



**Groundwater Sample Results,  
Level 2 Laboratory Report, Level 4 Laboratory Report,  
Electronic Data Deliverable, Data Validation Report,  
and the Sample Location Report, SDG 1800322**

*Naval Air Station Whidbey Island  
Oak Harbor, Washington*

June 2019

March 03, 2018

**Vista Work Order No. 1800322**

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 February 16, 2018. This sample set was analyzed on a rush turn-around time, under your Project Name 'CTO-4041 Clean Whidbey Island'.

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](mailto:mmaier@vista-analytical.com).

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

Sincerely,

Martha Maier  
Laboratory Director



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

**Vista Work Order No. 1800322**

**Case Narrative**

**Sample Condition on Receipt:**

Eight 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**

The samples were extracted and analyzed for a selected list of PFAS 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.

Two Laboratory Fortified Blank (LFB) and a Laboratory Reagent Blank (LRB) were extracted and analyzed with each preparation batch. No analytes were detected in the Laboratory Reagent Blanks above 1/2 the LOQ. The LFB recoveries were within the method acceptance criteria.

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

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# Sample Inventory Report

Vista Sample ID	Client Sample ID	Sampled	Received	Components/Containers
1800322-01	WI-A06-RW13-0218	13-Feb-18 15:51	16-Feb-18 09:02	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1800322-02	WI-A06-FB13-0218	13-Feb-18 15:52	16-Feb-18 09:02	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1800322-03	WI-A06-RW14-0218	14-Feb-18 09:25	16-Feb-18 09:02	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1800322-04	WI-A06-FB14-0218	14-Feb-18 09:26	16-Feb-18 09:02	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1800322-05	WI-A06-RW15-0218	14-Feb-18 10:03	16-Feb-18 09:02	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1800322-06	WI-A06-FB15-0218	14-Feb-18 10:04	16-Feb-18 09:02	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1800322-07	WI-A06-RW16-0218	14-Feb-18 11:04	16-Feb-18 09:02	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1800322-08	WI-A06-FB16-0218	14-Feb-18 11:05	16-Feb-18 09:02	HDPE Bottle, 250 mL HDPE Bottle, 250 mL

## **ANALYTICAL RESULTS**

**Sample ID: LRB** **EPA Method 537**

<b>Client Data</b>					<b>Laboratory Data</b>					
Name:	CH2M Hill	Matrix:	Aqueous		Lab Sample:	B8B0124-BLK1	Column:	BEH C18		
Project:	CTO-4041 Clean Whidbey Island									

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.443	5.00	10.0		B8B0124	20-Feb-18	0.250 L	24-Feb-18 21:46	1
PFHxA	ND	0.663	5.00	10.0		B8B0124	20-Feb-18	0.250 L	24-Feb-18 21:46	1
PFHpA	ND	0.533	5.00	10.0		B8B0124	20-Feb-18	0.250 L	24-Feb-18 21:46	1
PFHxS	ND	0.415	5.00	10.0		B8B0124	20-Feb-18	0.250 L	24-Feb-18 21:46	1
PFOA	ND	1.08	5.00	10.0		B8B0124	20-Feb-18	0.250 L	24-Feb-18 21:46	1
PFNA	ND	1.44	5.00	10.0		B8B0124	20-Feb-18	0.250 L	24-Feb-18 21:46	1
PFOS	ND	1.04	5.00	10.0		B8B0124	20-Feb-18	0.250 L	24-Feb-18 21:46	1
PFDA	ND	1.28	5.00	10.0		B8B0124	20-Feb-18	0.250 L	24-Feb-18 21:46	1
MeFOSAA	ND	3.04	5.00	10.0		B8B0124	20-Feb-18	0.250 L	24-Feb-18 21:46	1
EtFOSAA	ND	1.93	5.00	10.0		B8B0124	20-Feb-18	0.250 L	24-Feb-18 21:46	1
PFOA	ND	0.255	5.00	10.0		B8B0124	20-Feb-18	0.250 L	24-Feb-18 21:46	1
PFDoA	ND	0.952	5.00	10.0		B8B0124	20-Feb-18	0.250 L	24-Feb-18 21:46	1
PFTDA	ND	0.943	5.00	10.0		B8B0124	20-Feb-18	0.250 L	24-Feb-18 21:46	1
PFTeDA	ND	0.777	5.00	10.0		B8B0124	20-Feb-18	0.250 L	24-Feb-18 21:46	1
Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
13C2-PFHxA	SURR	92.7	70 - 130		B8B0124	20-Feb-18	0.250 L	24-Feb-18 21:46	1	
13C2-PFDA	SURR	81.2	70 - 130		B8B0124	20-Feb-18	0.250 L	24-Feb-18 21:46	1	
d5-EtFOSAA	SURR	97.0	70 - 130		B8B0124	20-Feb-18	0.250 L	24-Feb-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: LFBD** **EPA Method 537**

Name: CH2M Hill	Lab Sample: B8B0124-BS1/B8B0124-BSD1	Date Extracted: 20-Feb-18
Project: CTO-4041 Clean Whidbey Island	QC Batch: B8B0124	Column: BEH C18
Matrix: Aqueous	Samp Size: 0.250/0.250 L	

Analyte	LCS (ng/L)	LCS Spike Amt	LCS % Rec	LCS Quals	LCSD (ng/L)	LCSD Spike Amt	LCSD % Rec	RPD	LCSD Quals	%Rec Limits	RPD Limits	LCS Analyzed	LCS Dil	LCSD Analyzed	LCSD Dil
PFBS	75.9	70.8	107		77.1	70.8	109	1.59		70-130		24-Feb-18 21:21	1	24-Feb-18 21:33	1
PFHxA	68.9	80.0	86.1		73.0	80.0	91.3	5.88		70-130		24-Feb-18 21:21	1	24-Feb-18 21:33	1
PFHpA	72.3	80.0	90.4		79.2	80.0	99.1	9.10		70-130		24-Feb-18 21:21	1	24-Feb-18 21:33	1
PFHxS	80.7	72.8	111		80.7	72.8	111	0.0434		70-130		24-Feb-18 21:21	1	24-Feb-18 21:33	1
PFOA	81.3	80.0	102		77.8	80.0	97.2	4.43		70-130		24-Feb-18 21:21	1	24-Feb-18 21:33	1
PFNA	73.0	80.0	91.2		78.2	80.0	97.8	6.93		70-130		24-Feb-18 21:21	1	24-Feb-18 21:33	1
PFOS	73.0	74.0	98.7		76.3	74.0	103	4.35		70-130		24-Feb-18 21:21	1	24-Feb-18 21:33	1
PFDA	70.9	80.0	88.6		72.1	80.0	90.2	1.78		70-130		24-Feb-18 21:21	1	24-Feb-18 21:33	1
MeFOSAA	80.4	80.0	101		91.9	80.0	115	13.4		70-130		24-Feb-18 21:21	1	24-Feb-18 21:33	1
EtFOSAA	78.3	80.0	97.8		75.9	80.0	94.9	3.04		70-130		24-Feb-18 21:21	1	24-Feb-18 21:33	1
PFUnA	64.8	80.0	80.9		70.3	80.0	87.9	8.21		70-130		24-Feb-18 21:21	1	24-Feb-18 21:33	1
PFDoA	66.2	80.0	82.7		82.2	80.0	103	21.6		70-130		24-Feb-18 21:21	1	24-Feb-18 21:33	1
PFTTrDA	71.5	80.0	89.4		71.1	80.0	88.9	0.491		70-130		24-Feb-18 21:21	1	24-Feb-18 21:33	1
PFTeDA	69.7	80.0	87.1		67.5	80.0	84.4	3.09		70-130		24-Feb-18 21:21	1	24-Feb-18 21:33	1
Labeled Standards	Type		LCS % Rec	LCS Quals			LCSD % Rec		LCSD Quals	Limits		LCS Analyzed	LCS Dil	LCSD Analyzed	LCSD Dil
13C2-PFHxA	SURR		98.8				92.5			70-130		24-Feb-18 21:21	1	24-Feb-18 21:33	1
13C2-PFDA	SURR		80.6				88.5			70-130		24-Feb-18 21:21	1	24-Feb-18 21:33	1
d5-EtFOSAA	SURR		82.0				96.7			70-130		24-Feb-18 21:21	1	24-Feb-18 21:33	1



**Sample ID: LRB** **EPA Method 537**

<b>Client Data</b>					<b>Laboratory Data</b>						
Name:	CH2M Hill	Matrix:	Aqueous		Lab Sample:	B8B0153-BLK1	Column:	BEH C18			
Project:	CTO-4041 Clean Whidbey Island										

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.443	5.00	10.0		B8B0153	27-Feb-18	0.250 L	28-Feb-18 10:26	1
PFHxA	ND	0.663	5.00	10.0		B8B0153	27-Feb-18	0.250 L	28-Feb-18 10:26	1
PFHpA	ND	0.533	5.00	10.0		B8B0153	27-Feb-18	0.250 L	28-Feb-18 10:26	1
PFHxS	ND	0.415	5.00	10.0		B8B0153	27-Feb-18	0.250 L	28-Feb-18 10:26	1
PFOA	ND	1.08	5.00	10.0		B8B0153	27-Feb-18	0.250 L	28-Feb-18 10:26	1
PFNA	ND	1.44	5.00	10.0		B8B0153	27-Feb-18	0.250 L	28-Feb-18 10:26	1
PFOS	ND	1.04	5.00	10.0		B8B0153	27-Feb-18	0.250 L	28-Feb-18 10:26	1
PFDA	ND	1.28	5.00	10.0		B8B0153	27-Feb-18	0.250 L	28-Feb-18 10:26	1
MeFOSAA	ND	3.04	5.00	10.0		B8B0153	27-Feb-18	0.250 L	28-Feb-18 10:26	1
EtFOSAA	ND	1.93	5.00	10.0		B8B0153	27-Feb-18	0.250 L	28-Feb-18 10:26	1
PFOA	ND	0.255	5.00	10.0		B8B0153	27-Feb-18	0.250 L	28-Feb-18 10:26	1
PFDoA	ND	0.952	5.00	10.0		B8B0153	27-Feb-18	0.250 L	28-Feb-18 10:26	1
PFTeDA	ND	0.943	5.00	10.0		B8B0153	27-Feb-18	0.250 L	28-Feb-18 10:26	1
PFTeDA	ND	0.777	5.00	10.0		B8B0153	27-Feb-18	0.250 L	28-Feb-18 10:26	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	88.4	70 - 130			B8B0153	27-Feb-18	0.250 L	28-Feb-18 10:26	1
13C2-PFDA	SURR	88.5	70 - 130			B8B0153	27-Feb-18	0.250 L	28-Feb-18 10:26	1
d5-EtFOSAA	SURR	112	70 - 130			B8B0153	27-Feb-18	0.250 L	28-Feb-18 10:26	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.

<b>Sample ID: LFBD</b>	<b>EPA Method 537</b>
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Name: CH2M Hill	Lab Sample: B8B0153-BS1/B8B0153-BSD1	Date Extracted: 27-Feb-18	
Project: CTO-4041 Clean Whidbey Island	QC Batch: B8B0153	Column: BEH C18	
Matrix: Aqueous	Samp Size: 0.250/0.250 L		

Analyte	LCS (ng/L)	LCS Spike Amt	LCS % Rec	LCS Quals	LCSD (ng/L)	LCSD Spike Amt	LCSD % Rec	RPD	LCSD Quals	%Rec Limits	RPD Limits	LCS Analyzed	LCS Dil	LCSD Analyzed	LCSD Dil
PFBS	38.4	35.4	109		37.0	35.4	104	3.87		70-130		28-Feb-18 10:02	1	28-Feb-18 10:14	1
PFHxA	32.1	40.0	80.2		28.3	40.0	70.8	12.5		70-130		28-Feb-18 10:02	1	28-Feb-18 10:14	1
PFHpA	39.3	40.0	98.4		37.7	40.0	94.2	4.36		70-130		28-Feb-18 10:02	1	28-Feb-18 10:14	1
PFHxS	42.0	36.4	115		37.8	36.4	104	10.5		70-130		28-Feb-18 10:02	1	28-Feb-18 10:14	1
PFOA	40.5	40.0	101		38.0	40.0	95.0	6.39		70-130		28-Feb-18 10:02	1	28-Feb-18 10:14	1
PFNA	36.3	40.0	90.6		34.7	40.0	86.8	4.35		70-130		28-Feb-18 10:02	1	28-Feb-18 10:14	1
PFOS	37.6	37.0	102		35.6	37.0	96.3	5.24		70-130		28-Feb-18 10:02	1	28-Feb-18 10:14	1
PFDA	35.7	40.0	89.2		33.0	40.0	82.4	7.99		70-130		28-Feb-18 10:02	1	28-Feb-18 10:14	1
MeFOSAA	52.2	40.0	130		45.5	40.0	114	13.7		70-130		28-Feb-18 10:02	1	28-Feb-18 10:14	1
EtFOSAA	42.9	40.0	107		42.4	40.0	106	1.26		70-130		28-Feb-18 10:02	1	28-Feb-18 10:14	1
PFUnA	34.5	40.0	86.3		35.0	40.0	87.5	1.35		70-130		28-Feb-18 10:02	1	28-Feb-18 10:14	1
PFDoA	39.1	40.0	97.6		33.8	40.0	84.5	14.5		70-130		28-Feb-18 10:02	1	28-Feb-18 10:14	1
PFTTrDA	33.8	40.0	84.6		33.9	40.0	84.6	0.0614		70-130		28-Feb-18 10:02	1	28-Feb-18 10:14	1
PFTeDA	33.9	40.0	84.7		33.4	40.0	83.4	1.53		70-130		28-Feb-18 10:02	1	28-Feb-18 10:14	1

Labeled Standards	Type	LCS % Rec	LCS Quals	LCSD % Rec	LCSD Quals	Limits	LCS Analyzed	LCS Dil	LCSD Analyzed	LCSD Dil
13C2-PFHxA	SURR	89.8		92.9		70-130	28-Feb-18 10:02	1	28-Feb-18 10:14	1
13C2-PFDA	SURR	82.2		85.6		70-130	28-Feb-18 10:02	1	28-Feb-18 10:14	1
d5-EtFOSAA	SURR	91.4		94.7		70-130	28-Feb-18 10:02	1	28-Feb-18 10:14	1

**Sample ID: WI-A06-RW13-0218**

**EPA Method 537**

Client Data				Laboratory Data			
Name:	CH2M Hill	Matrix:	Drinking Water	Lab Sample:	1800322-01	Column:	BEH C18
Project:	CTO-4041 Clean Whidbey Island	Date Collected:	13-Feb-18 15:51	Date Received:	16-Feb-18 09:02		

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.437	4.94	9.87		B8B0124	20-Feb-18	0.253 L	24-Feb-18 21:58	1
PFHxA	0.676	0.654	4.94	9.87	J	B8B0124	20-Feb-18	0.253 L	24-Feb-18 21:58	1
PFHpA	ND	0.526	4.94	9.87		B8B0124	20-Feb-18	0.253 L	24-Feb-18 21:58	1
PFHxS	ND	0.410	4.94	9.87		B8B0124	20-Feb-18	0.253 L	24-Feb-18 21:58	1
PFOA	ND	1.07	4.94	9.87		B8B0124	20-Feb-18	0.253 L	24-Feb-18 21:58	1
PFNA	ND	1.42	4.94	9.87		B8B0124	20-Feb-18	0.253 L	24-Feb-18 21:58	1
PFOS	ND	1.03	4.94	9.87		B8B0124	20-Feb-18	0.253 L	24-Feb-18 21:58	1
PFDA	ND	1.26	4.94	9.87		B8B0124	20-Feb-18	0.253 L	24-Feb-18 21:58	1
MeFOSAA	ND	3.00	4.94	9.87		B8B0124	20-Feb-18	0.253 L	24-Feb-18 21:58	1
EtFOSAA	ND	1.90	4.94	9.87		B8B0124	20-Feb-18	0.253 L	24-Feb-18 21:58	1
PFUnA	ND	0.252	4.94	9.87		B8B0124	20-Feb-18	0.253 L	24-Feb-18 21:58	1
PFDoA	ND	0.940	4.94	9.87		B8B0124	20-Feb-18	0.253 L	24-Feb-18 21:58	1
PFTrDA	ND	0.931	4.94	9.87		B8B0124	20-Feb-18	0.253 L	24-Feb-18 21:58	1
PFTeDA	ND	0.767	4.94	9.87		B8B0124	20-Feb-18	0.253 L	24-Feb-18 21:58	1
Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
13C2-PFHxA	SURR	108	70 - 130		B8B0124	20-Feb-18	0.253 L	24-Feb-18 21:58	1	
13C2-PFDA	SURR	83.0	70 - 130		B8B0124	20-Feb-18	0.253 L	24-Feb-18 21:58	1	
d5-EtFOSAA	SURR	79.1	70 - 130		B8B0124	20-Feb-18	0.253 L	24-Feb-18 21:58	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: WI-A06-FB13-0218** **EPA Method 537**

Client Data				Laboratory Data			
Name:	CH2M Hill	Matrix:	Drinking Water	Lab Sample:	1800322-02	Column:	BEH C18
Project:	CTO-4041 Clean Whidbey Island	Date Collected:	13-Feb-18 15:52	Date Received:	16-Feb-18 09:02		

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.437	4.94	9.87		B8B0124	20-Feb-18	0.253 L	24-Feb-18 22:10	1
PFHxA	ND	0.654	4.94	9.87		B8B0124	20-Feb-18	0.253 L	24-Feb-18 22:10	1
PFHpA	ND	0.526	4.94	9.87		B8B0124	20-Feb-18	0.253 L	24-Feb-18 22:10	1
PFHxS	ND	0.410	4.94	9.87		B8B0124	20-Feb-18	0.253 L	24-Feb-18 22:10	1
PFOA	ND	1.07	4.94	9.87		B8B0124	20-Feb-18	0.253 L	24-Feb-18 22:10	1
PFNA	ND	1.42	4.94	9.87		B8B0124	20-Feb-18	0.253 L	24-Feb-18 22:10	1
PFOS	ND	1.03	4.94	9.87		B8B0124	20-Feb-18	0.253 L	24-Feb-18 22:10	1
PFDA	ND	1.26	4.94	9.87		B8B0124	20-Feb-18	0.253 L	24-Feb-18 22:10	1
MeFOSAA	ND	3.00	4.94	9.87		B8B0124	20-Feb-18	0.253 L	24-Feb-18 22:10	1
EtFOSAA	ND	1.90	4.94	9.87		B8B0124	20-Feb-18	0.253 L	24-Feb-18 22:10	1
PFOA	ND	0.252	4.94	9.87		B8B0124	20-Feb-18	0.253 L	24-Feb-18 22:10	1
PFDoA	ND	0.940	4.94	9.87		B8B0124	20-Feb-18	0.253 L	24-Feb-18 22:10	1
PFTTrDA	ND	0.931	4.94	9.87		B8B0124	20-Feb-18	0.253 L	24-Feb-18 22:10	1
PFTeDA	ND	0.767	4.94	9.87		B8B0124	20-Feb-18	0.253 L	24-Feb-18 22:10	1
Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
13C2-PFHxA	SURR	91.2	70 - 130		B8B0124	20-Feb-18	0.253 L	24-Feb-18 22:10	1	
13C2-PFDA	SURR	81.5	70 - 130		B8B0124	20-Feb-18	0.253 L	24-Feb-18 22:10	1	
d5-EtFOSAA	SURR	102	70 - 130		B8B0124	20-Feb-18	0.253 L	24-Feb-18 22:10	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: WI-A06-RW14-0218** **EPA Method 537**

Client Data				Laboratory Data			
Name:	CH2M Hill	Matrix:	Drinking Water	Lab Sample:	1800322-03	Column:	BEH C18
Project:	CTO-4041 Clean Whidbey Island	Date Collected:	14-Feb-18 09:25	Date Received:	16-Feb-18 09:02		

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	58.0	0.453	5.12	10.2		B8B0124	20-Feb-18	0.244 L	26-Feb-18 08:28	1
PFHxA	60.5	0.679	5.12	10.2		B8B0124	20-Feb-18	0.244 L	26-Feb-18 08:28	1
PFHpA	16.3	0.546	5.12	10.2		B8B0124	20-Feb-18	0.244 L	26-Feb-18 08:28	1
PFHxS	260	2.12	25.6	51.2	D	B8B0124	20-Feb-18	0.244 L	28-Feb-18 11:33	5
PFOA	21.8	1.11	5.12	10.2		B8B0124	20-Feb-18	0.244 L	26-Feb-18 08:28	1
PFNA	ND	1.47	5.12	10.2		B8B0124	20-Feb-18	0.244 L	26-Feb-18 08:28	1
PFOS	7.68	1.06	5.12	10.2	J	B8B0124	20-Feb-18	0.244 L	26-Feb-18 08:28	1
PFDA	ND	1.31	5.12	10.2		B8B0124	20-Feb-18	0.244 L	26-Feb-18 08:28	1
MeFOSAA	ND	3.11	5.12	10.2		B8B0124	20-Feb-18	0.244 L	26-Feb-18 08:28	1
EtFOSAA	ND	1.98	5.12	10.2		B8B0124	20-Feb-18	0.244 L	26-Feb-18 08:28	1
PFUnA	ND	0.261	5.12	10.2		B8B0124	20-Feb-18	0.244 L	26-Feb-18 08:28	1
PFDoA	ND	0.974	5.12	10.2		B8B0124	20-Feb-18	0.244 L	26-Feb-18 08:28	1
PFTrDA	ND	0.965	5.12	10.2		B8B0124	20-Feb-18	0.244 L	26-Feb-18 08:28	1
PFTeDA	ND	0.795	5.12	10.2		B8B0124	20-Feb-18	0.244 L	26-Feb-18 08:28	1
Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
13C2-PFHxA	SURR	89.4	70 - 130		B8B0124	20-Feb-18	0.244 L	26-Feb-18 08:28	1	
13C2-PFDA	SURR	71.9	70 - 130		B8B0124	20-Feb-18	0.244 L	26-Feb-18 08:28	1	
d5-EtFOSAA	SURR	88.9	70 - 130		B8B0124	20-Feb-18	0.244 L	26-Feb-18 08:28	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: WI-A06-FB14-0218** **EPA Method 537**

Client Data				Laboratory Data			
Name:	CH2M Hill	Matrix:	Drinking Water	Lab Sample:	1800322-04	Column:	BEH C18
Project:	CTO-4041 Clean Whidbey Island	Date Collected:	14-Feb-18 09:26	Date Received:	16-Feb-18 09:02		

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.428	4.83	9.67		B8B0124	20-Feb-18	0.259 L	24-Feb-18 22:35	1
PFHxA	0.665	0.641	4.83	9.67	J	B8B0124	20-Feb-18	0.259 L	24-Feb-18 22:35	1
PFHpA	ND	0.515	4.83	9.67		B8B0124	20-Feb-18	0.259 L	24-Feb-18 22:35	1
PFHxS	ND	0.401	4.83	9.67		B8B0124	20-Feb-18	0.259 L	01-Mar-18 16:48	1
PFOA	ND	1.04	4.83	9.67		B8B0124	20-Feb-18	0.259 L	24-Feb-18 22:35	1
PFNA	ND	1.39	4.83	9.67		B8B0124	20-Feb-18	0.259 L	24-Feb-18 22:35	1
PFOS	ND	1.01	4.83	9.67		B8B0124	20-Feb-18	0.259 L	24-Feb-18 22:35	1
PFDA	ND	1.24	4.83	9.67		B8B0124	20-Feb-18	0.259 L	24-Feb-18 22:35	1
MeFOSAA	ND	2.94	4.83	9.67		B8B0124	20-Feb-18	0.259 L	24-Feb-18 22:35	1
EtFOSAA	ND	1.87	4.83	9.67		B8B0124	20-Feb-18	0.259 L	24-Feb-18 22:35	1
PFUnA	ND	0.247	4.83	9.67		B8B0124	20-Feb-18	0.259 L	24-Feb-18 22:35	1
PFDoA	ND	0.920	4.83	9.67		B8B0124	20-Feb-18	0.259 L	24-Feb-18 22:35	1
PFTriDA	ND	0.912	4.83	9.67		B8B0124	20-Feb-18	0.259 L	24-Feb-18 22:35	1
PFTeDA	ND	0.751	4.83	9.67		B8B0124	20-Feb-18	0.259 L	24-Feb-18 22:35	1
Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
13C2-PFHxA	SURR	98.2	70 - 130		B8B0124	20-Feb-18	0.259 L	24-Feb-18 22:35	1	
13C2-PFDA	SURR	76.6	70 - 130		B8B0124	20-Feb-18	0.259 L	24-Feb-18 22:35	1	
d5-EtFOSAA	SURR	79.6	70 - 130		B8B0124	20-Feb-18	0.259 L	24-Feb-18 22:35	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: WI-A06-RW15-0218** **EPA Method 537**

Client Data				Laboratory Data			
Name:	CH2M Hill	Matrix:	Drinking Water	Lab Sample:	1800322-05	Column:	BEH C18
Project:	CTO-4041 Clean Whidbey Island	Date Collected:	14-Feb-18 10:03	Date Received:	16-Feb-18 09:02		

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.435	4.90	9.81		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:39	1
PFHxA	ND	0.650	4.90	9.81		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:39	1
PFHpA	ND	0.523	4.90	9.81		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:39	1
PFHxS	ND	0.407	4.90	9.81		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:39	1
PFOA	ND	1.06	4.90	9.81		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:39	1
PFNA	ND	1.41	4.90	9.81		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:39	1
PFOS	ND	1.02	4.90	9.81		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:39	1
PFDA	ND	1.26	4.90	9.81		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:39	1
MeFOSAA	ND	2.98	4.90	9.81		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:39	1
EtFOSAA	ND	1.89	4.90	9.81		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:39	1
PFUnA	ND	0.250	4.90	9.81		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:39	1
PFDoA	ND	0.934	4.90	9.81		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:39	1
PFTrDA	ND	0.925	4.90	9.81		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:39	1
PFTeDA	ND	0.762	4.90	9.81		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:39	1
Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
13C2-PFHxA	SURR	98.0	70 - 130		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:39	1	
13C2-PFDA	SURR	90.0	70 - 130		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:39	1	
d5-EtFOSAA	SURR	85.0	70 - 130		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:39	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.

**Sample ID: WI-A06-FB15-0218** **EPA Method 537**

Client Data				Laboratory Data			
Name:	CH2M Hill	Matrix:	Drinking Water	Lab Sample:	1800322-06	Column:	BEH C18
Project:	CTO-4041 Clean Whidbey Island	Date Collected:	14-Feb-18 10:04	Date Received:	16-Feb-18 09:02		

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.435	4.90	9.82		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:51	1
PFHxA	ND	0.651	4.90	9.82		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:51	1
PFHpA	ND	0.523	4.90	9.82		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:51	1
PFHxS	ND	0.407	4.90	9.82		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:51	1
PFOA	ND	1.06	4.90	9.82		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:51	1
PFNA	ND	1.41	4.90	9.82		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:51	1
PFOS	ND	1.02	4.90	9.82		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:51	1
PFDA	ND	1.26	4.90	9.82		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:51	1
MeFOSAA	ND	2.98	4.90	9.82		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:51	1
EtFOSAA	ND	1.89	4.90	9.82		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:51	1
PFUnA	ND	0.250	4.90	9.82		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:51	1
PFDoA	ND	0.934	4.90	9.82		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:51	1
PFTrDA	ND	0.926	4.90	9.82		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:51	1
PFTeDA	ND	0.763	4.90	9.82		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:51	1
Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
13C2-PFHxA	SURR	98.4	70 - 130		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:51	1	
13C2-PFDA	SURR	89.7	70 - 130		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:51	1	
d5-EtFOSAA	SURR	103	70 - 130		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:51	1	

DL - Detection Limit

LOD - Limit of Detection  
LOQ - Limit of quantitation

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

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



**Sample ID: WI-A06-RW16-0218**

**EPA Method 537**

Client Data				Laboratory Data			
Name:	CH2M Hill	Matrix:	Drinking Water	Lab Sample:	1800322-07	Column:	BEH C18
Project:	CTO-4041 Clean Whidbey Island	Date Collected:	14-Feb-18 11:04	Date Received:	16-Feb-18 09:02		

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.446	5.04	10.1		B8B0124	20-Feb-18	0.248 L	24-Feb-18 23:12	1
PFHxA	0.906	0.668	5.04	10.1	J	B8B0124	20-Feb-18	0.248 L	24-Feb-18 23:12	1
PFHpA	ND	0.537	5.04	10.1		B8B0124	20-Feb-18	0.248 L	24-Feb-18 23:12	1
PFHxS	ND	0.418	5.04	10.1		B8B0124	20-Feb-18	0.248 L	24-Feb-18 23:12	1
PFOA	ND	1.09	5.04	10.1		B8B0124	20-Feb-18	0.248 L	24-Feb-18 23:12	1
PFNA	ND	1.45	5.04	10.1		B8B0124	20-Feb-18	0.248 L	24-Feb-18 23:12	1
PFOS	ND	1.05	5.04	10.1		B8B0124	20-Feb-18	0.248 L	24-Feb-18 23:12	1
PFDA	ND	1.29	5.04	10.1		B8B0124	20-Feb-18	0.248 L	24-Feb-18 23:12	1
MeFOSAA	ND	3.06	5.04	10.1		B8B0124	20-Feb-18	0.248 L	24-Feb-18 23:12	1
EtFOSAA	ND	1.94	5.04	10.1		B8B0124	20-Feb-18	0.248 L	24-Feb-18 23:12	1
PFUnA	ND	0.257	5.04	10.1		B8B0124	20-Feb-18	0.248 L	24-Feb-18 23:12	1
PFDoA	ND	0.958	5.04	10.1		B8B0124	20-Feb-18	0.248 L	24-Feb-18 23:12	1
PFTrDA	ND	0.949	5.04	10.1		B8B0124	20-Feb-18	0.248 L	24-Feb-18 23:12	1
PFTeDA	ND	0.782	5.04	10.1		B8B0124	20-Feb-18	0.248 L	24-Feb-18 23:12	1
Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
13C2-PFHxA	SURR	95.7	70 - 130		B8B0124	20-Feb-18	0.248 L	24-Feb-18 23:12	1	
13C2-PFDA	SURR	81.7	70 - 130		B8B0124	20-Feb-18	0.248 L	24-Feb-18 23:12	1	
d5-EtFOSAA	SURR	84.9	70 - 130		B8B0124	20-Feb-18	0.248 L	24-Feb-18 23:12	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: WI-A06-FB16-0218** **EPA Method 537**

Client Data				Laboratory Data			
Name:	CH2M Hill	Matrix:	Drinking Water	Lab Sample:	1800322-08	Column:	BEH C18
Project:	CTO-4041 Clean Whidbey Island	Date Collected:	14-Feb-18 11:05	Date Received:	16-Feb-18 09:02		

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.431	4.86	9.72		B8B0124	20-Feb-18	0.257 L	24-Feb-18 23:25	1
PFHxA	ND	0.644	4.86	9.72		B8B0124	20-Feb-18	0.257 L	24-Feb-18 23:25	1
PFHpA	ND	0.518	4.86	9.72		B8B0124	20-Feb-18	0.257 L	24-Feb-18 23:25	1
PFHxS	ND	0.403	4.86	9.72		B8B0124	20-Feb-18	0.257 L	24-Feb-18 23:25	1
PFOA	ND	1.05	4.86	9.72		B8B0124	20-Feb-18	0.257 L	24-Feb-18 23:25	1
PFNA	ND	1.40	4.86	9.72		B8B0124	20-Feb-18	0.257 L	24-Feb-18 23:25	1
PFOS	ND	1.01	4.86	9.72		B8B0124	20-Feb-18	0.257 L	24-Feb-18 23:25	1
PFDA	ND	1.24	4.86	9.72		B8B0124	20-Feb-18	0.257 L	24-Feb-18 23:25	1
MeFOSAA	ND	2.96	4.86	9.72		B8B0124	20-Feb-18	0.257 L	24-Feb-18 23:25	1
EtFOSAA	ND	1.88	4.86	9.72		B8B0124	20-Feb-18	0.257 L	24-Feb-18 23:25	1
PFOA	ND	0.248	4.86	9.72		B8B0124	20-Feb-18	0.257 L	24-Feb-18 23:25	1
PFDoA	ND	0.925	4.86	9.72		B8B0124	20-Feb-18	0.257 L	24-Feb-18 23:25	1
PFTriDA	ND	0.917	4.86	9.72		B8B0124	20-Feb-18	0.257 L	24-Feb-18 23:25	1
PFTeDA	ND	0.755	4.86	9.72		B8B0124	20-Feb-18	0.257 L	24-Feb-18 23:25	1
Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
13C2-PFHxA	SURR	106	70 - 130		B8B0124	20-Feb-18	0.257 L	24-Feb-18 23:25	1	
13C2-PFDA	SURR	85.9	70 - 130		B8B0124	20-Feb-18	0.257 L	24-Feb-18 23:25	1	
d5-EtFOSAA	SURR	86.2	70 - 130		B8B0124	20-Feb-18	0.257 L	24-Feb-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.

## **DATA QUALIFIERS & ABBREVIATIONS**

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

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

## CERTIFICATIONS

<b>Accrediting Authority</b>	<b>Certificate Number</b>
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 #: 1800322 Temp: 0.5 °C  
 Storage ID: WR-2 Storage Secured: Yes  No

Project ID: CTO-4041 CLEAN WHIDBEY ISLAND PO#: 10006-7-108336 Sampler: KATE RABE (name)

TAT Standard:  21 days  
 (check one): Rush (surcharge may apply)  
 14 days  7 days Specify: 10 DAY

Invoice to: Name TIFFANY HILL Company CH2M HILL Address 1100 NE CIRCLE BLVD, SUITE 300 City CORVALLIS State OR Ph# 97330 Fax#

Relinquished by (printed name and signature) Kate Rabe Date 2/15/18 Time 0900 Received by (printed name and signature) B. Benedict Beth Briant Date 02/16/18 Time 0913

Sample ID	Date	Time	Location/Sample Description	Add Analysis(es) Requested										Comments			
				Quantity	Type	Matrix	PFDA/ PFOS	UCMR3 PFAS List/6	537 List: 14	Full List of 28	Other: Please List Below	Mod. EPA Method 537	EPA Method 537(DW only)				
WI-A06-RW13-0218	2/13/18	1551		2	P	DW											
WI-A06-FB13-0218	2/13/18	1552		2	P	DW											
WI-A06-RW14-0218	2/14/18	9:25		2	P	DW											
WI-A06-FB14-0218	2/14/18	9:26		2	P	DW											
WI-A06-RW15-0218	2/14/18	10:03		2	P	DW											
WI-A06-FB15-0218	2/14/18	10:04		2	P	DW											
WI-A06-RW16-0218	2/14/18	11:04		2	P	DW											
WI-A06-FB16-0218	2/14/18	11:05		2	P	DW											

Special Instructions/Comments: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

SEND DOCUMENTATION AND RESULTS TO:  
 Name: TIFFANY HILL  
 Company: CH2M HILL  
 Address: 1100 NE CIRCLE BLVD, SUITE 300  
 City: CORVALLIS State: OR Zip: 97330  
 Phone: \_\_\_\_\_ 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 #: 1800322 TAT 10

<b>Samples Arrival:</b>	Date/Time: <u>02/16/18</u> <u>0902</u> <u>0909</u> <u>UBB</u>	Initials: <u>UBB</u>	Location: <u>WR-2</u>
<b>Logged In:</b>	Date/Time: <u>02/16/18</u> <u>1247</u>	Initials: <u>UBB</u>	Location: <u>NR-2</u>
<b>Delivered By:</b>	<input checked="" type="checkbox"/> FedEx	<input type="checkbox"/> UPS	<input type="checkbox"/> On Trac
	<input type="checkbox"/> GSO	<input type="checkbox"/> DHL	<input type="checkbox"/> Hand Delivered
	<input type="checkbox"/> Other		
<b>Preservation:</b>	<input checked="" type="checkbox"/> Ice	<input type="checkbox"/> Blue Ice	<input type="checkbox"/> Dry Ice
	<input type="checkbox"/> None		
Temp °C: <u>0.6</u> (uncorrected)	Time: <u>0914</u>	Thermometer ID: IR-4	
Temp °C: <u>0.5</u> (corrected)	Probe used: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		

	YES	NO	NA
Adequate Sample Volume Received?	<input checked="" type="checkbox"/>		
Holding Time Acceptable?	<input checked="" type="checkbox"/>		
Shipping Container(s) Intact?	<input checked="" type="checkbox"/>		
Shipping Custody Seals Intact?	<input checked="" type="checkbox"/>		
Shipping Documentation Present?	<input checked="" type="checkbox"/>		
Airbill	<input checked="" type="checkbox"/>		
Trk # <u>807984197628</u>	<input checked="" type="checkbox"/>		
Sample Container Intact?	<input checked="" type="checkbox"/>		
Sample Custody Seals Intact?			<input checked="" type="checkbox"/>
Chain of Custody / Sample Documentation Present?	<input checked="" type="checkbox"/>		
COC Anomaly/Sample Acceptance Form completed?		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
If Chlorinated or Drinking Water Samples, Acceptable Preservation?	<input checked="" type="checkbox"/>		
Preservation Documented:	<input type="checkbox"/> Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	<input checked="" type="checkbox"/> Trizma	<input type="checkbox"/> None
	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA
Shipping Container	<input checked="" type="checkbox"/> Vista	<input type="checkbox"/> Client	<input checked="" type="checkbox"/> Retain
	<input type="checkbox"/> Return	<input type="checkbox"/> Dispose	

Comments:

March 03, 2018

**Vista Work Order No. 1800322**

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 February 16, 2018. This sample set was analyzed on a rush turn-around time, under your Project Name 'CTO-4041 Clean Whidbey Island'.

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](mailto:mmaier@vista-analytical.com).

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

Sincerely,

Martha Maier  
Laboratory Director



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

**Vista Work Order No. 1800322**

**Case Narrative**

**Sample Condition on Receipt:**

Eight 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**

The samples were extracted and analyzed for a selected list of PFAS 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.

Two Laboratory Fortified Blank (LFB) and a Laboratory Reagent Blank (LRB) were extracted and analyzed with each preparation batch. No analytes were detected in the Laboratory Reagent Blanks above 1/2 the LOQ. The LFB recoveries were within the method acceptance criteria.

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



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# Sample Inventory Report

<b>Vista Sample ID</b>	<b>Client Sample ID</b>	<b>Sampled</b>	<b>Received</b>	<b>Components/Containers</b>
1800322-01	WI-A06-RW13-0218	13-Feb-18 15:51	16-Feb-18 09:02	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1800322-02	WI-A06-FB13-0218	13-Feb-18 15:52	16-Feb-18 09:02	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1800322-03	WI-A06-RW14-0218	14-Feb-18 09:25	16-Feb-18 09:02	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1800322-04	WI-A06-FB14-0218	14-Feb-18 09:26	16-Feb-18 09:02	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1800322-05	WI-A06-RW15-0218	14-Feb-18 10:03	16-Feb-18 09:02	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1800322-06	WI-A06-FB15-0218	14-Feb-18 10:04	16-Feb-18 09:02	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1800322-07	WI-A06-RW16-0218	14-Feb-18 11:04	16-Feb-18 09:02	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1800322-08	WI-A06-FB16-0218	14-Feb-18 11:05	16-Feb-18 09:02	HDPE Bottle, 250 mL HDPE Bottle, 250 mL

## **ANALYTICAL RESULTS**

**Sample ID: LRB** **EPA Method 537**

<b>Client Data</b>				<b>Laboratory Data</b>			
Name:	CH2M Hill	Matrix:	Aqueous	Lab Sample:	B8B0124-BLK1	Column:	BEH C18
Project:	CTO-4041 Clean Whidbey Island						

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.443	5.00	10.0		B8B0124	20-Feb-18	0.250 L	24-Feb-18 21:46	1
PFHxA	ND	0.663	5.00	10.0		B8B0124	20-Feb-18	0.250 L	24-Feb-18 21:46	1
PFHpA	ND	0.533	5.00	10.0		B8B0124	20-Feb-18	0.250 L	24-Feb-18 21:46	1
PFHxS	ND	0.415	5.00	10.0		B8B0124	20-Feb-18	0.250 L	24-Feb-18 21:46	1
PFOA	ND	1.08	5.00	10.0		B8B0124	20-Feb-18	0.250 L	24-Feb-18 21:46	1
PFNA	ND	1.44	5.00	10.0		B8B0124	20-Feb-18	0.250 L	24-Feb-18 21:46	1
PFOS	ND	1.04	5.00	10.0		B8B0124	20-Feb-18	0.250 L	24-Feb-18 21:46	1
PFDA	ND	1.28	5.00	10.0		B8B0124	20-Feb-18	0.250 L	24-Feb-18 21:46	1
MeFOSAA	ND	3.04	5.00	10.0		B8B0124	20-Feb-18	0.250 L	24-Feb-18 21:46	1
EtFOSAA	ND	1.93	5.00	10.0		B8B0124	20-Feb-18	0.250 L	24-Feb-18 21:46	1
PFOA	ND	0.255	5.00	10.0		B8B0124	20-Feb-18	0.250 L	24-Feb-18 21:46	1
PFDoA	ND	0.952	5.00	10.0		B8B0124	20-Feb-18	0.250 L	24-Feb-18 21:46	1
PFTeDA	ND	0.943	5.00	10.0		B8B0124	20-Feb-18	0.250 L	24-Feb-18 21:46	1
PFTeDA	ND	0.777	5.00	10.0		B8B0124	20-Feb-18	0.250 L	24-Feb-18 21:46	1
Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
13C2-PFHxA	SURR	92.7	70 - 130		B8B0124	20-Feb-18	0.250 L	24-Feb-18 21:46	1	
13C2-PFDA	SURR	81.2	70 - 130		B8B0124	20-Feb-18	0.250 L	24-Feb-18 21:46	1	
d5-EtFOSAA	SURR	97.0	70 - 130		B8B0124	20-Feb-18	0.250 L	24-Feb-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: LFBD**

**EPA Method 537**

Name:	CH2M Hill	Lab Sample:	B8B0124-BS1/B8B0124-BSD1	Date Extracted:	20-Feb-18
Project:	CTO-4041 Clean Whidbey Island	QC Batch:	B8B0124	Column:	BEH C18
Matrix:	Aqueous	Samp Size:	0.250/0.250 L		

Analyte	LCS (ng/L)	LCS Spike Amt	LCS % Rec	LCS Quals	LCSD (ng/L)	LCSD Spike Amt	LCSD % Rec	RPD	LCSD Quals	%Rec Limits	RPD Limits	LCS Analyzed	LCS Dil	LCSD Analyzed	LCSD Dil
PFBS	75.9	70.8	107		77.1	70.8	109	1.59		70-130		24-Feb-18 21:21	1	24-Feb-18 21:33	1
PFHxA	68.9	80.0	86.1		73.0	80.0	91.3	5.88		70-130		24-Feb-18 21:21	1	24-Feb-18 21:33	1
PFHpA	72.3	80.0	90.4		79.2	80.0	99.1	9.10		70-130		24-Feb-18 21:21	1	24-Feb-18 21:33	1
PFHxS	80.7	72.8	111		80.7	72.8	111	0.0434		70-130		24-Feb-18 21:21	1	24-Feb-18 21:33	1
PFOA	81.3	80.0	102		77.8	80.0	97.2	4.43		70-130		24-Feb-18 21:21	1	24-Feb-18 21:33	1
PFNA	73.0	80.0	91.2		78.2	80.0	97.8	6.93		70-130		24-Feb-18 21:21	1	24-Feb-18 21:33	1
PFOS	73.0	74.0	98.7		76.3	74.0	103	4.35		70-130		24-Feb-18 21:21	1	24-Feb-18 21:33	1
PFDA	70.9	80.0	88.6		72.1	80.0	90.2	1.78		70-130		24-Feb-18 21:21	1	24-Feb-18 21:33	1
MeFOSAA	80.4	80.0	101		91.9	80.0	115	13.4		70-130		24-Feb-18 21:21	1	24-Feb-18 21:33	1
EtFOSAA	78.3	80.0	97.8		75.9	80.0	94.9	3.04		70-130		24-Feb-18 21:21	1	24-Feb-18 21:33	1
PFUnA	64.8	80.0	80.9		70.3	80.0	87.9	8.21		70-130		24-Feb-18 21:21	1	24-Feb-18 21:33	1
PFDoA	66.2	80.0	82.7		82.2	80.0	103	21.6		70-130		24-Feb-18 21:21	1	24-Feb-18 21:33	1
PFTTrDA	71.5	80.0	89.4		71.1	80.0	88.9	0.491		70-130		24-Feb-18 21:21	1	24-Feb-18 21:33	1
PFTeDA	69.7	80.0	87.1		67.5	80.0	84.4	3.09		70-130		24-Feb-18 21:21	1	24-Feb-18 21:33	1

Labeled Standards	Type	LCS % Rec	LCS Quals	LCSD % Rec	LCSD Quals	Limits	LCS Analyzed	LCS Dil	LCSD Analyzed	LCSD Dil
13C2-PFHxA	SURR	98.8		92.5		70-130	24-Feb-18 21:21	1	24-Feb-18 21:33	1
13C2-PFDA	SURR	80.6		88.5		70-130	24-Feb-18 21:21	1	24-Feb-18 21:33	1
d5-EtFOSAA	SURR	82.0		96.7		70-130	24-Feb-18 21:21	1	24-Feb-18 21:33	1

**Sample ID: LRB** **EPA Method 537**

<b>Client Data</b>					<b>Laboratory Data</b>					
Name:	CH2M Hill	Matrix:	Aqueous		Lab Sample:	B8B0153-BLK1	Column:	BEH C18		
Project:	CTO-4041 Clean Whidbey Island									

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.443	5.00	10.0		B8B0153	27-Feb-18	0.250 L	28-Feb-18 10:26	1
PFHxA	ND	0.663	5.00	10.0		B8B0153	27-Feb-18	0.250 L	28-Feb-18 10:26	1
PFHpA	ND	0.533	5.00	10.0		B8B0153	27-Feb-18	0.250 L	28-Feb-18 10:26	1
PFHxS	ND	0.415	5.00	10.0		B8B0153	27-Feb-18	0.250 L	28-Feb-18 10:26	1
PFOA	ND	1.08	5.00	10.0		B8B0153	27-Feb-18	0.250 L	28-Feb-18 10:26	1
PFNA	ND	1.44	5.00	10.0		B8B0153	27-Feb-18	0.250 L	28-Feb-18 10:26	1
PFOS	ND	1.04	5.00	10.0		B8B0153	27-Feb-18	0.250 L	28-Feb-18 10:26	1
PFDA	ND	1.28	5.00	10.0		B8B0153	27-Feb-18	0.250 L	28-Feb-18 10:26	1
MeFOSAA	ND	3.04	5.00	10.0		B8B0153	27-Feb-18	0.250 L	28-Feb-18 10:26	1
EtFOSAA	ND	1.93	5.00	10.0		B8B0153	27-Feb-18	0.250 L	28-Feb-18 10:26	1
PFOA	ND	0.255	5.00	10.0		B8B0153	27-Feb-18	0.250 L	28-Feb-18 10:26	1
PFDoA	ND	0.952	5.00	10.0		B8B0153	27-Feb-18	0.250 L	28-Feb-18 10:26	1
PFTTrDA	ND	0.943	5.00	10.0		B8B0153	27-Feb-18	0.250 L	28-Feb-18 10:26	1
PFTeDA	ND	0.777	5.00	10.0		B8B0153	27-Feb-18	0.250 L	28-Feb-18 10:26	1
Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
13C2-PFHxA	SURR	88.4	70 - 130		B8B0153	27-Feb-18	0.250 L	28-Feb-18 10:26	1	
13C2-PFDA	SURR	88.5	70 - 130		B8B0153	27-Feb-18	0.250 L	28-Feb-18 10:26	1	
d5-EtFOSAA	SURR	112	70 - 130		B8B0153	27-Feb-18	0.250 L	28-Feb-18 10:26	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: LFBD** **EPA Method 537**

Name: CH2M Hill	Lab Sample: B8B0153-BS1/B8B0153-BSD1	Date Extracted: 27-Feb-18	
Project: CTO-4041 Clean Whidbey Island	QC Batch: B8B0153	Column: BEH C18	
Matrix: Aqueous	Samp Size: 0.250/0.250 L		

Analyte	LCS (ng/L)	LCS Spike Amt	LCS % Rec	LCS Quals	LCSD (ng/L)	LCSD Spike Amt	LCSD % Rec	RPD	LCSD Quals	%Rec Limits	RPD Limits	LCS Analyzed	LCS Dil	LCSD Analyzed	LCSD Dil
PFBS	38.4	35.4	109		37.0	35.4	104	3.87		70-130		28-Feb-18 10:02	1	28-Feb-18 10:14	1
PFHxA	32.1	40.0	80.2		28.3	40.0	70.8	12.5		70-130		28-Feb-18 10:02	1	28-Feb-18 10:14	1
PFHpA	39.3	40.0	98.4		37.7	40.0	94.2	4.36		70-130		28-Feb-18 10:02	1	28-Feb-18 10:14	1
PFHxS	42.0	36.4	115		37.8	36.4	104	10.5		70-130		28-Feb-18 10:02	1	28-Feb-18 10:14	1
PFOA	40.5	40.0	101		38.0	40.0	95.0	6.39		70-130		28-Feb-18 10:02	1	28-Feb-18 10:14	1
PFNA	36.3	40.0	90.6		34.7	40.0	86.8	4.35		70-130		28-Feb-18 10:02	1	28-Feb-18 10:14	1
PFOS	37.6	37.0	102		35.6	37.0	96.3	5.24		70-130		28-Feb-18 10:02	1	28-Feb-18 10:14	1
PFDA	35.7	40.0	89.2		33.0	40.0	82.4	7.99		70-130		28-Feb-18 10:02	1	28-Feb-18 10:14	1
MeFOSAA	52.2	40.0	130		45.5	40.0	114	13.7		70-130		28-Feb-18 10:02	1	28-Feb-18 10:14	1
EtFOSAA	42.9	40.0	107		42.4	40.0	106	1.26		70-130		28-Feb-18 10:02	1	28-Feb-18 10:14	1
PFUnA	34.5	40.0	86.3		35.0	40.0	87.5	1.35		70-130		28-Feb-18 10:02	1	28-Feb-18 10:14	1
PFDoA	39.1	40.0	97.6		33.8	40.0	84.5	14.5		70-130		28-Feb-18 10:02	1	28-Feb-18 10:14	1
PFTTrDA	33.8	40.0	84.6		33.9	40.0	84.6	0.0614		70-130		28-Feb-18 10:02	1	28-Feb-18 10:14	1
PFTeDA	33.9	40.0	84.7		33.4	40.0	83.4	1.53		70-130		28-Feb-18 10:02	1	28-Feb-18 10:14	1

Labeled Standards	Type	LCS % Rec	LCS Quals	LCSD % Rec	LCSD Quals	Limits	LCS Analyzed	LCS Dil	LCSD Analyzed	LCSD Dil
13C2-PFHxA	SURR	89.8		92.9		70-130	28-Feb-18 10:02	1	28-Feb-18 10:14	1
13C2-PFDA	SURR	82.2		85.6		70-130	28-Feb-18 10:02	1	28-Feb-18 10:14	1
d5-EtFOSAA	SURR	91.4		94.7		70-130	28-Feb-18 10:02	1	28-Feb-18 10:14	1

**Sample ID: WI-A06-RW13-0218** **EPA Method 537**

Client Data				Laboratory Data			
Name:	CH2M Hill	Matrix:	Drinking Water	Lab Sample:	1800322-01	Column:	BEH C18
Project:	CTO-4041 Clean Whidbey Island	Date Collected:	13-Feb-18 15:51	Date Received:	16-Feb-18 09:02		

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.437	4.94	9.87		B8B0124	20-Feb-18	0.253 L	24-Feb-18 21:58	1
PFHxA	0.676	0.654	4.94	9.87	J	B8B0124	20-Feb-18	0.253 L	24-Feb-18 21:58	1
PFHpA	ND	0.526	4.94	9.87		B8B0124	20-Feb-18	0.253 L	24-Feb-18 21:58	1
PFHxS	ND	0.410	4.94	9.87		B8B0124	20-Feb-18	0.253 L	24-Feb-18 21:58	1
PFOA	ND	1.07	4.94	9.87		B8B0124	20-Feb-18	0.253 L	24-Feb-18 21:58	1
PFNA	ND	1.42	4.94	9.87		B8B0124	20-Feb-18	0.253 L	24-Feb-18 21:58	1
PFOS	ND	1.03	4.94	9.87		B8B0124	20-Feb-18	0.253 L	24-Feb-18 21:58	1
PFDA	ND	1.26	4.94	9.87		B8B0124	20-Feb-18	0.253 L	24-Feb-18 21:58	1
MeFOSAA	ND	3.00	4.94	9.87		B8B0124	20-Feb-18	0.253 L	24-Feb-18 21:58	1
EtFOSAA	ND	1.90	4.94	9.87		B8B0124	20-Feb-18	0.253 L	24-Feb-18 21:58	1
PFOxA	ND	0.252	4.94	9.87		B8B0124	20-Feb-18	0.253 L	24-Feb-18 21:58	1
PFDoA	ND	0.940	4.94	9.87		B8B0124	20-Feb-18	0.253 L	24-Feb-18 21:58	1
PFTTrDA	ND	0.931	4.94	9.87		B8B0124	20-Feb-18	0.253 L	24-Feb-18 21:58	1
PFTeDA	ND	0.767	4.94	9.87		B8B0124	20-Feb-18	0.253 L	24-Feb-18 21:58	1
Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
13C2-PFHxA	SURR	108	70 - 130		B8B0124	20-Feb-18	0.253 L	24-Feb-18 21:58	1	
13C2-PFDA	SURR	83.0	70 - 130		B8B0124	20-Feb-18	0.253 L	24-Feb-18 21:58	1	
d5-EtFOSAA	SURR	79.1	70 - 130		B8B0124	20-Feb-18	0.253 L	24-Feb-18 21:58	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: WI-A06-FB13-0218** **EPA Method 537**

Client Data				Laboratory Data			
Name:	CH2M Hill	Matrix:	Drinking Water	Lab Sample:	1800322-02	Column:	BEH C18
Project:	CTO-4041 Clean Whidbey Island	Date Collected:	13-Feb-18 15:52	Date Received:	16-Feb-18 09:02		

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.437	4.94	9.87		B8B0124	20-Feb-18	0.253 L	24-Feb-18 22:10	1
PFHxA	ND	0.654	4.94	9.87		B8B0124	20-Feb-18	0.253 L	24-Feb-18 22:10	1
PFHpA	ND	0.526	4.94	9.87		B8B0124	20-Feb-18	0.253 L	24-Feb-18 22:10	1
PFHxS	ND	0.410	4.94	9.87		B8B0124	20-Feb-18	0.253 L	24-Feb-18 22:10	1
PFOA	ND	1.07	4.94	9.87		B8B0124	20-Feb-18	0.253 L	24-Feb-18 22:10	1
PFNA	ND	1.42	4.94	9.87		B8B0124	20-Feb-18	0.253 L	24-Feb-18 22:10	1
PFOS	ND	1.03	4.94	9.87		B8B0124	20-Feb-18	0.253 L	24-Feb-18 22:10	1
PFDA	ND	1.26	4.94	9.87		B8B0124	20-Feb-18	0.253 L	24-Feb-18 22:10	1
MeFOSAA	ND	3.00	4.94	9.87		B8B0124	20-Feb-18	0.253 L	24-Feb-18 22:10	1
EtFOSAA	ND	1.90	4.94	9.87		B8B0124	20-Feb-18	0.253 L	24-Feb-18 22:10	1
PFOA	ND	0.252	4.94	9.87		B8B0124	20-Feb-18	0.253 L	24-Feb-18 22:10	1
PFDoA	ND	0.940	4.94	9.87		B8B0124	20-Feb-18	0.253 L	24-Feb-18 22:10	1
PFTeDA	ND	0.931	4.94	9.87		B8B0124	20-Feb-18	0.253 L	24-Feb-18 22:10	1
PFTeDA	ND	0.767	4.94	9.87		B8B0124	20-Feb-18	0.253 L	24-Feb-18 22:10	1
Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
13C2-PFHxA	SURR	91.2	70 - 130		B8B0124	20-Feb-18	0.253 L	24-Feb-18 22:10	1	
13C2-PFDA	SURR	81.5	70 - 130		B8B0124	20-Feb-18	0.253 L	24-Feb-18 22:10	1	
d5-EtFOSAA	SURR	102	70 - 130		B8B0124	20-Feb-18	0.253 L	24-Feb-18 22:10	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.

**Sample ID: WI-A06-RW14-0218** **EPA Method 537**

Client Data				Laboratory Data			
Name:	CH2M Hill	Matrix:	Drinking Water	Lab Sample:	1800322-03	Column:	BEH C18
Project:	CTO-4041 Clean Whidbey Island	Date Collected:	14-Feb-18 09:25	Date Received:	16-Feb-18 09:02		

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	58.0	0.453	5.12	10.2		B8B0124	20-Feb-18	0.244 L	26-Feb-18 08:28	1
PFHxA	60.5	0.679	5.12	10.2		B8B0124	20-Feb-18	0.244 L	26-Feb-18 08:28	1
PFHpA	16.3	0.546	5.12	10.2		B8B0124	20-Feb-18	0.244 L	26-Feb-18 08:28	1
PFHxS	260	2.12	25.6	51.2	D	B8B0124	20-Feb-18	0.244 L	28-Feb-18 11:33	5
PFOA	21.8	1.11	5.12	10.2		B8B0124	20-Feb-18	0.244 L	26-Feb-18 08:28	1
PFNA	ND	1.47	5.12	10.2		B8B0124	20-Feb-18	0.244 L	26-Feb-18 08:28	1
PFOS	7.68	1.06	5.12	10.2	J	B8B0124	20-Feb-18	0.244 L	26-Feb-18 08:28	1
PFDA	ND	1.31	5.12	10.2		B8B0124	20-Feb-18	0.244 L	26-Feb-18 08:28	1
MeFOSAA	ND	3.11	5.12	10.2		B8B0124	20-Feb-18	0.244 L	26-Feb-18 08:28	1
EtFOSAA	ND	1.98	5.12	10.2		B8B0124	20-Feb-18	0.244 L	26-Feb-18 08:28	1
PFUnA	ND	0.261	5.12	10.2		B8B0124	20-Feb-18	0.244 L	26-Feb-18 08:28	1
PFDoA	ND	0.974	5.12	10.2		B8B0124	20-Feb-18	0.244 L	26-Feb-18 08:28	1
PFTrDA	ND	0.965	5.12	10.2		B8B0124	20-Feb-18	0.244 L	26-Feb-18 08:28	1
PFTeDA	ND	0.795	5.12	10.2		B8B0124	20-Feb-18	0.244 L	26-Feb-18 08:28	1
Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
13C2-PFHxA	SURR	89.4	70 - 130		B8B0124	20-Feb-18	0.244 L	26-Feb-18 08:28	1	
13C2-PFDA	SURR	71.9	70 - 130		B8B0124	20-Feb-18	0.244 L	26-Feb-18 08:28	1	
d5-EtFOSAA	SURR	88.9	70 - 130		B8B0124	20-Feb-18	0.244 L	26-Feb-18 08:28	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: WI-A06-FB14-0218** **EPA Method 537**

Client Data				Laboratory Data			
Name:	CH2M Hill	Matrix:	Drinking Water	Lab Sample:	1800322-04	Column:	BEH C18
Project:	CTO-4041 Clean Whidbey Island	Date Collected:	14-Feb-18 09:26	Date Received:	16-Feb-18 09:02		

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.428	4.83	9.67		B8B0124	20-Feb-18	0.259 L	24-Feb-18 22:35	1
PFHxA	0.665	0.641	4.83	9.67	J	B8B0124	20-Feb-18	0.259 L	24-Feb-18 22:35	1
PFHpA	ND	0.515	4.83	9.67		B8B0124	20-Feb-18	0.259 L	24-Feb-18 22:35	1
PFHxS	ND	0.401	4.83	9.67		B8B0124	20-Feb-18	0.259 L	01-Mar-18 16:48	1
PFOA	ND	1.04	4.83	9.67		B8B0124	20-Feb-18	0.259 L	24-Feb-18 22:35	1
PFNA	ND	1.39	4.83	9.67		B8B0124	20-Feb-18	0.259 L	24-Feb-18 22:35	1
PFOS	ND	1.01	4.83	9.67		B8B0124	20-Feb-18	0.259 L	24-Feb-18 22:35	1
PFDA	ND	1.24	4.83	9.67		B8B0124	20-Feb-18	0.259 L	24-Feb-18 22:35	1
MeFOSAA	ND	2.94	4.83	9.67		B8B0124	20-Feb-18	0.259 L	24-Feb-18 22:35	1
EtFOSAA	ND	1.87	4.83	9.67		B8B0124	20-Feb-18	0.259 L	24-Feb-18 22:35	1
PFUnA	ND	0.247	4.83	9.67		B8B0124	20-Feb-18	0.259 L	24-Feb-18 22:35	1
PFDoA	ND	0.920	4.83	9.67		B8B0124	20-Feb-18	0.259 L	24-Feb-18 22:35	1
PFTrDA	ND	0.912	4.83	9.67		B8B0124	20-Feb-18	0.259 L	24-Feb-18 22:35	1
PFTeDA	ND	0.751	4.83	9.67		B8B0124	20-Feb-18	0.259 L	24-Feb-18 22:35	1
Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
13C2-PFHxA	SURR	98.2	70 - 130		B8B0124	20-Feb-18	0.259 L	24-Feb-18 22:35	1	
13C2-PFDA	SURR	76.6	70 - 130		B8B0124	20-Feb-18	0.259 L	24-Feb-18 22:35	1	
d5-EtFOSAA	SURR	79.6	70 - 130		B8B0124	20-Feb-18	0.259 L	24-Feb-18 22:35	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: WI-A06-RW15-0218** **EPA Method 537**

Client Data				Laboratory Data			
Name:	CH2M Hill	Matrix:	Drinking Water	Lab Sample:	1800322-05	Column:	BEH C18
Project:	CTO-4041 Clean Whidbey Island	Date Collected:	14-Feb-18 10:03	Date Received:	16-Feb-18 09:02		

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.435	4.90	9.81		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:39	1
PFHxA	ND	0.650	4.90	9.81		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:39	1
PFHpA	ND	0.523	4.90	9.81		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:39	1
PFHxS	ND	0.407	4.90	9.81		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:39	1
PFOA	ND	1.06	4.90	9.81		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:39	1
PFNA	ND	1.41	4.90	9.81		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:39	1
PFOS	ND	1.02	4.90	9.81		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:39	1
PFDA	ND	1.26	4.90	9.81		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:39	1
MeFOSAA	ND	2.98	4.90	9.81		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:39	1
EtFOSAA	ND	1.89	4.90	9.81		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:39	1
PFOA	ND	0.250	4.90	9.81		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:39	1
PFDoA	ND	0.934	4.90	9.81		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:39	1
PFTDA	ND	0.925	4.90	9.81		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:39	1
PFTeDA	ND	0.762	4.90	9.81		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:39	1
Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
13C2-PFHxA	SURR	98.0	70 - 130		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:39	1	
13C2-PFDA	SURR	90.0	70 - 130		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:39	1	
d5-EtFOSAA	SURR	85.0	70 - 130		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:39	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: WI-A06-FB15-0218** **EPA Method 537**

Client Data				Laboratory Data			
Name:	CH2M Hill	Matrix:	Drinking Water	Lab Sample:	1800322-06	Column:	BEH C18
Project:	CTO-4041 Clean Whidbey Island	Date Collected:	14-Feb-18 10:04	Date Received:	16-Feb-18 09:02		

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.435	4.90	9.82		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:51	1
PFHxA	ND	0.651	4.90	9.82		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:51	1
PFHpA	ND	0.523	4.90	9.82		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:51	1
PFHxS	ND	0.407	4.90	9.82		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:51	1
PFOA	ND	1.06	4.90	9.82		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:51	1
PFNA	ND	1.41	4.90	9.82		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:51	1
PFOS	ND	1.02	4.90	9.82		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:51	1
PFDA	ND	1.26	4.90	9.82		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:51	1
MeFOSAA	ND	2.98	4.90	9.82		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:51	1
EtFOSAA	ND	1.89	4.90	9.82		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:51	1
PFUnA	ND	0.250	4.90	9.82		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:51	1
PFDoA	ND	0.934	4.90	9.82		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:51	1
PFTriDA	ND	0.926	4.90	9.82		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:51	1
PFTeDA	ND	0.763	4.90	9.82		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:51	1
Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
13C2-PFHxA	SURR	98.4	70 - 130		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:51	1	
13C2-PFDA	SURR	89.7	70 - 130		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:51	1	
d5-EtFOSAA	SURR	103	70 - 130		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:51	1	

DL - Detection Limit

LOD - Limit of Detection  
LOQ - Limit of quantitation

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

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

**Sample ID: WI-A06-RW16-0218**

**EPA Method 537**

Client Data				Laboratory Data			
Name:	CH2M Hill	Matrix:	Drinking Water	Lab Sample:	1800322-07	Column:	BEH C18
Project:	CTO-4041 Clean Whidbey Island	Date Collected:	14-Feb-18 11:04	Date Received:	16-Feb-18 09:02		

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.446	5.04	10.1		B8B0124	20-Feb-18	0.248 L	24-Feb-18 23:12	1
PFHxA	0.906	0.668	5.04	10.1	J	B8B0124	20-Feb-18	0.248 L	24-Feb-18 23:12	1
PFHpA	ND	0.537	5.04	10.1		B8B0124	20-Feb-18	0.248 L	24-Feb-18 23:12	1
PFHxS	ND	0.418	5.04	10.1		B8B0124	20-Feb-18	0.248 L	24-Feb-18 23:12	1
PFOA	ND	1.09	5.04	10.1		B8B0124	20-Feb-18	0.248 L	24-Feb-18 23:12	1
PFNA	ND	1.45	5.04	10.1		B8B0124	20-Feb-18	0.248 L	24-Feb-18 23:12	1
PFOS	ND	1.05	5.04	10.1		B8B0124	20-Feb-18	0.248 L	24-Feb-18 23:12	1
PFDA	ND	1.29	5.04	10.1		B8B0124	20-Feb-18	0.248 L	24-Feb-18 23:12	1
MeFOSAA	ND	3.06	5.04	10.1		B8B0124	20-Feb-18	0.248 L	24-Feb-18 23:12	1
EtFOSAA	ND	1.94	5.04	10.1		B8B0124	20-Feb-18	0.248 L	24-Feb-18 23:12	1
PFUnA	ND	0.257	5.04	10.1		B8B0124	20-Feb-18	0.248 L	24-Feb-18 23:12	1
PFDoA	ND	0.958	5.04	10.1		B8B0124	20-Feb-18	0.248 L	24-Feb-18 23:12	1
PFTrDA	ND	0.949	5.04	10.1		B8B0124	20-Feb-18	0.248 L	24-Feb-18 23:12	1
PFTeDA	ND	0.782	5.04	10.1		B8B0124	20-Feb-18	0.248 L	24-Feb-18 23:12	1
Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
13C2-PFHxA	SURR	95.7	70 - 130		B8B0124	20-Feb-18	0.248 L	24-Feb-18 23:12	1	
13C2-PFDA	SURR	81.7	70 - 130		B8B0124	20-Feb-18	0.248 L	24-Feb-18 23:12	1	
d5-EtFOSAA	SURR	84.9	70 - 130		B8B0124	20-Feb-18	0.248 L	24-Feb-18 23:12	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.

**Sample ID: WI-A06-FB16-0218** **EPA Method 537**

Client Data				Laboratory Data			
Name:	CH2M Hill	Matrix:	Drinking Water	Lab Sample:	1800322-08	Column:	BEH C18
Project:	CTO-4041 Clean Whidbey Island	Date Collected:	14-Feb-18 11:05	Date Received:	16-Feb-18 09:02		

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.431	4.86	9.72		B8B0124	20-Feb-18	0.257 L	24-Feb-18 23:25	1
PFHxA	ND	0.644	4.86	9.72		B8B0124	20-Feb-18	0.257 L	24-Feb-18 23:25	1
PFHpA	ND	0.518	4.86	9.72		B8B0124	20-Feb-18	0.257 L	24-Feb-18 23:25	1
PFHxS	ND	0.403	4.86	9.72		B8B0124	20-Feb-18	0.257 L	24-Feb-18 23:25	1
PFOA	ND	1.05	4.86	9.72		B8B0124	20-Feb-18	0.257 L	24-Feb-18 23:25	1
PFNA	ND	1.40	4.86	9.72		B8B0124	20-Feb-18	0.257 L	24-Feb-18 23:25	1
PFOS	ND	1.01	4.86	9.72		B8B0124	20-Feb-18	0.257 L	24-Feb-18 23:25	1
PFDA	ND	1.24	4.86	9.72		B8B0124	20-Feb-18	0.257 L	24-Feb-18 23:25	1
MeFOSAA	ND	2.96	4.86	9.72		B8B0124	20-Feb-18	0.257 L	24-Feb-18 23:25	1
EtFOSAA	ND	1.88	4.86	9.72		B8B0124	20-Feb-18	0.257 L	24-Feb-18 23:25	1
PFOA	ND	0.248	4.86	9.72		B8B0124	20-Feb-18	0.257 L	24-Feb-18 23:25	1
PFDoA	ND	0.925	4.86	9.72		B8B0124	20-Feb-18	0.257 L	24-Feb-18 23:25	1
PFTeDA	ND	0.917	4.86	9.72		B8B0124	20-Feb-18	0.257 L	24-Feb-18 23:25	1
PFTeDA	ND	0.755	4.86	9.72		B8B0124	20-Feb-18	0.257 L	24-Feb-18 23:25	1
Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
13C2-PFHxA	SURR	106	70 - 130		B8B0124	20-Feb-18	0.257 L	24-Feb-18 23:25	1	
13C2-PFDA	SURR	85.9	70 - 130		B8B0124	20-Feb-18	0.257 L	24-Feb-18 23:25	1	
d5-EtFOSAA	SURR	86.2	70 - 130		B8B0124	20-Feb-18	0.257 L	24-Feb-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.

## **DATA QUALIFIERS & ABBREVIATIONS**

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

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



## CERTIFICATIONS

<b>Accrediting Authority</b>	<b>Certificate Number</b>
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 #: 1800322 Temp: 0.5 °C  
 Storage ID: WR-2 Storage Secured: Yes  No

Project ID: CTO-4041 CLEAN WHIDBEY ISLAND PO#: 10006-7-108336 Sampler: KATE RABE (name)

TAT Standard:  21 days  
 (check one): Rush (surcharge may apply)  
 14 days  7 days Specify: 10 DAY

Invoice to: Name TIFFANY HILL Company CH2M HILL Address 1100 NE CIRCLE BLVD, SUITE 300 City CORVALLIS State OR Ph# 97330 Fax#

Relinquished by (printed name and signature) Kate Rabe Date 2/15/18 Time 0900 Received by (printed name and signature) B. Benedict Beth Briant Date 02/16/18 Time 0913

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

Method of Shipment: \_\_\_\_\_  
 Tracking No.: \_\_\_\_\_

ATTN: \_\_\_\_\_

Sample ID	Date	Time	Location/Sample Description	Add Analysis(es) Requested										Comments						
				Quantity	Type	Matrix	PFDA/ PFOS	UCMR3 PFAS List/6	537 List: 14	Full List of 28	Other: Please List Below	Mod. EPA Method 537	EPA Method 537(DW only)							
WI-A06-RW13-0218	2/13/18	1551		2	P	DW														
WI-A06-FB13-0218	2/13/18	1552		2	P	DW														
WI-A06-RW14-0218	2/14/18	9:25		2	P	DW														
WI-A06-FB14-0218	2/14/18	9:26		2	P	DW														
WI-A06-RW15-0218	2/14/18	10:03		2	P	DW														
WI-A06-FB15-0218	2/14/18	10:04		2	P	DW														
WI-A06-RW16-0218	2/14/18	11:04		2	P	DW														
WI-A06-FB16-0218	2/14/18	11:05		2	P	DW														

Special Instructions/Comments: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

SEND DOCUMENTATION AND RESULTS TO:  
 Name: TIFFANY HILL  
 Company: CH2M HILL  
 Address: 1100 NE CIRCLE BLVD, SUITE 300  
 City: CORVALLIS State: OR Zip: 97330  
 Phone: \_\_\_\_\_ 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 #: 1800322 TAT 10

Samples Arrival:	Date/Time: <u>02/16/18</u> <u>0902</u> <u>0909</u>	Initials: <u>UBB</u>	Location: <u>WR-2</u>
Logged In:	Date/Time: <u>02/16/18</u> <u>1247</u>	Initials: <u>UBB</u>	Location: <u>NR-2</u>
Delivered By:	<input checked="" type="checkbox"/> FedEx	<input type="checkbox"/> UPS	<input type="checkbox"/> On Trac
	<input type="checkbox"/> GSO	<input type="checkbox"/> DHL	<input type="checkbox"/> Hand Delivered
	<input type="checkbox"/> Other		
Preservation:	<input checked="" type="checkbox"/> Ice	<input type="checkbox"/> Blue Ice	<input type="checkbox"/> Dry Ice
	<input type="checkbox"/> None		
Temp °C: <u>0.6</u> (uncorrected)	Time: <u>0914</u>	Thermometer ID: <u>IR-4</u>	
Temp °C: <u>0.5</u> (corrected)	Probe used: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		

	YES	NO	NA
Adequate Sample Volume Received?	<input checked="" type="checkbox"/>		
Holding Time Acceptable?	<input checked="" type="checkbox"/>		
Shipping Container(s) Intact?	<input checked="" type="checkbox"/>		
Shipping Custody Seals Intact?	<input checked="" type="checkbox"/>		
Shipping Documentation Present?	<input checked="" type="checkbox"/>		
Airbill	<input checked="" type="checkbox"/>		
Trk # <u>807984197628</u>	<input checked="" type="checkbox"/>		
Sample Container Intact?	<input checked="" type="checkbox"/>		
Sample Custody Seals Intact?			<input checked="" type="checkbox"/>
Chain of Custody / Sample Documentation Present?	<input checked="" type="checkbox"/>		
COC Anomaly/Sample Acceptance Form completed?		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
If Chlorinated or Drinking Water Samples, Acceptable Preservation?	<input checked="" type="checkbox"/>		
Preservation Documented:	<input type="checkbox"/> Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	<input checked="" type="checkbox"/> Trizma	<input type="checkbox"/> None
	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA
Shipping Container	<input checked="" type="checkbox"/> Vista	<input type="checkbox"/> Client	<input checked="" type="checkbox"/> Retain
	<input type="checkbox"/> Return	<input type="checkbox"/> Dispose	

Comments:

## **EXTRACTION INFORMATION**

Process Sheet  
**Workorder: 1800322**



Prep Expiration: 2018-Feb-27  
 Client: CH2M Hill

**Workorder Due: 26-Feb-18 00:00**

TAT: 10

Method: **537 PFAS DW DoD Unmodified**  
 Matrix: **Aqueous**

Prep Batch: B8B0124

Version: 14 Analytes  
 DoD: **DoD QSM 5.1**

Prep Data Entered: 2.22.18 FR  
 Date and Initials

Initial Sequence: S08 W59

LabSampleID	A/B	Prep Rec	Spike Rec	ClientSampleID	Comments	Location	Container
1800322-01	A	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	WI-A06-RW13-0218		WR-2 E-2	HDPE Bottle, 250 mL
1800322-02		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	WI-A06-FB13-0218		WR-2 E-2	HDPE Bottle, 250 mL
1800322-03		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	WI-A06-RW14-0218		WR-2 E-2	HDPE Bottle, 250 mL
1800322-04		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	WI-A06-FB14-0218		WR-2 E-2	HDPE Bottle, 250 mL
1800322-05		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	WI-A06-RW15-0218		WR-2 E-2	HDPE Bottle, 250 mL
1800322-06		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	WI-A06-FB15-0218		WR-2 E-2	HDPE Bottle, 250 mL
1800322-07		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	WI-A06-RW16-0218		WR-2 E-2	HDPE Bottle, 250 mL
1800322-08		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	WI-A06-FB16-0218		WR-2 E-2	HDPE Bottle, 250 mL

Pre-Prep Check Out: HN 2/20/18  
 Pre-Prep Check In: NA

Prep Check Out: NA  
 Prep Check In: NA

Prep Reconciled Initials/Date: HN 2/20/18  
 Spike Reconciled Initials/Date: MA 2/20/18  
 VialBoxID: Sumo Hector

PREPARATION BENCH SHEET

Matrix: Aqueous

B8B0124

Chemist: *HC*

Method: 537 PFAS DW DoD Unmodified

Prep Date/Time: 20-Feb-18 12:40

1330  
*HC*

Prepared using: LCMS - SPE Extraction-LCMS

BalanceID: HRMS-9

Cen	VISTA Sample ID	Bottle + Sample (g)	Bottle Only (g)	Sample Amt. (L)	SS/NS CHEM/WIT DATE	SPE	IS CHEM/WIT DATE
<input type="checkbox"/>	B8B0124-BLK1 <i>(A)</i>	NA	NA	(0.250) ✓	<i>HC</i> HN 2-20-18	HN 2/20/18	<i>HC</i> MA 2-21-18
<input type="checkbox"/>	B8B0124-BS1	↓	↓	↓ ✓	↓	↓	↓
<input type="checkbox"/>	B8B0124-BSD1	↓	↓	↓ ✓	↓	↓	↓
<input type="checkbox"/>	1800322-01	280.26	26.95	0.25331 ✓	↓	↓	↓
<input type="checkbox"/>	1800322-02	282.50	29.21	0.25329 ✓	↓	↓	↓
<input type="checkbox"/>	1800322-03	271.70	27.43	0.24427 ✓	↓	↓	↓
<input type="checkbox"/>	1800322-04	285.92	27.34	0.25858 ✓	↓	↓	↓
<input type="checkbox"/>	1800322-05 <i>(B)</i>	288.09	27.83	0.26026 ✓	↓	↓	↓
<input type="checkbox"/>	1800322-06 <i>(B)</i>	287.01	27.69	0.25932 ✓	↓	↓	↓
<input type="checkbox"/>	1800322-07	277.74	29.43	0.24831 ✓	↓	↓	↓
<input type="checkbox"/>	1800322-08	286.41	29.23	0.25718 ✓	↓	↓	↓

SS/IS: *18B0501, 20 µL (V2)* SPE Chem: *Standard X 33, 500mg / 6mL*  
 Lot#: *S17-005658*

NS: *17L2901, 20 µL (V2)* Ele SOLV: *MeOH*  
 Lot#: *J3064809*

IS/RS: *18B0502, 20 µL (V2)* Final Volume(s) *1 mL*

Notes: *(A) 0.25g Trizma added HN 2/20/18*  
*(B) Potential low recovery, may have to RX HN 2/20/18*

Comments: Assume 1 g = 1 mL  
Cen = Centrifuged

Batch: B8B0124

Matrix: Aqueous

LabNumber	WetWeight (Initial)	% Solids (Extraction Solids)	DryWeight	Final	Extracted	Ext By	Spike	SpikeAmount	ClientMatrix	Analysis
1800322-01	0.25331 -	NA	NA	1000	20-Feb-18 13:30	HAC			Drinking Water	537 PFAS DW DoD Unmoc
1800322-02	0.25329 -			1000	20-Feb-18 13:30	HAC			Drinking Water	537 PFAS DW DoD Unmoc
1800322-03	0.24427 -			1000	20-Feb-18 13:30	HAC			Drinking Water	537 PFAS DW DoD Unmoc
1800322-04	0.25858 -			1000	20-Feb-18 13:30	HAC			Drinking Water	537 PFAS DW DoD Unmoc
1800322-05	0.26026 -			1000	20-Feb-18 13:30	HAC			Drinking Water	537 PFAS DW DoD Unmoc
1800322-06	0.25932 -			1000	20-Feb-18 13:30	HAC			Drinking Water	537 PFAS DW DoD Unmoc
1800322-07	0.24831 -			1000	20-Feb-18 13:30	HAC			Drinking Water	537 PFAS DW DoD Unmoc
1800322-08	0.25718 -			1000	20-Feb-18 13:30	HAC			Drinking Water	537 PFAS DW DoD Unmoc
B8B0124-BLK1	0.25 -			1000	20-Feb-18 13:30	HAC				QC
B8B0124-BS1	0.25 -			1000	20-Feb-18 13:30	HAC	17L2901 -	20 -		QC
B8B0124-BSD1	0.25 -			1000	20-Feb-18 13:30	HAC	17L2901 -	20 -		QC

FR 2.22.18

Process Sheet  
**Workorder: 1800322**

R4

Prep Expiration: 2018-Feb-27  
 Client: CH2M Hill

**Workorder Due: 26-Feb-18 00:00**

TAT: 10

Method: **537 PFAS DW DoD Unmodified**  
 Matrix: **Aqueous**  
 Client Matrix: Drinking Water

Prep Batch: B8B0153

Version: 14 Analytes  
**DoD: DoD QSM 5.1**

Prep Data Entered: 2-28-18 FR  
 Date and Initials

Initial Sequence: S8B0066

LabSampleID	Recon	ClientSampleID	Date Received	Location	Comments
<del>1800322-01</del>	<input type="checkbox"/>	<del>WI-A06-RW13-0218</del>	16-Feb-18 09:02	WR-2 E-2	
<del>1800322-02</del>	<input type="checkbox"/>	<del>WI-A06-FB13-0218</del>	16-Feb-18 09:02	WR-2 E-2	
<del>1800322-03</del>	<input type="checkbox"/>	<del>WI-A06-RW14-0218</del>	16-Feb-18 09:02	WR-2 E-2	
<del>1800322-04</del>	<input type="checkbox"/>	<del>WI-A06-FB14-0218</del>	16-Feb-18 09:02	WR-2 E-2	
1800322-05 B	<input checked="" type="checkbox"/>	WI-A06-RW15-0218 ✓	16-Feb-18 09:02	WR-2 E-2	
1800322-06 B	<input checked="" type="checkbox"/>	WI-A06-FB15-0218 ✓	16-Feb-18 09:02	WR-2 E-2	
<del>1800322-07</del>	<input type="checkbox"/>	<del>WI-A06-RW16-0218</del>	16-Feb-18 09:02	WR-2 E-2	
<del>1800322-08</del>	<input type="checkbox"/>	<del>WI-A06-FB16-0218</del>	16-Feb-18 09:02	WR-2 E-2	

Vista PM: Martha Maier

Vial Box ID: KAT

Sample Reconciled By: HN KC 2 2/27/18



PREPARATION BENCH SHEET

Matrix: Aqueous

B8B0153

Chemist: KC

Method: 537 PFAS DW DoD Unmodified

Prep Date/Time: 26-Feb-18 07:55  
27 11:40

Prepared using: LCMS - SPE Extraction-LCMS

KC 2/27/18

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
<input type="checkbox"/>	B8B0153-BLK1 (A)	NA	NA	(0.250)	KC FR 2/27/18	KC FR 2/27/18	KC HN 2/27/18
<input type="checkbox"/>	B8B0153-BS1	↓	↓	(0.250)	↓	↓	↓
<input type="checkbox"/>	B8B0153-BSD1	↓	↓	(0.250)			
<input type="checkbox"/>	1800348-01	295.95	37.47	0.25848			
<input type="checkbox"/>	1800348-02	295.80	37.40	0.25840			
<input type="checkbox"/>	1800348-03	294.15	37.58	0.25657			
<input type="checkbox"/>	1800348-04	295.24	37.61	0.25763			
<input type="checkbox"/>	1800363-01	289.30	28.08	0.26122			
<input type="checkbox"/>	1800363-02	290.60	27.87	0.26273			
<input type="checkbox"/>	1800363-03	284.96	28.34	0.25662			
<input type="checkbox"/>	1800363-04	277.66	27.05	0.25061			
<input checked="" type="checkbox"/>	1800363-05	286.47	28.21	0.25826			
<input type="checkbox"/>	1800363-06	275.47	27.61	0.24786			
<input checked="" type="checkbox"/>	1800363-07	284.95	27.37	0.25758			
<input checked="" type="checkbox"/>	1800363-08	287.72	27.93	0.25979			
<input type="checkbox"/>	1800363-09	283.49	28.04	0.25545			

SS/IS: 18B0501, 20µL (V2)  
 NS: 17L2901, 10µL (V2)  
 IS/RS: 18B0502, 20µL (V2)

SPE Chem: Strata-X 330m 500mg 10mL  
 Lot#: 517-005658  
 Ele SOLV: H<sub>2</sub>O/H  
 Lot#: JB0604809  
 Final Volume(s) 1mL

Notes: (A) 1.25 g Trizma added to QCS - HB 2/29 2/27/18  
HB 2/27/18

Comments: Assume 1 g = 1 mL  
 Cen = Centrifuged

PREPARATION BENCH SHEET

Matrix: Aqueous

B8B0153

Chemist: KC

Method: 537 PFAS DW DoD Unmodified

Prep Date/Time: ~~26-Feb-18 07:55~~  
 27 11:40  
 KC 2/27/18

Prepared using: LCMS - SPE Extraction-LCMS

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
<input type="checkbox"/>	1800363-10	285.69	28.02	0.25767	KC FR 2/27/18	KC FR 2/27/18	KC H/V/2/27/18

SS/IS: <u>18B0501, 20 mL (V2)</u> NS: <u>17L2901, 10 mL (V2)</u> IS/RS: <u>18B0502, 20 mL (V2)</u>	SPE Chem: <u>Strata-X 33 <math>\mu</math>m 500mg/mL</u> Lot#: <u><del>517-000</del> 517-005658 KC</u> Ele SOLV: <u>MeOH</u> Lot#: <u>JB064809</u> Final Volume(s) <u>1 mL</u>	Notes:
--	---	--------

Comments: Assume 1 g = 1 mL  
 Cen = Centrifuged

PREPARATION BENCH SHEET

Matrix: Aqueous

Method: 537 PFAS DW DoD Unmodified

B8B0153

Chemist: KC

Prep Date/Time: 26-Feb-18 07:55

27 11:40  
KC 2/27/18

Prepared using: LCMS - SPE Extraction-LCMS

BalanceID: FIRMS-8

Cen	VISTA Sample ID	Bottle + Sample (g)	Bottle Only (g)	Sample Amt. (L)	SS/NS CHEM/WIT DATE	SPE	IS CHEM/WIT DATE
<input type="checkbox"/>	B8B0153-BLK1					HN 2/27/18	
<input type="checkbox"/>	B8B0153-BS1						
<input type="checkbox"/>	B8B0153-BSD1						
<input type="checkbox"/>	1800322-05RE1	282.50	27.67	0.25483 ✓	KC HN 2/27/18	KC 7R 2/27/18	KC HN 2/27/18
<input type="checkbox"/>	1800322-06RE1	282.36	27.66	0.25470 ✓	↓	↓	↓
<input type="checkbox"/>	1800348-01						
<input type="checkbox"/>	1800348-02						
<input type="checkbox"/>	1800348-03						
<input type="checkbox"/>	1800348-04						
<input type="checkbox"/>	1800363-01						
<input type="checkbox"/>	1800363-02						
<input type="checkbox"/>	1800363-03						
<input type="checkbox"/>	1800363-04						
<input type="checkbox"/>	1800363-05						
<input type="checkbox"/>	1800363-06						
<input checked="" type="checkbox"/>	1800363-07						

SS/IS: 18B0501, 20mL (V2)  
 NS: 7L 2901, 10mL (V2)  
 IS/RS: 18B0502, 20mL (V2)

SPE Chem: Siratax 33um <sup>500mg</sup>/<sub>6ml</sub>  
 Lot#: S17-005658

Ele SOLV: MeOH  
 Lot#: JB064809

Final Volume(s) 1mL

Notes:

Comments: Assume 1 g = 1 mL  
 Cen = Centrifuged

LabNumber	WetWeight (Initial)	% Solids (Extraction Solids)	DryWeight	Final	Extracted	Ext By	Spike	SpikeAmount	ClientMatrix	Analysis
1800322-05RE1	0.25483 -	NA	NA	1000	27-Feb-18 11:40	KC			Drinking Water	537 PFAS DW DoD Unmoc
1800322-06RE1	0.2547 -			1000	27-Feb-18 11:40	KC			Drinking Water	537 PFAS DW DoD Unmoc
1800348-01	0.25848 -			1000	27-Feb-18 11:40	KC			QC Water	537 PFAS DW DoD Unmoc
1800348-02	0.2584 -			1000	27-Feb-18 11:40	KC			Potable Water	537 PFAS DW DoD Unmoc
1800348-03	0.25657 -			1000	27-Feb-18 11:40	KC			Potable Water	537 PFAS DW DoD Unmoc
1800348-04	0.25763 -			1000	27-Feb-18 11:40	KC			Potable Water	537 PFAS DW DoD Unmoc
1800363-01	0.26122 -			1000	27-Feb-18 11:40	KC			Drinking Water	537 PFAS DW DoD Unmoc
1800363-02	0.26273 -			1000	27-Feb-18 11:40	KC			Drinking Water	537 PFAS DW DoD Unmoc
1800363-03	0.25662 -			1000	27-Feb-18 11:40	KC			Drinking Water	537 PFAS DW DoD Unmoc
1800363-04	0.25061 -			1000	27-Feb-18 11:40	KC			Drinking Water	537 PFAS DW DoD Unmoc
1800363-05	0.25826 -			1000	27-Feb-18 11:40	KC			Drinking Water	537 PFAS DW DoD Unmoc
1800363-06	0.24786 -			1000	27-Feb-18 11:40	KC			Drinking Water	537 PFAS DW DoD Unmoc
1800363-07	0.25758 -			1000	27-Feb-18 11:40	KC			Drinking Water	537 PFAS DW DoD Unmoc
1800363-08	0.25979 -			1000	27-Feb-18 11:40	KC			Drinking Water	537 PFAS DW DoD Unmoc
1800363-09	0.25545 -			1000	27-Feb-18 11:40	KC			Drinking Water	537 PFAS DW DoD Unmoc
1800363-10	0.25767 -			1000	27-Feb-18 11:40	KC			Drinking Water	537 PFAS DW DoD Unmoc
B8B0153-BLK1	0.25 -			1000	27-Feb-18 11:40	KC				QC
B8B0153-BS1	0.25 -			1000	27-Feb-18 11:40	KC	17L2901 -	10 -		QC
B8B0153-BSD1	0.25 -			1000	27-Feb-18 11:40	KC	17L2901 -	10 -		QC

FR 2-28-18

**SAMPLE DATA –EPA METHOD 537**

Dataset: X:\G1.PRO\Results\2018\180224G1\180224G1-18.qld

Last Altered: Tuesday, February 27, 2018 10:12:31 Pacific Standard Time

Printed: Tuesday, February 27, 2018 10:13:25 Pacific Standard Time

Method: X:\G1.PRO\MethDB\PFAS\_DW\_L14\_1223.mdb 23 Feb 2018 15:59:15

Calibration: X:\G1.PRO\CurveDB\C18\_537\_Q1\_02-23-18\_L14.cdb 23 Feb 2018 16:46:11

Name: 180224G1\_18, Date: 24-Feb-2018, Time: 21:46:20, ID: B8B0124-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		1.38e4	0.2500		3.01				
2	2 PFHxA	313.2 > 268.9	5.33e1	9.25e3	0.2500		3.35	3.37	0.0577	0.417	
3	3 PFHpA	363 > 318.9	1.38e1	9.25e3	0.2500		3.87	3.89	0.0150	0.0636	
4	4 PFHxS	398.9 > 79.6	2.06e0	1.38e4	0.2500		4.00	4.01	0.00428	0.0245	
5	5 PFOA	413 > 368.7	1.26e2	9.25e3	0.2500		4.30	4.30	0.136	0.650	
6	6 PFNA	463 > 418.8	8.56e0	9.25e3	0.2500		4.64	4.64	0.00926	0.0364	
7	7 PFOS	499 > 79.9	2.01e0	1.38e4	0.2500		4.71	4.71	0.00418	0.0174	
8	8 PFDA	513 > 468.8	6.02e1	9.25e3	0.2500		4.87	4.95	0.0651	0.234	
9	9 N-MeFOSAA	570.1 > 419.0	2.36e0	1.05e4	0.2500		5.01	5.07	0.00895	0.0273	
10	10 N-EtFOSAA	584.2 > 419.0		1.05e4	0.2500		5.19				
11	11 PFUnA	563 > 518.9	4.72e0	9.25e3	0.2500		5.13	5.13	0.00510	0.0203	
12	12 PFDoA	612.9 > 318.8		9.25e3	0.2500		5.33				
13	13 PFTTrDA	662.9 > 618.9		9.25e3	0.2500		5.56				
14	14 PFTeDA	712.9 > 668.8	1.04e1	9.25e3	0.2500		5.73	5.79	0.0112	0.0360	
15	15 13C2-PFHxA	315 > 269.8	6.27e3	9.25e3	0.2500	0.731	3.45	3.37	6.78	37.1	92.7
16	16 13C2-PFDA	515.1 > 469.9	6.83e3	9.25e3	0.2500	0.910	4.90	4.95	7.39	32.5	81.2
17	17 d5-N-EtFOSAA	589.3 > 419.0	1.07e4	1.05e4	0.2500	1.049	5.07	5.19	40.7	155	97.0
18	18 13C2-PFOA	414.9 > 369.7	9.25e3	9.25e3	0.2500	1.000	4.41	4.30	10.0	40.0	100.0
19	19 13C4-PFOS	503.0 > 79.9	1.38e4	1.38e4	0.2500	1.000	4.81	4.71	28.7	115	100.0
20	20 d3-N-MeFOSAA	573.3 > 419.0	1.05e4	1.05e4	0.2500	1.000	5.16	5.07	40.0	160	100.0

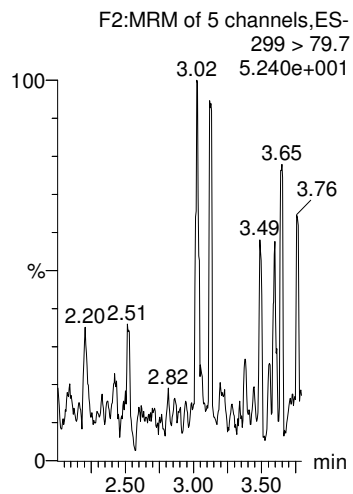
Dataset: X:\G1.PRO\Results\2018\180224G1\180224G1-18.qld

Last Altered: Tuesday, February 27, 2018 10:12:31 Pacific Standard Time  
Printed: Tuesday, February 27, 2018 10:13:25 Pacific Standard Time

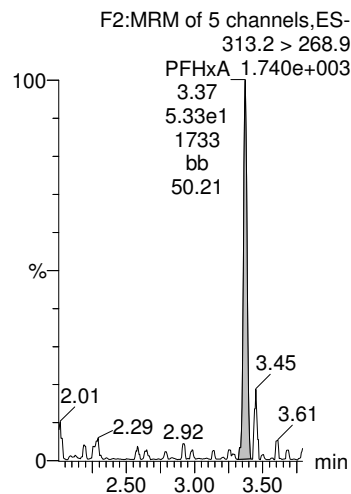
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Calibration: X:\G1.PRO\CurveDB\C18\_537\_Q1\_02-23-18\_L14.cdb 23 Feb 2018 16:46:11

Name: 180224G1\_18, Date: 24-Feb-2018, Time: 21:46:20, ID: B8B0124-BLK1 LRB 0.25, Description: LRB

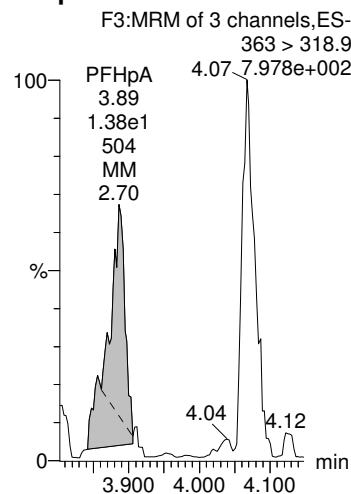
**PFBS**



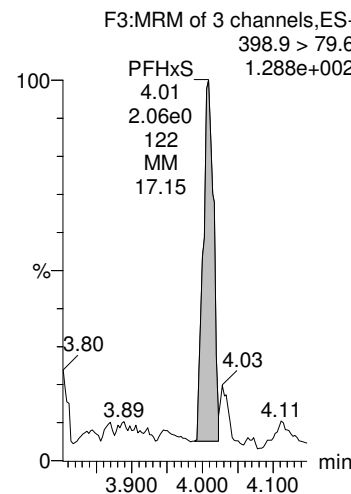
**PFHxA**



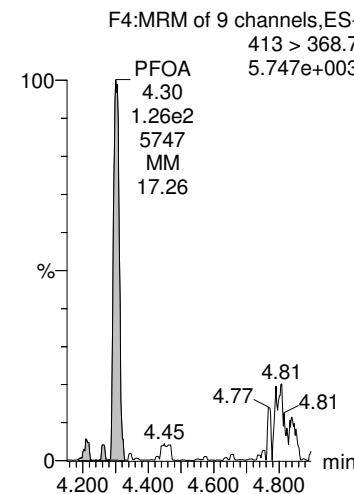
**PFHpA**



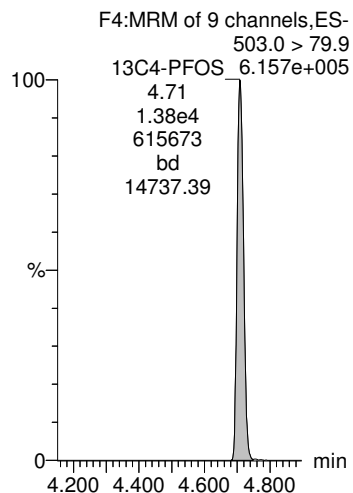
**PFHxS**



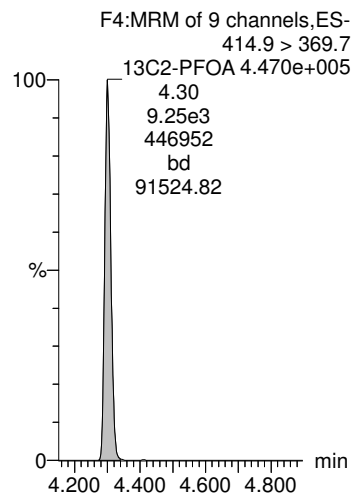
**PFOA**



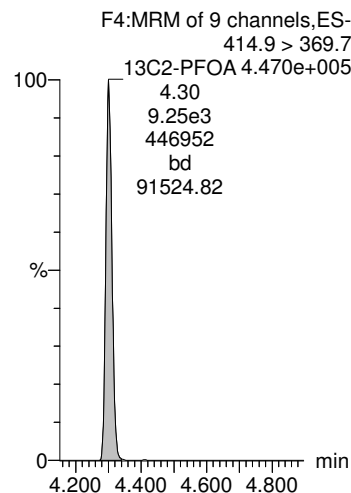
**13C4-PFOS**



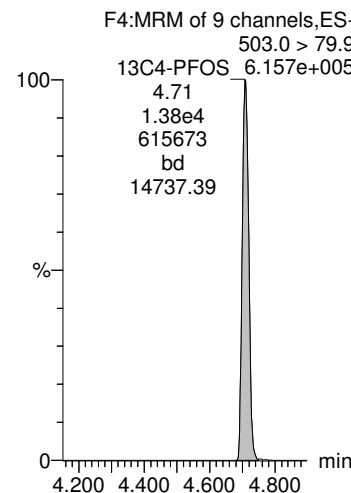
**13C2-PFOA**



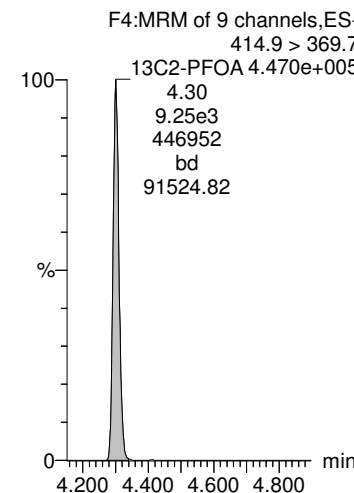
**13C2-PFOA**



**13C4-PFOS**



**13C2-PFOA**

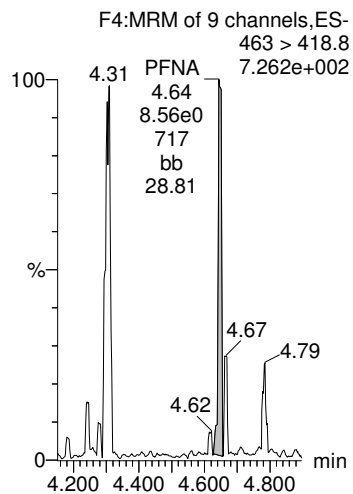


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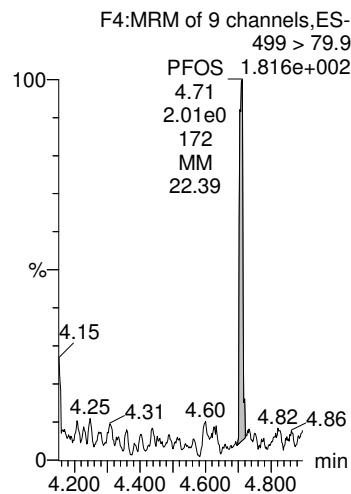
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Printed: Tuesday, February 27, 2018 10:13:25 Pacific Standard Time

Name: 180224G1\_18, Date: 24-Feb-2018, Time: 21:46:20, ID: B8B0124-BLK1 LRB 0.25, Description: LRB

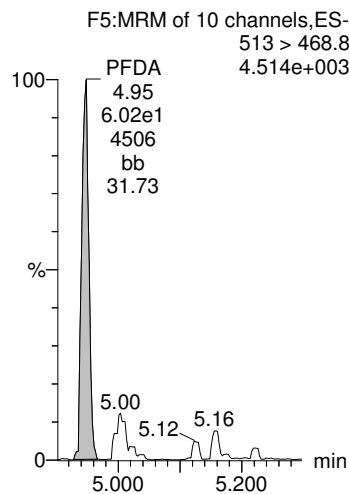
**PFNA**



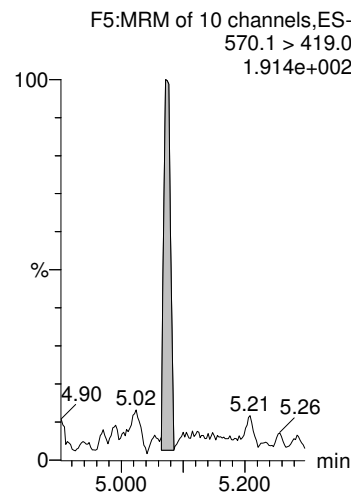
**PFOS**



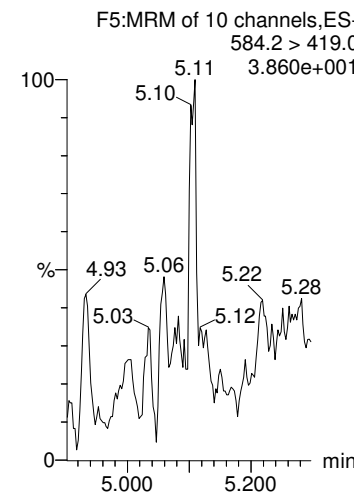
**PFDA**



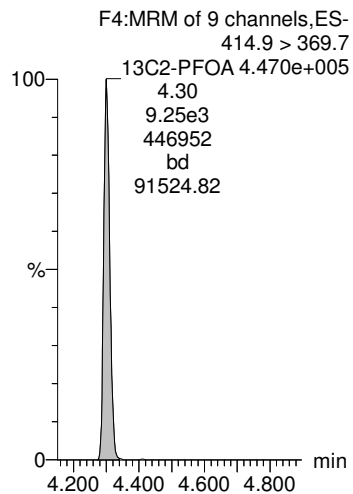
**N-MeFOSAA**



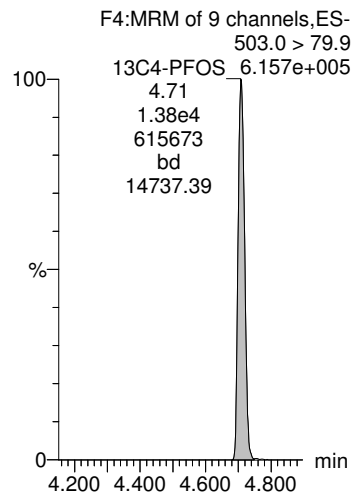
**N-EtFOSAA**



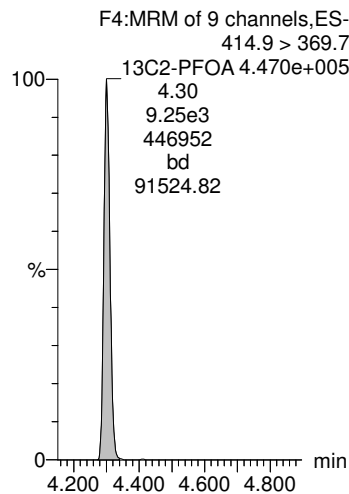
**13C2-PFOA**



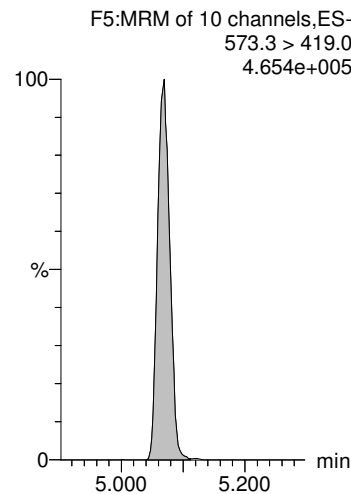
**13C4-PFOS**



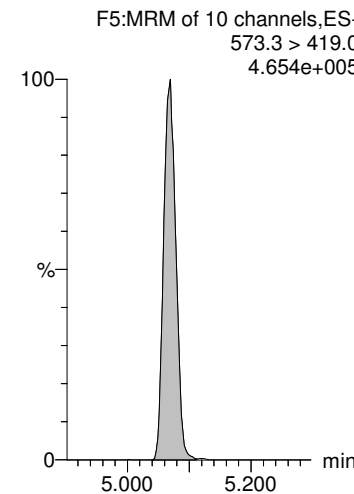
**13C2-PFOA**



**d3-N-MeFOSAA**



**d3-N-MeFOSAA**



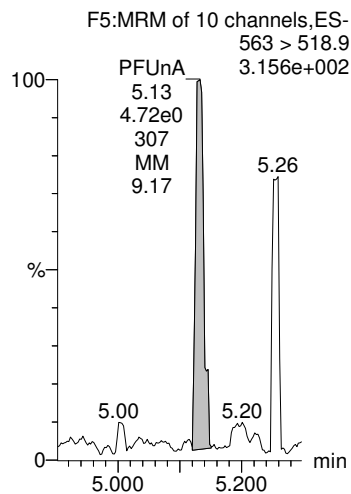


Dataset: X:\G1.PRO\Results\2018\180224G1\180224G1-18.qld

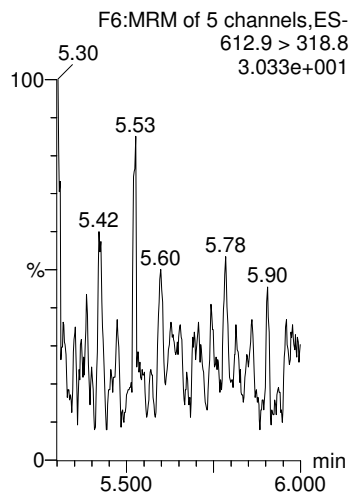
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Printed: Tuesday, February 27, 2018 10:13:25 Pacific Standard Time

Name: 180224G1\_18, Date: 24-Feb-2018, Time: 21:46:20, ID: B8B0124-BLK1 LRB 0.25, Description: LRB

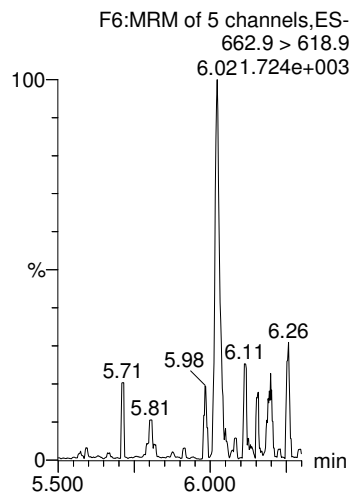
**PFUnA**



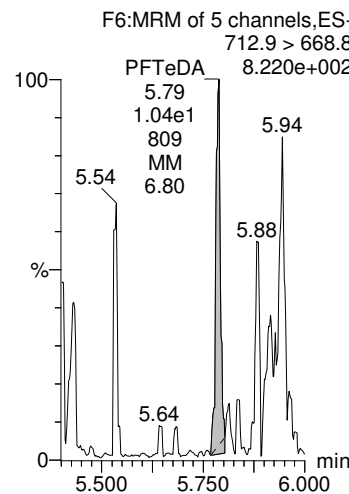
**PFD0A**



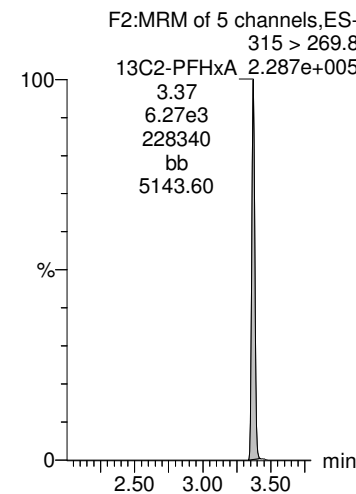
**PFTrDA**



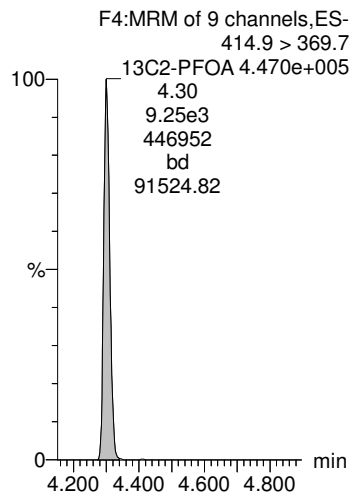
**PFTeDA**



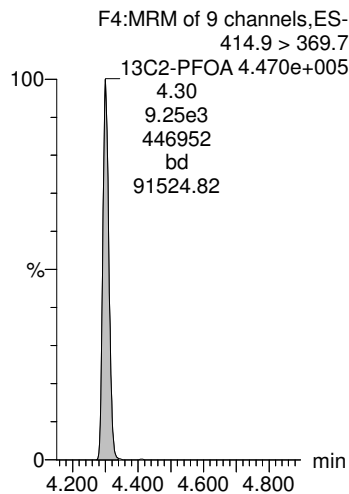
**13C2-PFHxA**



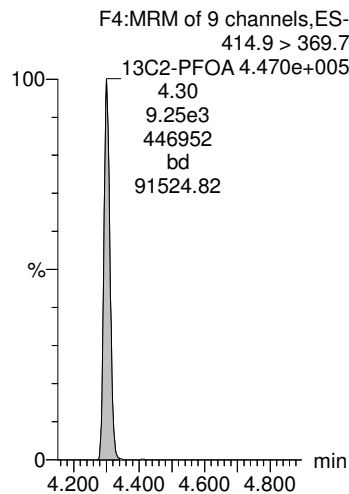
**13C2-PFOA**



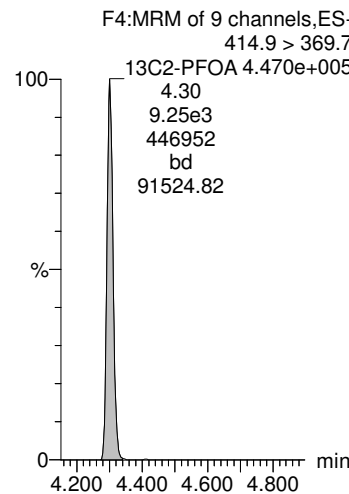
**13C2-PFOA**



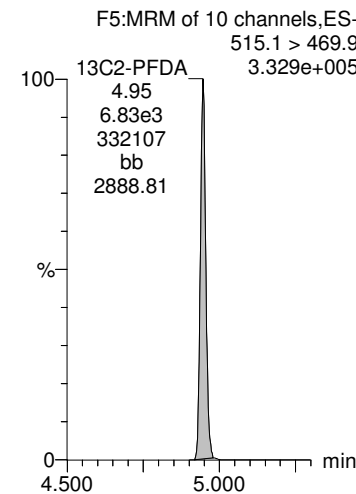
**13C2-PFOA**



**13C2-PFOA**



**13C2-PFDA**



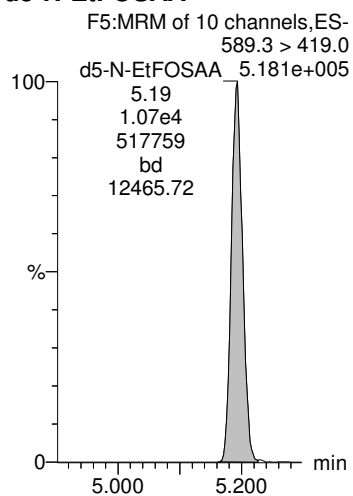
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Last Altered: Tuesday, February 27, 2018 10:12:31 Pacific Standard Time

Printed: Tuesday, February 27, 2018 10:13:25 Pacific Standard Time

Name: 180224G1\_18, Date: 24-Feb-2018, Time: 21:46:20, ID: B8B0124-BLK1 LRB 0.25, Description: LRB

**d5-N-EtFOSAA**



Dataset: X:\G1.PRO\Results\2018\180224G1\180224G1-16.qld

Last Altered: Tuesday, February 27, 2018 10:05:04 Pacific Standard Time

Printed: Tuesday, February 27, 2018 10:05:29 Pacific Standard Time

Method: X:\G1.PRO\MethDB\PFAS\_DW\_L14\_1223.mdb 23 Feb 2018 15:59:15

Calibration: X:\G1.PRO\CurveDB\C18\_537\_Q1\_02-23-18\_L14.cdb 23 Feb 2018 16:46:11

Name: 180224G1\_16, Date: 24-Feb-2018, Time: 21:21:30, ID: B8B0124-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	6.97e3	1.44e4	0.2500		3.01	3.01	13.9	75.9	107.2
2	2 PFHxA	313.2 > 268.9	8.92e3	9.36e3	0.2500		3.35	3.37	9.53	68.9	86.1
3	3 PFHpA	363 > 318.9	1.59e4	9.36e3	0.2500		3.87	3.88	17.0	72.3	90.4
4	4 PFHxS	398.9 > 79.6	7.09e3	1.44e4	0.2500		4.00	4.01	14.1	80.7	112.1
5	5 PFOA	413 > 368.7	1.59e4	9.36e3	0.2500		4.30	4.30	17.0	81.3	101.6
6	6 PFNA	463 > 418.8	1.74e4	9.36e3	0.2500		4.64	4.64	18.5	73.0	91.2
7	7 PFOS	499 > 79.9	8.81e3	1.44e4	0.2500		4.71	4.71	17.5	73.0	98.7
8	8 PFDA	513 > 468.8	1.79e4	9.36e3	0.2500		4.87	4.94	19.1	70.9	88.6
9	9 N-MeFOSAA	570.1 > 419.0	8.35e3	1.22e4	0.2500		5.01	5.07	27.4	80.4	100.5
10	10 N-EtFOSAA	584.2 > 419.0	6.33e3	1.22e4	0.2500		5.19	5.20	20.7	78.3	97.8
11	11 PFUnA	563 > 518.9	1.52e4	9.36e3	0.2500		5.13	5.20	16.3	64.8	80.9
12	12 PFDoA	612.9 > 318.8	2.45e3	9.36e3	0.2500		5.33	5.42	2.62	66.2	82.7
13	13 PFTrDA	662.9 > 618.9	2.30e4	9.36e3	0.2500		5.56	5.61	24.6	71.5	89.4
14	14 PFTeDA	712.9 > 668.8	2.04e4	9.36e3	0.2500		5.73	5.78	21.8	69.7	87.1
15	15 13C2-PFHxA	315 > 269.8	6.76e3	9.36e3	0.2500	0.731	3.45	3.37	7.22	39.5	98.8
16	16 13C2-PFDA	515.1 > 469.9	6.87e3	9.36e3	0.2500	0.910	4.90	4.94	7.34	32.3	80.6
17	17 d5-N-EtFOSAA	589.3 > 419.0	1.05e4	1.22e4	0.2500	1.049	5.07	5.19	34.4	131	82.0
18	18 13C2-PFOA	414.9 > 369.7	9.36e3	9.36e3	0.2500	1.000	4.41	4.30	10.0	40.0	100.0
19	19 13C4-PFOS	503.0 > 79.9	1.44e4	1.44e4	0.2500	1.000	4.81	4.71	28.7	115	100.0
20	20 d3-N-MeFOSAA	573.3 > 419.0	1.22e4	1.22e4	0.2500	1.000	5.16	5.07	40.0	160	100.0

Dataset: X:\G1.PRO\Results\2018\180224G1\180224G1-16.qld

Last Altered: Tuesday, February 27, 2018 10:05:04 Pacific Standard Time

Printed: Tuesday, February 27, 2018 10:05:29 Pacific Standard Time

Method: X:\G1.PRO\MethDB\PFAS\_DW\_L14\_1223.mdb 23 Feb 2018 15:59:15

Calibration: X:\G1.PRO\CurveDB\C18\_537\_Q1\_02-23-18\_L14.cdb 23 Feb 2018 16:46:11

Name: 180224G1\_16, Date: 24-Feb-2018, Time: 21:21:30, ID: B8B0124-BS1 LFB 0.25, Description: LFB

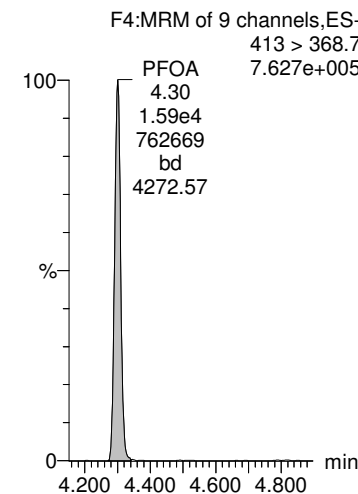
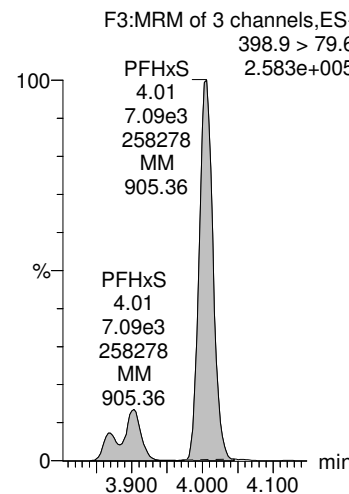
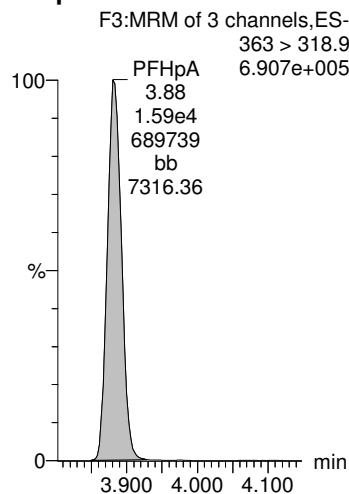
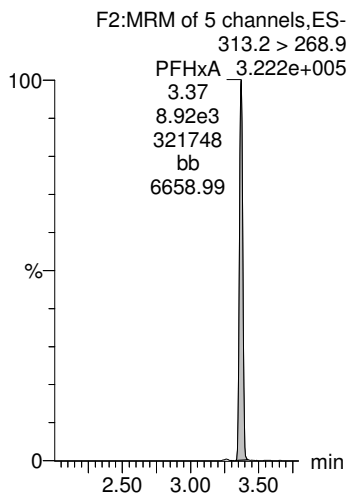
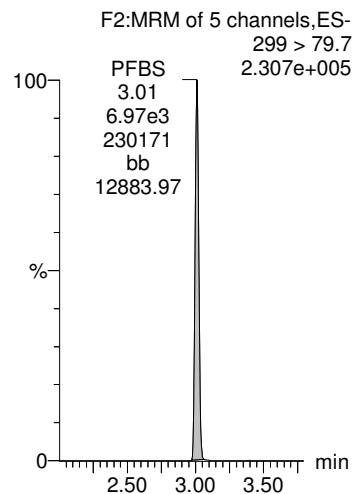
**PFBS**

**PFHxA**

**PFHpA**

**PFHxS**

**PFOA**



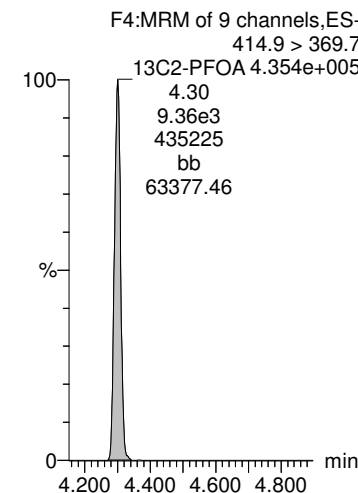
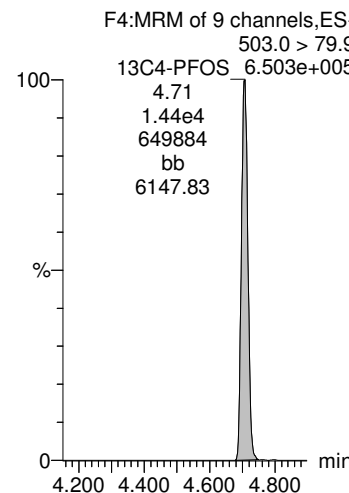
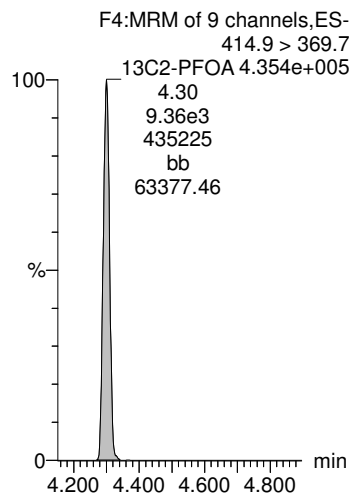
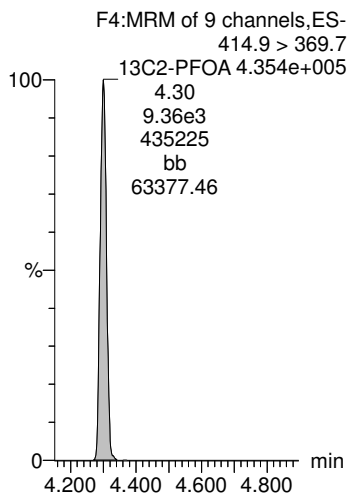
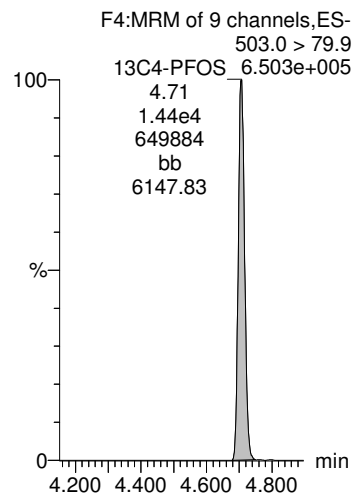
**13C4-PFOS**

**13C2-PFOA**

**13C2-PFOA**

**13C4-PFOS**

**13C2-PFOA**



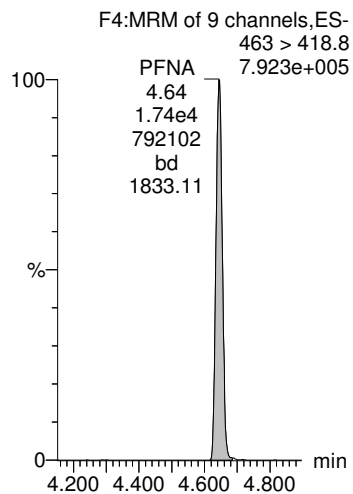
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Last Altered: Tuesday, February 27, 2018 10:05:04 Pacific Standard Time

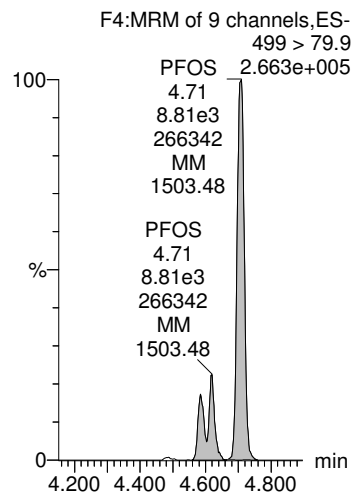
Printed: Tuesday, February 27, 2018 10:05:29 Pacific Standard Time

Name: 180224G1\_16, Date: 24-Feb-2018, Time: 21:21:30, ID: B8B0124-BS1 LFB 0.25, Description: LFB

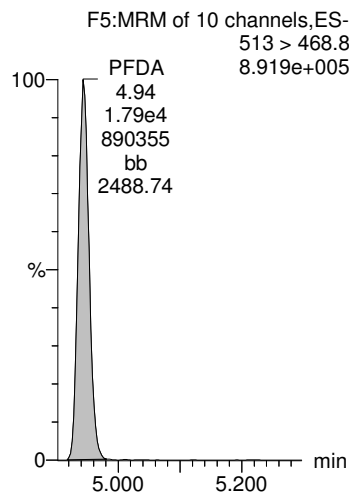
**PFNA**



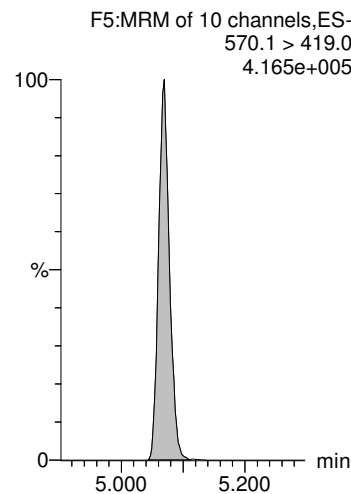
**PFOS**



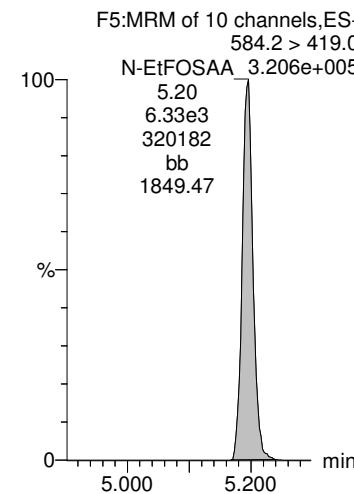
**PFDA**



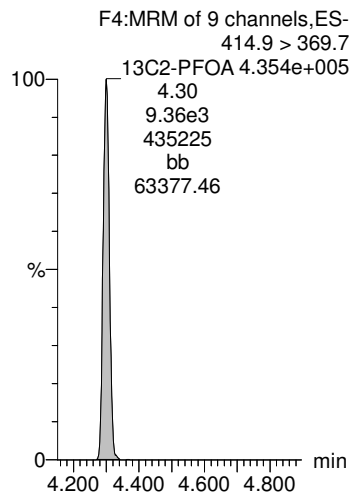
**N-MeFOSAA**



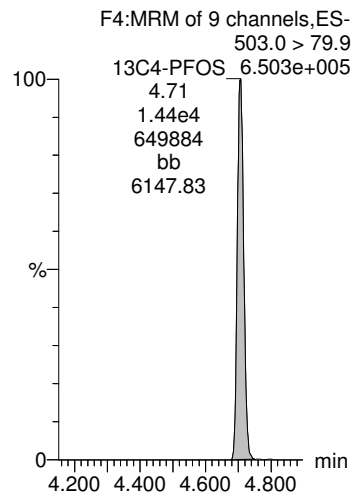
**N-EtFOSAA**



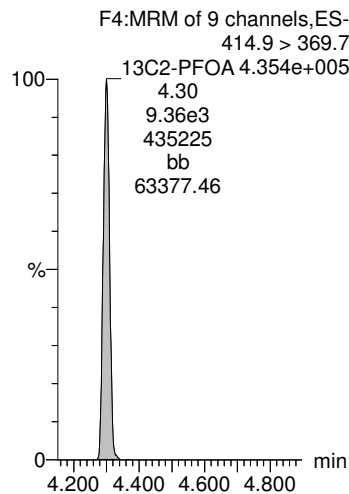
**13C2-PFOA**



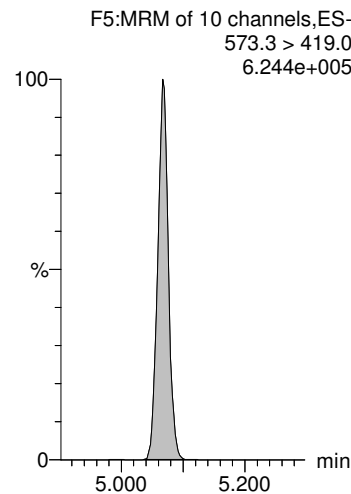
**13C4-PFOS**



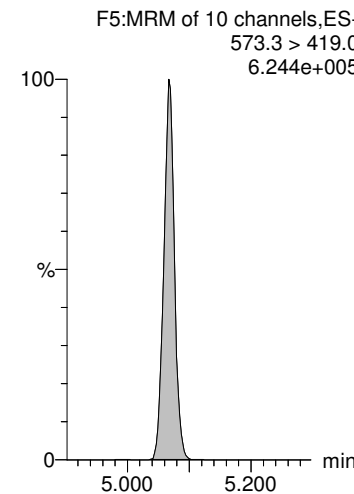
**13C2-PFOA**



**d3-N-MeFOSAA**



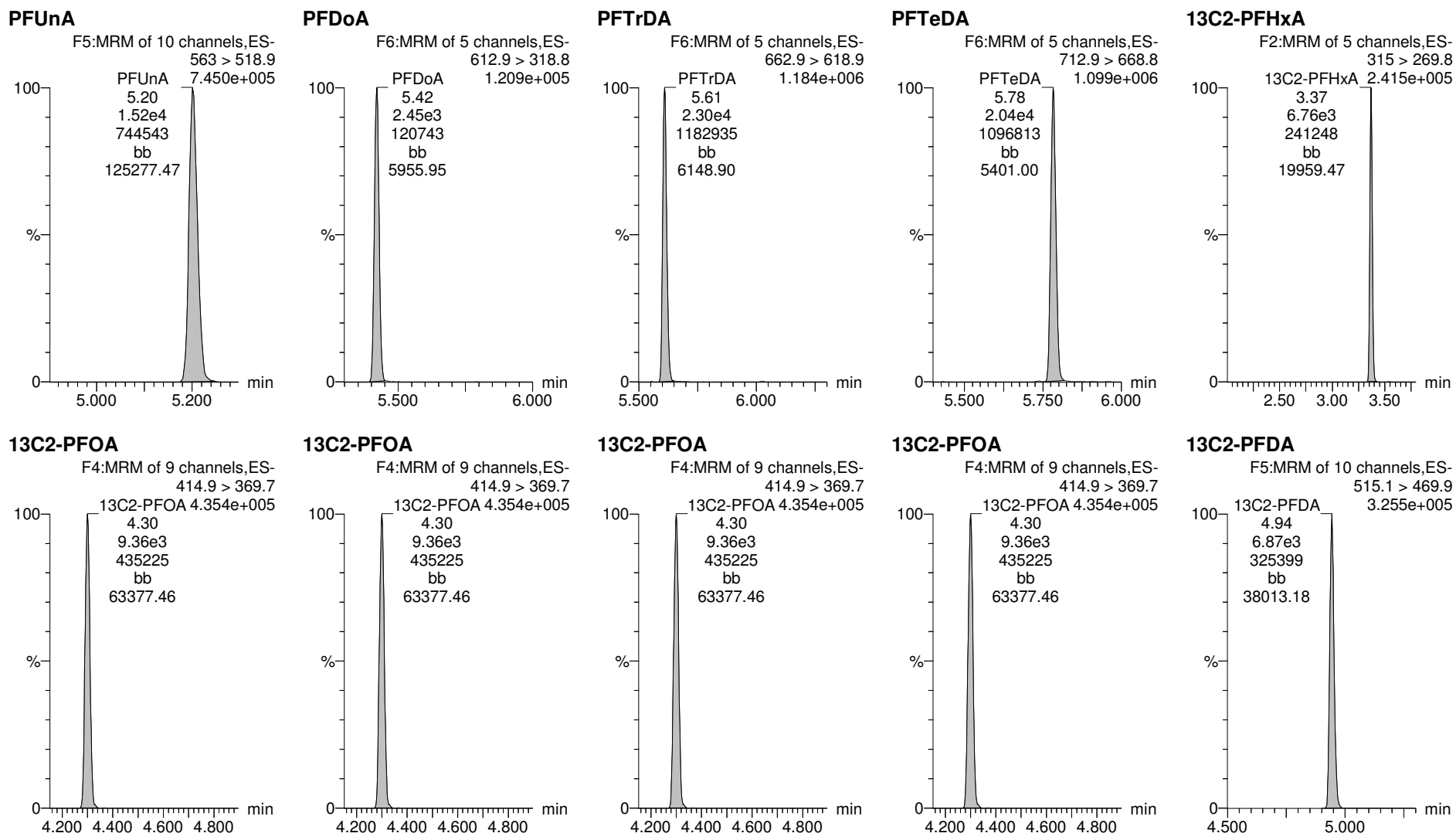
**d3-N-MeFOSAA**



Dataset: X:\G1.PRO\Results\2018\180224G1\180224G1-16.qld

Last Altered: Tuesday, February 27, 2018 10:05:04 Pacific Standard Time  
Printed: Tuesday, February 27, 2018 10:05:29 Pacific Standard Time

Name: 180224G1\_16, Date: 24-Feb-2018, Time: 21:21:30, ID: B8B0124-BS1 LFB 0.25, Description: LFB



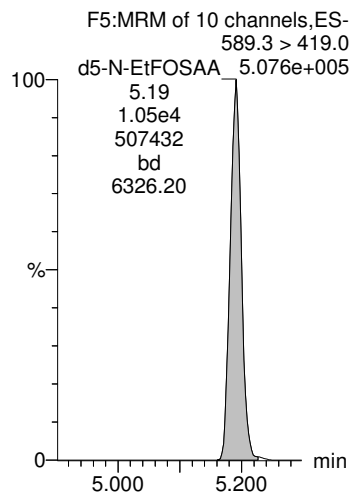
Dataset: X:\G1.PRO\Results\2018\180224G1\180224G1-16.qld

Last Altered: Tuesday, February 27, 2018 10:05:04 Pacific Standard Time

Printed: Tuesday, February 27, 2018 10:05:29 Pacific Standard Time

Name: 180224G1\_16, Date: 24-Feb-2018, Time: 21:21:30, ID: B8B0124-BS1 LFB 0.25, Description: LFB

**d5-N-EtFOSAA**



Dataset: X:\G1.PRO\Results\2018\180224G1\180224G1-17.qld

Last Altered: Tuesday, February 27, 2018 10:01:52 Pacific Standard Time

Printed: Tuesday, February 27, 2018 10:02:58 Pacific Standard Time

Method: X:\G1.PRO\MethDB\PFAS\_DW\_L14\_1223.mdb 23 Feb 2018 15:59:15

Calibration: X:\G1.PRO\CurveDB\C18\_537\_Q1\_02-23-18\_L14.cdb 23 Feb 2018 16:46:11

Name: 180224G1\_17, Date: 24-Feb-2018, Time: 21:33:56, ID: B8B0124-BSD1 LFBD 0.25, Description: LFBD

	# Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	299 > 79.7	6.99e3	1.42e4	0.2500		3.01	3.01	14.1	77.1	108.9
2	2 PFHxA	313.2 > 268.9	9.00e3	8.91e3	0.2500		3.35	3.37	10.1	73.0	91.3
3	3 PFHpA	363 > 318.9	1.66e4	8.91e3	0.2500		3.87	3.88	18.6	79.2	99.1
4	4 PFHxS	398.9 > 79.6	7.00e3	1.42e4	0.2500		3.99	4.00	14.1	80.7	112.0
5	5 PFOA	413 > 368.7	1.45e4	8.91e3	0.2500		4.30	4.30	16.3	77.8	97.2
6	6 PFNA	463 > 418.8	1.77e4	8.91e3	0.2500		4.64	4.64	19.9	78.2	97.8
7	7 PFOS	499 > 79.9	9.09e3	1.42e4	0.2500		4.71	4.71	18.3	76.3	103.1
8	8 PFDA	513 > 468.8	1.74e4	8.91e3	0.2500		4.87	4.94	19.5	72.1	90.2
9	9 N-MeFOSAA	570.1 > 419.0	9.02e3	1.15e4	0.2500		5.01	5.07	31.4	91.9	114.9
10	10 N-EtFOSAA	584.2 > 419.0	5.77e3	1.15e4	0.2500		5.19	5.19	20.1	75.9	94.9
11	11 PFUnA	563 > 518.9	1.57e4	8.91e3	0.2500		5.13	5.20	17.7	70.3	87.9
12	12 PFDoA	612.9 > 318.8	2.90e3	8.91e3	0.2500		5.33	5.42	3.26	82.2	102.8
13	13 PFTrDA	662.9 > 618.9	2.18e4	8.91e3	0.2500		5.56	5.61	24.4	71.1	88.9
14	14 PFTeDA	712.9 > 668.8	1.88e4	8.91e3	0.2500		5.73	5.78	21.1	67.5	84.4
15	15 13C2-PFHxA	315 > 269.8	6.02e3	8.91e3	0.2500	0.731	3.45	3.37	6.76	37.0	92.5
16	16 13C2-PFDA	515.1 > 469.9	7.17e3	8.91e3	0.2500	0.910	4.90	4.94	8.05	35.4	88.5
17	17 d5-N-EtFOSAA	589.3 > 419.0	1.16e4	1.15e4	0.2500	1.049	5.07	5.19	40.6	155	96.7
18	18 13C2-PFOA	414.9 > 369.7	8.91e3	8.91e3	0.2500	1.000	4.41	4.30	10.0	40.0	100.0
19	19 13C4-PFOS	503.0 > 79.9	1.42e4	1.42e4	0.2500	1.000	4.81	4.71	28.7	115	100.0
20	20 d3-N-MeFOSAA	573.3 > 419.0	1.15e4	1.15e4	0.2500	1.000	5.16	5.07	40.0	160	100.0



Dataset: X:\G1.PRO\Results\2018\180224G1\180224G1-17.qld

Last Altered: Tuesday, February 27, 2018 10:01:52 Pacific Standard Time

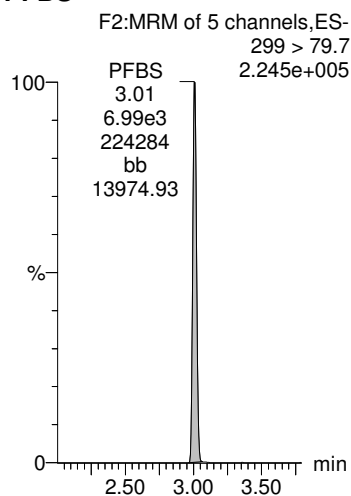
Printed: Tuesday, February 27, 2018 10:02:58 Pacific Standard Time

Method: X:\G1.PRO\MethDB\PFAS\_DW\_L14\_1223.mdb 23 Feb 2018 15:59:15

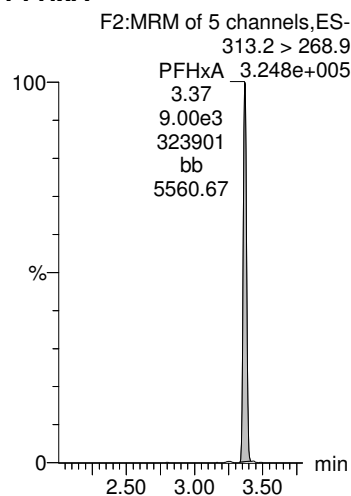
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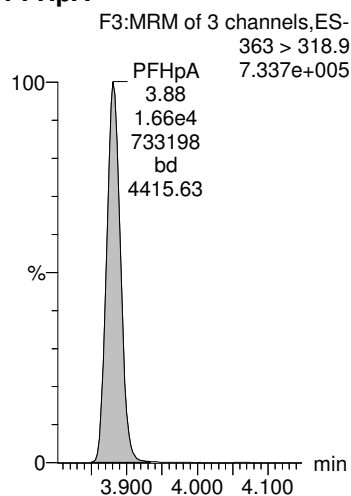
**PFBS**



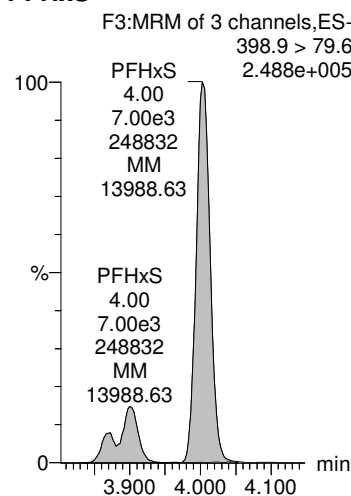
**PFHxA**



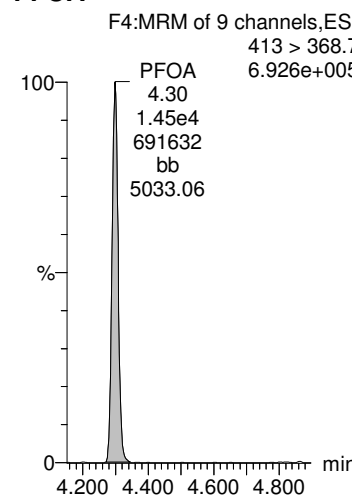
**PFHpA**



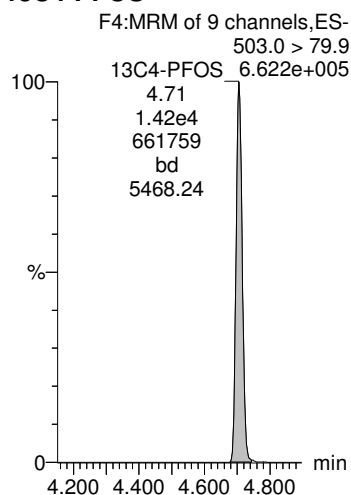
**PFHxS**



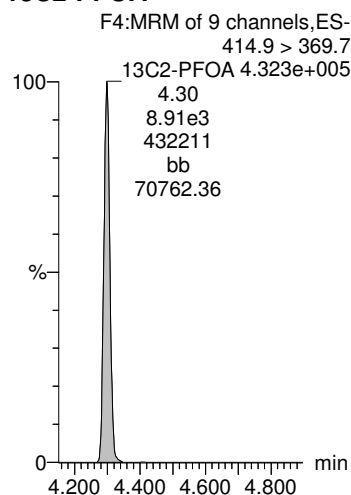
**PFOA**



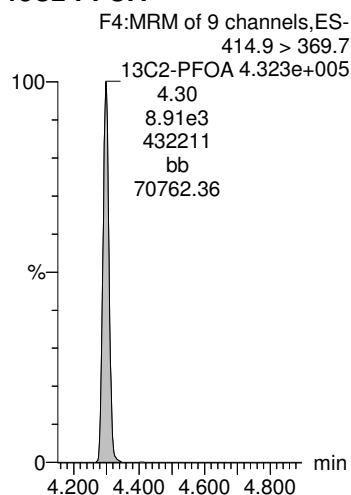
**13C4-PFOS**



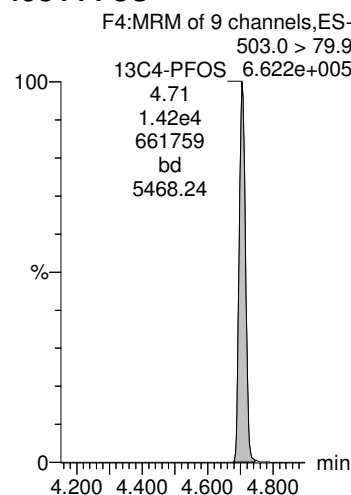
**13C2-PFOA**



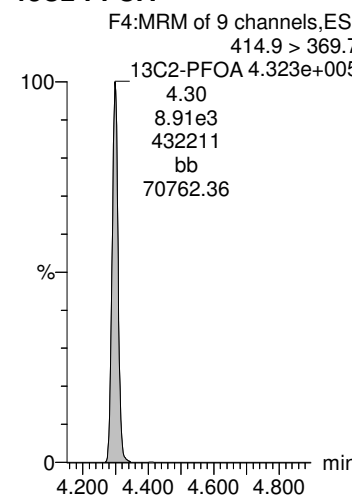
**13C2-PFOA**



**13C4-PFOS**



**13C2-PFOA**

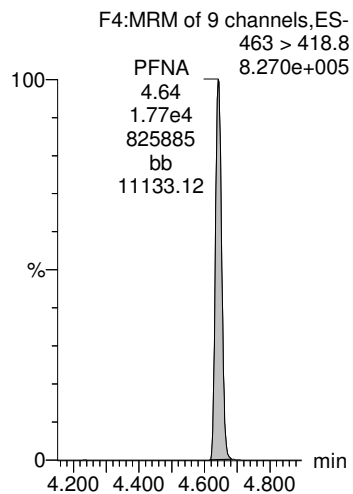


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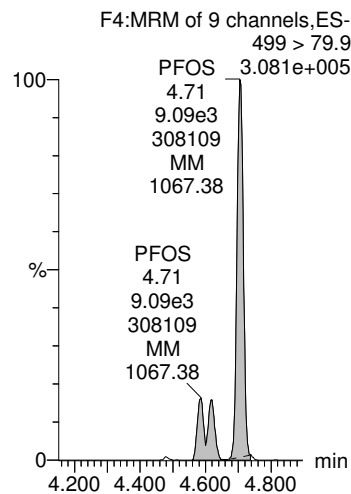
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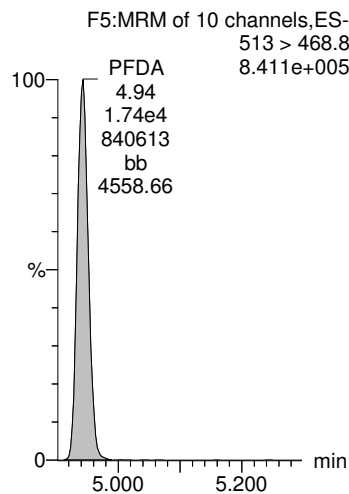
**PFNA**



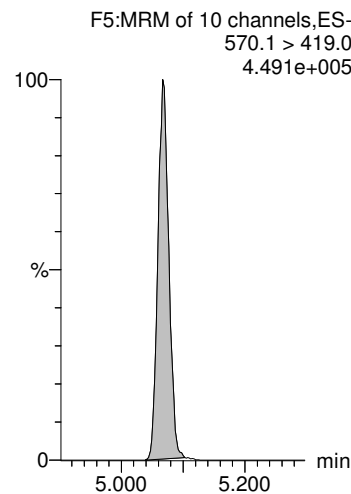
**PFOS**



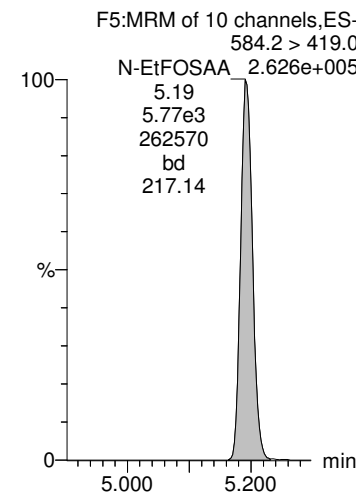
**PFDA**



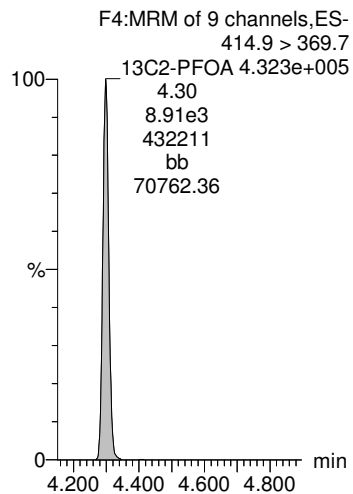
**N-MeFOSAA**



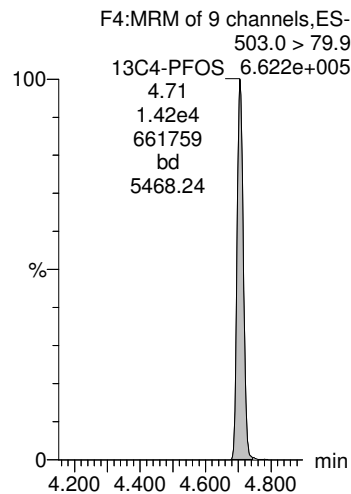
**N-EtFOSAA**



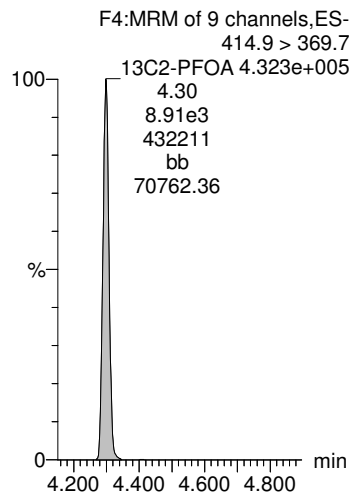
**13C2-PFOA**



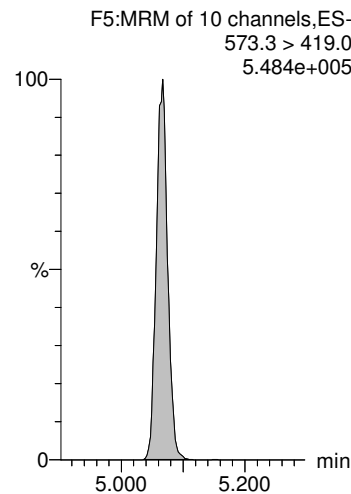
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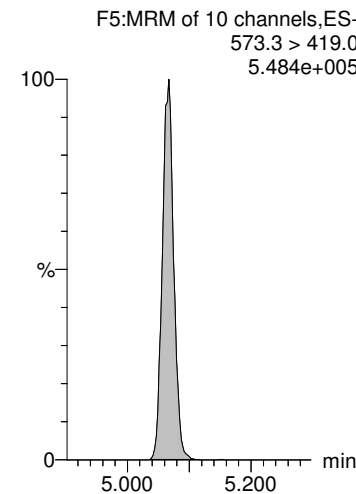
**13C2-PFOA**



**d3-N-MeFOSAA**



**d3-N-MeFOSAA**



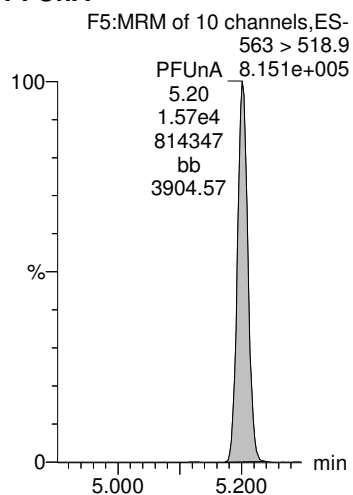
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Last Altered: Tuesday, February 27, 2018 10:01:52 Pacific Standard Time

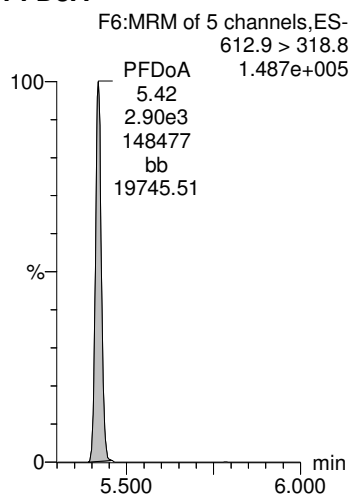
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Name: 180224G1\_17, Date: 24-Feb-2018, Time: 21:33:56, ID: B8B0124-BSD1 LFBD 0.25, Description: LFBD

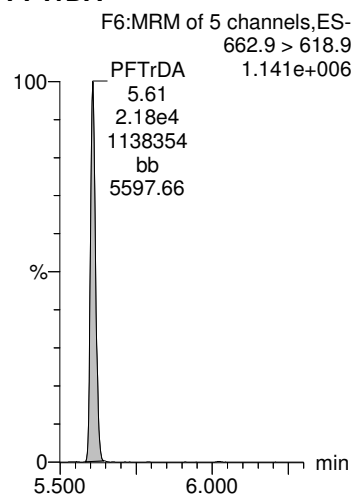
**PFUnA**



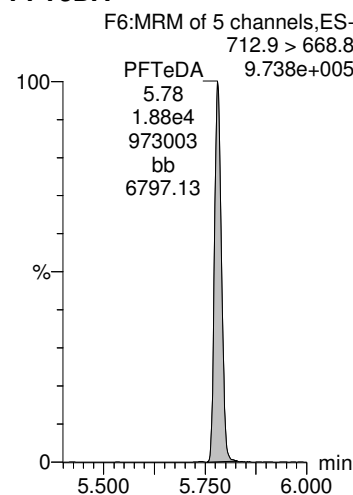
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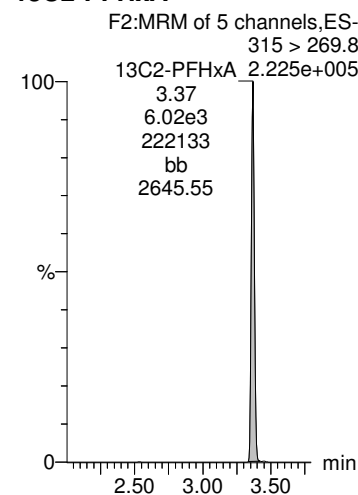
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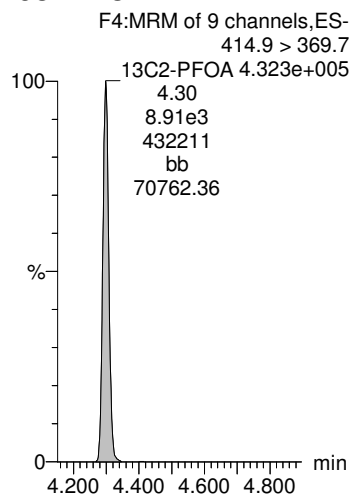
**PFTeDA**



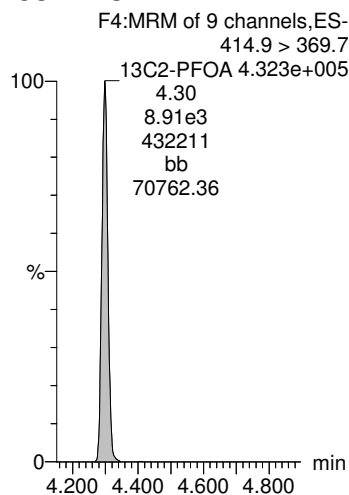
**13C2-PFHxA**



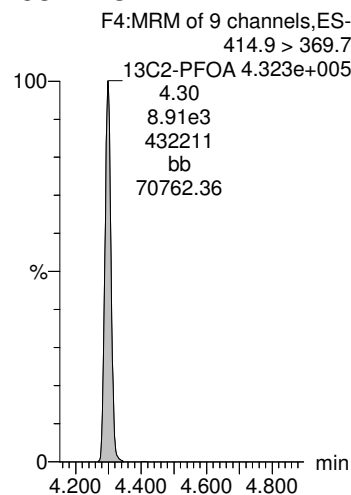
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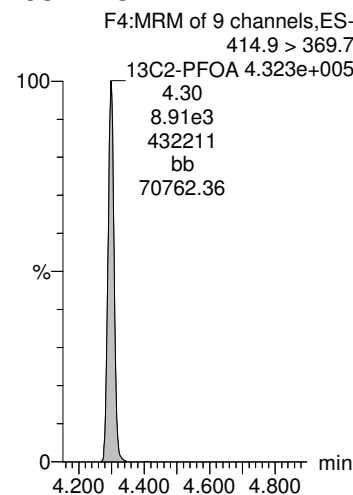
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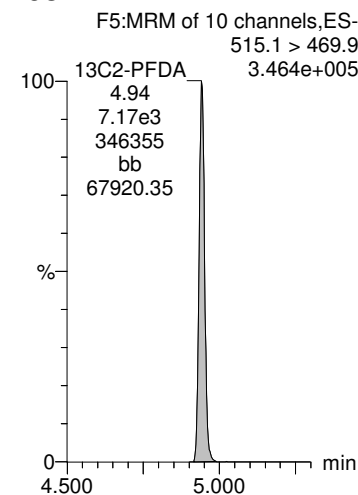
**13C2-PFOA**



**13C2-PFOA**



**13C2-PFDA**



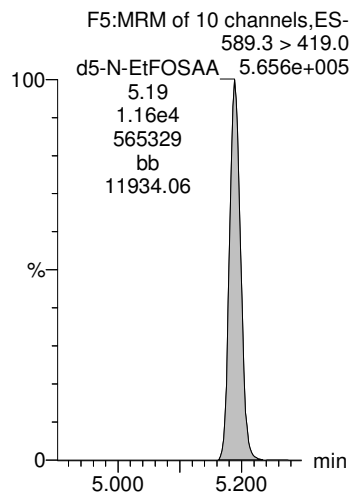
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Last Altered: Tuesday, February 27, 2018 10:01:52 Pacific Standard Time

Printed: Tuesday, February 27, 2018 10:02:58 Pacific Standard Time

Name: 180224G1\_17, Date: 24-Feb-2018, Time: 21:33:56, ID: B8B0124-BSD1 LFBD 0.25, Description: LFBD

**d5-N-EtFOSAA**



Dataset: X:\G1.PRO\Results\2018\180228G1\180228G1-6.qld

Last Altered: Wednesday, February 28, 2018 13:13:13 Pacific Standard Time

Printed: Wednesday, February 28, 2018 13:13:53 Pacific Standard Time

Method: X:\G1.PRO\MethDB\PFAS\_DW\_L14\_1223.mdb 23 Feb 2018 15:59:15

Calibration: X:\G1.PRO\CurveDB\C18\_537\_Q1\_02-23-18\_L14.cdb 23 Feb 2018 16:46:11

Name: 180228G1\_6, Date: 28-Feb-2018, Time: 10:26:54, ID: B8B0153-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		1.88e4	0.2500		3.01				
2	2 PFHxA	313.2 > 268.9	9.40e1	1.17e4	0.2500		3.35	3.37	0.0805	0.582	
3	3 PFHpA	363 > 318.9	2.60e1	1.17e4	0.2500		3.87	3.88	0.0222	0.0946	
4	4 PFHxS	398.9 > 79.6	6.05e0	1.88e4	0.2500		4.00	4.00	0.00924	0.0528	
5	5 PFOA	413 > 368.7	1.17e2	1.17e4	0.2500		4.30	4.29	0.100	0.479	
6	6 PFNA	463 > 418.8		1.17e4	0.2500		4.64				
7	7 PFOS	499 > 79.9	4.35e0	1.88e4	0.2500		4.71	4.70	0.00664	0.0277	
8	8 PFDA	513 > 468.8	9.51e1	1.17e4	0.2500		4.87	4.94	0.0815	0.293	
9	9 N-MeFOSAA	570.1 > 419.0		1.23e4	0.2500		5.01				
10	10 N-EtFOSAA	584.2 > 419.0	7.32e-1	1.23e4	0.2500		5.19	5.19	0.00238	0.00897	
11	11 PFUnA	563 > 518.9	9.80e0	1.17e4	0.2500		5.13	5.20	0.00840	0.0334	
12	12 PFDoA	612.9 > 318.8		1.17e4	0.2500		5.33				
13	13 PFTrDA	662.9 > 618.9		1.17e4	0.2500		5.56				
14	14 PFTeDA	712.9 > 668.8	6.42e0	1.17e4	0.2500		5.73	5.79	0.00551	0.0176	
15	15 13C2-PFHxA	315 > 269.8	7.54e3	1.17e4	0.2500	0.731	3.45	3.37	6.47	35.4	88.4
16	16 13C2-PFDA	515.1 > 469.9	9.39e3	1.17e4	0.2500	0.910	4.90	4.94	8.05	35.4	88.5
17	17 d5-N-EtFOSAA	589.3 > 419.0	1.45e4	1.23e4	0.2500	1.049	5.07	5.19	47.1	180	112.3
18	18 13C2-PFOA	414.9 > 369.7	1.17e4	1.17e4	0.2500	1.000	4.41	4.30	10.0	40.0	100.0
19	19 13C4-PFOS	503.0 > 79.9	1.88e4	1.88e4	0.2500	1.000	4.81	4.71	28.7	115	100.0
20	20 d3-N-MeFOSAA	573.3 > 419.0	1.23e4	1.23e4	0.2500	1.000	5.16	5.07	40.0	160	100.0

Dataset: X:\G1.PRO\Results\2018\180228G1\180228G1-6.qld

Last Altered: Wednesday, February 28, 2018 13:13:13 Pacific Standard Time

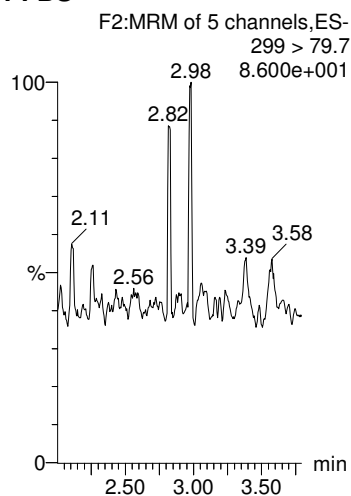
Printed: Wednesday, February 28, 2018 13:13:53 Pacific Standard Time

Method: X:\G1.PRO\MethDB\PFAS\_DW\_L14\_1223.mdb 23 Feb 2018 15:59:15

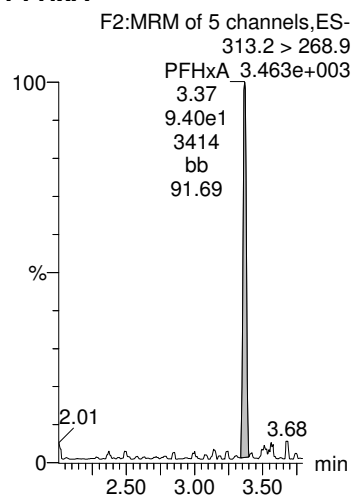
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Name: 180228G1\_6, Date: 28-Feb-2018, Time: 10:26:54, ID: B8B0153-BLK1 LRB 0.25, Description: LRB

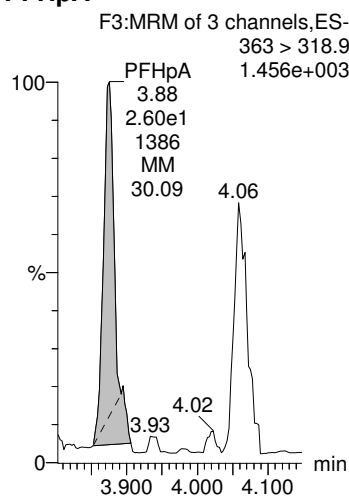
**PFBS**



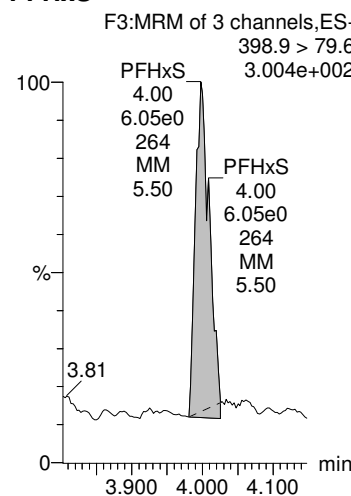
**PFHxA**



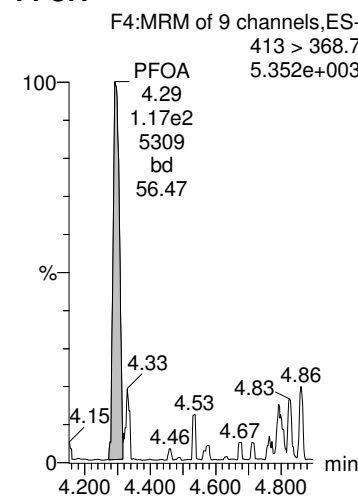
**PFHpA**



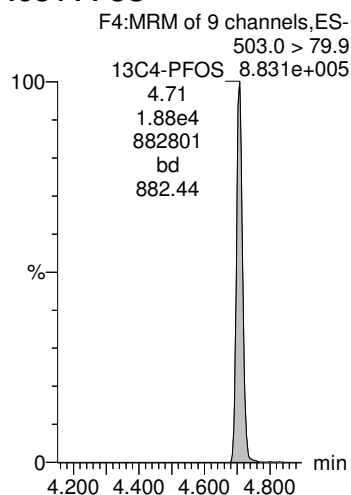
**PFHxS**



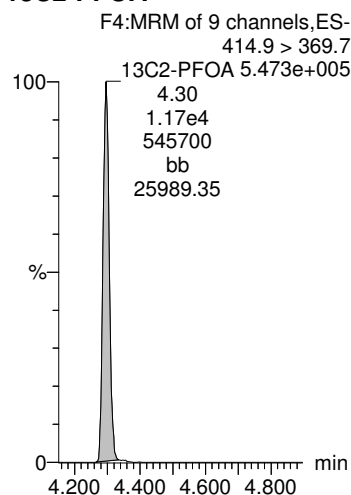
**PFOA**



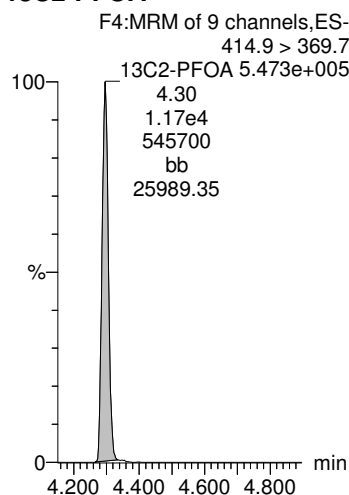
**13C4-PFOS**



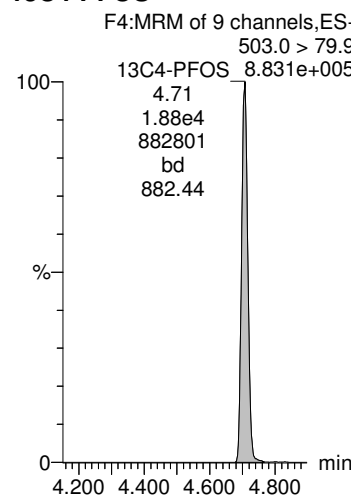
**13C2-PFOA**



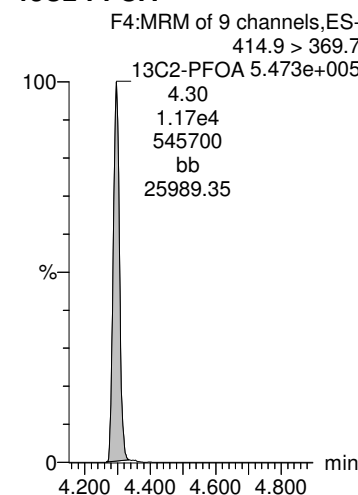
**13C2-PFOA**



**13C4-PFOS**



**13C2-PFOA**



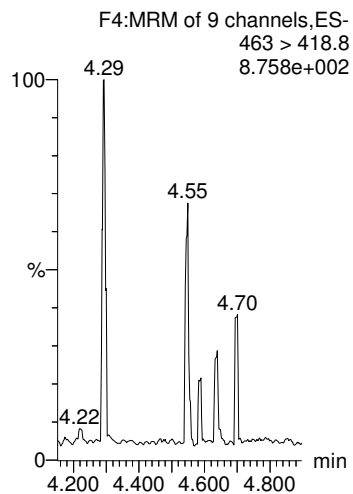
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Last Altered: Wednesday, February 28, 2018 13:13:13 Pacific Standard Time

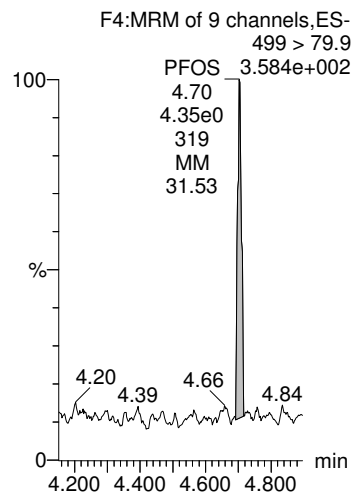
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Name: 180228G1\_6, Date: 28-Feb-2018, Time: 10:26:54, ID: B8B0153-BLK1 LRB 0.25, Description: LRB

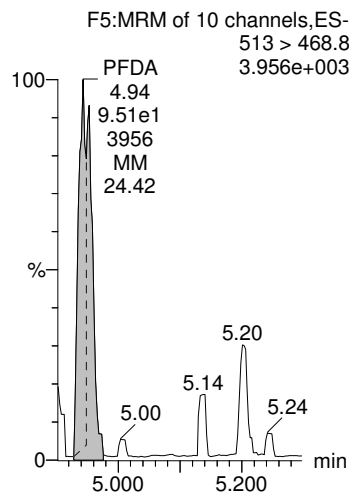
**PFNA**



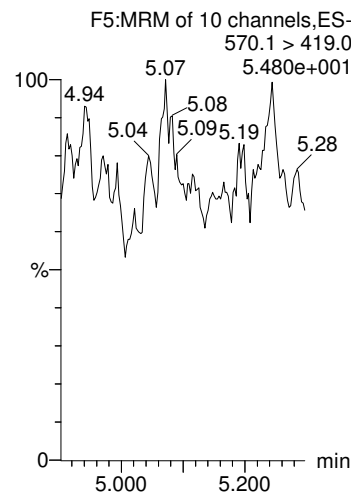
**PFOS**



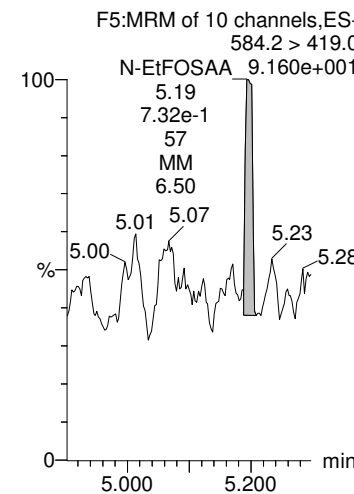
**PFDA**



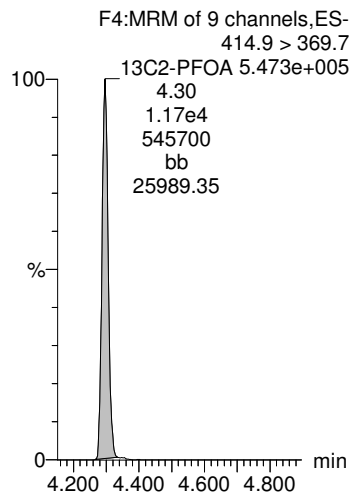
**N-MeFOSAA**



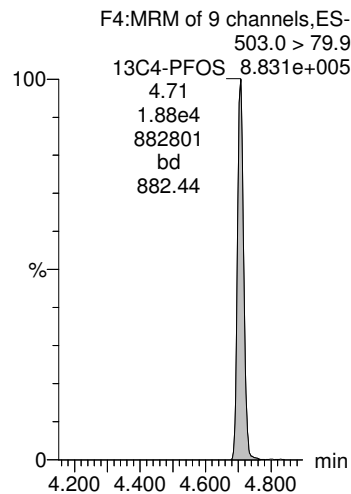
**N-EtFOSAA**



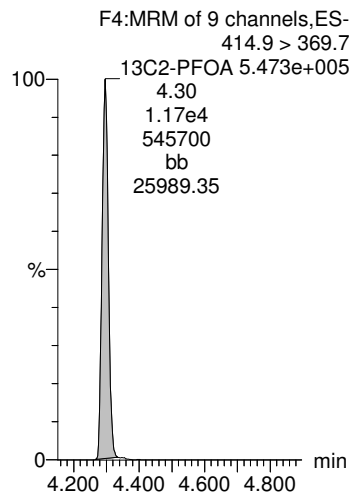
**13C2-PFOA**



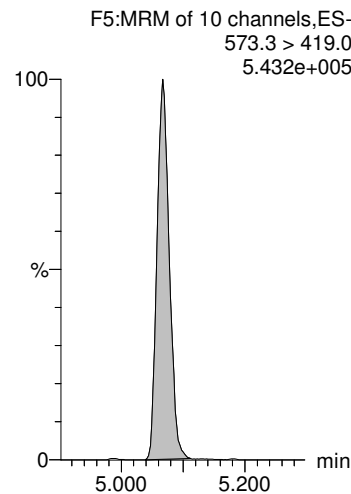
**13C4-PFOS**



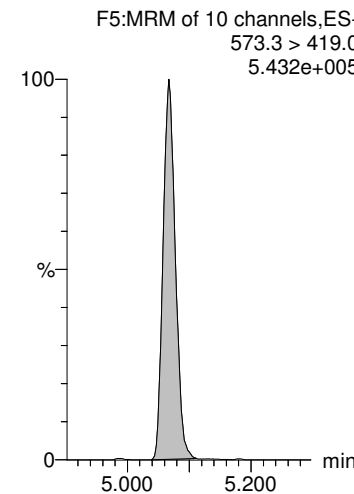
**13C2-PFOA**



**d3-N-MeFOSAA**



**d3-N-MeFOSAA**



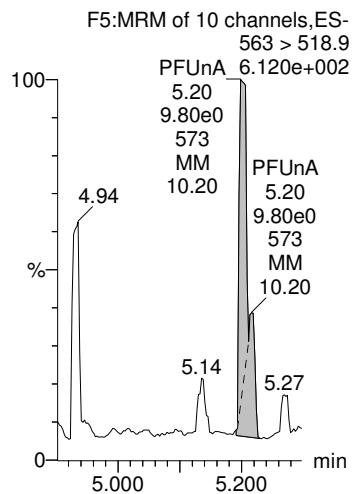
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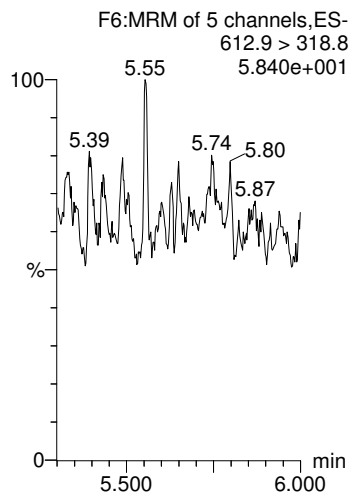
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Name: 180228G1\_6, Date: 28-Feb-2018, Time: 10:26:54, ID: B8B0153-BLK1 LRB 0.25, Description: LRB

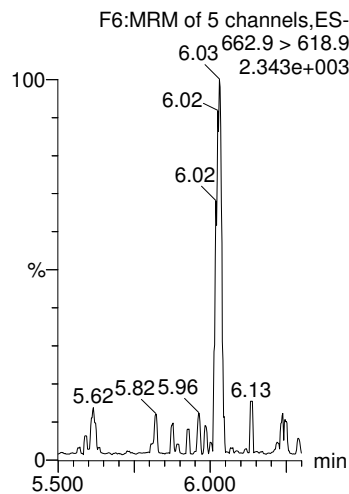
**PFUnA**



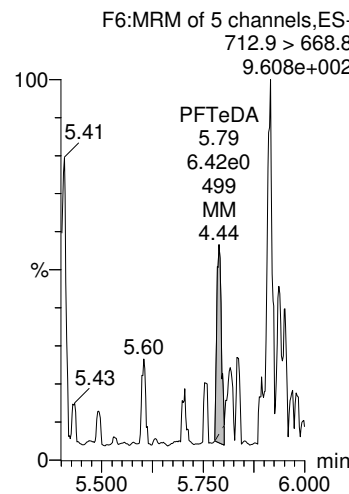
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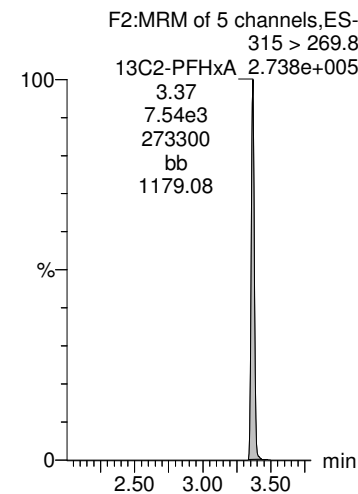
**PFTrDA**



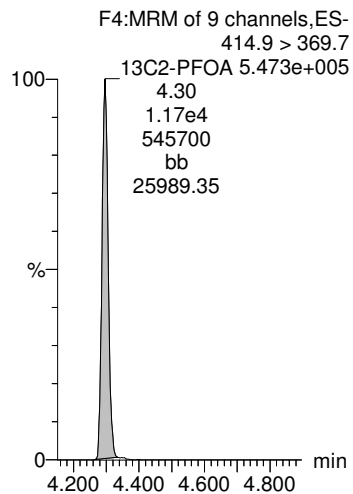
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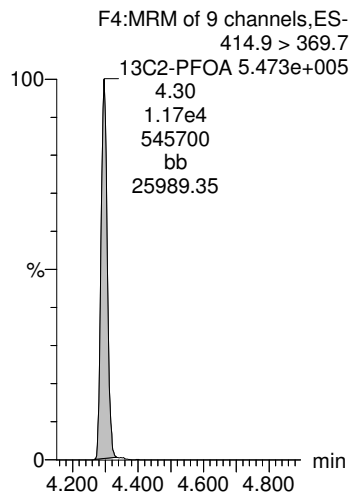
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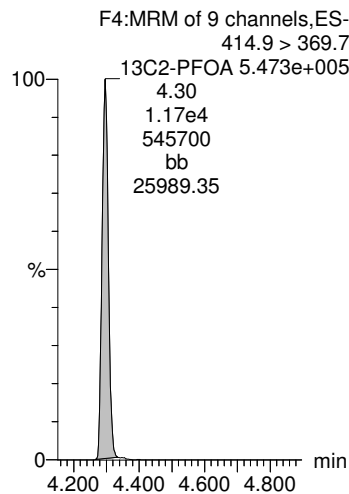
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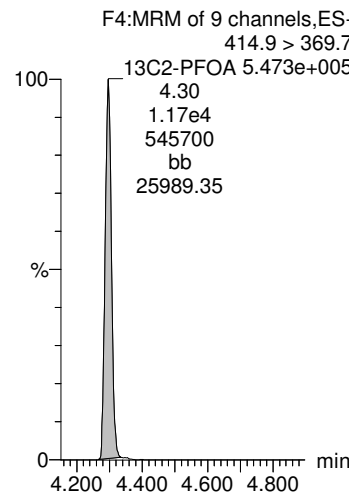
**13C2-PFOA**



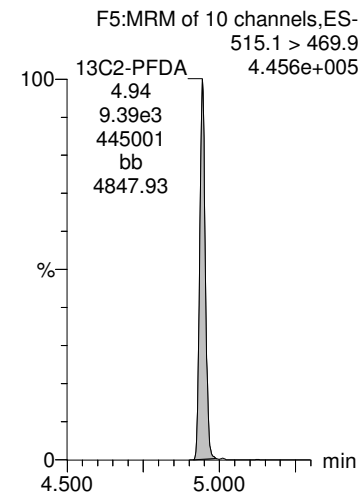
**13C2-PFOA**



**13C2-PFOA**



**13C2-PFDA**





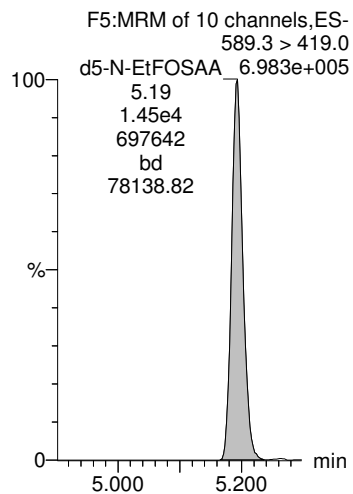
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Last Altered: Wednesday, February 28, 2018 13:13:13 Pacific Standard Time

Printed: Wednesday, February 28, 2018 13:13:53 Pacific Standard Time

Name: 180228G1\_6, Date: 28-Feb-2018, Time: 10:26:54, ID: B8B0153-BLK1 LRB 0.25, Description: LRB

**d5-N-EtFOSAA**



Dataset: X:\G1.PRO\Results\2018\180228G1\180228G1-4.qld

Last Altered: Wednesday, February 28, 2018 12:53:34 Pacific Standard Time

Printed: Wednesday, February 28, 2018 12:54:56 Pacific Standard Time

Method: X:\G1.PRO\MethDB\PFAS\_DW\_L14\_1223.mdb 23 Feb 2018 15:59:15

Calibration: X:\G1.PRO\CurveDB\C18\_537\_Q1\_02-23-18\_L14.cdb 23 Feb 2018 16:46:11

Name: 180228G1\_4, Date: 28-Feb-2018, Time: 10:02:08, ID: B8B0153-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	4.59e3	1.88e4	0.2500		3.01	2.99	7.02	38.4	108.5
2	2 PFHxA	313.2 > 268.9	5.44e3	1.23e4	0.2500		3.35	3.37	4.44	32.1	80.2
3	3 PFHpA	363 > 318.9	1.13e4	1.23e4	0.2500		3.86	3.87	9.25	39.3	98.4
4	4 PFHxS	398.9 > 79.6	4.80e3	1.88e4	0.2500		3.99	4.00	7.34	42.0	115.0
5	5 PFOA	413 > 368.7	1.04e4	1.23e4	0.2500		4.29	4.29	8.48	40.5	101.2
6	6 PFNA	463 > 418.8	1.13e4	1.23e4	0.2500		4.64	4.64	9.21	36.3	90.6
7	7 PFOS	499 > 79.9	5.90e3	1.88e4	0.2500		4.71	4.71	9.02	37.6	101.5
8	8 PFDA	513 > 468.8	1.20e4	1.23e4	0.2500		4.86	4.94	9.78	35.7	89.2
9	9 N-MeFOSAA	570.1 > 419.0	6.31e3	1.44e4	0.2500		5.01	5.07	17.5	52.2	130.4
10	10 N-EtFOSAA	584.2 > 419.0	4.09e3	1.44e4	0.2500		5.19	5.20	11.4	42.9	107.3
11	11 PFUnA	563 > 518.9	1.06e4	1.23e4	0.2500		5.12	5.21	8.67	34.5	86.3
12	12 PFDoA	612.9 > 318.8	1.90e3	1.23e4	0.2500		5.32	5.42	1.55	39.1	97.6
13	13 PFTTrDA	662.9 > 618.9	1.42e4	1.23e4	0.2500		5.55	5.61	11.6	33.8	84.6
14	14 PFTeDA	712.9 > 668.8	1.30e4	1.23e4	0.2500		5.72	5.79	10.6	33.9	84.7
15	15 13C2-PFHxA	315 > 269.8	8.05e3	1.23e4	0.2500	0.731	3.44	3.37	6.57	35.9	89.8
16	16 13C2-PFDA	515.1 > 469.9	9.17e3	1.23e4	0.2500	0.910	4.89	4.94	7.48	32.9	82.2
17	17 d5-N-EtFOSAA	589.3 > 419.0	1.38e4	1.44e4	0.2500	1.049	5.07	5.19	38.3	146	91.4
18	18 13C2-PFOA	414.9 > 369.7	1.23e4	1.23e4	0.2500	1.000	4.41	4.29	10.0	40.0	100.0
19	19 13C4-PFOS	503.0 > 79.9	1.88e4	1.88e4	0.2500	1.000	4.81	4.71	28.7	115	100.0
20	20 d3-N-MeFOSAA	573.3 > 419.0	1.44e4	1.44e4	0.2500	1.000	5.16	5.07	40.0	160	100.0

Dataset: X:\G1.PRO\Results\2018\180228G1\180228G1-4.qld

Last Altered: Wednesday, February 28, 2018 12:53:34 Pacific Standard Time

Printed: Wednesday, February 28, 2018 12:54:56 Pacific Standard Time

Method: X:\G1.PRO\MethDB\PFAS\_DW\_L14\_1223.mdb 23 Feb 2018 15:59:15

Calibration: X:\G1.PRO\CurveDB\C18\_537\_Q1\_02-23-18\_L14.cdb 23 Feb 2018 16:46:11

Name: 180228G1\_4, Date: 28-Feb-2018, Time: 10:02:08, ID: B8B0153-BS1 LFB 0.25, Description: LFB

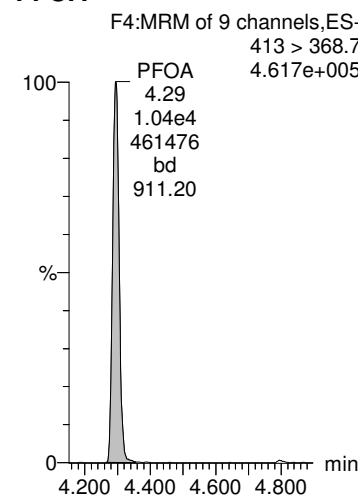
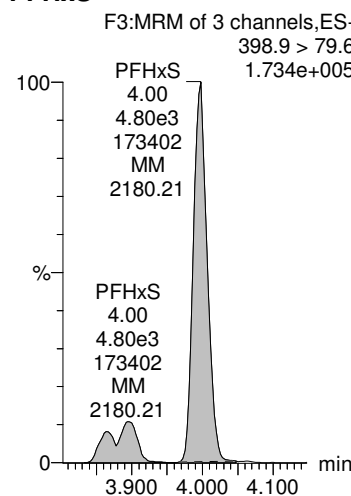
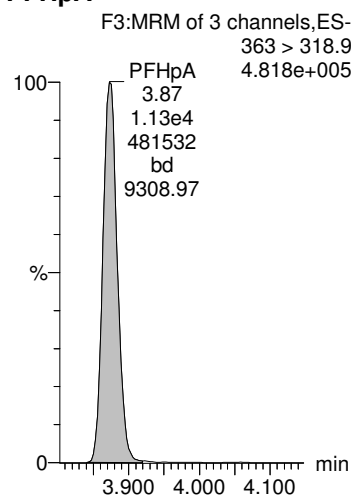
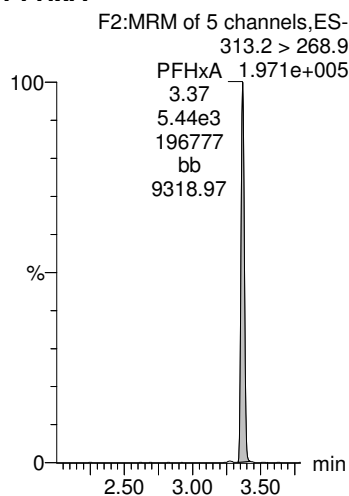
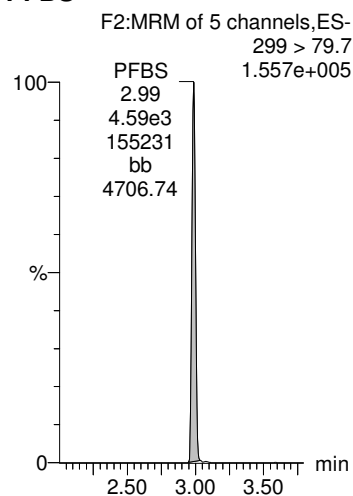
**PFBS**

**PFHxA**

**PFHpA**

**PFHxS**

**PFOA**



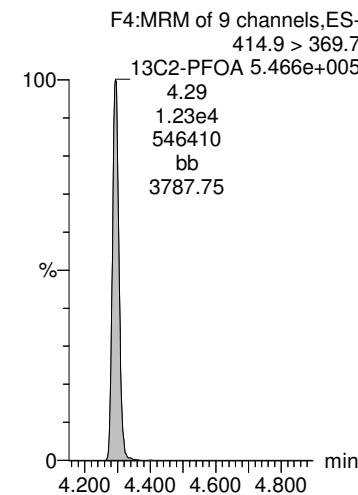
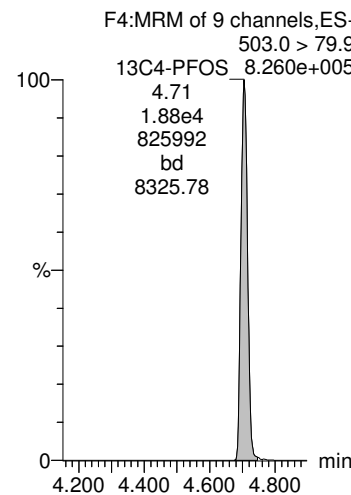
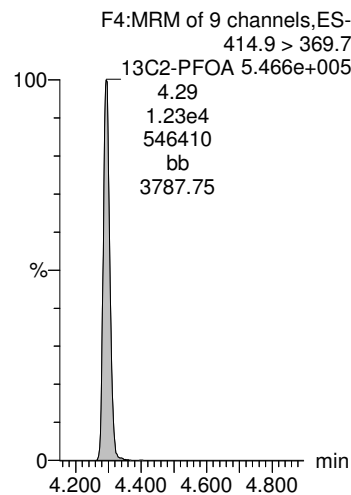
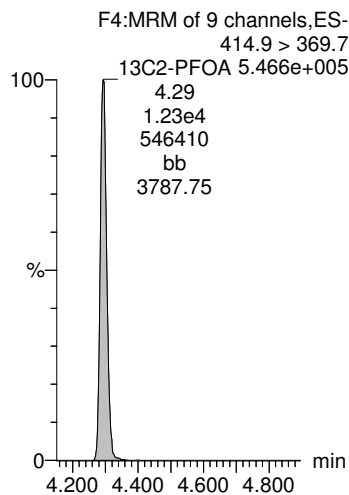
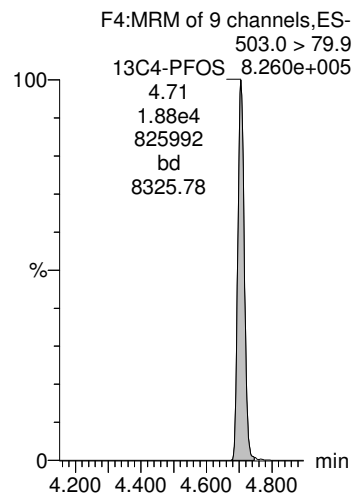
**13C4-PFOS**

**13C2-PFOA**

**13C2-PFOA**

**13C4-PFOS**

**13C2-PFOA**

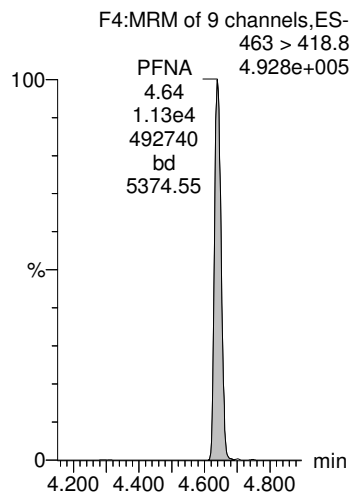


Dataset: X:\G1.PRO\Results\2018\180228G1\180228G1-4.qld

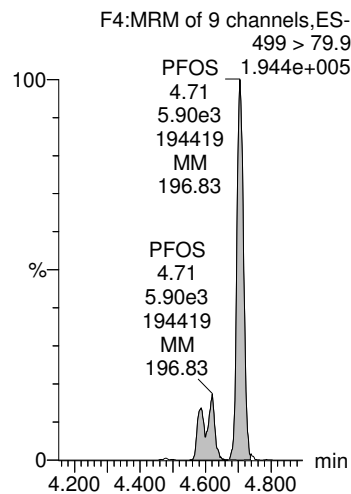
Last Altered: Wednesday, February 28, 2018 12:53:34 Pacific Standard Time  
Printed: Wednesday, February 28, 2018 12:54:56 Pacific Standard Time

Name: 180228G1\_4, Date: 28-Feb-2018, Time: 10:02:08, ID: B8B0153-BS1 LFB 0.25, Description: LFB

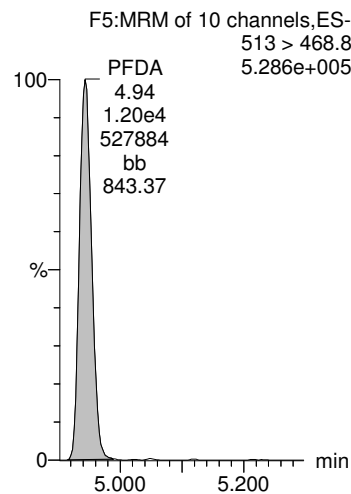
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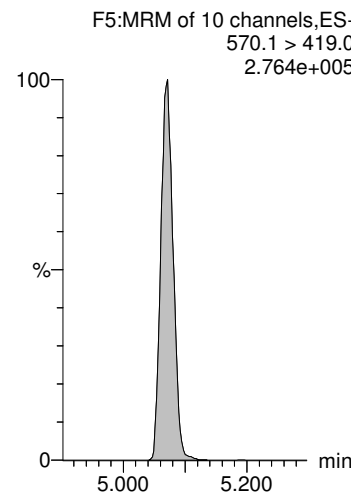
**PFOS**



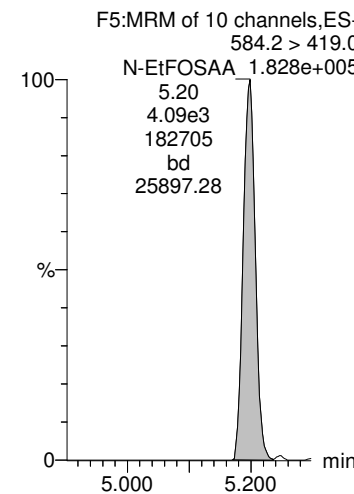
**PFDA**



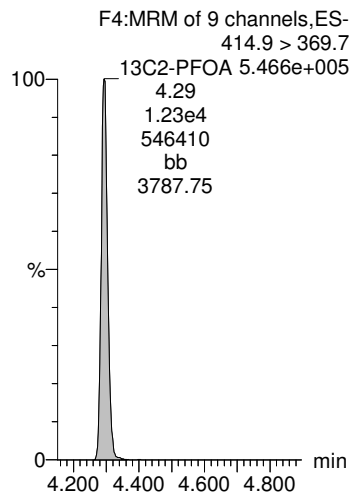
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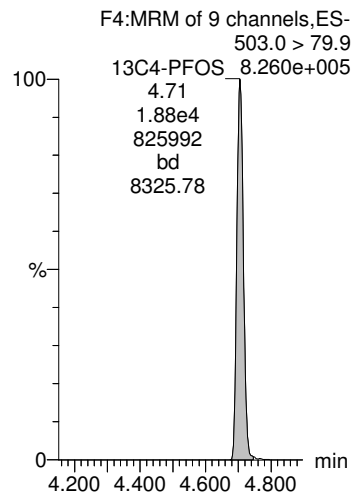
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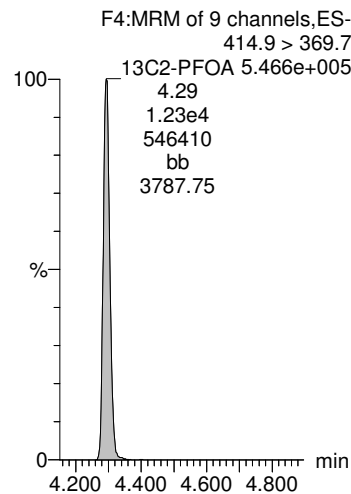
**13C2-PFOA**



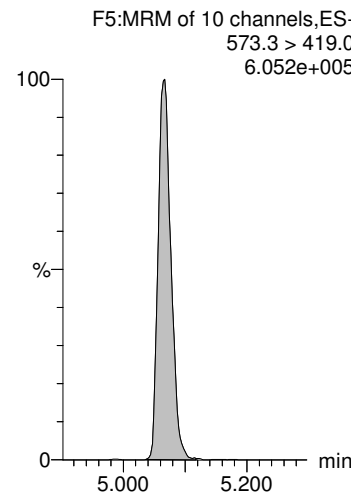
**13C4-PFOS**



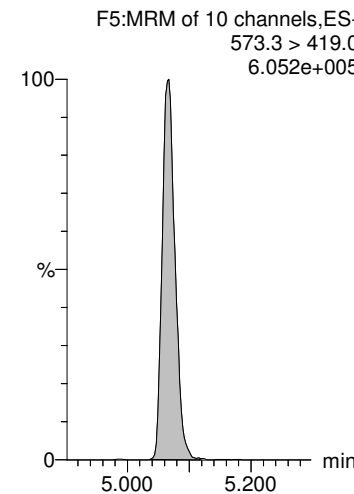
**13C2-PFOA**



**d3-N-MeFOSAA**



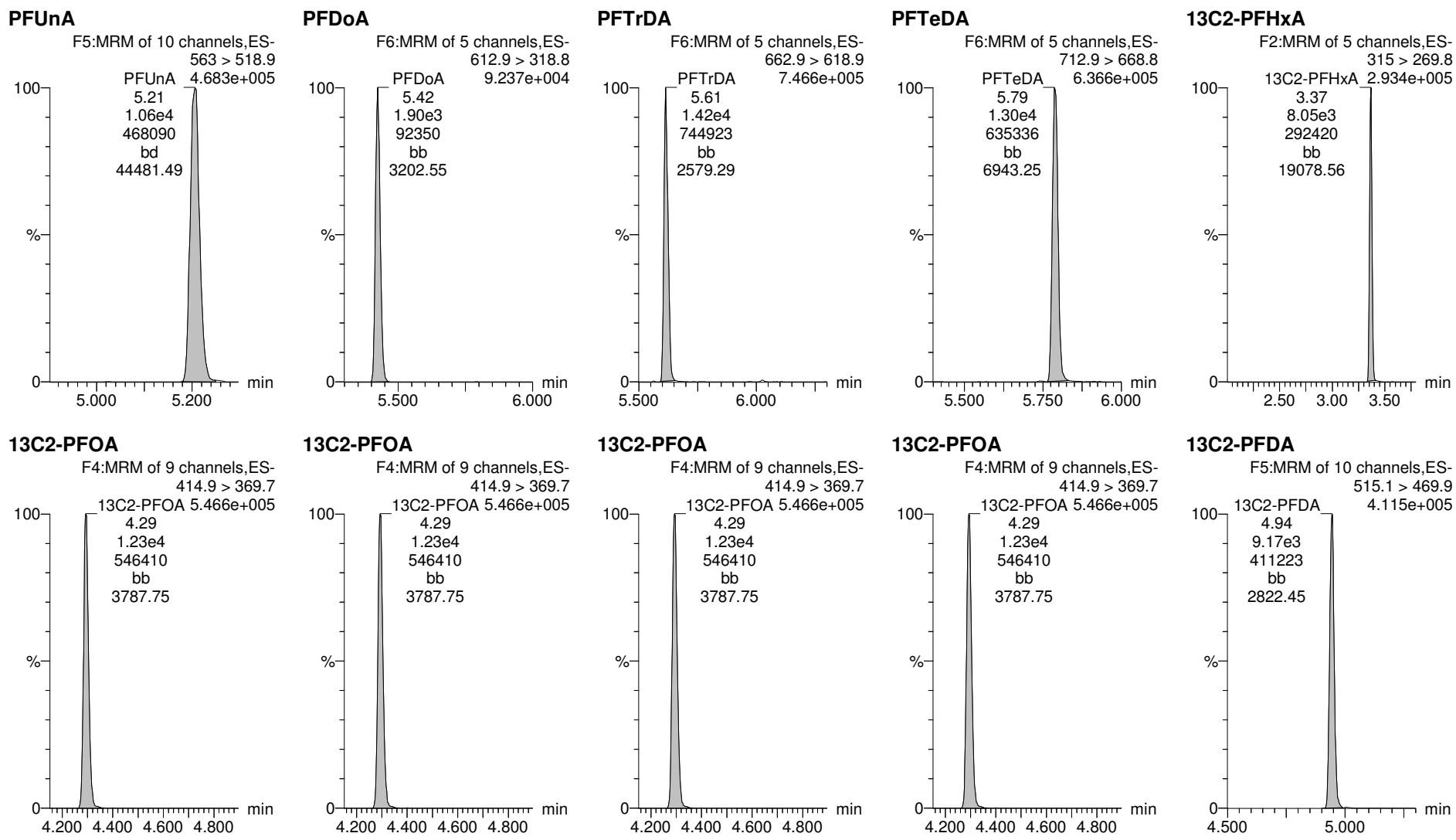
**d3-N-MeFOSAA**



Dataset: X:\G1.PRO\Results\2018\180228G1\180228G1-4.qld

Last Altered: Wednesday, February 28, 2018 12:53:34 Pacific Standard Time  
Printed: Wednesday, February 28, 2018 12:54:56 Pacific Standard Time

Name: 180228G1\_4, Date: 28-Feb-2018, Time: 10:02:08, ID: B8B0153-BS1 LFB 0.25, Description: LFB



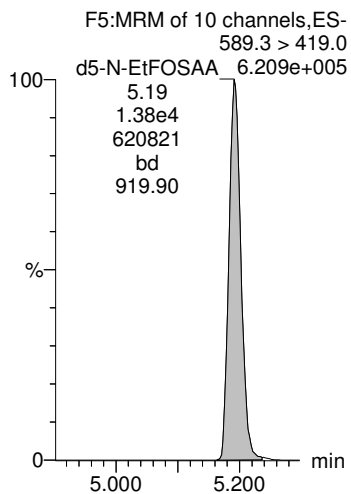
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Last Altered: Wednesday, February 28, 2018 12:53:34 Pacific Standard Time

Printed: Wednesday, February 28, 2018 12:54:56 Pacific Standard Time

Name: 180228G1\_4, Date: 28-Feb-2018, Time: 10:02:08, ID: B8B0153-BS1 LFB 0.25, Description: LFB

**d5-N-EtFOSAA**



Dataset: X:\G1.PRO\Results\2018\180228G1\180228G1-5.qld

Last Altered: Wednesday, February 28, 2018 13:16:43 Pacific Standard Time

Printed: Wednesday, February 28, 2018 13:17:20 Pacific Standard Time

Method: X:\G1.PRO\MethDB\PFAS\_DW\_L14\_1223.mdb 23 Feb 2018 15:59:15

Calibration: X:\G1.PRO\CurveDB\C18\_537\_Q1\_02-23-18\_L14.cdb 23 Feb 2018 16:46:11

Name: 180228G1\_5, Date: 28-Feb-2018, Time: 10:14:30, ID: B8B0153-BSD1 LFBD 0.25, Description: LFBD

	# Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	299 > 79.7	4.24e3	1.80e4	0.2500		3.01	2.99	6.76	37.0	104.4
2	2 PFHxA	313.2 > 268.9	4.45e3	1.14e4	0.2500		3.35	3.37	3.92	28.3	70.8
3	3 PFHpA	363 > 318.9	1.01e4	1.14e4	0.2500		3.87	3.88	8.86	37.7	94.2
4	4 PFHxS	398.9 > 79.6	4.14e3	1.80e4	0.2500		4.00	4.00	6.61	37.8	103.5
5	5 PFOA	413 > 368.7	9.03e3	1.14e4	0.2500		4.30	4.30	7.96	38.0	95.0
6	6 PFNA	463 > 418.8	1.00e4	1.14e4	0.2500		4.64	4.64	8.82	34.7	86.8
7	7 PFOS	499 > 79.9	5.37e3	1.80e4	0.2500		4.71	4.71	8.56	35.6	96.3
8	8 PFDA	513 > 468.8	1.03e4	1.14e4	0.2500		4.87	4.95	9.04	33.0	82.4
9	9 N-MeFOSAA	570.1 > 419.0	5.24e3	1.38e4	0.2500		5.01	5.07	15.2	45.5	113.7
10	10 N-EtFOSAA	584.2 > 419.0	3.86e3	1.38e4	0.2500		5.19	5.20	11.2	42.4	105.9
11	11 PFUnA	563 > 518.9	9.98e3	1.14e4	0.2500		5.13	5.21	8.79	35.0	87.5
12	12 PFDoA	612.9 > 318.8	1.52e3	1.14e4	0.2500		5.33	5.43	1.34	33.8	84.5
13	13 PFTTrDA	662.9 > 618.9	1.32e4	1.14e4	0.2500		5.56	5.62	11.6	33.9	84.6
14	14 PFTeDA	712.9 > 668.8	1.18e4	1.14e4	0.2500		5.73	5.79	10.4	33.4	83.4
15	15 13C2-PFHxA	315 > 269.8	7.72e3	1.14e4	0.2500	0.731	3.45	3.37	6.79	37.2	92.9
16	16 13C2-PFDA	515.1 > 469.9	8.84e3	1.14e4	0.2500	0.910	4.90	4.95	7.79	34.2	85.6
17	17 d5-N-EtFOSAA	589.3 > 419.0	1.37e4	1.38e4	0.2500	1.049	5.07	5.20	39.7	151	94.7
18	18 13C2-PFOA	414.9 > 369.7	1.14e4	1.14e4	0.2500	1.000	4.41	4.30	10.0	40.0	100.0
19	19 13C4-PFOS	503.0 > 79.9	1.80e4	1.80e4	0.2500	1.000	4.81	4.71	28.7	115	100.0
20	20 d3-N-MeFOSAA	573.3 > 419.0	1.38e4	1.38e4	0.2500	1.000	5.16	5.07	40.0	160	100.0

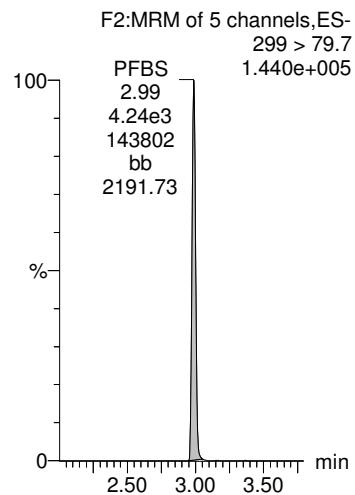
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Last Altered: Wednesday, February 28, 2018 13:16:43 Pacific Standard Time  
Printed: Wednesday, February 28, 2018 13:17:20 Pacific Standard Time

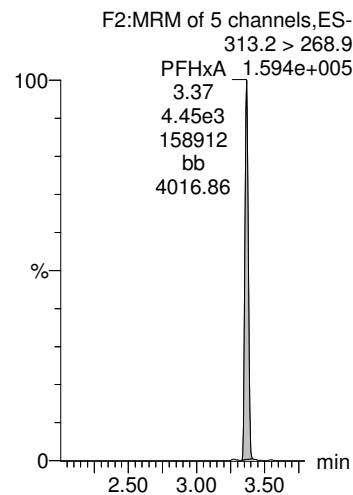
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Name: 180228G1\_5, Date: 28-Feb-2018, Time: 10:14:30, ID: B8B0153-BSD1 LFBD 0.25, Description: LFBD

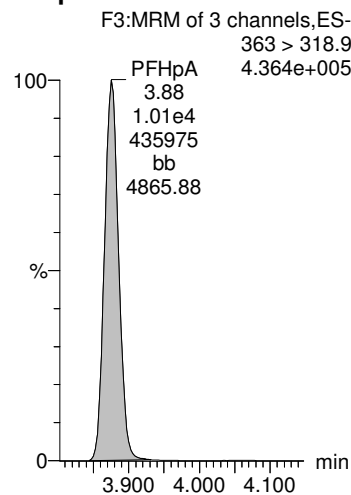
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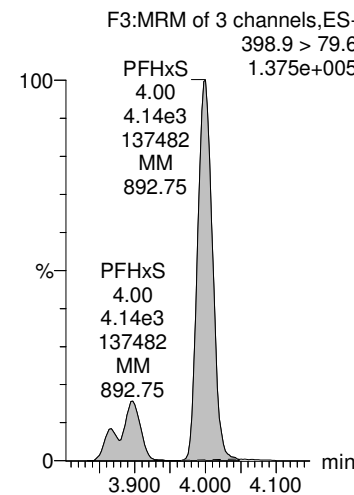
**PFHxA**



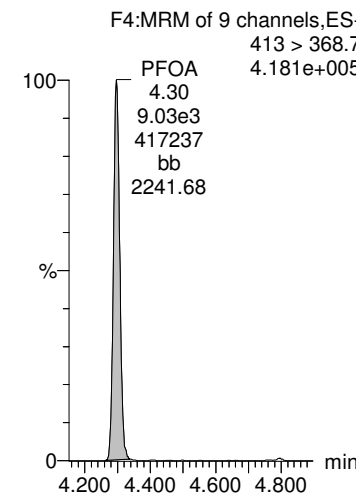
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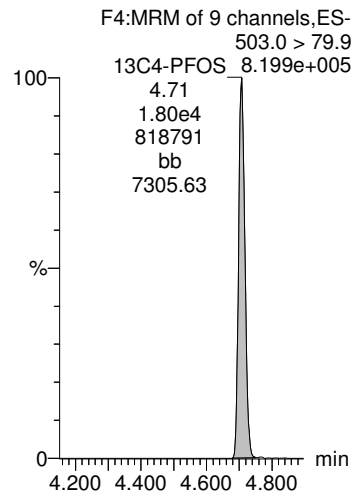
**PFHxS**



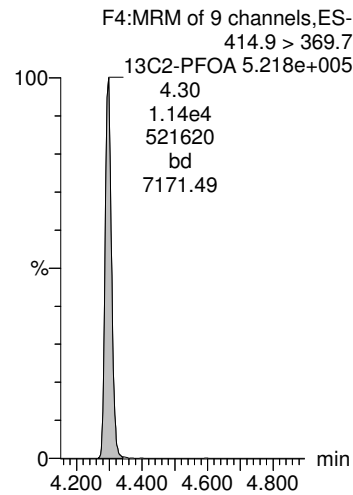
**PFOA**



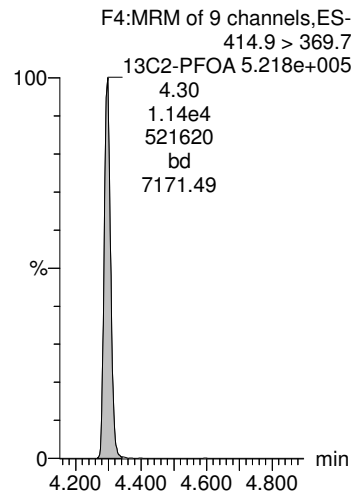
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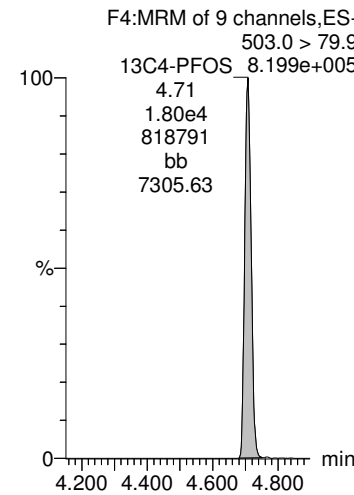
**13C2-PFOA**



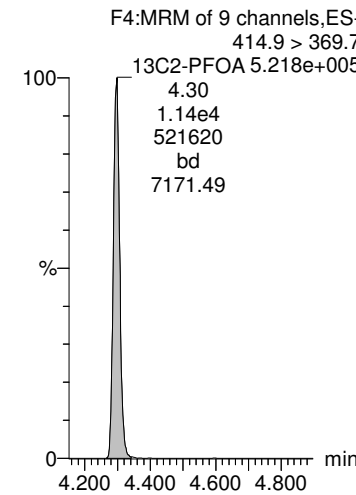
**13C2-PFOA**



**13C4-PFOS**



**13C2-PFOA**

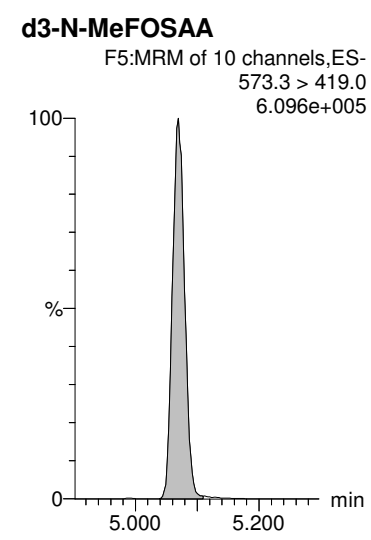
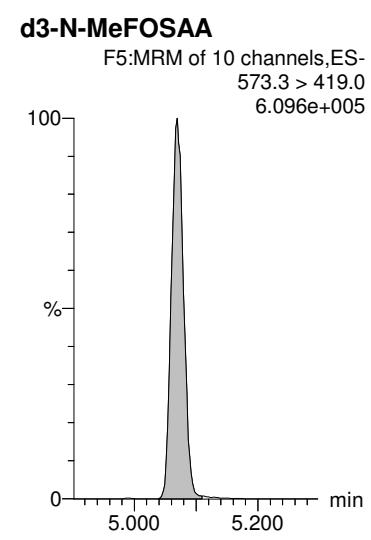
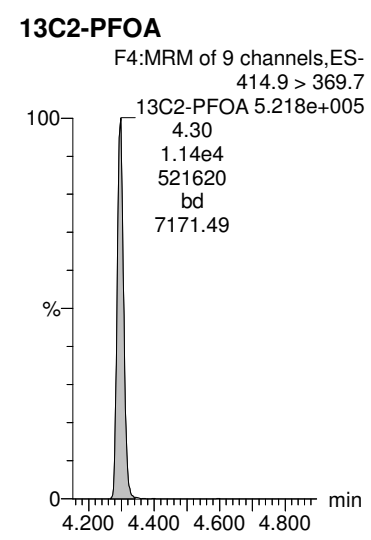
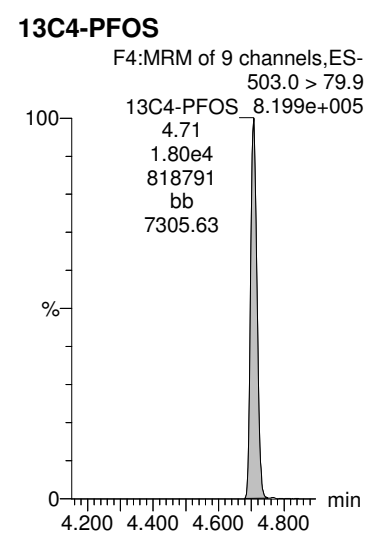
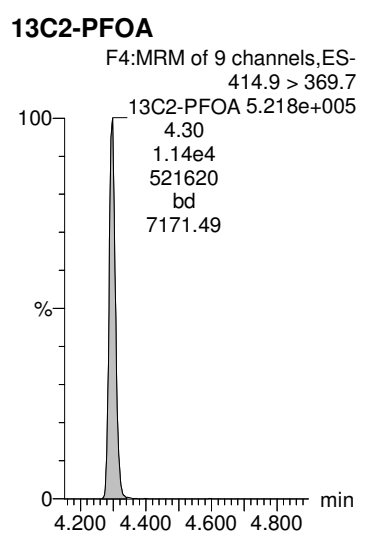
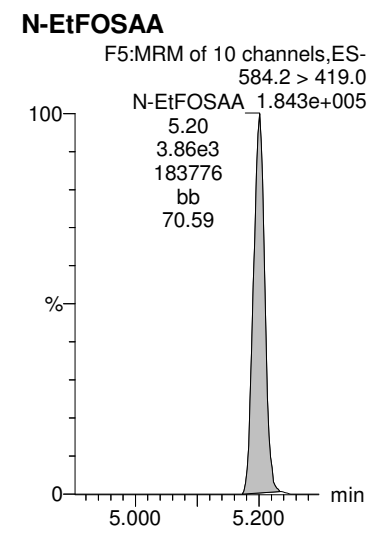
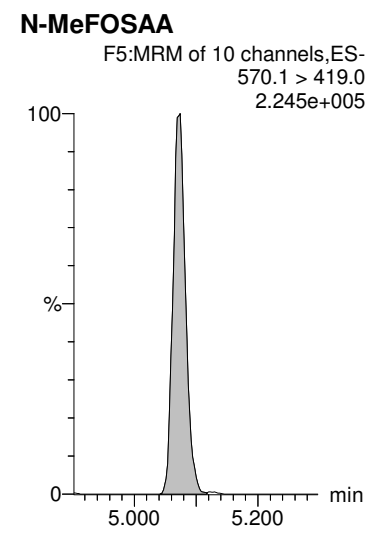
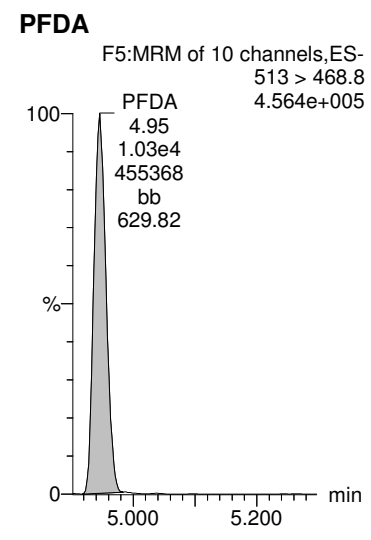
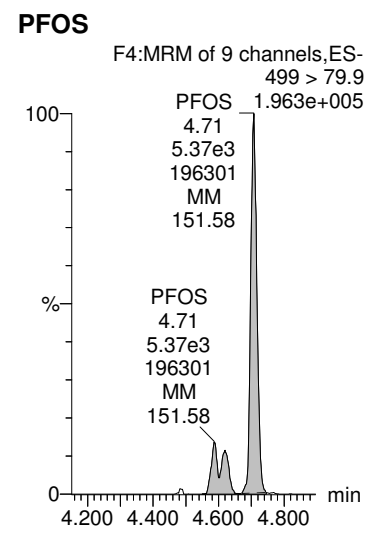
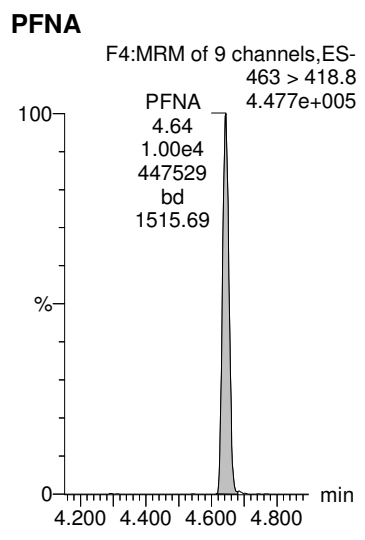




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Last Altered: Wednesday, February 28, 2018 13:16:43 Pacific Standard Time  
Printed: Wednesday, February 28, 2018 13:17:20 Pacific Standard Time

Name: 180228G1\_5, Date: 28-Feb-2018, Time: 10:14:30, ID: B8B0153-BSD1 LFB D 0.25, Description: LFB D



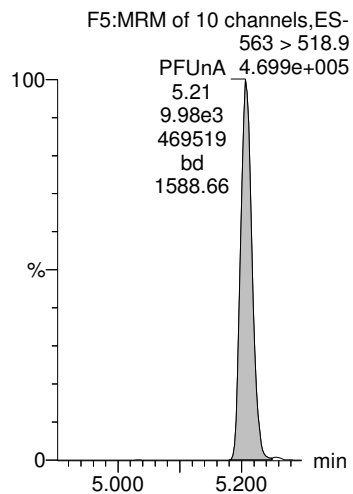
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Last Altered: Wednesday, February 28, 2018 13:16:43 Pacific Standard Time

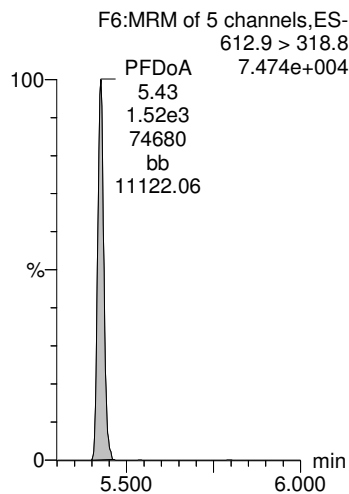
Printed: Wednesday, February 28, 2018 13:17:20 Pacific Standard Time

Name: 180228G1\_5, Date: 28-Feb-2018, Time: 10:14:30, ID: B8B0153-BSD1 LFB0 0.25, Description: LFB0

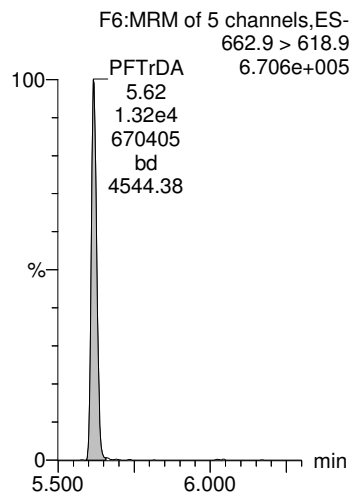
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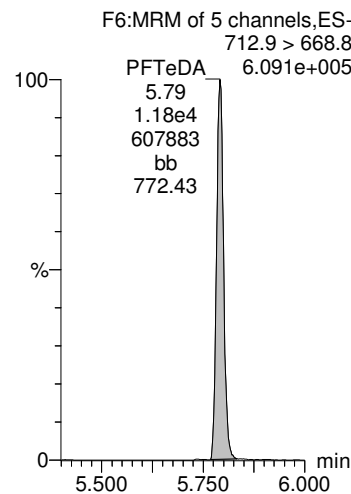
**PFD0A**



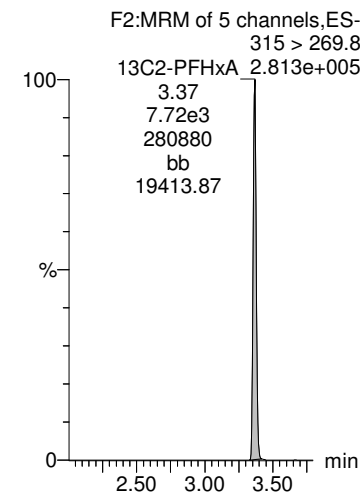
**PFTrDA**



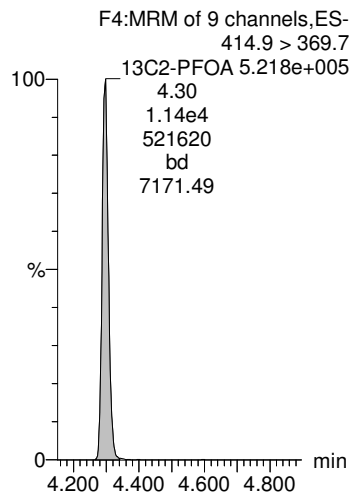
**PFTeDA**



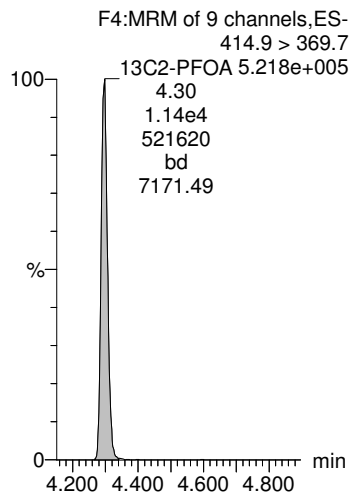
**13C2-PFHxA**



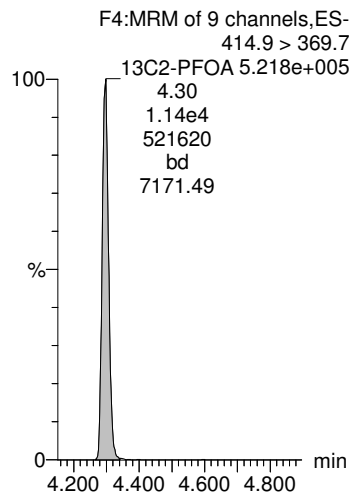
**13C2-PFOA**



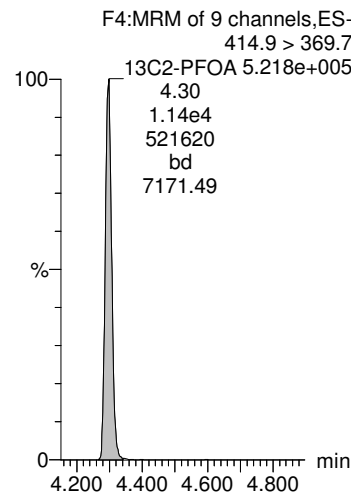
**13C2-PFOA**



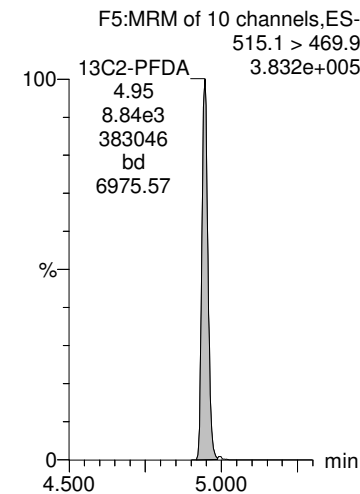
**13C2-PFOA**



**13C2-PFOA**



**13C2-PFDA**



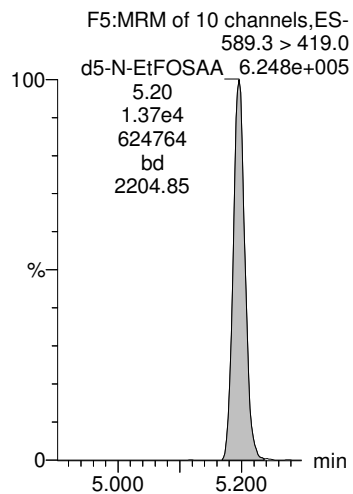
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Last Altered: Wednesday, February 28, 2018 13:16:43 Pacific Standard Time

Printed: Wednesday, February 28, 2018 13:17:20 Pacific Standard Time

Name: 180228G1\_5, Date: 28-Feb-2018, Time: 10:14:30, ID: B8B0153-BSD1 LFBD 0.25, Description: LFBD

**d5-N-EtFOSAA**



Dataset: X:\G1.PRO\Results\2018\180224G1\180224G1-19.qld

Last Altered: Tuesday, February 27, 2018 10:16:56 Pacific Standard Time

Printed: Tuesday, February 27, 2018 10:17:17 Pacific Standard Time

Method: X:\G1.PRO\MethDB\PFAS\_DW\_L14\_1223.mdb 23 Feb 2018 15:59:15

Calibration: X:\G1.PRO\CurveDB\C18\_537\_Q1\_02-23-18\_L14.cdb 23 Feb 2018 16:46:11

Name: 180224G1\_19, Date: 24-Feb-2018, Time: 21:58:41, ID: 1800322-01 WI-A06-RW13-0218 0.25331, Description: WI-A06-RW13-0218

	# Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	299 > 79.7		1.43e4	0.2533		3.01				
2	2 PFHxA	313.2 > 268.9	8.05e1	8.50e3	0.2533		3.35	3.37	0.0948	0.676	
3	3 PFHpA	363 > 318.9	2.44e1	8.50e3	0.2533		3.87	3.89	0.0287	0.121	
4	4 PFHxS	398.9 > 79.6	5.64e0	1.43e4	0.2533		4.00	4.01	0.0113	0.0636	
5	5 PFOA	413 > 368.7	1.06e2	8.50e3	0.2533		4.30	4.30	0.124	0.586	
6	6 PFNA	463 > 418.8	7.69e0	8.50e3	0.2533		4.64	4.65	0.00905	0.0352	
7	7 PFOS	499 > 79.9	7.91e-1	1.43e4	0.2533		4.71	4.71	0.00158	0.00650	
8	8 PFDA	513 > 468.8	6.92e1	8.50e3	0.2533		4.87	4.95	0.0814	0.289	
9	9 N-MeFOSAA	570.1 > 419.0		1.14e4	0.2533		5.01				
10	10 N-EtFOSAA	584.2 > 419.0		1.14e4	0.2533		5.19				
11	11 PFUnA	563 > 518.9		8.50e3	0.2533		5.13				
12	12 PFDoA	612.9 > 318.8		8.50e3	0.2533		5.33				
13	13 PFTrDA	662.9 > 618.9		8.50e3	0.2533		5.56				
14	14 PFTeDA	712.9 > 668.8		8.50e3	0.2533		5.73				
15	15 13C2-PFHxA	315 > 269.8	6.71e3	8.50e3	0.2533	0.731	3.45	3.37	7.89	42.6	107.9
16	16 13C2-PFDA	515.1 > 469.9	6.42e3	8.50e3	0.2533	0.910	4.90	4.94	7.55	32.8	83.0
17	17 d5-N-EtFOSAA	589.3 > 419.0	9.50e3	1.14e4	0.2533	1.049	5.07	5.19	33.2	125	79.1
18	18 13C2-PFOA	414.9 > 369.7	8.50e3	8.50e3	0.2533	1.000	4.41	4.30	10.0	39.5	100.0
19	19 13C4-PFOS	503.0 > 79.9	1.43e4	1.43e4	0.2533	1.000	4.81	4.71	28.7	113	100.0
20	20 d3-N-MeFOSAA	573.3 > 419.0	1.14e4	1.14e4	0.2533	1.000	5.16	5.07	40.0	158	100.0

Dataset: X:\G1.PRO\Results\2018\180224G1\180224G1-19.qld

Last Altered: Tuesday, February 27, 2018 10:16:56 Pacific Standard Time

Printed: Tuesday, February 27, 2018 10:17:17 Pacific Standard Time

Method: X:\G1.PRO\MethDB\PFAS\_DW\_L14\_1223.mdb 23 Feb 2018 15:59:15

Calibration: X:\G1.PRO\CurveDB\C18\_537\_Q1\_02-23-18\_L14.cdb 23 Feb 2018 16:46:11

Name: 180224G1\_19, Date: 24-Feb-2018, Time: 21:58:41, ID: 1800322-01 WI-A06-RW13-0218 0.25331, Description: WI-A06-RW13-0218

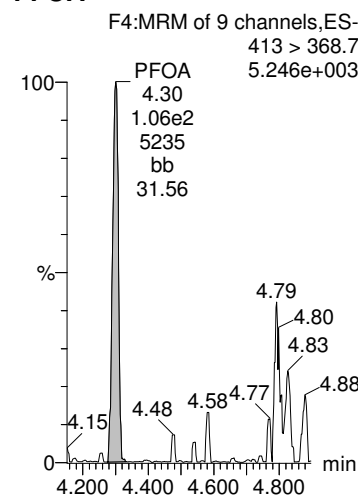
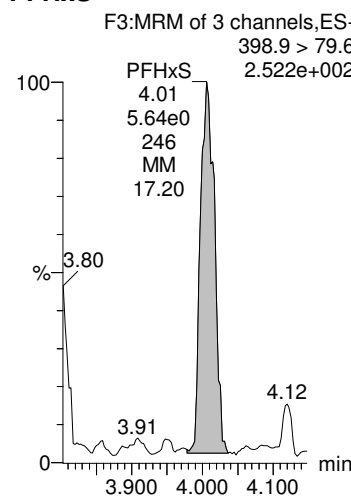
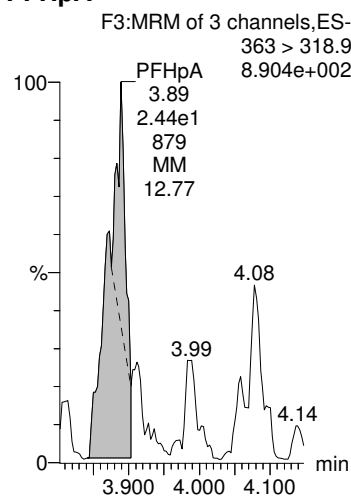
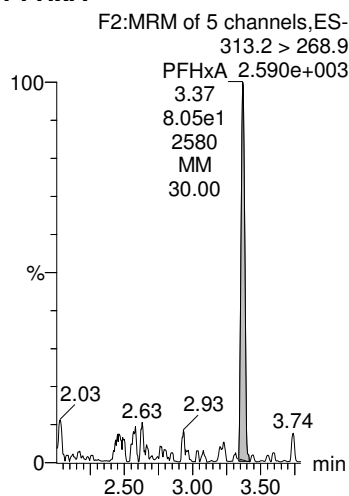
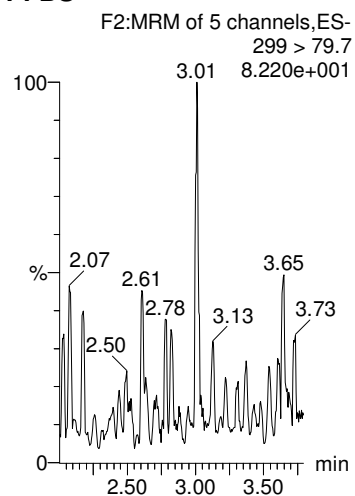
**PFBS**

**PFHxA**

**PFHpA**

**PFHxS**

**PFOA**



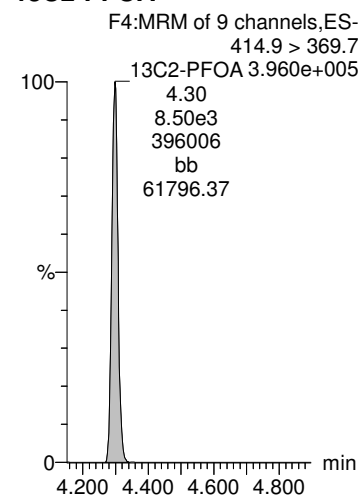
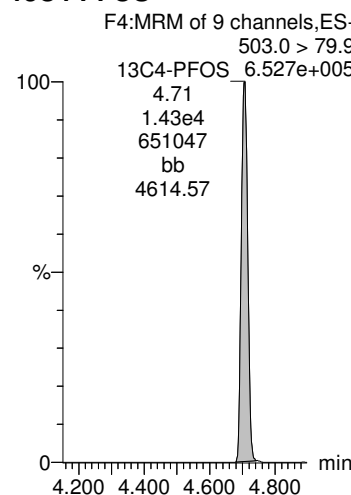
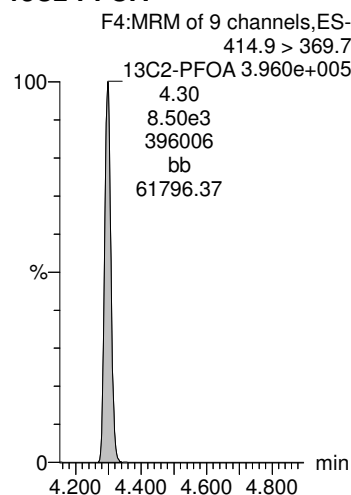
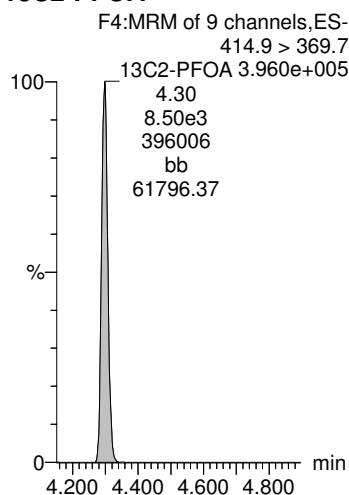
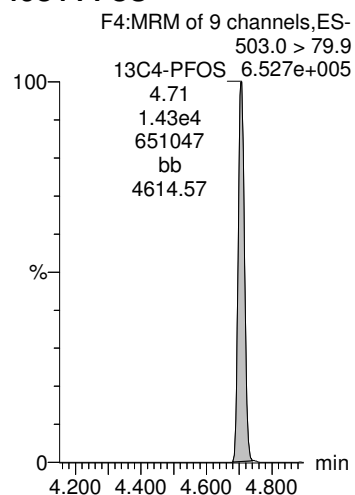
**13C4-PFOS**

**13C2-PFOA**

**13C2-PFOA**

**13C4-PFOS**

**13C2-PFOA**

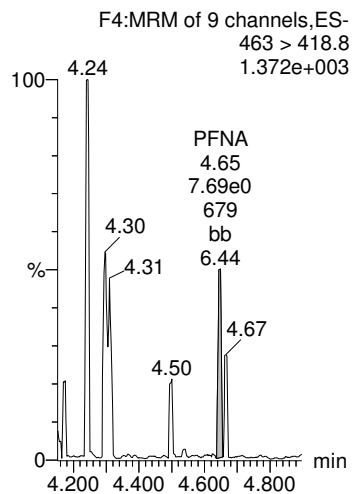


Dataset: X:\G1.PRO\Results\2018\180224G1\180224G1-19.qld

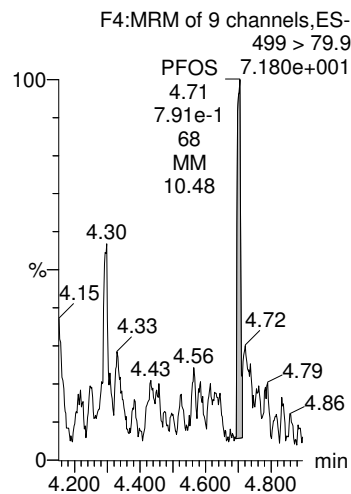
Last Altered: Tuesday, February 27, 2018 10:16:56 Pacific Standard Time  
Printed: Tuesday, February 27, 2018 10:17:17 Pacific Standard Time

Name: 180224G1\_19, Date: 24-Feb-2018, Time: 21:58:41, ID: 1800322-01 WI-A06-RW13-0218 0.25331, Description: WI-A06-RW13-0218

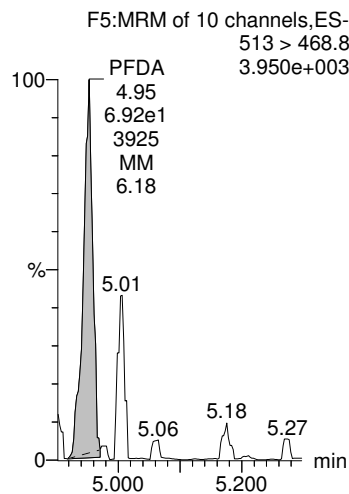
**PFNA**



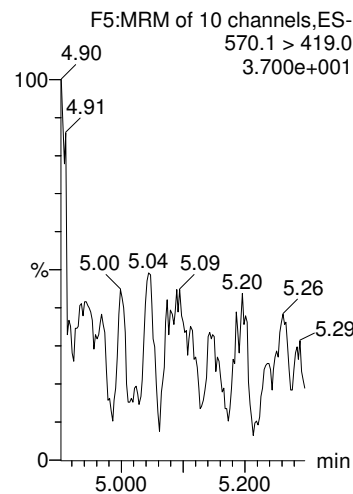
**PFOS**



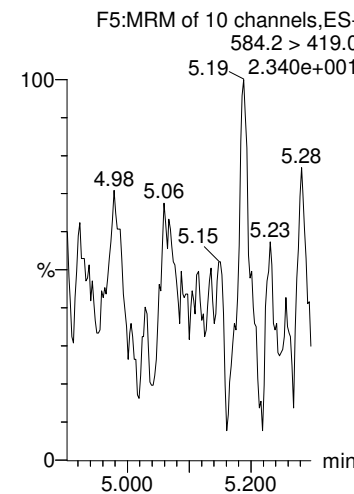
**PFDA**



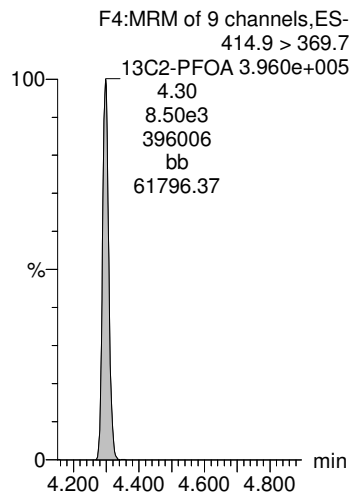
**N-MeFOSAA**



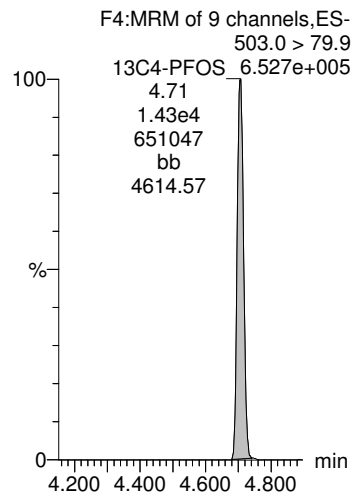
**N-EtFOSAA**



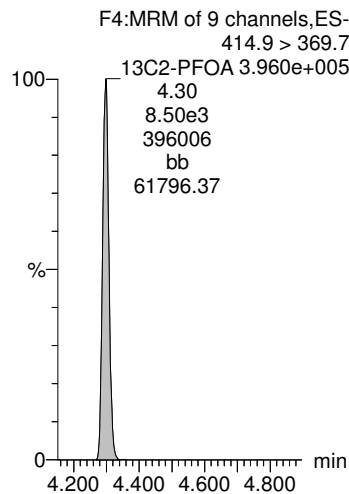
**13C2-PFOA**



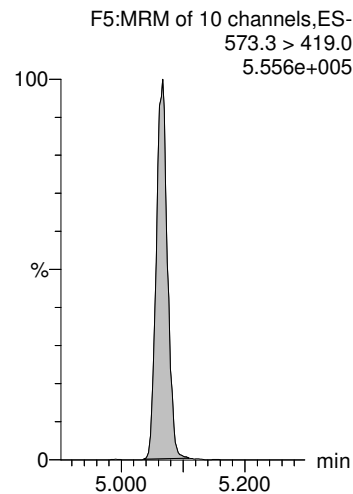
**13C4-PFOS**



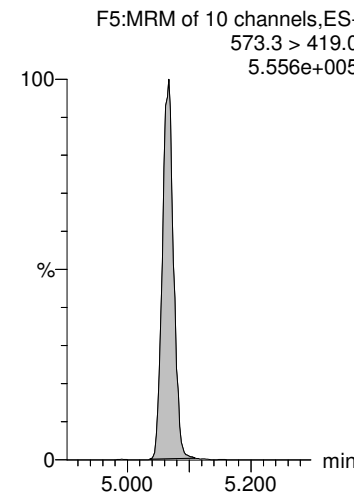
**13C2-PFOA**



**d3-N-MeFOSAA**



**d3-N-MeFOSAA**



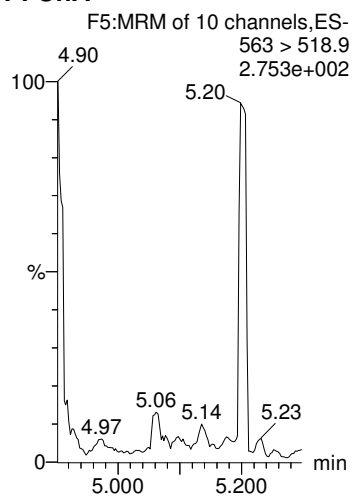
Dataset: X:\G1.PRO\Results\2018\180224G1\180224G1-19.qld

Last Altered: Tuesday, February 27, 2018 10:16:56 Pacific Standard Time

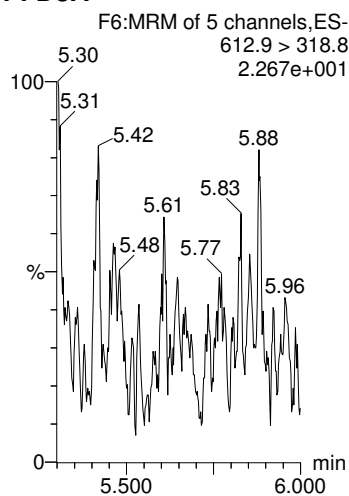
Printed: Tuesday, February 27, 2018 10:17:17 Pacific Standard Time

Name: 180224G1\_19, Date: 24-Feb-2018, Time: 21:58:41, ID: 1800322-01 WI-A06-RW13-0218 0.25331, Description: WI-A06-RW13-0218

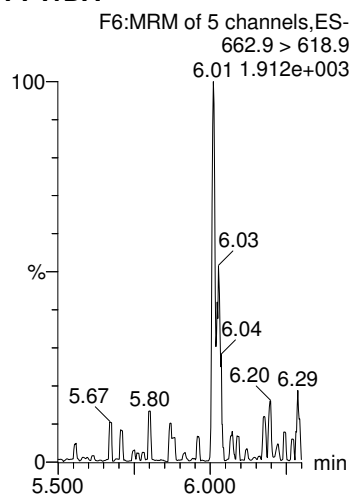
**PFUnA**



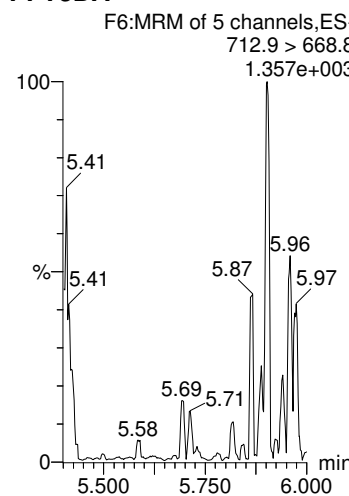
**PFDaA**



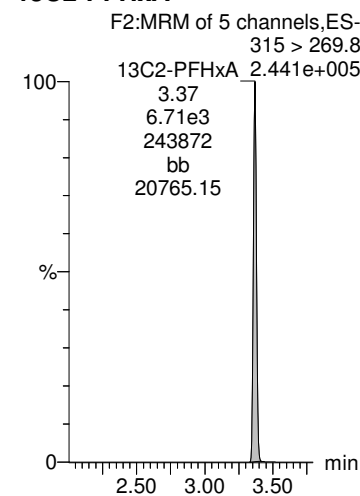
**PFTrDA**



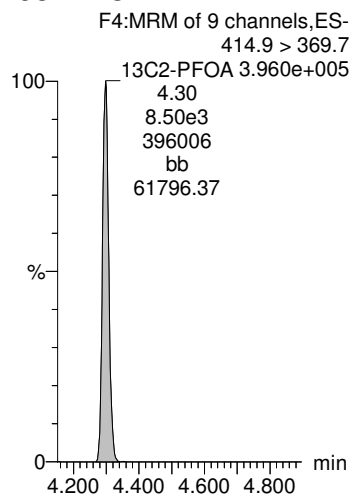
**PFTeDA**



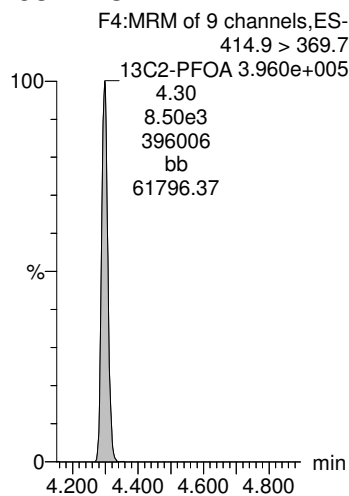
**13C2-PFHxA**



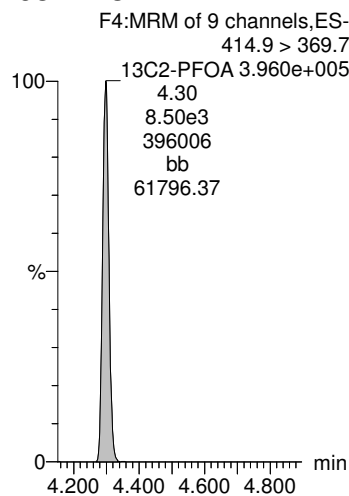
**13C2-PFOA**



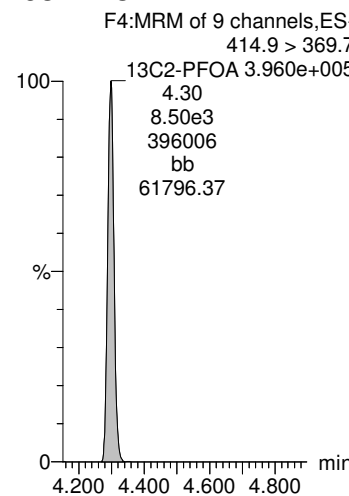
**13C2-PFOA**



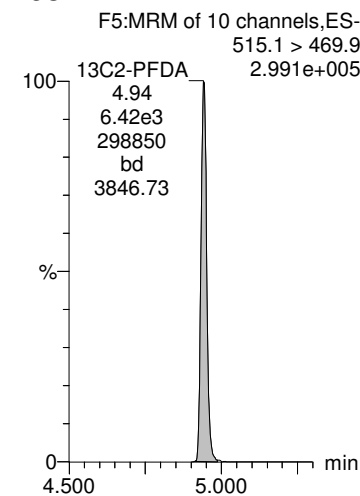
**13C2-PFOA**



**13C2-PFOA**



**13C2-PFDA**



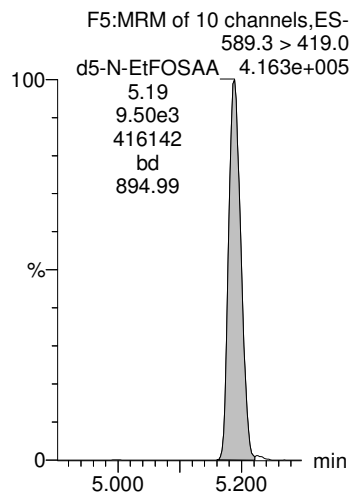
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Last Altered: Tuesday, February 27, 2018 10:16:56 Pacific Standard Time

Printed: Tuesday, February 27, 2018 10:17:17 Pacific Standard Time

Name: 180224G1\_19, Date: 24-Feb-2018, Time: 21:58:41, ID: 1800322-01 WI-A06-RW13-0218 0.25331, Description: WI-A06-RW13-0218

**d5-N-EtFOSAA**





Dataset: X:\G1.PRO\Results\2018\180224G1\180224G1-20.qld

Last Altered: Tuesday, February 27, 2018 10:25:00 Pacific Standard Time

Printed: Tuesday, February 27, 2018 10:25:15 Pacific Standard Time

Method: X:\G1.PRO\MethDB\PFAS\_DW\_L14\_1223.mdb 23 Feb 2018 15:59:15

Calibration: X:\G1.PRO\CurveDB\C18\_537\_Q1\_02-23-18\_L14.cdb 23 Feb 2018 16:46:11

Name: 180224G1\_20, Date: 24-Feb-2018, Time: 22:10:57, ID: 1800322-02 WI-A06-FB13-0218 0.25329, Description: WI-A06-FB13-0218

	# Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	299 > 79.7		1.38e4	0.2533		3.01				
2	2 PFHxA	313.2 > 268.9	8.35e1	9.39e3	0.2533		3.35	3.37	0.0889	0.634	
3	3 PFHpA	363 > 318.9	1.36e1	9.39e3	0.2533		3.87	3.88	0.0145	0.0609	
4	4 PFHxS	398.9 > 79.6	6.30e-1	1.38e4	0.2533		4.00	3.99	0.00131	0.00737	
5	5 PFOA	413 > 368.7	1.01e2	9.39e3	0.2533		4.30	4.30	0.107	0.505	
6	6 PFNA	463 > 418.8		9.39e3	0.2533		4.64				
7	7 PFOS	499 > 79.9		1.38e4	0.2533		4.71				
8	8 PFDA	513 > 468.8	5.80e1	9.39e3	0.2533		4.87	4.95	0.0617	0.219	
9	9 N-MeFOSAA	570.1 > 419.0		1.02e4	0.2533		5.01				
10	10 N-EtFOSAA	584.2 > 419.0	3.74e-1	1.02e4	0.2533		5.19	5.07	0.00147	0.00547	
11	11 PFUnA	563 > 518.9		9.39e3	0.2533		5.13				
12	12 PFDoA	612.9 > 318.8		9.39e3	0.2533		5.33				
13	13 PFTTrDA	662.9 > 618.9		9.39e3	0.2533		5.56				
14	14 PFTeDA	712.9 > 668.8	6.94e0	9.39e3	0.2533		5.73	5.79	0.00739	0.0233	
15	15 13C2-PFHxA	315 > 269.8	6.26e3	9.39e3	0.2533	0.731	3.45	3.37	6.67	36.0	91.2
16	16 13C2-PFDA	515.1 > 469.9	6.97e3	9.39e3	0.2533	0.910	4.90	4.94	7.42	32.2	81.5
17	17 d5-N-EtFOSAA	589.3 > 419.0	1.09e4	1.02e4	0.2533	1.049	5.07	5.19	42.7	161	101.8
18	18 13C2-PFOA	414.9 > 369.7	9.39e3	9.39e3	0.2533	1.000	4.41	4.30	10.0	39.5	100.0
19	19 13C4-PFOS	503.0 > 79.9	1.38e4	1.38e4	0.2533	1.000	4.81	4.71	28.7	113	100.0
20	20 d3-N-MeFOSAA	573.3 > 419.0	1.02e4	1.02e4	0.2533	1.000	5.16	5.07	40.0	158	100.0

Dataset: X:\G1.PRO\Results\2018\180224G1\180224G1-20.qld

Last Altered: Tuesday, February 27, 2018 10:25:00 Pacific Standard Time

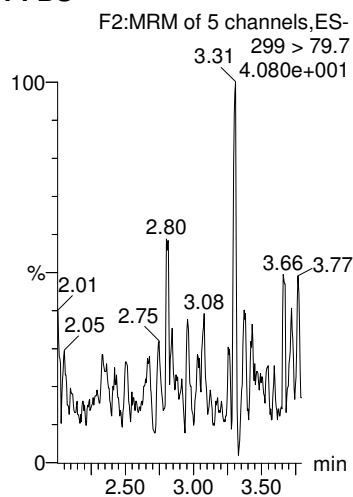
Printed: Tuesday, February 27, 2018 10:25:15 Pacific Standard Time

Method: X:\G1.PRO\MethDB\PFAS\_DW\_L14\_1223.mdb 23 Feb 2018 15:59:15

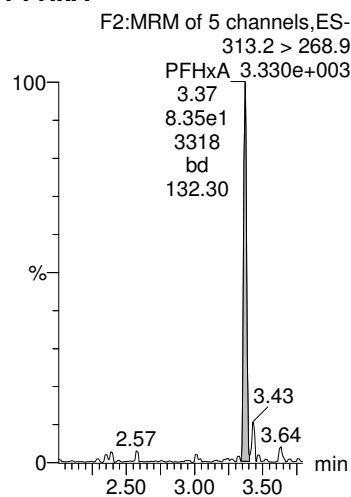
Calibration: X:\G1.PRO\CurveDB\C18\_537\_Q1\_02-23-18\_L14.cdb 23 Feb 2018 16:46:11

Name: 180224G1\_20, Date: 24-Feb-2018, Time: 22:10:57, ID: 1800322-02 WI-A06-FB13-0218 0.25329, Description: WI-A06-FB13-0218

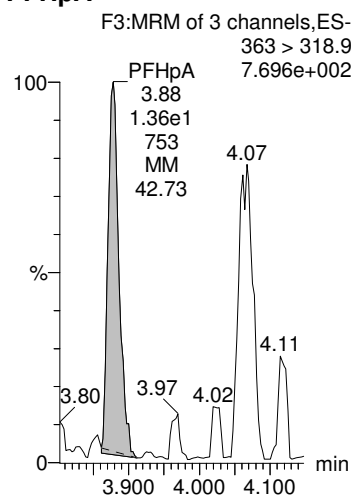
**PFBS**



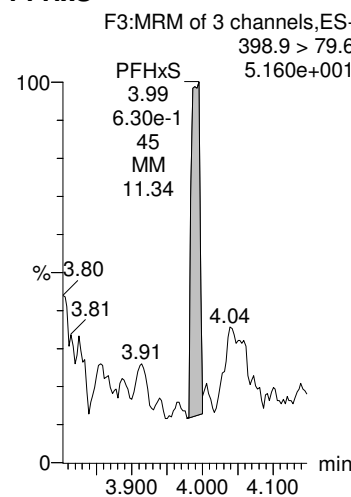
**PFHxA**



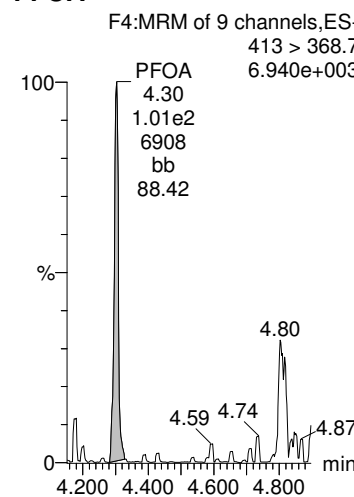
**PFHpA**



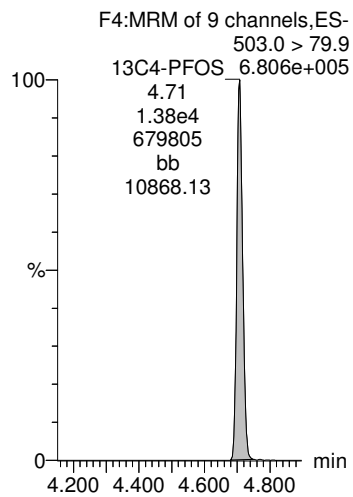
**PFHxS**



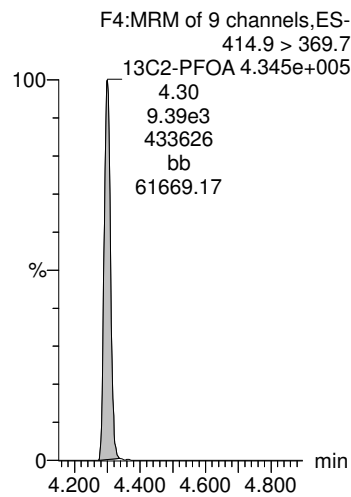
**PFOA**



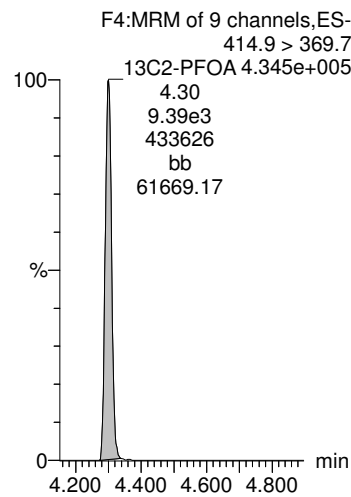
**13C4-PFOS**



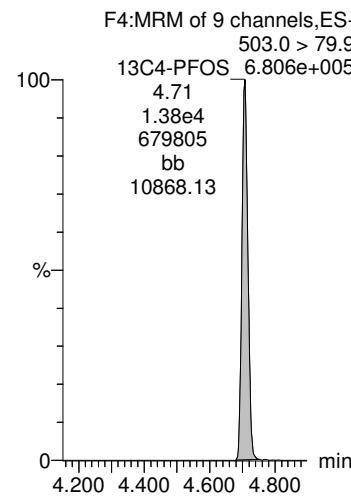
**13C2-PFOA**



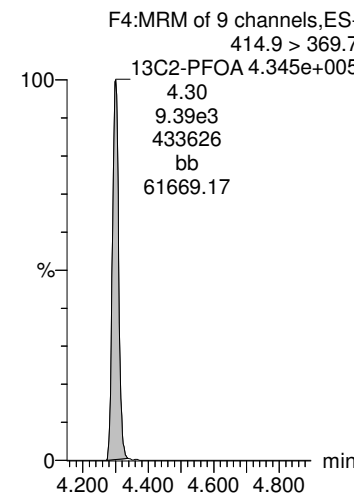
**13C2-PFOA**



**13C4-PFOS**



**13C2-PFOA**



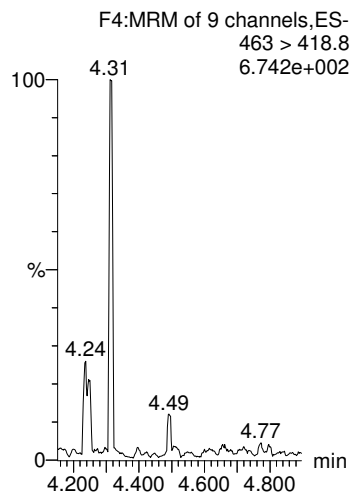
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Last Altered: Tuesday, February 27, 2018 10:25:00 Pacific Standard Time

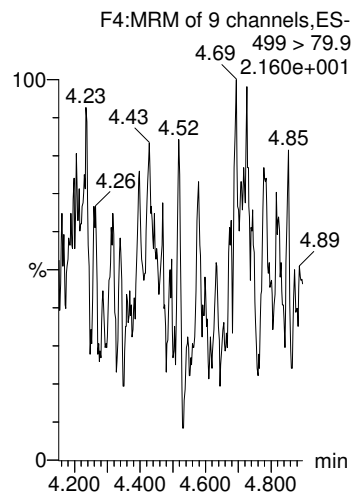
Printed: Tuesday, February 27, 2018 10:25:15 Pacific Standard Time

Name: 180224G1\_20, Date: 24-Feb-2018, Time: 22:10:57, ID: 1800322-02 WI-A06-FB13-0218 0.25329, Description: WI-A06-FB13-0218

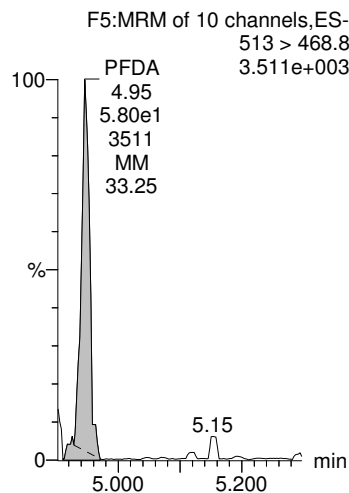
**PFNA**



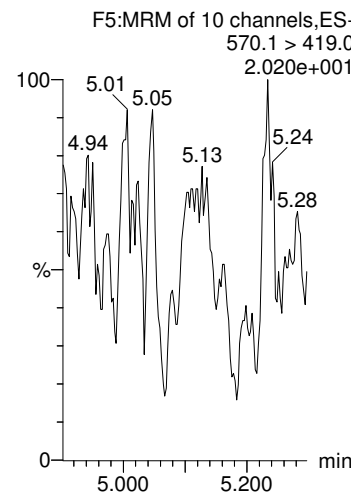
**PFOS**



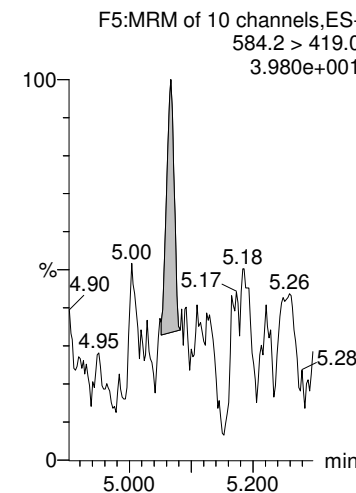
**PFDA**



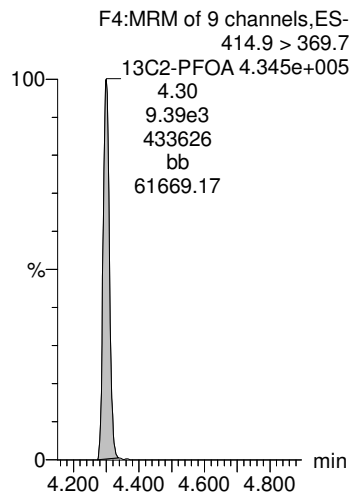
**N-MeFOSAA**



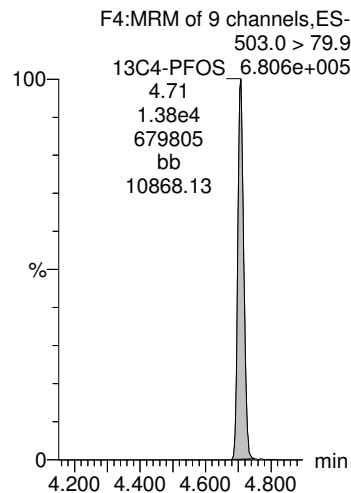
**N-EtFOSAA**



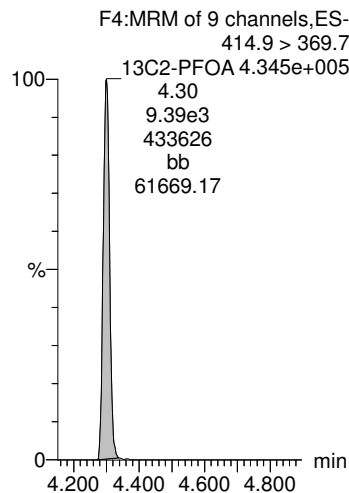
**13C2-PFOA**



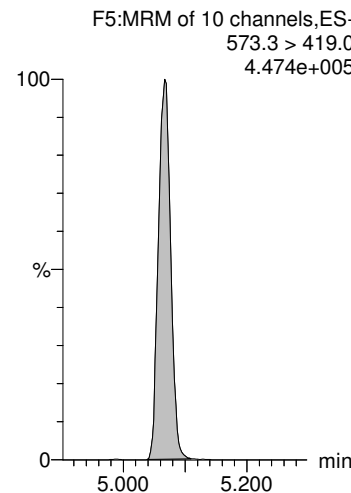
**13C4-PFOS**



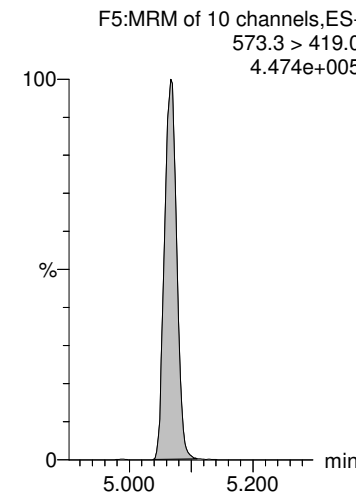
**13C2-PFOA**



**d3-N-MeFOSAA**



**d3-N-MeFOSAA**

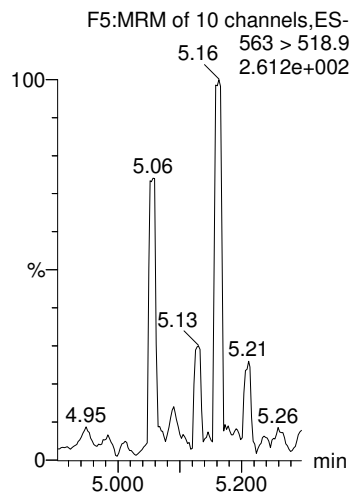


Dataset: X:\G1.PRO\Results\2018\180224G1\180224G1-20.qld

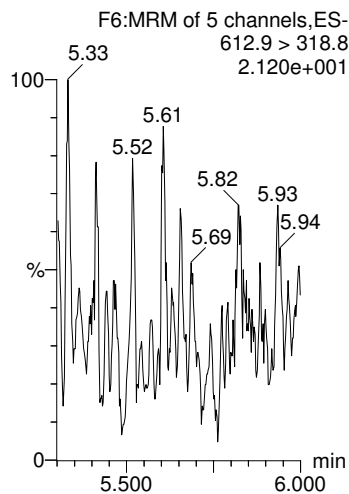
Last Altered: Tuesday, February 27, 2018 10:25:00 Pacific Standard Time  
Printed: Tuesday, February 27, 2018 10:25:15 Pacific Standard Time

Name: 180224G1\_20, Date: 24-Feb-2018, Time: 22:10:57, ID: 1800322-02 WI-A06-FB13-0218 0.25329, Description: WI-A06-FB13-0218

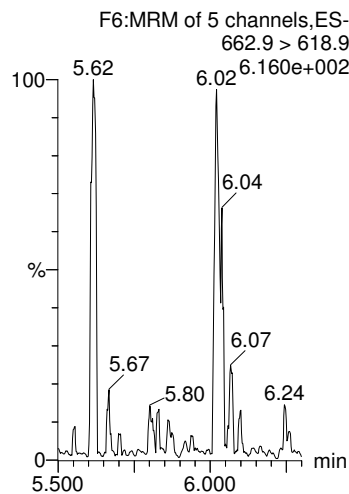
**PFUnA**



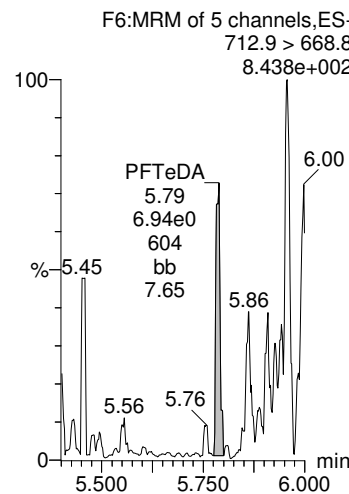
**PFDaA**



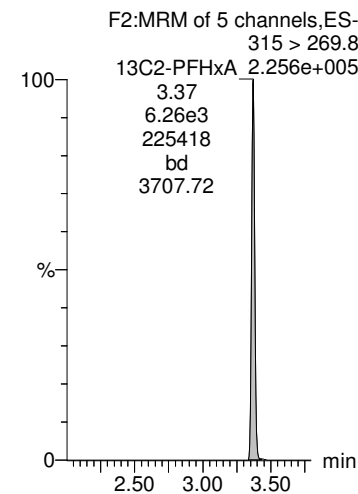
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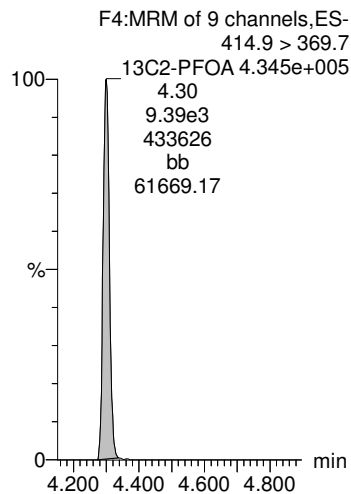
**PFTeDA**



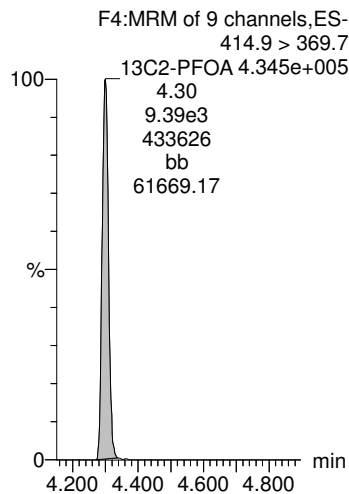
**13C2-PFHxA**



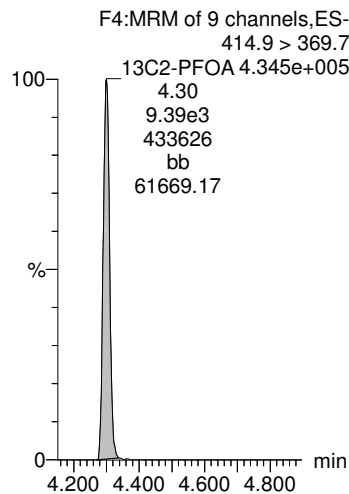
**13C2-PFOA**



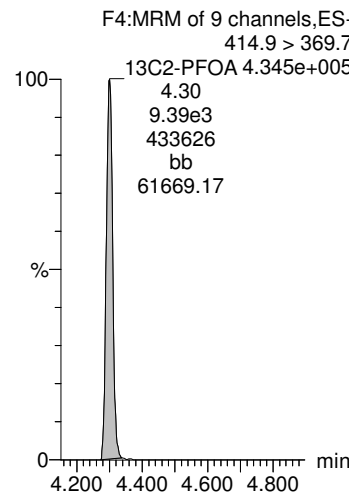
**13C2-PFOA**



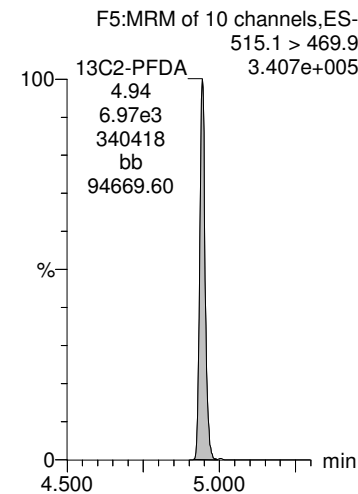
**13C2-PFOA**



**13C2-PFOA**



**13C2-PFDA**



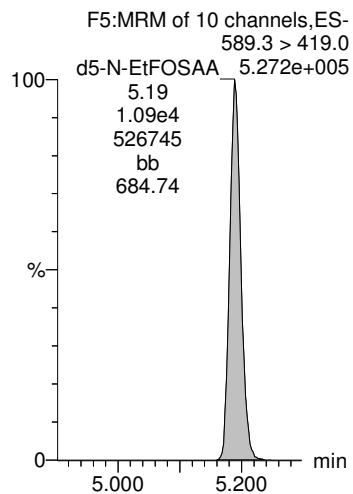
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Last Altered: Tuesday, February 27, 2018 10:25:00 Pacific Standard Time

Printed: Tuesday, February 27, 2018 10:25:15 Pacific Standard Time

Name: 180224G1\_20, Date: 24-Feb-2018, Time: 22:10:57, ID: 1800322-02 WI-A06-FB13-0218 0.25329, Description: WI-A06-FB13-0218

**d5-N-EtFOSAA**



Dataset: X:\G1.PRO\Results\2018\180226G1\180226G1-4.qld

Last Altered: Tuesday, February 27, 2018 11:07:11 Pacific Standard Time

Printed: Tuesday, February 27, 2018 11:11:51 Pacific Standard Time

\*E see Dilution

Method: X:\G1.PRO\MethDB\PFAS\_DW\_L14\_1223.mdb 23 Feb 2018 15:59:15

Calibration: X:\G1.PRO\CurveDB\C18\_537\_Q1\_02-23-18\_L14.cdb 23 Feb 2018 16:46:11

Name: 180226G1\_4, Date: 26-Feb-2018, Time: 08:28:38, ID: 1800322-03 WI-A06-RW14-0218 0.24427, Description: WI-A06-RW14-0218

	# Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	299 > 79.7	5.68e3	1.57e4	0.2443		3.01	3.01	10.4	58.0	
2	2 PFHxA	313.2 > 268.9	9.08e3	1.11e4	0.2443		3.35	3.37	8.18	60.5	
3	3 PFHpA	363 > 318.9	4.17e3	1.11e4	0.2443		3.87	3.89	3.75	16.3	
4	4 PFHxS	398.9 > 79.6	2.45e4	1.57e4	0.2443		3.99	4.01	44.6	261 *E	
5	5 PFOA	413 > 368.7	4.94e3	1.11e4	0.2443		4.30	4.30	4.45	21.8	
6	6 PFNA	463 > 418.8		1.11e4	0.2443		4.64				
7	7 PFOS	499 > 79.9	9.87e2	1.57e4	0.2443		4.71	4.59	1.80	7.68	
8	8 PFDA	513 > 468.8	3.53e1	1.11e4	0.2443		4.87	4.94	0.0318	0.117	
9	9 N-MeFOSAA	570.1 > 419.0		1.14e4	0.2443		5.00				
10	10 N-EtFOSAA	584.2 > 419.0		1.14e4	0.2443		5.18				
11	11 PFUnA	563 > 518.9		1.11e4	0.2443		5.13				
12	12 PFDoA	612.9 > 318.8		1.11e4	0.2443		5.33				
13	13 PFTrDA	662.9 > 618.9		1.11e4	0.2443		5.56				
14	14 PFTeDA	712.9 > 668.8		1.11e4	0.2443		5.73				
15	15 13C2-PFHxA	315 > 269.8	7.26e3	1.11e4	0.2443	0.731	3.45	3.37	6.54	36.6	89.4
16	16 13C2-PFDA	515.1 > 469.9	7.26e3	1.11e4	0.2443	0.910	4.90	4.94	6.54	29.4	71.9
17	17 d5-N-EtFOSAA	589.3 > 419.0	1.06e4	1.14e4	0.2443	1.049	5.06	5.19	37.3	146	88.9
18	18 13C2-PFOA	414.9 > 369.7	1.11e4	1.11e4	0.2443	1.000	4.41	4.30	10.0	40.9	100.0
19	19 13C4-PFOS	503.0 > 79.9	1.57e4	1.57e4	0.2443	1.000	4.81	4.71	28.7	117	100.0
20	20 d3-N-MeFOSAA	573.3 > 419.0	1.14e4	1.14e4	0.2443	1.000	5.16	5.06	40.0	164	100.0

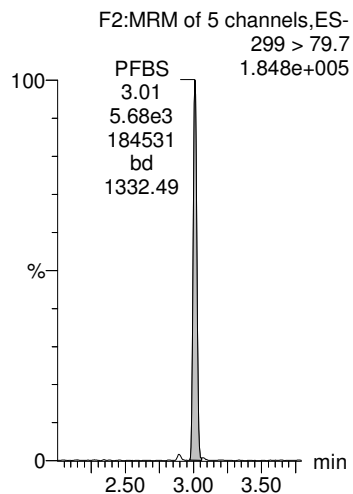
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Last Altered: Tuesday, February 27, 2018 11:07:11 Pacific Standard Time  
Printed: Tuesday, February 27, 2018 11:11:51 Pacific Standard Time

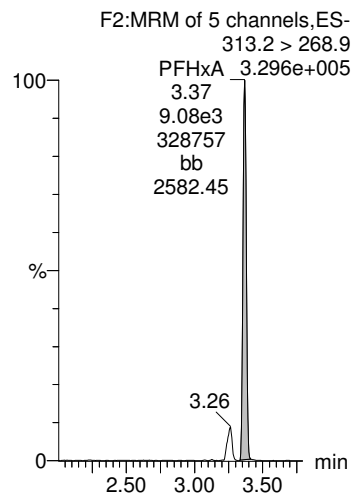
Method: X:\G1.PRO\MethDB\PFAS\_DW\_L14\_1223.mdb 23 Feb 2018 15:59:15  
Calibration: X:\G1.PRO\CurveDB\C18\_537\_Q1\_02-23-18\_L14.cdb 23 Feb 2018 16:46:11

Name: 180226G1\_4, Date: 26-Feb-2018, Time: 08:28:38, ID: 1800322-03 WI-A06-RW14-0218 0.24427, Description: WI-A06-RW14-0218

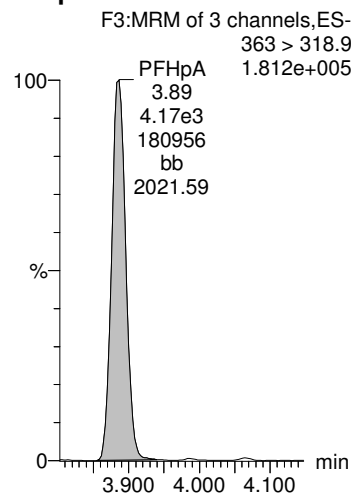
**PFBS**



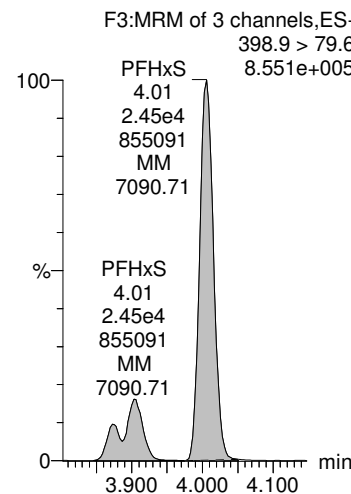
**PFHxA**



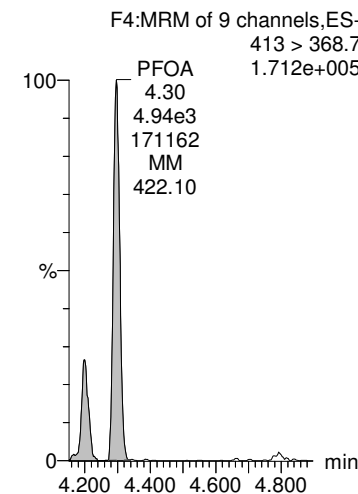
**PFHpA**



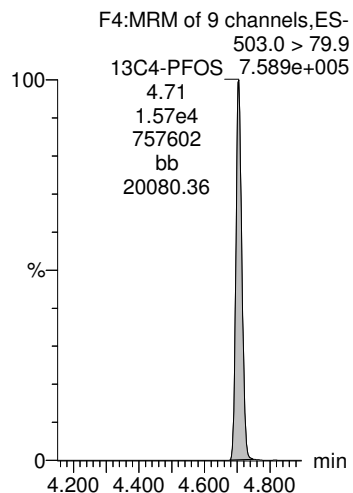
**PFHxS**



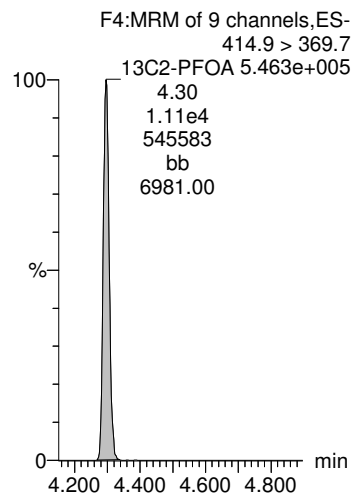
**PFOA**



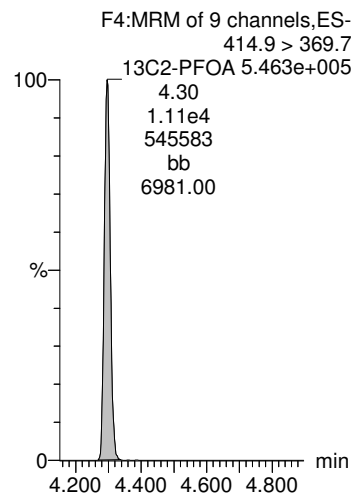
**13C4-PFOS**



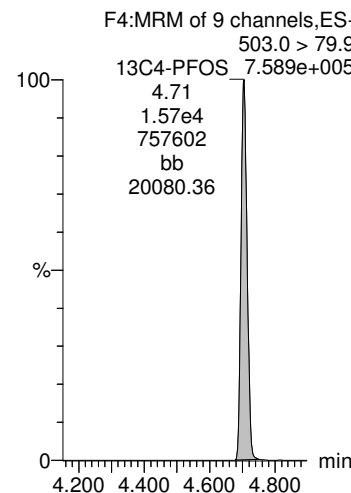
**13C2-PFOA**



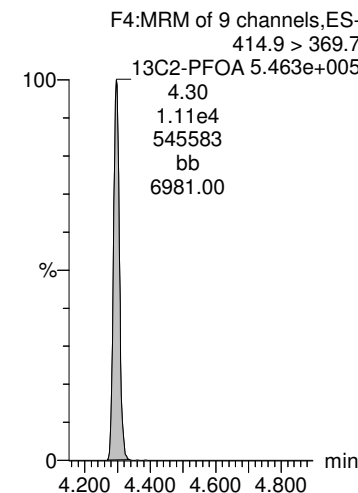
**13C2-PFOA**



**13C4-PFOS**



**13C2-PFOA**



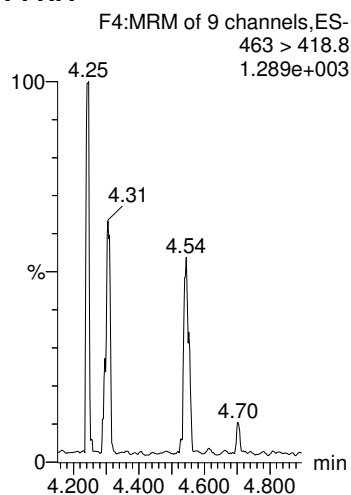
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Last Altered: Tuesday, February 27, 2018 11:07:11 Pacific Standard Time

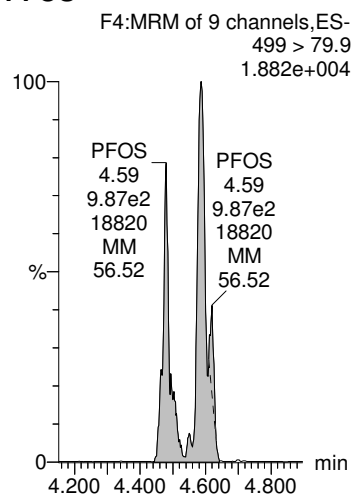
Printed: Tuesday, February 27, 2018 11:11:51 Pacific Standard Time

Name: 180226G1\_4, Date: 26-Feb-2018, Time: 08:28:38, ID: 1800322-03 WI-A06-RW14-0218 0.24427, Description: WI-A06-RW14-0218

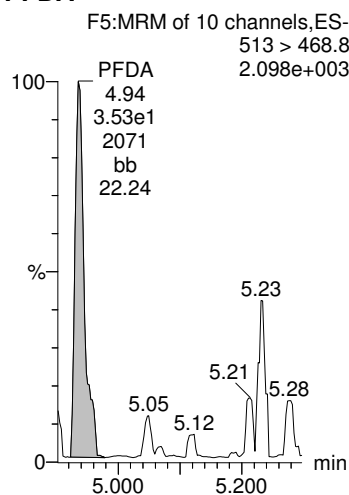
**PFNA**



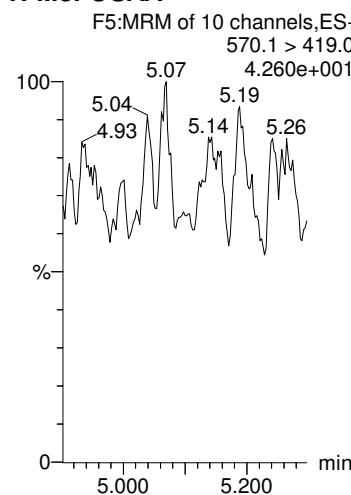
**PFOS**



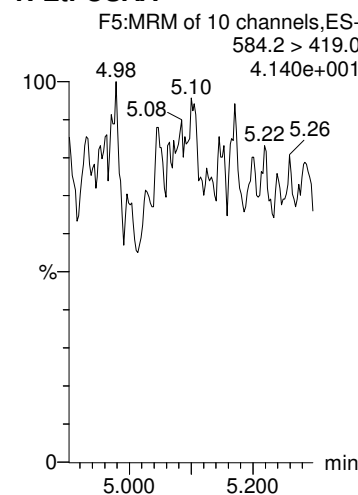
**PFDA**



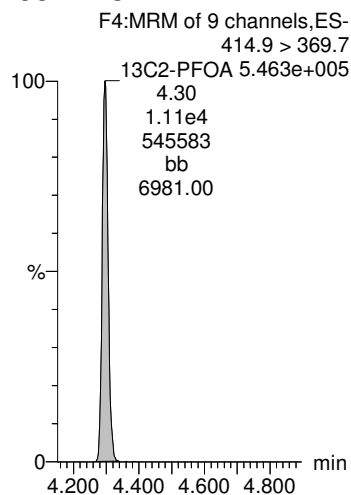
**N-MeFOSAA**



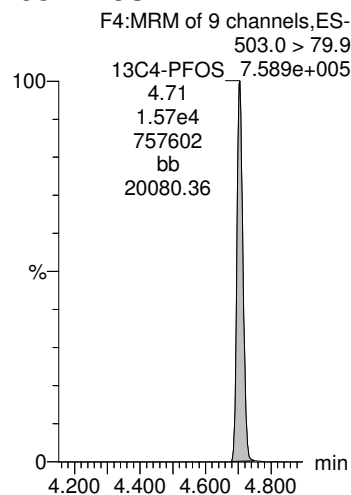
**N-EtFOSAA**



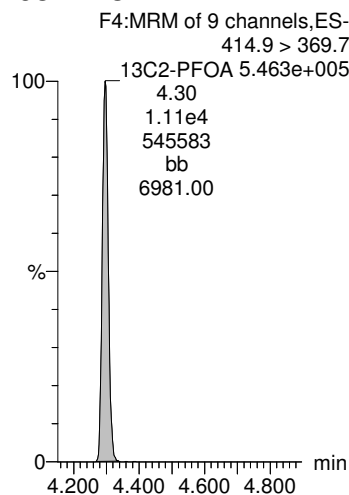
**13C2-PFOA**



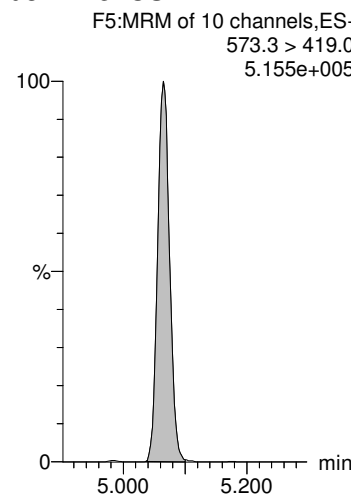
**13C4-PFOS**



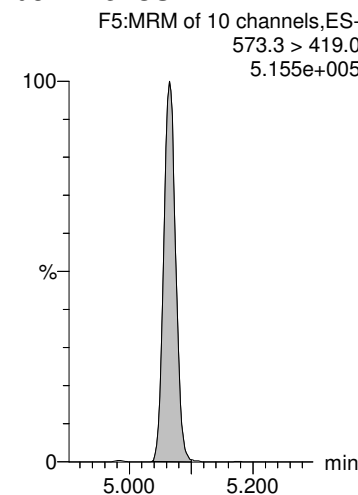
**13C2-PFOA**



**d3-N-MeFOSAA**



**d3-N-MeFOSAA**



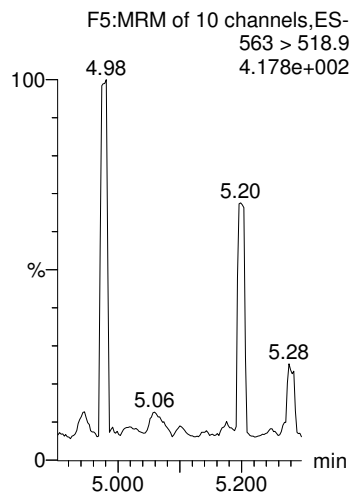


Dataset: X:\G1.PRO\Results\2018\180226G1\180226G1-4.qld

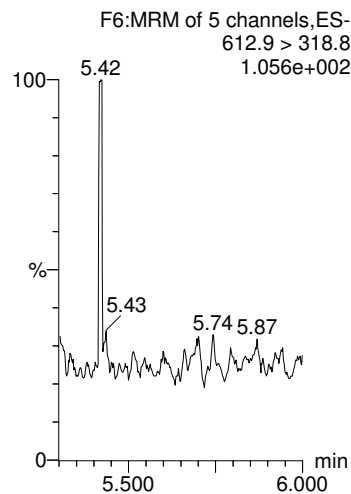
Last Altered: Tuesday, February 27, 2018 11:07:11 Pacific Standard Time  
Printed: Tuesday, February 27, 2018 11:11:51 Pacific Standard Time

Name: 180226G1\_4, Date: 26-Feb-2018, Time: 08:28:38, ID: 1800322-03 WI-A06-RW14-0218 0.24427, Description: WI-A06-RW14-0218

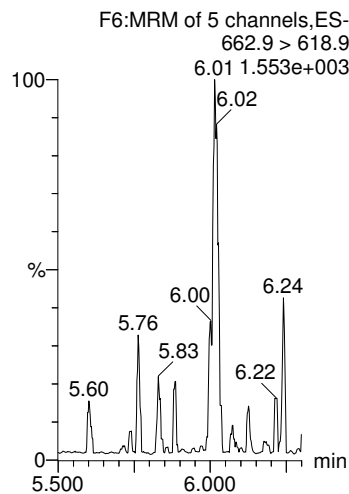
**PFUnA**



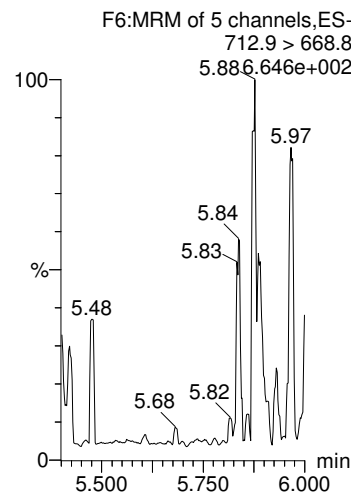
**PFDaA**



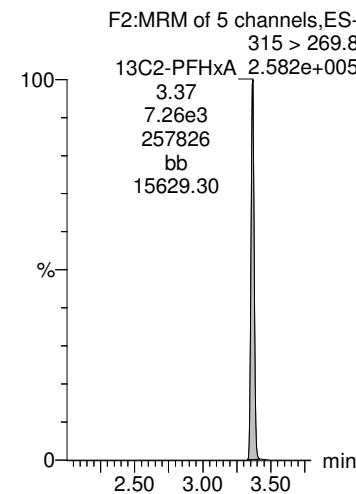
**PFTrDA**



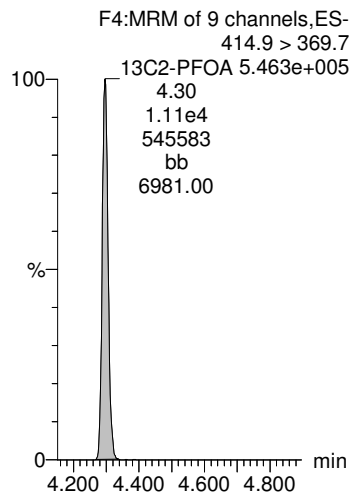
**PFTeDA**



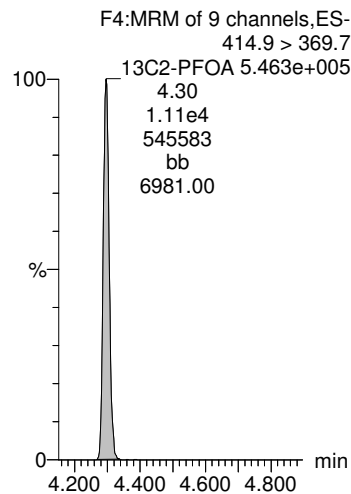
**13C2-PFHxA**



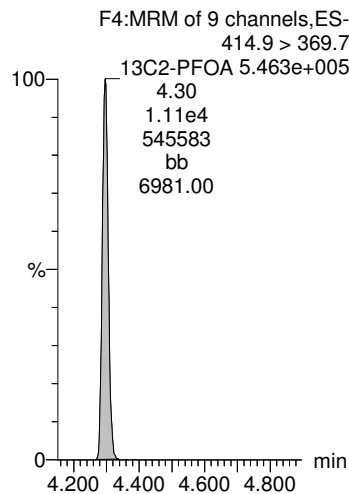
**13C2-PFOA**



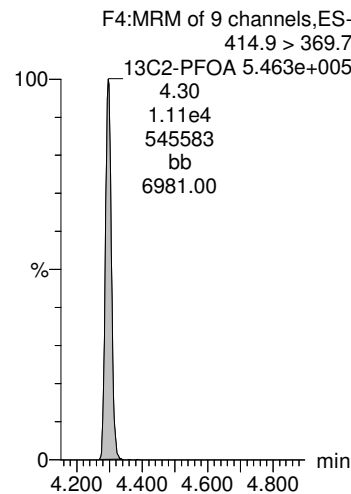
**13C2-PFOA**



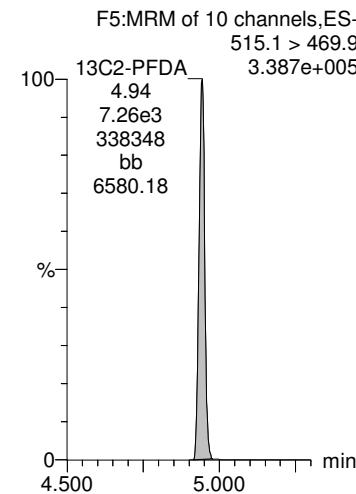
**13C2-PFOA**



**13C2-PFOA**



**13C2-PFDA**



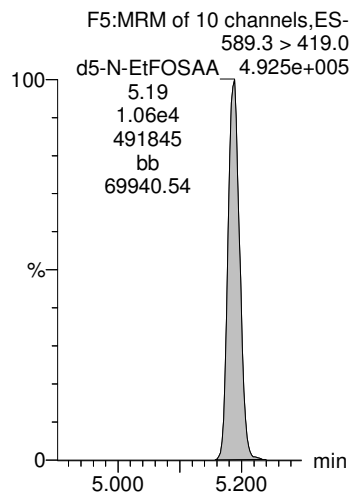
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Last Altered: Tuesday, February 27, 2018 11:07:11 Pacific Standard Time

Printed: Tuesday, February 27, 2018 11:11:51 Pacific Standard Time

Name: 180226G1\_4, Date: 26-Feb-2018, Time: 08:28:38, ID: 1800322-03 WI-A06-RW14-0218 0.24427, Description: WI-A06-RW14-0218

**d5-N-EtFOSAA**



Dataset: X:\G1.PRO\Results\2018\180228G1\180228G1-11.qld

Last Altered: Wednesday, February 28, 2018 13:38:59 Pacific Standard Time

Printed: Wednesday, February 28, 2018 13:40:16 Pacific Standard Time

Method: X:\G1.PRO\MethDB\PFAS\_DW\_L14\_1223.mdb 23 Feb 2018 15:59:15

Calibration: X:\G1.PRO\CurveDB\C18\_537\_Q1\_02-23-18\_L14.cdb 23 Feb 2018 16:46:11

Name: 180228G1\_11, Date: 28-Feb-2018, Time: 11:33:57, ID: 1800322-03 WI-A06-RW @ 5 X 14-0218 0.24427, Description: WI-A06-RW14-0218

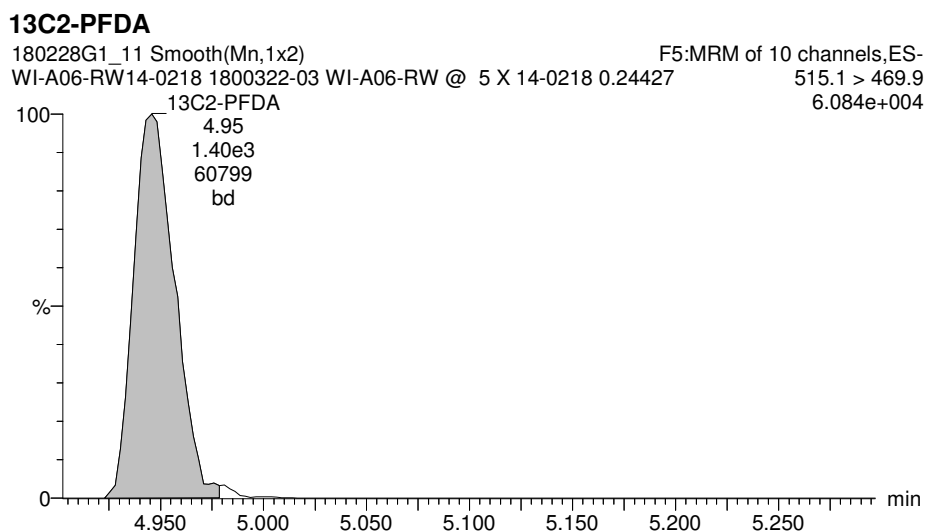
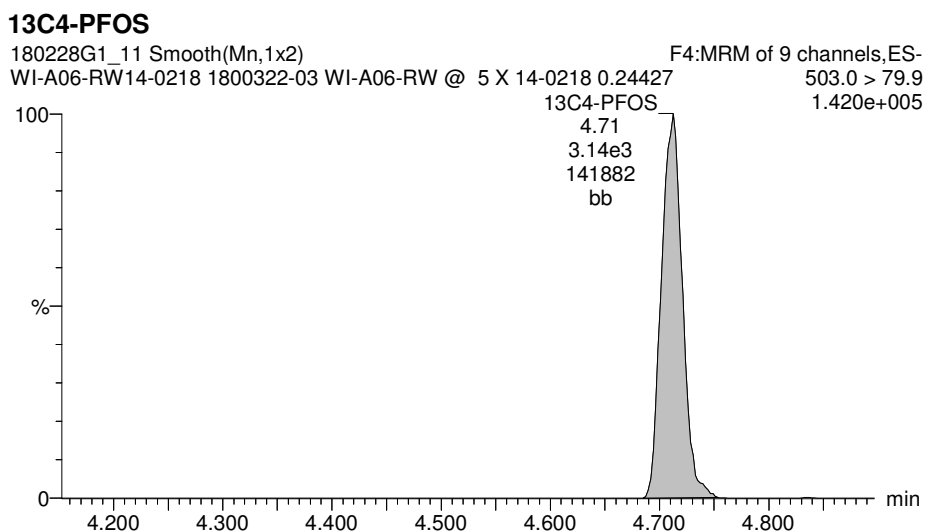
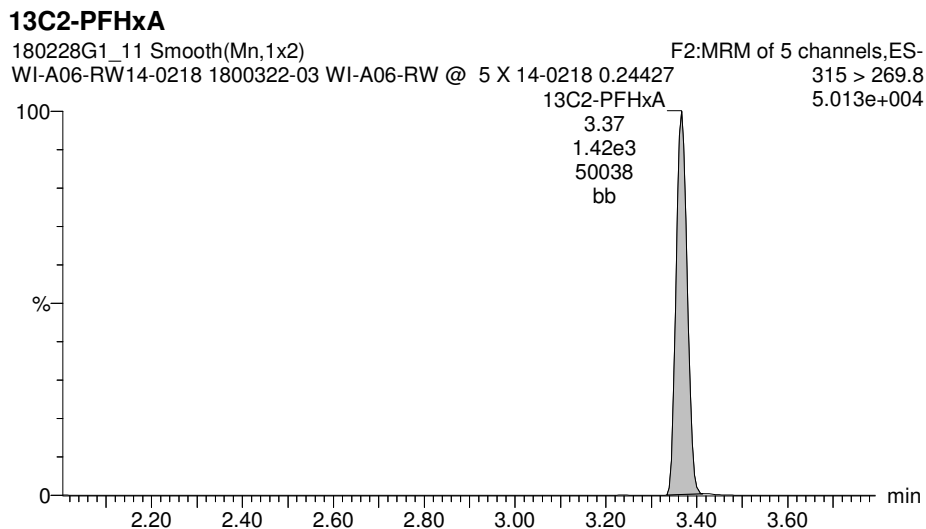
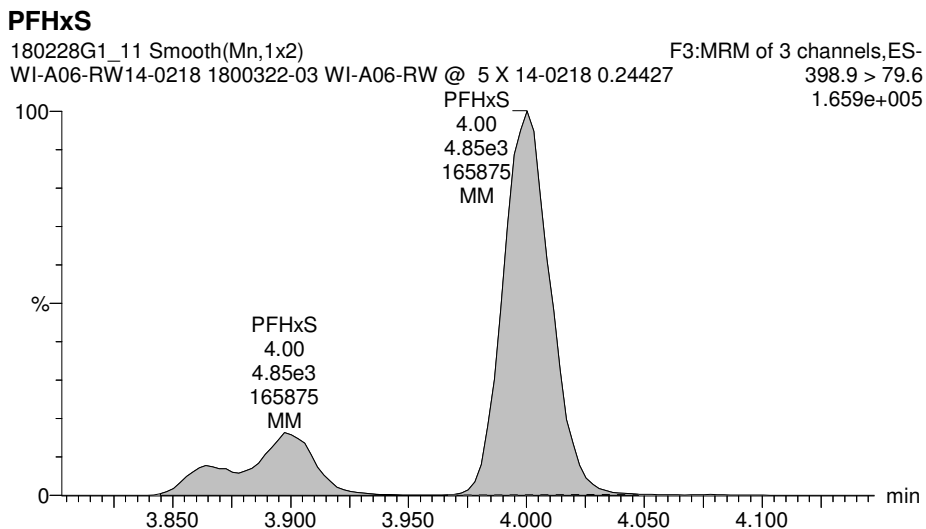
#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	4 PFHxS	398.9 > 79.6	4.85e3	3.14e3	0.2443		4.00	4.00	44.4	260	
2	15 13C2-PFHxA	315 > 269.8	1.42e3	1.88e3	0.2443	0.731	3.45	3.37	7.55	42.3	103.2
3	16 13C2-PFDA	515.1 > 469.9	1.40e3	1.88e3	0.2443	0.910	4.90	4.95	7.46	33.6	82.0
4	18 13C2-PFOA	414.9 > 369.7	1.88e3	1.88e3	0.2443	1.000	4.41	4.30	10.0	40.9	100.0
5	19 13C4-PFOS	503.0 > 79.9	3.14e3	3.14e3	0.2443	1.000	4.81	4.71	28.7	117	100.0

Dataset: X:\G1.PRO\Results\2018\180228G1\180228G1-11.qld

Last Altered: Wednesday, February 28, 2018 13:38:59 Pacific Standard Time  
Printed: Wednesday, February 28, 2018 13:40:16 Pacific Standard Time

Method: X:\G1.PRO\MethDB\PFAS\_DW\_L14\_1223.mdb 23 Feb 2018 15:59:15  
Calibration: X:\G1.PRO\CurveDB\C18\_537\_Q1\_02-23-18\_L14.cdb 23 Feb 2018 16:46:11

Name: 180228G1\_11, Date: 28-Feb-2018, Time: 11:33:57, ID: 1800322-03 WI-A06-RW @ 5 X 14-0218 0.24427, Description: WI-A06-RW14-0218



Dataset: X:\G1.PRO\Results\2018\180224G1\180224G1-22.qld

Last Altered: Tuesday, February 27, 2018 10:35:10 Pacific Standard Time

Printed: Tuesday, February 27, 2018 10:35:47 Pacific Standard Time

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Calibration: X:\G1.PRO\CurveDB\C18\_537\_Q1\_02-23-18\_L14.cdb 23 Feb 2018 16:46:11

Name: 180224G1\_22, Date: 24-Feb-2018, Time: 22:35:39, ID: 1800322-04 WI-A06-FB14-0218 0.25858, Description: WI-A06-FB14-0218

	# Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	299 > 79.7	2.91e0	1.43e4	0.2586		3.01	3.02	0.00585	0.0309	
2	2 PFHxA	313.2 > 268.9	8.51e1	8.94e3	0.2586		3.35	3.37	0.0951	0.665	
3	3 PFHpA	363 > 318.9	1.44e1	8.94e3	0.2586		3.87	3.87	0.0161	0.0660	
4	4 PFHxS	398.9 > 79.6	1.39e0	1.43e4	0.2586		3.99	4.01	0.00280	0.0155	
5	5 PFOA	413 > 368.7	1.19e2	8.94e3	0.2586		4.30	4.30	0.133	0.615	
6	6 PFNA	463 > 418.8		8.94e3	0.2586		4.64				
7	7 PFOS	499 > 79.9	5.67e0	1.43e4	0.2586		4.71	4.70	0.0114	0.0460	
8	8 PFDA	513 > 468.8	3.20e1	8.94e3	0.2586		4.87	4.95	0.0358	0.124	
9	9 N-MeFOSAA	570.1 > 419.0	1.45e0	1.15e4	0.2586		5.00	5.07	0.00503	0.0148	
10	10 N-EtFOSAA	584.2 > 419.0		1.15e4	0.2586		5.18				
11	11 PFUnA	563 > 518.9		8.94e3	0.2586		5.13				
12	12 PFDoA	612.9 > 318.8		8.94e3	0.2586		5.33				
13	13 PFTTrDA	662.9 > 618.9	5.40e0	8.94e3	0.2586		5.56	5.61	0.00604	0.0170	
14	14 PFTeDA	712.9 > 668.8		8.94e3	0.2586		5.73				
15	15 13C2-PFHxA	315 > 269.8	6.43e3	8.94e3	0.2586	0.731	3.45	3.37	7.19	38.0	98.2
16	16 13C2-PFDA	515.1 > 469.9	6.23e3	8.94e3	0.2586	0.910	4.90	4.94	6.97	29.6	76.6
17	17 d5-N-EtFOSAA	589.3 > 419.0	9.63e3	1.15e4	0.2586	1.049	5.06	5.19	33.4	123	79.6
18	18 13C2-PFOA	414.9 > 369.7	8.94e3	8.94e3	0.2586	1.000	4.41	4.30	10.0	38.7	100.0
19	19 13C4-PFOS	503.0 > 79.9	1.43e4	1.43e4	0.2586	1.000	4.81	4.71	28.7	111	100.0
20	20 d3-N-MeFOSAA	573.3 > 419.0	1.15e4	1.15e4	0.2586	1.000	5.16	5.06	40.0	155	100.0

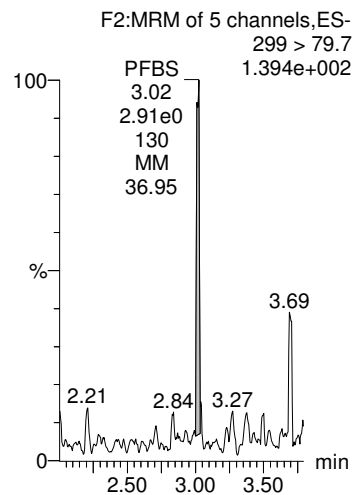
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Printed: Tuesday, February 27, 2018 10:35:47 Pacific Standard Time

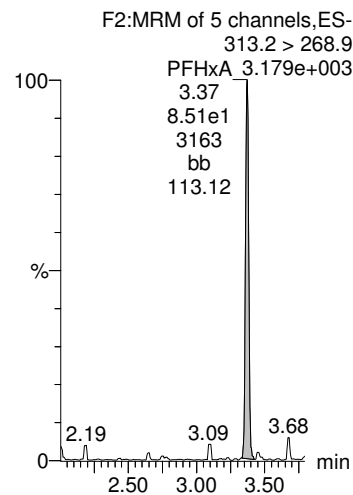
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Name: 180224G1\_22, Date: 24-Feb-2018, Time: 22:35:39, ID: 1800322-04 WI-A06-FB14-0218 0.25858, Description: WI-A06-FB14-0218

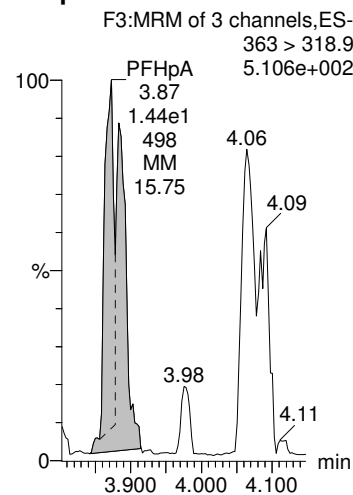
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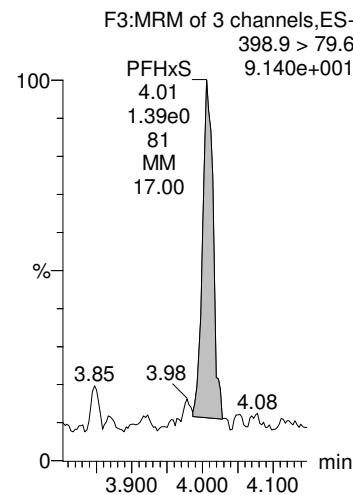
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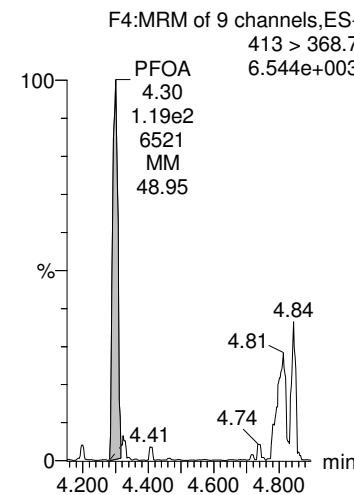
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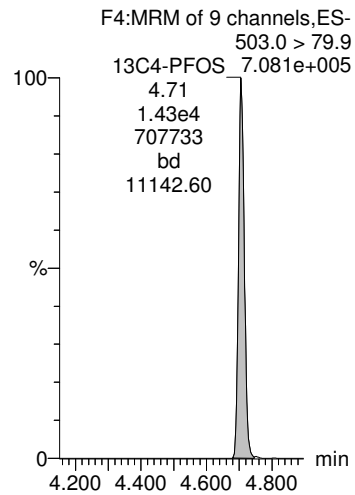
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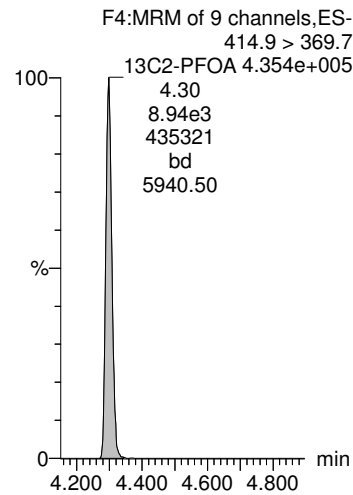
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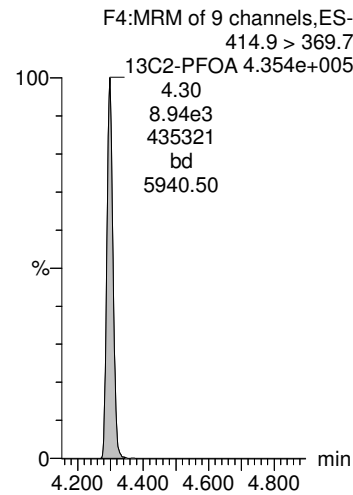
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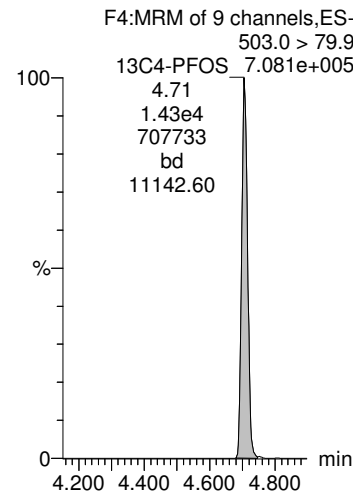
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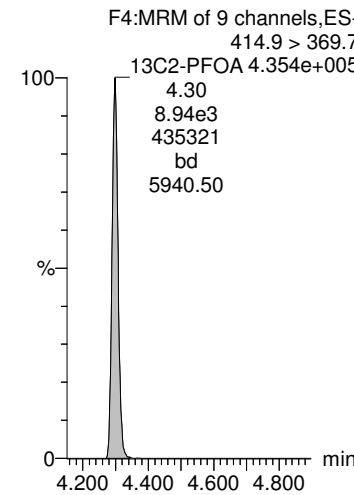
**13C2-PFOA**



**13C4-PFOS**



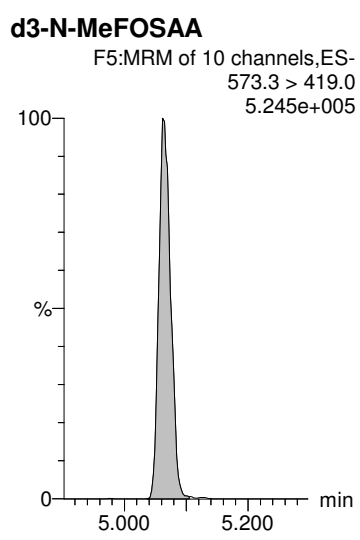
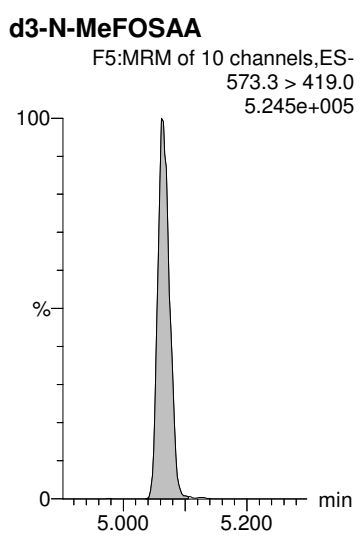
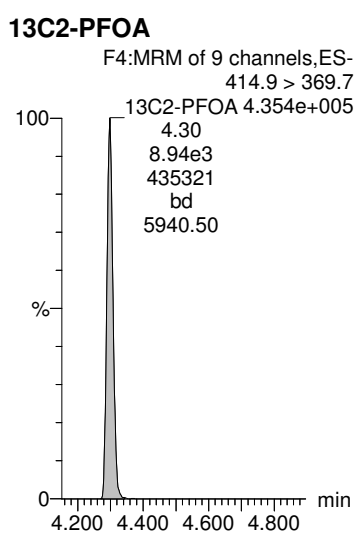
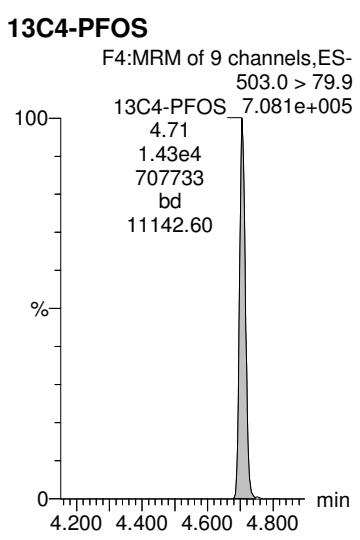
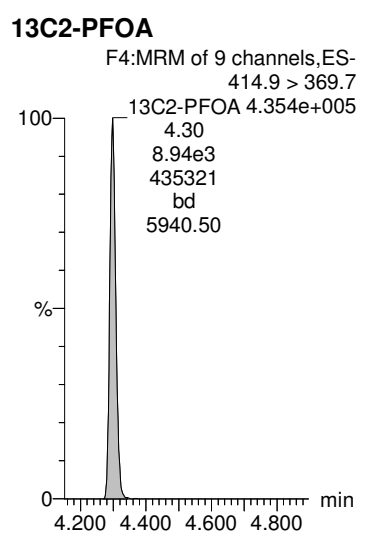
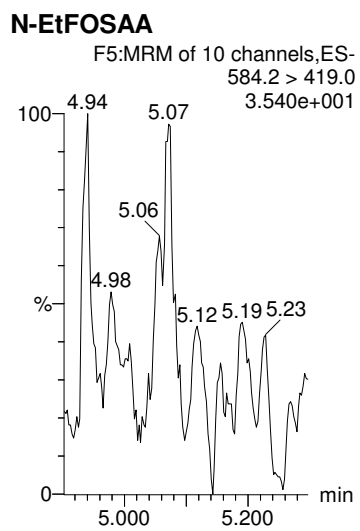
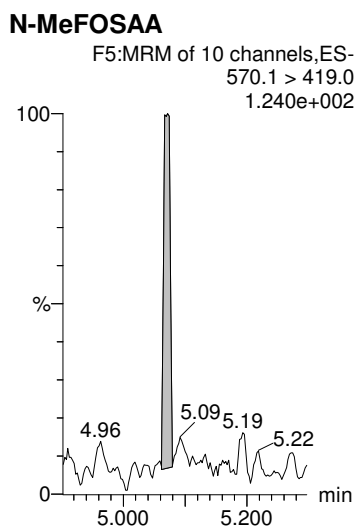
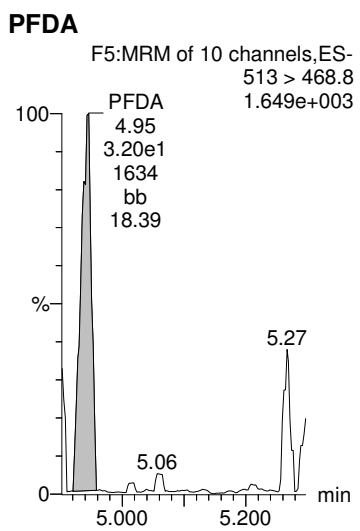
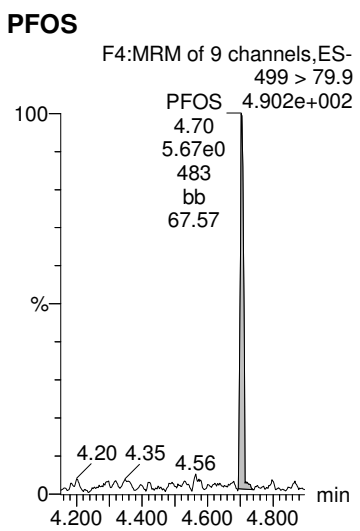
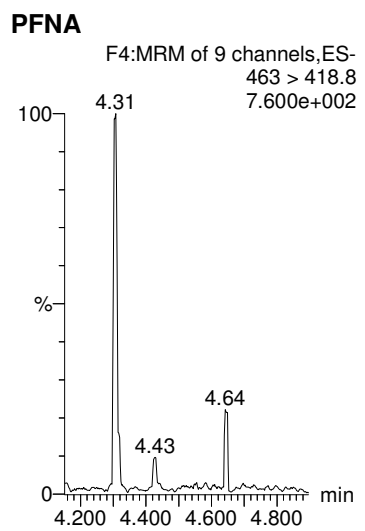
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Printed: Tuesday, February 27, 2018 10:35:47 Pacific Standard Time

Name: 180224G1\_22, Date: 24-Feb-2018, Time: 22:35:39, ID: 1800322-04 WI-A06-FB14-0218 0.25858, Description: WI-A06-FB14-0218

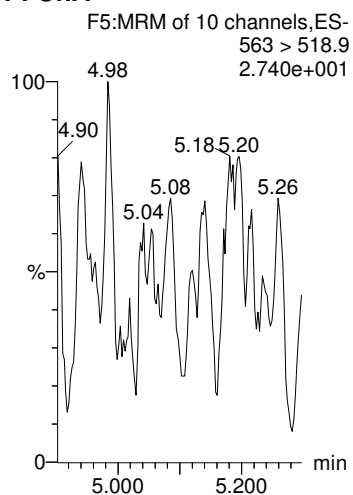


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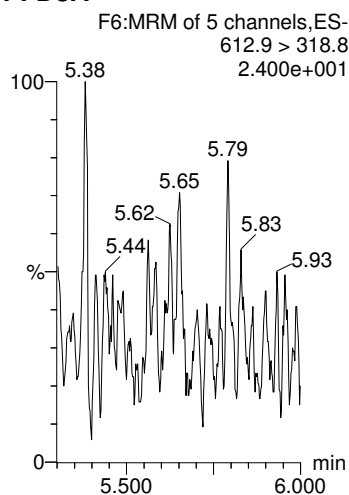
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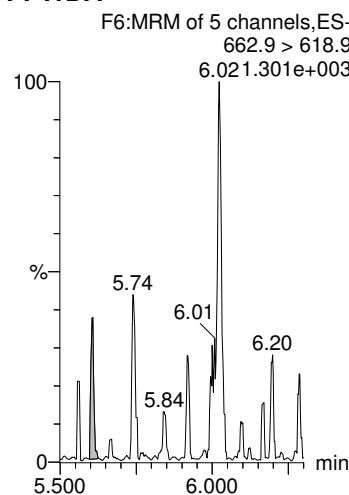
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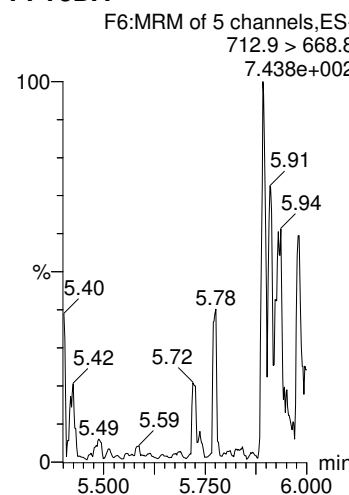
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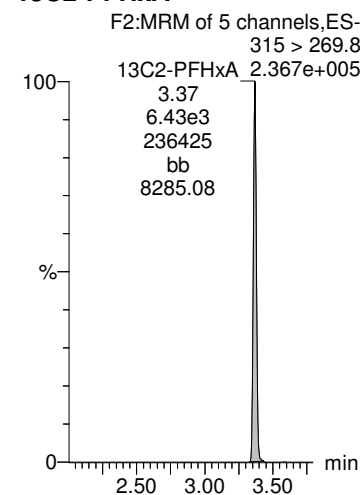
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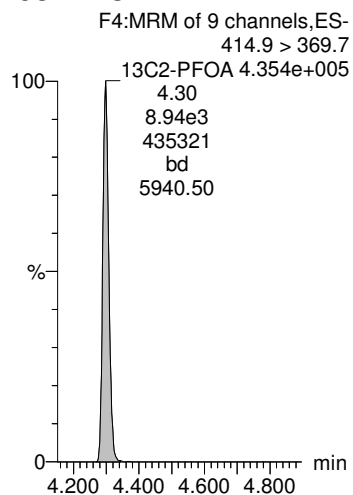
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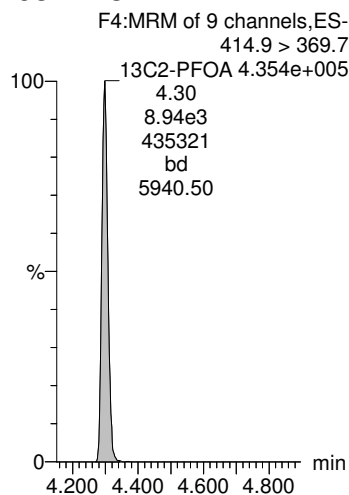
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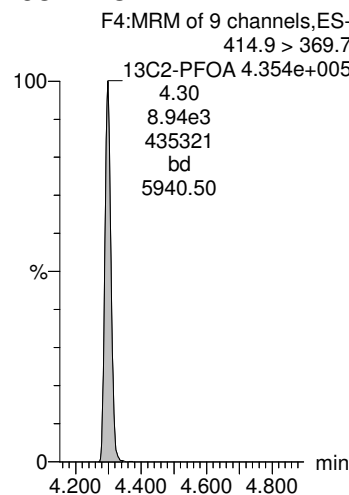
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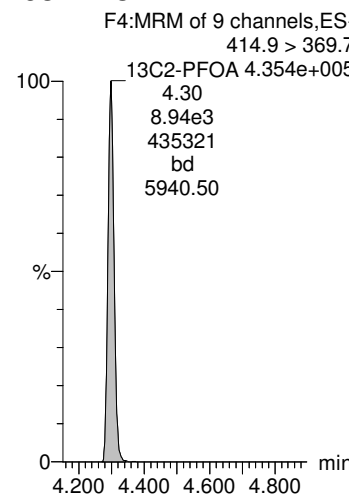
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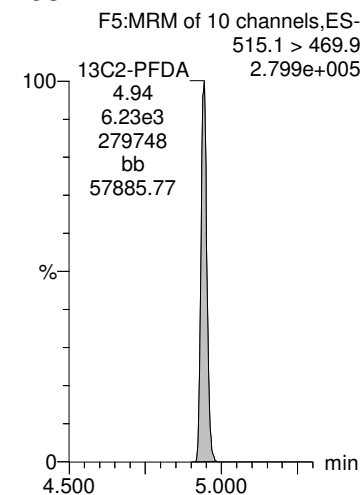
**13C2-PFOA**



**13C2-PFOA**



**13C2-PFDA**





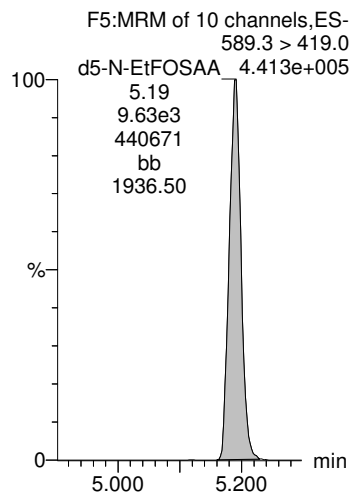
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Last Altered: Tuesday, February 27, 2018 10:35:10 Pacific Standard Time

Printed: Tuesday, February 27, 2018 10:35:47 Pacific Standard Time

Name: 180224G1\_22, Date: 24-Feb-2018, Time: 22:35:39, ID: 1800322-04 WI-A06-FB14-0218 0.25858, Description: WI-A06-FB14-0218

**d5-N-EtFOSAA**



Dataset: X:\G1.PRO\Results\2018\180228G1\180228G1-7.qld

Last Altered: Wednesday, February 28, 2018 13:22:40 Pacific Standard Time

Printed: Wednesday, February 28, 2018 13:24:48 Pacific Standard Time

Method: X:\G1.PRO\MethDB\PFAS\_DW\_L14\_1223.mdb 23 Feb 2018 15:59:15

Calibration: X:\G1.PRO\CurveDB\C18\_537\_Q1\_02-23-18\_L14.cdb 23 Feb 2018 16:46:11

Name: 180228G1\_7, Date: 28-Feb-2018, Time: 10:39:19, ID: 1800322-05RE1 WI-A06-RW15-0218 0.25483, Description: WI-A06-RW15-0218

	# Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	299 > 79.7		1.81e4	0.2548		3.01				
2	2 PFHxA	313.2 > 268.9	8.30e1	1.11e4	0.2548		3.35	3.37	0.0746	0.529	
3	3 PFHpA	363 > 318.9	2.59e1	1.11e4	0.2548		3.87	3.87	0.0233	0.0973	
4	4 PFHxS	398.9 > 79.6	2.97e0	1.81e4	0.2548		4.00	4.01	0.00471	0.0264	
5	5 PFOA	413 > 368.7	9.64e1	1.11e4	0.2548		4.30	4.30	0.0867	0.406	
6	6 PFNA	463 > 418.8	2.93e0	1.11e4	0.2548		4.64	4.65	0.00263	0.0102	
7	7 PFOS	499 > 79.9	1.22e0	1.81e4	0.2548		4.71	4.70	0.00193	0.00788	
8	8 PFDA	513 > 468.8	5.01e1	1.11e4	0.2548		4.87	4.95	0.0450	0.159	
9	9 N-MeFOSAA	570.1 > 419.0	4.37e0	1.39e4	0.2548		5.01	5.08	0.0126	0.0376	
10	10 N-EtFOSAA	584.2 > 419.0		1.39e4	0.2548		5.19				
11	11 PFUnA	563 > 518.9	1.84e0	1.11e4	0.2548		5.13	5.21	0.00166	0.00647	
12	12 PFDoA	612.9 > 318.8		1.11e4	0.2548		5.33				
13	13 PFTrDA	662.9 > 618.9		1.11e4	0.2548		5.56				
14	14 PFTeDA	712.9 > 668.8	5.51e0	1.11e4	0.2548		5.73	5.79	0.00496	0.0156	
15	15 13C2-PFHxA	315 > 269.8	7.97e3	1.11e4	0.2548	0.731	3.45	3.37	7.17	38.5	98.0
16	16 13C2-PFDA	515.1 > 469.9	9.11e3	1.11e4	0.2548	0.910	4.90	4.95	8.19	35.3	90.0
17	17 d5-N-EtFOSAA	589.3 > 419.0	1.24e4	1.39e4	0.2548	1.049	5.07	5.20	35.7	133	85.0
18	18 13C2-PFOA	414.9 > 369.7	1.11e4	1.11e4	0.2548	1.000	4.41	4.30	10.0	39.2	100.0
19	19 13C4-PFOS	503.0 > 79.9	1.81e4	1.81e4	0.2548	1.000	4.81	4.71	28.7	113	100.0
20	20 d3-N-MeFOSAA	573.3 > 419.0	1.39e4	1.39e4	0.2548	1.000	5.16	5.07	40.0	157	100.0

Dataset: X:\G1.PRO\Results\2018\180228G1\180228G1-7.qld

Last Altered: Wednesday, February 28, 2018 13:22:40 Pacific Standard Time

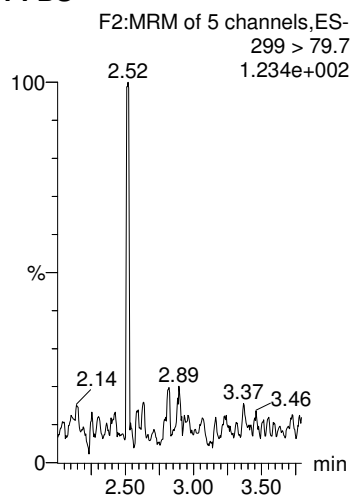
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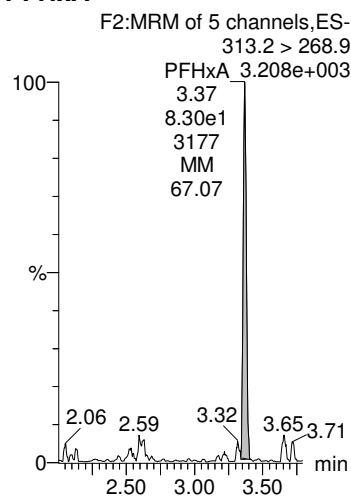
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Name: 180228G1\_7, Date: 28-Feb-2018, Time: 10:39:19, ID: 1800322-05RE1 WI-A06-RW15-0218 0.25483, Description: WI-A06-RW15-0218

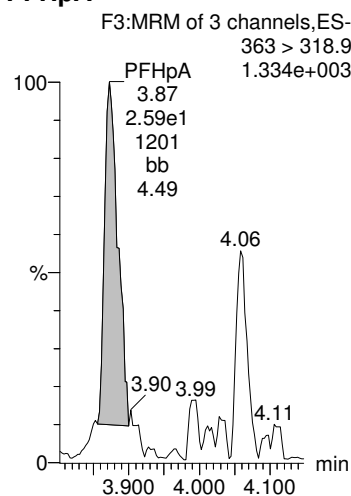
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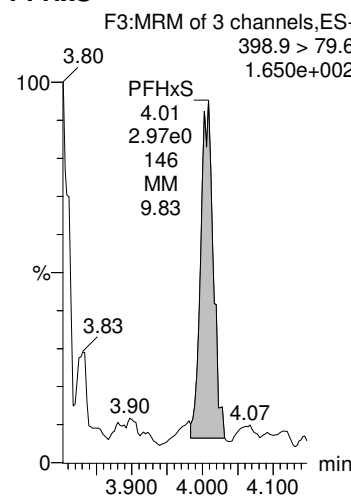
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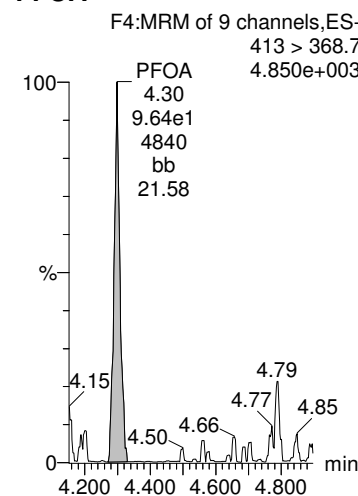
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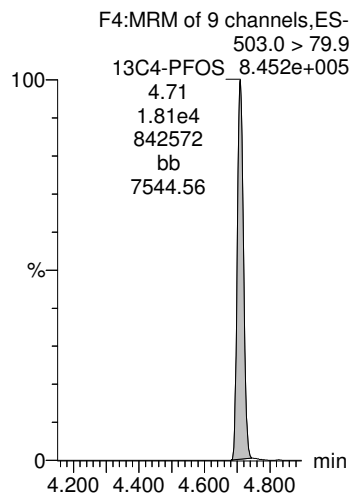
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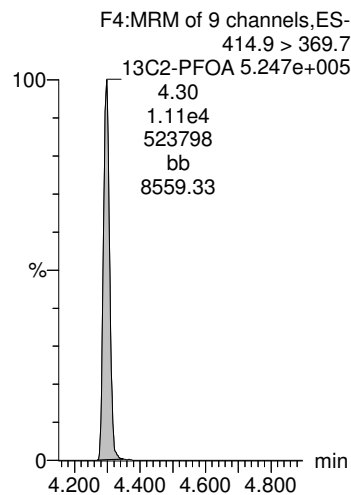
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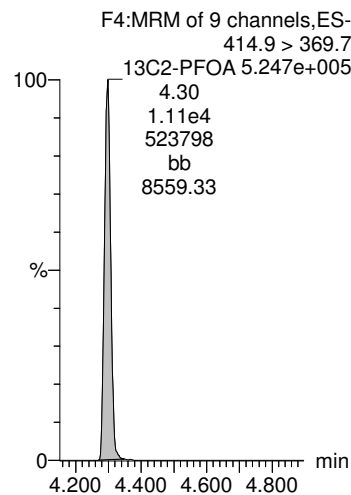
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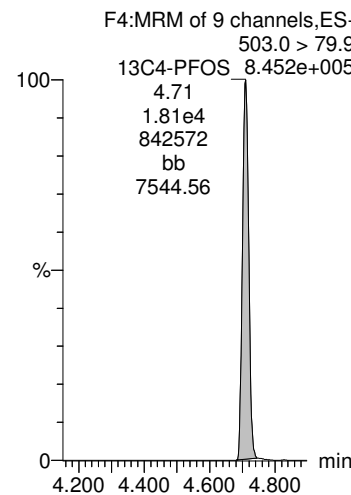
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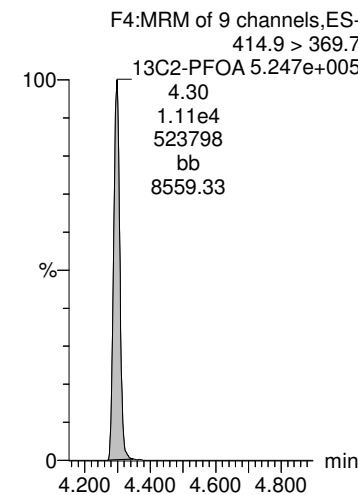
**13C2-PFOA**



**13C4-PFOS**



**13C2-PFOA**



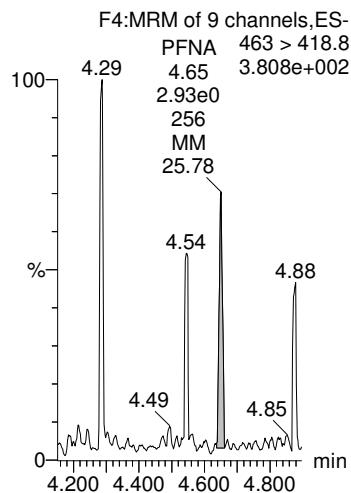
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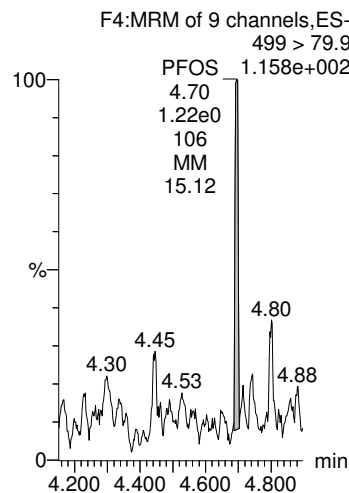
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Name: 180228G1\_7, Date: 28-Feb-2018, Time: 10:39:19, ID: 1800322-05RE1 WI-A06-RW15-0218 0.25483, Description: WI-A06-RW15-0218

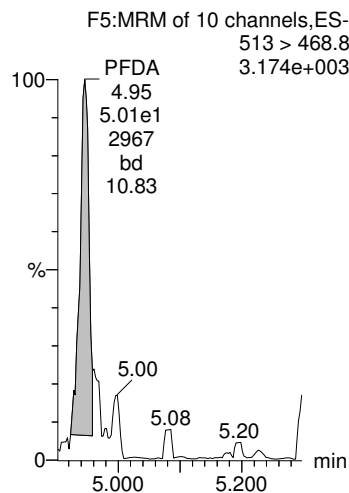
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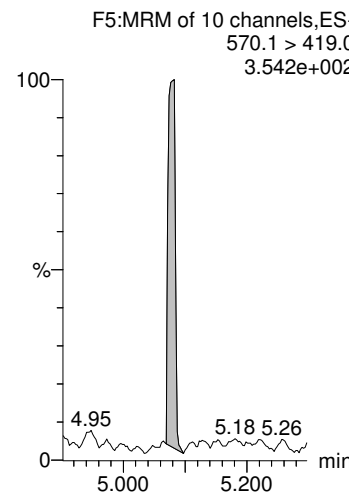
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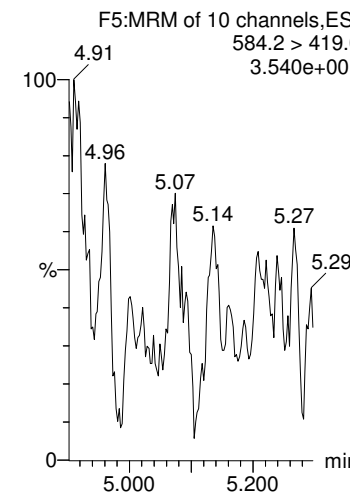
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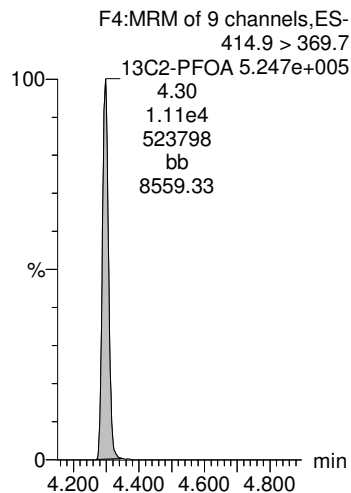
**N-MeFOSAA**



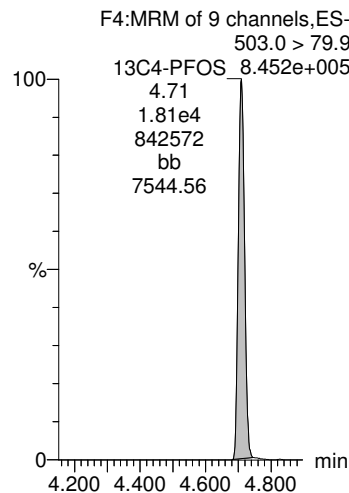
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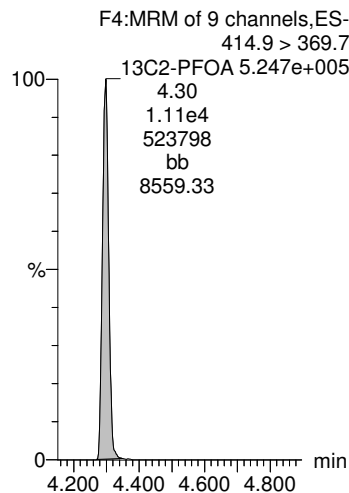
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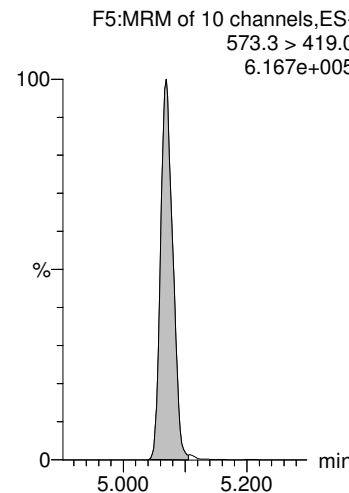
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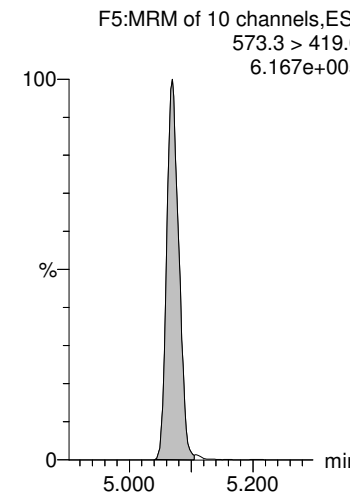
**13C2-PFOA**



**d3-N-MeFOSAA**



**d3-N-MeFOSAA**



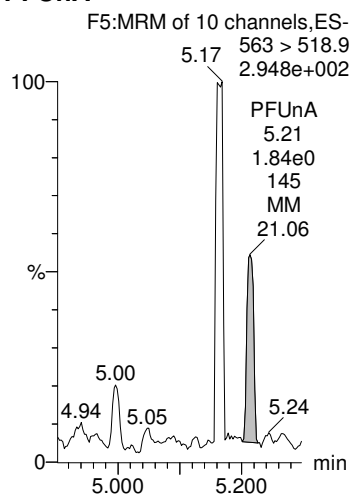
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Last Altered: Wednesday, February 28, 2018 13:22:40 Pacific Standard Time

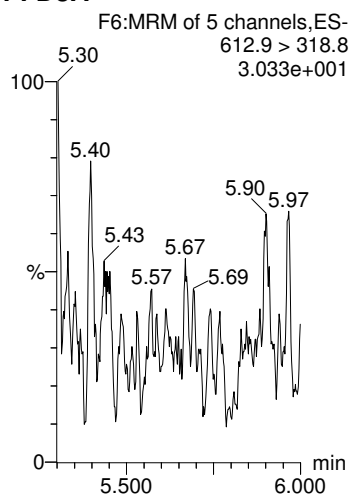
Printed: Wednesday, February 28, 2018 13:24:48 Pacific Standard Time

Name: 180228G1\_7, Date: 28-Feb-2018, Time: 10:39:19, ID: 1800322-05RE1 WI-A06-RW15-0218 0.25483, Description: WI-A06-RW15-0218

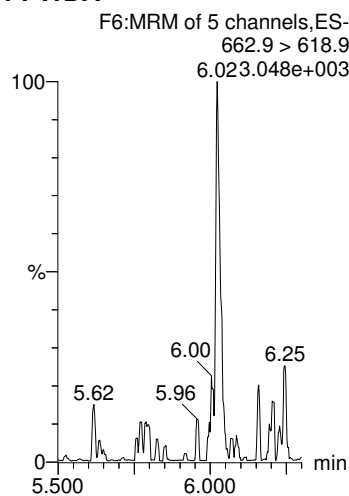
**PFUnA**



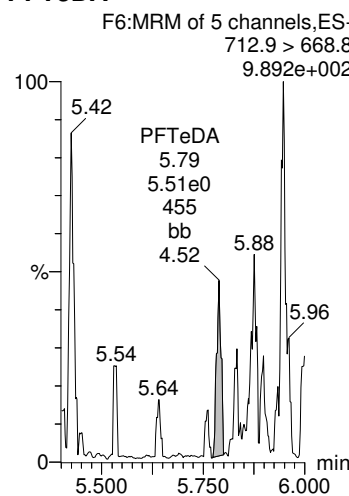
**PFDoA**



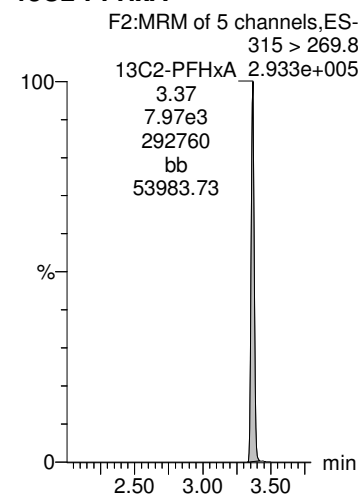
**PFTrDA**



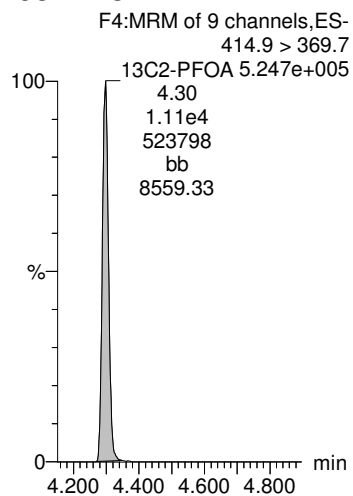
**PFTeDA**



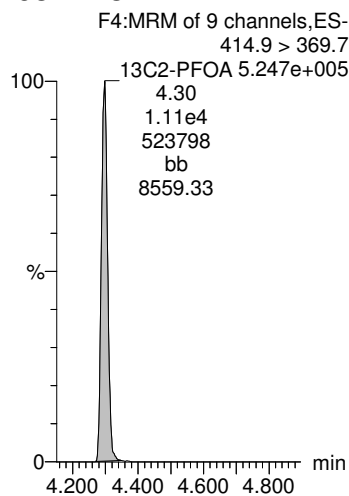
**13C2-PFHxA**



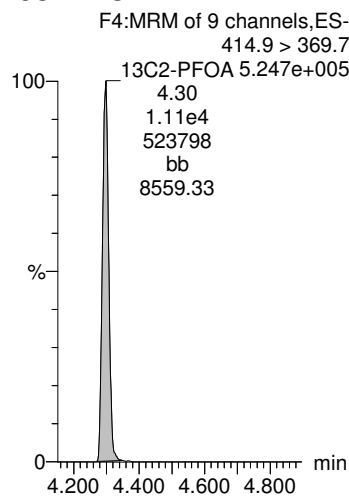
**13C2-PFOA**



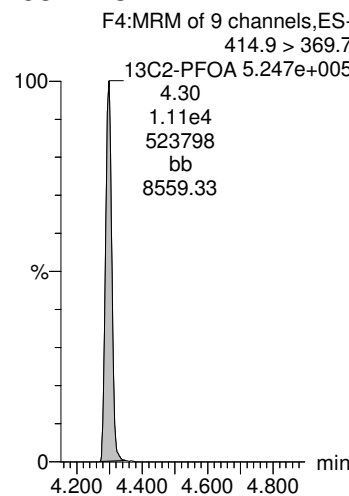
**13C2-PFOA**



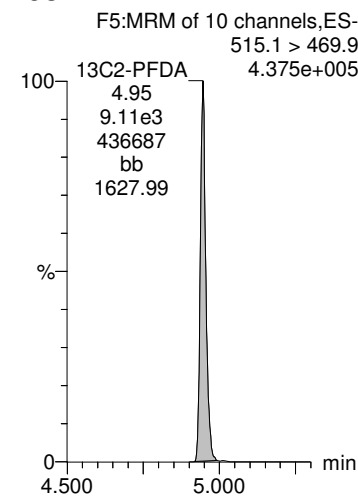
**13C2-PFOA**



**13C2-PFOA**



**13C2-PFDA**



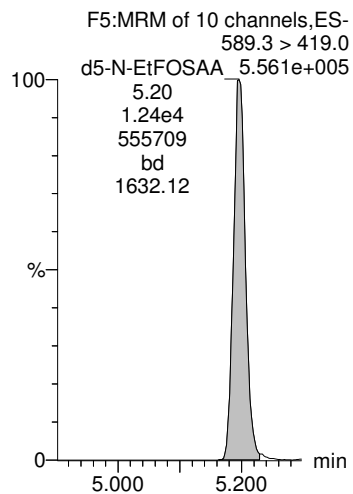
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Last Altered: Wednesday, February 28, 2018 13:22:40 Pacific Standard Time

Printed: Wednesday, February 28, 2018 13:24:48 Pacific Standard Time

Name: 180228G1\_7, Date: 28-Feb-2018, Time: 10:39:19, ID: 1800322-05RE1 WI-A06-RW15-0218 0.25483, Description: WI-A06-RW15-0218

**d5-N-EtFOSAA**



Dataset: X:\G1.PRO\Results\2018\180228G1\180228G1-8.qld

Last Altered: Wednesday, February 28, 2018 13:36:43 Pacific Standard Time

Printed: Wednesday, February 28, 2018 13:37:13 Pacific Standard Time

Method: X:\G1.PRO\MethDB\PFAS\_DW\_L14\_1223.mdb 23 Feb 2018 15:59:15

Calibration: X:\G1.PRO\CurveDB\C18\_537\_Q1\_02-23-18\_L14.cdb 23 Feb 2018 16:46:11

Name: 180228G1\_8, Date: 28-Feb-2018, Time: 10:51:45, ID: 1800322-06RE1 WI-A06-FB15-0218 0.2547, Description: WI-A06-FB15-0218

	# Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	299 > 79.7		1.93e4	0.2547		3.01				
2	2 PFHxA	313.2 > 268.9	9.11e1	1.15e4	0.2547		3.35	3.37	0.0792	0.562	
3	3 PFHpA	363 > 318.9	2.77e1	1.15e4	0.2547		3.86	3.88	0.0241	0.101	
4	4 PFHxS	398.9 > 79.6	2.24e0	1.93e4	0.2547		4.00	3.99	0.00333	0.0187	
5	5 PFOA	413 > 368.7	1.93e2	1.15e4	0.2547		4.29	4.30	0.168	0.789	
6	6 PFNA	463 > 418.8		1.15e4	0.2547		4.64				
7	7 PFOS	499 > 79.9	2.76e0	1.93e4	0.2547		4.71	4.70	0.00411	0.0168	
8	8 PFDA	513 > 468.8	1.02e2	1.15e4	0.2547		4.86	4.95	0.0889	0.314	
9	9 N-MeFOSAA	570.1 > 419.0	6.85e-1	1.40e4	0.2547		5.01	5.08	0.00195	0.00585	
10	10 N-EtFOSAA	584.2 > 419.0		1.40e4	0.2547		5.19				
11	11 PFUnA	563 > 518.9	1.98e1	1.15e4	0.2547		5.12	5.21	0.0172	0.0673	
12	12 PFDoA	612.9 > 318.8	7.62e-1	1.15e4	0.2547		5.32	5.42	0.000663	0.0164	
13	13 PFTTrDA	662.9 > 618.9	1.19e1	1.15e4	0.2547		5.55	5.63	0.0104	0.0296	
14	14 PFTeDA	712.9 > 668.8		1.15e4	0.2547		5.72				
15	15 13C2-PFHxA	315 > 269.8	8.27e3	1.15e4	0.2547	0.731	3.44	3.37	7.19	38.6	98.4
16	16 13C2-PFDA	515.1 > 469.9	9.38e3	1.15e4	0.2547	0.910	4.89	4.94	8.16	35.2	89.7
17	17 d5-N-EtFOSAA	589.3 > 419.0	1.51e4	1.40e4	0.2547	1.049	5.07	5.19	43.2	161	102.8
18	18 13C2-PFOA	414.9 > 369.7	1.15e4	1.15e4	0.2547	1.000	4.41	4.29	10.0	39.3	100.0
19	19 13C4-PFOS	503.0 > 79.9	1.93e4	1.93e4	0.2547	1.000	4.81	4.71	28.7	113	100.0
20	20 d3-N-MeFOSAA	573.3 > 419.0	1.40e4	1.40e4	0.2547	1.000	5.16	5.07	40.0	157	100.0

Dataset: X:\G1.PRO\Results\2018\180228G1\180228G1-8.qld

Last Altered: Wednesday, February 28, 2018 13:36:43 Pacific Standard Time

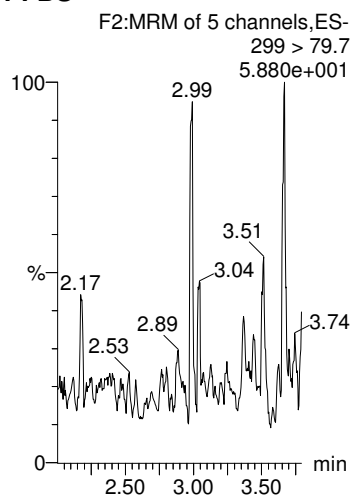
Printed: Wednesday, February 28, 2018 13:37:13 Pacific Standard Time

Method: X:\G1.PRO\MethDB\PFAS\_DW\_L14\_1223.mdb 23 Feb 2018 15:59:15

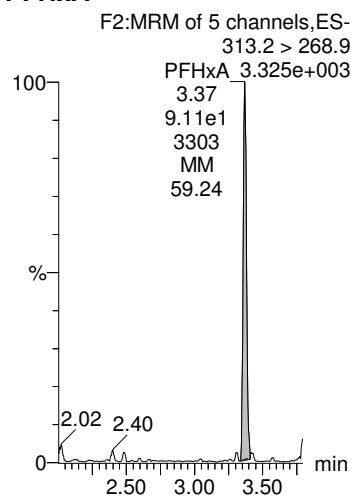
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Name: 180228G1\_8, Date: 28-Feb-2018, Time: 10:51:45, ID: 1800322-06RE1 WI-A06-FB15-0218 0.2547, Description: WI-A06-FB15-0218

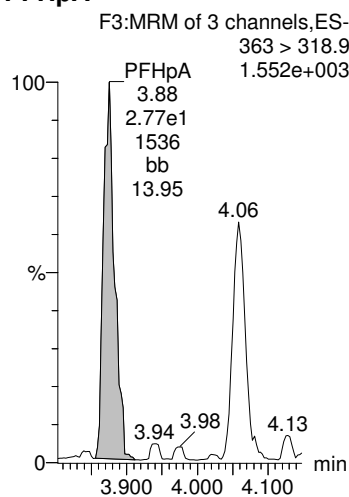
**PFBS**



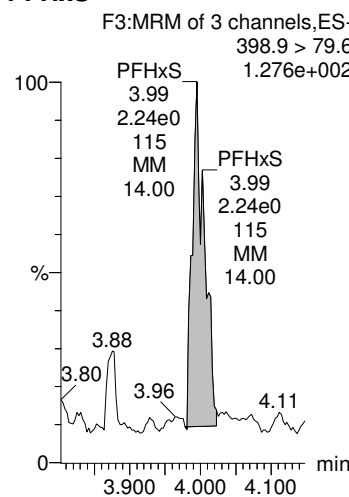
**PFHxA**



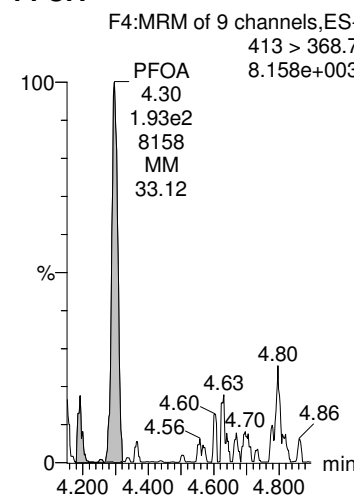
**PFHpA**



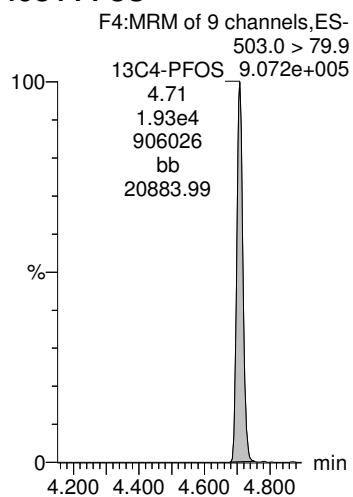
**PFHxS**



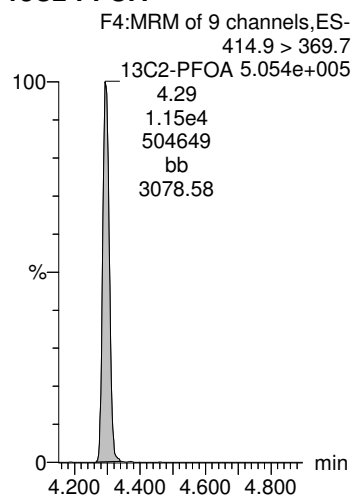
**PFOA**



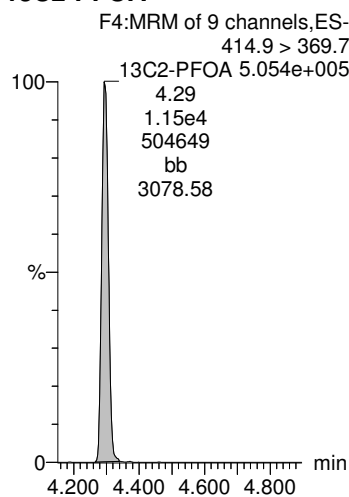
**13C4-PFOS**



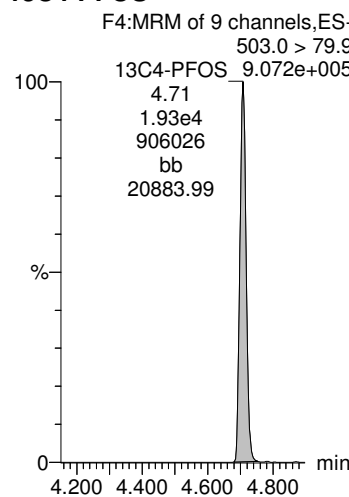
**13C2-PFOA**



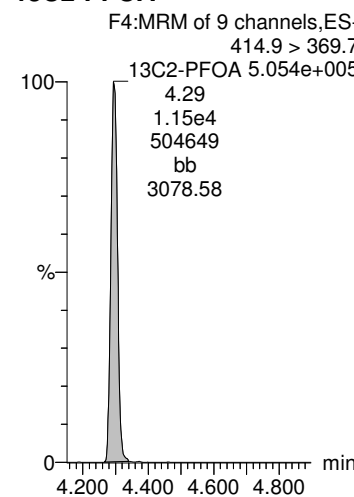
**13C2-PFOA**



**13C4-PFOS**



**13C2-PFOA**



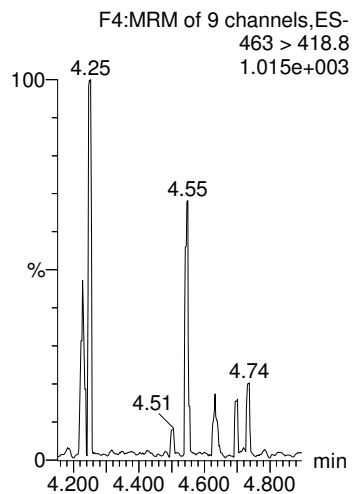


Dataset: X:\G1.PRO\Results\2018\180228G1\180228G1-8.qld

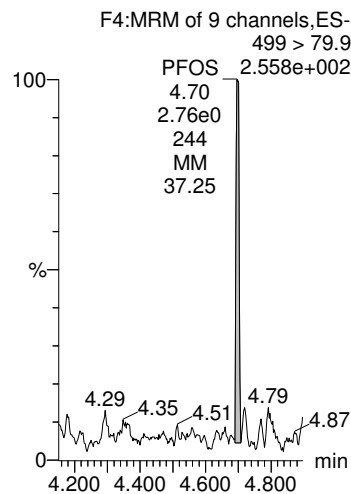
Last Altered: Wednesday, February 28, 2018 13:36:43 Pacific Standard Time  
Printed: Wednesday, February 28, 2018 13:37:13 Pacific Standard Time

Name: 180228G1\_8, Date: 28-Feb-2018, Time: 10:51:45, ID: 1800322-06RE1 WI-A06-FB15-0218 0.2547, Description: WI-A06-FB15-0218

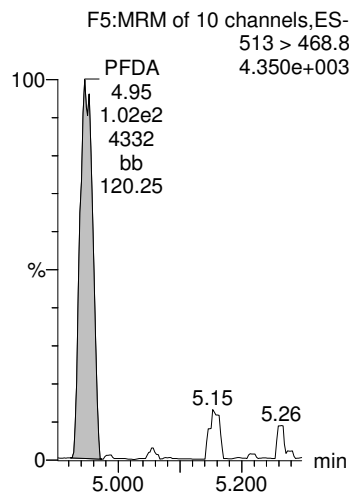
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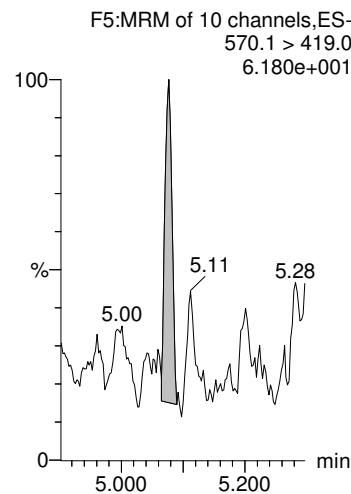
**PFOS**



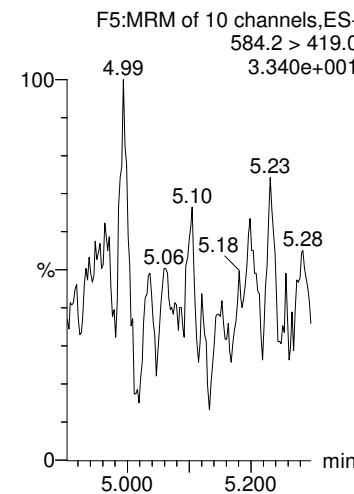
**PFDA**



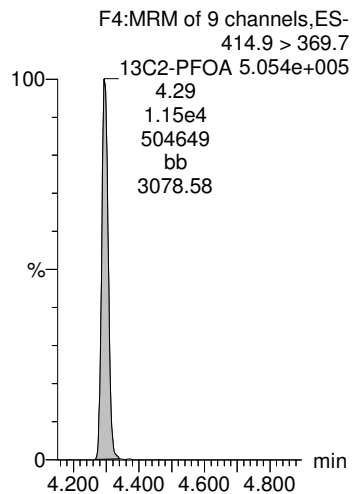
**N-MeFOSAA**



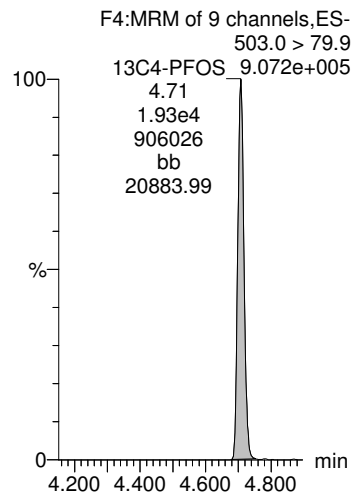
**N-EtFOSAA**



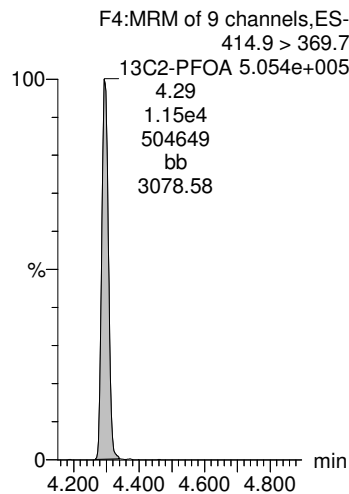
**13C2-PFOA**



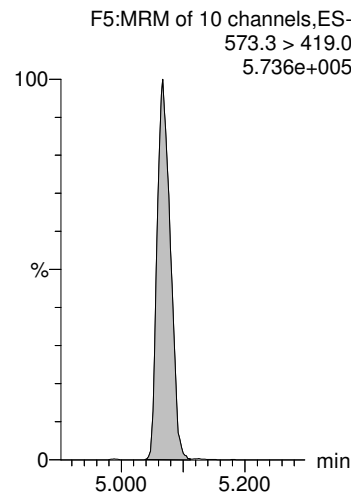
**13C4-PFOS**



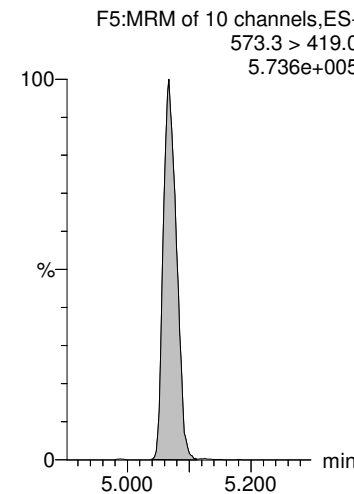
**13C2-PFOA**



**d3-N-MeFOSAA**



**d3-N-MeFOSAA**

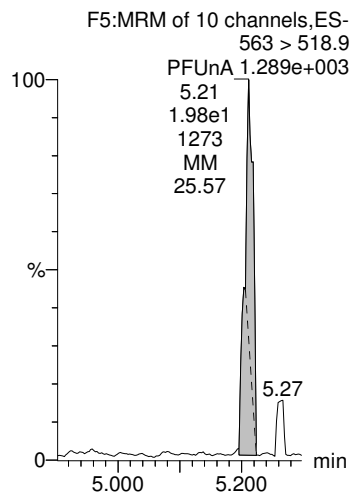


Dataset: X:\G1.PRO\Results\2018\180228G1\180228G1-8.qld

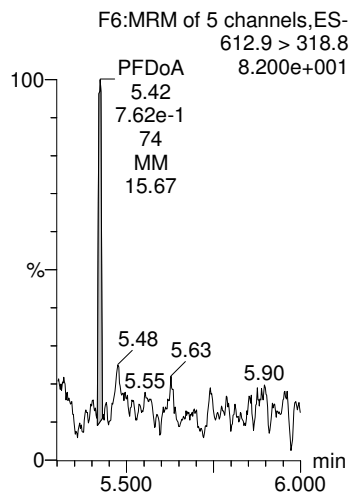
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Printed: Wednesday, February 28, 2018 13:37:13 Pacific Standard Time

Name: 180228G1\_8, Date: 28-Feb-2018, Time: 10:51:45, ID: 1800322-06RE1 WI-A06-FB15-0218 0.2547, Description: WI-A06-FB15-0218

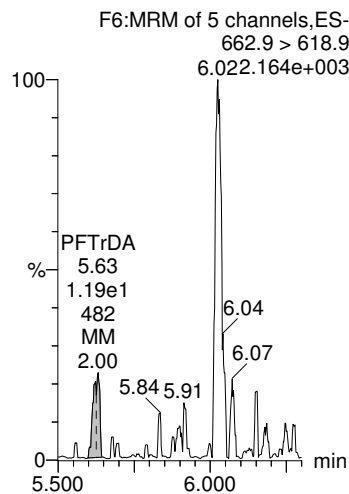
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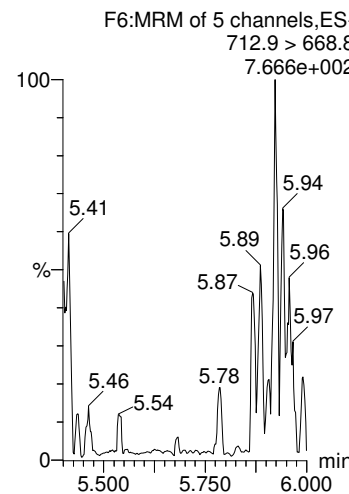
**PFDaA**



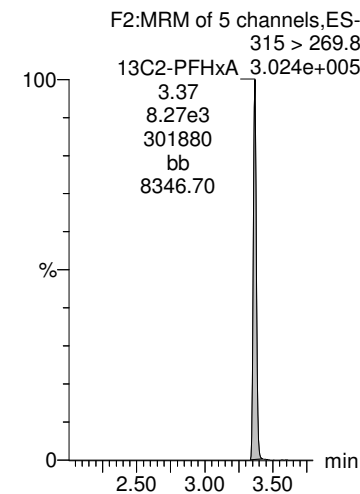
**PFTrDA**



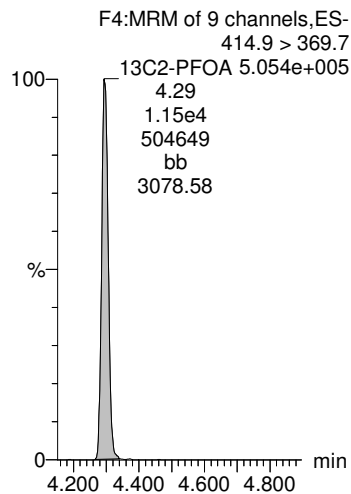
**PFTeDA**



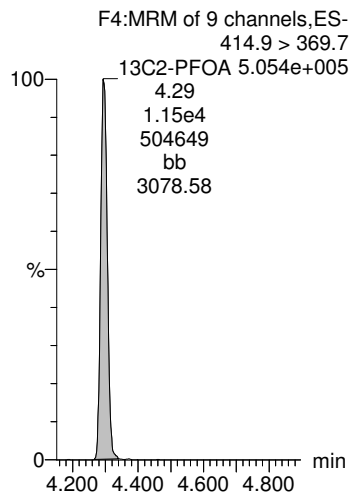
**13C2-PFHxA**



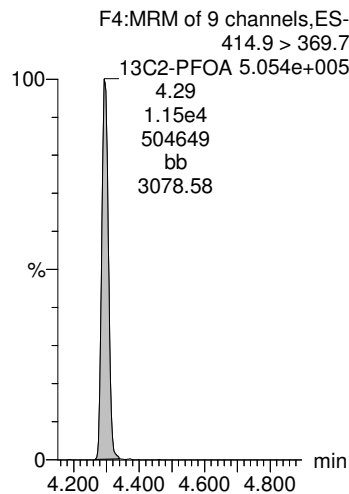
**13C2-PFOA**



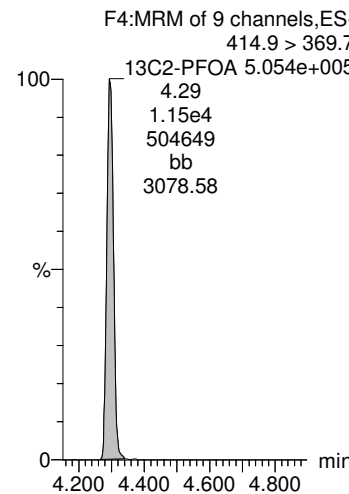
**13C2-PFOA**



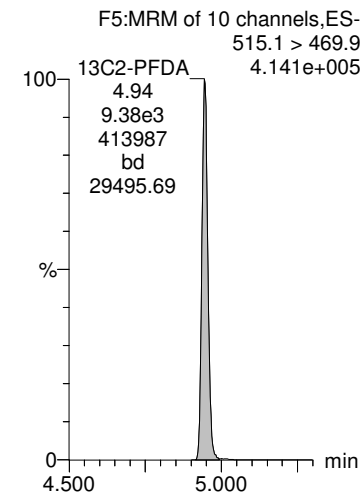
**13C2-PFOA**



**13C2-PFOA**



**13C2-PFDA**



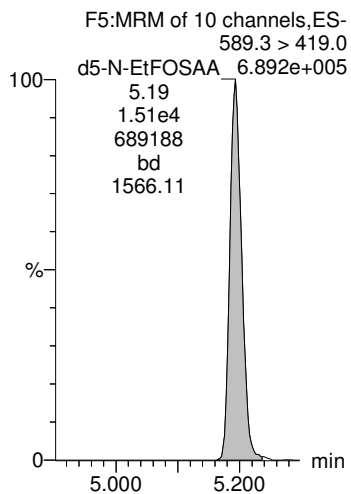
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Last Altered: Wednesday, February 28, 2018 13:36:43 Pacific Standard Time

Printed: Wednesday, February 28, 2018 13:37:13 Pacific Standard Time

Name: 180228G1\_8, Date: 28-Feb-2018, Time: 10:51:45, ID: 1800322-06RE1 WI-A06-FB15-0218 0.2547, Description: WI-A06-FB15-0218

**d5-N-EtFOSAA**



Dataset: X:\G1.PRO\Results\2018\180224G1\180224G1-25.qld

Last Altered: Tuesday, February 27, 2018 10:50:15 Pacific Standard Time

Printed: Tuesday, February 27, 2018 10:51:09 Pacific Standard Time

Method: X:\G1.PRO\MethDB\PFAS\_DW\_L14\_1223.mdb 23 Feb 2018 15:59:15

Calibration: X:\G1.PRO\CurveDB\C18\_537\_Q1\_02-23-18\_L14.cdb 23 Feb 2018 16:46:11

Name: 180224G1\_25, Date: 24-Feb-2018, Time: 23:12:55, ID: 1800322-07 WI-A06-RW16-0218 0.24831, Description: WI-A06-RW16-0218

	# Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	299 > 79.7		1.35e4	0.2483		3.01				
2	2 PFHxA	313.2 > 268.9	1.15e2	9.24e3	0.2483		3.35	3.37	0.125	0.906	
3	3 PFHpA	363 > 318.9	2.02e1	9.24e3	0.2483		3.87	3.88	0.0219	0.0936	
4	4 PFHxS	398.9 > 79.6	4.45e0	1.35e4	0.2483		3.99	4.00	0.00942	0.0542	
5	5 PFOA	413 > 368.7	1.19e2	9.24e3	0.2483		4.30	4.29	0.129	0.621	
6	6 PFNA	463 > 418.8	5.95e0	9.24e3	0.2483		4.64	4.64	0.00644	0.0255	
7	7 PFOS	499 > 79.9	1.69e0	1.35e4	0.2483		4.71	4.71	0.00359	0.0150	
8	8 PFDA	513 > 468.8	5.16e1	9.24e3	0.2483		4.87	4.95	0.0558	0.202	
9	9 N-MeFOSAA	570.1 > 419.0		1.14e4	0.2483		5.00				
10	10 N-EtFOSAA	584.2 > 419.0		1.14e4	0.2483		5.18				
11	11 PFUnA	563 > 518.9		9.24e3	0.2483		5.13				
12	12 PFDoA	612.9 > 318.8		9.24e3	0.2483		5.33				
13	13 PFTrDA	662.9 > 618.9	5.17e0	9.24e3	0.2483		5.56	5.60	0.00560	0.0164	
14	14 PFTeDA	712.9 > 668.8		9.24e3	0.2483		5.73				
15	15 13C2-PFHxA	315 > 269.8	6.47e3	9.24e3	0.2483	0.731	3.45	3.37	7.00	38.6	95.7
16	16 13C2-PFDA	515.1 > 469.9	6.86e3	9.24e3	0.2483	0.910	4.90	4.94	7.43	32.9	81.7
17	17 d5-N-EtFOSAA	589.3 > 419.0	1.02e4	1.14e4	0.2483	1.049	5.06	5.19	35.6	137	84.9
18	18 13C2-PFOA	414.9 > 369.7	9.24e3	9.24e3	0.2483	1.000	4.41	4.30	10.0	40.3	100.0
19	19 13C4-PFOS	503.0 > 79.9	1.35e4	1.35e4	0.2483	1.000	4.81	4.71	28.7	116	100.0
20	20 d3-N-MeFOSAA	573.3 > 419.0	1.14e4	1.14e4	0.2483	1.000	5.16	5.06	40.0	161	100.0

Dataset: X:\G1.PRO\Results\2018\180224G1\180224G1-25.qld

Last Altered: Tuesday, February 27, 2018 10:50:15 Pacific Standard Time

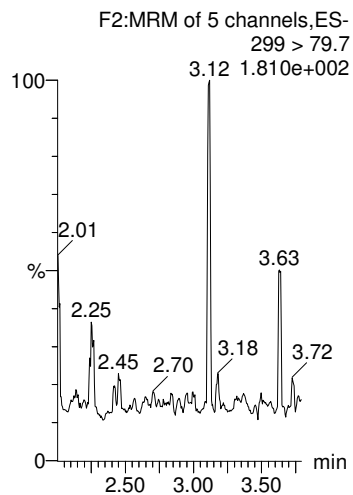
Printed: Tuesday, February 27, 2018 10:51:09 Pacific Standard Time

Method: X:\G1.PRO\MethDB\PFAS\_DW\_L14\_1223.mdb 23 Feb 2018 15:59:15

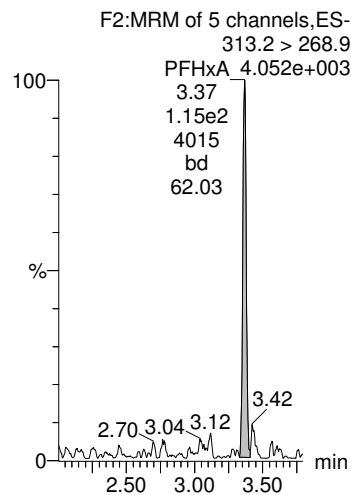
Calibration: X:\G1.PRO\CurveDB\C18\_537\_Q1\_02-23-18\_L14.cdb 23 Feb 2018 16:46:11

Name: 180224G1\_25, Date: 24-Feb-2018, Time: 23:12:55, ID: 1800322-07 WI-A06-RW16-0218 0.24831, Description: WI-A06-RW16-0218

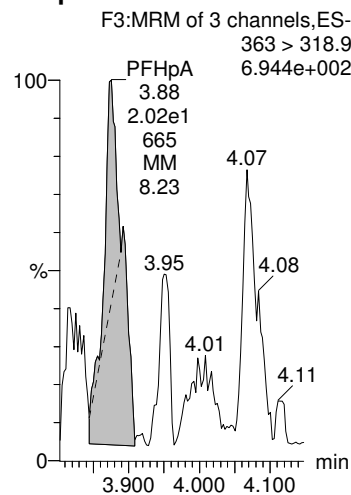
**PFBS**



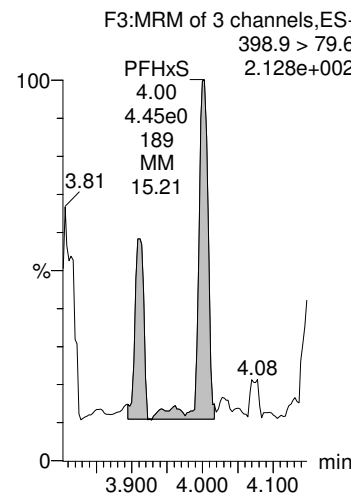
**PFHxA**



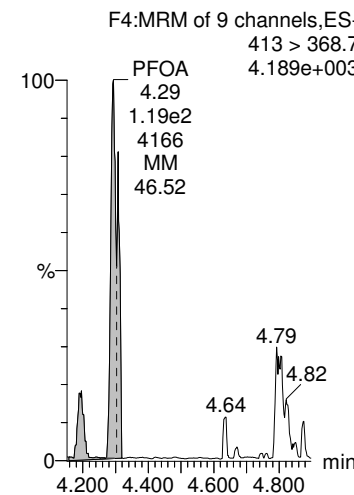
**PFHpA**



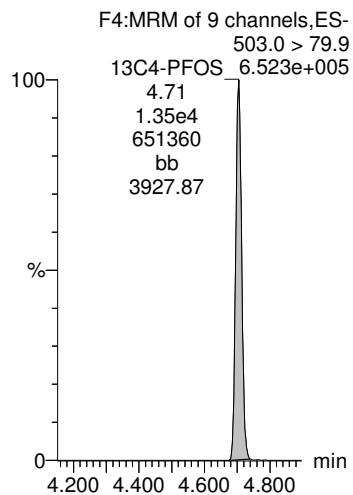
**PFHxS**



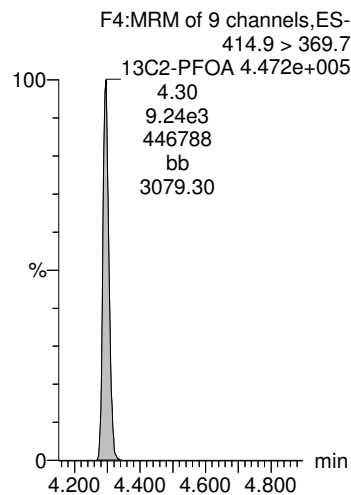
**PFOA**



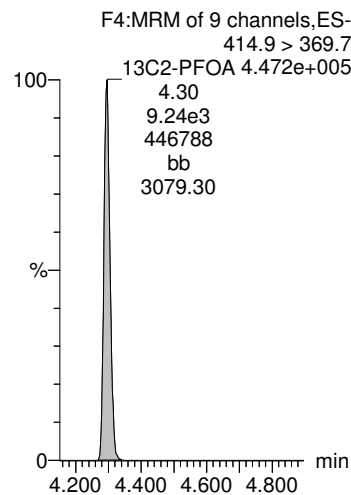
**13C4-PFOS**



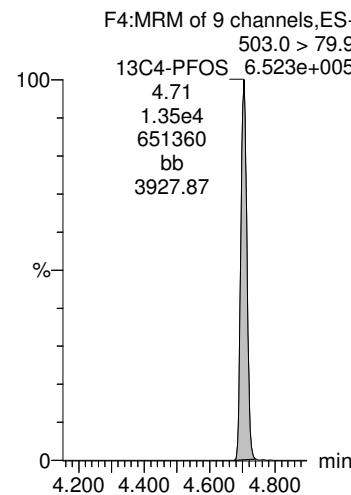
**13C2-PFOA**



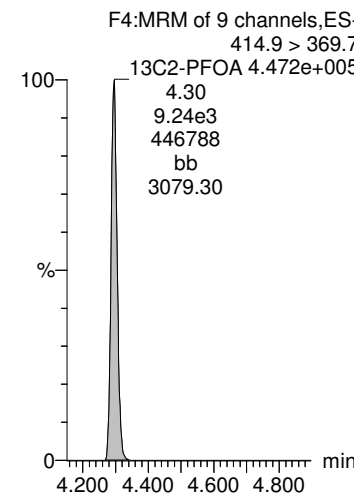
**13C2-PFOA**



**13C4-PFOS**



**13C2-PFOA**

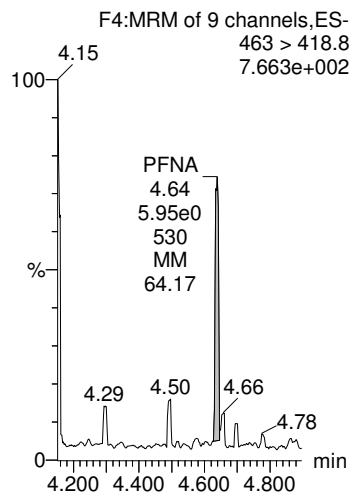


Dataset: X:\G1.PRO\Results\2018\180224G1\180224G1-25.qld

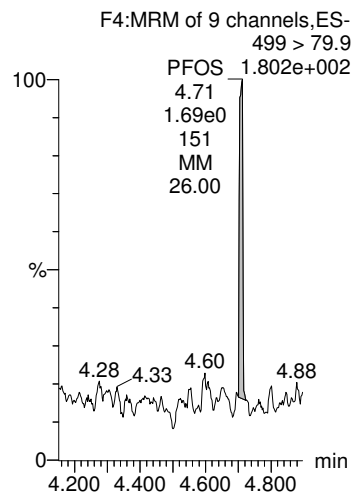
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Printed: Tuesday, February 27, 2018 10:51:09 Pacific Standard Time

Name: 180224G1\_25, Date: 24-Feb-2018, Time: 23:12:55, ID: 1800322-07 WI-A06-RW16-0218 0.24831, Description: WI-A06-RW16-0218

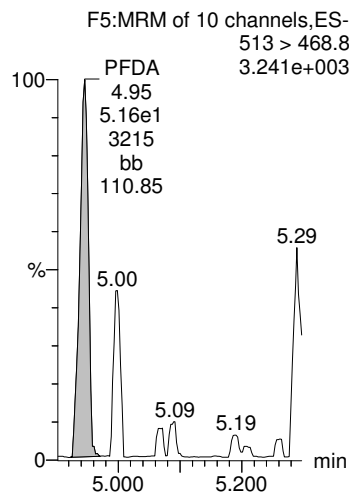
**PFNA**



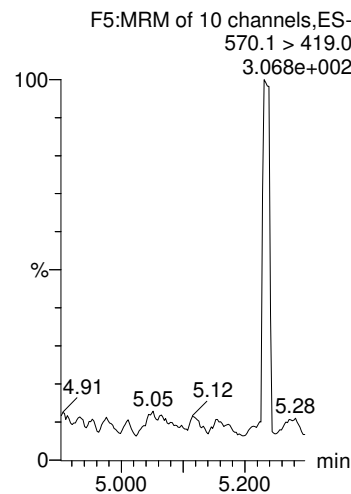
**PFOS**



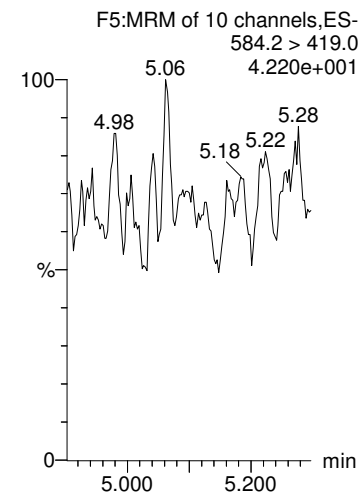
**PFDA**



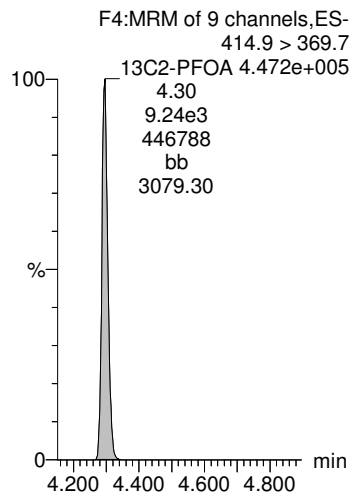
**N-MeFOSAA**



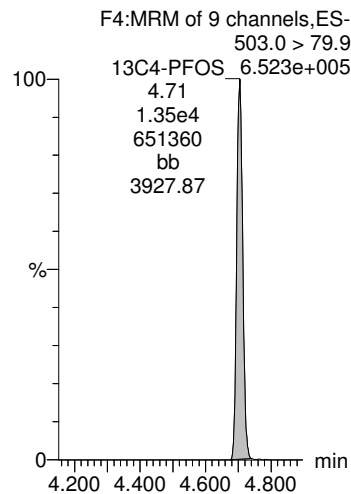
**N-EtFOSAA**



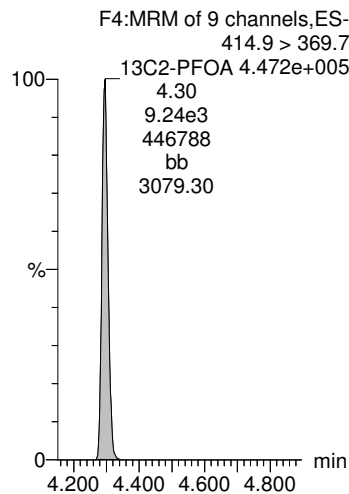
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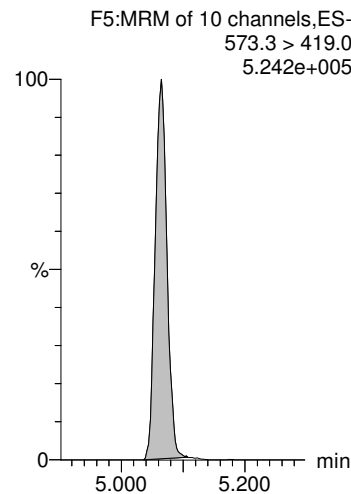
**13C4-PFOS**



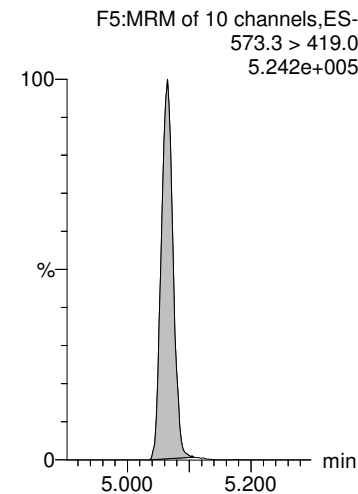
**13C2-PFOA**



**d3-N-MeFOSAA**



**d3-N-MeFOSAA**

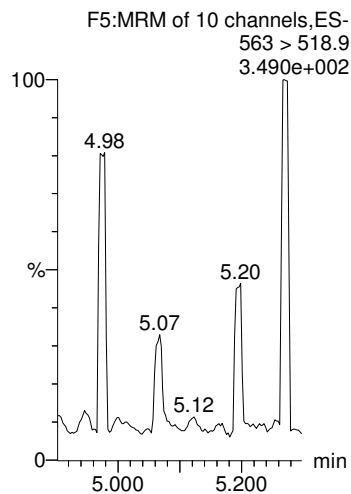


Dataset: X:\G1.PRO\Results\2018\180224G1\180224G1-25.qld

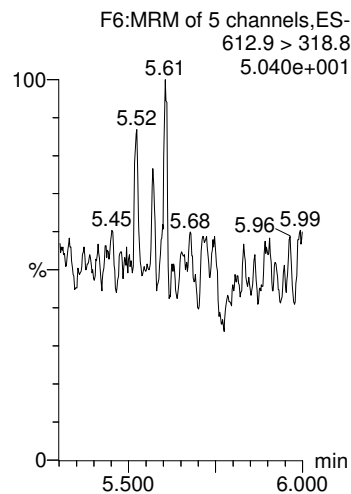
Last Altered: Tuesday, February 27, 2018 10:50:15 Pacific Standard Time  
Printed: Tuesday, February 27, 2018 10:51:09 Pacific Standard Time

Name: 180224G1\_25, Date: 24-Feb-2018, Time: 23:12:55, ID: 1800322-07 WI-A06-RW16-0218 0.24831, Description: WI-A06-RW16-0218

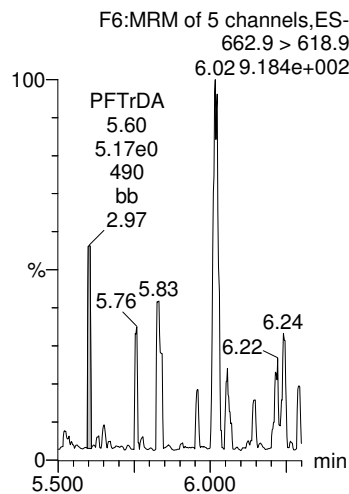
**PFUnA**



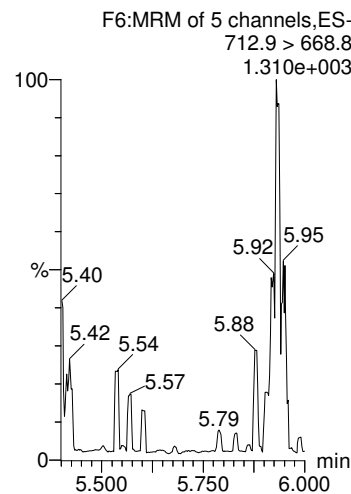
**PFDaA**



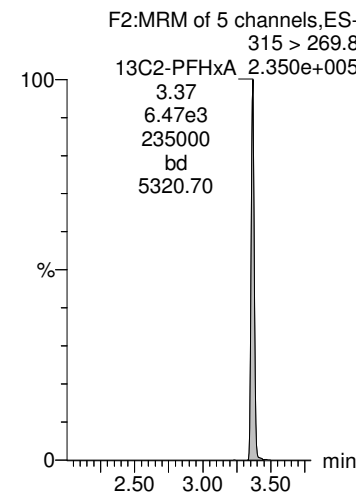
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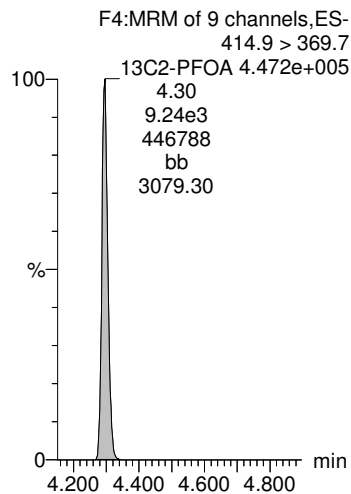
**PFTeDA**



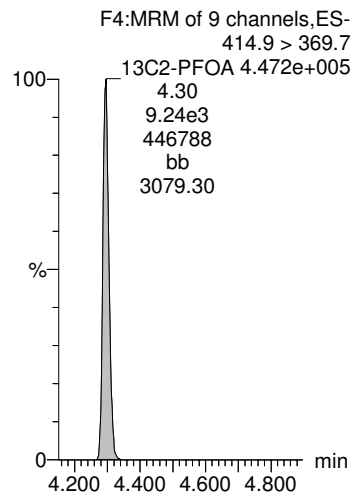
**13C2-PFHxA**



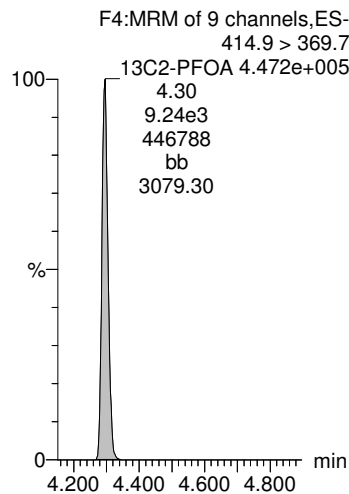
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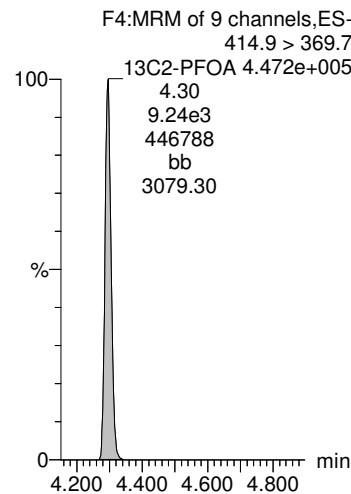
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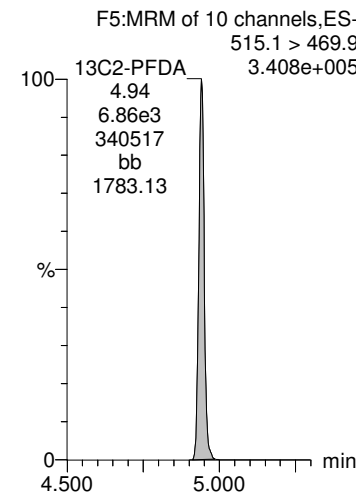
**13C2-PFOA**



**13C2-PFOA**



**13C2-PFDA**



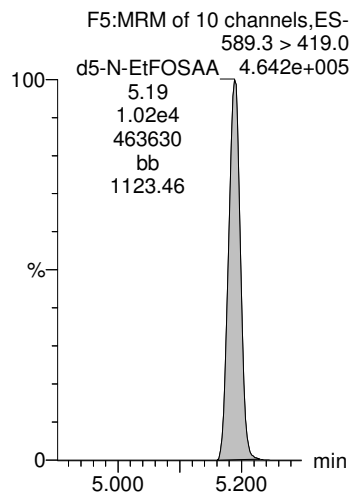
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Last Altered: Tuesday, February 27, 2018 10:50:15 Pacific Standard Time

Printed: Tuesday, February 27, 2018 10:51:09 Pacific Standard Time

Name: 180224G1\_25, Date: 24-Feb-2018, Time: 23:12:55, ID: 1800322-07 WI-A06-RW16-0218 0.24831, Description: WI-A06-RW16-0218

**d5-N-EtFOSAA**





Dataset: X:\G1.PRO\Results\2018\180224G1\180224G1-26.qld

Last Altered: Tuesday, February 27, 2018 11:00:47 Pacific Standard Time

Printed: Tuesday, February 27, 2018 11:01:00 Pacific Standard Time

Method: X:\G1.PRO\MethDB\PFAS\_DW\_L14\_1223.mdb 23 Feb 2018 15:59:15

Calibration: X:\G1.PRO\CurveDB\C18\_537\_Q1\_02-23-18\_L14.cdb 23 Feb 2018 16:46:11

Name: 180224G1\_26, Date: 24-Feb-2018, Time: 23:25:20, ID: 1800322-08 WI-A06-FB16-0218 0.25718, Description: WI-A06-FB16-0218

	# Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	299 > 79.7		1.32e4	0.2572		3.01				
2	2 PFHxA	313.2 > 268.9	7.13e1	8.65e3	0.2572		3.35	3.37	0.0824	0.579	
3	3 PFHpA	363 > 318.9	2.24e1	8.65e3	0.2572		3.87	3.88	0.0259	0.107	
4	4 PFHxS	398.9 > 79.6	2.55e0	1.32e4	0.2572		3.99	4.00	0.00554	0.0308	
5	5 PFOA	413 > 368.7	9.23e1	8.65e3	0.2572		4.30	4.30	0.107	0.495	
6	6 PFNA	463 > 418.8	8.29e0	8.65e3	0.2572		4.64	4.65	0.00958	0.0366	
7	7 PFOS	499 > 79.9	1.44e0	1.32e4	0.2572		4.70	4.71	0.00312	0.0127	
8	8 PFDA	513 > 468.8	6.80e1	8.65e3	0.2572		4.87	4.95	0.0786	0.275	
9	9 N-MeFOSAA	570.1 > 419.0	2.50e0	1.09e4	0.2572		5.00	5.06	0.00919	0.0272	
10	10 N-EtFOSAA	584.2 > 419.0		1.09e4	0.2572		5.18				
11	11 PFUnA	563 > 518.9	2.70e0	8.65e3	0.2572		5.13	5.19	0.00312	0.0121	
12	12 PFDoA	612.9 > 318.8		8.65e3	0.2572		5.33				
13	13 PFTrDA	662.9 > 618.9	9.01e0	8.65e3	0.2572		5.56	5.60	0.0104	0.0295	
14	14 PFTeDA	712.9 > 668.8		8.65e3	0.2572		5.73				
15	15 13C2-PFHxA	315 > 269.8	6.72e3	8.65e3	0.2572	0.731	3.45	3.37	7.77	41.3	106.2
16	16 13C2-PFDA	515.1 > 469.9	6.76e3	8.65e3	0.2572	0.910	4.90	4.94	7.81	33.4	85.9
17	17 d5-N-EtFOSAA	589.3 > 419.0	9.84e3	1.09e4	0.2572	1.049	5.06	5.19	36.2	134	86.2
18	18 13C2-PFOA	414.9 > 369.7	8.65e3	8.65e3	0.2572	1.000	4.41	4.30	10.0	38.9	100.0
19	19 13C4-PFOS	503.0 > 79.9	1.32e4	1.32e4	0.2572	1.000	4.81	4.70	28.7	112	100.0
20	20 d3-N-MeFOSAA	573.3 > 419.0	1.09e4	1.09e4	0.2572	1.000	5.16	5.06	40.0	156	100.0

Dataset: X:\G1.PRO\Results\2018\180224G1\180224G1-26.qld

Last Altered: Tuesday, February 27, 2018 11:00:47 Pacific Standard Time

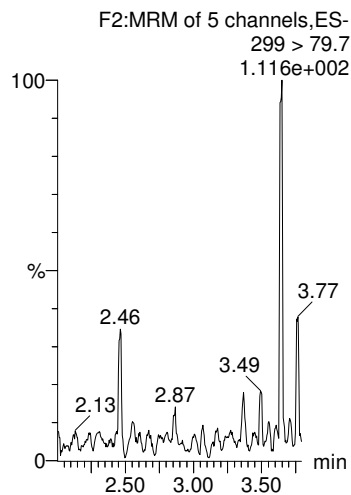
Printed: Tuesday, February 27, 2018 11:01:00 Pacific Standard Time

Method: X:\G1.PRO\MethDB\PFAS\_DW\_L14\_1223.mdb 23 Feb 2018 15:59:15

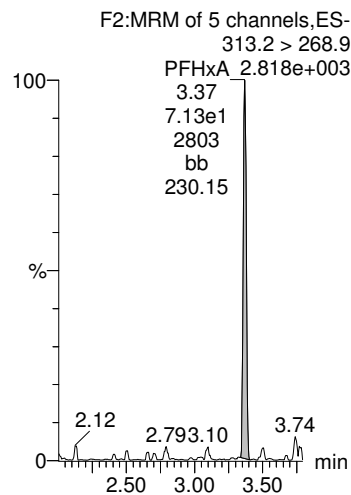
Calibration: X:\G1.PRO\CurveDB\C18\_537\_Q1\_02-23-18\_L14.cdb 23 Feb 2018 16:46:11

Name: 180224G1\_26, Date: 24-Feb-2018, Time: 23:25:20, ID: 1800322-08 WI-A06-FB16-0218 0.25718, Description: WI-A06-FB16-0218

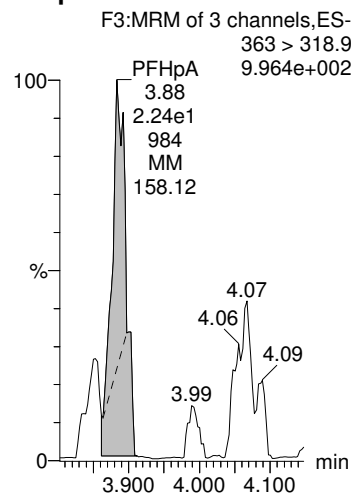
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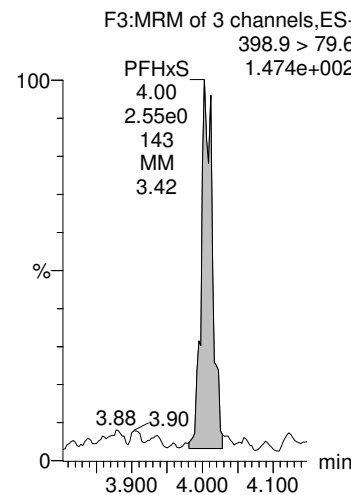
**PFHxA**



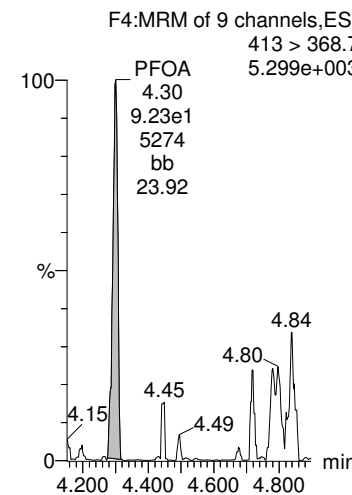
**PFHpA**



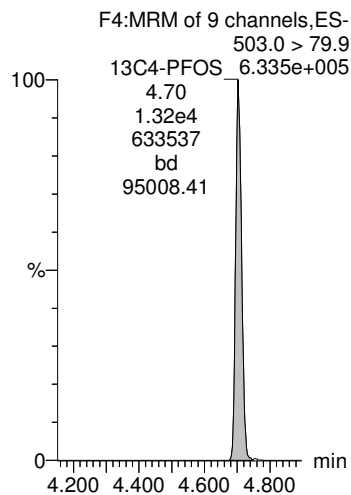
**PFHxS**



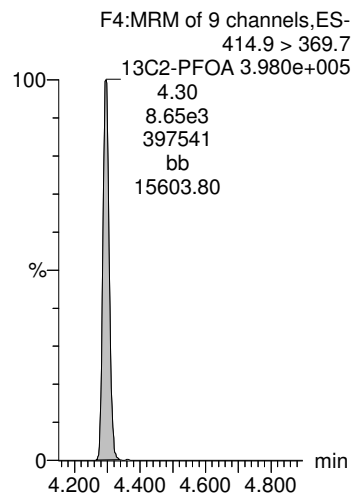
**PFOA**



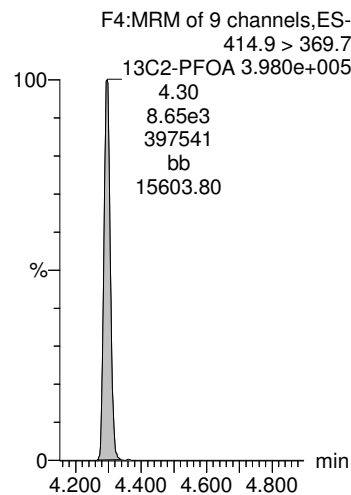
**13C4-PFOS**



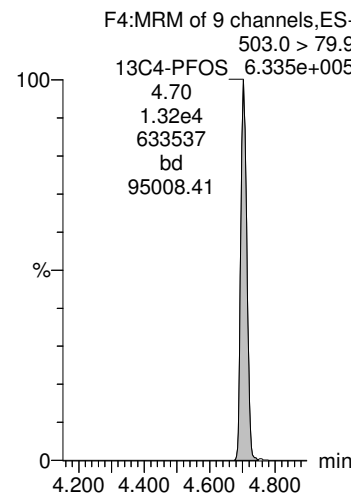
**13C2-PFOA**



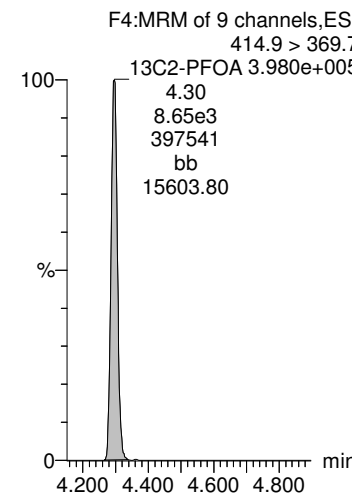
**13C2-PFOA**



**13C4-PFOS**



**13C2-PFOA**



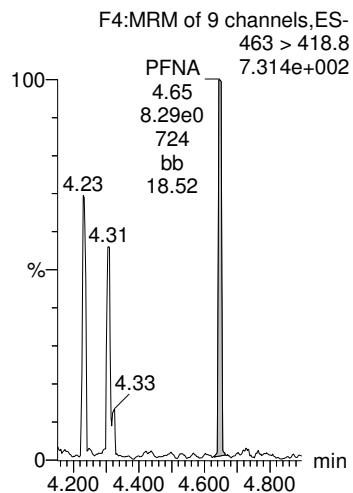
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Last Altered: Tuesday, February 27, 2018 11:00:47 Pacific Standard Time

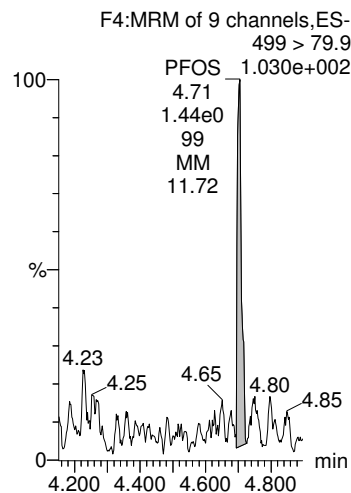
Printed: Tuesday, February 27, 2018 11:01:00 Pacific Standard Time

Name: 180224G1\_26, Date: 24-Feb-2018, Time: 23:25:20, ID: 1800322-08 WI-A06-FB16-0218 0.25718, Description: WI-A06-FB16-0218

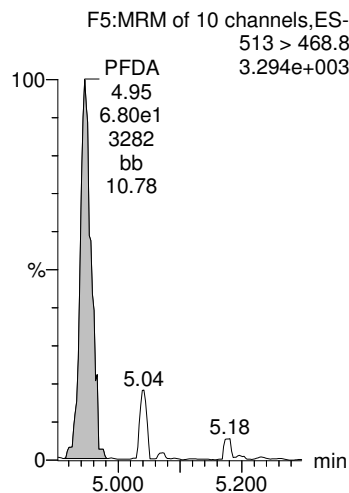
**PFNA**



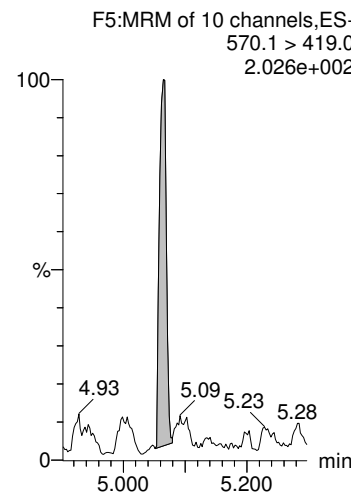
**PFOS**



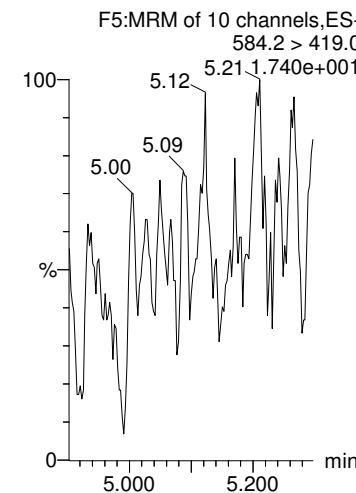
**PFDA**



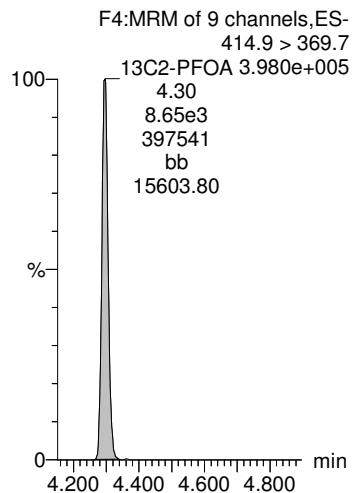
**N-MeFOSAA**



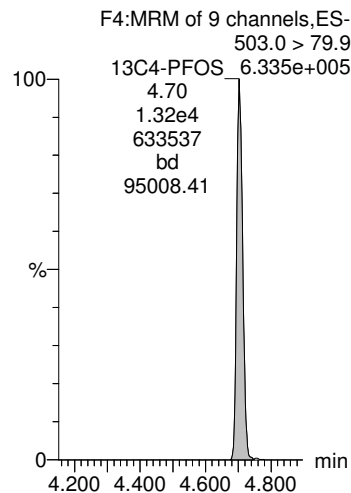
**N-EtFOSAA**



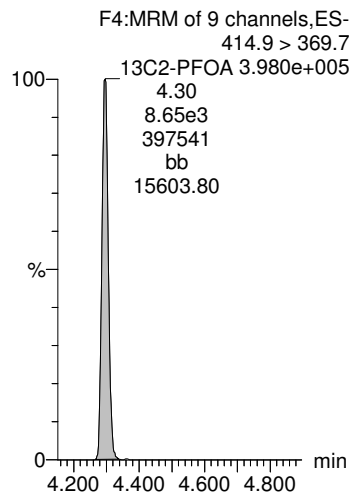
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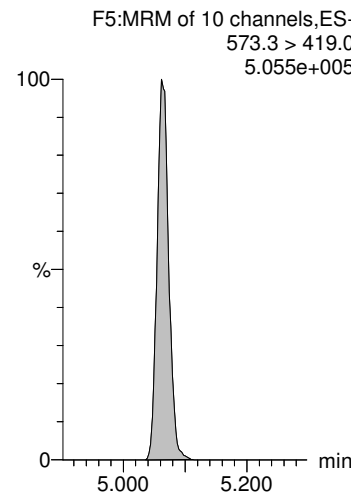
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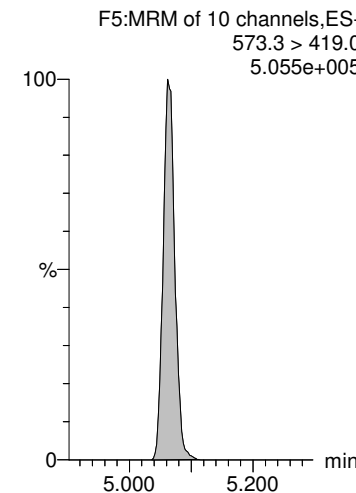
**13C2-PFOA**



**d3-N-MeFOSAA**



**d3-N-MeFOSAA**

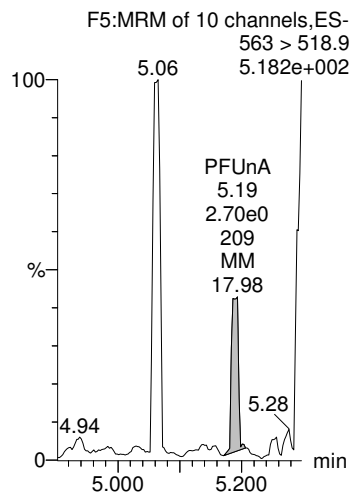


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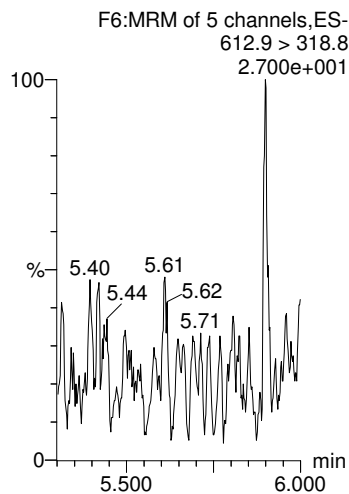
Last Altered: Tuesday, February 27, 2018 11:00:47 Pacific Standard Time  
Printed: Tuesday, February 27, 2018 11:01:00 Pacific Standard Time

Name: 180224G1\_26, Date: 24-Feb-2018, Time: 23:25:20, ID: 1800322-08 WI-A06-FB16-0218 0.25718, Description: WI-A06-FB16-0218

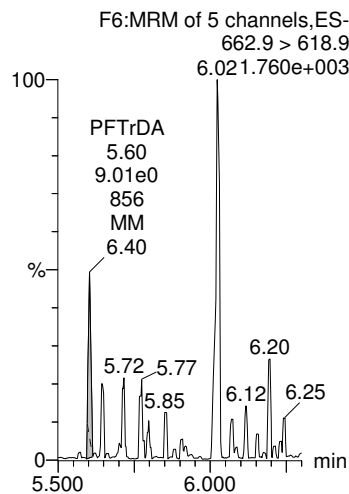
**PFUnA**



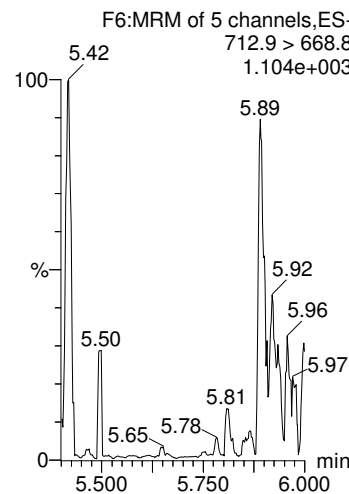
**PFD0A**



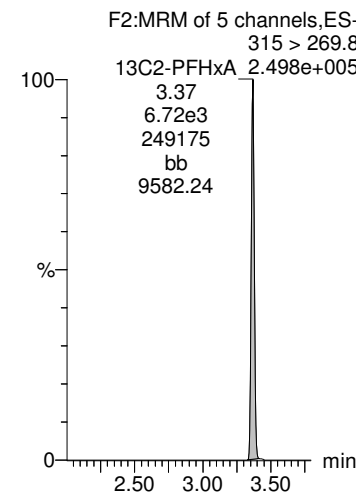
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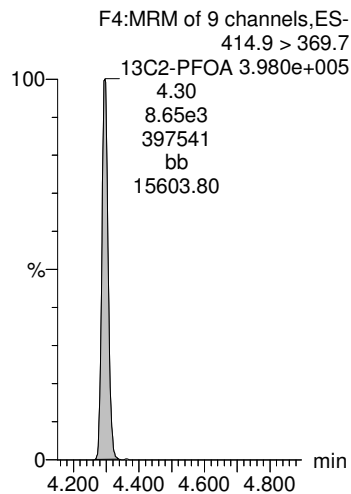
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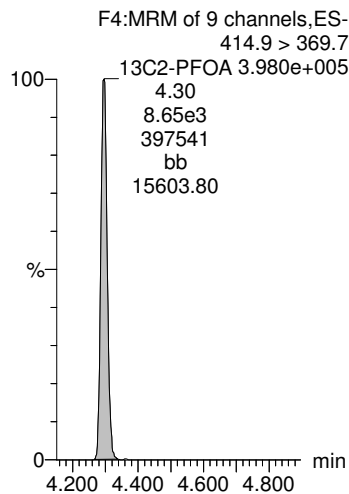
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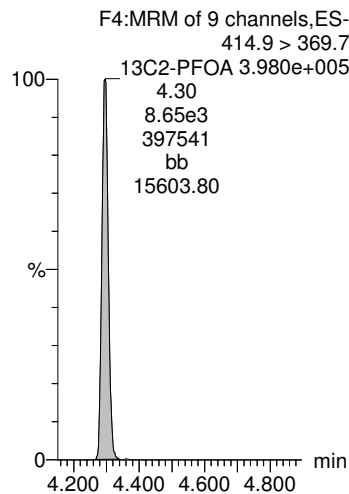
**13C2-PFOA**



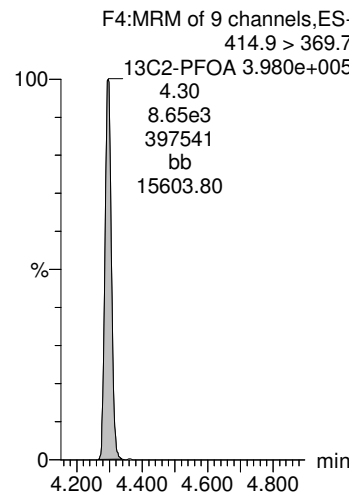
**13C2-PFOA**



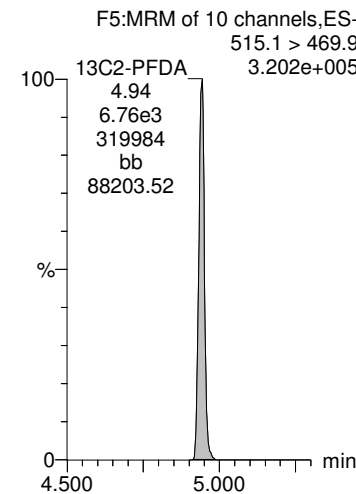
**13C2-PFOA**



**13C2-PFOA**



**13C2-PFDA**



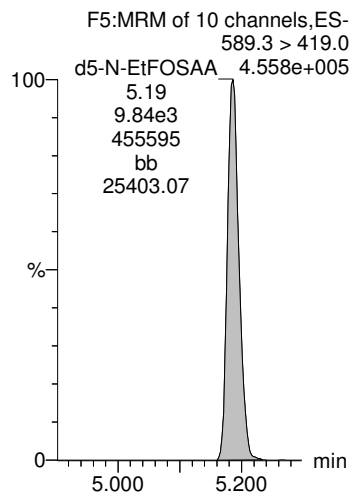
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Last Altered: Tuesday, February 27, 2018 11:00:47 Pacific Standard Time

Printed: Tuesday, February 27, 2018 11:01:00 Pacific Standard Time

Name: 180224G1\_26, Date: 24-Feb-2018, Time: 23:25:20, ID: 1800322-08 WI-A06-FB16-0218 0.25718, Description: WI-A06-FB16-0218

**d5-N-EtFOSAA**



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

Is Area

Ical

Compound 18: 13C2-PFOA

ID	Name	Type	Std. Conc	RT	Area	IS Area	Ical Area	Area %
1	ST180224G1-1 PFC CS-1 537 18B2310	180224G1_Analyte	10	4.31	11123.88	11123.88	8974.47	123.95
2	IPA	180224G1_Analyte	10				8974.47	0.00
3	B8B0105-BS1 LFB 0.25	180224G1_Analyte	10	4.3	10056.83	10056.83	8974.47	112.06
4	B8B0105-BLK1 LRB 0.25	180224G1_Analyte	10	4.3	9820.758	9820.758	8974.47	109.43
5	B8B0105-MS1 LFSM 0.26208	180224G1_Analyte	10	4.3	9443.107	9443.107	8974.47	105.22
6	B8B0105-MSD1 LFSMD 0.26895	180224G1_Analyte	10	4.3	10763.57	10763.57	8974.47	119.94
7	1800307-01 WI-A06-RW09-0218 0.28197	180224G1_Analyte	10	4.3	8606.472	8606.472	8974.47	95.90
8	1800307-02 WI-A06-FB09-0218 0.26838	180224G1_Analyte	10	4.3	10005.49	10005.49	8974.47	111.49
9	1800307-03 WI-A06-RW10-0218 0.27468	180224G1_Analyte	10	4.3	10596.8	10596.8	8974.47	118.08
10	1800307-04 WI-A06-FB10-0218 0.27036	180224G1_Analyte	10	4.3	10342.81	10342.81	8974.47	115.25
11	1800307-05 WI-A06-RW11-0218 0.2755	180224G1_Analyte	10	4.3	11364.48	11364.48	8974.47	126.63
12	1800307-06 WI-A06-FB11-0218 0.25843	180224G1_Analyte	10	4.3	9143.509	9143.509	8974.47	101.88
13	1800307-07 WI-A06-RW12-0218 0.27029	180224G1_Analyte	10	4.3	10258.8	10258.8	8974.47	114.31
14	1800307-08 WI-A06-FB12-0218 0.26763	180224G1_Analyte	10	4.3	9539.102	9539.102	8974.47	106.29
15	B8B0124-BS1 LFB 0.25	180224G1_Analyte	10	4.3	9363.689	9363.689	8974.47	104.34
16	B8B0124-BSD1 LFBD 0.25	180224G1_Analyte	10	4.3	8906.223	8906.223	8974.47	99.24
17	B8B0124-BLK1 LRB 0.25	180224G1_Analyte	10	4.3	9246.722	9246.722	8974.47	103.03
18	1800322-01 WI-A06-RW13-0218 0.25331	180224G1_Analyte	10	4.3	8499.16	8499.16	8974.47	94.70
19	1800322-02 WI-A06-FB13-0218 0.25329	180224G1_Analyte	10	4.3	9390.753	9390.753	8974.47	104.64
20	1800322-03 WI-A06-RW14-0218 0.24427	180224G1_Analyte	10	4.3	9094.823	9094.823	8974.47	101.34
21	1800322-04 WI-A06-FB14-0218 0.25858	180224G1_Analyte	10	4.3	8942.485	8942.485	8974.47	99.64
22	1800322-05 WI-A06-RW15-0218 0.26026	180224G1_Analyte	10	4.3	9326.669	9326.669	8974.47	103.92
23	1800322-06 WI-A06-FB15-0218 0.25932	180224G1_Analyte	10	4.3	8766.302	8766.302	8974.47	97.68
24	1800322-07 WI-A06-RW16-0218 0.24831	180224G1_Analyte	10	4.3	9238.358	9238.358	8974.47	102.94
25	1800322-08 WI-A06-FB16-0218 0.25718	180224G1_Analyte	10	4.3	8653.531	8653.531	8974.47	96.42
26	IPA	180224G1_Analyte	10				8974.47	0.00
27	ST180224G1-2 PFC CS1 537 18B2304	180224G1_Analyte	10	4.3	10870.97	10870.97	8974.47	121.13

## Compound 19: 13C4-PFOS

ID	Name	Type	Std. Conc	RT	Area	IS Area	Ical Area	Area %
1	ST180224G1-1 PFC CS-1 537 18B2310	180224G1_Analyte	28.7	4.71	18295.96	18295.96	17934.74	102.01
2	IPA	180224G1_Analyte	28.7				17934.74	0.00
3	B8B0105-BS1 LFB 0.25	180224G1_Analyte	28.7	4.71	15978.94	15978.94	17934.74	89.09
4	B8B0105-BLK1 LRB 0.25	180224G1_Analyte	28.7	4.71	15877.48	15877.48	17934.74	88.53
5	B8B0105-MS1 LFSM 0.26208	180224G1_Analyte	28.7	4.71	14971.71	14971.71	17934.74	83.48
6	B8B0105-MSD1 LFSMD 0.26895	180224G1_Analyte	28.7	4.71	17420.99	17420.99	17934.74	97.14
7	1800307-01 WI-A06-RW09-0218 0.28197	180224G1_Analyte	28.7	4.71	13834.89	13834.89	17934.74	77.14
8	1800307-02 WI-A06-FB09-0218 0.26838	180224G1_Analyte	28.7	4.71	16326.44	16326.44	17934.74	91.03
9	1800307-03 WI-A06-RW10-0218 0.27468	180224G1_Analyte	28.7	4.71	17111.22	17111.22	17934.74	95.41
10	1800307-04 WI-A06-FB10-0218 0.27036	180224G1_Analyte	28.7	4.71	16970.81	16970.81	17934.74	94.63
11	1800307-05 WI-A06-RW11-0218 0.2755	180224G1_Analyte	28.7	4.71	18035.06	18035.06	17934.74	100.56
12	1800307-06 WI-A06-FB11-0218 0.25843	180224G1_Analyte	28.7	4.71	15389.49	15389.49	17934.74	85.81
13	1800307-07 WI-A06-RW12-0218 0.27029	180224G1_Analyte	28.7	4.71	17373.58	17373.58	17934.74	96.87
14	1800307-08 WI-A06-FB12-0218 0.26763	180224G1_Analyte	28.7	4.71	15604.49	15604.49	17934.74	87.01
15	B8B0124-BS1 LFB 0.25	180224G1_Analyte	28.7	4.71	14420.61	14420.61	17934.74	80.41
16	B8B0124-BSD1 LFBD 0.25	180224G1_Analyte	28.7	4.71	14240.59	14240.59	17934.74	79.40
17	B8B0124-BLK1 LRB 0.25	180224G1_Analyte	28.7	4.71	13790.99	13790.99	17934.74	76.90
18	1800322-01 WI-A06-RW13-0218 0.25331	180224G1_Analyte	28.7	4.71	14349.13	14349.13	17934.74	80.01
19	1800322-02 WI-A06-FB13-0218 0.25329	180224G1_Analyte	28.7	4.71	13835.66	13835.66	17934.74	77.14
20	1800322-03 WI-A06-RW14-0218 0.24427	180224G1_Analyte	28.7	4.71	12499.89	12499.89	17934.74	69.70
21	1800322-04 WI-A06-FB14-0218 0.25858	180224G1_Analyte	28.7	4.71	14267.32	14267.32	17934.74	79.55
22	1800322-05 WI-A06-RW15-0218 0.26026	180224G1_Analyte	28.7	4.71	13124.9	13124.9	17934.74	73.18
23	1800322-06 WI-A06-FB15-0218 0.25932	180224G1_Analyte	28.7	4.71	13895.13	13895.13	17934.74	77.48
24	1800322-07 WI-A06-RW16-0218 0.24831	180224G1_Analyte	28.7	4.71	13548.39	13548.39	17934.74	75.54
25	1800322-08 WI-A06-FB16-0218 0.25718	180224G1_Analyte	28.7	4.7	13199.47	13199.47	17934.74	73.60
26	IPA	180224G1_Analyte	28.7				17934.74	0.00
27	ST180224G1-2 PFC CS1 537 18B2304	180224G1_Analyte	28.7	4.71	16240.95	16240.95	17934.74	90.56



## Compound 20: d3-N-MeFOSAA

ID	Name	Type	Std. Conc	RT	Area	IS Area	Ical Area	Area %
1	ST180224G1-1 PFC CS-1 537 18B2310	180224G1_Analyte	40	5.07	11768.93	11768.93	12825.49	91.76
2	IPA	180224G1_Analyte	40	5.07	13.484	13.484	12825.49	0.11
3	B8B0105-BS1 LFB 0.25	180224G1_Analyte	40	5.06	10617.91	10617.91	12825.49	82.79
4	B8B0105-BLK1 LRB 0.25	180224G1_Analyte	40	5.07	11228.37	11228.37	12825.49	87.55
5	B8B0105-MS1 LFSM 0.26208	180224G1_Analyte	40	5.06	10892.97	10892.97	12825.49	84.93
6	B8B0105-MSD1 LFSMD 0.26895	180224G1_Analyte	40	5.06	11535.83	11535.83	12825.49	89.94
7	1800307-01 WI-A06-RW09-0218 0.28197	180224G1_Analyte	40	5.06	10255.52	10255.52	12825.49	79.96
8	1800307-02 WI-A06-FB09-0218 0.26838	180224G1_Analyte	40	5.06	10905.6	10905.6	12825.49	85.03
9	1800307-03 WI-A06-RW10-0218 0.27468	180224G1_Analyte	40	5.06	11804.72	11804.72	12825.49	92.04
10	1800307-04 WI-A06-FB10-0218 0.27036	180224G1_Analyte	40	5.07	11095.21	11095.21	12825.49	86.51
11	1800307-05 WI-A06-RW11-0218 0.2755	180224G1_Analyte	40	5.06	12710.19	12710.19	12825.49	99.10
12	1800307-06 WI-A06-FB11-0218 0.25843	180224G1_Analyte	40	5.07	11193.75	11193.75	12825.49	87.28
13	1800307-07 WI-A06-RW12-0218 0.27029	180224G1_Analyte	40	5.07	11822.15	11822.15	12825.49	92.18
14	1800307-08 WI-A06-FB12-0218 0.26763	180224G1_Analyte	40	5.07	12198.36	12198.36	12825.49	95.11
15	B8B0124-BS1 LFB 0.25	180224G1_Analyte	40	5.07	12213.2	12213.2	12825.49	95.23
16	B8B0124-BSD1 LFBD 0.25	180224G1_Analyte	40	5.07	11472.54	11472.54	12825.49	89.45
17	B8B0124-BLK1 LRB 0.25	180224G1_Analyte	40	5.07	10546.52	10546.52	12825.49	82.23
18	1800322-01 WI-A06-RW13-0218 0.25331	180224G1_Analyte	40	5.07	11440.48	11440.48	12825.49	89.20
19	1800322-02 WI-A06-FB13-0218 0.25329	180224G1_Analyte	40	5.07	10180.59	10180.59	12825.49	79.38
20	1800322-03 WI-A06-RW14-0218 0.24427	180224G1_Analyte	40	5.06	10727.92	10727.92	12825.49	83.65
21	1800322-04 WI-A06-FB14-0218 0.25858	180224G1_Analyte	40	5.06	11523.3	11523.3	12825.49	89.85
22	1800322-05 WI-A06-RW15-0218 0.26026	180224G1_Analyte	40	5.06	11064.56	11064.56	12825.49	86.27
23	1800322-06 WI-A06-FB15-0218 0.25932	180224G1_Analyte	40	5.06	8580.464	8580.464	12825.49	66.90
24	1800322-07 WI-A06-RW16-0218 0.24831	180224G1_Analyte	40	5.06	11409.32	11409.32	12825.49	88.96
25	1800322-08 WI-A06-FB16-0218 0.25718	180224G1_Analyte	40	5.06	10873.79	10873.79	12825.49	84.78
26	IPA	180224G1_Analyte	40				12825.49	0.00
27	ST180224G1-2 PFC CS1 537 18B2304	180224G1_Analyte	40	5.06	12476.12	12476.12	12825.49	97.28

Ccal

## Compound 18: 13C2-PFOA

ID	Name	Type	Std. Conc	RT	Area	IS Area	Ccal Area	Area %
1	ST180224G1-1 PFC CS-1 537 18B2310	180224G1_Analyte	10	4.31	11123.88	11123.88	11123.88	100.00
2	IPA	180224G1_Analyte	10				11123.88	0.00
3	B8B0105-BS1 LFB 0.25	180224G1_Analyte	10	4.3	10056.83	10056.83	11123.88	90.41
4	B8B0105-BLK1 LRB 0.25	180224G1_Analyte	10	4.3	9820.758	9820.758	11123.88	88.29
5	B8B0105-MS1 LFSM 0.26208	180224G1_Analyte	10	4.3	9443.107	9443.107	11123.88	84.89
6	B8B0105-MSD1 LFSMD 0.26895	180224G1_Analyte	10	4.3	10763.57	10763.57	11123.88	96.76
7	1800307-01 WI-A06-RW09-0218 0.28197	180224G1_Analyte	10	4.3	8606.472	8606.472	11123.88	77.37
8	1800307-02 WI-A06-FB09-0218 0.26838	180224G1_Analyte	10	4.3	10005.49	10005.49	11123.88	89.95
9	1800307-03 WI-A06-RW10-0218 0.27468	180224G1_Analyte	10	4.3	10596.8	10596.8	11123.88	95.26
10	1800307-04 WI-A06-FB10-0218 0.27036	180224G1_Analyte	10	4.3	10342.81	10342.81	11123.88	92.98
11	1800307-05 WI-A06-RW11-0218 0.2755	180224G1_Analyte	10	4.3	11364.48	11364.48	11123.88	102.16
12	1800307-06 WI-A06-FB11-0218 0.25843	180224G1_Analyte	10	4.3	9143.509	9143.509	11123.88	82.20
13	1800307-07 WI-A06-RW12-0218 0.27029	180224G1_Analyte	10	4.3	10258.8	10258.8	11123.88	92.22
14	1800307-08 WI-A06-FB12-0218 0.26763	180224G1_Analyte	10	4.3	9539.102	9539.102	11123.88	85.75
15	B8B0124-BS1 LFB 0.25	180224G1_Analyte	10	4.3	9363.689	9363.689	11123.88	84.18
16	B8B0124-BSD1 LFBD 0.25	180224G1_Analyte	10	4.3	8906.223	8906.223	11123.88	80.06
17	B8B0124-BLK1 LRB 0.25	180224G1_Analyte	10	4.3	9246.722	9246.722	11123.88	83.13
18	1800322-01 WI-A06-RW13-0218 0.25331	180224G1_Analyte	10	4.3	8499.16	8499.16	11123.88	76.40
19	1800322-02 WI-A06-FB13-0218 0.25329	180224G1_Analyte	10	4.3	9390.753	9390.753	11123.88	84.42
20	1800322-03 WI-A06-RW14-0218 0.24427	180224G1_Analyte	10	4.3	9094.823	9094.823	11123.88	81.76
21	1800322-04 WI-A06-FB14-0218 0.25858	180224G1_Analyte	10	4.3	8942.485	8942.485	11123.88	80.39
22	1800322-05 WI-A06-RW15-0218 0.26026	180224G1_Analyte	10	4.3	9326.669	9326.669	11123.88	83.84
23	1800322-06 WI-A06-FB15-0218 0.25932	180224G1_Analyte	10	4.3	8766.302	8766.302	11123.88	78.81
24	1800322-07 WI-A06-RW16-0218 0.24831	180224G1_Analyte	10	4.3	9238.358	9238.358	11123.88	83.05
25	1800322-08 WI-A06-FB16-0218 0.25718	180224G1_Analyte	10	4.3	8653.531	8653.531	11123.88	77.79
26	IPA	180224G1_Analyte	10				11123.88	0.00
27	ST180224G1-2 PFC CS1 537 18B2304	180224G1_Analyte	10	4.3	10870.97	10870.97	11123.88	97.73

Compound 19: 13C4-PFOS

ID	Name	Type	Std. Conc	RT	Area	IS Area	Ccal Area	Area %
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1	ST180224G1-1 PFC CS-1 537 18B2310	180224G1_Analyte	28.7	4.71	18295.96	18295.96	18295.96	100.00
2	IPA	180224G1_Analyte	28.7				18295.96	0.00
3	B8B0105-BS1 LFB 0.25	180224G1_Analyte	28.7	4.71	15978.94	15978.94	18295.96	87.34
4	B8B0105-BLK1 LRB 0.25	180224G1_Analyte	28.7	4.71	15877.48	15877.48	18295.96	86.78
5	B8B0105-MS1 LFSM 0.26208	180224G1_Analyte	28.7	4.71	14971.71	14971.71	18295.96	81.83
6	B8B0105-MSD1 LFSMD 0.26895	180224G1_Analyte	28.7	4.71	17420.99	17420.99	18295.96	95.22
7	1800307-01 WI-A06-RW09-0218 0.28197	180224G1_Analyte	28.7	4.71	13834.89	13834.89	18295.96	75.62
8	1800307-02 WI-A06-FB09-0218 0.26838	180224G1_Analyte	28.7	4.71	16326.44	16326.44	18295.96	89.24
9	1800307-03 WI-A06-RW10-0218 0.27468	180224G1_Analyte	28.7	4.71	17111.22	17111.22	18295.96	93.52
10	1800307-04 WI-A06-FB10-0218 0.27036	180224G1_Analyte	28.7	4.71	16970.81	16970.81	18295.96	92.76
11	1800307-05 WI-A06-RW11-0218 0.2755	180224G1_Analyte	28.7	4.71	18035.06	18035.06	18295.96	98.57
12	1800307-06 WI-A06-FB11-0218 0.25843	180224G1_Analyte	28.7	4.71	15389.49	15389.49	18295.96	84.11
13	1800307-07 WI-A06-RW12-0218 0.27029	180224G1_Analyte	28.7	4.71	17373.58	17373.58	18295.96	94.96
14	1800307-08 WI-A06-FB12-0218 0.26763	180224G1_Analyte	28.7	4.71	15604.49	15604.49	18295.96	85.29
15	B8B0124-BS1 LFB 0.25	180224G1_Analyte	28.7	4.71	14420.61	14420.61	18295.96	78.82
16	B8B0124-BSD1 LFBD 0.25	180224G1_Analyte	28.7	4.71	14240.59	14240.59	18295.96	77.83
17	B8B0124-BLK1 LRB 0.25	180224G1_Analyte	28.7	4.71	13790.99	13790.99	18295.96	75.38
18	1800322-01 WI-A06-RW13-0218 0.25331	180224G1_Analyte	28.7	4.71	14349.13	14349.13	18295.96	78.43
19	1800322-02 WI-A06-FB13-0218 0.25329	180224G1_Analyte	28.7	4.71	13835.66	13835.66	18295.96	75.62
20	1800322-03 WI-A06-RW14-0218 0.24427	180224G1_Analyte	28.7	4.71	12499.89	12499.89	18295.96	68.32
21	1800322-04 WI-A06-FB14-0218 0.25858	180224G1_Analyte	28.7	4.71	14267.32	14267.32	18295.96	77.98
22	1800322-05 WI-A06-RW15-0218 0.26026	180224G1_Analyte	28.7	4.71	13124.9	13124.9	18295.96	71.74
23	1800322-06 WI-A06-FB15-0218 0.25932	180224G1_Analyte	28.7	4.71	13895.13	13895.13	18295.96	75.95
24	1800322-07 WI-A06-RW16-0218 0.24831	180224G1_Analyte	28.7	4.71	13548.39	13548.39	18295.96	74.05
25	1800322-08 WI-A06-FB16-0218 0.25718	180224G1_Analyte	28.7	4.7	13199.47	13199.47	18295.96	72.14
26	IPA	180224G1_Analyte	28.7				18295.96	0.00
27	ST180224G1-2 PFC CS1 537 18B2304	180224G1_Analyte	28.7	4.71	16240.95	16240.95	18295.96	88.77

Compound 20: d3-N-MeFOSAA

ID	Name	Type	Std. Conc	RT	Area	IS Area	Ccal Area	Area %
1	ST180224G1-1 PFC CS-1 537 18B2310	180224G1_Analyte	40	5.07	11768.93	11768.93	11768.93	100.00
2	IPA	180224G1_Analyte	40	5.07	13.484	13.484	11768.93	0.11

3	B8B0105-BS1 LFB 0.25	180224G1_Analyte	40	5.06	10617.91	10617.91	11768.93	90.22
4	B8B0105-BLK1 LRB 0.25	180224G1_Analyte	40	5.07	11228.37	11228.37	11768.93	95.41
5	B8B0105-MS1 LFSM 0.26208	180224G1_Analyte	40	5.06	10892.97	10892.97	11768.93	92.56
6	B8B0105-MSD1 LFSMD 0.26895	180224G1_Analyte	40	5.06	11535.83	11535.83	11768.93	98.02
7	1800307-01 WI-A06-RW09-0218 0.28197	180224G1_Analyte	40	5.06	10255.52	10255.52	11768.93	87.14
8	1800307-02 WI-A06-FB09-0218 0.26838	180224G1_Analyte	40	5.06	10905.6	10905.6	11768.93	92.66
9	1800307-03 WI-A06-RW10-0218 0.27468	180224G1_Analyte	40	5.06	11804.72	11804.72	11768.93	100.30
10	1800307-04 WI-A06-FB10-0218 0.27036	180224G1_Analyte	40	5.07	11095.21	11095.21	11768.93	94.28
11	1800307-05 WI-A06-RW11-0218 0.2755	180224G1_Analyte	40	5.06	12710.19	12710.19	11768.93	108.00
12	1800307-06 WI-A06-FB11-0218 0.25843	180224G1_Analyte	40	5.07	11193.75	11193.75	11768.93	95.11
13	1800307-07 WI-A06-RW12-0218 0.27029	180224G1_Analyte	40	5.07	11822.15	11822.15	11768.93	100.45
14	1800307-08 WI-A06-FB12-0218 0.26763	180224G1_Analyte	40	5.07	12198.36	12198.36	11768.93	103.65
15	B8B0124-BS1 LFB 0.25	180224G1_Analyte	40	5.07	12213.2	12213.2	11768.93	103.78
16	B8B0124-BSD1 LFBD 0.25	180224G1_Analyte	40	5.07	11472.54	11472.54	11768.93	97.48
17	B8B0124-BLK1 LRB 0.25	180224G1_Analyte	40	5.07	10546.52	10546.52	11768.93	89.61
18	1800322-01 WI-A06-RW13-0218 0.25331	180224G1_Analyte	40	5.07	11440.48	11440.48	11768.93	97.21
19	1800322-02 WI-A06-FB13-0218 0.25329	180224G1_Analyte	40	5.07	10180.59	10180.59	11768.93	86.50
20	1800322-03 WI-A06-RW14-0218 0.24427	180224G1_Analyte	40	5.06	10727.92	10727.92	11768.93	91.15
21	1800322-04 WI-A06-FB14-0218 0.25858	180224G1_Analyte	40	5.06	11523.3	11523.3	11768.93	97.91
22	1800322-05 WI-A06-RW15-0218 0.26026	180224G1_Analyte	40	5.06	11064.56	11064.56	11768.93	94.02
23	1800322-06 WI-A06-FB15-0218 0.25932	180224G1_Analyte	40	5.06	8580.464	8580.464	11768.93	72.91
24	1800322-07 WI-A06-RW16-0218 0.24831	180224G1_Analyte	40	5.06	11409.32	11409.32	11768.93	96.94
25	1800322-08 WI-A06-FB16-0218 0.25718	180224G1_Analyte	40	5.06	10873.79	10873.79	11768.93	92.39
26	IPA	180224G1_Analyte	40				11768.93	0.00
27	ST180224G1-2 PFC CS1 537 18B2304	180224G1_Analyte	40	5.06	12476.12	12476.12	11768.93	106.01

# LC Calibration Standards Review Checklist

*am  
4/26/18  
DW*

		ION Ratio	Concentration	C-Cals Name	Sign Date	Correct I-Cal	Manual Integrations	
Calibration ID: <u>ST190022461-1</u>	<u>LMH</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Calibration ID: <u>J -2</u>	<u>LMH</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Calibration ID: _____	LMH	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Calibration ID: _____	LMH	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Calibration ID: _____	LMH	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Calibration ID: _____	LMH	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Calibration ID: _____	LMH	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Calibration ID: _____	LMH	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Calibration ID: _____	LMH	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Calibration ID: _____	LMH	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Full Mass Cal. Date: 4/15/18

Run Log Present:

# of Samples per Sequence Checked:

Instrument Blank Saved:  NA DW

IIS Area Saved:  180224C1

Reviewed By: JA, 02/26/2018  
Initials/Date

**Comments:**

Dataset: X:\G1.PRO\Results\2018\180224G1\180224G1-2.qld

Last Altered: Monday, February 26, 2018 07:34:19 Pacific Standard Time

Printed: Monday, February 26, 2018 07:35:20 Pacific Standard Time

*JWA.*  
*02/26/2018*

Method: X:\G1.PRO\MethDB\PFAS\_DW\_L14\_1223.mdb 23 Feb 2018 15:59:15

Calibration: X:\G1.PRO\CurveDB\C18\_537\_Q1\_02-23-18\_L14.cdb 23 Feb 2018 16:46:11

Name: 180224G1\_2, Date: 24-Feb-2018, Time: 18:28:03, ID: ST180224G1-1 PFC CS-1 537 18B2310, Description: PFC CS-1 537 18B2310

#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	299 > 79.7	9.77e2	1.83e4	1.0000		3.02	3.02	1.53	2.09	118.2
2	2 PFHxA	313.2 > 268.9	1.23e3	1.11e4	1.0000		3.36	3.38	1.10	1.99	99.7
3	3 PFHpA	363 > 318.9	2.18e3	1.11e4	1.0000		3.88	3.89	1.96	2.08	104.2
4	4 PFHxS	398.9 > 79.6	1.06e3	1.83e4	1.0000		4.00	4.01	1.65	2.36	129.9
5	5 PFOA	413 > 368.7	2.11e3	1.11e4	1.0000		4.31	4.31	1.90	2.27	113.3
6	6 PFNA	463 > 418.8	2.59e3	1.11e4	1.0000		4.65	4.65	2.33	2.29	114.6
7	7 PFOS	499 > 79.9	1.13e3	1.83e4	1.0000		4.71	4.71	1.76	1.84	99.3
8	8 PFDA	513 > 468.8	2.45e3	1.11e4	1.0000		4.88	4.95	2.20	1.99	99.4
9	9 N-MeFOSAA	570.1 > 419.0	9.30e2	1.18e4	1.0000		5.01	5.07	3.16	2.40	119.9
10	10 N-EtFOSAA	584.2 > 419.0	5.80e2	1.18e4	1.0000		5.19	5.20	1.97	1.86	93.0
11	11 PFUnA	563 > 518.9	2.18e3	1.11e4	1.0000		5.14	5.21	1.96	1.95	97.5
12	12 PFDoA	612.9 > 318.8	4.39e2	1.11e4	1.0000		5.34	5.42	0.394	2.49	124.4
13	13 PFTrDA	662.9 > 618.9	3.10e3	1.11e4	1.0000		5.57	5.62	2.78	2.03	101.3
14	14 PFTeDA	712.9 > 668.8	2.71e3	1.11e4	1.0000		5.74	5.79	2.43	1.95	97.4
15	15 13C2-PFHxA	315 > 269.8	8.43e3	1.11e4	1.0000	0.731	3.46	3.38	7.58	10.4	103.6
16	16 13C2-PFDA	515.1 > 469.9	7.73e3	1.11e4	1.0000	0.910	4.91	4.95	6.95	7.63	76.3
17	17 d5-N-EtFOSAA	589.3 > 419.0	1.15e4	1.18e4	1.0000	1.049	5.07	5.20	39.0	37.2	92.9
18	18 13C2-PFOA	414.9 > 369.7	1.11e4	1.11e4	1.0000	1.000	4.41	4.31	10.0	10.0	100.0
19	19 13C4-PFOS	503.0 > 79.9	1.83e4	1.83e4	1.0000	1.000	4.81	4.71	28.7	28.7	100.0
20	20 d3-N-MeFOSAA	573.3 > 419.0	1.18e4	1.18e4	1.0000	1.000	5.16	5.07	40.0	40.0	100.0

*on*  
*2/26/18*

Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Monday, February 26, 2018 08:02:58 Pacific Standard Time

Printed: Monday, February 26, 2018 08:04:17 Pacific Standard Time

Method: X:\G1.PRO\MethDB\PFAS\_DW\_L14\_1223.mdb 23 Feb 2018 15:59:15

Calibration: X:\G1.PRO\CurveDB\C18\_537\_Q1\_02-23-18\_L14.cdb 23 Feb 2018 16:46:11

Compound name: PFBS

	Name	ID	Acq.Date	Acq.Time
1	180224G1_1	IPA	24-Feb-18	18:16:00
2	180224G1_2	ST180224G1-1 PFC CS-1 537 18B2310	24-Feb-18	18:28:03
3	180224G1_3	IPA	24-Feb-18	18:40:23
4	180224G1_4	B8B0105-BS1 LFB 0.25	24-Feb-18	18:52:43
5	180224G1_5	B8B0105-BLK1 LRB 0.25	24-Feb-18	19:05:05
6	180224G1_6	B8B0105-MS1 LFSM 0.26208	24-Feb-18	19:17:31
7	180224G1_7	B8B0105-MSD1 LFSMD 0.26895	24-Feb-18	19:29:56
8	180224G1_8	1800307-01 WI-A06-RW09-0218 0.28197	24-Feb-18	19:42:21
9	180224G1_9	1800307-02 WI-A06-FB09-0218 0.26838	24-Feb-18	19:54:46
10	180224G1_10	1800307-03 WI-A06-RW10-0218 0.27468	24-Feb-18	20:07:11
11	180224G1_11	1800307-04 WI-A06-FB10-0218 0.27036	24-Feb-18	20:19:32
12	180224G1_12	1800307-05 WI-A06-RW11-0218 0.2755	24-Feb-18	20:31:48
13	180224G1_13	1800307-06 WI-A06-FB11-0218 0.25843	24-Feb-18	20:44:14
14	180224G1_14	1800307-07 WI-A06-RW12-0218 0.27029	24-Feb-18	20:56:39
15	180224G1_15	1800307-08 WI-A06-FB12-0218 0.26763	24-Feb-18	21:09:04
16	180224G1_16	B8B0124-BS1 LFB 0.25	24-Feb-18	21:21:30
17	180224G1_17	B8B0124-BSD1 LFB 0.25	24-Feb-18	21:33:56
18	180224G1_18	B8B0124-BLK1 LRB 0.25	24-Feb-18	21:46:20
19	180224G1_19	1800322-01 WI-A06-RW13-0218 0.25331	24-Feb-18	21:58:41
20	180224G1_20	1800322-02 WI-A06-FB13-0218 0.25329	24-Feb-18	22:10:57
21	180224G1_21	1800322-03 WI-A06-RW14-0218 0.24427	24-Feb-18	22:23:15
22	180224G1_22	1800322-04 WI-A06-FB14-0218 0.25858	24-Feb-18	22:35:39
23	180224G1_23	1800322-05 WI-A06-RW15-0218 0.26026	24-Feb-18	22:48:05
24	180224G1_24	1800322-06 WI-A06-FB15-0218 0.25932	24-Feb-18	23:00:31
25	180224G1_25	1800322-07 WI-A06-RW16-0218 0.24831	24-Feb-18	23:12:55
26	180224G1_26	1800322-08 WI-A06-FB16-0218 0.25718	24-Feb-18	23:25:20
27	180224G1_27	IPA	24-Feb-18	23:37:42
28	180224G1_28	ST180224G1-2 PFC CS1 537 18B2304	24-Feb-18	23:50:10
29	180224G1_29	IPA	25-Feb-18	00:02:32

Dataset: X:\G1.PRO\Results\2018\180224G1\180224G1-2.qld

Last Altered: Monday, February 26, 2018 07:34:19 Pacific Standard Time

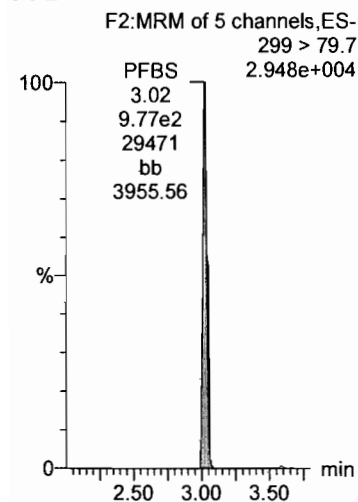
Printed: Monday, February 26, 2018 07:35:20 Pacific Standard Time

Method: X:\G1.PRO\MethDB\PFAS\_DW\_L14\_1223.mdb 23 Feb 2018 15:59:15

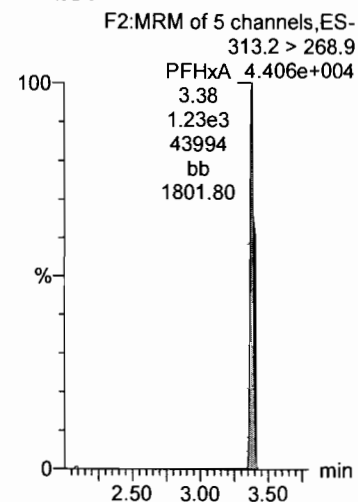
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Name: 180224G1\_2, Date: 24-Feb-2018, Time: 18:28:03, ID: ST180224G1-1 PFC CS-1 537 18B2310, Description: PFC CS-1 537 18B2310

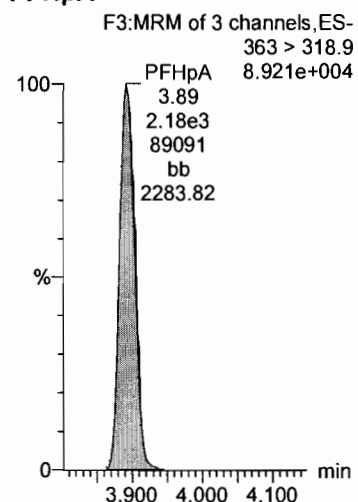
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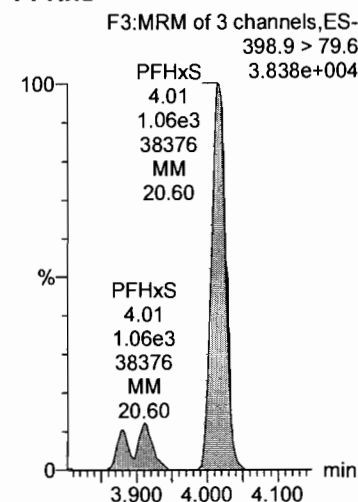
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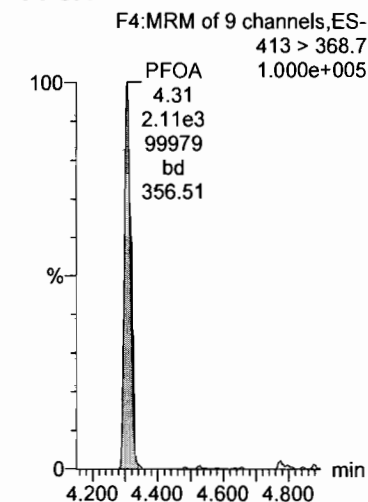
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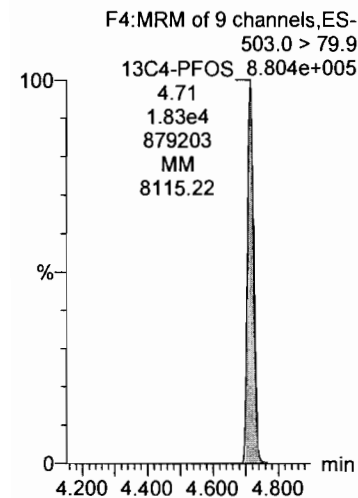
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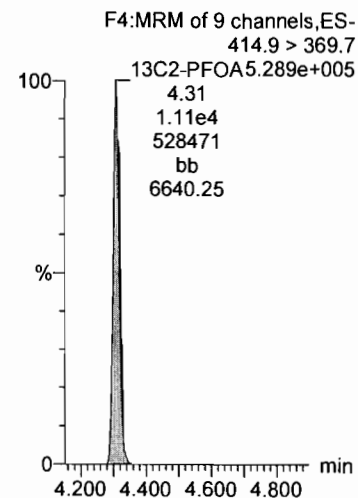
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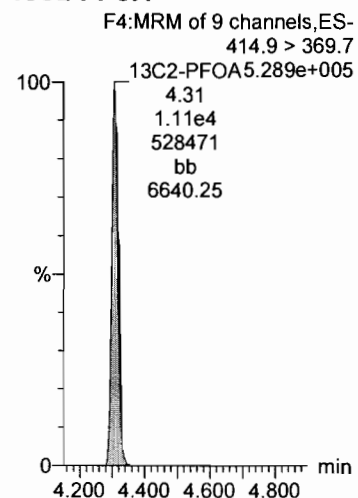
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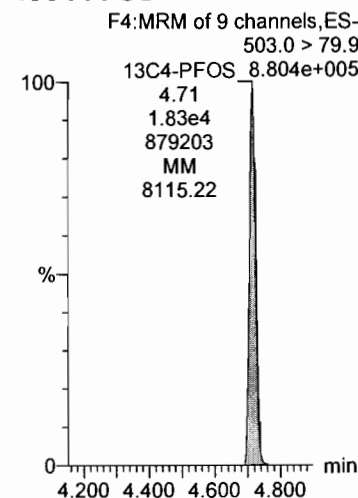
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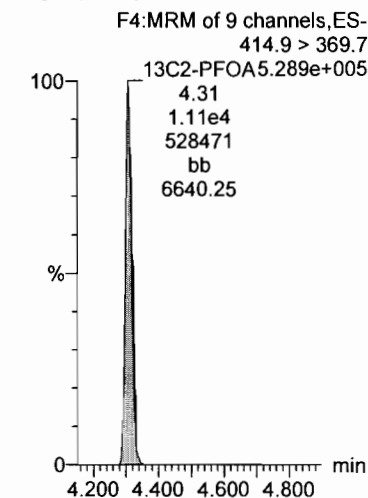
**13C2-PFOA**



**13C4-PFOS**



**13C2-PFOA**





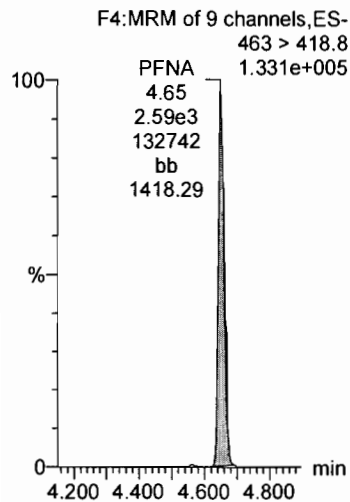
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Last Altered: Monday, February 26, 2018 07:34:19 Pacific Standard Time

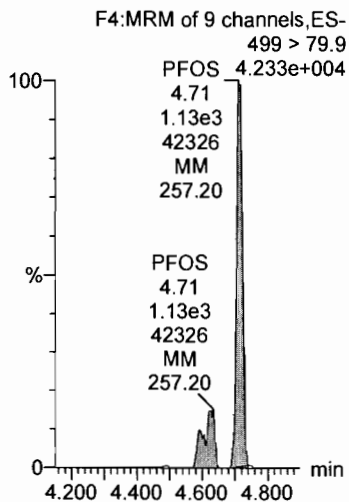
Printed: Monday, February 26, 2018 07:35:20 Pacific Standard Time

Name: 180224G1\_2, Date: 24-Feb-2018, Time: 18:28:03, ID: ST180224G1-1 PFC CS-1 537 18B2310, Description: PFC CS-1 537 18B2310

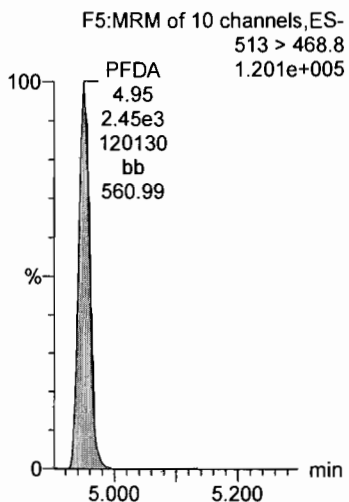
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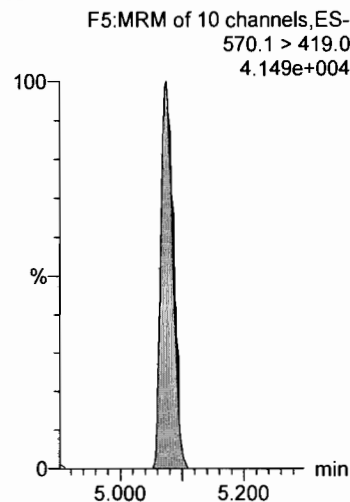
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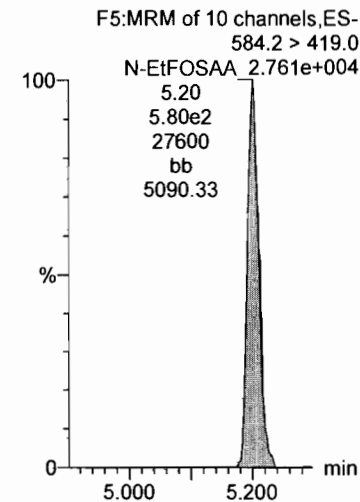
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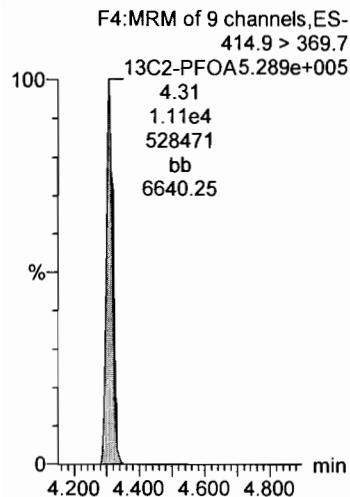
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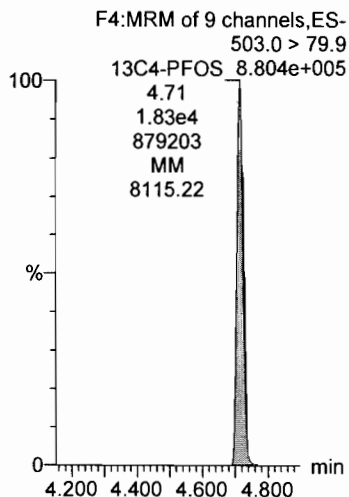
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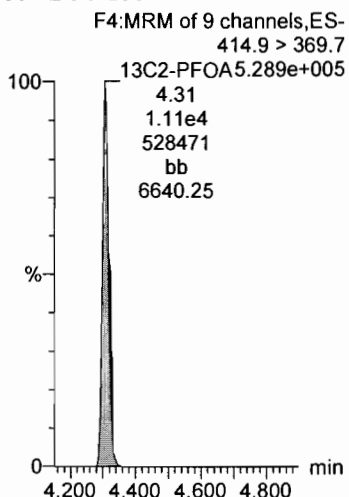
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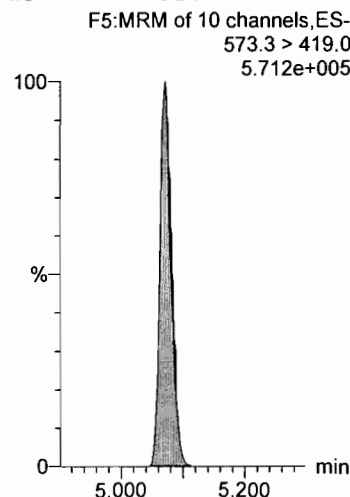
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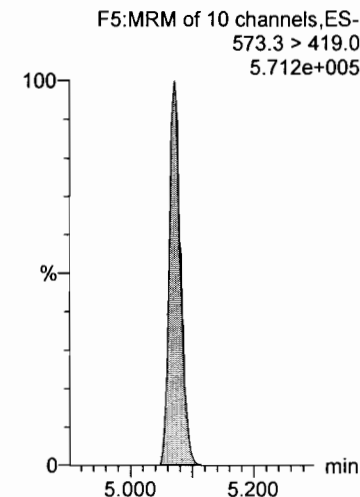
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**d3-N-MeFOSAA**



**d3-N-MeFOSAA**

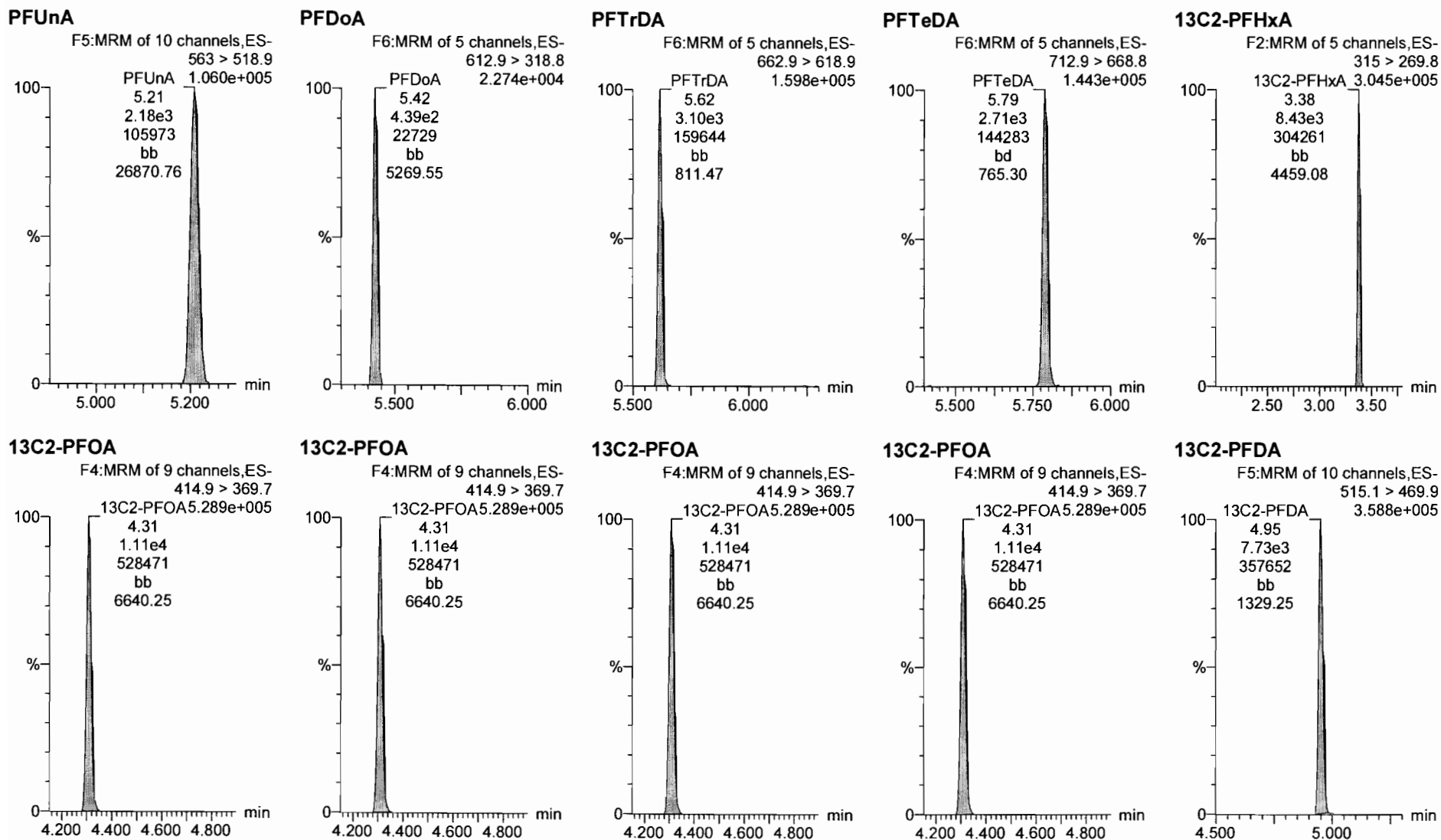


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Last Altered: Monday, February 26, 2018 07:34:19 Pacific Standard Time

Printed: Monday, February 26, 2018 07:35:20 Pacific Standard Time

Name: 180224G1\_2, Date: 24-Feb-2018, Time: 18:28:03, ID: ST180224G1-1 PFC CS-1 537 18B2310, Description: PFC CS-1 537 18B2310



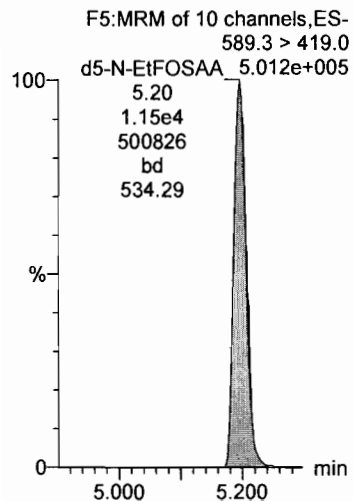
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Printed: Monday, February 26, 2018 07:35:20 Pacific Standard Time

Name: 180224G1\_2, Date: 24-Feb-2018, Time: 18:28:03, ID: ST180224G1-1 PFC CS-1 537 18B2310, Description: PFC CS-1 537 18B2310

**d5-N-EtFOSAA**



Dataset: X:\G1.PRO\Results\2018\180224G1\180224G1-28.qld

Last Altered: Monday, February 26, 2018 07:35:43 Pacific Standard Time

Printed: Monday, February 26, 2018 07:36:01 Pacific Standard Time

*J.A.*  
*02/26/2018*

Method: X:\G1.PRO\MethDB\PFAS\_DW\_L14\_1223.mdb 23 Feb 2018 15:59:15

Calibration: X:\G1.PRO\CurveDB\C18\_537\_Q1\_02-23-18\_L14.cdb 23 Feb 2018 16:46:11

Name: 180224G1\_28, Date: 24-Feb-2018, Time: 23:50:10, ID: ST180224G1-2 PFC CS1 537 18B2304, Description: PFC CS1 537 18B2304

#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	299 > 79.7	4.17e3	1.62e4	1.0000		3.01	3.01	7.36	10.1	113.8
2	2 PFHxA	313.2 > 268.9	4.86e3	1.09e4	1.0000		3.35	3.37	4.47	8.07	80.7
3	3 PFHpA	363 > 318.9	9.55e3	1.09e4	1.0000		3.87	3.88	8.78	9.34	93.4
4	4 PFHxS	398.9 > 79.6	3.77e3	1.62e4	1.0000		3.99	4.00	6.66	9.52	104.4
5	5 PFOA	413 > 368.7	8.69e3	1.09e4	1.0000		4.30	4.30	8.00	9.54	95.4
6	6 PFNA	463 > 418.8	1.04e4	1.09e4	1.0000		4.64	4.64	9.60	9.44	94.4
7	7 PFOS	499 > 79.9	4.77e3	1.62e4	1.0000		4.71	4.71	8.43	8.78	94.9
8	8 PFDA	513 > 468.8	1.05e4	1.09e4	1.0000		4.87	4.94	9.63	8.79	87.9
9	9 N-MeFOSAA	570.1 > 419.0	3.98e3	1.25e4	1.0000		5.00	5.07	12.8	9.55	95.5
10	10 N-EtFOSAA	584.2 > 419.0	3.90e3	1.25e4	1.0000		5.18	5.19	12.5	11.8	118.0
11	11 PFUnA	563 > 518.9	8.87e3	1.09e4	1.0000		5.13	5.20	8.16	8.12	81.2
12	12 PFDoA	612.9 > 318.8	1.74e3	1.09e4	1.0000		5.33	5.42	1.60	10.1	100.8
13	13 PFTrDA	662.9 > 618.9	1.35e4	1.09e4	1.0000		5.56	5.61	12.4	9.05	90.5
14	14 PFTeDA	712.9 > 668.8	1.19e4	1.09e4	1.0000		5.73	5.78	11.0	8.77	87.7
15	15 13C2-PFHxA	315 > 269.8	7.96e3	1.09e4	1.0000	0.731	3.45	3.37	7.32	10.0	100.1
16	16 13C2-PFDA	515.1 > 469.9	7.64e3	1.09e4	1.0000	0.910	4.90	4.94	7.02	7.72	77.2
17	17 d5-N-EtFOSAA	589.3 > 419.0	1.23e4	1.25e4	1.0000	1.049	5.06	5.19	39.3	37.5	93.7
18	18 13C2-PFOA	414.9 > 369.7	1.09e4	1.09e4	1.0000	1.000	4.41	4.30	10.0	10.0	100.0
19	19 13C4-PFOS	503.0 > 79.9	1.62e4	1.62e4	1.0000	1.000	4.81	4.71	28.7	28.7	100.0
20	20 d3-N-MeFOSAA	573.3 > 419.0	1.25e4	1.25e4	1.0000	1.000	5.16	5.06	40.0	40.0	100.0

*dm*  
*2/26/18*

Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Monday, February 26, 2018 08:02:58 Pacific Standard Time

Printed: Monday, February 26, 2018 08:04:17 Pacific Standard Time

Method: X:\G1.PRO\MethDB\PFAS\_DW\_L14\_1223.mdb 23 Feb 2018 15:59:15

Calibration: X:\G1.PRO\CurveDB\C18\_537\_Q1\_02-23-18\_L14.cdb 23 Feb 2018 16:46:11

Compound name: PFBS

	Name	ID	Acq.Date	Acq.Time
1	180224G1_1	IPA	24-Feb-18	18:16:00
2	180224G1_2	ST180224G1-1 PFC CS-1 537 18B2310	24-Feb-18	18:28:03
3	180224G1_3	IPA	24-Feb-18	18:40:23
4	180224G1_4	B8B0105-BS1 LFB 0.25	24-Feb-18	18:52:43
5	180224G1_5	B8B0105-BLK1 LRB 0.25	24-Feb-18	19:05:05
6	180224G1_6	B8B0105-MS1 LFSM 0.26208	24-Feb-18	19:17:31
7	180224G1_7	B8B0105-MSD1 LFSMD 0.26895	24-Feb-18	19:29:56
8	180224G1_8	1800307-01 WI-A06-RW09-0218 0.28197	24-Feb-18	19:42:21
9	180224G1_9	1800307-02 WI-A06-FB09-0218 0.26838	24-Feb-18	19:54:46
10	180224G1_10	1800307-03 WI-A06-RW10-0218 0.27468	24-Feb-18	20:07:11
11	180224G1_11	1800307-04 WI-A06-FB10-0218 0.27036	24-Feb-18	20:19:32
12	180224G1_12	1800307-05 WI-A06-RW11-0218 0.2755	24-Feb-18	20:31:48
13	180224G1_13	1800307-06 WI-A06-FB11-0218 0.25843	24-Feb-18	20:44:14
14	180224G1_14	1800307-07 WI-A06-RW12-0218 0.27029	24-Feb-18	20:56:39
15	180224G1_15	1800307-08 WI-A06-FB12-0218 0.26763	24-Feb-18	21:09:04
16	180224G1_16	B8B0124-BS1 LFB 0.25	24-Feb-18	21:21:30
17	180224G1_17	B8B0124-BSD1 LFB 0.25	24-Feb-18	21:33:56
18	180224G1_18	B8B0124-BLK1 LRB 0.25	24-Feb-18	21:46:20
19	180224G1_19	1800322-01 WI-A06-RW13-0218 0.25331	24-Feb-18	21:58:41
20	180224G1_20	1800322-02 WI-A06-FB13-0218 0.25329	24-Feb-18	22:10:57
21	180224G1_21	1800322-03 WI-A06-RW14-0218 0.24427	24-Feb-18	22:23:15
22	180224G1_22	1800322-04 WI-A06-FB14-0218 0.25858	24-Feb-18	22:35:39
23	180224G1_23	1800322-05 WI-A06-RW15-0218 0.26026	24-Feb-18	22:48:05
24	180224G1_24	1800322-06 WI-A06-FB15-0218 0.25932	24-Feb-18	23:00:31
25	180224G1_25	1800322-07 WI-A06-RW16-0218 0.24831	24-Feb-18	23:12:55
26	180224G1_26	1800322-08 WI-A06-FB16-0218 0.25718	24-Feb-18	23:25:20
27	180224G1_27	IPA	24-Feb-18	23:37:42
28	180224G1_28	ST180224G1-2 PFC CS1 537 18B2304	24-Feb-18	23:50:10
29	180224G1_29	IPA	25-Feb-18	00:02:32

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Last Altered: Monday, February 26, 2018 07:35:43 Pacific Standard Time

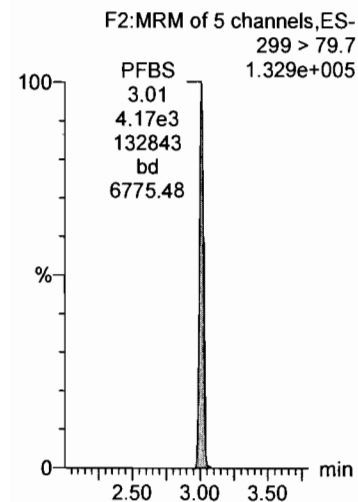
Printed: Monday, February 26, 2018 07:36:01 Pacific Standard Time

Method: X:\G1.PRO\MethDB\PFAS\_DW\_L14\_1223.mdb 23 Feb 2018 15:59:15

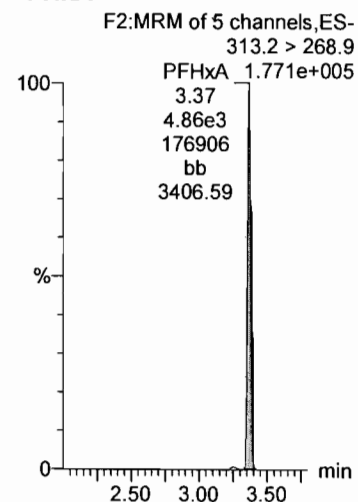
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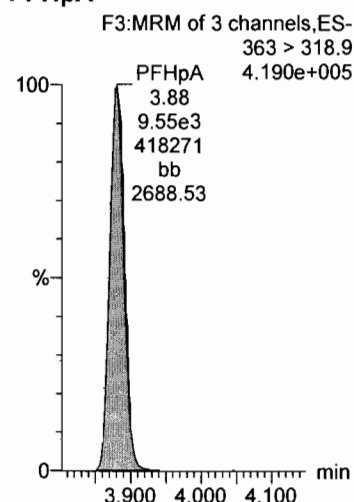
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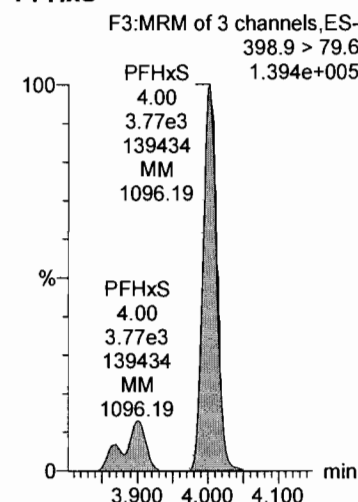
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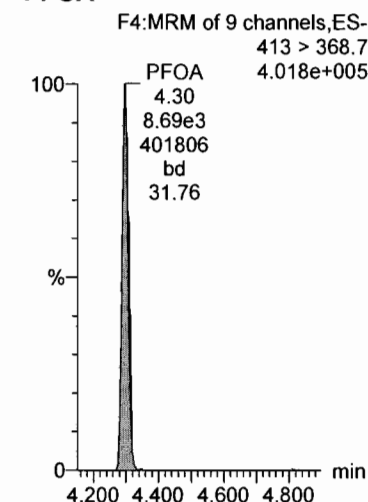
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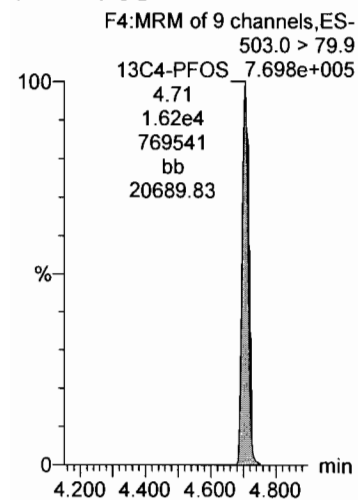
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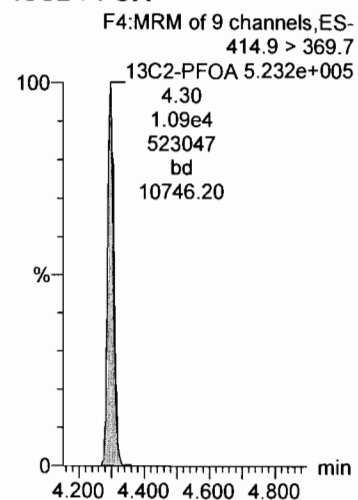
**PFOA**



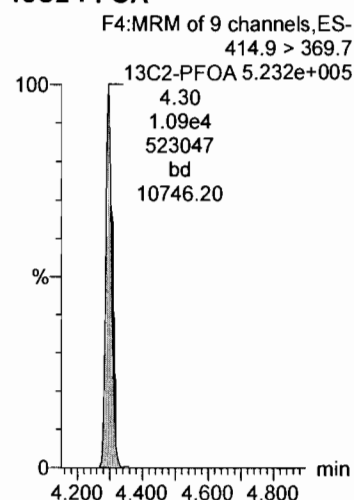
**13C4-PFOS**



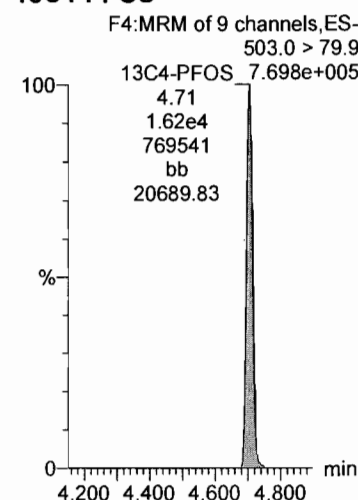
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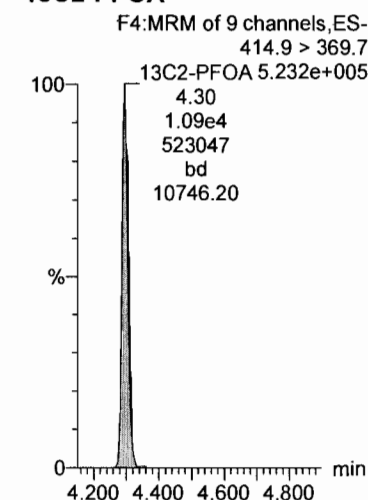
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**13C4-PFOS**



**13C2-PFOA**



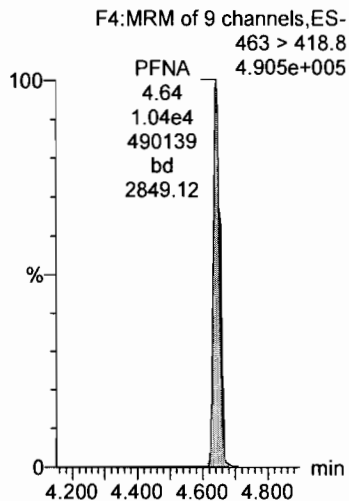
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Last Altered: Monday, February 26, 2018 07:35:43 Pacific Standard Time

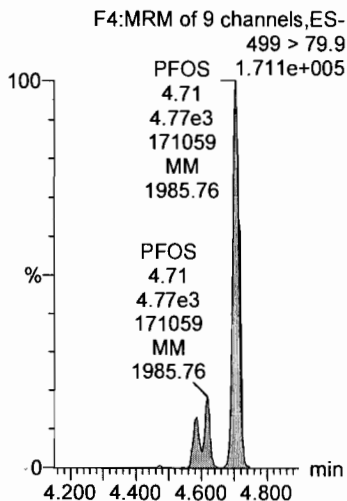
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Name: 180224G1\_28, Date: 24-Feb-2018, Time: 23:50:10, ID: ST180224G1-2 PFC CS1 537 18B2304, Description: PFC CS1 537 18B2304

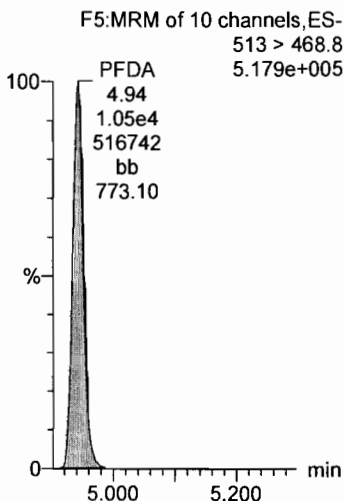
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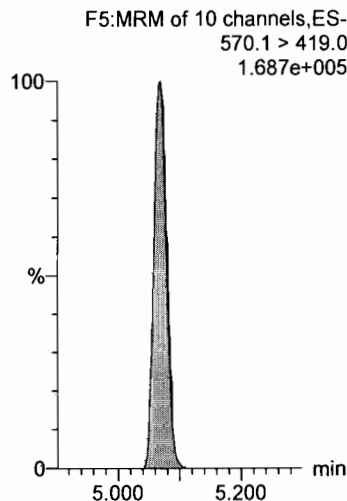
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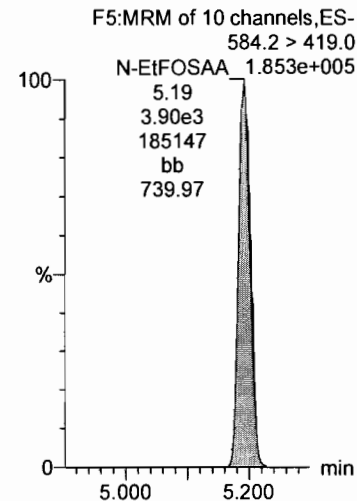
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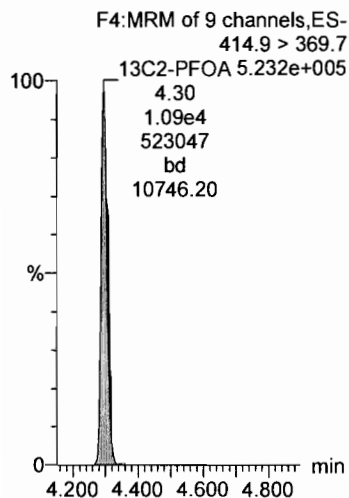
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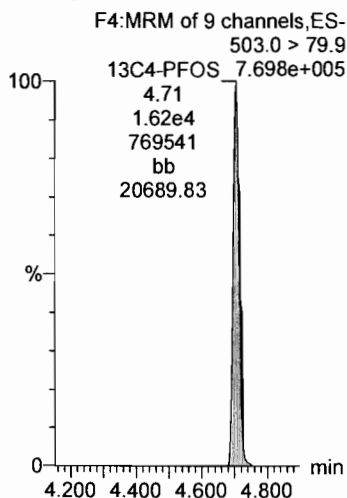
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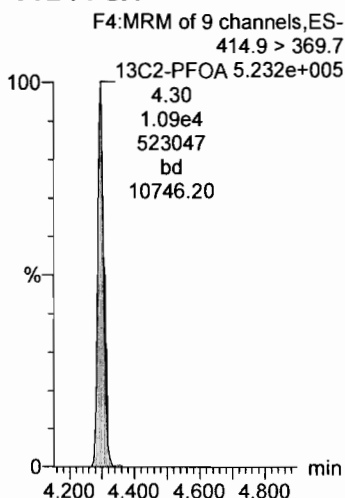
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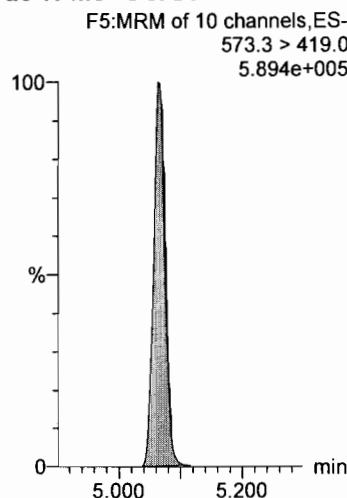
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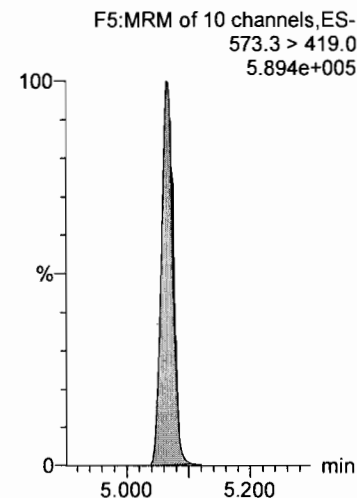
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**d3-N-MeFOSAA**



**d3-N-MeFOSAA**

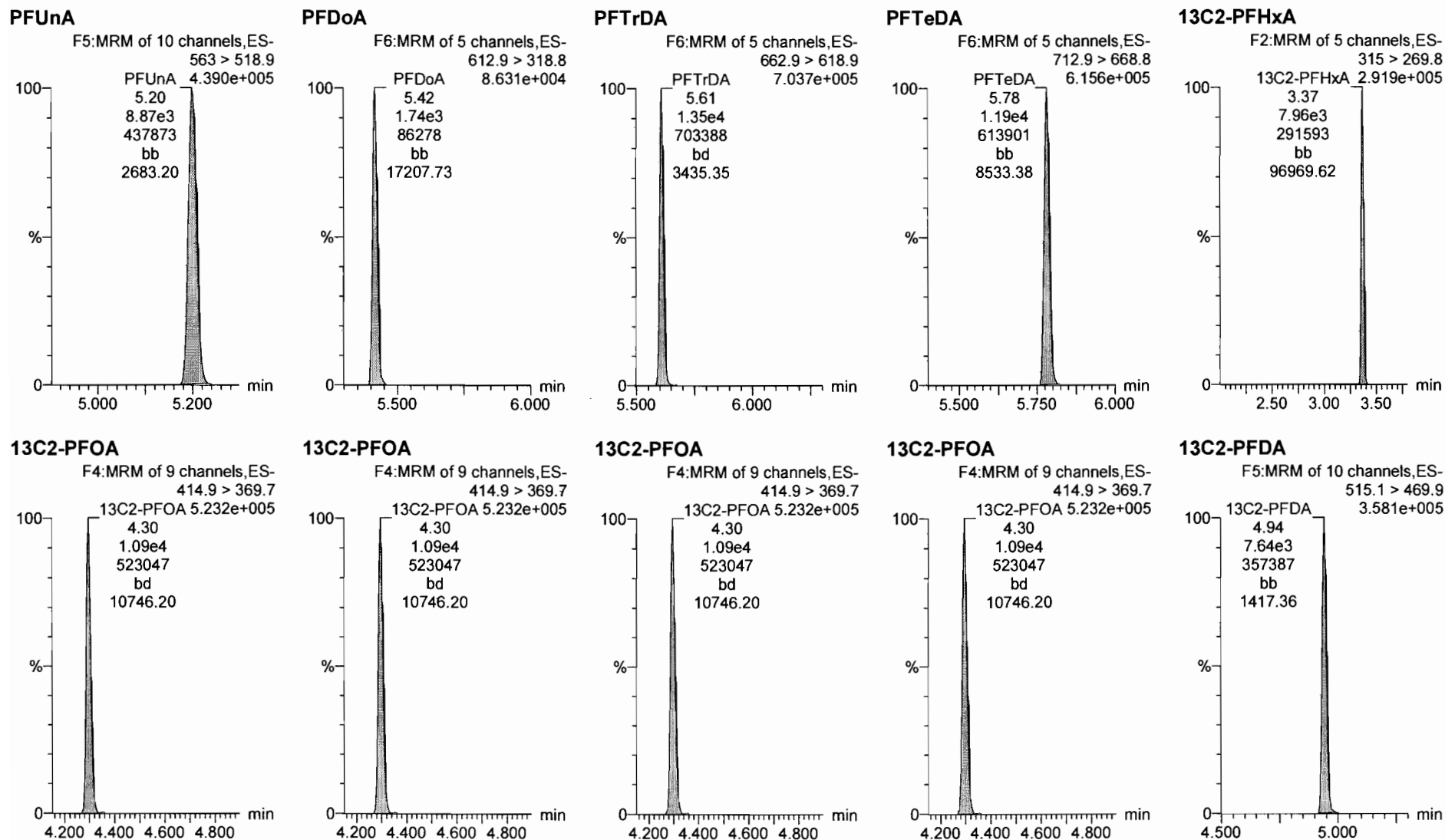


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Last Altered: Monday, February 26, 2018 07:35:43 Pacific Standard Time

Printed: Monday, February 26, 2018 07:36:01 Pacific Standard Time

Name: 180224G1\_28, Date: 24-Feb-2018, Time: 23:50:10, ID: ST180224G1-2 PFC CS1 537 18B2304, Description: PFC CS1 537 18B2304





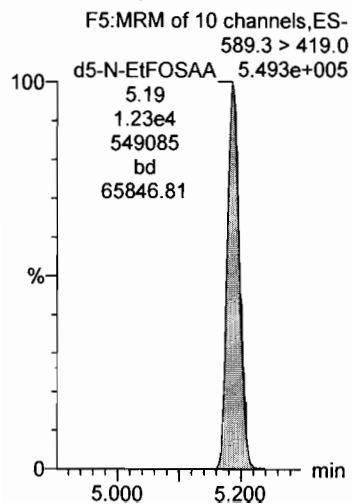
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Last Altered: Monday, February 26, 2018 07:35:43 Pacific Standard Time

Printed: Monday, February 26, 2018 07:36:01 Pacific Standard Time

Name: 180224G1\_28, Date: 24-Feb-2018, Time: 23:50:10, ID: ST180224G1-2 PFC CS1 537 18B2304, Description: PFC CS1 537 18B2304

**d5-N-EtFOSAA**



## ICAL

### Compound 18: 13C2-PFOA

ID	Name	Type	Std. Co RT	Area	ICAL AREA	Area %
1 IPA	180226G1_1	Analyte	10	4.41		
2 ST180226G1-1 PFC CS-1 537 18B2310	180226G1_2	Analyte	10	4.31	10925.58	8974.47 121.74
3 IPA	180226G1_3	Analyte	10			
4 1800322-03 WI-A06-RW14-0218 0.24427	180226G1_4	Analyte	10	4.3	11103.93	8974.47 123.73
5 IPA	180226G1_5	Analyte	10			
6 ST180226G1-2 PFC CS1 537 18B2304	180226G1_6	Analyte	10	4.3	11157.46	8974.47 124.32
7 IPA	180226G1_7	Analyte	10			

### Compound 19: 13C4-PFOS

ID	Name	Type	Std. Co RT	Area	ICAL AREA	Area %
1 IPA	180226G1_1	Analyte	28.7	4.82	19.858	
2 ST180226G1-1 PFC CS-1 537 18B2310	180226G1_2	Analyte	28.7	4.72	16917.57	17934.74 94.33
3 IPA	180226G1_3	Analyte	28.7	4.71	6.507	
4 1800322-03 WI-A06-RW14-0218 0.24427	180226G1_4	Analyte	28.7	4.71	15731.68	17934.74 87.72
5 IPA	180226G1_5	Analyte	28.7			
6 ST180226G1-2 PFC CS1 537 18B2304	180226G1_6	Analyte	28.7	4.71	16699.04	17934.74 93.11
7 IPA	180226G1_7	Analyte	28.7			

### Compound 20: d3-N-MeFOSAA

ID	Name	Type	Std. Co RT	Area	ICAL AREA	Area %
1 IPA	180226G1_1	Analyte	40			
2 ST180226G1-1 PFC CS-1 537 18B2310	180226G1_2	Analyte	40	5.08	12852.66	12825.49 100.21
3 IPA	180226G1_3	Analyte	40			
4 1800322-03 WI-A06-RW14-0218 0.24427	180226G1_4	Analyte	40	5.06	11406.92	12825.49 88.94
5 IPA	180226G1_5	Analyte	40			
6 ST180226G1-2 PFC CS1 537 18B2304	180226G1_6	Analyte	40	5.07	12730.58	12825.49 99.26
7 IPA	180226G1_7	Analyte	40			

## CCAL

### Compound 18: 13C2-PFOA

ID	Name	Type	Std. Co RT	Area	CCAL AREA	Area %
1 IPA	180226G1_1	Analyte	10	4.41 38.265		
2 ST180226G1-1 PFC CS-1 537 18B2310	180226G1_2	Analyte	10	4.31 10925.58	10925.58	100.00
3 IPA	180226G1_3	Analyte	10			
4 1800322-03 WI-A06-RW14-0218 0.24427	180226G1_4	Analyte	10	4.3 11103.93	10925.58	101.63
5 IPA	180226G1_5	Analyte	10			
6 ST180226G1-2 PFC CS1 537 18B2304	180226G1_6	Analyte	10	4.3 11157.46	10925.58	102.12
7 IPA	180226G1_7	Analyte	10			

### Compound 19: 13C4-PFOS

ID	Name	Type	Std. Co RT	Area	CCAL AREA	Area %
1 IPA	180226G1_1	Analyte	28.7	4.82 19.858		
2 ST180226G1-1 PFC CS-1 537 18B2310	180226G1_2	Analyte	28.7	4.72 16917.57	16917.57	100.00
3 IPA	180226G1_3	Analyte	28.7	4.71 6.507		
4 1800322-03 WI-A06-RW14-0218 0.24427	180226G1_4	Analyte	28.7	4.71 15731.68	16917.57	92.99
5 IPA	180226G1_5	Analyte	28.7			
6 ST180226G1-2 PFC CS1 537 18B2304	180226G1_6	Analyte	28.7	4.71 16699.04	16917.57	98.71
7 IPA	180226G1_7	Analyte	28.7			

### Compound 20: d3-N-MeFOSAA

ID	Name	Type	Std. Co RT	Area	CCAL AREA	Area %
1 IPA	180226G1_1	Analyte	40			
2 ST180226G1-1 PFC CS-1 537 18B2310	180226G1_2	Analyte	40	5.08 12852.66	12852.66	100.00
3 IPA	180226G1_3	Analyte	40			
4 1800322-03 WI-A06-RW14-0218 0.24427	180226G1_4	Analyte	40	5.06 11406.92	12852.66	88.75
5 IPA	180226G1_5	Analyte	40			
6 ST180226G1-2 PFC CS1 537 18B2304	180226G1_6	Analyte	40	5.07 12730.58	12852.66	99.05
7 IPA	180226G1_7	Analyte	40			

# LC Calibration Standards Review Checklist

Q1

		ION Ratio	Concentration	C-Cals Name	Sign Date	Correct I-Cal	Manual Integrations	
Calibration ID:	<u>ST180226G1-1</u> <b>LMH</b>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Calibration ID:	<u>↓ -2</u> <b>LMH</b>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
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~~NA~~  
↓

Full Mass Cal. Date: 4.15.17

Run Log Present:

# of Samples per Sequence Checked:

Instrument Blank Saved:  NA DW

IIS Area Saved:  180226G1

Reviewed By: JA. 02/28/2018  
Initials/Date

**Comments:**

L14, DW

Dataset: X:\G1.PRO\Results\2018\180226G1\180226G1-2.qld

Last Altered: Tuesday, February 27, 2018 11:17:25 Pacific Standard Time

Printed: Tuesday, February 27, 2018 11:17:49 Pacific Standard Time

*J.A.*  
*02/28/2018*

Method: X:\G1.PRO\MethDB\PFAS\_DW\_L14\_1223.mdb 23 Feb 2018 15:59:15

Calibration: X:\G1.PRO\CurveDB\C18\_537\_Q1\_02-23-18\_L14.cdb 23 Feb 2018 16:46:11

*MJT*  
*2/27/18*

Name: 180226G1\_2, Date: 26-Feb-2018, Time: 08:03:45, ID: ST180226G1-1 PFC CS-1 537 18B2310, Description: PFC CS-1 537 18B2310

#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	299 > 79.7	8.90e2	1.69e4	1.0000		3.02	3.03	1.51	2.07	116.7
2	2 PFHxA	313.2 > 268.9	1.20e3	1.09e4	1.0000		3.36	3.38	1.10	1.99	99.3
3	3 PFHpA	363 > 318.9	2.27e3	1.09e4	1.0000		3.88	3.90	2.08	2.21	110.6
4	4 PFHxS	398.9 > 79.6	1.02e3	1.69e4	1.0000		4.00	4.02	1.73	2.47	135.5
5	5 PFOA	413 > 368.7	2.19e3	1.09e4	1.0000		4.31	4.31	2.00	2.39	119.4
6	6 PFNA	463 > 418.8	2.29e3	1.09e4	1.0000		4.65	4.66	2.10	2.06	103.2
7	7 PFOS	499 > 79.9	1.10e3	1.69e4	1.0000		4.72	4.72	1.87	1.95	105.3
8	8 PFDA	513 > 468.8	2.69e3	1.09e4	1.0000		4.88	4.95	2.47	2.23	111.3
9	9 N-MeFOSAA	570.1 > 419.0	8.73e2	1.29e4	1.0000		5.02	5.08	2.72	2.06	103.1
10	10 N-EtFOSAA	584.2 > 419.0	7.79e2	1.29e4	1.0000		5.20	5.20	2.43	2.29	114.4
11	11 PFUnA	563 > 518.9	2.22e3	1.09e4	1.0000		5.14	5.21	2.03	2.02	101.2
12	12 PFDoA	612.9 > 318.8	4.45e2	1.09e4	1.0000		5.34	5.42	0.408	2.57	128.7
13	13 PFTTrDA	662.9 > 618.9	3.02e3	1.09e4	1.0000		5.57	5.61	2.77	2.01	100.6
14	14 PFTeDA	712.9 > 668.8	2.74e3	1.09e4	1.0000		5.74	5.79	2.51	2.01	100.5
15	15 13C2-PFHxA	315 > 269.8	8.17e3	1.09e4	1.0000	0.731	3.46	3.38	7.48	10.2	102.3
16	16 13C2-PFDA	515.1 > 469.9	8.85e3	1.09e4	1.0000	0.910	4.91	4.95	8.10	8.90	89.0
17	17 d5-N-EtFOSAA	589.3 > 419.0	1.27e4	1.29e4	1.0000	1.049	5.08	5.20	39.5	37.7	94.2
18	18 13C2-PFOA	414.9 > 369.7	1.09e4	1.09e4	1.0000	1.000	4.41	4.31	10.0	10.0	100.0
19	19 13C4-PFOS	503.0 > 79.9	1.69e4	1.69e4	1.0000	1.000	4.81	4.72	28.7	28.7	100.0
20	20 d3-N-MeFOSAA	573.3 > 419.0	1.29e4	1.29e4	1.0000	1.000	5.16	5.08	40.0	40.0	100.0

*50-150%*  
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Dataset: Untitled

Last Altered: Tuesday, February 27, 2018 11:23:58 Pacific Standard Time

Printed: Tuesday, February 27, 2018 11:24:43 Pacific Standard Time

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Calibration: X:\G1.PRO\CurveDB\C18\_537\_Q1\_02-23-18\_L14.cdb 23 Feb 2018 16:46:11

Compound name: PFBS

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1	180226G1_1	IPA	26-Feb-18	07:51:20
2	180226G1_2	ST180226G1-1 PFC CS-1 537 18B2310	26-Feb-18	08:03:45
3	180226G1_3	IPA	26-Feb-18	08:16:11
4	180226G1_4	1800322-03 WI-A06-RW14-0218 0.24427	26-Feb-18	08:28:38
5	180226G1_5	IPA	26-Feb-18	08:41:00
6	180226G1_6	ST180226G1-2 PFC CS1 537 18B2304	26-Feb-18	08:53:27
7	180226G1_7	IPA	26-Feb-18	09:05:49

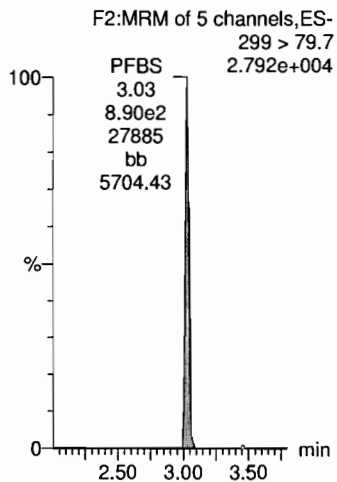
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Printed: Tuesday, February 27, 2018 11:17:49 Pacific Standard Time

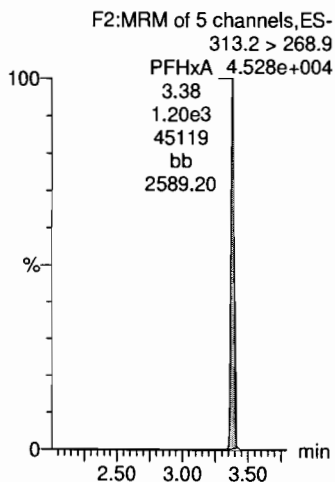
Method: X:\G1.PRO\MethDB\PFAS\_DW\_L14\_1223.mdb 23 Feb 2018 15:59:15  
Calibration: X:\G1.PRO\CurveDB\C18\_537\_Q1\_02-23-18\_L14.cdb 23 Feb 2018 16:46:11

Name: 180226G1\_2, Date: 26-Feb-2018, Time: 08:03:45, ID: ST180226G1-1 PFC CS-1 537 18B2310, Description: PFC CS-1 537 18B2310

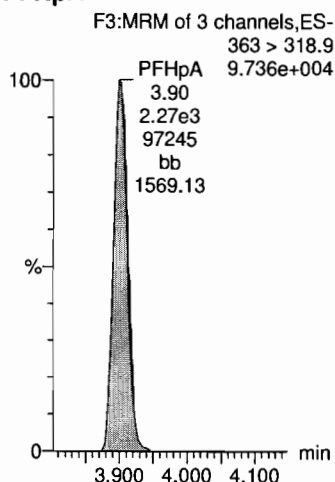
**PFBS**



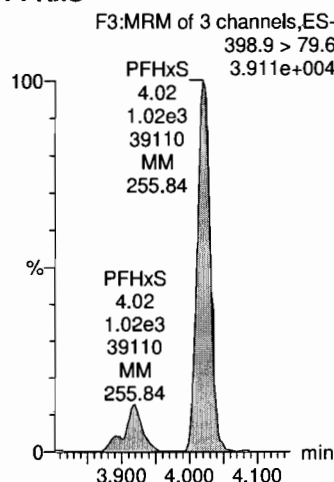
**PFHxA**



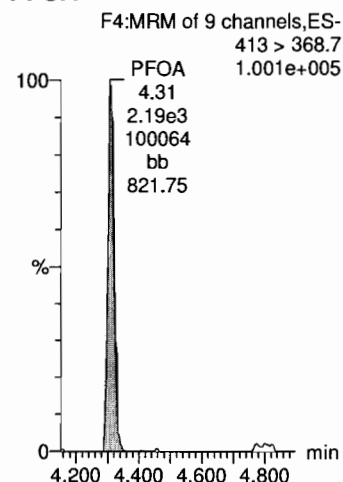
**PFHpA**



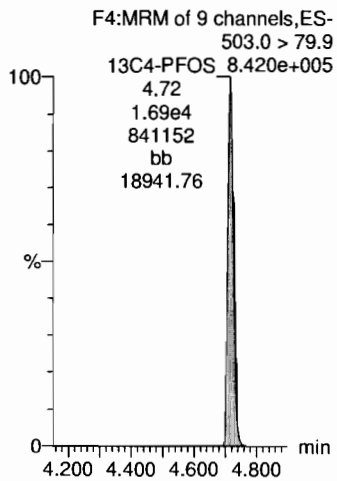
**PFHxS**



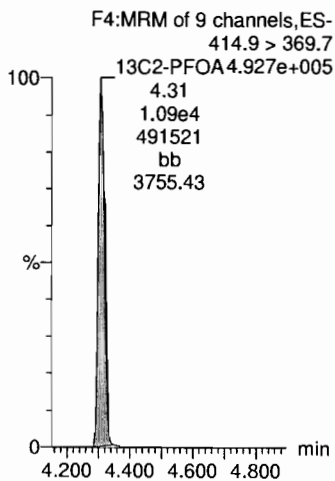
**PFOA**



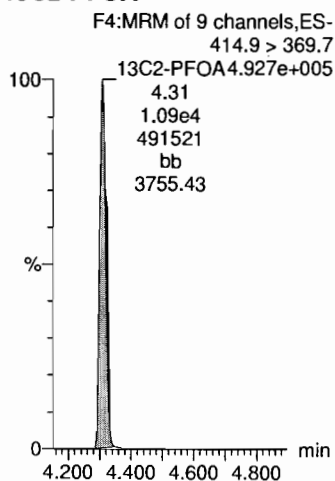
**13C4-PFOS**



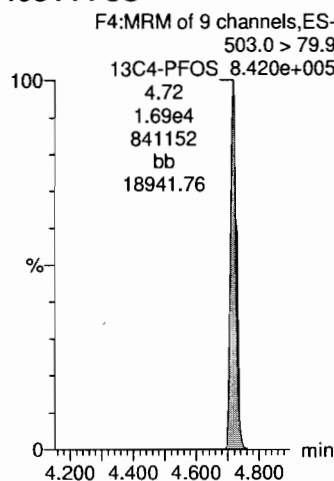
**13C2-PFOA**



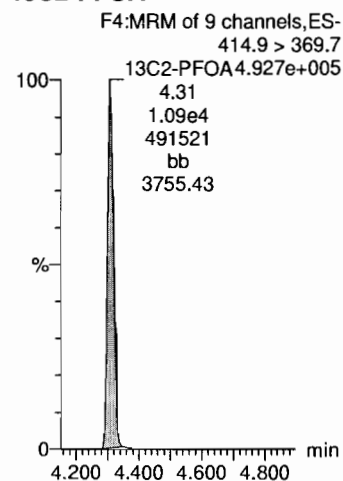
**13C2-PFOA**



**13C4-PFOS**



**13C2-PFOA**



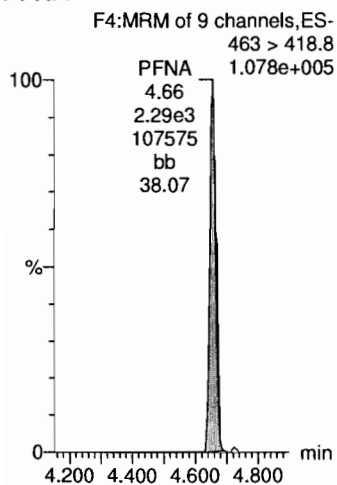
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Last Altered: Tuesday, February 27, 2018 11:17:25 Pacific Standard Time

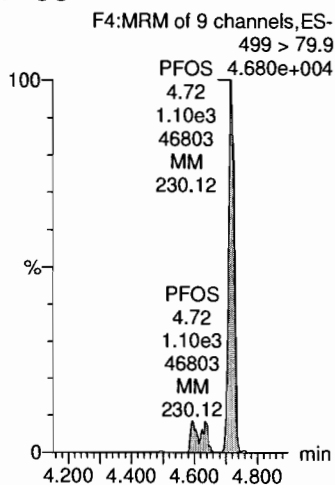
Printed: Tuesday, February 27, 2018 11:17:49 Pacific Standard Time

Name: 180226G1\_2, Date: 26-Feb-2018, Time: 08:03:45, ID: ST180226G1-1 PFC CS-1 537 18B2310, Description: PFC CS-1 537 18B2310

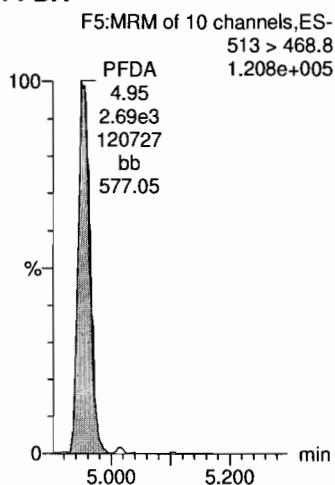
**PFNA**



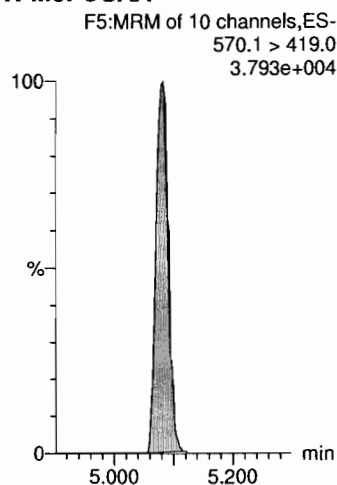
**PFOS**



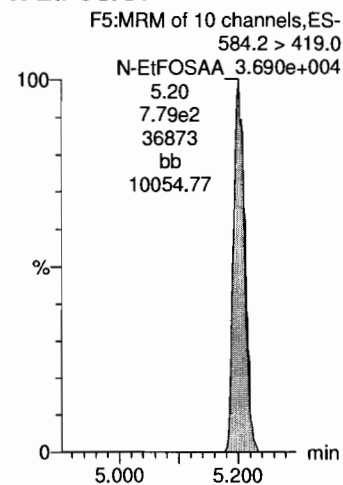
**PFDA**



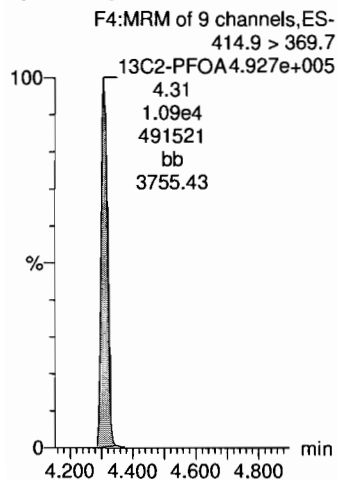
**N-MeFOSAA**



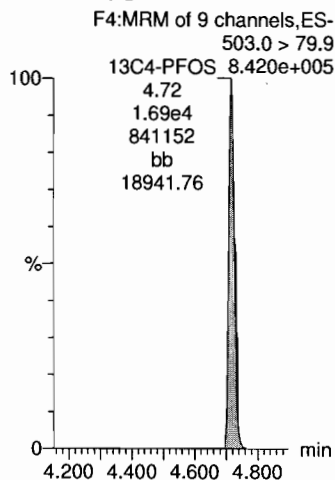
**N-EtFOSAA**



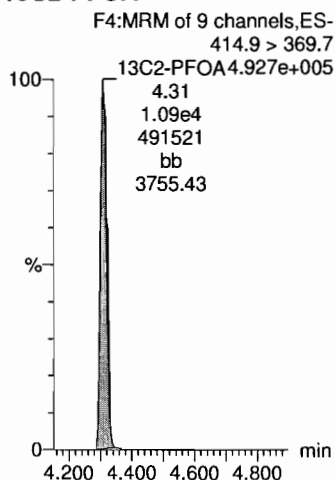
**13C2-PFOA**



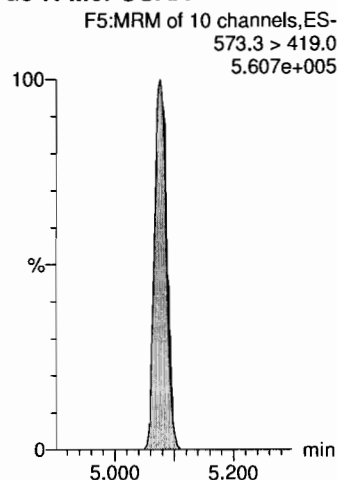
**13C4-PFOS**



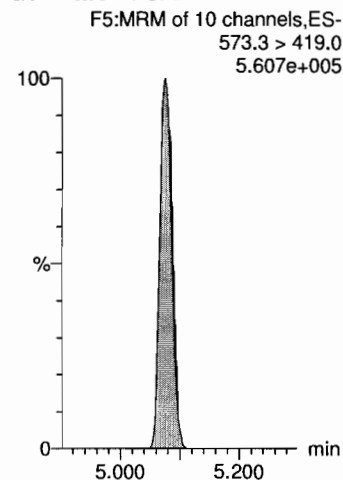
**13C2-PFOA**



**d3-N-MeFOSAA**



**d3-N-MeFOSAA**



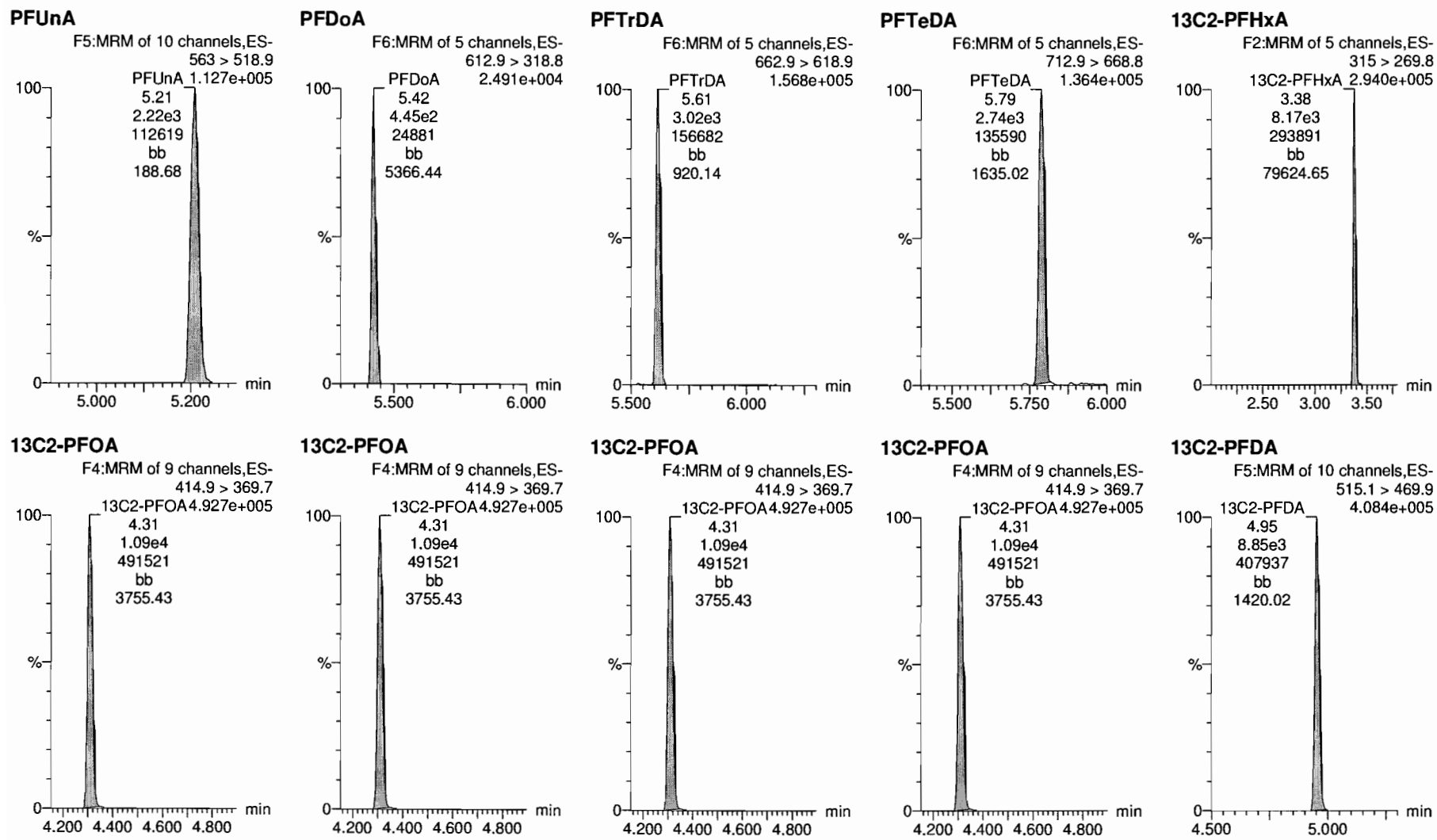


Dataset: X:\G1.PRO\Results\2018\180226G1\180226G1-2.qld

Last Altered: Tuesday, February 27, 2018 11:17:25 Pacific Standard Time

Printed: Tuesday, February 27, 2018 11:17:49 Pacific Standard Time

Name: 180226G1\_2, Date: 26-Feb-2018, Time: 08:03:45, ID: ST180226G1-1 PFC CS-1 537 18B2310, Description: PFC CS-1 537 18B2310



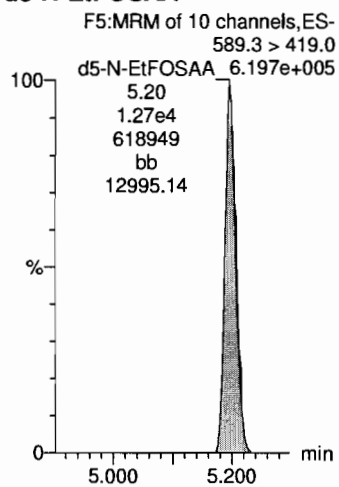
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Last Altered: Tuesday, February 27, 2018 11:17:25 Pacific Standard Time

Printed: Tuesday, February 27, 2018 11:17:49 Pacific Standard Time

Name: 180226G1\_2, Date: 26-Feb-2018, Time: 08:03:45, ID: ST180226G1-1 PFC CS-1 537 18B2310, Description: PFC CS-1 537 18B2310

**d5-N-EtFOSAA**



Dataset: X:\G1.PRO\Results\2018\180226G1\180226G1-6.qld

Last Altered: Tuesday, February 27, 2018 11:21:41 Pacific Standard Time

Printed: Tuesday, February 27, 2018 11:22:00 Pacific Standard Time

*vja.*  
*02/28/2018*

Method: X:\G1.PRO\MethDB\PFAS\_DW\_L14\_1223.mdb 23 Feb 2018 15:59:15

Calibration: X:\G1.PRO\CurveDB\C18\_537\_Q1\_02-23-18\_L14.cdb 23 Feb 2018 16:46:11

*MJT*  
*2/27/18*

Name: 180226G1\_6, Date: 26-Feb-2018, Time: 08:53:27, ID: ST180226G1-2 PFC CS1 537 18B2304, Description: PFC CS1 537 18B2304

	# Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	299 > 79.7	3.95e3	1.67e4	1.0000		3.01	3.01	6.79	9.28	104.9
2	2 PFHxA	313.2 > 268.9	4.65e3	1.12e4	1.0000		3.35	3.37	4.17	7.53	75.3
3	3 PFHpA	363 > 318.9	9.33e3	1.12e4	1.0000		3.87	3.89	8.36	8.89	88.9
4	4 PFHxS	398.9 > 79.6	4.12e3	1.67e4	1.0000		3.99	4.01	7.08	10.1	111.0
5	5 PFOA	413 > 368.7	9.08e3	1.12e4	1.0000		4.30	4.30	8.14	9.72	97.2
6	6 PFNA	463 > 418.8	1.14e4	1.12e4	1.0000		4.64	4.64	10.2	10.0	100.4
7	7 PFOS	499 > 79.9	5.23e3	1.67e4	1.0000		4.71	4.71	8.98	9.35	101.1
8	8 PFDA	513 > 468.8	9.38e3	1.12e4	1.0000		4.87	4.94	8.41	7.66	76.6
9	9 N-MeFOSAA	570.1 > 419.0	4.75e3	1.27e4	1.0000		5.01	5.07	14.9	11.1	111.5
10	10 N-EtFOSAA	584.2 > 419.0	3.47e3	1.27e4	1.0000		5.19	5.19	10.9	10.3	102.9
11	11 PFUnA	563 > 518.9	9.40e3	1.12e4	1.0000		5.13	5.20	8.43	8.39	83.9
12	12 PFDoA	612.9 > 318.8	1.75e3	1.12e4	1.0000		5.33	5.41	1.57	9.93	99.3
13	13 PFTTrDA	662.9 > 618.9	1.31e4	1.12e4	1.0000		5.56	5.61	11.7	8.54	85.4
14	14 PFTeDA	712.9 > 668.8	1.15e4	1.12e4	1.0000		5.73	5.78	10.3	8.28	82.8
15	15 13C2-PFHxA	315 > 269.8	7.58e3	1.12e4	1.0000	0.731	3.45	3.37	6.80	9.29	92.9
16	16 13C2-PFDA	515.1 > 469.9	8.64e3	1.12e4	1.0000	0.910	4.90	4.94	7.74	8.51	85.1
17	17 d5-N-EtFOSAA	589.3 > 419.0	1.33e4	1.27e4	1.0000	1.049	5.07	5.19	41.8	39.8	99.5
18	18 13C2-PFOA	414.9 > 369.7	1.12e4	1.12e4	1.0000	1.000	4.41	4.30	10.0	10.0	100.0
19	19 13C4-PFOS	503.0 > 79.9	1.67e4	1.67e4	1.0000	1.000	4.81	4.71	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	5.07	40.0	40.0	100.0

*70-130-*  
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Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Tuesday, February 27, 2018 11:23:58 Pacific Standard Time

Printed: Tuesday, February 27, 2018 11:24:43 Pacific Standard Time

Method: X:\G1.PRO\MethDB\PFAS\_DW\_L14\_1223.mdb 23 Feb 2018 15:59:15

Calibration: X:\G1.PRO\CurveDB\C18\_537\_Q1\_02-23-18\_L14.cdb 23 Feb 2018 16:46:11

Compound name: PFBS

	Name	ID	Acq.Date	Acq.Time
1	180226G1_1	IPA	26-Feb-18	07:51:20
2	180226G1_2	ST180226G1-1 PFC CS-1 537 18B2310	26-Feb-18	08:03:45
3	180226G1_3	IPA	26-Feb-18	08:16:11
4	180226G1_4	1800322-03 WI-A06-RW14-0218 0.24427	26-Feb-18	08:28:38
5	180226G1_5	IPA	26-Feb-18	08:41:00
6	180226G1_6	ST180226G1-2 PFC CS1 537 18B2304	26-Feb-18	08:53:27
7	180226G1_7	IPA	26-Feb-18	09:05:49

Dataset: X:\G1.PRO\Results\2018\180226G1\180226G1-6.qld

Last Altered: Tuesday, February 27, 2018 11:21:41 Pacific Standard Time

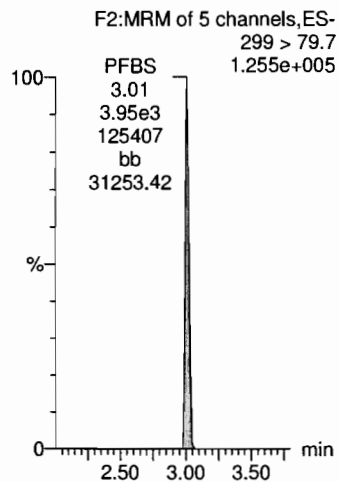
Printed: Tuesday, February 27, 2018 11:22:00 Pacific Standard Time

Method: X:\G1.PRO\MethDB\PFAS\_DW\_L14\_1223.mdb 23 Feb 2018 15:59:15

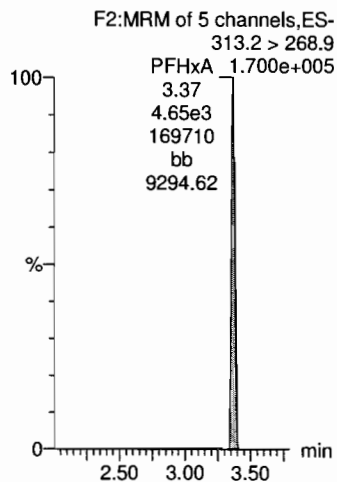
Calibration: X:\G1.PRO\CurveDB\C18\_537\_Q1\_02-23-18\_L14.cdb 23 Feb 2018 16:46:11

Name: 180226G1\_6, Date: 26-Feb-2018, Time: 08:53:27, ID: ST180226G1-2 PFC CS1 537 18B2304, Description: PFC CS1 537 18B2304

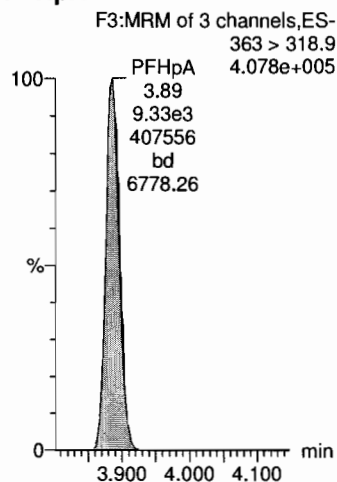
**PFBS**



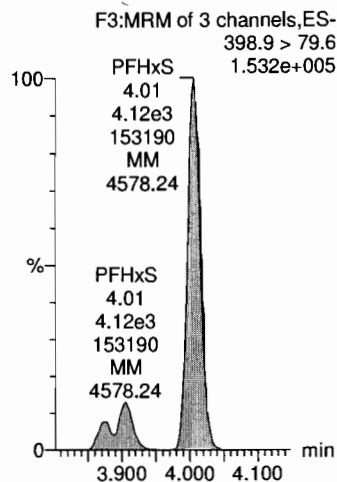
**PFHxA**



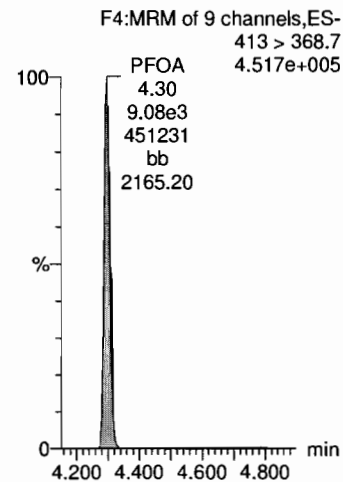
**PFHpA**



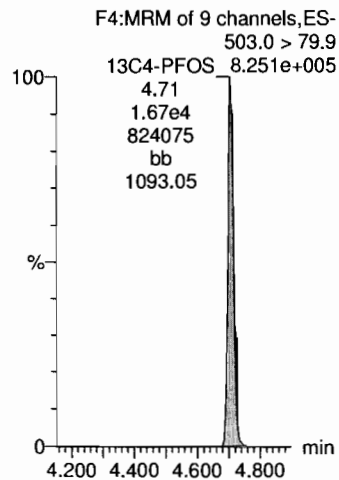
**PFHxS**



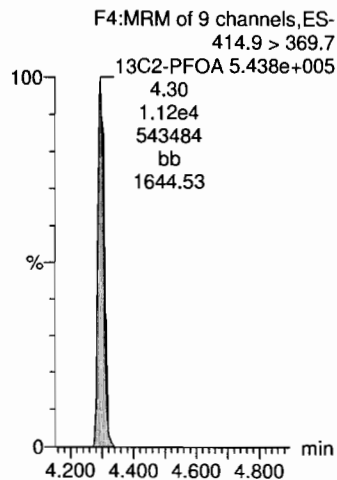
**PFOA**



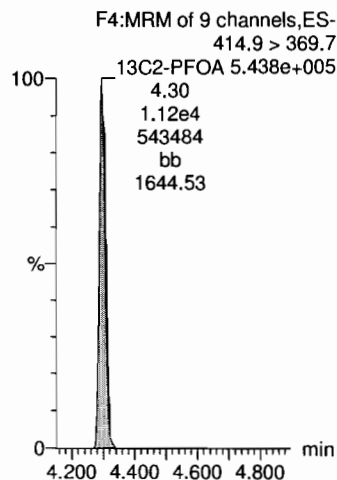
**13C4-PFOS**



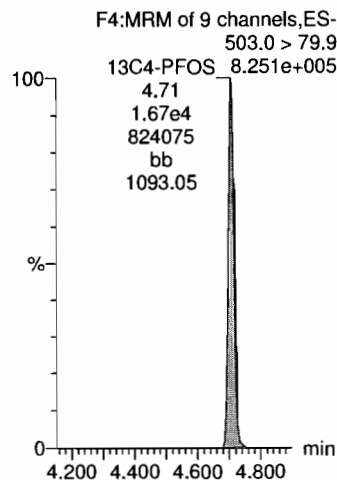
**13C2-PFOA**



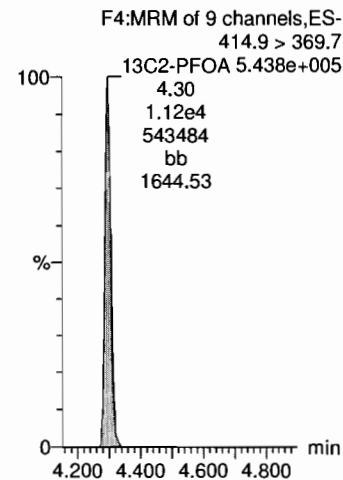
**13C2-PFOA**



**13C4-PFOS**



**13C2-PFOA**



MJT 2/27/2018

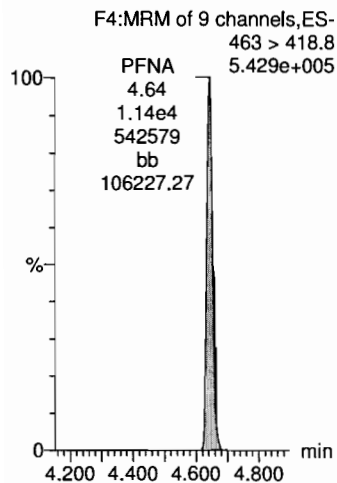
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Last Altered: Tuesday, February 27, 2018 11:21:41 Pacific Standard Time

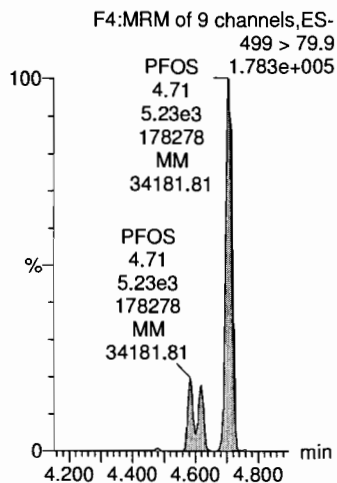
Printed: Tuesday, February 27, 2018 11:22:00 Pacific Standard Time

Name: 180226G1\_6, Date: 26-Feb-2018, Time: 08:53:27, ID: ST180226G1-2 PFC CS1 537 18B2304, Description: PFC CS1 537 18B2304

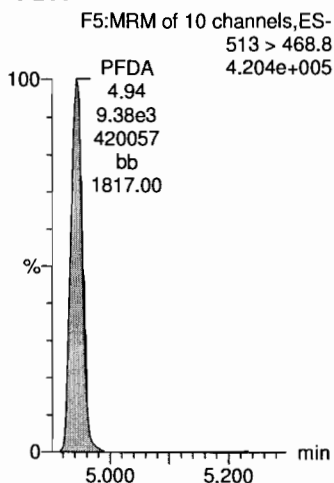
**PFNA**



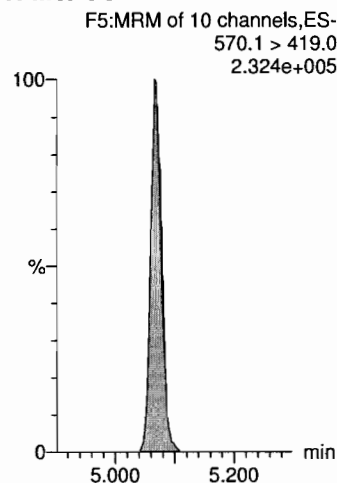
**PFOS**



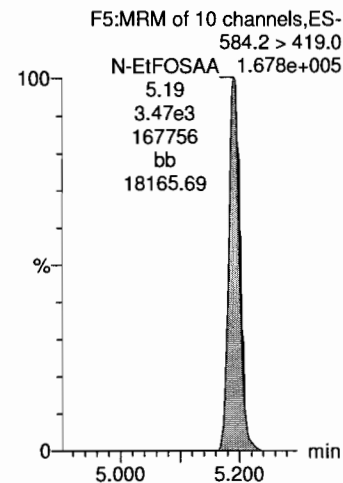
**PFDA**



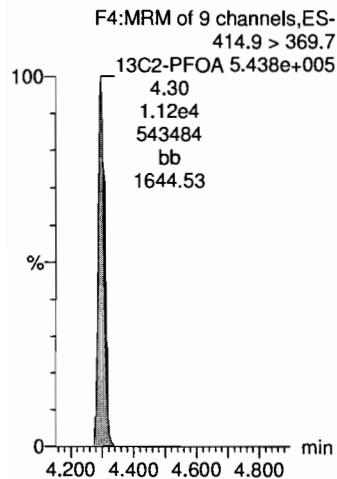
**N-MeFOSAA**



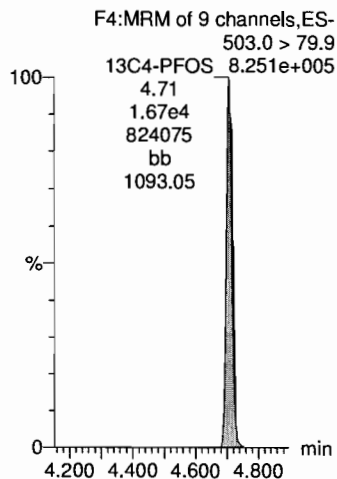
**N-EiFOSAA**



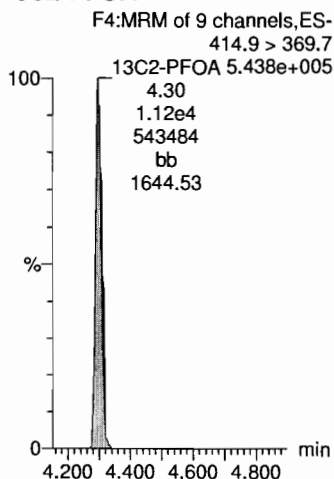
**13C2-PFOA**



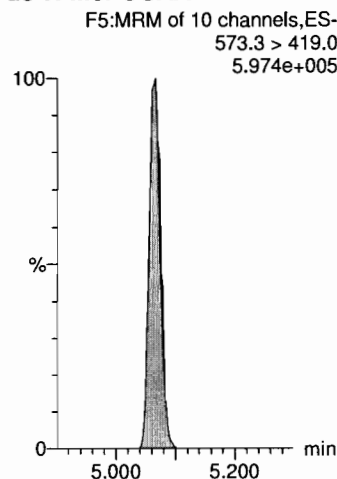
**13C4-PFOS**



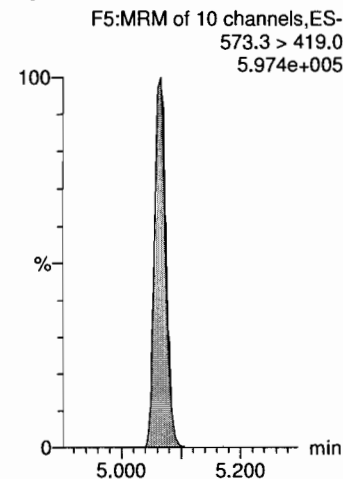
**13C2-PFOA**



**d3-N-MeFOSAA**



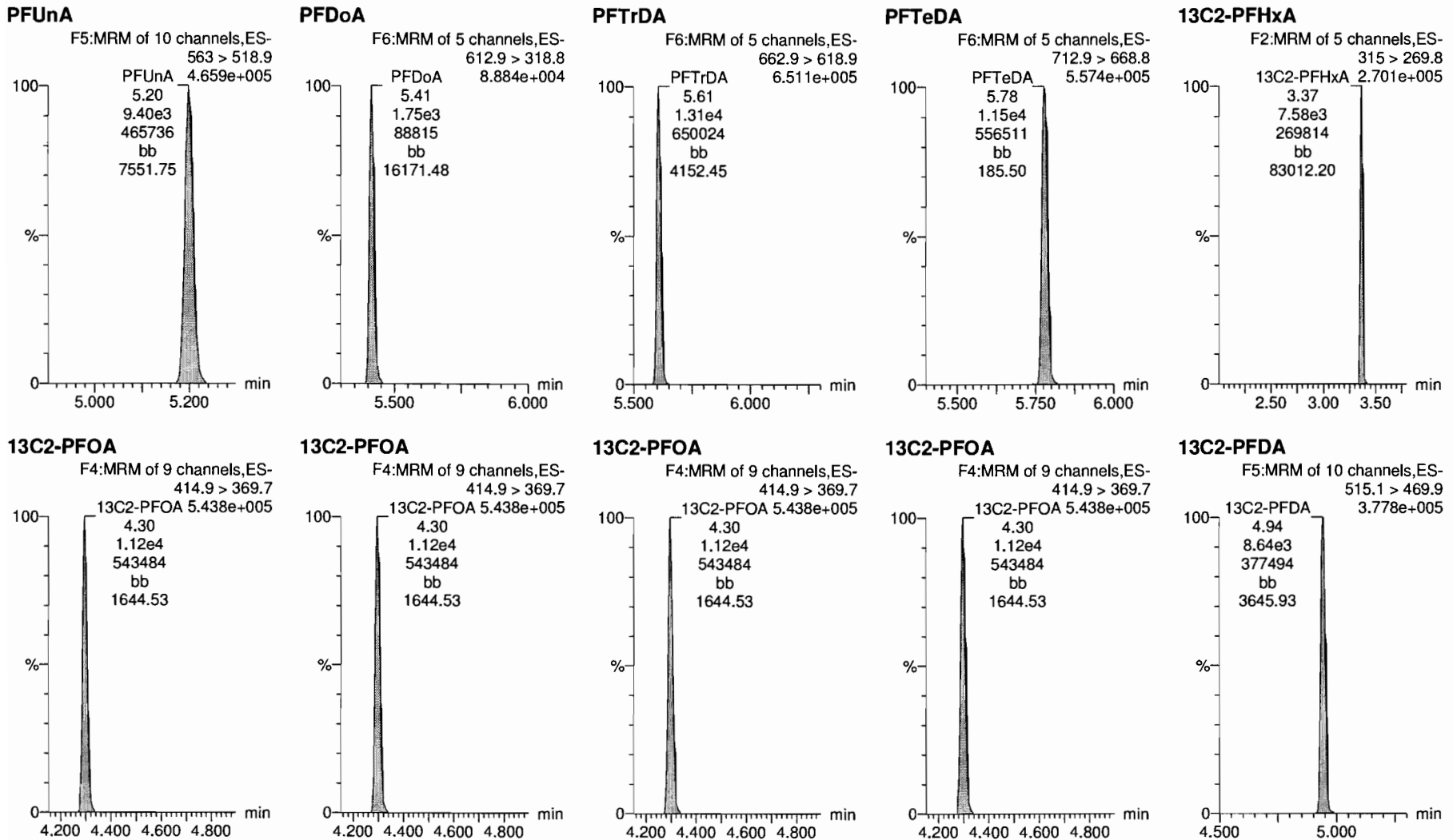
**d3-N-MeFOSAA**



Dataset: X:\G1.PRO\Results\2018\180226G1\180226G1-6.qld

Last Altered: Tuesday, February 27, 2018 11:21:41 Pacific Standard Time  
Printed: Tuesday, February 27, 2018 11:22:00 Pacific Standard Time

Name: 180226G1\_6, Date: 26-Feb-2018, Time: 08:53:27, ID: ST180226G1-2 PFC CS1 537 18B2304, Description: PFC CS1 537 18B2304



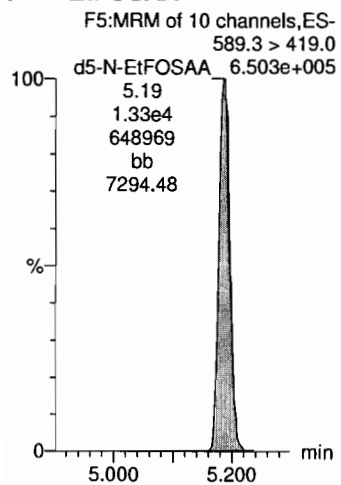
Dataset: X:\G1.PRO\Results\2018\180226G1\180226G1-6.qld

Last Altered: Tuesday, February 27, 2018 11:21:41 Pacific Standard Time

Printed: Tuesday, February 27, 2018 11:22:00 Pacific Standard Time

Name: 180226G1\_6, Date: 26-Feb-2018, Time: 08:53:27, ID: ST180226G1-2 PFC CS1 537 18B2304, Description: PFC CS1 537 18B2304

**d5-N-EtFOSAA**





## ICAL

Compound 18: 13C2-PFOA

ID	Name	Type	Std. (RT	Area	Ical Area	Area %
1 IPA	180228G1_1	Analyte	10		8974.47	0.00
2 ST180228G1-1 PFC CS-1 537 18B2310	180228G1_2	Analyte	10 4.3	12263.87	8974.47	136.65
3 IPA	180228G1_3	Analyte	10		8974.47	0.00
4 B8B0153-BS1 LFB 0.25	180228G1_4	Analyte	10 4.3	12257.31	8974.47	136.58
5 B8B0153-BSD1 LFB 0.25	180228G1_5	Analyte	10 4.3	11356.17	8974.47	126.54
6 B8B0153-BLK1 LRB 0.25	180228G1_6	Analyte	10 4.3	11668.56	8974.47	130.02
7 1800322-05RE1 WI-A06-RW15-0218 0.25483	180228G1_7	Analyte	10 4.3	11121.76	8974.47	123.93
8 1800322-06RE1 WI-A06-FB15-0218 0.2547	180228G1_8	Analyte	10 4.3	11490.89	8974.47	128.04
9 1800348-01 Moon beam 001 0.25848	180228G1_9	Analyte	10 4.3	10828.47	8974.47	120.66
10 1800348-02 Moon beam 002 0.2584	180228G1_10	Analyte	10 4.3	10925.33	8974.47	121.74
11 1800322-03 WI-A06-RW @ 5 X 14-0218 0.24427	180228G1_11	Analyte	10 4.3	1878.734	8974.47	20.93
12 IPA	180228G1_12	Analyte	10		8974.47	0.00
13 ST180228G1-2 PFC CS1 537 18B2304	180228G1_13	Analyte	10 4.3	12394.86	8974.47	138.11
14 IPA	180228G1_14	Analyte	10		8974.47	0.00
15 1800348-03 Moon beam 003 0.25657	180228G1_15	Analyte	10 4.3	11071.38	8974.47	123.37
16 1800348-04 Moon beam 004 0.25763	180228G1_16	Analyte	10 4.3	9716.693	8974.47	108.27
17 1800363-01 CH-AT-1RW158-0218 0.26122	180228G1_17	Analyte	10 4.3	10188.26	8974.47	113.52
18 1800363-02 CH-AT-1FB158-0218 0.26273	180228G1_18	Analyte	10 4.3	11122.07	8974.47	123.93
19 1800363-03 CH-AT-1RW159-0218 0.25662	180228G1_19	Analyte	10 4.3	11324.89	8974.47	126.19
20 1800363-04 CH-AT-1FB159-0218 0.25061	180228G1_20	Analyte	10 4.3	11304.19	8974.47	125.96
21 1800363-05 CH-AT-1RW160-0218 0.25826	180228G1_21	Analyte	10 4.3	10277.9	8974.47	114.52
22 1800363-06 CH-AT-1FB160-0218 0.24786	180228G1_22	Analyte	10 4.3	10191.03	8974.47	113.56
23 1800363-07 CH-AT-2RW58-0218 0.25758	180228G1_23	Analyte	10 4.3	10318.7	8974.47	114.98
24 1800363-08 CH-AT-2RW58B-0218 0.25979	180228G1_24	Analyte	10 4.3	10759.63	8974.47	119.89
25 1800363-09 CH-AT-2RW58C-0218 0.25545	180228G1_25	Analyte	10 4.3	11102.35	8974.47	123.71
26 1800363-10 CH-AT-2RW58D-0218 0.25767	180228G1_26	Analyte	10 4.3	10053.45	8974.47	112.02
27 IPA	180228G1_27	Analyte	10		8974.47	0.00
28 ST180228G1-3 PFC CS3 537 18B2306	180228G1_28	Analyte	10 4.3	11033.62	8974.47	122.94
29 IPA	180228G1_29	Analyte	10			

## Compound 19: 13C4-PFOS

ID	Name	Type	Std. (RT	Area	Ical Area	Area %
1 IPA	180228G1_1	Analyte	29		17934.74	0.00
2 ST180228G1-1 PFC CS-1 537 18B2310	180228G1_2	Analyte	29 4.7	19386.45	17934.74	108.09
3 IPA	180228G1_3	Analyte	29		17934.74	0.00
4 B8B0153-BS1 LFB 0.25	180228G1_4	Analyte	29 4.7	18774.43	17934.74	104.68
5 B8B0153-BSD1 LFBD 0.25	180228G1_5	Analyte	29 4.7	18005.72	17934.74	100.40
6 B8B0153-BLK1 LRB 0.25	180228G1_6	Analyte	29 4.7	18807.17	17934.74	104.86
7 1800322-05RE1 WI-A06-RW15-0218 0.25483	180228G1_7	Analyte	29 4.7	18092.61	17934.74	100.88
8 1800322-06RE1 WI-A06-FB15-0218 0.2547	180228G1_8	Analyte	29 4.7	19265.41	17934.74	107.42
9 1800348-01 Moon beam 001 0.25848	180228G1_9	Analyte	29 4.7	18623.7	17934.74	103.84
10 1800348-02 Moon beam 002 0.2584	180228G1_10	Analyte	29 4.7	19623.6	17934.74	109.42
11 1800322-03 WI-A06-RW @ 5 X 14-0218 0.24427	180228G1_11	Analyte	29 4.7	3136.097	17934.74	17.49
12 IPA	180228G1_12	Analyte	29		17934.74	0.00
13 ST180228G1-2 PFC CS1 537 18B2304	180228G1_13	Analyte	29 4.7	22758.44	17934.74	126.90
14 IPA	180228G1_14	Analyte	29		17934.74	0.00
15 1800348-03 Moon beam 003 0.25657	180228G1_15	Analyte	29 4.7	20243.3	17934.74	112.87
16 1800348-04 Moon beam 004 0.25763	180228G1_16	Analyte	29 4.7	20304.44	17934.74	113.21
17 1800363-01 CH-AT-1RW158-0218 0.26122	180228G1_17	Analyte	29 4.7	19338.95	17934.74	107.83
18 1800363-02 CH-AT-1FB158-0218 0.26273	180228G1_18	Analyte	29 4.7	19907.58	17934.74	111.00
19 1800363-03 CH-AT-1RW159-0218 0.25662	180228G1_19	Analyte	29 4.7	18923.06	17934.74	105.51
20 1800363-04 CH-AT-1FB159-0218 0.25061	180228G1_20	Analyte	29 4.7	18491.58	17934.74	103.10
21 1800363-05 CH-AT-1RW160-0218 0.25826	180228G1_21	Analyte	29 4.7	17927.81	17934.74	99.96
22 1800363-06 CH-AT-1FB160-0218 0.24786	180228G1_22	Analyte	29 4.7	17461	17934.74	97.36
23 1800363-07 CH-AT-2RW58-0218 0.25758	180228G1_23	Analyte	29 4.7	19315.91	17934.74	107.70
24 1800363-08 CH-AT-2RW58B-0218 0.25979	180228G1_24	Analyte	29 4.7	18672.53	17934.74	104.11
25 1800363-09 CH-AT-2RW58C-0218 0.25545	180228G1_25	Analyte	29 4.7	20474.91	17934.74	114.16
26 1800363-10 CH-AT-2RW58D-0218 0.25767	180228G1_26	Analyte	29 4.7	18637.94	17934.74	103.92
27 IPA	180228G1_27	Analyte	29		17934.74	0.00
28 ST180228G1-3 PFC CS3 537 18B2306	180228G1_28	Analyte	29 4.7	19631.95	17934.74	109.46
29 IPA	180228G1_29	Analyte	29			

Compound 20: d3-N-MeFOSAA

ID	Name	Type	Std. (RT	Area	Ical Area	Area %
1	IPA	Analyte	40		12825.49	0.00
2	ST180228G1-1 PFC CS-1 537 18B2310	Analyte	40 5.1	13868.04	12825.49	108.13
3	IPA	Analyte	40		12825.49	0.00
4	B8B0153-BS1 LFB 0.25	Analyte	40 5.1	14392.69	12825.49	112.22
5	B8B0153-BSD1 LFBD 0.25	Analyte	40 5.1	13766.01	12825.49	107.33
6	B8B0153-BLK1 LRB 0.25	Analyte	40 5.1	12315.34	12825.49	96.02
7	1800322-05RE1 WI-A06-RW15-0218 0.25483	Analyte	40 5.1	13889.99	12825.49	108.30
8	1800322-06RE1 WI-A06-FB15-0218 0.2547	Analyte	40 5.1	14024.18	12825.49	109.35
9	1800348-01 Moon beam 001 0.25848	Analyte	40 5.1	13569.55	12825.49	105.80
10	1800348-02 Moon beam 002 0.2584	Analyte	40 5.1	16238.06	12825.49	126.61
11	1800322-03 WI-A06-RW @ 5 X 14-0218 0.24427	Analyte	40 5.1	2706.427	12825.49	21.10
12	IPA	Analyte	40		12825.49	0.00
13	ST180228G1-2 PFC CS1 537 18B2304	Analyte	40 5.1	16474.33	12825.49	128.45
14	IPA	Analyte	40		12825.49	0.00
15	1800348-03 Moon beam 003 0.25657	Analyte	40 5.1	13630.82	12825.49	106.28
16	1800348-04 Moon beam 004 0.25763	Analyte	40 5.1	15108.85	12825.49	117.80
17	1800363-01 CH-AT-1RW158-0218 0.26122	Analyte	40 5.1	14066.61	12825.49	109.68
18	1800363-02 CH-AT-1FB158-0218 0.26273	Analyte	40 5.1	15229.33	12825.49	118.74
19	1800363-03 CH-AT-1RW159-0218 0.25662	Analyte	40 5.1	15283.55	12825.49	119.17
20	1800363-04 CH-AT-1FB159-0218 0.25061	Analyte	40 5.1	15318.16	12825.49	119.44
21	1800363-05 CH-AT-1RW160-0218 0.25826	Analyte	40 5.1	13977.46	12825.49	108.98
22	1800363-06 CH-AT-1FB160-0218 0.24786	Analyte	40 5.1	13457.85	12825.49	104.93
23	1800363-07 CH-AT-2RW58-0218 0.25758	Analyte	40 5.1	13075.08	12825.49	101.95
24	1800363-08 CH-AT-2RW58B-0218 0.25979	Analyte	40 5.1	13526.61	12825.49	105.47
25	1800363-09 CH-AT-2RW58C-0218 0.25545	Analyte	40 5.1	16676.58	12825.49	130.03
26	1800363-10 CH-AT-2RW58D-0218 0.25767	Analyte	40 5.1	15681.21	12825.49	122.27
27	IPA	Analyte	40		12825.49	0.00
28	ST180228G1-3 PFC CS3 537 18B2306	Analyte	40 5.1	15294.11	12825.49	119.25
29	IPA	Analyte	40			

## CCAL 1

Compound 18: 13C2-PFOA

ID	Name	Type	Std. (RT	Area	Ccal Area	Area %
1 IPA	180228G1_1	Analyte	10		12263.87	0.00
2 ST180228G1-1 PFC CS-1 537 18B2310	180228G1_2	Analyte	10 4.3	12263.87	12263.87	100.00
3 IPA	180228G1_3	Analyte	10		12263.87	0.00
4 B8B0153-BS1 LFB 0.25	180228G1_4	Analyte	10 4.3	12257.31	12263.87	99.95
5 B8B0153-BSD1 LFBD 0.25	180228G1_5	Analyte	10 4.3	11356.17	12263.87	92.60
6 B8B0153-BLK1 LRB 0.25	180228G1_6	Analyte	10 4.3	11668.56	12263.87	95.15
7 1800322-05RE1 WI-A06-RW15-0218 0.25483	180228G1_7	Analyte	10 4.3	11121.76	12263.87	90.69
8 1800322-06RE1 WI-A06-FB15-0218 0.2547	180228G1_8	Analyte	10 4.3	11490.89	12263.87	93.70
9 1800348-01 Moon beam 001 0.25848	180228G1_9	Analyte	10 4.3	10828.47	12263.87	88.30
10 1800348-02 Moon beam 002 0.2584	180228G1_10	Analyte	10 4.3	10925.33	12263.87	89.09
11 1800322-03 WI-A06-RW @ 5 X 14-0218 0.24427	180228G1_11	Analyte	10 4.3	1878.734	12263.87	15.32
12 IPA	180228G1_12	Analyte	10		12263.87	0.00
13 ST180228G1-2 PFC CS1 537 18B2304	180228G1_13	Analyte	10 4.3	12394.86	12263.87	101.07

## CCAL2

ID	Name	Type	Std. (RT	Area	Ccal Area	Area %
13 ST180228G1-2 PFC CS1 537 18B2304	180228G1_13	Analyte	10 4.3	12394.86	12394.86	100.00
14 IPA	180228G1_14	Analyte	10		12394.86	0.00
15 1800348-03 Moon beam 003 0.25657	180228G1_15	Analyte	10 4.3	11071.38	12394.86	89.32
16 1800348-04 Moon beam 004 0.25763	180228G1_16	Analyte	10 4.3	9716.693	12394.86	78.39
17 1800363-01 CH-AT-1RW158-0218 0.26122	180228G1_17	Analyte	10 4.3	10188.26	12394.86	82.20
18 1800363-02 CH-AT-1FB158-0218 0.26273	180228G1_18	Analyte	10 4.3	11122.07	12394.86	89.73
19 1800363-03 CH-AT-1RW159-0218 0.25662	180228G1_19	Analyte	10 4.3	11324.89	12394.86	91.37
20 1800363-04 CH-AT-1FB159-0218 0.25061	180228G1_20	Analyte	10 4.3	11304.19	12394.86	91.20
21 1800363-05 CH-AT-1RW160-0218 0.25826	180228G1_21	Analyte	10 4.3	10277.9	12394.86	82.92
22 1800363-06 CH-AT-1FB160-0218 0.24786	180228G1_22	Analyte	10 4.3	10191.03	12394.86	82.22
23 1800363-07 CH-AT-2RW58-0218 0.25758	180228G1_23	Analyte	10 4.3	10318.7	12394.86	83.25
24 1800363-08 CH-AT-2RW58B-0218 0.25979	180228G1_24	Analyte	10 4.3	10759.63	12394.86	86.81
25 1800363-09 CH-AT-2RW58C-0218 0.25545	180228G1_25	Analyte	10 4.3	11102.35	12394.86	89.57
26 1800363-10 CH-AT-2RW58D-0218 0.25767	180228G1_26	Analyte	10 4.3	10053.45	12394.86	81.11

27 IPA	180228G1_27	Analyte	10			12394.86	0.00
28 ST180228G1-3 PFC CS3 537 18B2306	180228G1_28	Analyte	10	4.3	11033.62	12394.86	89.02
29 IPA	180228G1_29	Analyte	10				

## CCAL 1

Compound 19: 13C4-PFOS

ID	Name	Type	Std. (RT)	Area	Ccal Area	Area %	
1 IPA	180228G1_1	Analyte	29		19386.45	0.00	
2 ST180228G1-1 PFC CS-1 537 18B2310	180228G1_2	Analyte	29	4.7	19386.45	19386.45	100.00
3 IPA	180228G1_3	Analyte	29		19386.45	0.00	
4 B8B0153-BS1 LFB 0.25	180228G1_4	Analyte	29	4.7	18774.43	19386.45	96.84
5 B8B0153-BSD1 LFBD 0.25	180228G1_5	Analyte	29	4.7	18005.72	19386.45	92.88
6 B8B0153-BLK1 LRB 0.25	180228G1_6	Analyte	29	4.7	18807.17	19386.45	97.01
7 1800322-05RE1 WI-A06-RW15-0218 0.25483	180228G1_7	Analyte	29	4.7	18092.61	19386.45	93.33
8 1800322-06RE1 WI-A06-FB15-0218 0.2547	180228G1_8	Analyte	29	4.7	19265.41	19386.45	99.38
9 1800348-01 Moon beam 001 0.25848	180228G1_9	Analyte	29	4.7	18623.7	19386.45	96.07
10 1800348-02 Moon beam 002 0.2584	180228G1_10	Analyte	29	4.7	19623.6	19386.45	101.22
11 1800322-03 WI-A06-RW @ 5 X 14-0218 0.24427	180228G1_11	Analyte	29	4.7	3136.097	19386.45	16.18
12 IPA	180228G1_12	Analyte	29			19386.45	0.00
13 ST180228G1-2 PFC CS1 537 18B2304	180228G1_13	Analyte	29	4.7	22758.44	19386.45	117.39

## CCAL 2

ID	Name	Type	Std. (RT)	Area	Ccal Area	Area %	
13 ST180228G1-2 PFC CS1 537 18B2304	180228G1_13	Analyte	29	4.7	22758.44	22758.44	100.00
14 IPA	180228G1_14	Analyte	29		22758.44	0.00	
15 1800348-03 Moon beam 003 0.25657	180228G1_15	Analyte	29	4.7	20243.3	22758.44	88.95
16 1800348-04 Moon beam 004 0.25763	180228G1_16	Analyte	29	4.7	20304.44	22758.44	89.22
17 1800363-01 CH-AT-1RW158-0218 0.26122	180228G1_17	Analyte	29	4.7	19338.95	22758.44	84.97
18 1800363-02 CH-AT-1FB158-0218 0.26273	180228G1_18	Analyte	29	4.7	19907.58	22758.44	87.47
19 1800363-03 CH-AT-1RW159-0218 0.25662	180228G1_19	Analyte	29	4.7	18923.06	22758.44	83.15
20 1800363-04 CH-AT-1FB159-0218 0.25061	180228G1_20	Analyte	29	4.7	18491.58	22758.44	81.25
21 1800363-05 CH-AT-1RW160-0218 0.25826	180228G1_21	Analyte	29	4.7	17927.81	22758.44	78.77

22	1800363-06 CH-AT-1FB160-0218 0.24786	180228G1_22	Analyte	29	4.7	17461	22758.44	76.72
23	1800363-07 CH-AT-2RW58-0218 0.25758	180228G1_23	Analyte	29	4.7	19315.91	22758.44	84.87
24	1800363-08 CH-AT-2RW58B-0218 0.25979	180228G1_24	Analyte	29	4.7	18672.53	22758.44	82.05
25	1800363-09 CH-AT-2RW58C-0218 0.25545	180228G1_25	Analyte	29	4.7	20474.91	22758.44	89.97
26	1800363-10 CH-AT-2RW58D-0218 0.25767	180228G1_26	Analyte	29	4.7	18637.94	22758.44	81.89
27	IPA	180228G1_27	Analyte	29			22758.44	0.00
28	ST180228G1-3 PFC CS3 537 18B2306	180228G1_28	Analyte	29	4.7	19631.95	22758.44	86.26
29	IPA	180228G1_29	Analyte	29				

## CCAL 1

Compound 20: d3-N-MeFOSAA

ID	Name	Type	Std. (RT)	Area	Ccal Area	Area %	
1	IPA	Analyte	40		13868.04	0.00	
2	ST180228G1-1 PFC CS-1 537 18B2310	Analyte	40	5.1	13868.04	13868.04	100.00
3	IPA	Analyte	40		13868.04	0.00	
4	B8B0153-BS1 LFB 0.25	Analyte	40	5.1	14392.69	13868.04	103.78
5	B8B0153-BSD1 LFBD 0.25	Analyte	40	5.1	13766.01	13868.04	99.26
6	B8B0153-BLK1 LRB 0.25	Analyte	40	5.1	12315.34	13868.04	88.80
7	1800322-05RE1 WI-A06-RW15-0218 0.25483	Analyte	40	5.1	13889.99	13868.04	100.16
8	1800322-06RE1 WI-A06-FB15-0218 0.2547	Analyte	40	5.1	14024.18	13868.04	101.13
9	1800348-01 Moon beam 001 0.25848	Analyte	40	5.1	13569.55	13868.04	97.85
10	1800348-02 Moon beam 002 0.2584	Analyte	40	5.1	16238.06	13868.04	117.09
11	1800322-03 WI-A06-RW @ 5 X 14-0218 0.24427	Analyte	40	5.1	2706.427	13868.04	19.52
12	IPA	Analyte	40		13868.04	0.00	
13	ST180228G1-2 PFC CS1 537 18B2304	Analyte	40	5.1	16474.33	13868.04	118.79

## CCAL 2

ID	Name	Type	Std. (	RT	Area	Ccal Area	Area %
13	ST180228G1-2 PFC CS1 537 18B2304	180228G1_13	Analyte	40 5.1	16474.33	16474.33	100.00
14	IPA	180228G1_14	Analyte	40		16474.33	0.00
15	1800348-03 Moon beam 003 0.25657	180228G1_15	Analyte	40 5.1	13630.82	16474.33	82.74
16	1800348-04 Moon beam 004 0.25763	180228G1_16	Analyte	40 5.1	15108.85	16474.33	91.71
17	1800363-01 CH-AT-1RW158-0218 0.26122	180228G1_17	Analyte	40 5.1	14066.61	16474.33	85.39
18	1800363-02 CH-AT-1FB158-0218 0.26273	180228G1_18	Analyte	40 5.1	15229.33	16474.33	92.44
19	1800363-03 CH-AT-1RW159-0218 0.25662	180228G1_19	Analyte	40 5.1	15283.55	16474.33	92.77
20	1800363-04 CH-AT-1FB159-0218 0.25061	180228G1_20	Analyte	40 5.1	15318.16	16474.33	92.98
21	1800363-05 CH-AT-1RW160-0218 0.25826	180228G1_21	Analyte	40 5.1	13977.46	16474.33	84.84
22	1800363-06 CH-AT-1FB160-0218 0.24786	180228G1_22	Analyte	40 5.1	13457.85	16474.33	81.69
23	1800363-07 CH-AT-2RW58-0218 0.25758	180228G1_23	Analyte	40 5.1	13075.08	16474.33	79.37
24	1800363-08 CH-AT-2RW58B-0218 0.25979	180228G1_24	Analyte	40 5.1	13526.61	16474.33	82.11
25	1800363-09 CH-AT-2RW58C-0218 0.25545	180228G1_25	Analyte	40 5.1	16676.58	16474.33	101.23
26	1800363-10 CH-AT-2RW58D-0218 0.25767	180228G1_26	Analyte	40 5.1	15681.21	16474.33	95.19
27	IPA	180228G1_27	Analyte	40		16474.33	0.00
28	ST180228G1-3 PFC CS3 537 18B2306	180228G1_28	Analyte	40 5.1	15294.11	16474.33	92.84
29	IPA	180228G1_29	Analyte	40			

**LC Calibration Standards Review Checklist**

Q1

Calibration ID:		ION Ratio	Concentration	C-Cals Name	Sign Date	Correct I-Cal	Manual Integrations	
<u>ST180228G1-1</u>	<u>LMH</u>	<u>NA</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<u>NA</u>
<u>J</u>	<u>-2 LMH</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
_____	LMH	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	LMH	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	LMH	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	LMH	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	LMH	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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_____	LMH	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Full Mass Cal. Date: 4.15.17

Run Log Present:

# of Samples per Sequence Checked:

Instrument Blank Saved:  NA DW

IIS Area Saved:  180228G1

Reviewed By: JA, 02/28/2018  
Initials/Date

**Comments:**

L14  
DW



Dataset: X:\G1.PRO\Results\2018\180228G1\180228G1-2.qld

Last Altered: Wednesday, February 28, 2018 13:47:07 Pacific Standard Time

Printed: Wednesday, February 28, 2018 13:47:23 Pacific Standard Time

*J.A.*  
*02/28/2018*

Method: X:\G1.PRO\MethDB\PFAS\_DW\_L14\_1223.mdb 23 Feb 2018 15:59:15

Calibration: X:\G1.PRO\CurveDB\C18\_537\_Q1\_02-23-18\_L14.cdb 23 Feb 2018 16:46:11

*MJT*  
*2/28/18*

Name: 180228G1\_2, Date: 28-Feb-2018, Time: 09:37:21, ID: ST180228G1-1 PFC CS-1 537 18B2310, Description: PFC CS-1 537 18B2310

	# Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	299 > 79.7	1.05e3	1.94e4	1.0000		3.01	2.98	1.55	2.12	120.0
2	2 PFHxA	313.2 > 268.9	1.46e3	1.23e4	1.0000		3.35	3.37	1.19	2.16	107.9
3	3 PFHpA	363 > 318.9	2.43e3	1.23e4	1.0000		3.87	3.88	1.98	2.11	105.3
4	4 PFHxS	398.9 > 79.6	1.02e3	1.94e4	1.0000		4.00	4.00	1.51	2.16	118.5
5	5 PFOA	413 > 368.7	2.32e3	1.23e4	1.0000		4.30	4.30	1.89	2.25	112.7
6	6 PFNA	463 > 418.8	2.83e3	1.23e4	1.0000		4.64	4.64	2.30	2.27	113.3
7	7 PFOS	499 > 79.9	1.29e3	1.94e4	1.0000		4.71	4.71	1.91	1.99	107.7
8	8 PFDA	513 > 468.8	2.82e3	1.23e4	1.0000		4.87	4.95	2.30	2.07	103.7
9	9 N-MeFOSAA	570.1 > 419.0	9.39e2	1.39e4	1.0000		5.01	5.07	2.71	2.06	102.8
10	10 N-EtFOSAA	584.2 > 419.0	9.31e2	1.39e4	1.0000		5.19	5.20	2.69	2.53	126.7
11	11 PFUnA	563 > 518.9	2.25e3	1.23e4	1.0000		5.13	5.21	1.83	1.82	91.2
12	12 PFDoA	612.9 > 318.8	3.71e2	1.23e4	1.0000		5.33	5.43	0.302	1.91	95.4
13	13 PFTrDA	662.9 > 618.9	3.47e3	1.23e4	1.0000		5.56	5.62	2.83	2.06	103.1
14	14 PFTeDA	712.9 > 668.8	3.06e3	1.23e4	1.0000		5.73	5.79	2.50	2.00	100.0
15	15 13C2-PFHxA	315 > 269.8	9.13e3	1.23e4	1.0000	0.731	3.45	3.37	7.45	10.2	101.8
16	16 13C2-PFDA	515.1 > 469.9	9.78e3	1.23e4	1.0000	0.910	4.90	4.95	7.97	8.76	87.6
17	17 d5-N-EtFOSAA	589.3 > 419.0	1.49e4	1.39e4	1.0000	1.049	5.07	5.19	43.1	41.1	102.7
18	18 13C2-PFOA	414.9 > 369.7	1.23e4	1.23e4	1.0000	1.000	4.41	4.30	10.0	10.0	100.0
19	19 13C4-PFOS	503.0 > 79.9	1.94e4	1.94e4	1.0000	1.000	4.81	4.71	28.7	28.7	100.0
20	20 d3-N-MeFOSAA	573.3 > 419.0	1.39e4	1.39e4	1.0000	1.000	5.16	5.07	40.0	40.0	100.0

Dataset: Untitled

Last Altered: Wednesday, February 28, 2018 13:50:23 Pacific Standard Time

Printed: Wednesday, February 28, 2018 13:51:19 Pacific Standard Time

Method: X:\G1.PRO\MethDB\PFAS\_DW\_L14\_1223.mdb 23 Feb 2018 15:59:15  
Calibration: X:\G1.PRO\CurveDB\C18\_537\_Q1\_02-23-18\_L14.cdb 23 Feb 2018 16:46:11

Compound name: PFBS

	Name	ID	Acq.Date	Acq.Time
1	180228G1_1	IPA	28-Feb-18	09:25:18
2	180228G1_2	ST180228G1-1 PFC CS-1 537 18B2310	28-Feb-18	09:37:21
3	180228G1_3	IPA	28-Feb-18	09:49:41
4	180228G1_4	B8B0153-BS1 LFB 0.25	28-Feb-18	10:02:08
5	180228G1_5	B8B0153-BSD1 LFBD 0.25	28-Feb-18	10:14:30
6	180228G1_6	B8B0153-BLK1 LRB 0.25	28-Feb-18	10:26:54
7	180228G1_7	1800322-05RE1 WI-A06-RW15-0218 0.25483	28-Feb-18	10:39:19
8	180228G1_8	1800322-06RE1 WI-A06-FB15-0218 0.2547	28-Feb-18	10:51:45
9	180228G1_9	1800348-01 Moon beam 001 0.25848	28-Feb-18	11:04:09
10	180228G1_10	1800348-02 Moon beam 002 0.2584	28-Feb-18	11:21:54
11	180228G1_11	1800322-03 WI-A06-RW @ 5 X 14-0218 0.24427	28-Feb-18	11:33:57
12	180228G1_12	IPA	28-Feb-18	11:46:23
13	180228G1_13	ST180228G1-2 PFC CS1 537 18B2304	28-Feb-18	11:58:49
14	180228G1_14	IPA	28-Feb-18	12:11:12

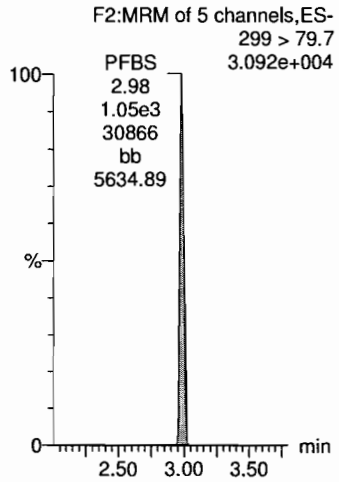
Dataset: X:\G1.PRO\Results\2018\180228G1\180228G1-2.qld

Last Altered: Wednesday, February 28, 2018 13:47:07 Pacific Standard Time  
Printed: Wednesday, February 28, 2018 13:47:23 Pacific Standard Time

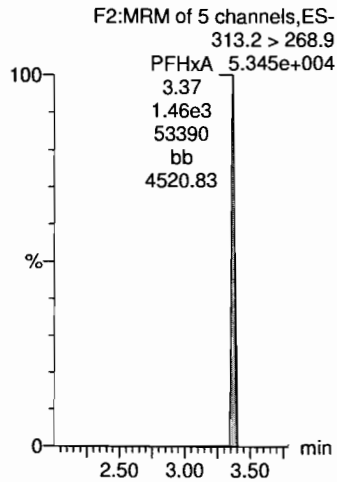
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Calibration: X:\G1.PRO\CurveDB\C18\_537\_Q1\_02-23-18\_L14.cdb 23 Feb 2018 16:46:11

Name: 180228G1\_2, Date: 28-Feb-2018, Time: 09:37:21, ID: ST180228G1-1 PFC CS-1 537 18B2310, Description: PFC CS-1 537 18B2310

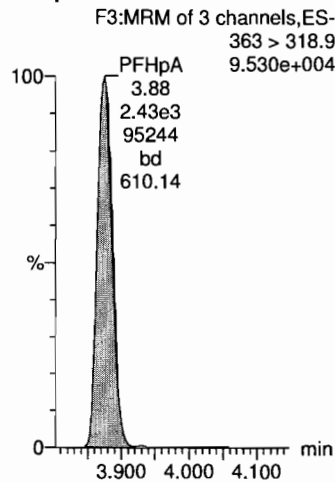
**PFBS**



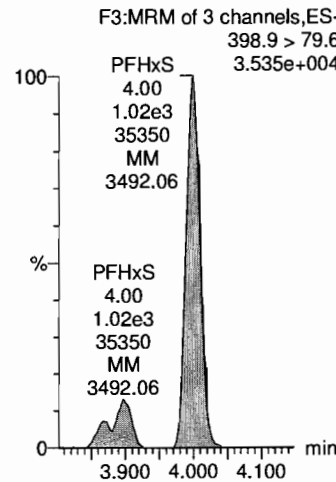
**PFHxA**



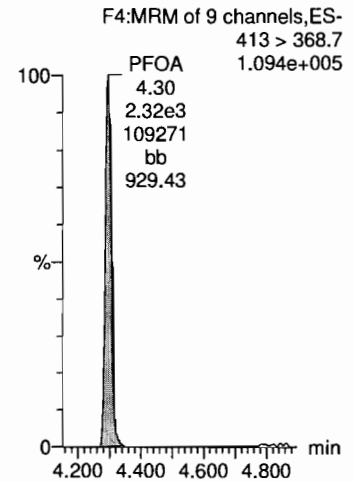
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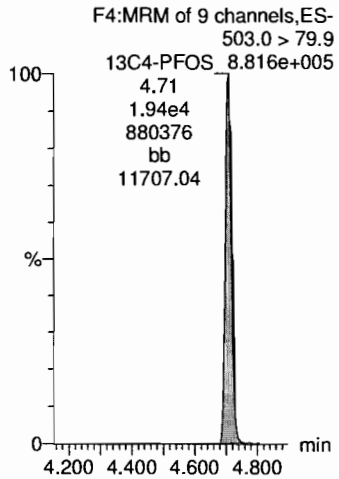
**PFHxS**



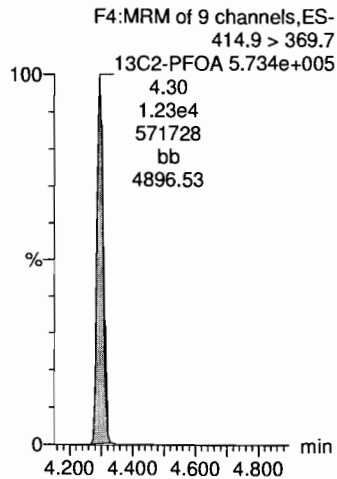
**PFOA**



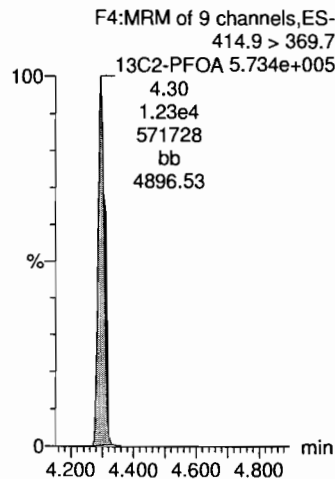
**13C4-PFOS**



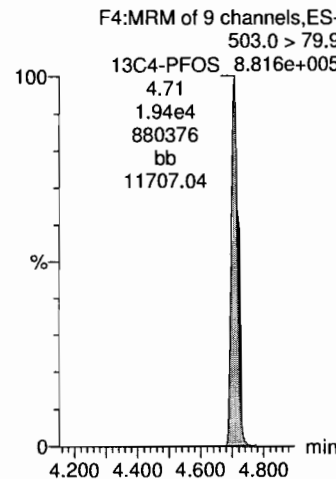
**13C2-PFOA**



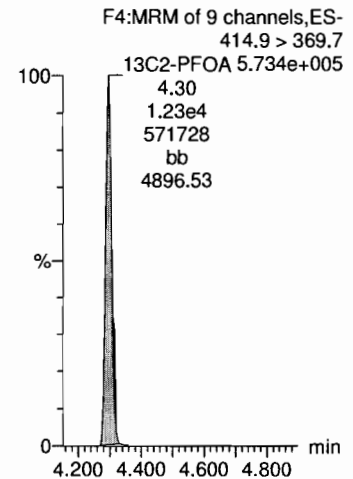
**13C2-PFOA**



**13C4-PFOS**



**13C2-PFOA**



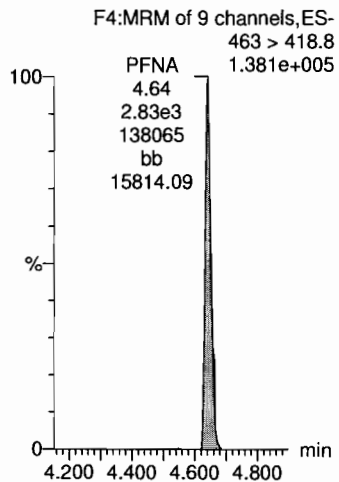
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Last Altered: Wednesday, February 28, 2018 13:47:07 Pacific Standard Time

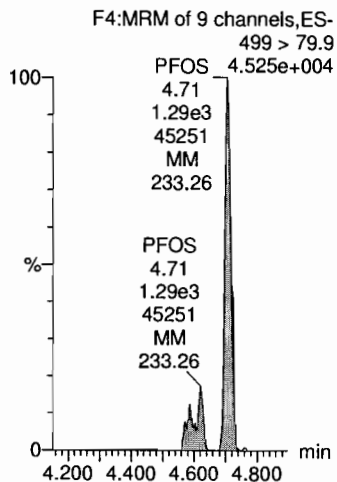
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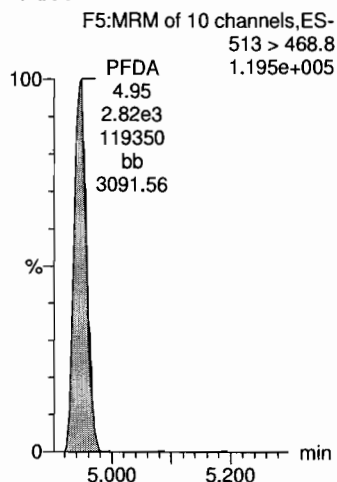
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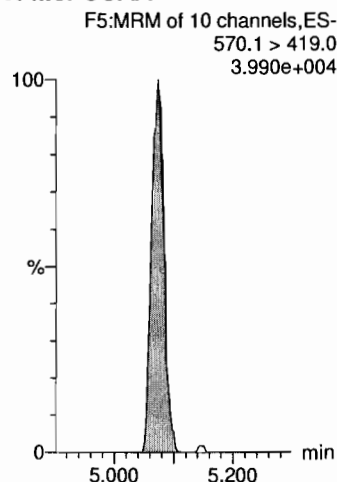
**PFOS**



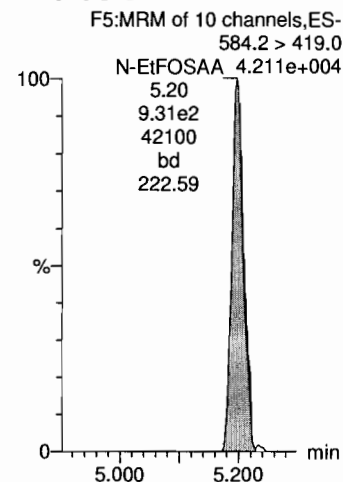
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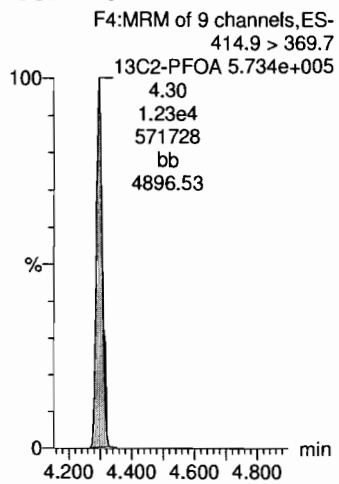
**N-MeFOSAA**



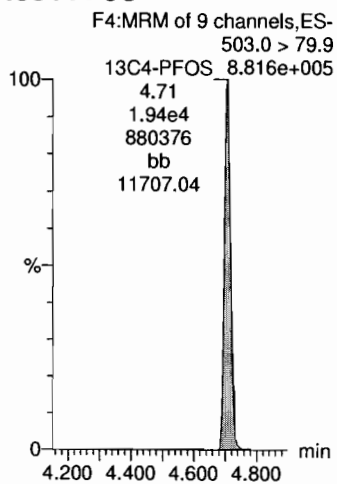
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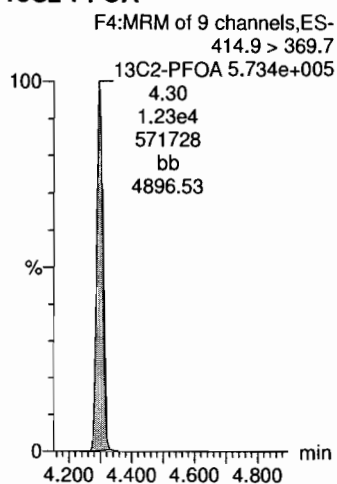
**13C2-PFOA**



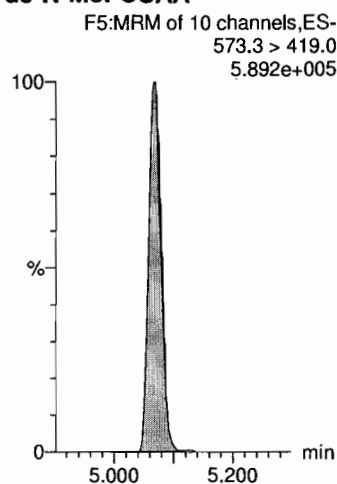
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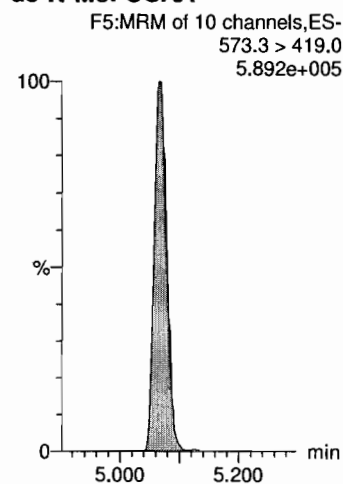
**13C2-PFOA**



**d3-N-MeFOSAA**



**d3-N-MeFOSAA**

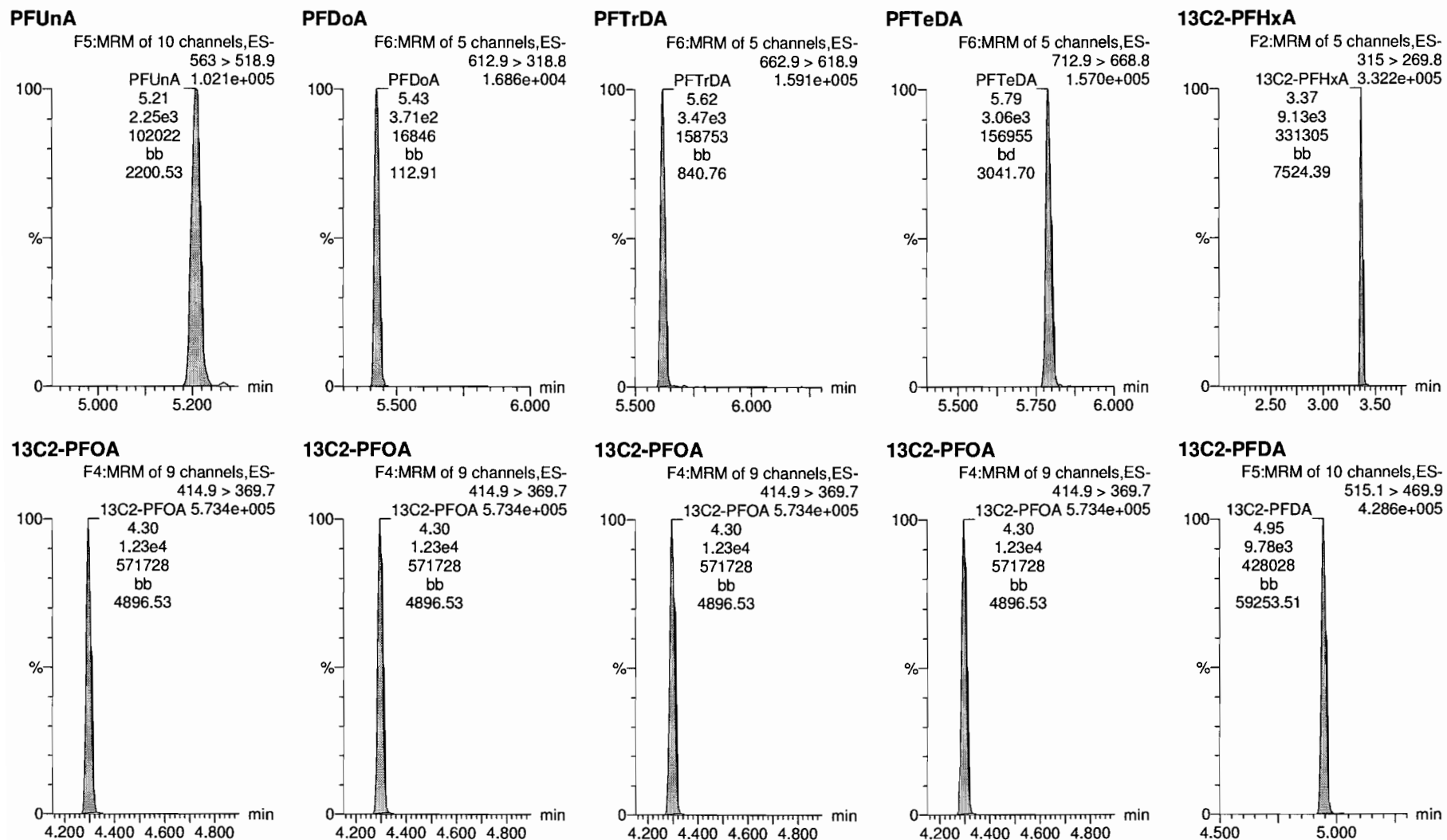


Dataset: X:\G1.PRO\Results\2018\180228G1\180228G1-2.qld

Last Altered: Wednesday, February 28, 2018 13:47:07 Pacific Standard Time

Printed: Wednesday, February 28, 2018 13:47:23 Pacific Standard Time

Name: 180228G1\_2, Date: 28-Feb-2018, Time: 09:37:21, ID: ST180228G1-1 PFC CS-1 537 18B2310, Description: PFC CS-1 537 18B2310



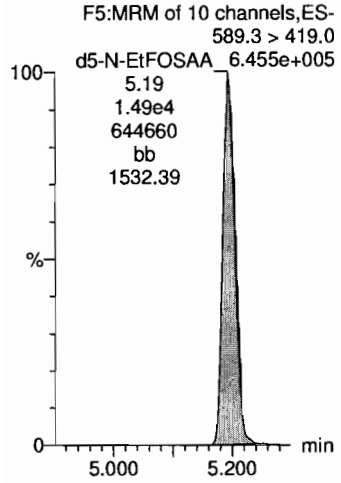
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Last Altered: Wednesday, February 28, 2018 13:47:07 Pacific Standard Time

Printed: Wednesday, February 28, 2018 13:47:23 Pacific Standard Time

Name: 180228G1\_2, Date: 28-Feb-2018, Time: 09:37:21, ID: ST180228G1-1 PFC CS-1 537 18B2310, Description: PFC CS-1 537 18B2310

**d5-N-EtFOSAA**



Dataset: X:\G1.PRO\Results\2018\180228G1\180228G1-13.qld

Last Altered: Wednesday, February 28, 2018 13:48:17 Pacific Standard Time  
Printed: Wednesday, February 28, 2018 13:48:41 Pacific Standard Time

*JA.*  
*02/28/2018*

Method: X:\G1.PRO\MethDB\PFAS\_DW\_L14\_1223.mdb 23 Feb 2018 15:59:15  
Calibration: X:\G1.PRO\CurveDB\C18\_537\_Q1\_02-23-18\_L14.cdb 23 Feb 2018 16:46:11

*MJT*  
*2/28/18*

Name: 180228G1\_13, Date: 28-Feb-2018, Time: 11:58:49, ID: ST180228G1-2 PFC CS1 537 18B2304, Description: PFC CS1 537 18B2304

#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	299 > 79.7	4.97e3	2.28e4	1.0000		3.02	2.99	6.27	8.58	96.9
2	2 PFHxA	313.2 > 268.9	5.89e3	1.24e4	1.0000		3.35	3.37	4.75	8.58	85.8
3	3 PFHpA	363 > 318.9	1.08e4	1.24e4	1.0000		3.87	3.88	8.75	9.30	93.0
4	4 PFHxS	398.9 > 79.6	4.92e3	2.28e4	1.0000		4.00	4.00	6.20	8.87	97.2
5	5 PFOA	413 > 368.7	9.15e3	1.24e4	1.0000		4.30	4.30	7.38	8.81	88.1
6	6 PFNA	463 > 418.8	1.14e4	1.24e4	1.0000		4.64	4.64	9.18	9.03	90.3
7	7 PFOS	499 > 79.9	6.14e3	2.28e4	1.0000		4.71	4.71	7.75	8.07	87.2
8	8 PFDA	513 > 468.8	1.21e4	1.24e4	1.0000		4.87	4.95	9.76	8.91	89.1
9	9 N-MeFOSAA	570.1 > 419.0	6.05e3	1.65e4	1.0000		5.01	5.07	14.7	11.0	109.7
10	10 N-EtFOSAA	584.2 > 419.0	4.22e3	1.65e4	1.0000		5.19	5.20	10.2	9.66	96.6
11	11 PFUnA	563 > 518.9	1.06e4	1.24e4	1.0000		5.13	5.21	8.56	8.52	85.2
12	12 PFDoA	612.9 > 318.8	1.80e3	1.24e4	1.0000		5.33	5.43	1.45	9.18	91.8
13	13 PFTrDA	662.9 > 618.9	1.50e4	1.24e4	1.0000		5.56	5.62	12.1	8.78	87.8
14	14 PFTeDA	712.9 > 668.8	1.37e4	1.24e4	1.0000		5.73	5.79	11.1	8.86	88.6
15	15 13C2-PFHxA	315 > 269.8	8.31e3	1.24e4	1.0000	0.731	3.45	3.37	6.71	9.17	91.7
16	16 13C2-PFDA	515.1 > 469.9	1.01e4	1.24e4	1.0000	0.910	4.90	4.95	8.19	9.00	90.0
17	17 d5-N-EtFOSAA	589.3 > 419.0	1.55e4	1.65e4	1.0000	1.049	5.07	5.20	37.7	36.0	89.9
18	18 13C2-PFOA	414.9 > 369.7	1.24e4	1.24e4	1.0000	1.000	4.41	4.30	10.0	10.0	100.0
19	19 13C4-PFOS	503.0 > 79.9	2.28e4	2.28e4	1.0000	1.000	4.81	4.71	28.7	28.7	100.0
20	20 d3-N-MeFOSAA	573.3 > 419.0	1.65e4	1.65e4	1.0000	1.000	5.16	5.07	40.0	40.0	100.0

Dataset: Untitled

Last Altered: Wednesday, February 28, 2018 13:50:23 Pacific Standard Time  
Printed: Wednesday, February 28, 2018 13:51:19 Pacific Standard Time

Method: X:\G1.PRO\MethDB\PFAS\_DW\_L14\_1223.mdb 23 Feb 2018 15:59:15  
Calibration: X:\G1.PRO\CurveDB\C18\_537\_Q1\_02-23-18\_L14.cdb 23 Feb 2018 16:46:11

Compound name: PFBS

	Name	ID	Acq.Date	Acq.Time
1	180228G1_1	IPA	28-Feb-18	09:25:18
2	180228G1_2	ST180228G1-1 PFC CS-1 537 18B2310	28-Feb-18	09:37:21
3	180228G1_3	IPA	28-Feb-18	09:49:41
4	180228G1_4	B8B0153-BS1 LFB 0.25	28-Feb-18	10:02:08
5	180228G1_5	B8B0153-BSD1 LFBD 0.25	28-Feb-18	10:14:30
6	180228G1_6	B8B0153-BLK1 LRB 0.25	28-Feb-18	10:26:54
7	180228G1_7	1800322-05RE1 WI-A06-RW15-0218 0.25483	28-Feb-18	10:39:19
8	180228G1_8	1800322-06RE1 WI-A06-FB15-0218 0.2547	28-Feb-18	10:51:45
9	180228G1_9	1800348-01 Moon beam 001 0.25848	28-Feb-18	11:04:09
10	180228G1_10	1800348-02 Moon beam 002 0.2584	28-Feb-18	11:21:54
11	180228G1_11	1800322-03 WI-A06-RW @ 5 X 14-0218 0.24427	28-Feb-18	11:33:57
12	180228G1_12	IPA	28-Feb-18	11:46:23
13	180228G1_13	ST180228G1-2 PFC CS1 537 18B2304	28-Feb-18	11:58:49
14	180228G1_14	IPA	28-Feb-18	12:11:12



Dataset: X:\G1.PRO\Results\2018\180228G1\180228G1-13.qld

Last Altered: Wednesday, February 28, 2018 13:48:17 Pacific Standard Time

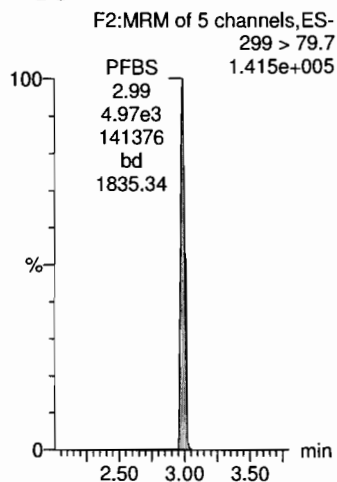
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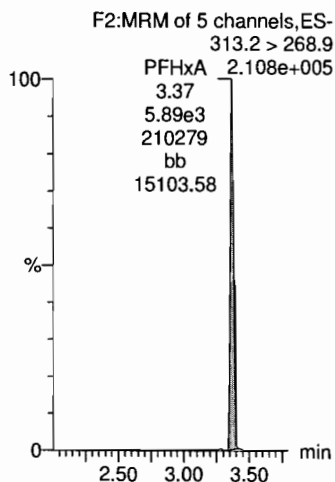
Calibration: X:\G1.PRO\CurveDB\C18\_537\_Q1\_02-23-18\_L14.cdb 23 Feb 2018 16:46:11

Name: 180228G1\_13, Date: 28-Feb-2018, Time: 11:58:49, ID: ST180228G1-2 PFC CS1 537 18B2304, Description: PFC CS1 537 18B2304

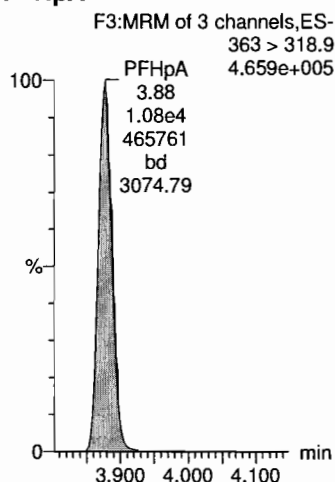
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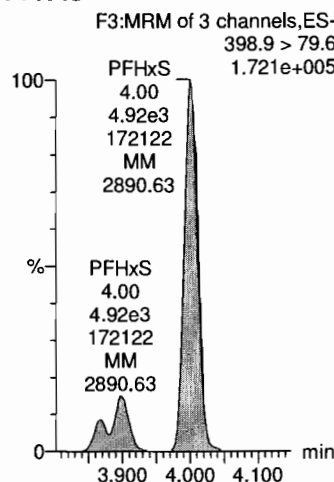
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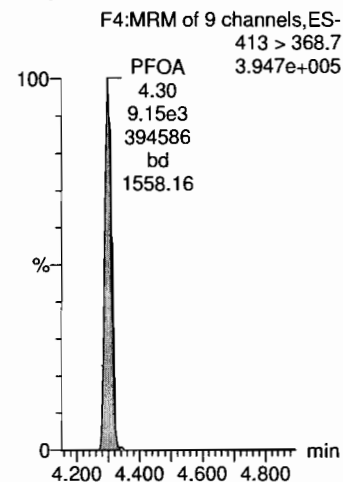
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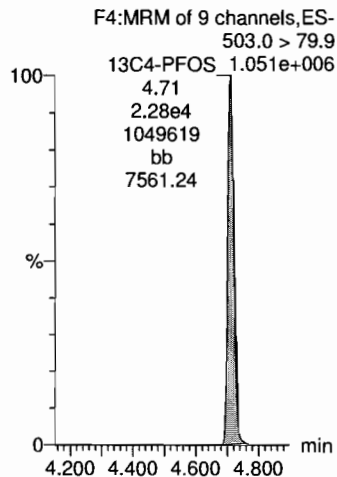
**PFHxS**



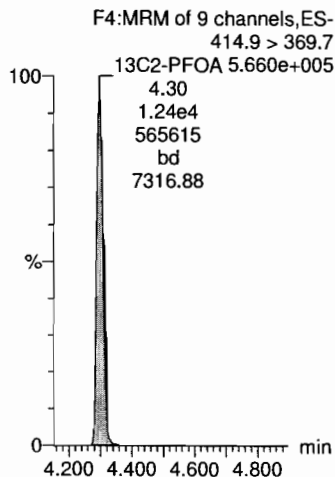
**PFOA**



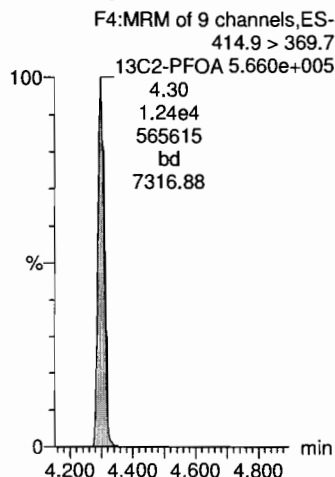
**13C4-PFOS**



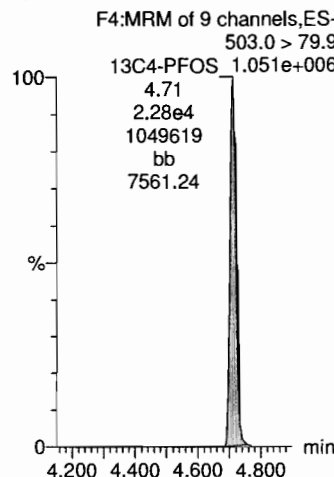
**13C2-PFOA**



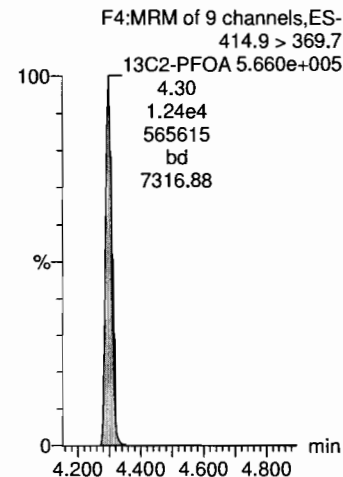
**13C2-PFOA**



**13C4-PFOS**



**13C2-PFOA**



MJT 2/28/2018

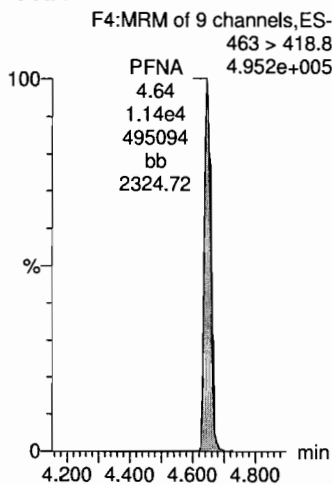
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Last Altered: Wednesday, February 28, 2018 13:48:17 Pacific Standard Time

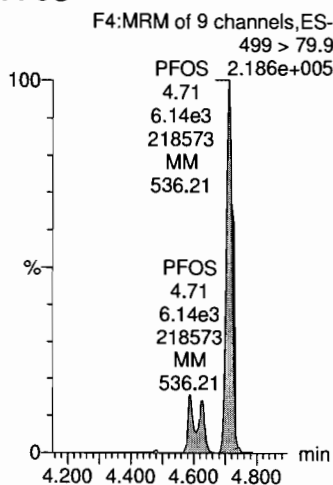
Printed: Wednesday, February 28, 2018 13:48:41 Pacific Standard Time

Name: 180228G1\_13, Date: 28-Feb-2018, Time: 11:58:49, ID: ST180228G1-2 PFC CS1 537 18B2304, Description: PFC CS1 537 18B2304

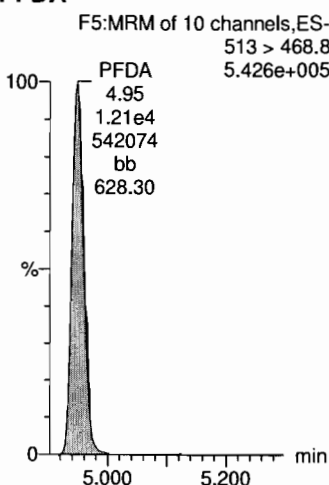
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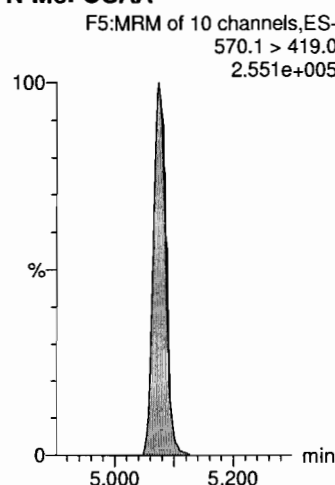
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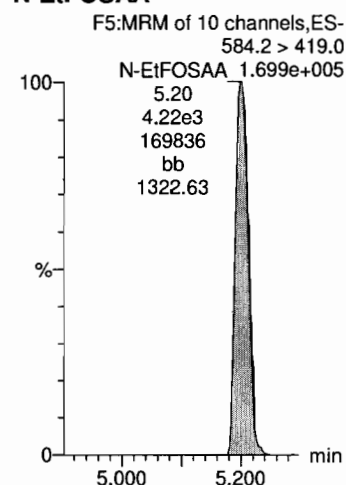
**PFDA**



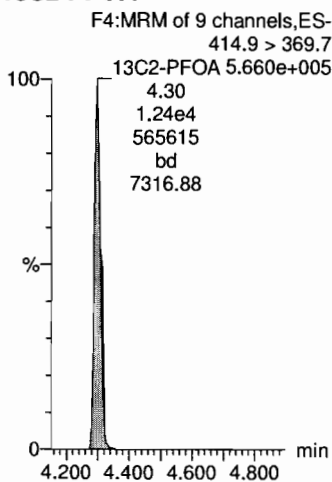
**N-MeFOSAA**



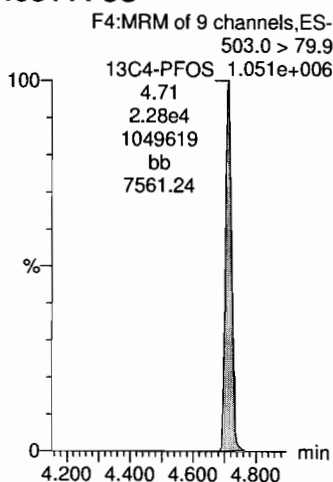
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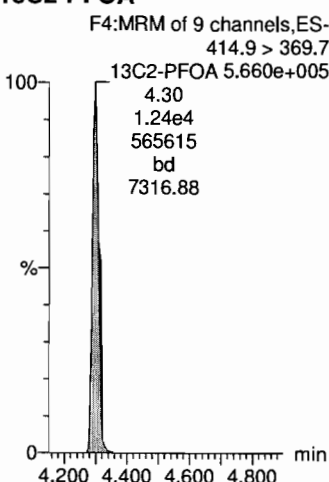
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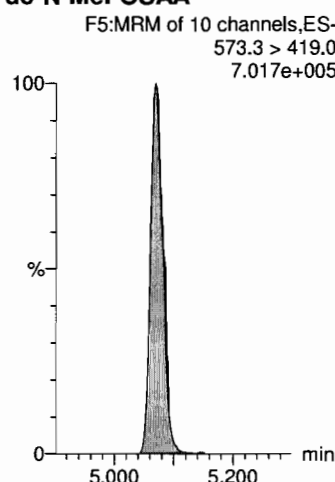
**13C4-PFOS**



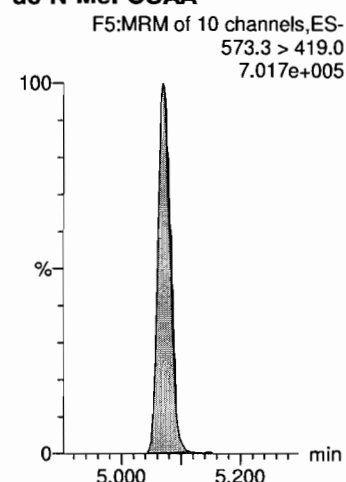
**13C2-PFOA**



**d3-N-MeFOSAA**



**d3-N-MeFOSAA**

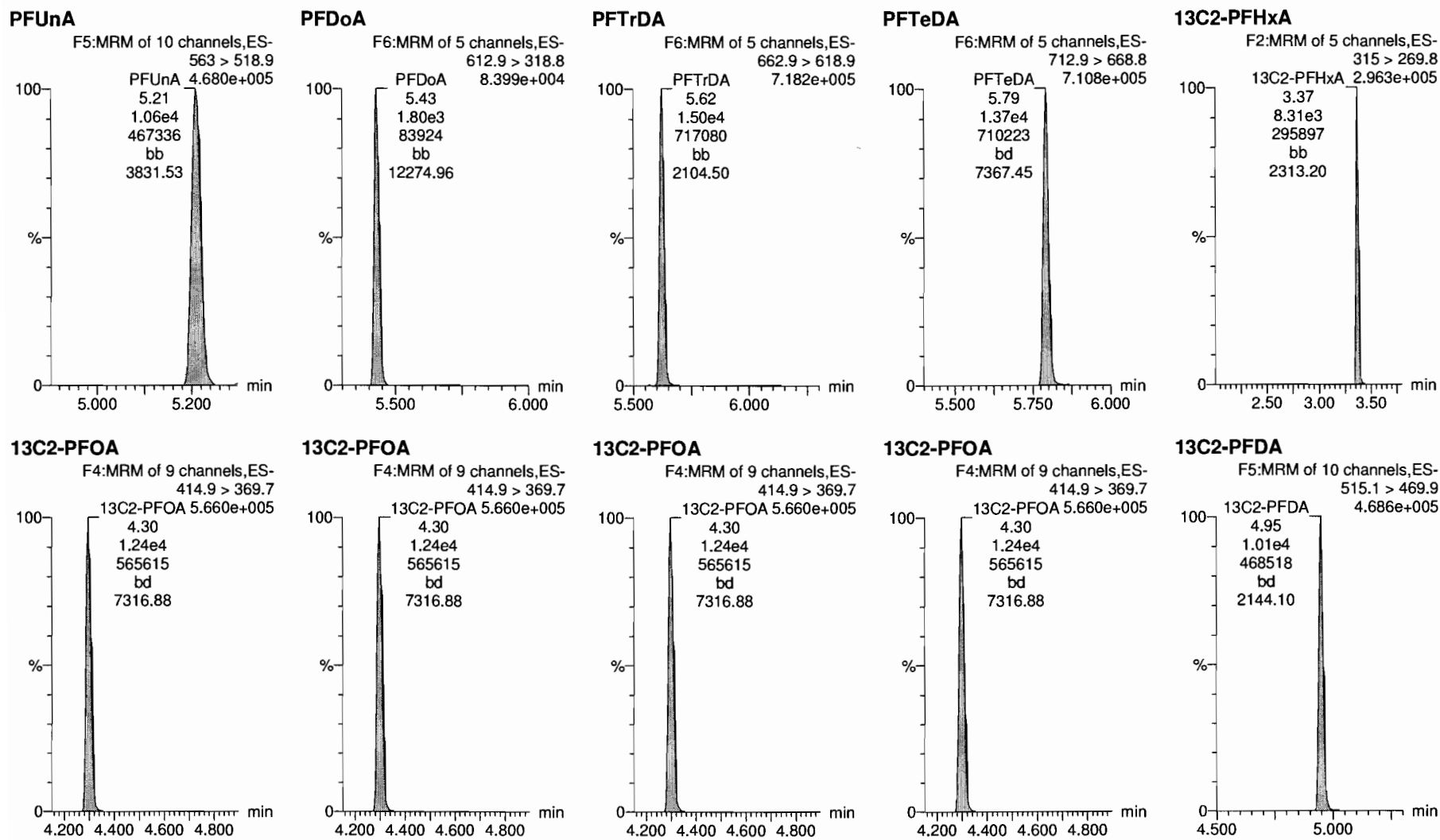


Dataset: X:\G1.PRO\Results\2018\180228G1\180228G1-13.qld

Last Altered: Wednesday, February 28, 2018 13:48:17 Pacific Standard Time

Printed: Wednesday, February 28, 2018 13:48:41 Pacific Standard Time

Name: 180228G1\_13, Date: 28-Feb-2018, Time: 11:58:49, ID: ST180228G1-2 PFC CS1 537 18B2304, Description: PFC CS1 537 18B2304



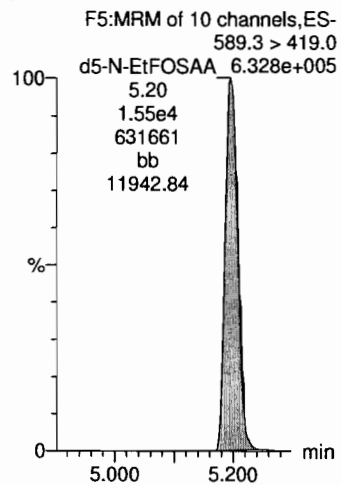
Dataset: X:\G1.PRO\Results\2018\180228G1\180228G1-13.qld

Last Altered: Wednesday, February 28, 2018 13:48:17 Pacific Standard Time

Printed: Wednesday, February 28, 2018 13:48:41 Pacific Standard Time

Name: 180228G1\_13, Date: 28-Feb-2018, Time: 11:58:49, ID: ST180228G1-2 PFC CS1 537 18B2304, Description: PFC CS1 537 18B2304

**d5-N-EtFOSAA**



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

Dataset: X:\G1.PRO\Results\2018\180223G2\180223G2-CRV.qld

Last Altered: Friday, February 23, 2018 17:19:15 Pacific Standard Time  
 Printed: Friday, February 23, 2018 17:22:19 Pacific Standard Time

*VJA*  
 02/24/2018

Method: X:\G1.PRO\MethDB\PFAS\_DW\_L14\_1223.mdb 23 Feb 2018 15:59:15  
 Calibration: X:\G1.PRO\CurveDB\C18\_537\_Q1\_02-23-18\_L14.cdb 23 Feb 2018 17:19:14

**Compound name: PFBS**

Coefficient of Determination: R<sup>2</sup> = 0.996349  
 Calibration curve: 0.731202 \* x  
 Response type: Internal Std ( Ref 19 ), Area \* ( IS Conc. / IS Area )  
 Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None

*MJT*  
 2/23/18

#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 180223G2_2	Standard	0.443	3.01	198.814	16868.711	0.338	0.5	4.5	NO	0.996	NO	bb
2	2 180223G2_3	Standard	0.885	3.01	521.997	18929.600	0.791	1.1	22.3	NO	0.996	NO	bb
3	3 180223G2_4	Standard	1.770	3.02	909.253	19568.625	1.334	1.8	3.0	NO	0.996	NO	bb
4	4 180223G2_5	Standard	4.420	3.01	2203.222	17986.094	3.516	4.8	8.8	NO	0.996	NO	bb
5	5 180223G2_6	Standard	8.850	3.02	3827.673	17892.594	6.140	8.4	-5.1	NO	0.996	NO	bb
6	6 180223G2_7	Standard	22.100	3.01	9307.743	17798.180	15.009	20.5	-7.1	NO	0.996	NO	bb
7	7 180223G2_8	Standard	44.200	3.02	19324.398	16645.363	33.319	45.6	3.1	NO	0.996	NO	bb
8	8 180223G2_9	Standard	66.300	3.02	28018.547	15491.563	51.908	71.0	7.1	NO	0.996	NO	MMX
9	9 180223G2_10	Standard	88.400	3.02	37264.695	15634.240	68.407	93.6	5.8	NO	0.996	NO	MMX

**Compound name: PFHxA**

Coefficient of Determination: R<sup>2</sup> = 0.997717  
 Calibration curve: 0.553475 \* 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 180223G2_2	Standard	0.500	3.38	354.132	9097.107	0.389	0.7	40.7	NO	0.998	NO	MM
2	2 180223G2_3	Standard	1.000	3.38	711.273	9939.635	0.716	1.3	29.3	NO	0.998	NO	MM
3	3 180223G2_4	Standard	2.000	3.38	1173.079	9566.432	1.226	2.2	10.8	NO	0.998	NO	bb
4	4 180223G2_5	Standard	5.000	3.38	2646.081	8946.824	2.958	5.3	6.9	NO	0.998	NO	bb
5	5 180223G2_6	Standard	10.000	3.38	4344.971	8816.899	4.928	8.9	-11.0	NO	0.998	NO	bb
6	6 180223G2_7	Standard	25.000	3.38	11894.084	8696.680	13.677	24.7	-1.2	NO	0.998	NO	bb
7	7 180223G2_8	Standard	50.000	3.38	23477.408	8483.395	27.675	50.0	0.0	NO	0.998	NO	bb
8	8 180223G2_9	Standard	75.000	3.38	34391.449	8248.775	41.693	75.3	0.4	NO	0.998	NO	MM
9	9 180223G2_10	Standard	100.000	3.38	44779.535	7559.229	59.238	107.0	7.0	NO	0.998	NO	bbX

MJT 2/23/2018

Dataset: X:\G1.PRO\Results\2018\180223G2\180223G2-CRV.qld

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**Compound name: PFHpA**

Coefficient of Determination:  $R^2 = 0.998875$

Calibration curve:  $0.940423 * x$

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 180223G2_2	Standard	0.500	3.89	483.433	9097.107	0.531	0.6	13.0	NO	0.999	NO	bb
2	2 180223G2_3	Standard	1.000	3.89	1185.001	9939.635	1.192	1.3	26.8	NO	0.999	NO	bb
3	3 180223G2_4	Standard	2.000	3.89	1948.822	9566.432	2.037	2.2	8.3	NO	0.999	NO	bb
4	4 180223G2_5	Standard	5.000	3.89	4527.533	8946.824	5.060	5.4	7.6	NO	0.999	NO	bb
5	5 180223G2_6	Standard	10.000	3.89	7941.743	8816.899	9.007	9.6	-4.2	NO	0.999	NO	MM
6	6 180223G2_7	Standard	25.000	3.89	19776.438	8696.680	22.740	24.2	-3.3	NO	0.999	NO	bb
7	7 180223G2_8	Standard	50.000	3.89	39949.883	8483.395	47.092	50.1	0.2	NO	0.999	NO	MM
8	8 180223G2_9	Standard	75.000	3.89	58401.840	8248.775	70.801	75.3	0.4	NO	0.999	NO	bb
9	9 180223G2_10	Standard	100.000	3.89	74943.813	7559.229	99.142	105.4	5.4	NO	0.999	NO	bbX

**Compound name: PFHxS**

Coefficient of Determination:  $R^2 = 0.997652$

Calibration curve:  $0.699727 * x$

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 180223G2_2	Standard	0.455	4.01	218.022	16868.711	0.371	0.5	16.5	NO	0.998	NO	MM
2	2 180223G2_3	Standard	0.910	4.01	506.356	18929.600	0.768	1.1	20.6	NO	0.998	NO	MM
3	3 180223G2_4	Standard	1.820	4.01	943.059	19568.625	1.383	2.0	8.6	NO	0.998	NO	MM
4	4 180223G2_5	Standard	4.560	4.01	2125.416	17986.094	3.391	4.8	6.3	NO	0.998	NO	MM
5	5 180223G2_6	Standard	9.120	4.01	3769.145	17892.594	6.046	8.6	-5.3	NO	0.998	NO	MM
6	6 180223G2_7	Standard	22.800	4.01	9441.263	17798.180	15.224	21.8	-4.6	NO	0.998	NO	MM
7	7 180223G2_8	Standard	45.600	4.01	18837.053	16645.363	32.479	46.4	1.8	NO	0.998	NO	MM
8	8 180223G2_9	Standard	68.400	4.01	26492.680	15491.563	49.081	70.1	2.5	NO	0.998	NO	MMX
9	9 180223G2_10	Standard	91.200	4.01	36343.625	15634.240	66.717	95.3	4.5	NO	0.998	NO	MMX

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**Compound name: PFOA**

Coefficient of Determination: R<sup>2</sup> = 0.998447

Calibration curve: 0.83774 \* 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 180223G2_2	Standard	0.500	4.31	444.616	9097.107	0.489	0.6	16.7	NO	0.998	NO	MMX
2	2 180223G2_3	Standard	1.000	4.31	1106.276	9939.635	1.113	1.3	32.9	NO	0.998	NO	bb
3	3 180223G2_4	Standard	2.000	4.31	1805.433	9566.432	1.887	2.3	12.6	NO	0.998	NO	MM
4	4 180223G2_5	Standard	5.000	4.31	4055.906	8946.824	4.533	5.4	8.2	NO	0.998	NO	bb
5	5 180223G2_6	Standard	10.000	4.31	6970.526	8816.899	7.906	9.4	-5.6	NO	0.998	NO	bb
6	6 180223G2_7	Standard	25.000	4.31	17861.994	8696.680	20.539	24.5	-1.9	NO	0.998	NO	bb
7	7 180223G2_8	Standard	50.000	4.31	35483.926	8483.395	41.828	49.9	-0.1	NO	0.998	NO	MM
8	8 180223G2_9	Standard	75.000	4.31	51913.281	8248.775	62.935	75.1	0.2	NO	0.998	NO	bb
9	9 180223G2_10	Standard	100.000	4.31	68504.563	7559.229	90.624	108.2	8.2	NO	0.998	NO	bbX

**Compound name: PFNA**

Coefficient of Determination: R<sup>2</sup> = 0.999615

Calibration curve: 1.01645 \* 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 180223G2_2	Standard	0.500	4.65	563.949	9097.107	0.620	0.6	22.0	NO	1.000	NO	bb
2	2 180223G2_3	Standard	1.000	4.65	1157.372	9939.635	1.164	1.1	14.6	NO	1.000	NO	MM
3	3 180223G2_4	Standard	2.000	4.65	1920.400	9566.432	2.007	2.0	-1.3	NO	1.000	NO	bb
4	4 180223G2_5	Standard	5.000	4.65	4575.846	8946.824	5.114	5.0	0.6	NO	1.000	NO	bb
5	5 180223G2_6	Standard	10.000	4.65	8764.228	8816.899	9.940	9.8	-2.2	NO	1.000	NO	bd
6	6 180223G2_7	Standard	25.000	4.65	22423.768	8696.680	25.784	25.4	1.5	NO	1.000	NO	bb
7	7 180223G2_8	Standard	50.000	4.65	42865.504	8483.395	50.529	49.7	-0.6	NO	1.000	NO	bb
8	8 180223G2_9	Standard	75.000	4.65	62783.340	8248.775	76.112	74.9	-0.2	NO	1.000	NO	bd
9	9 180223G2_10	Standard	100.000	4.65	84539.195	7559.229	111.836	110.0	10.0	NO	1.000	NO	bbX



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**Compound name: PFOS**

Coefficient of Determination:  $R^2 = 0.999243$

Calibration curve:  $0.960258 * x$

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 180223G2_2	Standard	0.464	4.71	240.346	16868.711	0.409	0.4	-8.2	NO	0.999	NO	MM
2	2 180223G2_3	Standard	0.925	4.71	578.990	18929.600	0.878	0.9	-1.2	NO	0.999	NO	MM
3	3 180223G2_4	Standard	1.850	4.72	1246.784	19568.625	1.829	1.9	2.9	NO	0.999	NO	MM
4	4 180223G2_5	Standard	4.625	4.71	2839.078	17986.094	4.530	4.7	2.0	NO	0.999	NO	MM
5	5 180223G2_6	Standard	9.250	4.71	5482.640	17892.594	8.794	9.2	-1.0	NO	0.999	NO	MM
6	6 180223G2_7	Standard	23.100	4.71	13237.046	17798.180	21.345	22.2	-3.8	NO	0.999	NO	MM
7	7 180223G2_8	Standard	46.200	4.71	26212.029	16645.363	45.195	47.1	1.9	NO	0.999	NO	MM
8	8 180223G2_9	Standard	69.300	4.71	38823.871	15491.563	71.926	74.9	8.1	NO	0.999	NO	MMX
9	9 180223G2_10	Standard	92.400	4.72	54783.223	15634.240	100.566	104.7	13.3	NO	0.999	NO	MMX

**Compound name: PFDA**

Coefficient of Determination:  $R^2 = 0.997317$

Calibration curve:  $1.0203 * x$

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 180223G2_2	Standard	0.500	4.95	595.268	9097.107	0.654	0.6	28.3	NO	0.997	NO	bb
2	2 180223G2_3	Standard	1.000	4.95	1092.503	9939.635	1.099	1.1	7.7	NO	0.997	NO	MM
3	3 180223G2_4	Standard	2.000	4.95	2348.901	9566.432	2.455	2.4	20.3	NO	0.997	NO	bb
4	4 180223G2_5	Standard	5.000	4.95	5082.690	8946.824	5.681	5.6	11.4	NO	0.997	NO	bb
5	5 180223G2_6	Standard	10.000	4.95	9182.706	8816.899	10.415	10.2	2.1	NO	0.997	NO	bb
6	6 180223G2_7	Standard	25.000	4.95	23729.313	8696.680	27.285	26.7	7.0	NO	0.997	NO	bb
7	7 180223G2_8	Standard	50.000	4.95	42435.055	8483.395	50.021	49.0	-1.9	NO	0.997	NO	bb
8	8 180223G2_9	Standard	75.000	4.95	61296.219	8248.775	74.309	72.8	-2.9	NO	0.997	NO	bb
9	9 180223G2_10	Standard	100.000	4.95	86878.820	7559.229	114.931	112.6	12.6	NO	0.997	NO	bbX

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**Compound name: N-MeFOSAA**

Coefficient of Determination:  $R^2 = 0.996817$

Calibration curve:  $1.4828 * x$

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 180223G2_2	Standard	0.500	5.07	216.499	12707.717	0.681	0.5	-8.1	NO	0.997	NO	MM
2	2 180223G2_3	Standard	1.000	5.07	405.579	13652.991	1.188	0.8	-19.9	NO	0.997	NO	bb
3	3 180223G2_4	Standard	2.000	5.07	807.999	11741.213	2.753	1.9	-7.2	NO	0.997	NO	bb
4	4 180223G2_5	Standard	5.000	5.07	2570.225	14071.951	7.306	4.9	-1.5	NO	0.997	NO	bd
5	5 180223G2_6	Standard	10.000	5.07	4020.162	12882.572	12.482	8.4	-15.8	NO	0.997	NO	bb
6	6 180223G2_7	Standard	25.000	5.07	11394.728	13583.305	33.555	22.6	-9.5	NO	0.997	NO	bd
7	7 180223G2_8	Standard	50.000	5.07	22109.602	12346.496	71.630	48.3	-3.4	NO	0.997	NO	MM
8	8 180223G2_9	Standard	75.000	5.07	34154.773	11885.659	114.944	77.5	3.4	NO	0.997	NO	bb
9	9 180223G2_10	Standard	100.000	5.07	48529.656	12638.679	153.591	103.6	3.6	NO	0.997	NO	MM

**Compound name: N-EtFOSAA**

Coefficient of Determination:  $R^2 = 0.993395$

Calibration curve:  $1.05983 * x$

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 180223G2_2	Standard	0.500	5.20	154.728	12707.717	0.487	0.5	-8.1	NO	0.993	NO	bb
2	2 180223G2_3	Standard	1.000	5.20	373.410	13652.991	1.094	1.0	3.2	NO	0.993	NO	MM
3	3 180223G2_4	Standard	2.000	5.20	628.798	11741.213	2.142	2.0	1.1	NO	0.993	NO	bb
4	4 180223G2_5	Standard	5.000	5.20	1653.245	14071.951	4.699	4.4	-11.3	NO	0.993	NO	bb
5	5 180223G2_6	Standard	10.000	5.20	3759.236	12882.572	11.672	11.0	10.1	NO	0.993	NO	bb
6	6 180223G2_7	Standard	25.000	5.20	9480.810	13583.305	27.919	26.3	5.4	NO	0.993	NO	bd
7	7 180223G2_8	Standard	50.000	5.20	17892.572	12346.496	57.968	54.7	9.4	NO	0.993	NO	bd
8	8 180223G2_9	Standard	75.000	5.20	24490.510	11885.659	82.420	77.8	3.7	NO	0.993	NO	bb
9	9 180223G2_10	Standard	100.000	5.20	30383.941	12638.679	96.162	90.7	-9.3	NO	0.993	NO	bb

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**Compound name: PFUnA**

Coefficient of Determination: R<sup>2</sup> = 0.999540

Calibration curve: 1.00493 \* 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 180223G2_2	Standard	0.500	5.21	522.451	9097.107	0.574	0.6	14.3	NO	1.000	NO	bb
2	2 180223G2_3	Standard	1.000	5.20	1059.691	9939.635	1.066	1.1	6.1	NO	1.000	NO	bb
3	3 180223G2_4	Standard	2.000	5.21	1984.447	9566.432	2.074	2.1	3.2	NO	1.000	NO	bb
4	4 180223G2_5	Standard	5.000	5.21	4406.931	8946.824	4.926	4.9	-2.0	NO	1.000	NO	bb
5	5 180223G2_6	Standard	10.000	5.21	9202.060	8816.899	10.437	10.4	3.9	NO	1.000	NO	MM
6	6 180223G2_7	Standard	25.000	5.21	22094.332	8696.680	25.405	25.3	1.1	NO	1.000	NO	bb
7	7 180223G2_8	Standard	50.000	5.21	41571.934	8483.395	49.004	48.8	-2.5	NO	1.000	NO	bb
8	8 180223G2_9	Standard	75.000	5.21	62562.047	8248.775	75.844	75.5	0.6	NO	1.000	NO	bb
9	9 180223G2_10	Standard	100.000	5.21	78905.391	7559.229	104.383	103.9	3.9	NO	1.000	NO	bbX

**Compound name: PFDoA**

Coefficient of Determination: R<sup>2</sup> = 0.995506

Calibration curve: 0.158397 \* 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 180223G2_2	Standard	0.500	5.43	59.313	9097.107	0.065	0.4	-17.7	NO	0.996	NO	bb
2	2 180223G2_3	Standard	1.000	5.43	144.899	9939.635	0.146	0.9	-8.0	NO	0.996	NO	bb
3	3 180223G2_4	Standard	2.000	5.43	316.583	9566.432	0.331	2.1	4.5	NO	0.996	NO	bb
4	4 180223G2_5	Standard	5.000	5.42	872.572	8946.824	0.975	6.2	23.1	NO	0.996	NO	bb
5	5 180223G2_6	Standard	10.000	5.43	1223.185	8816.899	1.387	8.8	-12.4	NO	0.996	NO	bb
6	6 180223G2_7	Standard	25.000	5.43	3603.039	8696.680	4.143	26.2	4.6	NO	0.996	NO	bb
7	7 180223G2_8	Standard	50.000	5.43	6975.865	8483.395	8.223	51.9	3.8	NO	0.996	NO	bb
8	8 180223G2_9	Standard	75.000	5.42	9419.647	8248.775	11.419	72.1	-3.9	NO	0.996	NO	bb
9	9 180223G2_10	Standard	100.000	5.43	10426.521	7559.229	13.793	87.1	-12.9	NO	0.996	NO	bbX

Dataset: X:\G1.PRO\Results\2018\180223G2\180223G2-CRV.qld

Last Altered: Friday, February 23, 2018 17:19:15 Pacific Standard Time  
 Printed: Friday, February 23, 2018 17:22:19 Pacific Standard Time

**Compound name: PFTrDA**

Coefficient of Determination: R<sup>2</sup> = 0.997291

Calibration curve: 1.3743 \* 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 180223G2_2	Standard	0.500	5.61	726.707	9097.107	0.799	0.6	16.3	NO	0.997	NO	bd
2	2 180223G2_3	Standard	1.000	5.61	1605.347	9939.635	1.615	1.2	17.5	NO	0.997	NO	bb
3	3 180223G2_4	Standard	2.000	5.61	3192.247	9566.432	3.337	2.4	21.4	NO	0.997	NO	bb
4	4 180223G2_5	Standard	5.000	5.61	6533.214	8946.824	7.302	5.3	6.3	NO	0.997	NO	bb
5	5 180223G2_6	Standard	10.000	5.61	12468.454	8816.899	14.142	10.3	2.9	NO	0.997	NO	bb
6	6 180223G2_7	Standard	25.000	5.61	32196.830	8696.680	37.022	26.9	7.8	NO	0.997	NO	MM
7	7 180223G2_8	Standard	50.000	5.62	56222.504	8483.395	66.274	48.2	-3.6	NO	0.997	NO	bb
8	8 180223G2_9	Standard	75.000	5.61	83378.453	8248.775	101.080	73.5	-1.9	NO	0.997	NO	bb
9	9 180223G2_10	Standard	100.000	5.61	109636.859	7559.229	145.037	105.5	5.5	NO	0.997	NO	bbX

**Compound name: PFTeDA**

Coefficient of Determination: R<sup>2</sup> = 0.998250

Calibration curve: 1.24932 \* 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 180223G2_2	Standard	0.500	5.79	611.723	9097.107	0.672	0.5	7.6	NO	0.998	NO	MM
2	2 180223G2_3	Standard	1.000	5.79	1435.181	9939.635	1.444	1.2	15.6	NO	0.998	NO	bb
3	3 180223G2_4	Standard	2.000	5.78	2593.027	9566.432	2.711	2.2	8.5	NO	0.998	NO	MM
4	4 180223G2_5	Standard	5.000	5.78	6228.092	8946.824	6.961	5.6	11.4	NO	0.998	NO	bb
5	5 180223G2_6	Standard	10.000	5.78	11576.812	8816.899	13.130	10.5	5.1	NO	0.998	NO	bb
6	6 180223G2_7	Standard	25.000	5.79	28530.078	8696.680	32.806	26.3	5.0	NO	0.998	NO	MM
7	7 180223G2_8	Standard	50.000	5.79	52361.477	8483.395	61.722	49.4	-1.2	NO	0.998	NO	bd
8	8 180223G2_9	Standard	75.000	5.79	75116.234	8248.775	91.064	72.9	-2.8	NO	0.998	NO	MM
9	9 180223G2_10	Standard	100.000	5.79	102852.344	7559.229	136.062	108.9	8.9	NO	0.998	NO	MMX

Dataset: X:\G1.PRO\Results\2018\180223G2\180223G2-CRV.qld

Last Altered: Friday, February 23, 2018 17:19:15 Pacific Standard Time

Printed: Friday, February 23, 2018 17:22:19 Pacific Standard Time

**Compound name: 13C2-PFHxA**

Response Factor: 0.731379

RRF SD: 0.0238184, Relative SD: 3.25663

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 180223G2_2	Standard	10.000	3.38	6700.987	9097.107	7.366	10.1	0.7	NO		NO	bd
2	2 180223G2_3	Standard	10.000	3.38	7319.206	9939.635	7.364	10.1	0.7	NO		NO	bb
3	3 180223G2_4	Standard	10.000	3.38	6657.065	9566.432	6.875	9.4	-6.0	NO		NO	bb
4	4 180223G2_5	Standard	10.000	3.38	6657.985	8946.824	7.442	10.2	1.7	NO		NO	bb
5	5 180223G2_6	Standard	10.000	3.38	6290.871	8816.899	7.135	9.8	-2.4	NO		NO	bb
6	6 180223G2_7	Standard	10.000	3.38	6250.375	8696.680	7.187	9.8	-1.7	NO		NO	bb
7	7 180223G2_8	Standard	10.000	3.38	6455.338	8483.395	7.609	10.4	4.0	NO		NO	bb
8	8 180223G2_9	Standard	10.000	3.38	6213.207	8248.775	7.532	10.3	3.0	NO		NO	bb
9	9 180223G2_10	Standard	10.000	3.38	6040.483	7559.229	7.991	10.9	9.3	NO		NO	bbX

**Compound name: 13C2-PFDA**

Response Factor: 0.909838

RRF SD: 0.0477189, Relative SD: 5.24477

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 180223G2_2	Standard	10.000	4.95	7725.546	9097.107	8.492	9.3	-6.7	NO		NO	bb
2	2 180223G2_3	Standard	10.000	4.95	8959.234	9939.635	9.014	9.9	-0.9	NO		NO	MM
3	3 180223G2_4	Standard	10.000	4.95	8703.722	9566.432	9.098	10.0	-0.0	NO		NO	bb
4	4 180223G2_5	Standard	10.000	4.95	8332.058	8946.824	9.313	10.2	2.4	NO		NO	bb
5	5 180223G2_6	Standard	10.000	4.95	7919.763	8816.899	8.982	9.9	-1.3	NO		NO	bb
6	6 180223G2_7	Standard	10.000	4.95	8753.030	8696.680	10.065	11.1	10.6	NO		NO	bb
7	7 180223G2_8	Standard	10.000	4.95	7796.922	8483.395	9.191	10.1	1.0	NO		NO	bb
8	8 180223G2_9	Standard	10.000	4.95	7120.327	8248.775	8.632	9.5	-5.1	NO		NO	bb
9	9 180223G2_10	Standard	10.000	4.95	7540.862	7559.229	9.976	11.0	9.6	NO		NO	bbX

Dataset: X:\G1.PRO\Results\2018\180223G2\180223G2-CRV.qld

Last Altered: Friday, February 23, 2018 17:19:15 Pacific Standard Time

Printed: Friday, February 23, 2018 17:22:19 Pacific Standard Time

**Compound name: d5-N-EtFOSAA**

Response Factor: 1.04937

RRF SD: 0.099298, Relative SD: 9.46259

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	180223G2_2	Standard	40.000	5.19	11991.277	12707.717	37.745	36.0	-10.1	NO		NO	bb
2	180223G2_3	Standard	40.000	5.19	16726.662	13652.991	49.005	46.7	16.7	NO		NO	bb
3	180223G2_4	Standard	40.000	5.19	14092.588	11741.213	48.011	45.8	14.4	NO		NO	bb
4	180223G2_5	Standard	40.000	5.19	14119.112	14071.951	40.134	38.2	-4.4	NO		NO	bb
5	180223G2_6	Standard	40.000	5.19	13679.503	12882.572	42.474	40.5	1.2	NO		NO	bb
6	180223G2_7	Standard	40.000	5.19	14178.573	13583.305	41.753	39.8	-0.5	NO		NO	bd
7	180223G2_8	Standard	40.000	5.19	12425.209	12346.496	40.255	38.4	-4.1	NO		NO	bb
8	180223G2_9	Standard	40.000	5.19	11514.227	11885.659	38.750	36.9	-7.7	NO		NO	bb
9	180223G2_10	Standard	40.000	5.19	12527.367	12638.679	39.648	37.8	-5.5	NO		NO	bd

**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	180223G2_2	Standard	10.000	4.31	9097.107	9097.107	10.000	10.0	0.0	NO		NO	bb
2	180223G2_3	Standard	10.000	4.31	9939.635	9939.635	10.000	10.0	0.0	NO		NO	bb
3	180223G2_4	Standard	10.000	4.31	9566.432	9566.432	10.000	10.0	0.0	NO		NO	bb
4	180223G2_5	Standard	10.000	4.31	8946.824	8946.824	10.000	10.0	0.0	NO		NO	bb
5	180223G2_6	Standard	10.000	4.31	8816.899	8816.899	10.000	10.0	0.0	NO		NO	bb
6	180223G2_7	Standard	10.000	4.31	8696.680	8696.680	10.000	10.0	0.0	NO		NO	bd
7	180223G2_8	Standard	10.000	4.31	8483.395	8483.395	10.000	10.0	0.0	NO		NO	bd
8	180223G2_9	Standard	10.000	4.31	8248.775	8248.775	10.000	10.0	0.0	NO		NO	bb
9	180223G2_10	Standard	10.000	4.31	7559.229	7559.229	10.000	10.0	0.0	NO		NO	bbX

Dataset: X:\G1.PRO\Results\2018\180223G2\180223G2-CRV.qld

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**Compound name: 13C4-PFOS**

Response Factor: 1

RRF SD: 1.35974e-016, Relative SD: 1.35974e-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	180223G2_2	Standard	28.700	4.71	16868.711	16868.711	28.700	28.7	0.0	NO		NO	bd
2	180223G2_3	Standard	28.700	4.71	18929.600	18929.600	28.700	28.7	0.0	NO		NO	MM
3	180223G2_4	Standard	28.700	4.71	19568.625	19568.625	28.700	28.7	0.0	NO		NO	bd
4	180223G2_5	Standard	28.700	4.71	17986.094	17986.094	28.700	28.7	0.0	NO		NO	bd
5	180223G2_6	Standard	28.700	4.71	17892.594	17892.594	28.700	28.7	0.0	NO		NO	bd
6	180223G2_7	Standard	28.700	4.71	17798.180	17798.180	28.700	28.7	0.0	NO		NO	bb
7	180223G2_8	Standard	28.700	4.71	16645.363	16645.363	28.700	28.7	0.0	NO		NO	bb
8	180223G2_9	Standard	28.700	4.71	15491.563	15491.563	28.700	28.7	0.0	NO		NO	bbX
9	180223G2_10	Standard	28.700	4.71	15634.240	15634.240	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	180223G2_2	Standard	40.000	5.07	12707.717	12707.717	40.000	40.0	0.0	NO		NO	bb
2	180223G2_3	Standard	40.000	5.07	13652.991	13652.991	40.000	40.0	0.0	NO		NO	bb
3	180223G2_4	Standard	40.000	5.07	11741.213	11741.213	40.000	40.0	0.0	NO		NO	bd
4	180223G2_5	Standard	40.000	5.07	14071.951	14071.951	40.000	40.0	0.0	NO		NO	bd
5	180223G2_6	Standard	40.000	5.07	12882.572	12882.572	40.000	40.0	0.0	NO		NO	bd
6	180223G2_7	Standard	40.000	5.07	13583.305	13583.305	40.000	40.0	0.0	NO		NO	bb
7	180223G2_8	Standard	40.000	5.07	12346.496	12346.496	40.000	40.0	0.0	NO		NO	bb
8	180223G2_9	Standard	40.000	5.07	11885.659	11885.659	40.000	40.0	0.0	NO		NO	bb
9	180223G2_10	Standard	40.000	5.07	12638.679	12638.679	40.000	40.0	0.0	NO		NO	MM

Dataset: X:\G1.PRO\Results\2018\180223G2\180223G2-CRV.qld

Last Altered: Friday, February 23, 2018 17:19:15 Pacific Standard Time

Printed: Friday, February 23, 2018 17:22:19 Pacific Standard Time

Method: X:\G1.PRO\MethDB\PFAS\_DW\_L14\_1223.mdb 23 Feb 2018 15:59:15

Calibration: X:\G1.PRO\CurveDB\C18\_537\_Q1\_02-23-18\_L14.cdb 23 Feb 2018 17:19:14

Name: 180223G2\_2, Date: 23-Feb-2018, Time: 13:29:59, ID: ST180223G2-1 PFC CS-3 537 18B2301, Description: PFC CS-3 537 18B2301

#	Name	IS#	CoD	CoD Flag	%RSD
1	1 PFBS	19	0.9963	NO	
2	2 PFHxA	18	0.9977	NO	
3	3 PFHpA	18	0.9989	NO	
4	4 PFHxS	19	0.9977	NO	
5	5 PFOA	18	0.9984	NO	
6	6 PFNA	18	0.9996	NO	
7	7 PFOS	19	0.9992	NO	
8	8 PFDA	18	0.9973	NO	
9	9 N-MeFOSAA	20	0.9968	NO	
10	10 N-EtFOSAA	20	0.9934	NO	
11	11 PFUnA	18	0.9995	NO	
12	12 PFDaA	18	0.9955	NO	
13	13 PFTrDA	18	0.9973	NO	
14	14 PFTeDA	18	0.9982	NO	
15	15 13C2-PFHxA	18		NO	3.257
16	16 13C2-PFDA	18		NO	5.245
17	17 d5-N-EtFOSAA	20		NO	9.463
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, February 23, 2018 17:34:09 Pacific Standard Time  
Printed: Friday, February 23, 2018 17:36:22 Pacific Standard Time

Method: X:\G1.PRO\MethDB\PFAS\_DW\_L14\_1223.mdb 23 Feb 2018 15:59:15  
Calibration: X:\G1.PRO\CurveDB\C18\_537\_Q1\_02-23-18\_L14.cdb 23 Feb 2018 16:46:11

Compound name: PFBS

	Name	ID	Acq.Date	Acq.Time
1	180223G2_1	IPA	23-Feb-18	13:17:36
2	180223G2_2	ST180223G2-1 PFC CS-3 537 18B2301	23-Feb-18	13:29:59
3	180223G2_3	ST180223G2-2 PFC CS-2 537 18B2302	23-Feb-18	13:42:20
4	180223G2_4	ST180223G2-3 PFC CS-1 537 18B2310	23-Feb-18	13:54:45
5	180223G2_5	ST180222G3-4 PFC CS0 537 18B2303	23-Feb-18	14:07:10
6	180223G2_6	ST180223G2-5 PFC CS1 537 18B2304	23-Feb-18	14:19:35
7	180223G2_7	ST180223G2-6 PFC CS2 537 18B2305	23-Feb-18	14:32:01
8	180223G2_8	ST180223G2-7 PFC CS3 537 18B2306	23-Feb-18	14:44:25
9	180223G2_9	ST180223G2-8 PFC CS4 537 18B2307	23-Feb-18	14:56:52
10	180223G2_10	ST180223G2-9 PFC CS5 537 18B2308	23-Feb-18	15:09:16
11	180223G2_11	IPA	23-Feb-18	15:21:37
12	180223G2_12	ICV180223G2-1 PFC ICV 537 18B2309	23-Feb-18	15:34:05
13	180223G2_13	IPA	23-Feb-18	15:46:26

# ICAL

## Compound 18: 13C2-PFOA

high 9939.64 RPD  
low 8248.78 18.59

ID	Name	Type	Std.	CRT	Area	IS Area	Respo	Primary	Flags
1	ST180223G2-1 PFC CS-3 537 18B2301	180223G2_2	Analyte	10	4.31	9097.11	9097.11	10	bb
2	ST180223G2-2 PFC CS-2 537 18B2302	180223G2_3	Analyte	10	4.31	9939.64	9939.64	10	bb
3	ST180223G2-3 PFC CS-1 537 18B2310	180223G2_4	Standard	10	4.31	9566.43	9566.43	10	bb
4	ST180222G3-4 PFC CS0 537 18B2303	180223G2_5	Standard	10	4.31	8946.82	8946.82	10	bb
5	ST180223G2-5 PFC CS1 537 18B2304	180223G2_6	Standard	10	4.31	8816.90	8816.90	10	bb
6	ST180223G2-6 PFC CS2 537 18B2305	180223G2_7	Standard	10	4.31	8696.68	8696.68	10	bd
7	ST180223G2-7 PFC CS3 537 18B2306	180223G2_8	Standard	10	4.31	8483.40	8483.40	10	bd
8	ST180223G2-8 PFC CS4 537 18B2307	180223G2_9	Standard	10	4.31	8248.78	8248.78	10	bb
9	ST180223G2-9 PFC CS5 537 18B2308	180223G2_10	Standard	10	4.31	7559.23	7559.23	10	bbX
							average		
							8974.47		

## Compound 19: 13C4-PFOS

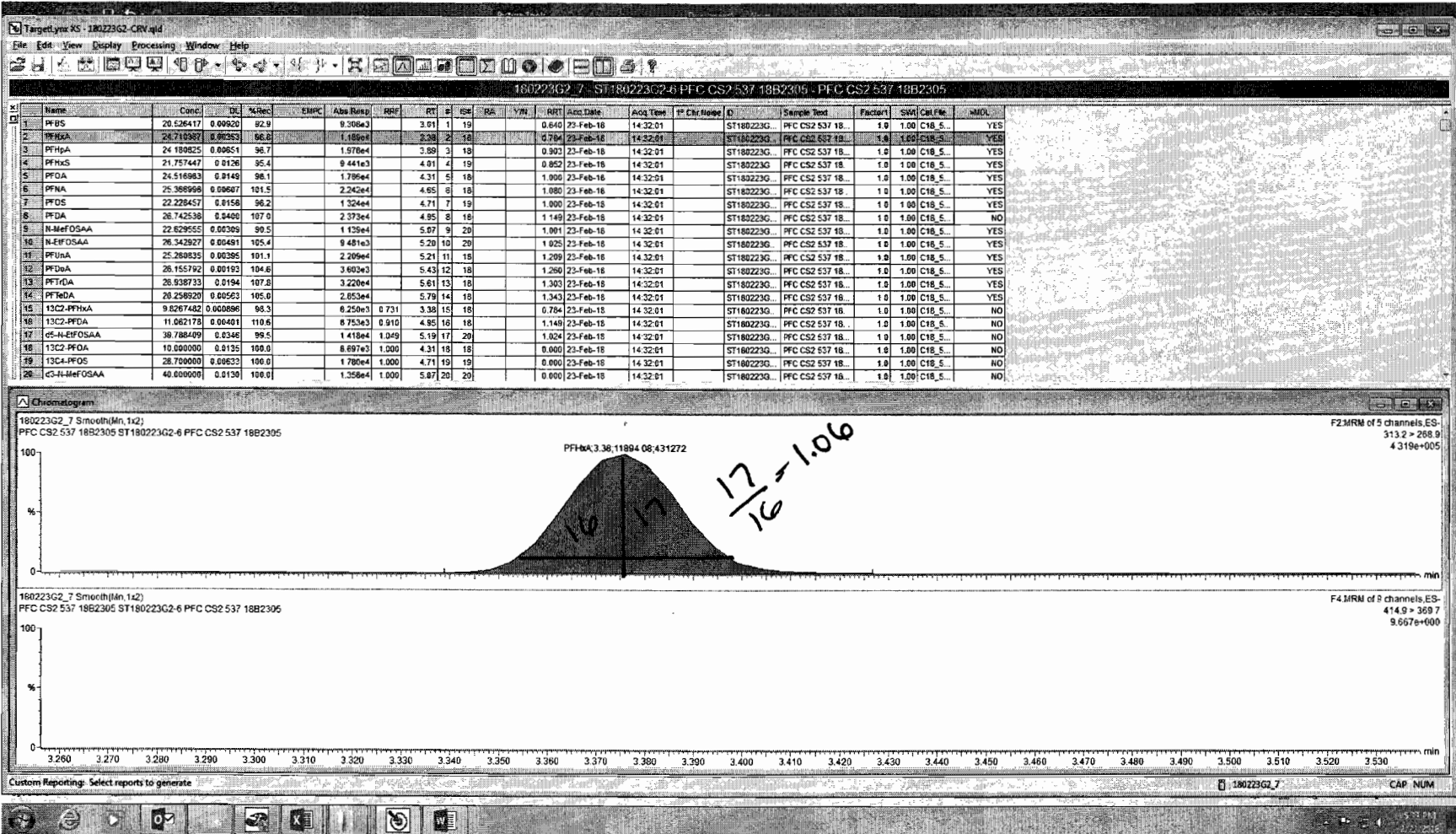
high 19568.625 RPD  
low 16645.363 16.14

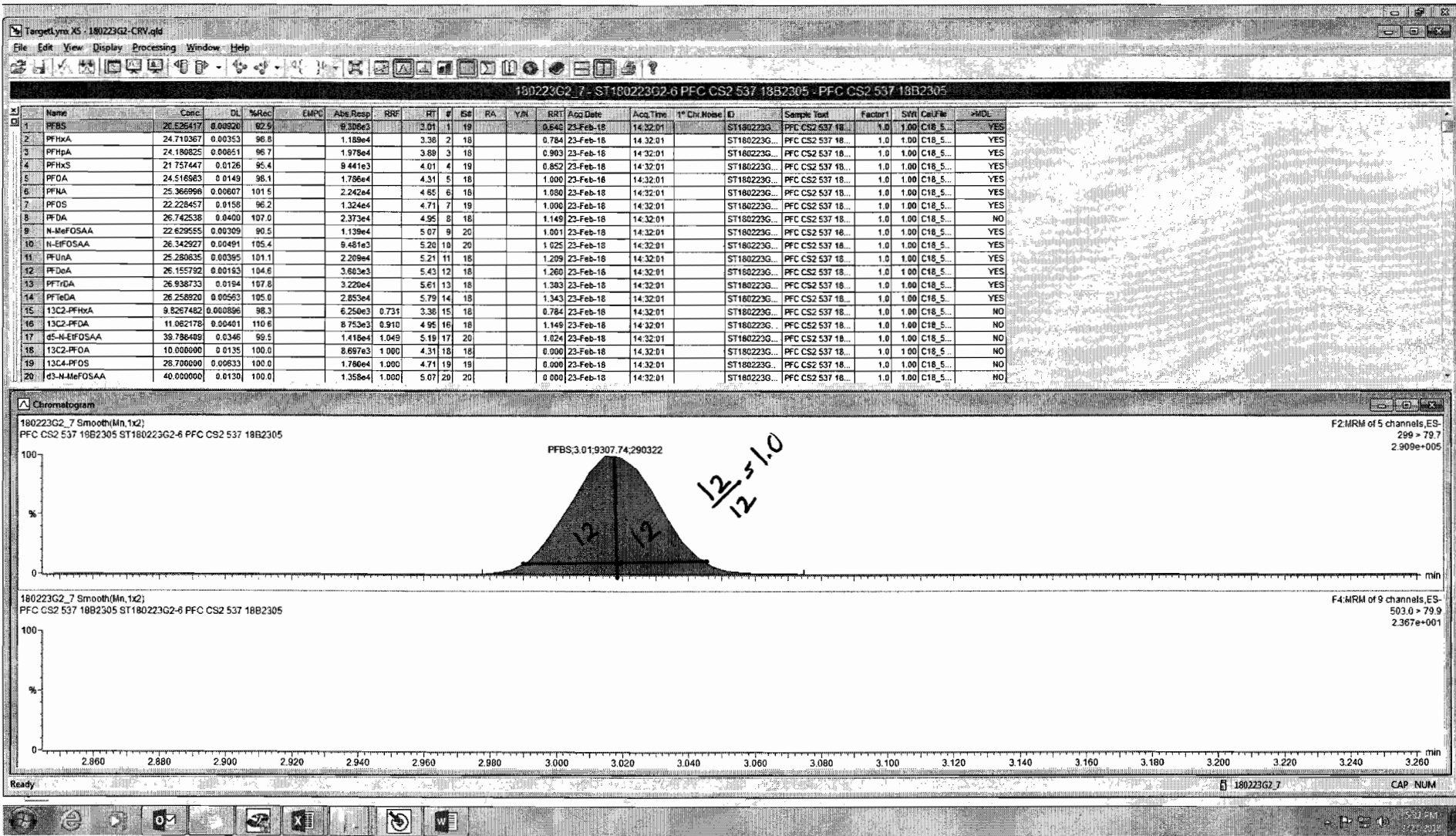
ID	Name	Type	Std.	CRT	Area	IS Area	Respo	Primary	Flags
1	ST180223G2-1 PFC CS-3 537 18B2301	180223G2_2	Analyte	28.7	4.71	16868.71	16868.71	28.7	bd
2	ST180223G2-2 PFC CS-2 537 18B2302	180223G2_3	Analyte	28.7	4.71	18923.35	18783.59	28.7	bb
3	ST180223G2-3 PFC CS-1 537 18B2310	180223G2_4	Standard	28.7	4.71	19568.63	19568.63	28.7	bd
4	ST180222G3-4 PFC CS0 537 18B2303	180223G2_5	Standard	28.7	4.71	17986.09	17986.09	28.7	bd
5	ST180223G2-5 PFC CS1 537 18B2304	180223G2_6	Standard	28.7	4.71	17892.59	17892.59	28.7	bd
6	ST180223G2-6 PFC CS2 537 18B2305	180223G2_7	Standard	28.7	4.71	17798.18	17798.18	28.7	bb
7	ST180223G2-7 PFC CS3 537 18B2306	180223G2_8	Standard	28.7	4.71	16645.36	16645.36	28.7	bb
8	ST180223G2-8 PFC CS4 537 18B2307	180223G2_9	Standard	28.7	4.71	15491.56	15491.56	28.7	bbX
9	ST180223G2-9 PFC CS5 537 18B2308	180223G2_10	Standard	28.7	4.71	15634.24	15634.24	28.7	bbX
							average		
							17934.74		

**Compound 20: d3-N-MeFOSAA**

high	14071.95	RPD
low	11741.21	18.06

ID	Name	Type	Std. CRT	Area	IS Area	Respo Primary	Flags
1	ST180223G2-1 PFC CS-3 537 18B2301	180223G2_2	Analyte	40 5.07	12707.72	12707.72	40 bb
2	ST180223G2-2 PFC CS-2 537 18B2302	180223G2_3	Analyte	40 5.07	13652.99	13652.99	40 bb
3	ST180223G2-3 PFC CS-1 537 18B2310	180223G2_4	Standard	40 5.07	11741.21	11741.21	40 bd
4	ST180222G3-4 PFC CS0 537 18B2303	180223G2_5	Standard	40 5.07	14071.95	14071.95	40 bd
5	ST180223G2-5 PFC CS1 537 18B2304	180223G2_6	Standard	40 5.07	12882.57	12882.57	40 bd
6	ST180223G2-6 PFC CS2 537 18B2305	180223G2_7	Standard	40 5.07	13583.31	13583.31	40 bb
7	ST180223G2-7 PFC CS3 537 18B2306	180223G2_8	Standard	40 5.07	12346.50	12346.50	40 bb
8	ST180223G2-8 PFC CS4 537 18B2307	180223G2_9	Standard	40 5.07	11885.66	11885.66	40 bb
9	ST180223G2-9 PFC CS5 537 18B2308	180223G2_10	Standard	40 5.07	12557.49	12557.49	40 bb
						average	
						12825.49	





Dataset: X:\G1.PRO\Results\2018\180223G2\180223G2-CRV.qld

Last Altered: Friday, February 23, 2018 17:19:15 Pacific Standard Time

Printed: Friday, February 23, 2018 17:26:36 Pacific Standard Time

Method: X:\G1.PRO\MethDB\PFAS\_DW\_L14\_1223.mdb 23 Feb 2018 15:59:15

Calibration: X:\G1.PRO\CurveDB\C18\_537\_Q1\_02-23-18\_L14.cdb 23 Feb 2018 17:19:14

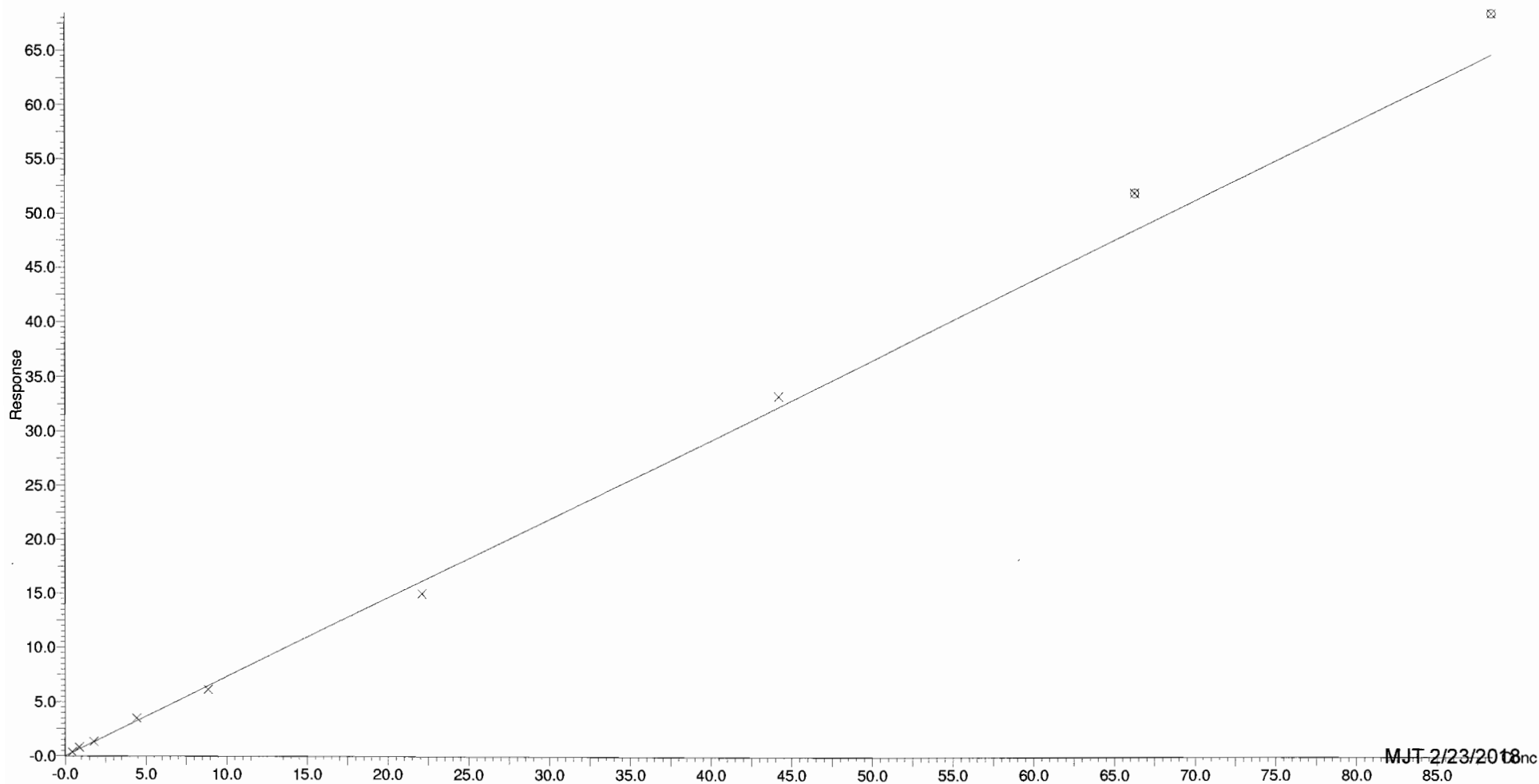
Compound name: PFBS

Coefficient of Determination:  $R^2 = 0.996349$

Calibration curve:  $0.731202 * x$

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

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



MJT 2/23/2018 inc

Dataset: X:\G1.PRO\Results\2018\180223G2\180223G2-CRV.qld

Last Altered: Friday, February 23, 2018 17:19:15 Pacific Standard Time

Printed: Friday, February 23, 2018 17:26:36 Pacific Standard Time

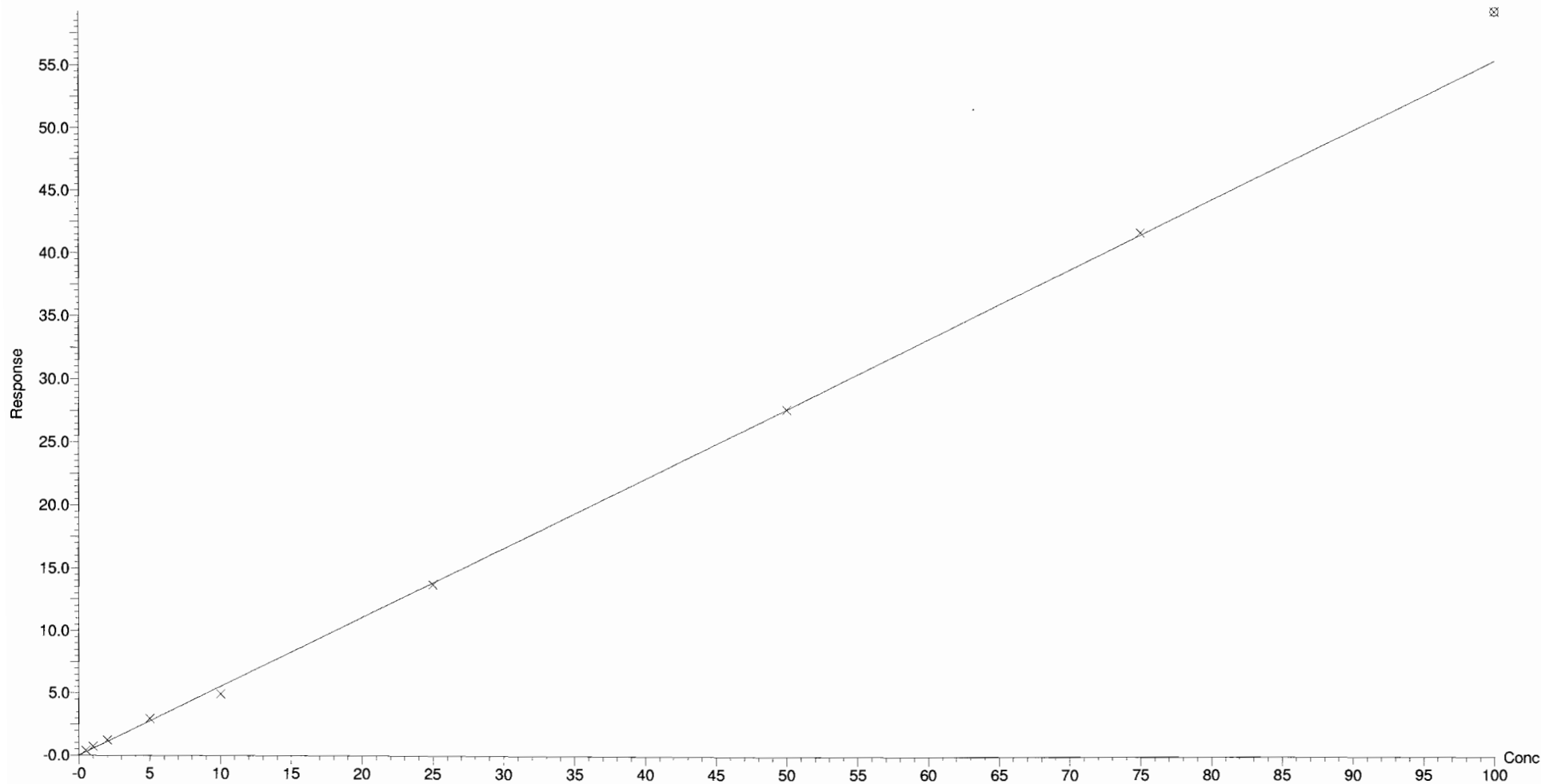
Compound name: PFHxA

Coefficient of Determination:  $R^2 = 0.997717$

Calibration curve:  $0.553475 * x$

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

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



MJT 2/23/2018

Dataset: X:\G1.PRO\Results\2018\180223G2\180223G2-CRV.qld

Last Altered: Friday, February 23, 2018 17:19:15 Pacific Standard Time

Printed: Friday, February 23, 2018 17:26:36 Pacific Standard Time

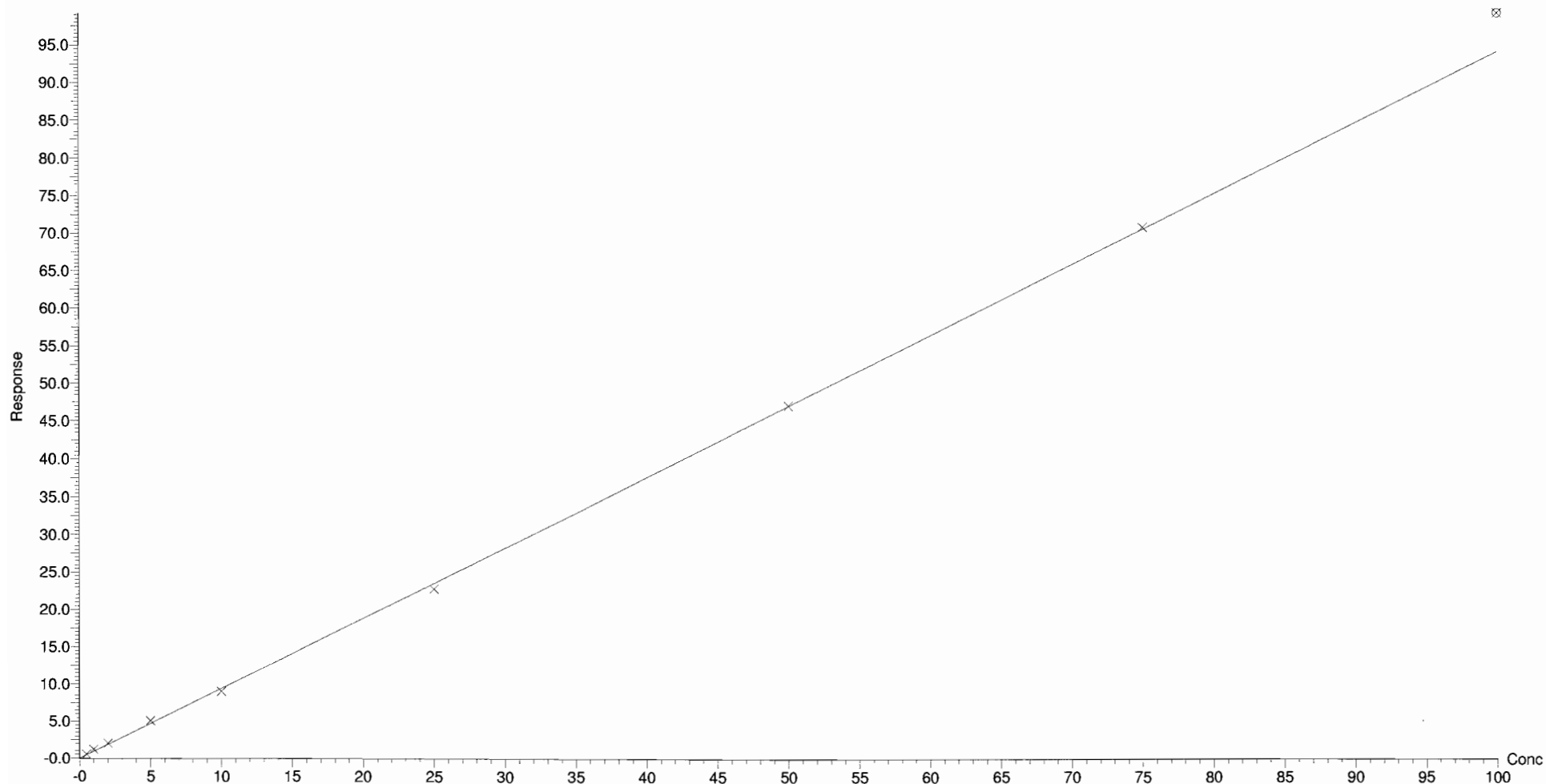
Compound name: PFHpA

Coefficient of Determination:  $R^2 = 0.998875$

Calibration curve:  $0.940423 * x$

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

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



MJT 2/23/2018



Dataset: X:\G1.PRO\Results\2018\180223G2\180223G2-CRV.qld

Last Altered: Friday, February 23, 2018 17:19:15 Pacific Standard Time

Printed: Friday, February 23, 2018 17:26:36 Pacific Standard Time

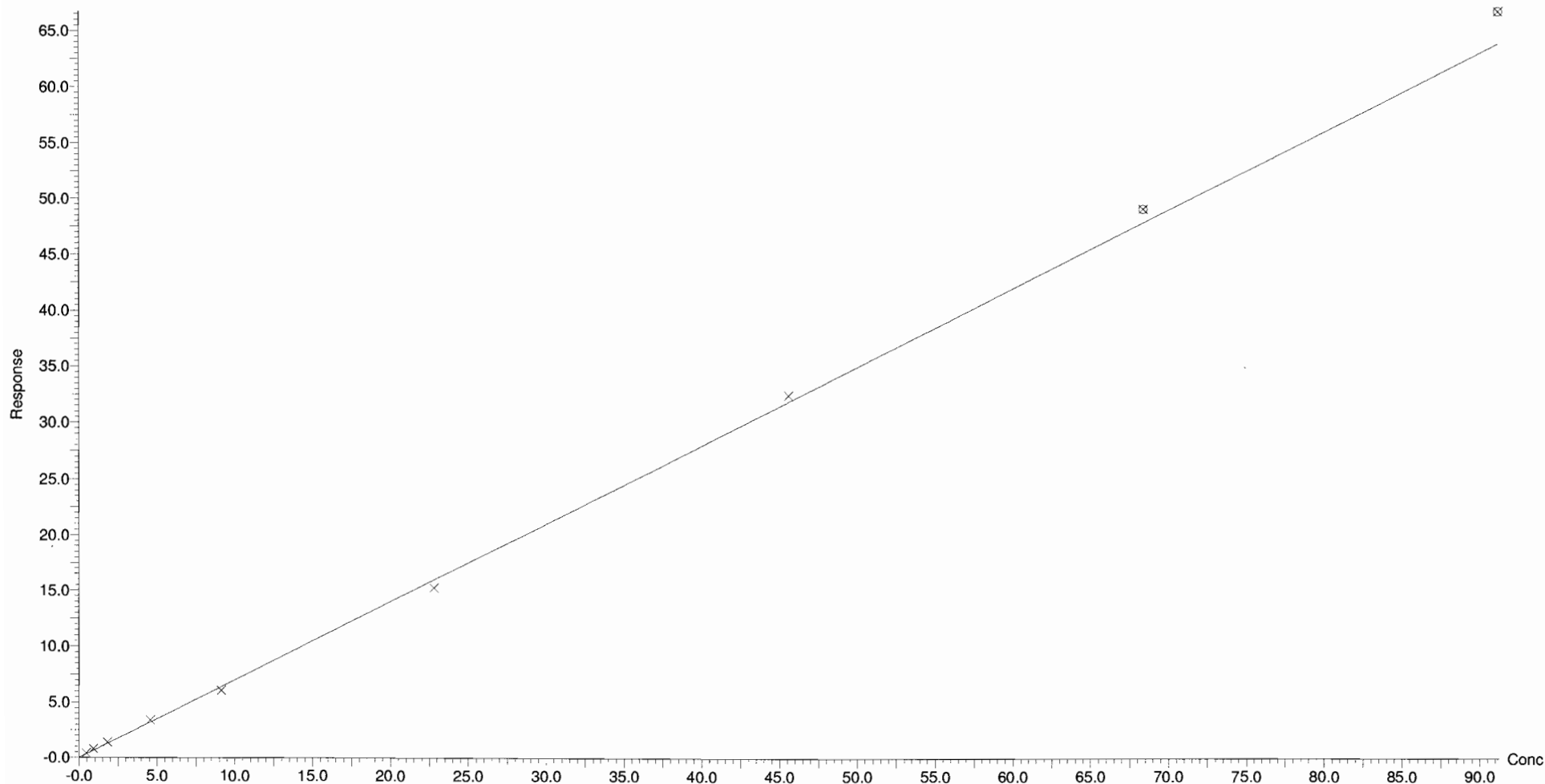
Compound name: PFHxS

Coefficient of Determination:  $R^2 = 0.997652$

Calibration curve:  $0.699727 * x$

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

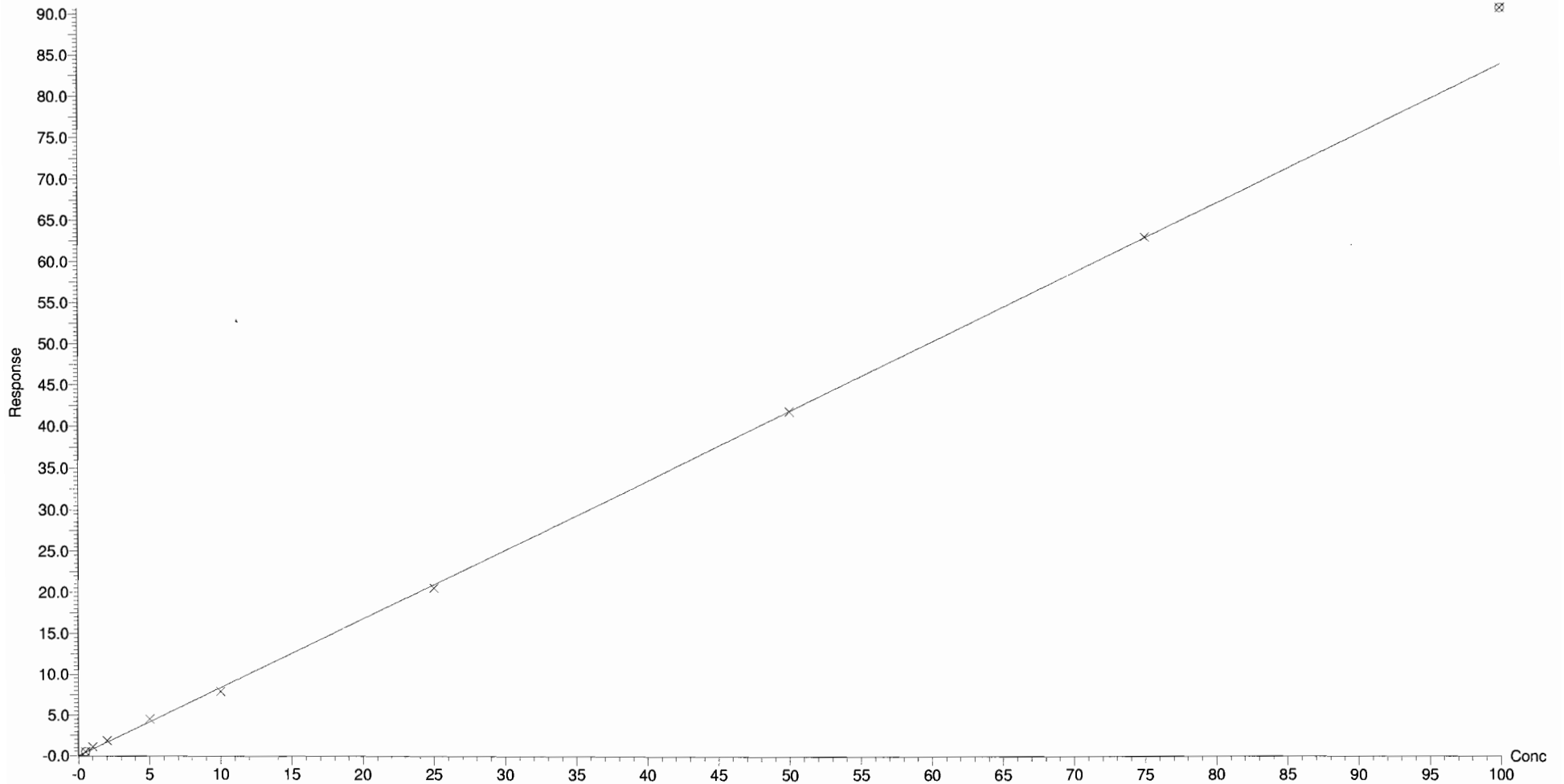
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None



MJT 2/23/2018

Dataset: X:\G1.PRO\Results\2018\180223G2\180223G2-CRV.qld  
Last Altered: Friday, February 23, 2018 17:19:15 Pacific Standard Time  
Printed: Friday, February 23, 2018 17:26:36 Pacific Standard Time

Compound name: PFOA  
Coefficient of Determination:  $R^2 = 0.998447$   
Calibration curve:  $0.83774 * x$   
Response type: Internal Std ( Ref 18 ), Area \* ( IS Conc. / IS Area )  
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None



MJT 2/23/2018

Dataset: X:\G1.PRO\Results\2018\180223G2\180223G2-CRV.qld

Last Altered: Friday, February 23, 2018 17:19:15 Pacific Standard Time

Printed: Friday, February 23, 2018 17:26:36 Pacific Standard Time

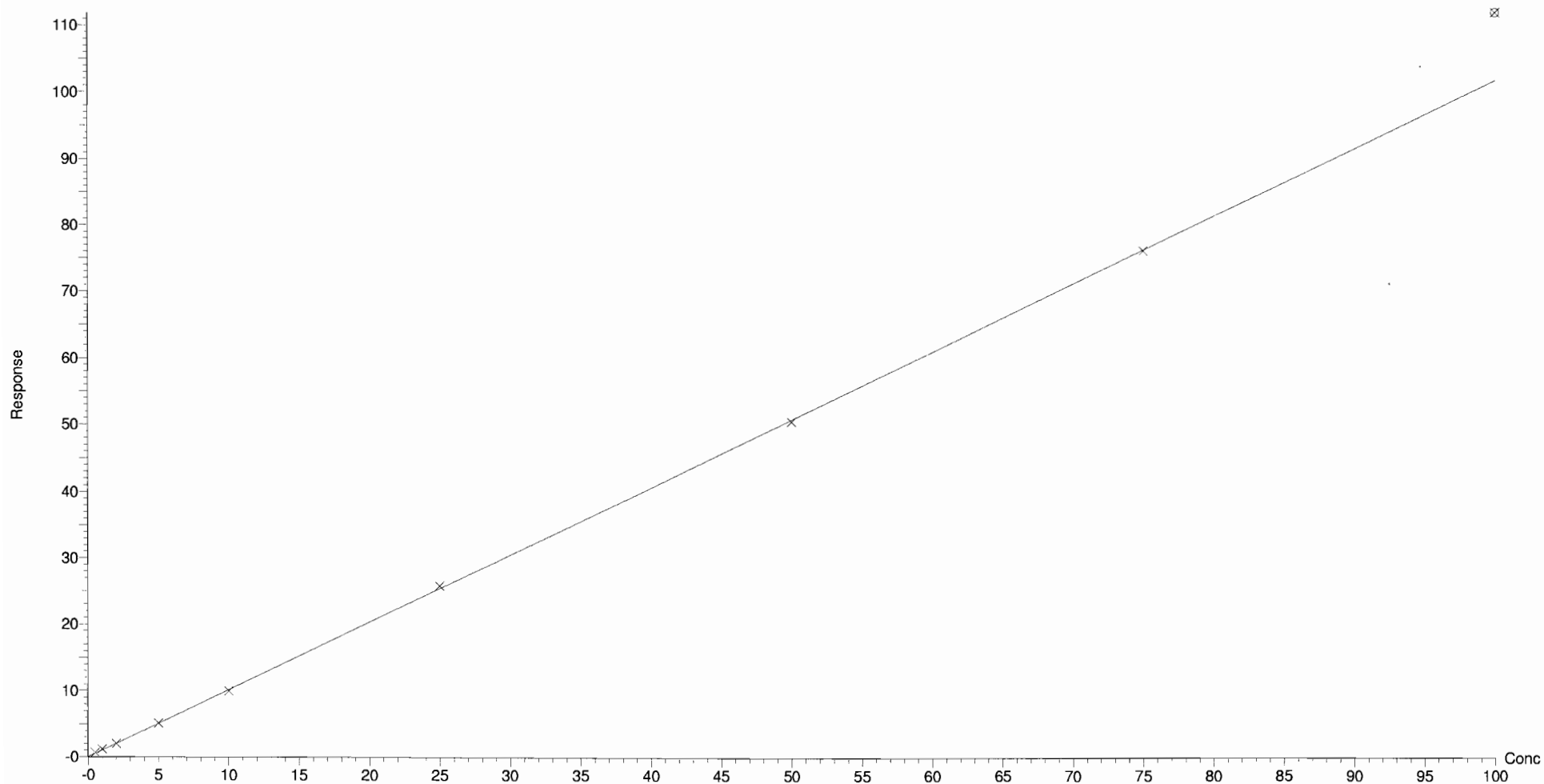
Compound name: PFNA

Coefficient of Determination:  $R^2 = 0.999615$

Calibration curve:  $1.01645 * x$

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

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



MJT 2/23/2018

Dataset: X:\G1.PRO\Results\2018\180223G2\180223G2-CRV.qld

Last Altered: Friday, February 23, 2018 17:19:15 Pacific Standard Time

Printed: Friday, February 23, 2018 17:26:36 Pacific Standard Time

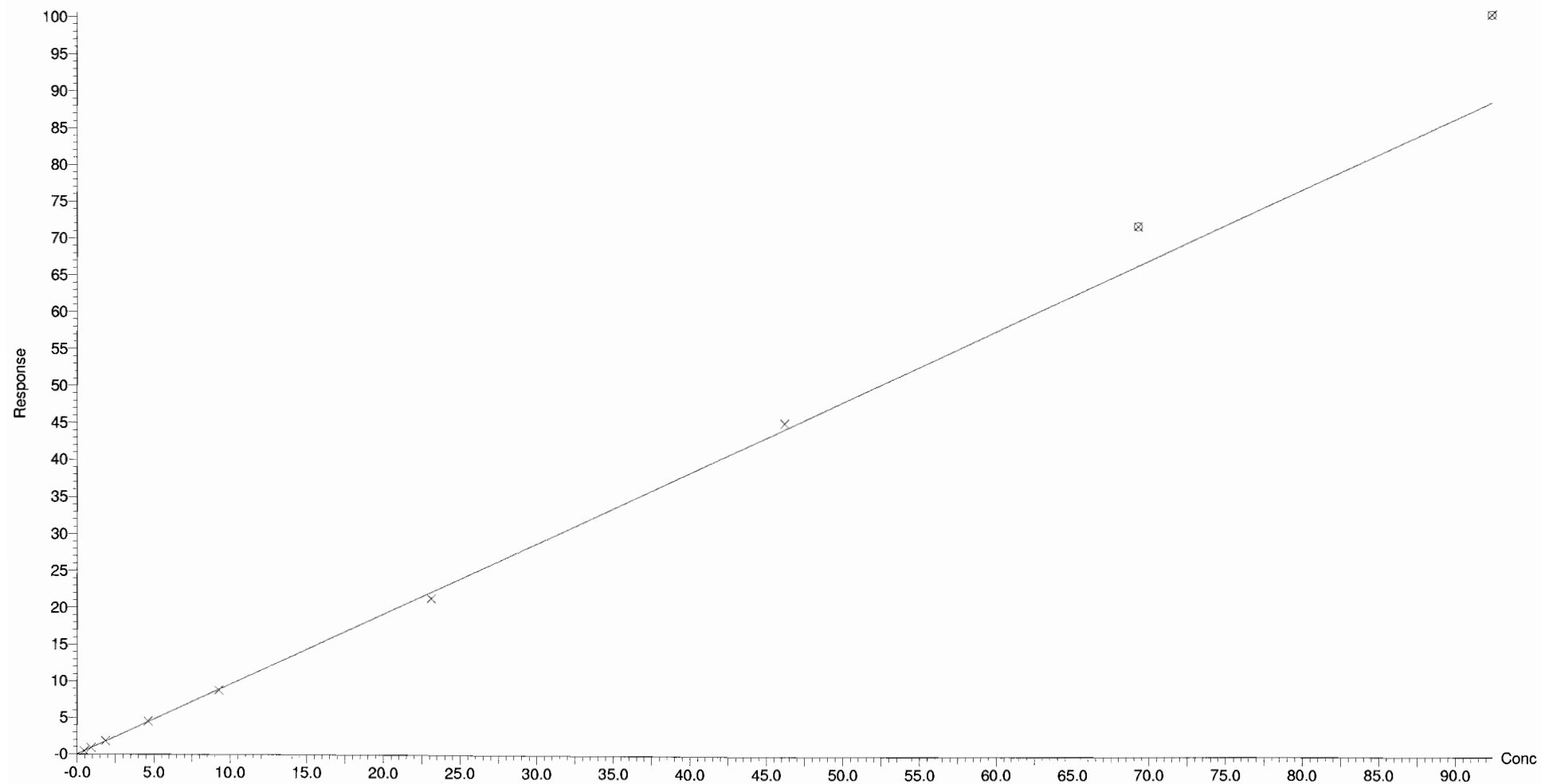
Compound name: PFOS

Coefficient of Determination:  $R^2 = 0.999243$

Calibration curve:  $0.960258 * x$

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

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



MJT 2/23/2018

Dataset: X:\G1.PRO\Results\2018\180223G2\180223G2-CRV.qld

Last Altered: Friday, February 23, 2018 17:19:15 Pacific Standard Time

Printed: Friday, February 23, 2018 17:26:36 Pacific Standard Time

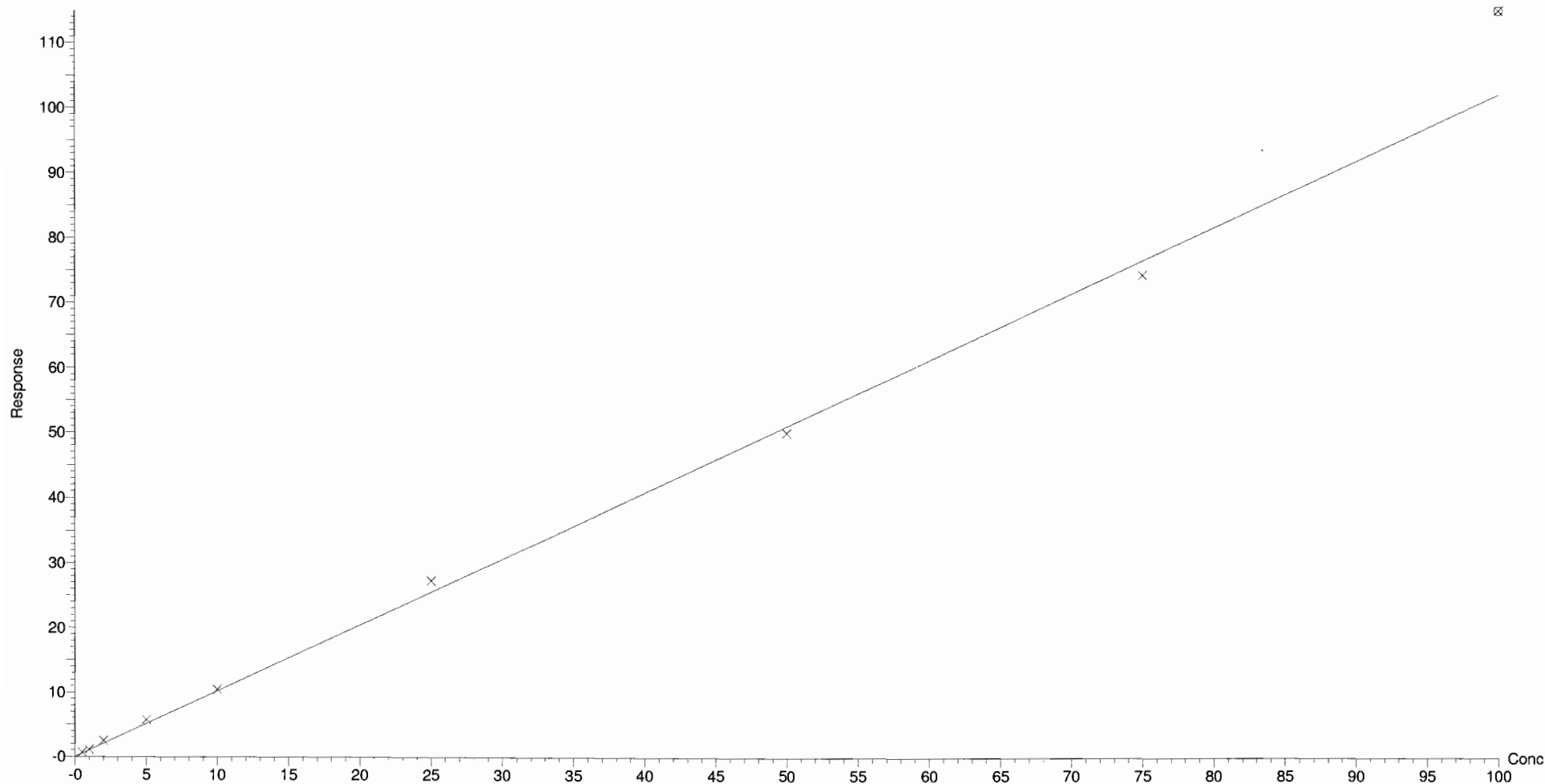
Compound name: PFDA

Coefficient of Determination:  $R^2 = 0.997317$

Calibration curve:  $1.0203 * x$

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

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



MJT 2/23/2018

Dataset: X:\G1.PRO\Results\2018\180223G2\180223G2-CRV.qld

Last Altered: Friday, February 23, 2018 17:19:15 Pacific Standard Time

Printed: Friday, February 23, 2018 17:26:36 Pacific Standard Time

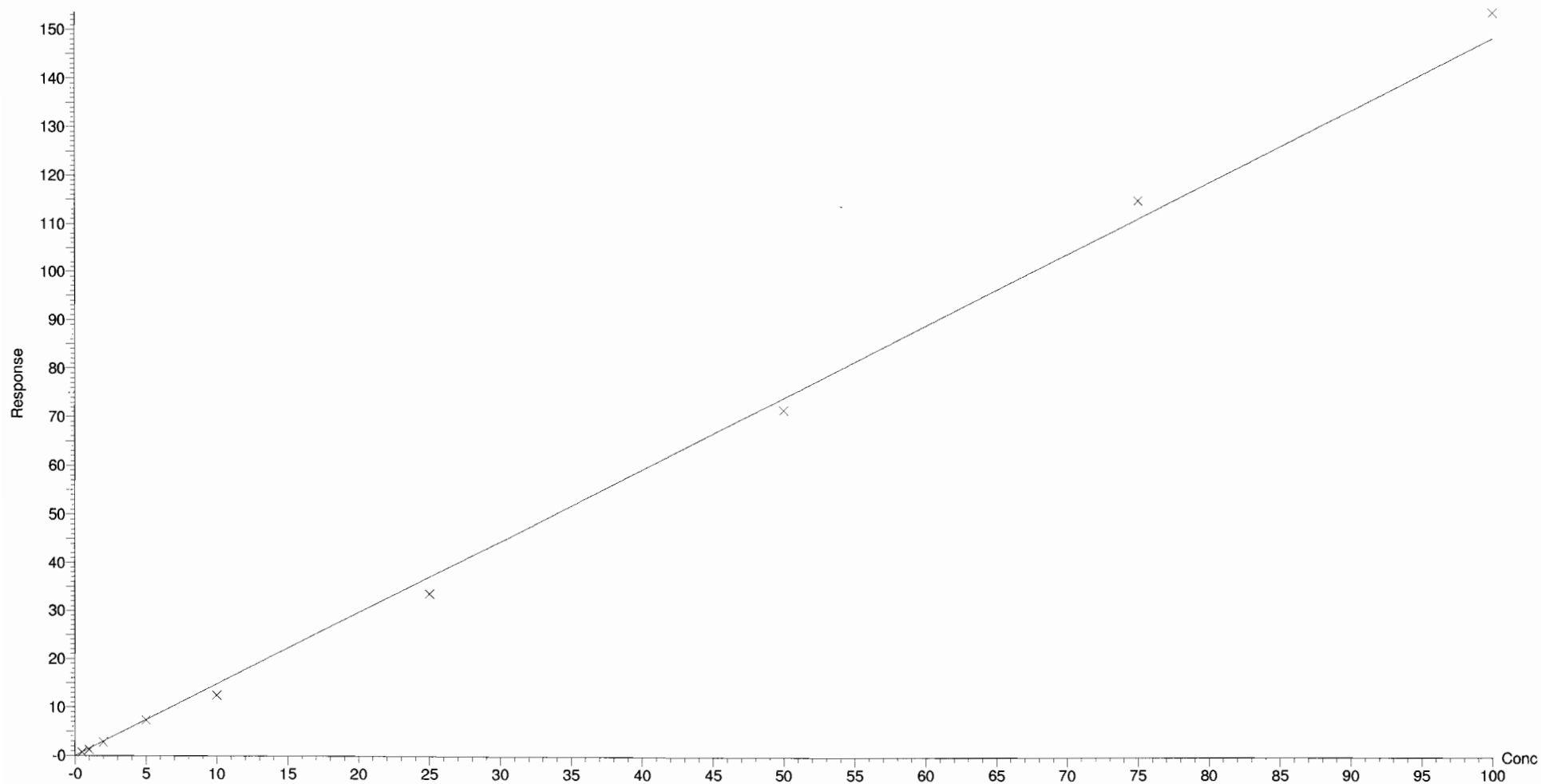
Compound name: N-MeFOSAA

Coefficient of Determination:  $R^2 = 0.996817$

Calibration curve:  $1.4828 * x$

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

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



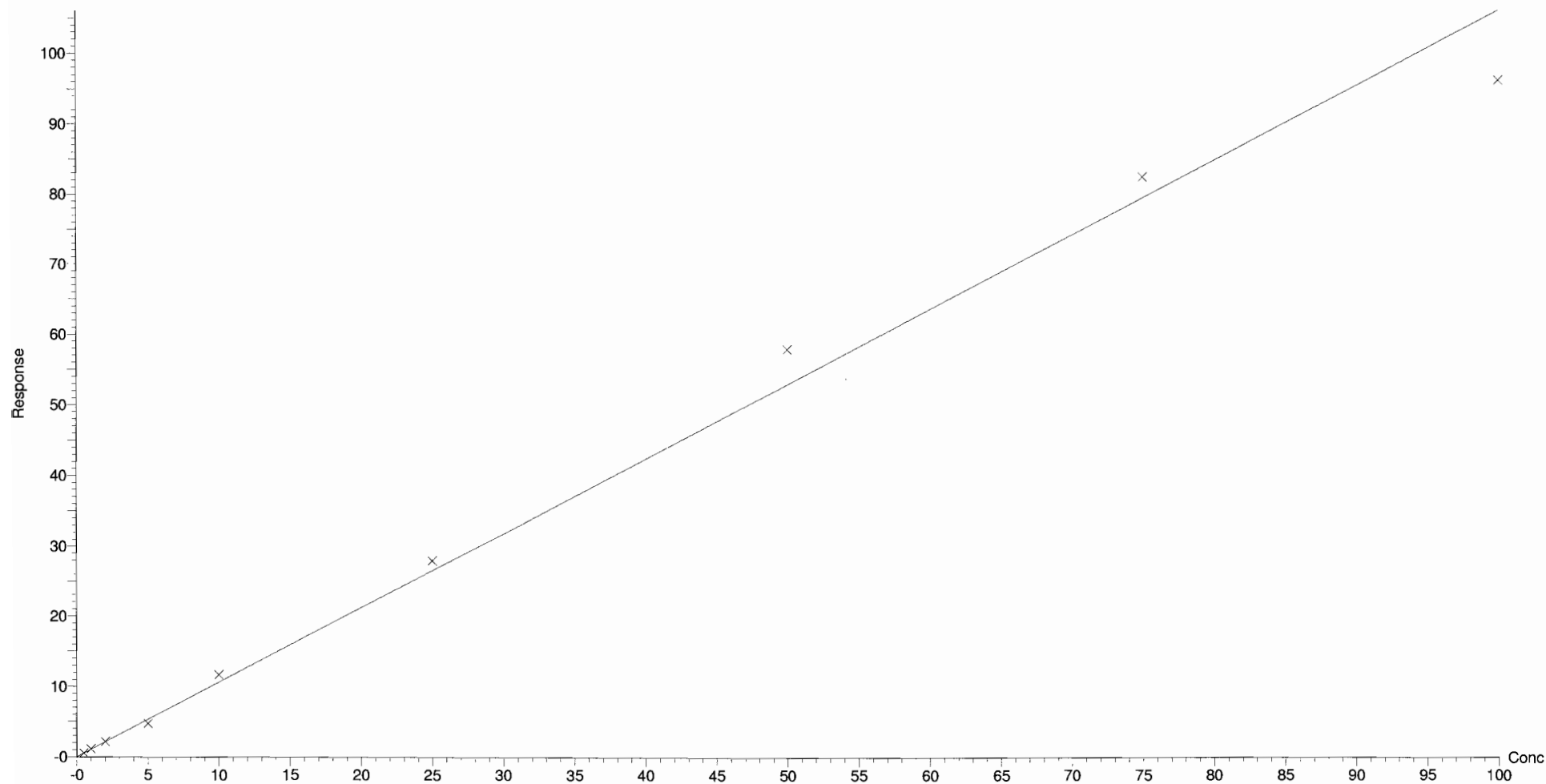
MJT 2/23/2018

Dataset: X:\G1.PRO\Results\2018\180223G2\180223G2-CRV.qld

Last Altered: Friday, February 23, 2018 17:19:15 Pacific Standard Time

Printed: Friday, February 23, 2018 17:26:36 Pacific Standard Time

Compound name: N-EtFOSAA  
Coefficient of Determination:  $R^2 = 0.993395$   
Calibration curve:  $1.05983 * x$   
Response type: Internal Std ( Ref 20 ), Area \* ( IS Conc. / IS Area )  
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None



MJT 2/23/2018

Dataset: X:\G1.PRO\Results\2018\180223G2\180223G2-CRV.qld

Last Altered: Friday, February 23, 2018 17:19:15 Pacific Standard Time

Printed: Friday, February 23, 2018 17:26:36 Pacific Standard Time

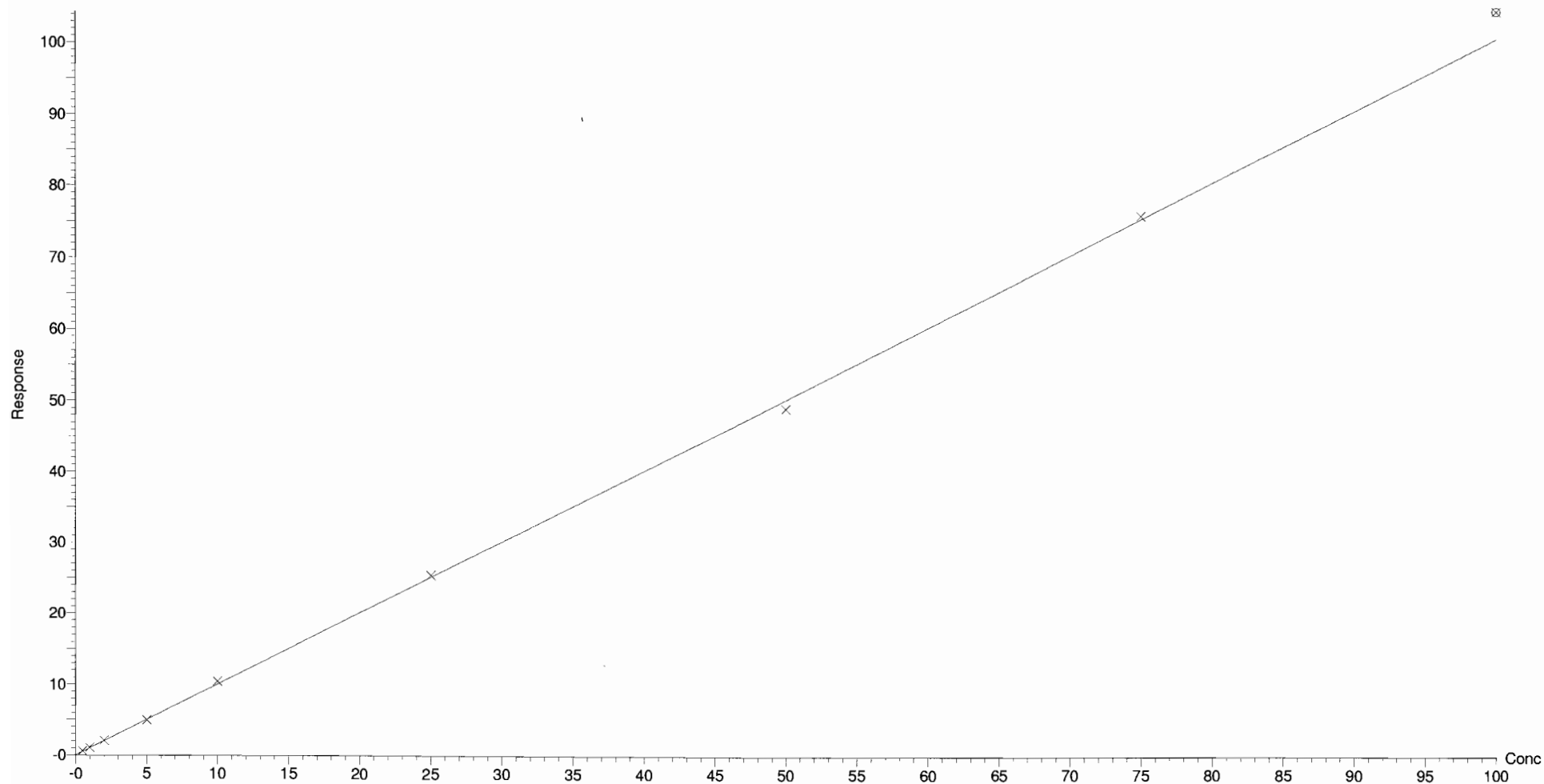
Compound name: PFUnA

Coefficient of Determination:  $R^2 = 0.999540$

Calibration curve:  $1.00493 * x$

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

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



MJT 2/23/2018



Dataset: X:\G1.PRO\Results\2018\180223G2\180223G2-CRV.qld

Last Altered: Friday, February 23, 2018 17:19:15 Pacific Standard Time

Printed: Friday, February 23, 2018 17:26:36 Pacific Standard Time

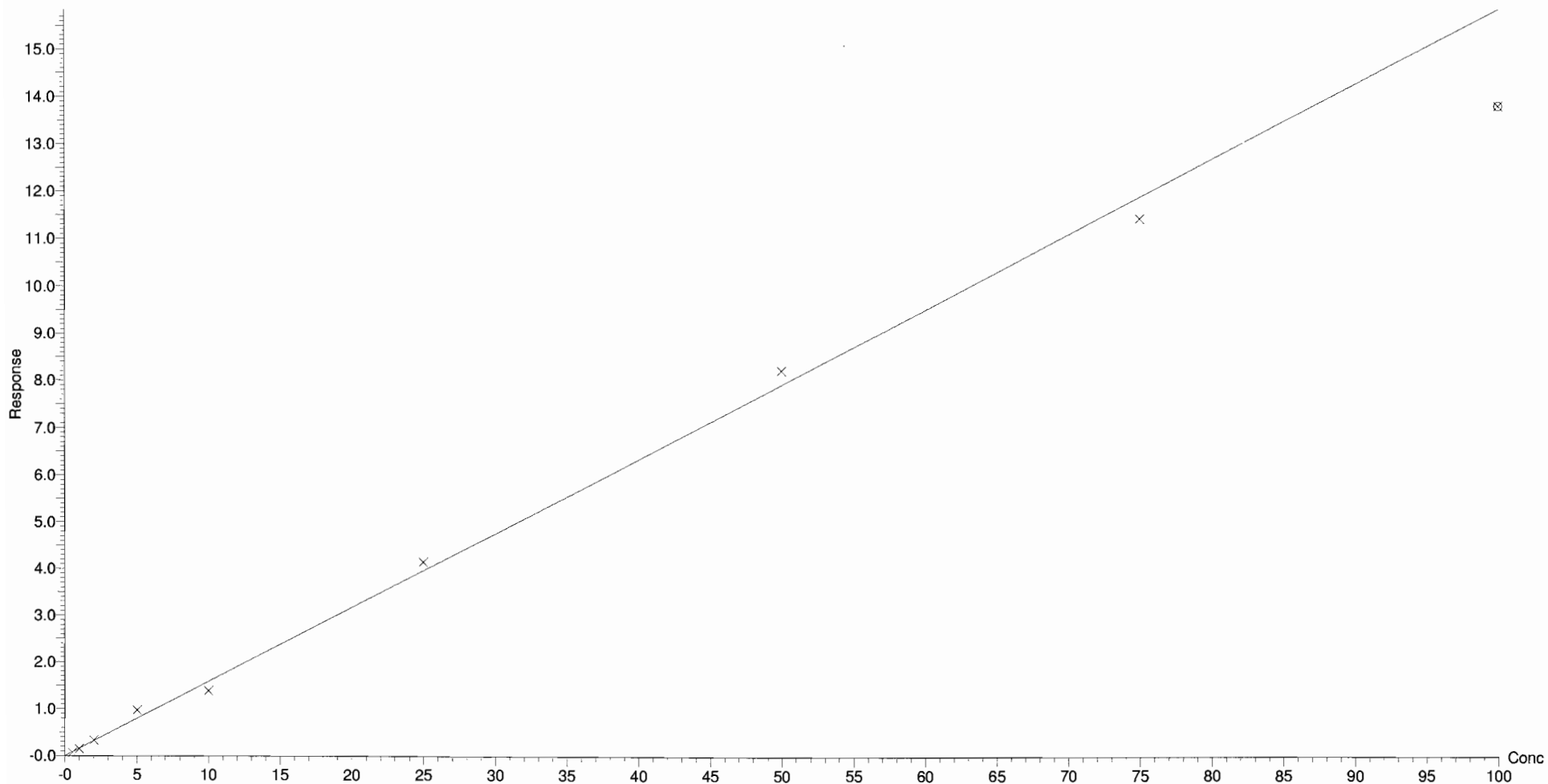
Compound name: PFDoA

Coefficient of Determination:  $R^2 = 0.995506$

Calibration curve:  $0.158397 * x$

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

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



MJT 2/23/2018

Dataset: X:\G1.PRO\Results\2018\180223G2\180223G2-CRV.qld

Last Altered: Friday, February 23, 2018 17:19:15 Pacific Standard Time

Printed: Friday, February 23, 2018 17:26:36 Pacific Standard Time

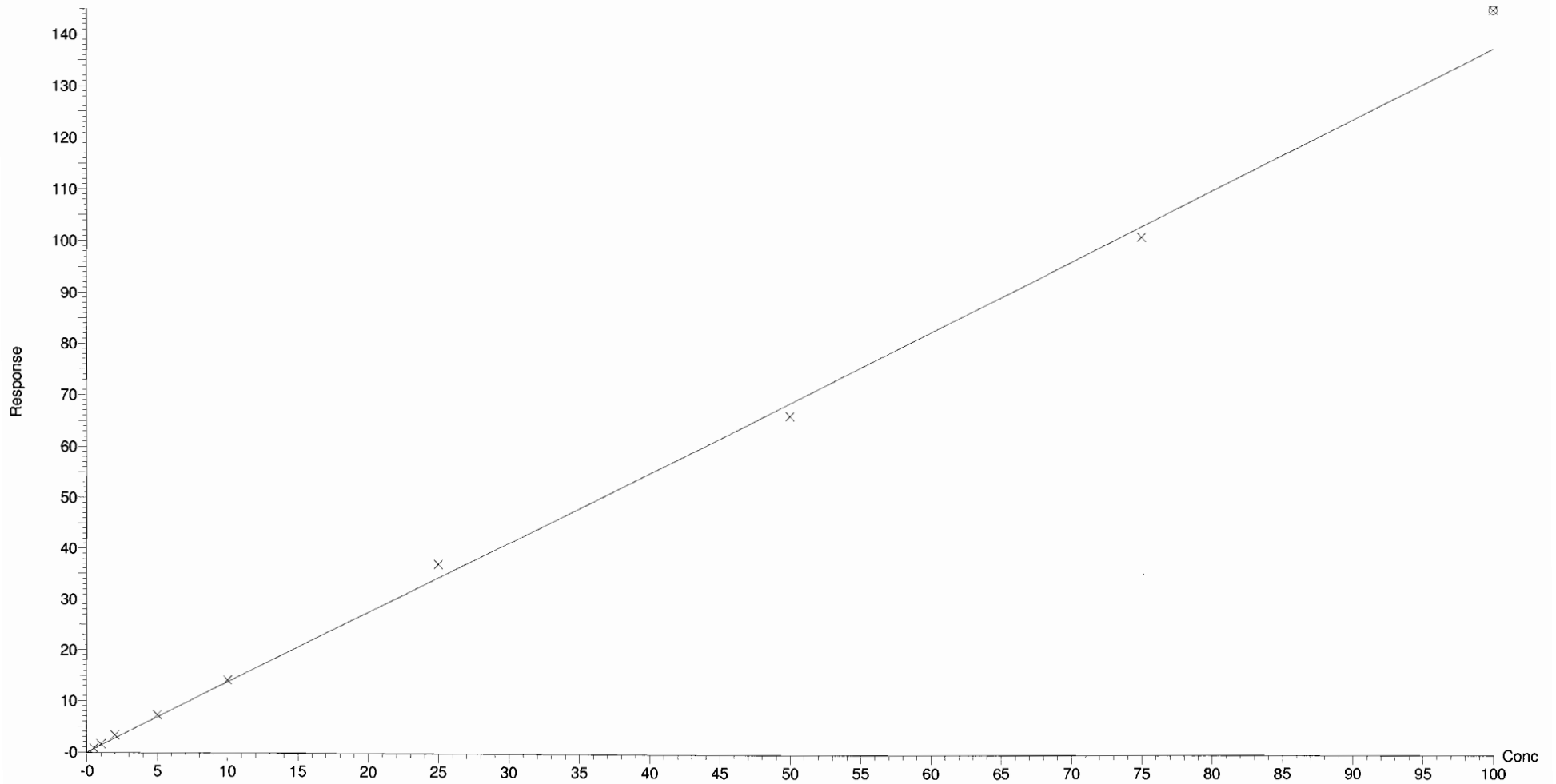
Compound name: PFTTrDA

Coefficient of Determination:  $R^2 = 0.997291$

Calibration curve:  $1.3743 * x$

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

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



MJT 2/23/2018

Dataset: X:\G1.PRO\Results\2018\180223G2\180223G2-CRV.qld

Last Altered: Friday, February 23, 2018 17:19:15 Pacific Standard Time

Printed: Friday, February 23, 2018 17:26:36 Pacific Standard Time

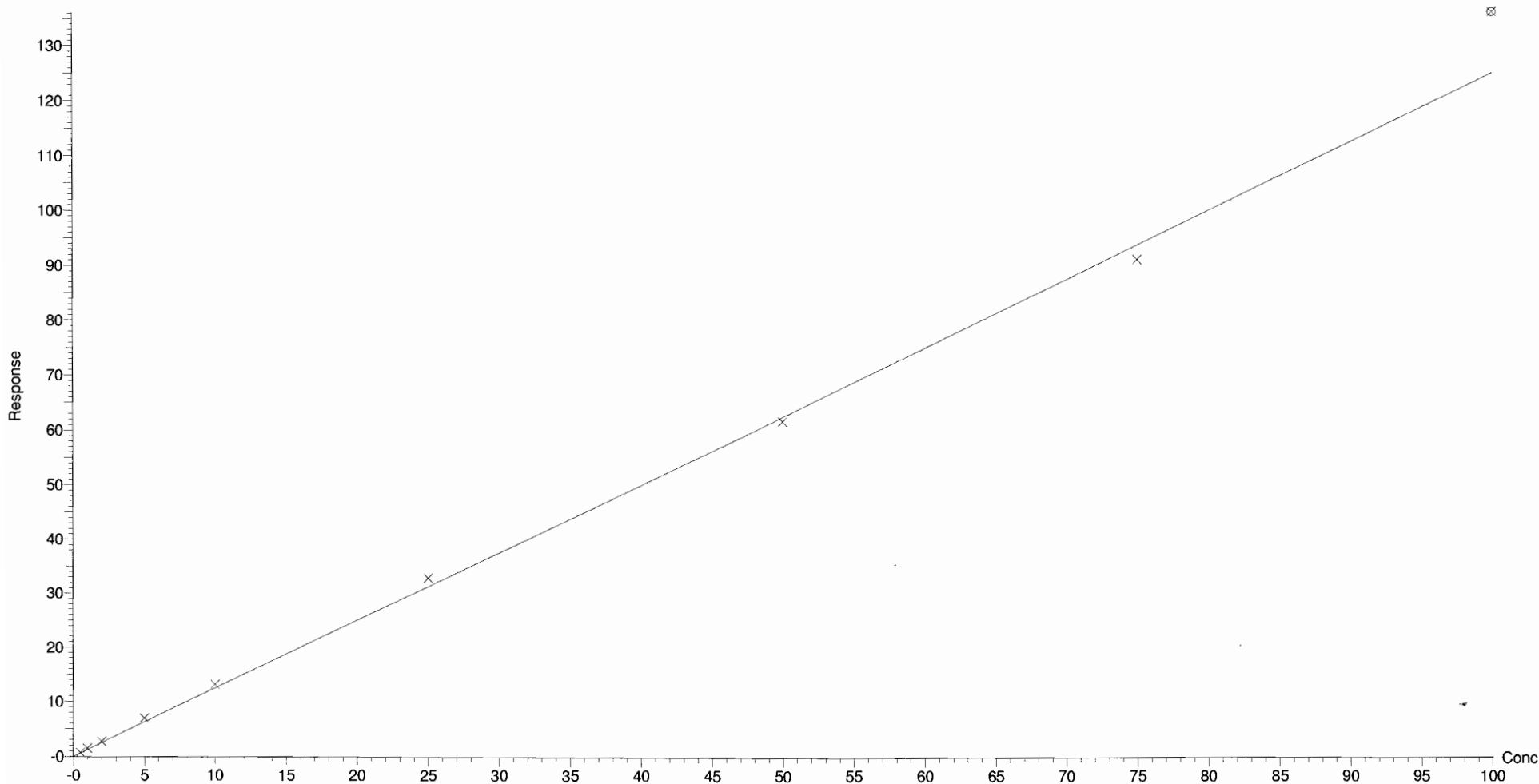
Compound name: PFTeDA

Coefficient of Determination:  $R^2 = 0.998250$

Calibration curve:  $1.24932 * x$

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

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



MJT 2/23/2018

Dataset: X:\G1.PRO\Results\2018\180223G2\180223G2-CRV.qld

Last Altered: Friday, February 23, 2018 17:19:15 Pacific Standard Time

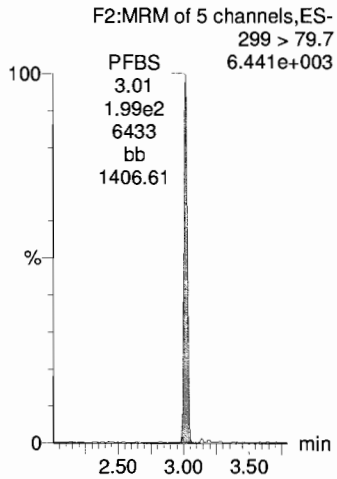
Printed: Friday, February 23, 2018 17:24:39 Pacific Standard Time

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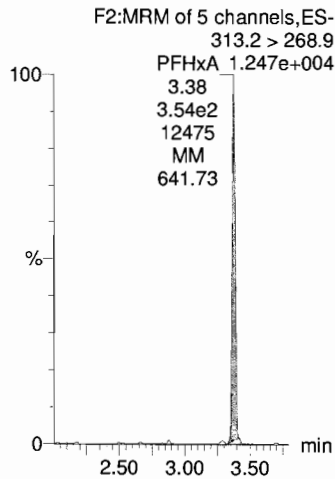
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Name: 180223G2\_2, Date: 23-Feb-2018, Time: 13:29:59, ID: ST180223G2-1 PFC CS-3 537 18B2301, Description: PFC CS-3 537 18B2301

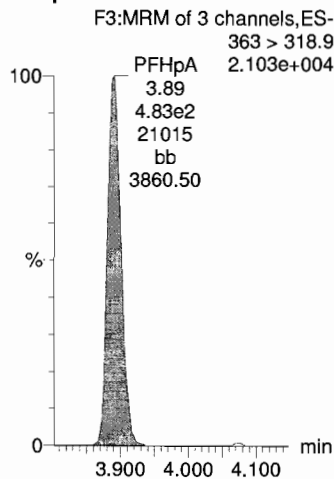
**PFBS**



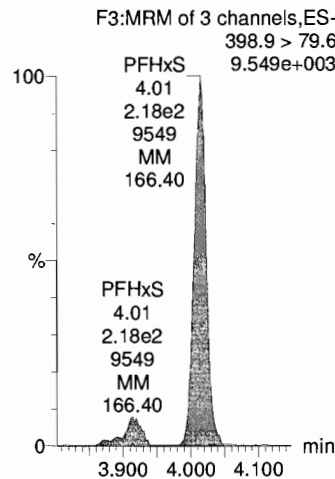
**PFHxA**



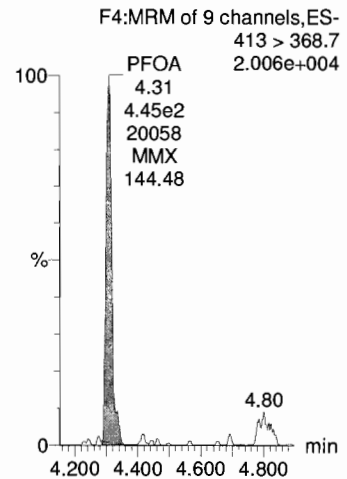
**PFHpA**



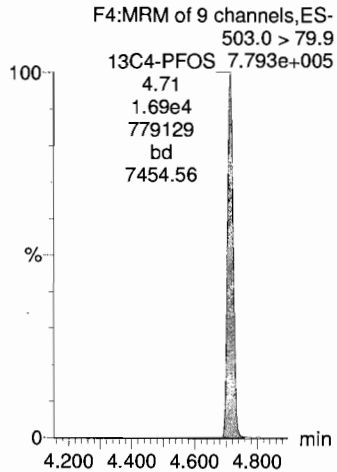
**PFHxS**



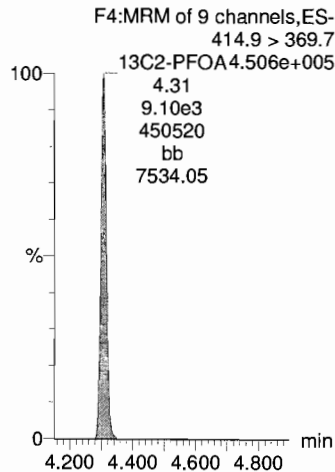
**PFOA**



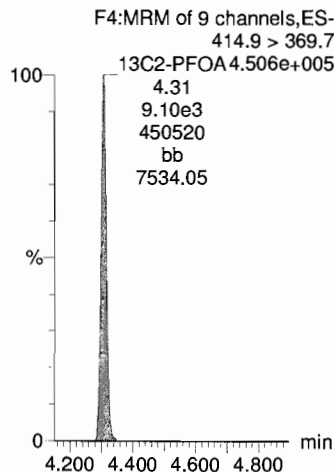
**13C4-PFOS**



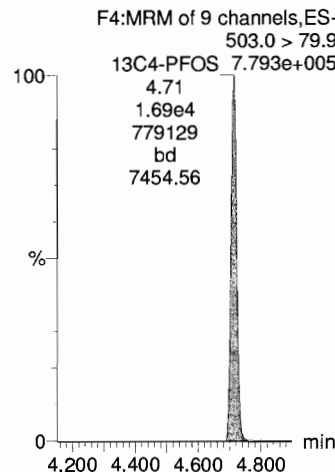
**13C2-PFOA**



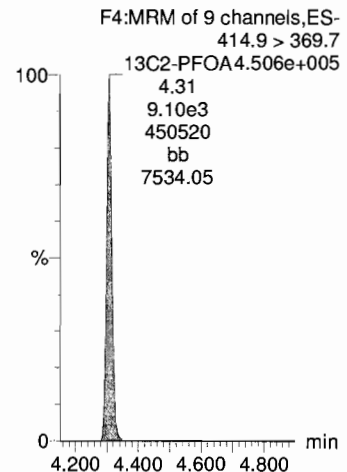
**13C2-PFOA**



**13C4-PFOS**



**13C2-PFOA**



MJT 2/23/2018

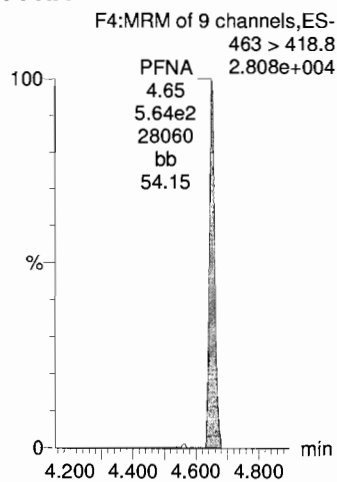
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Last Altered: Friday, February 23, 2018 17:19:15 Pacific Standard Time

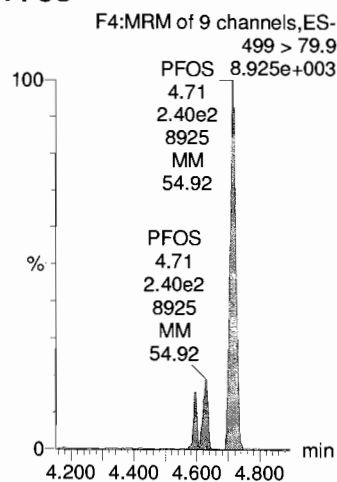
Printed: Friday, February 23, 2018 17:24:39 Pacific Standard Time

Name: 180223G2\_2, Date: 23-Feb-2018, Time: 13:29:59, ID: ST180223G2-1 PFC CS-3 537 18B2301, Description: PFC CS-3 537 18B2301

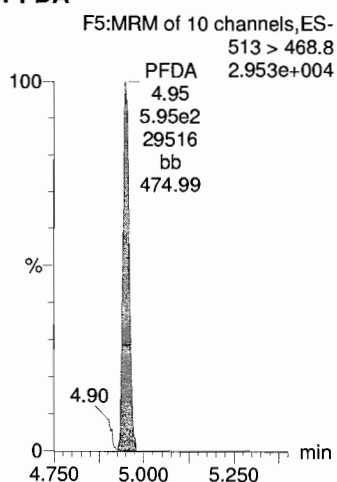
**PFNA**



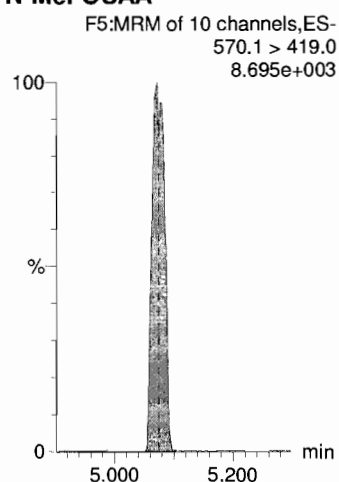
**PFOS**



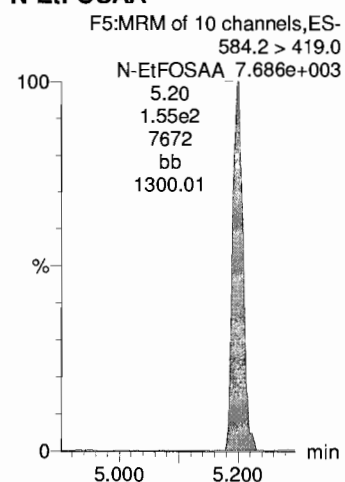
**PFDA**



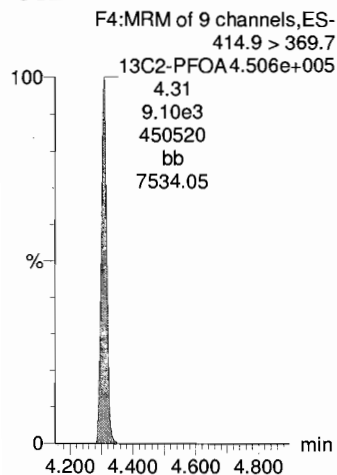
**N-MeFOSAA**



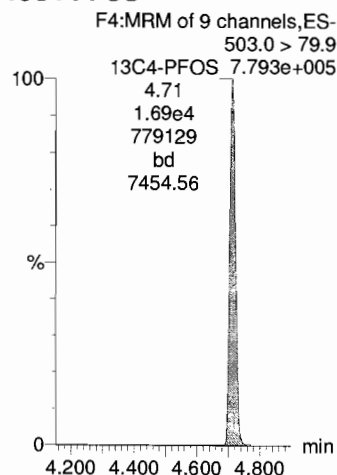
**N-EtFOSAA**



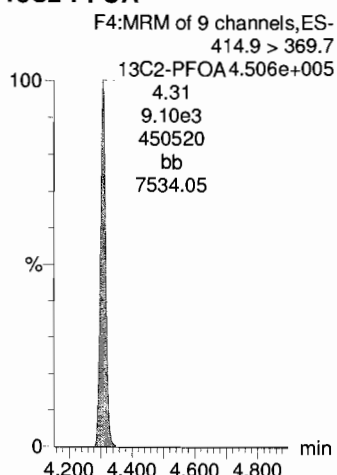
**13C2-PFOA**



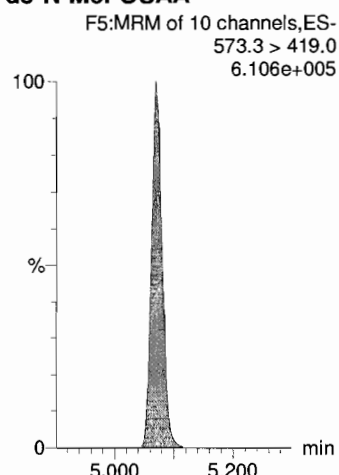
**13C4-PFOS**



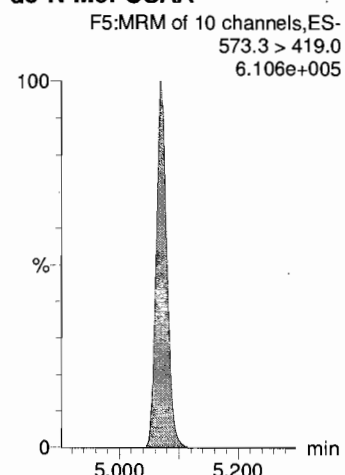
**13C2-PFOA**



**d3-N-MeFOSAA**



**d3-N-MeFOSAA**

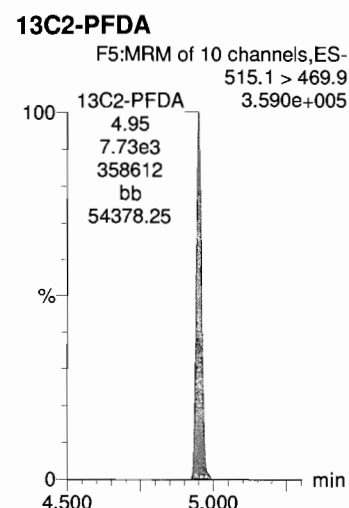
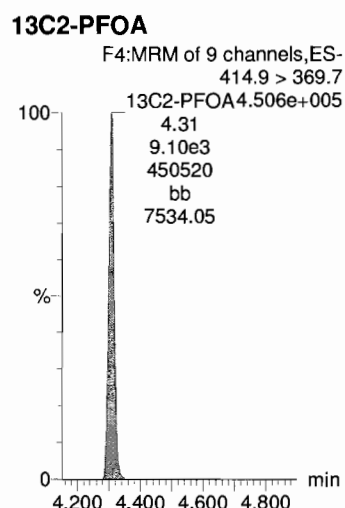
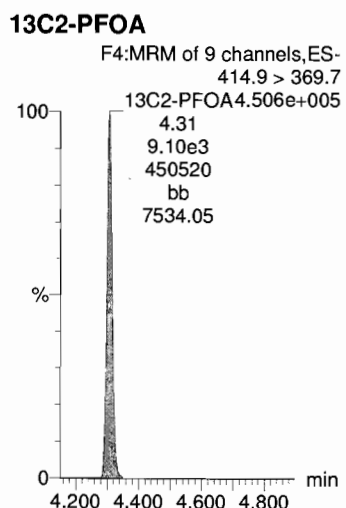
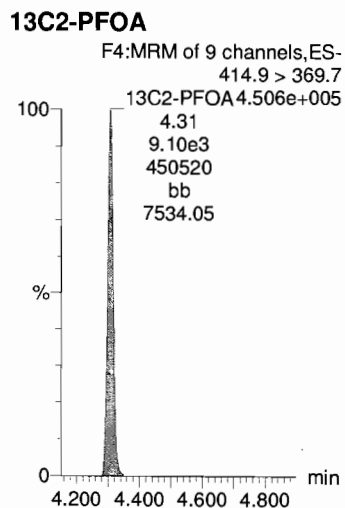
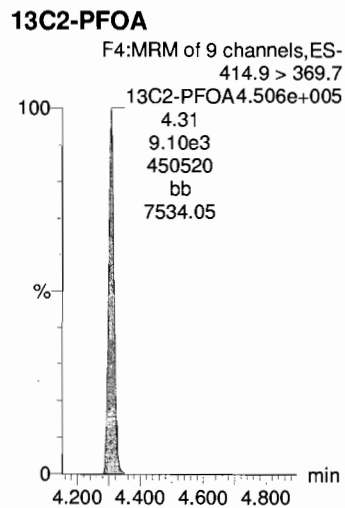
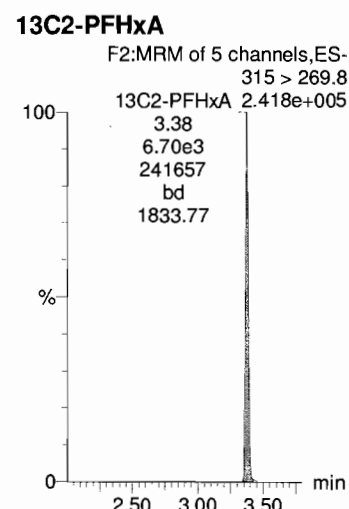
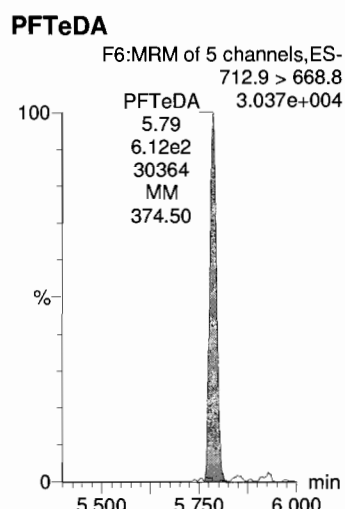
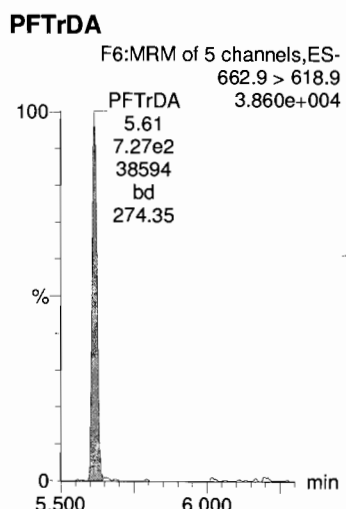
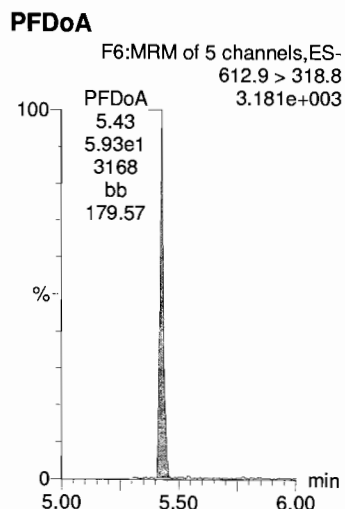
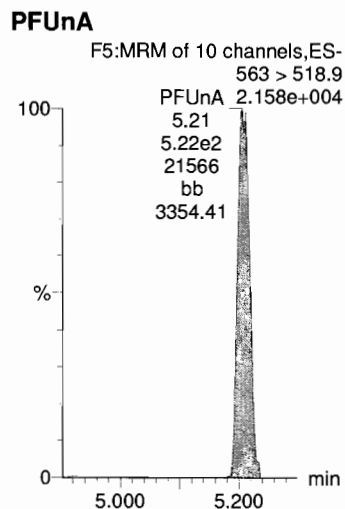


Dataset: X:\G1.PRO\Results\2018\180223G2\180223G2-CRV.qld

Last Altered: Friday, February 23, 2018 17:19:15 Pacific Standard Time

Printed: Friday, February 23, 2018 17:24:39 Pacific Standard Time

Name: 180223G2\_2, Date: 23-Feb-2018, Time: 13:29:59, ID: ST180223G2-1 PFC CS-3 537 18B2301, Description: PFC CS-3 537 18B2301



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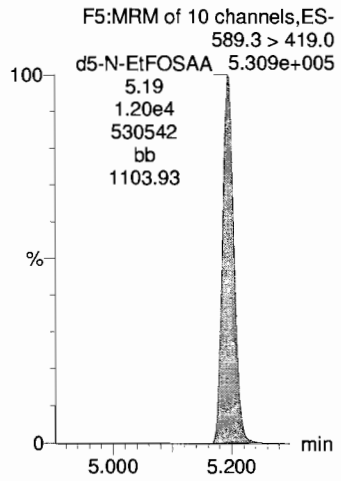
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Last Altered: Friday, February 23, 2018 17:19:15 Pacific Standard Time

Printed: Friday, February 23, 2018 17:24:39 Pacific Standard Time

Name: 180223G2\_2, Date: 23-Feb-2018, Time: 13:29:59, ID: ST180223G2-1 PFC CS-3 537 18B2301, Description: PFC CS-3 537 18B2301

**d5-N-EtFOSAA**



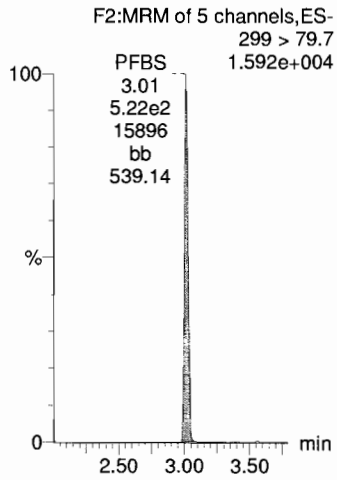
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Last Altered: Friday, February 23, 2018 17:19:15 Pacific Standard Time

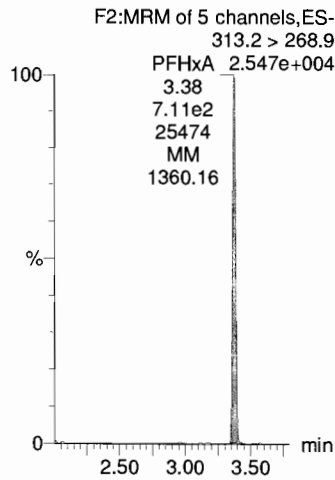
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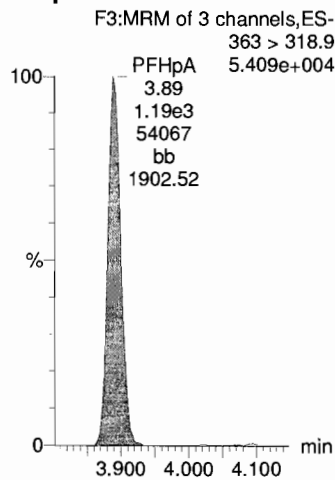
**PFBS**



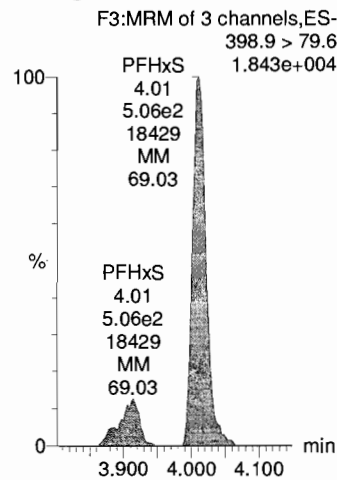
**PFHxA**



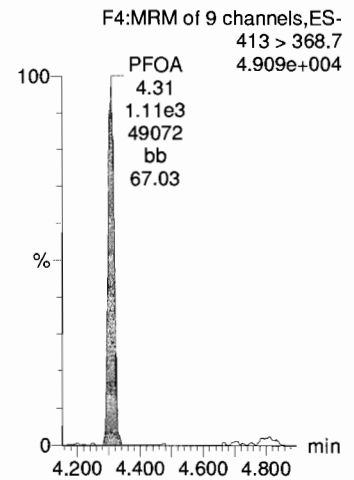
**PFHpA**



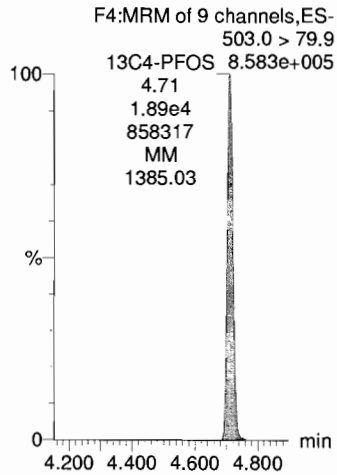
**PFHxS**



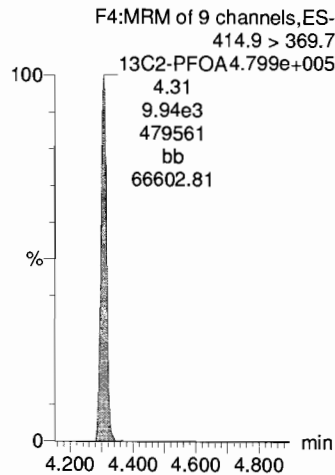
**PFOA**



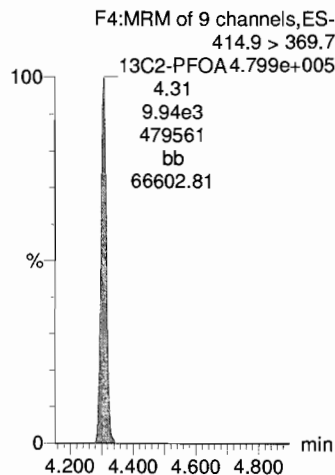
**13C4-PFOS**



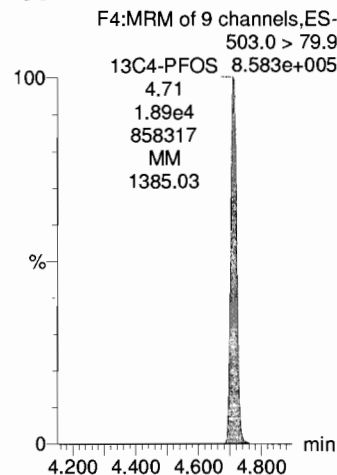
**13C2-PFOA**



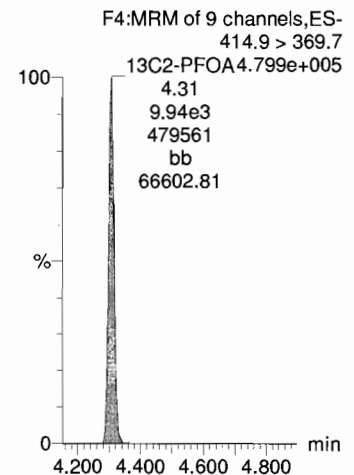
**13C2-PFOA**



**13C4-PFOS**



**13C2-PFOA**





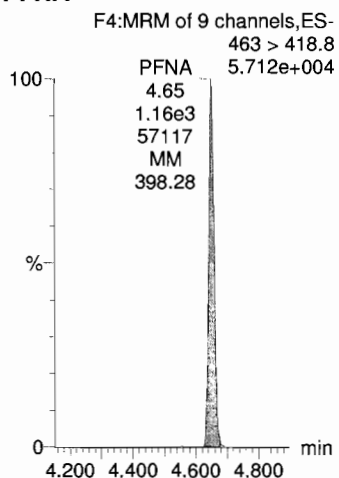
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Last Altered: Friday, February 23, 2018 17:19:15 Pacific Standard Time

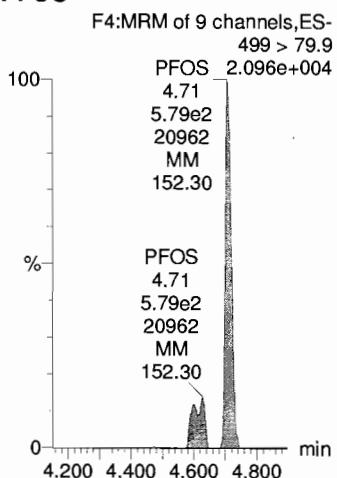
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Name: 180223G2\_3, Date: 23-Feb-2018, Time: 13:42:20, ID: ST180223G2-2 PFC CS-2 537 18B2302, Description: PFC CS-2 537 18B2302

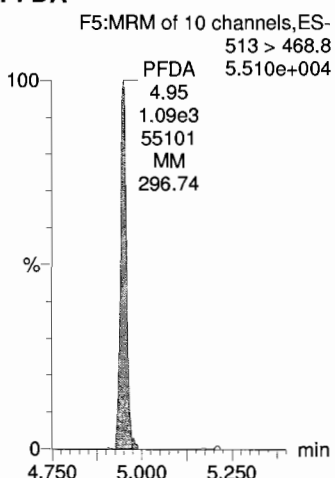
**PFNA**



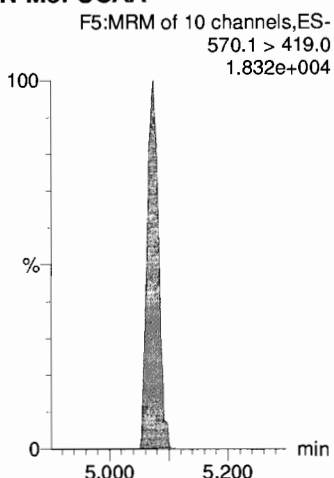
**PFOS**



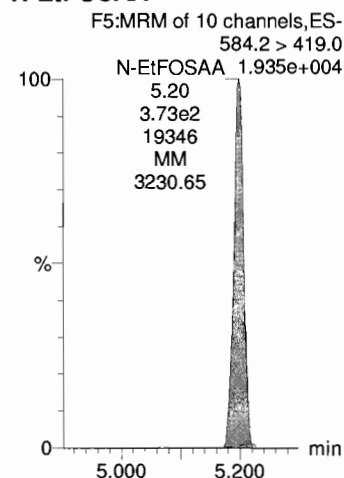
**PFDA**



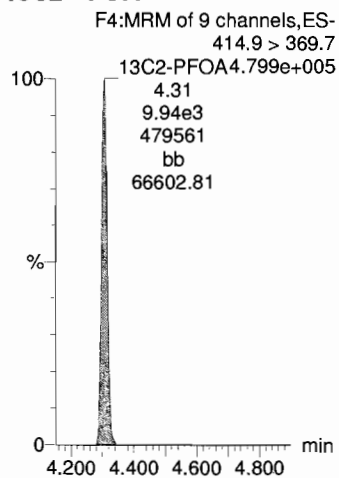
**N-MeFOSAA**



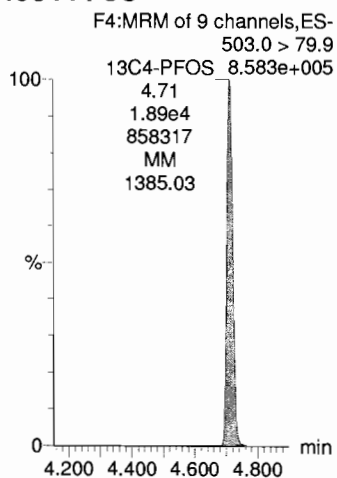
**N-EtFOSAA**



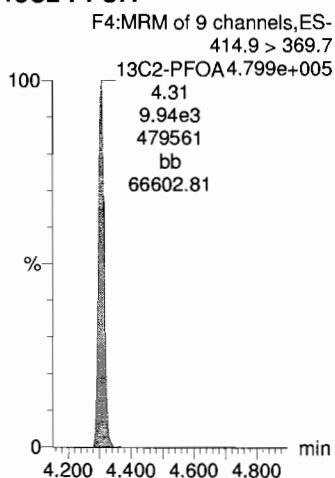
**13C2-PFOA**



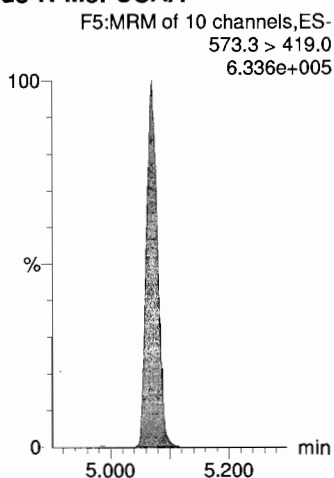
**13C4-PFOS**



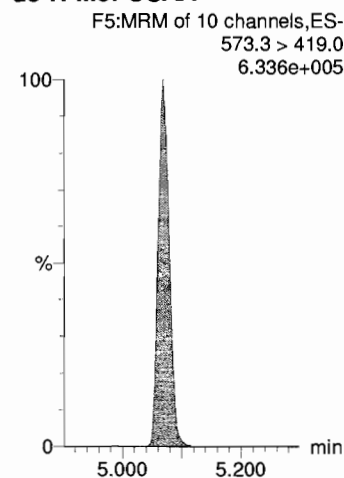
**13C2-PFOA**



**d3-N-MeFOSAA**



**d3-N-MeFOSAA**

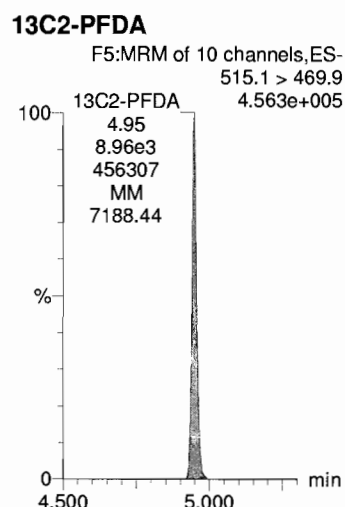
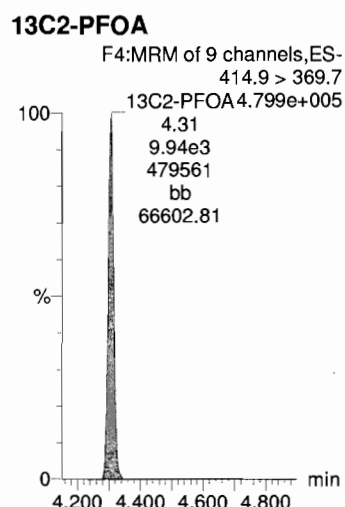
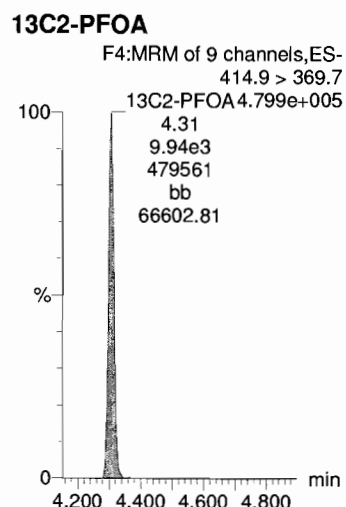
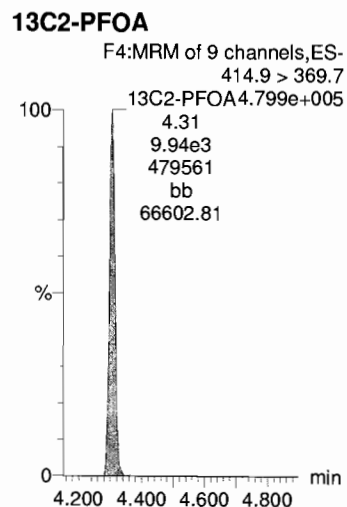
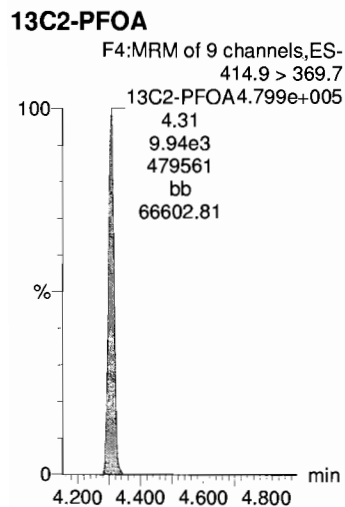
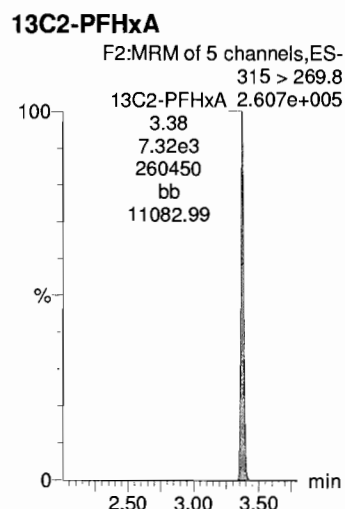
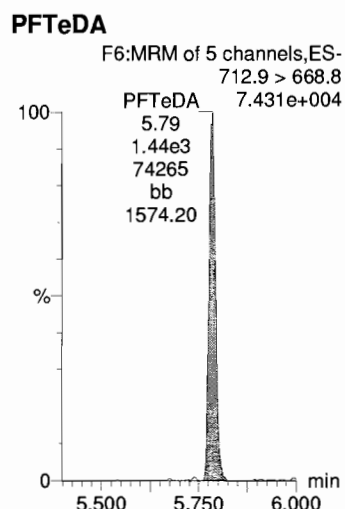
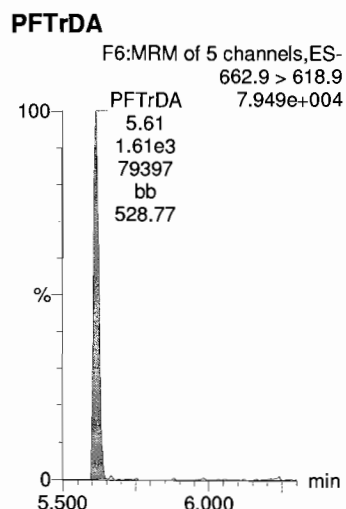
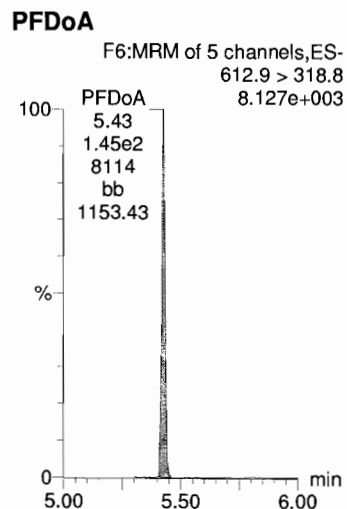
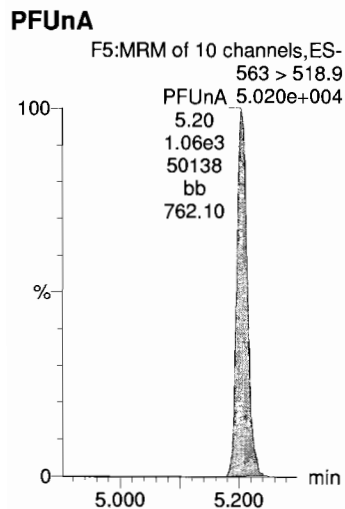


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Last Altered: Friday, February 23, 2018 17:19:15 Pacific Standard Time  
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Name: 180223G2\_3, Date: 23-Feb-2018, Time: 13:42:20, ID: ST180223G2-2 PFC CS-2 537 18B2302, Description: PFC CS-2 537 18B2302



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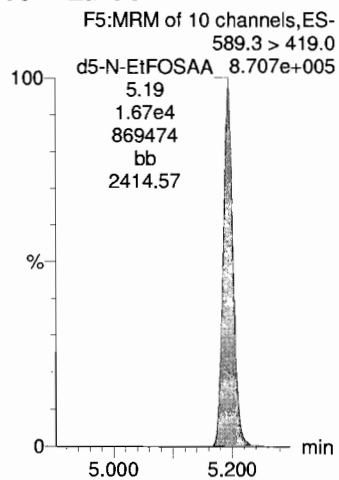
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Last Altered: Friday, February 23, 2018 17:19:15 Pacific Standard Time

Printed: Friday, February 23, 2018 17:24:39 Pacific Standard Time

Name: 180223G2\_3, Date: 23-Feb-2018, Time: 13:42:20, ID: ST180223G2-2 PFC CS-2 537 18B2302, Description: PFC CS-2 537 18B2302

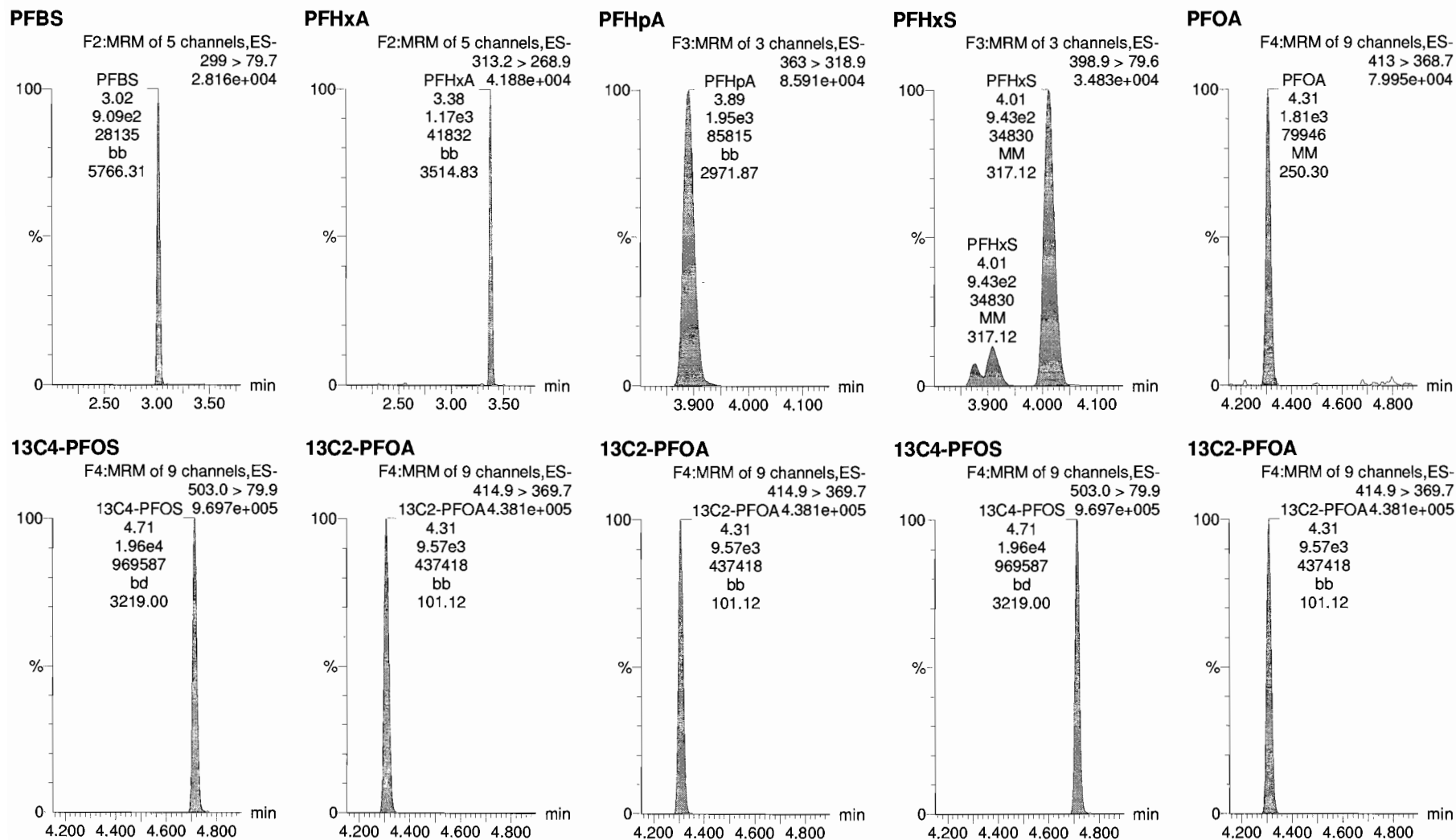
**d5-N-EtFOSAA**



Dataset: X:\G1.PRO\Results\2018\180223G2\180223G2-CRV.qld

Last Altered: Friday, February 23, 2018 17:19:15 Pacific Standard Time  
Printed: Friday, February 23, 2018 17:24:39 Pacific Standard Time

Name: 180223G2\_4, Date: 23-Feb-2018, Time: 13:54:45, ID: ST180223G2-3 PFC CS-1 537 18B2310, Description: PFC CS-1 537 18B2310



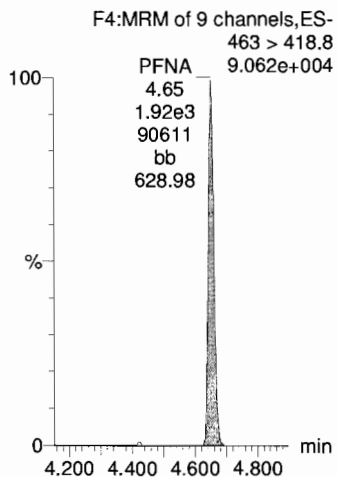
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Last Altered: Friday, February 23, 2018 17:19:15 Pacific Standard Time

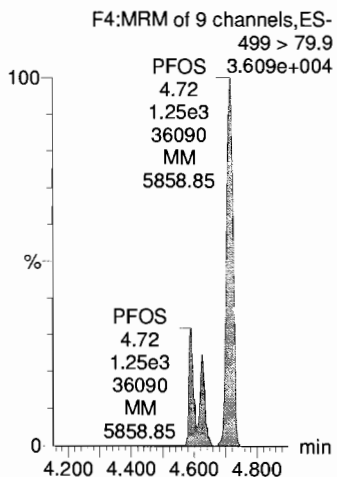
Printed: Friday, February 23, 2018 17:24:39 Pacific Standard Time

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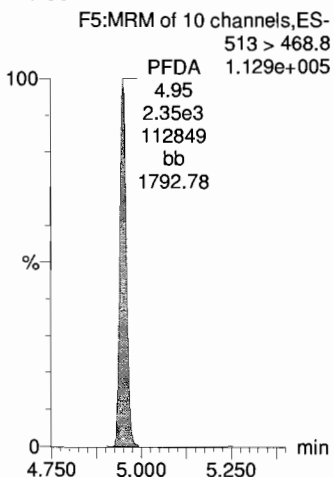
**PFNA**



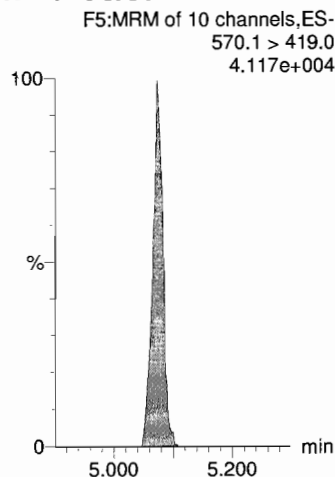
**PFOS**



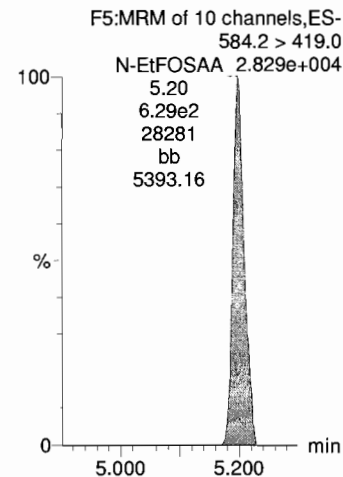
**PFDA**



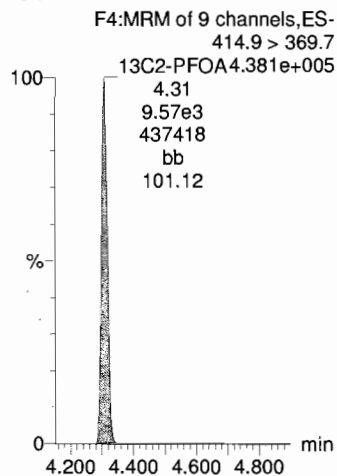
**N-MeFOSAA**



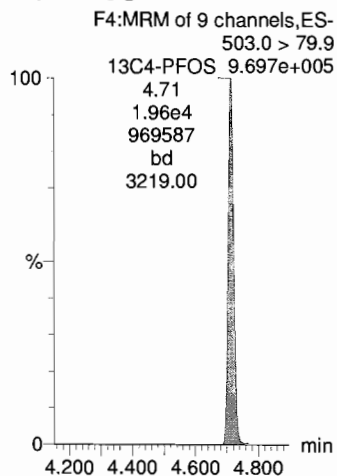
**N-EtFOSAA**



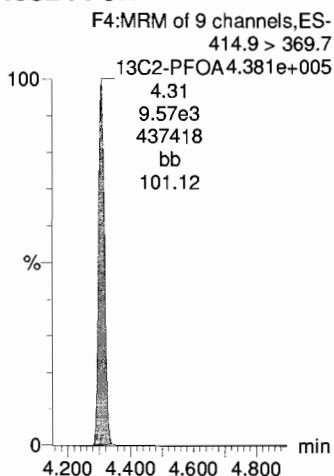
**13C2-PFOA**



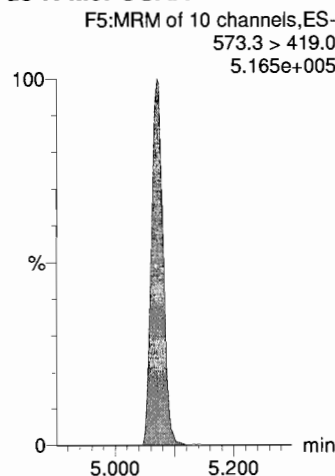
**13C4-PFOS**



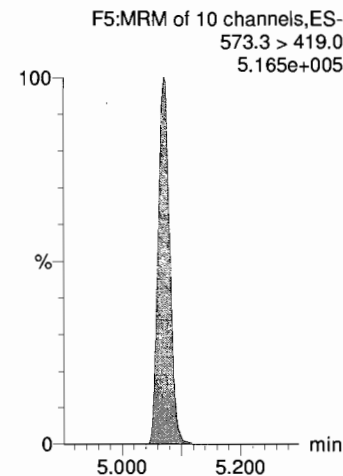
**13C2-PFOA**



**d3-N-MeFOSAA**



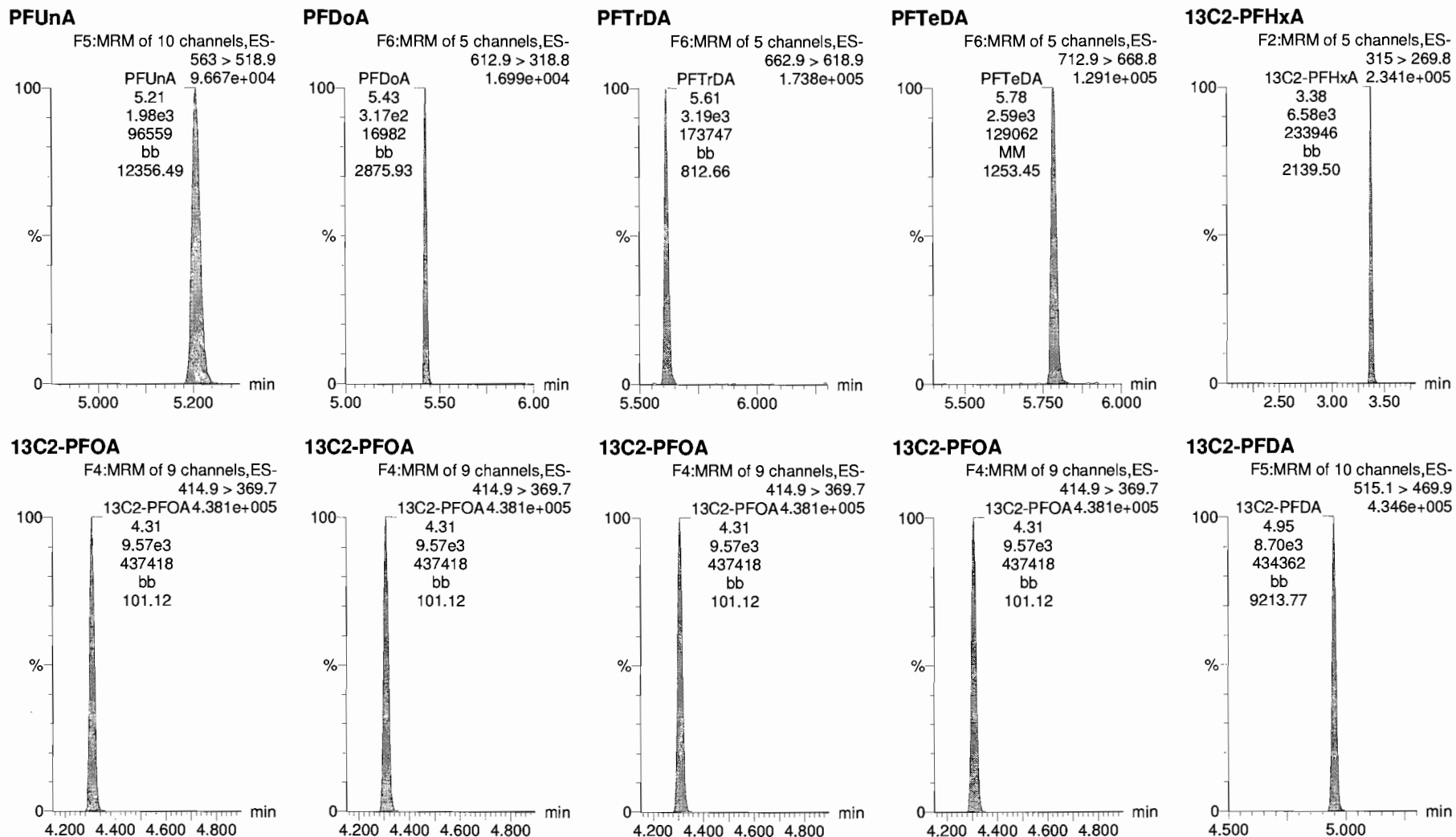
**d3-N-MeFOSAA**



Dataset: X:\G1.PRO\Results\2018\180223G2\180223G2-CRV.qld

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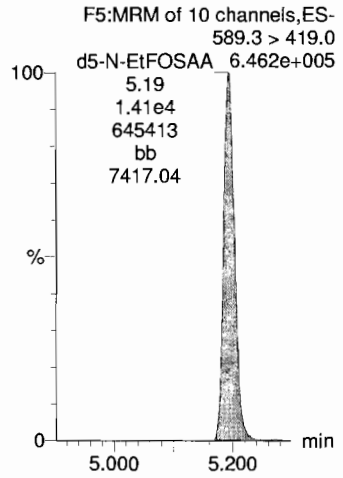
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Printed: Friday, February 23, 2018 17:24:39 Pacific Standard Time

Name: 180223G2\_4, Date: 23-Feb-2018, Time: 13:54:45, ID: ST180223G2-3 PFC CS-1 537 18B2310, Description: PFC CS-1 537 18B2310

**d5-N-EtFOSAA**



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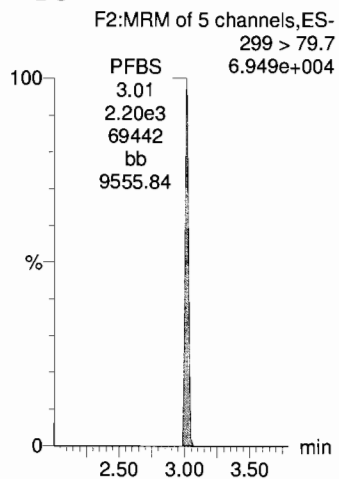
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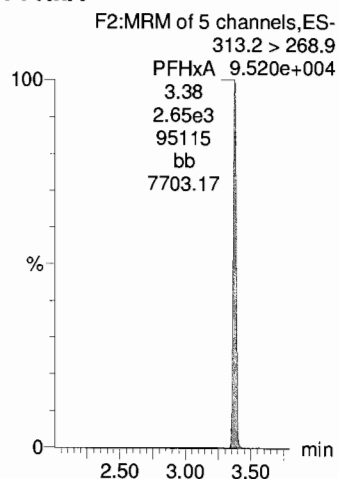
Printed: Friday, February 23, 2018 17:24:39 Pacific Standard Time

Name: 180223G2\_5, Date: 23-Feb-2018, Time: 14:07:10, ID: ST180222G3-4 PFC CS0 537 18B2303, Description: PFC CS0 537 18B2303

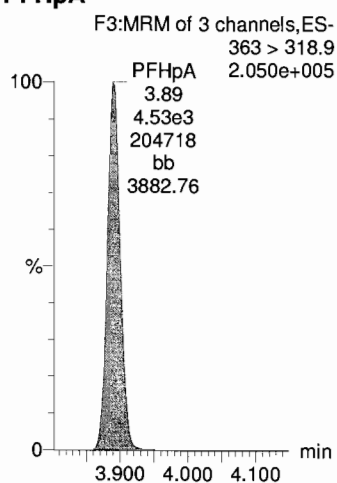
**PFBS**



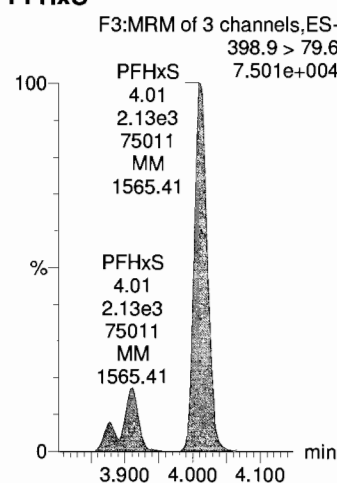
**PFHxA**



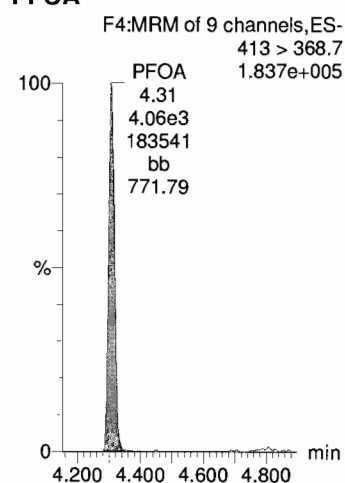
**PFHpA**



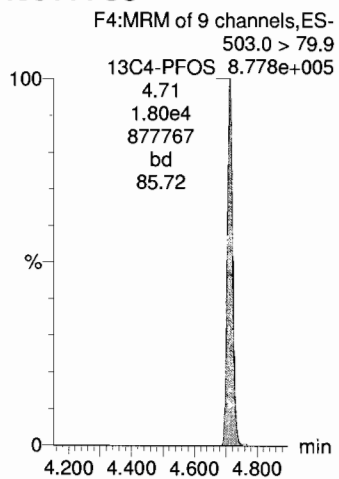
**PFHxS**



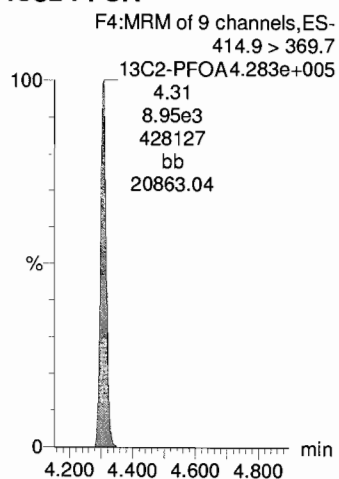
**PFOA**



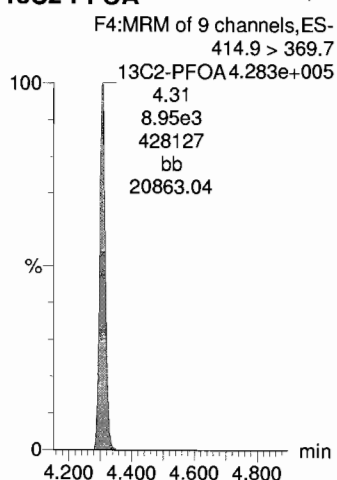
**13C4-PFOS**



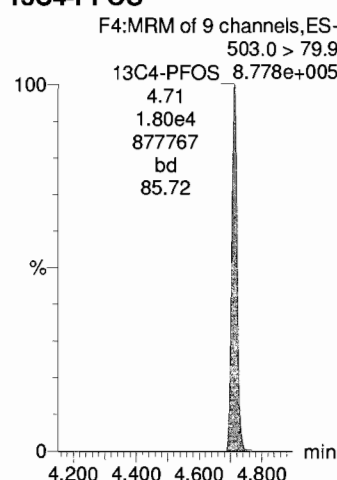
**13C2-PFOA**



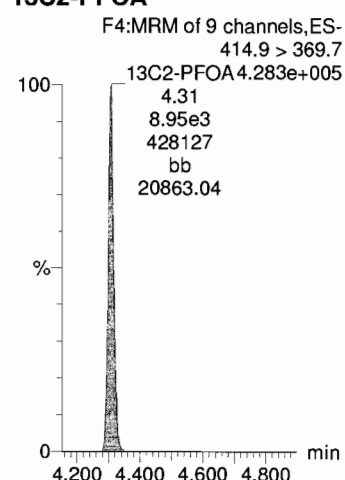
**13C2-PFOA**



**13C4-PFOS**



**13C2-PFOA**



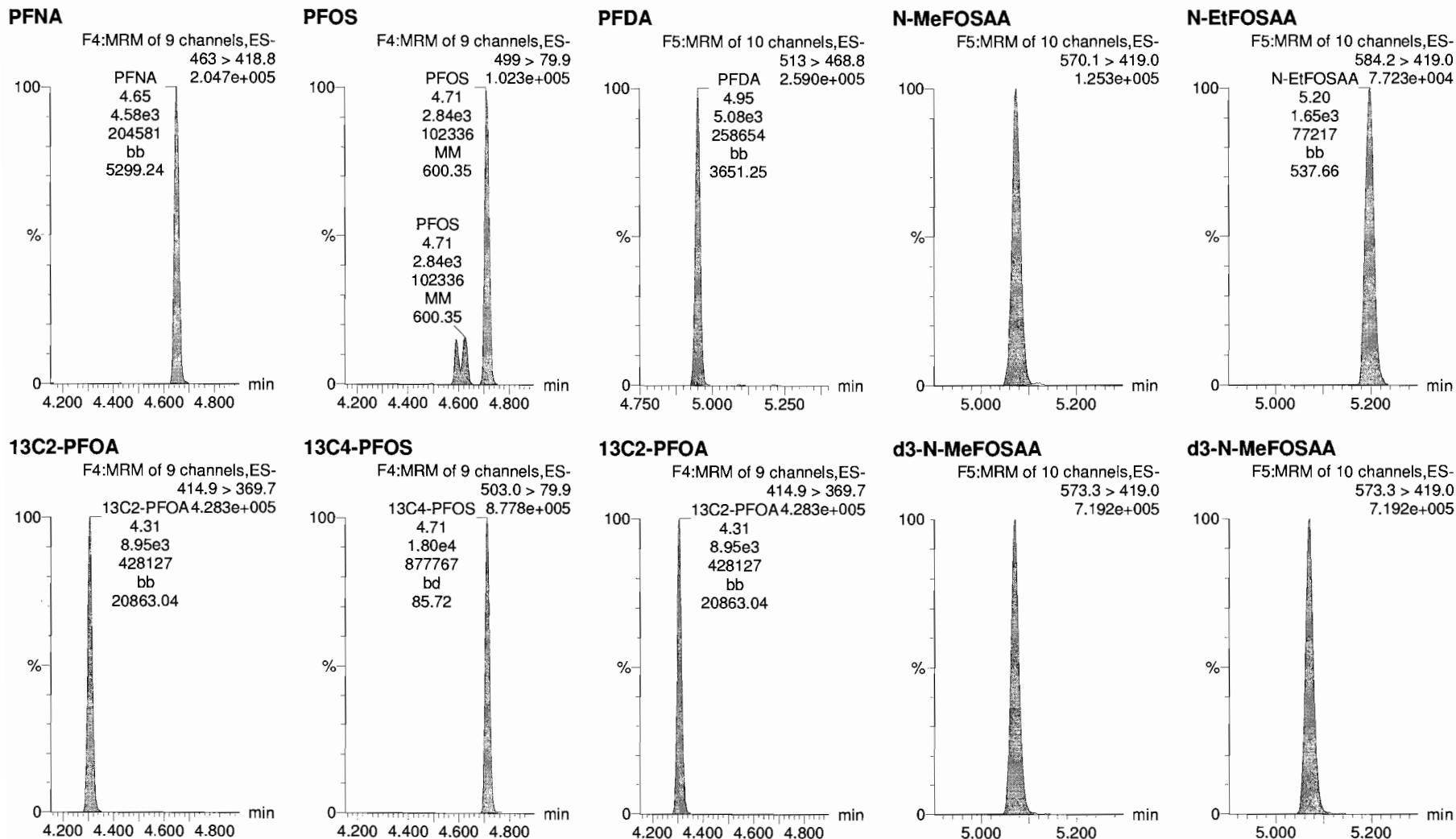


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Printed: Friday, February 23, 2018 17:24:39 Pacific Standard Time

Name: 180223G2\_5, Date: 23-Feb-2018, Time: 14:07:10, ID: ST180222G3-4 PFC CS0 537 18B2303, Description: PFC CS0 537 18B2303

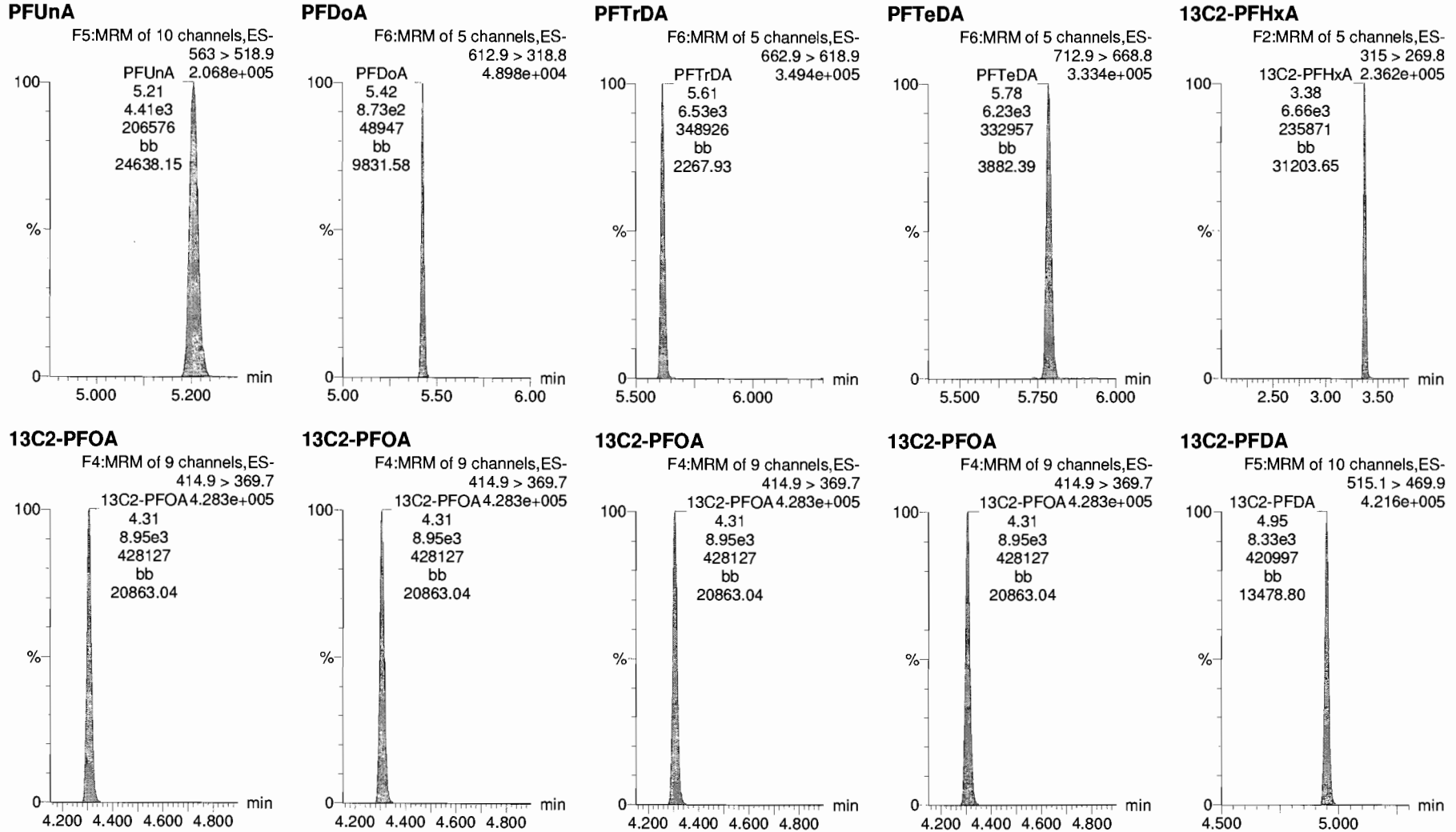


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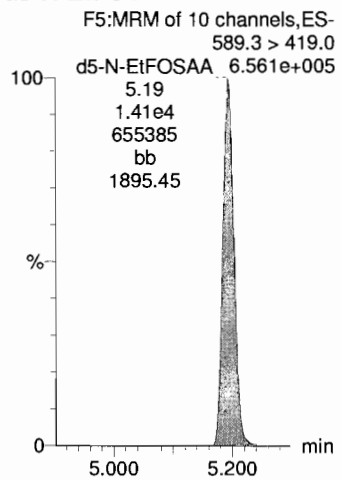
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Last Altered: Friday, February 23, 2018 17:19:15 Pacific Standard Time

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Name: 180223G2\_5, Date: 23-Feb-2018, Time: 14:07:10, ID: ST180222G3-4 PFC CS0 537 18B2303, Description: PFC CS0 537 18B2303

**d5-N-EtFOSAA**



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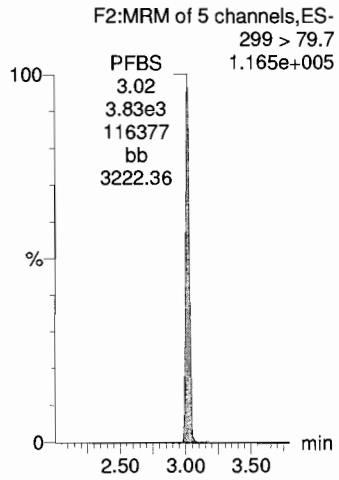
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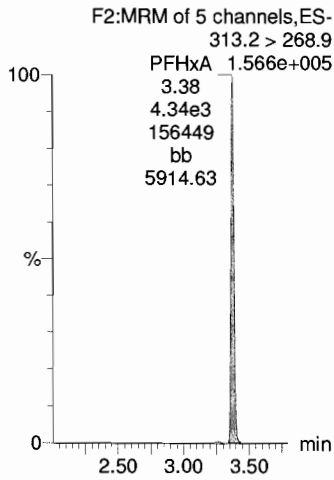
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Name: 180223G2\_6, Date: 23-Feb-2018, Time: 14:19:35, ID: ST180223G2-5 PFC CS1 537 18B2304, Description: PFC CS1 537 18B2304

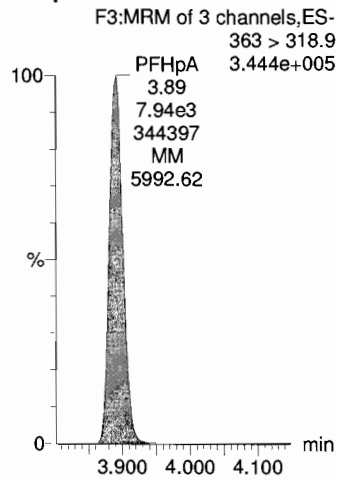
**PFBS**



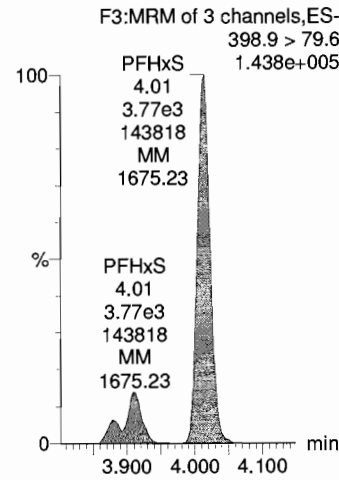
**PFHxA**



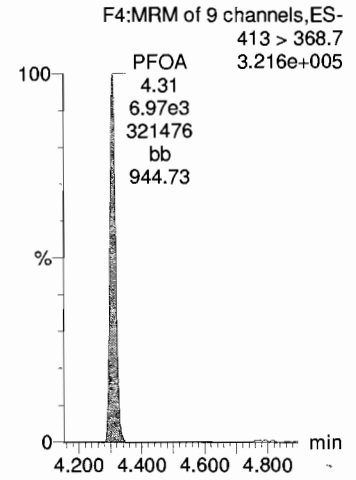
**PFHpA**



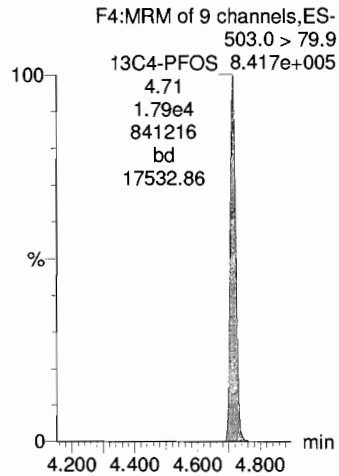
**PFHxS**



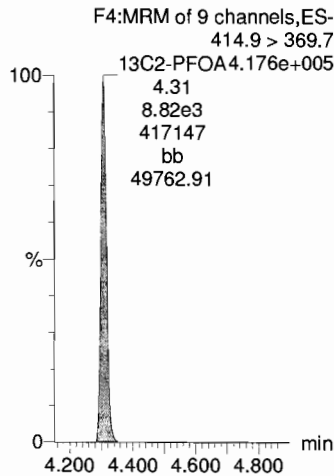
**PFOA**



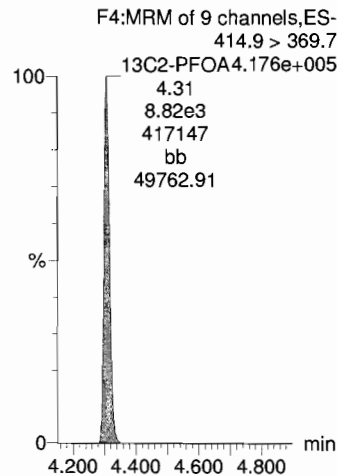
**13C4-PFOS**



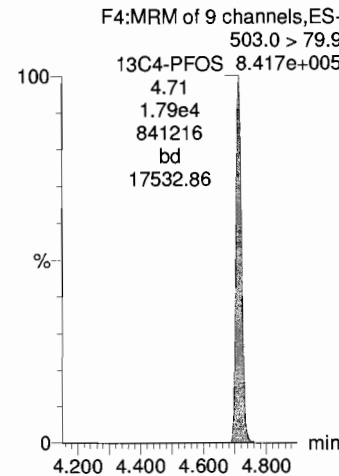
**13C2-PFOA**



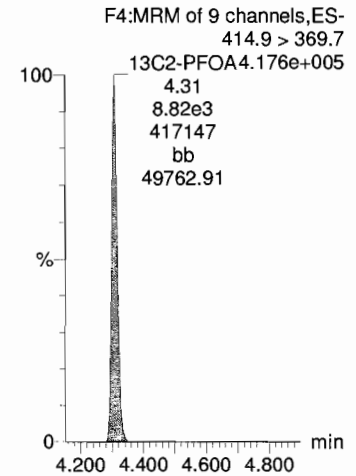
**13C2-PFOA**



**13C4-PFOS**



**13C2-PFOA**



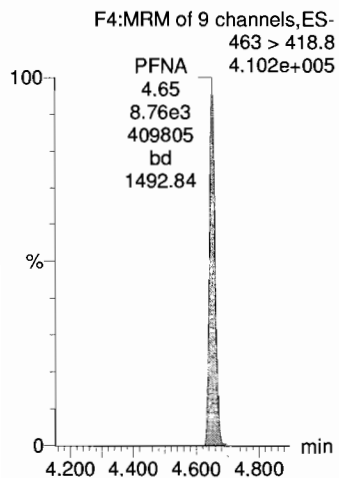
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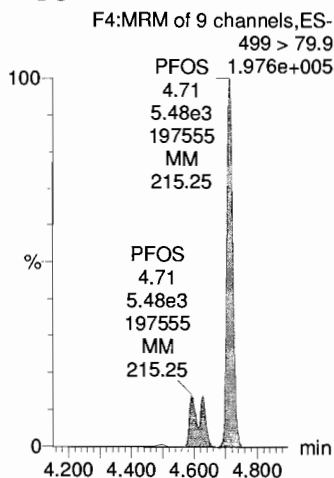
Printed: Friday, February 23, 2018 17:24:39 Pacific Standard Time

Name: 180223G2\_6, Date: 23-Feb-2018, Time: 14:19:35, ID: ST180223G2-5 PFC CS1 537 18B2304, Description: PFC CS1 537 18B2304

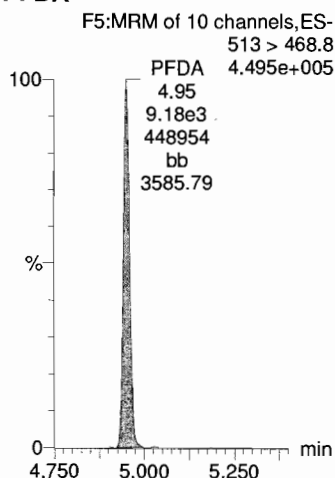
**PFNA**



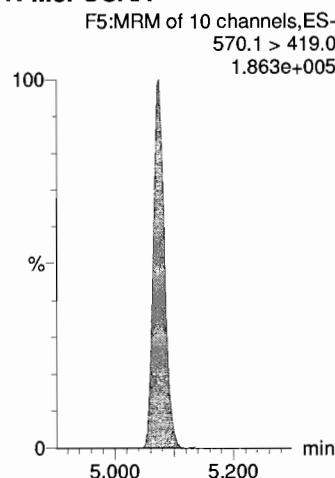
**PFOS**



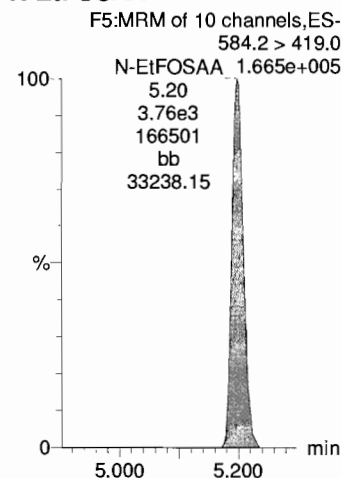
**PFDA**



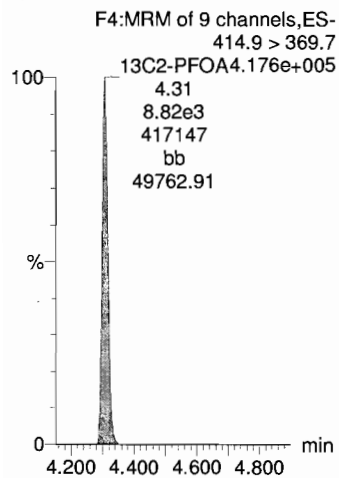
**N-MeFOSAA**



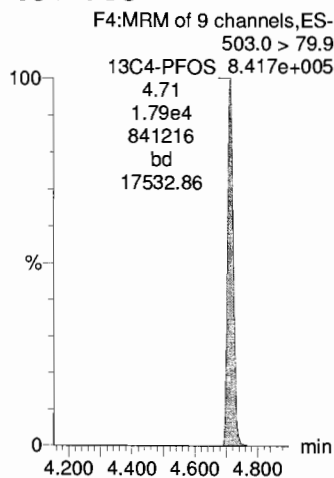
**N-EtFOSAA**



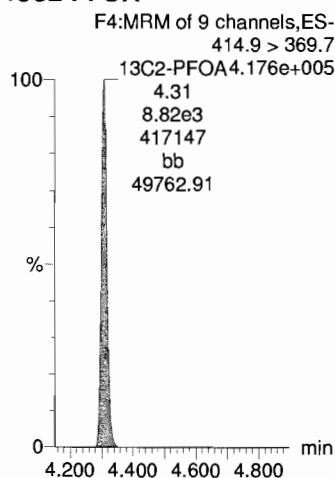
**13C2-PFOA**



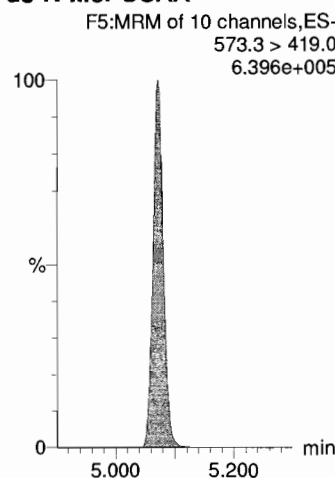
**13C4-PFOS**



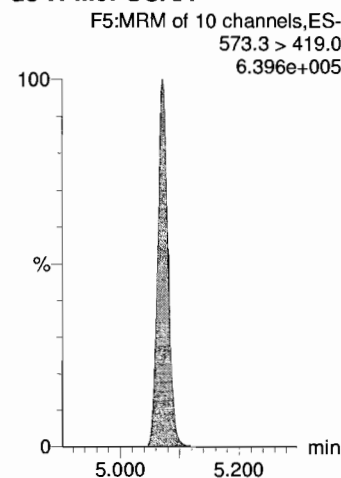
**13C2-PFOA**



**d3-N-MeFOSAA**



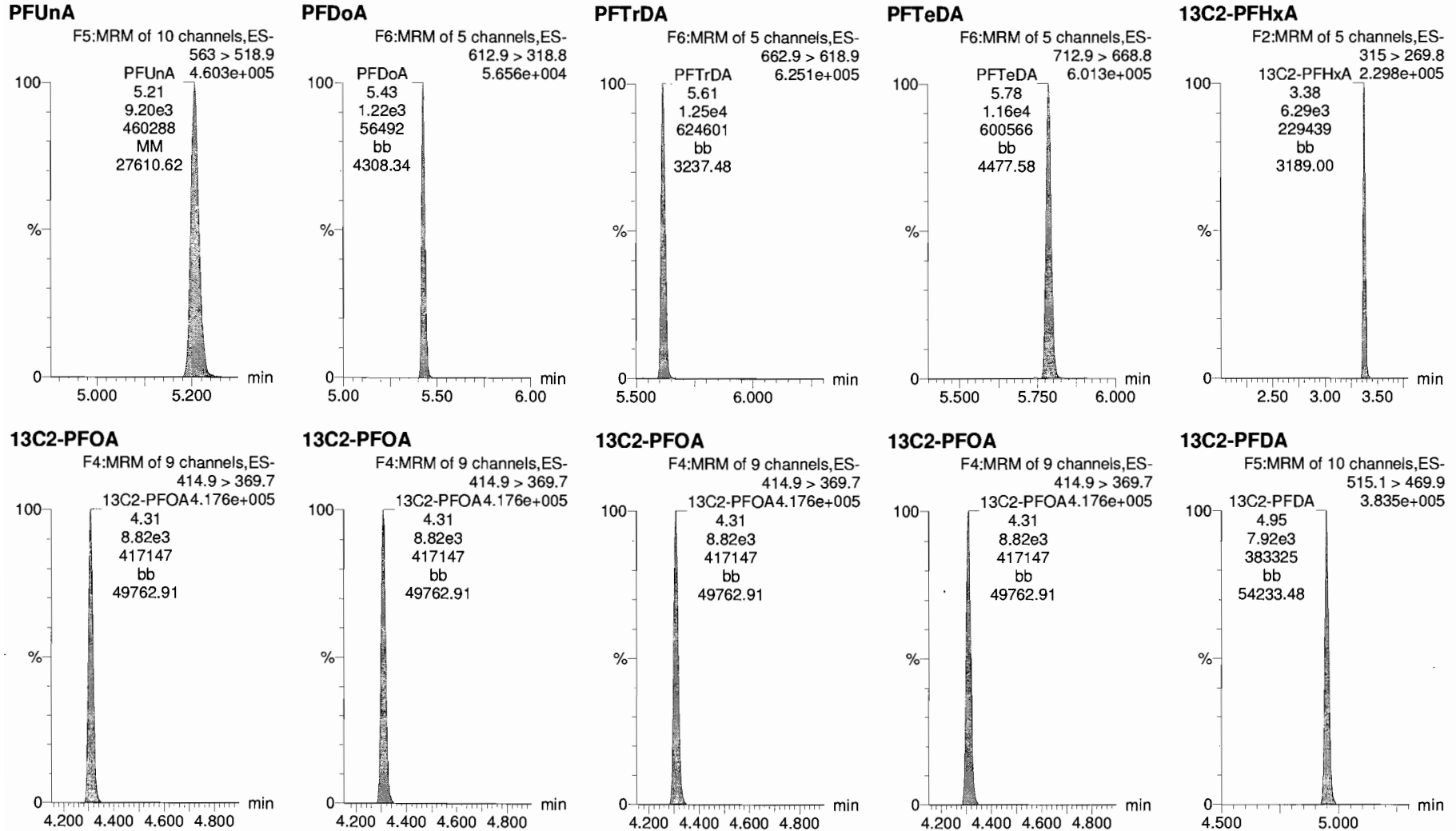
**d3-N-MeFOSAA**



Dataset: X:\G1.PRO\Results\2018\180223G2\180223G2-CRV.qld

Last Altered: Friday, February 23, 2018 17:19:15 Pacific Standard Time  
Printed: Friday, February 23, 2018 17:24:39 Pacific Standard Time

Name: 180223G2\_6, Date: 23-Feb-2018, Time: 14:19:35, ID: ST180223G2-5 PFC CS1 537 18B2304, Description: PFC CS1 537 18B2304



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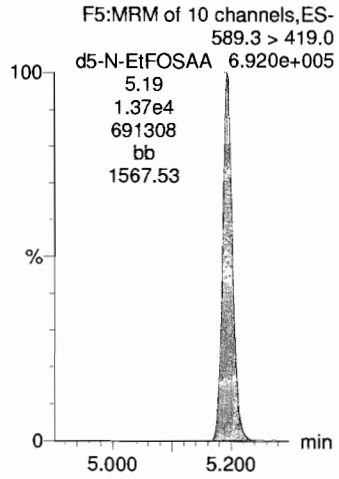
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Last Altered: Friday, February 23, 2018 17:19:15 Pacific Standard Time

Printed: Friday, February 23, 2018 17:24:39 Pacific Standard Time

Name: 180223G2\_6, Date: 23-Feb-2018, Time: 14:19:35, ID: ST180223G2-5 PFC CS1 537 18B2304, Description: PFC CS1 537 18B2304

**d5-N-EtFOSAA**

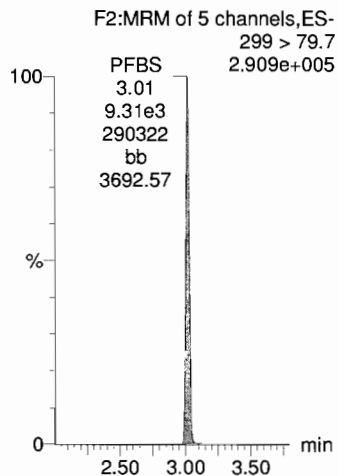


Dataset: X:\G1.PRO\Results\2018\180223G2\180223G2-CRV.qld

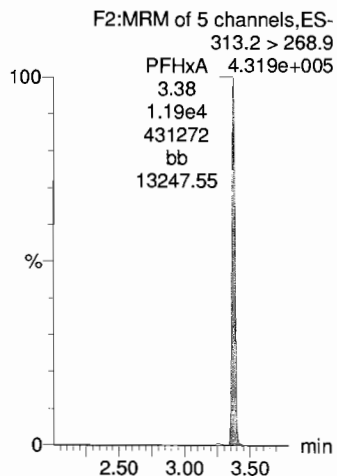
Last Altered: Friday, February 23, 2018 17:19:15 Pacific Standard Time  
Printed: Friday, February 23, 2018 17:24:39 Pacific Standard Time

Name: 180223G2\_7, Date: 23-Feb-2018, Time: 14:32:01, ID: ST180223G2-6 PFC CS2 537 18B2305, Description: PFC CS2 537 18B2305

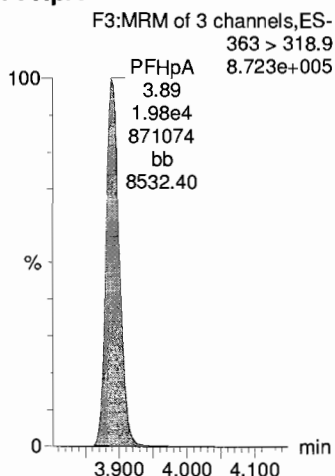
**PFBS**



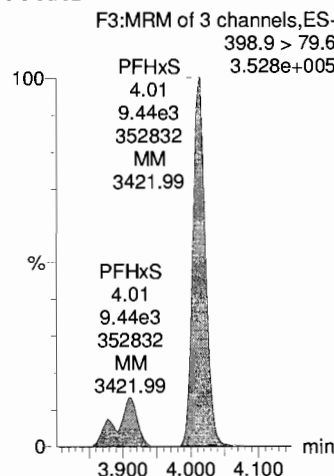
**PFHxA**



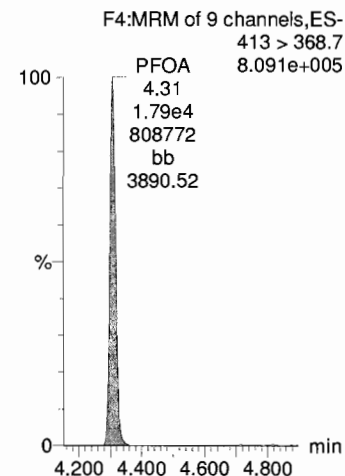
**PFHpA**



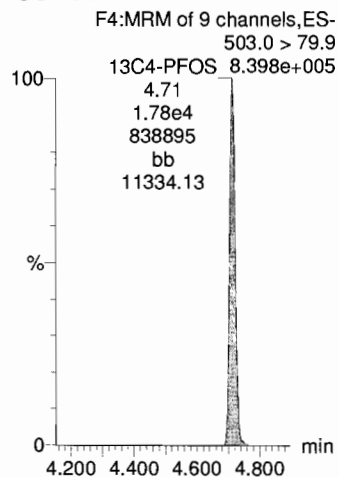
**PFHxS**



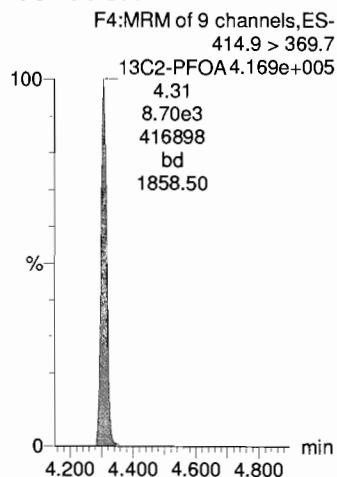
**PFOA**



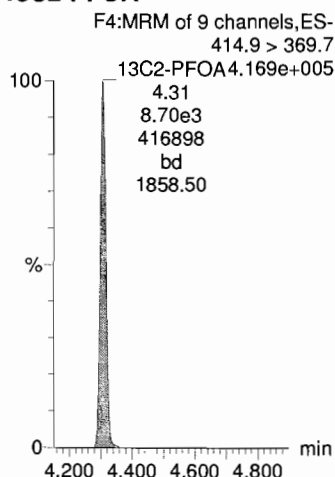
**13C4-PFOS**



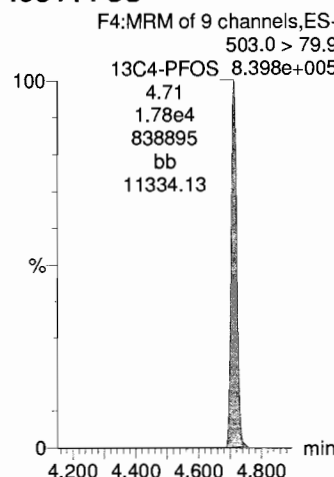
**13C2-PFOA**



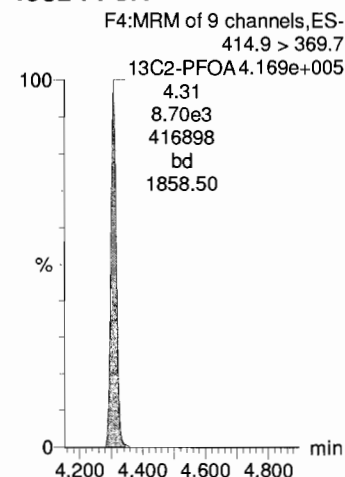
**13C2-PFOA**



**13C4-PFOS**



**13C2-PFOA**



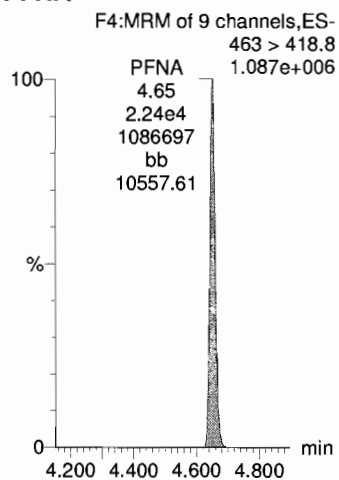


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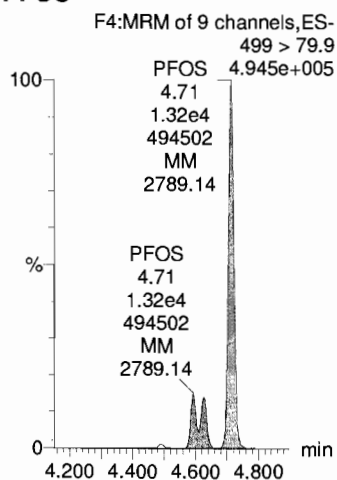
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Printed: Friday, February 23, 2018 17:24:39 Pacific Standard Time

Name: 180223G2\_7, Date: 23-Feb-2018, Time: 14:32:01, ID: ST180223G2-6 PFC CS2 537 18B2305, Description: PFC CS2 537 18B2305

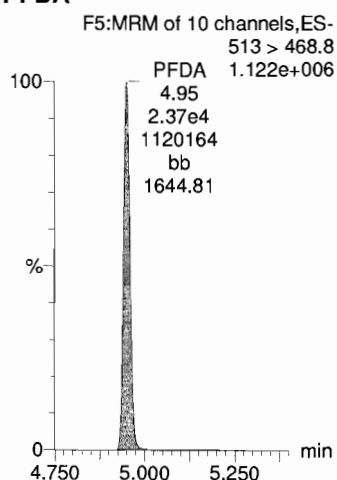
**PFNA**



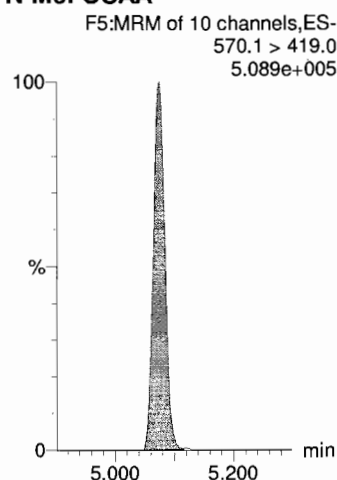
**PFOS**



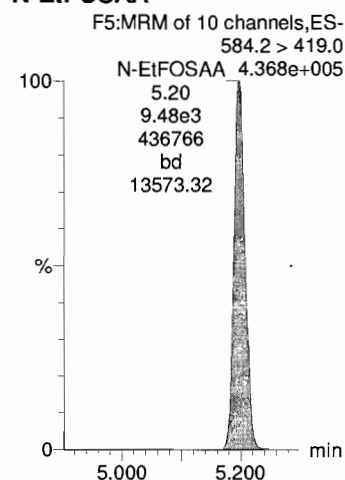
**PFDA**



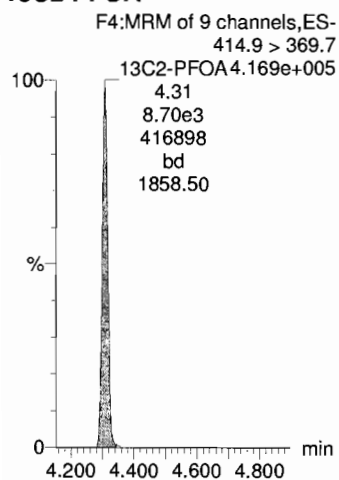
**N-MeFOSAA**



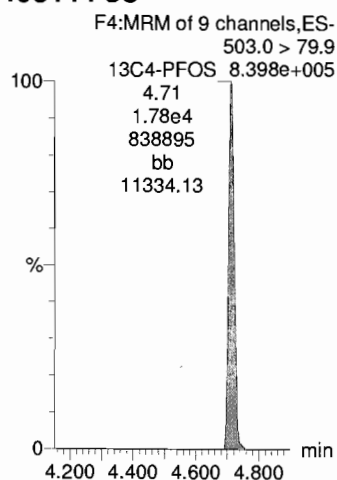
**N-EtFOSAA**



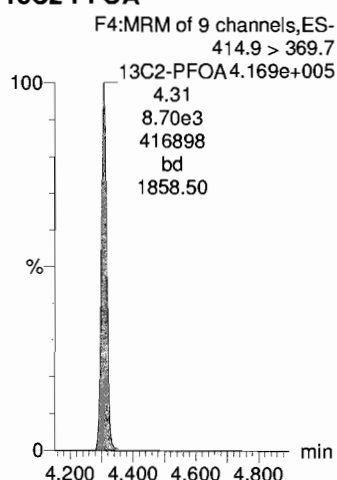
**13C2-PFOA**



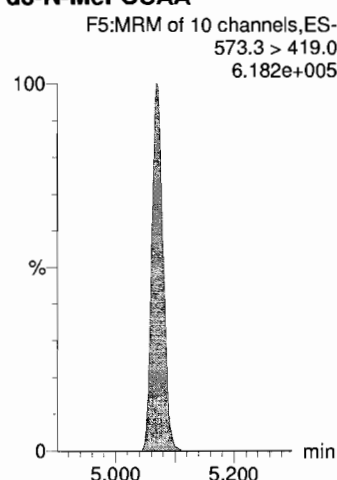
**13C4-PFOS**



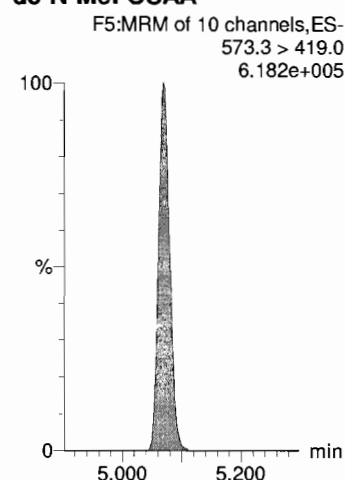
**13C2-PFOA**



**d3-N-MeFOSAA**



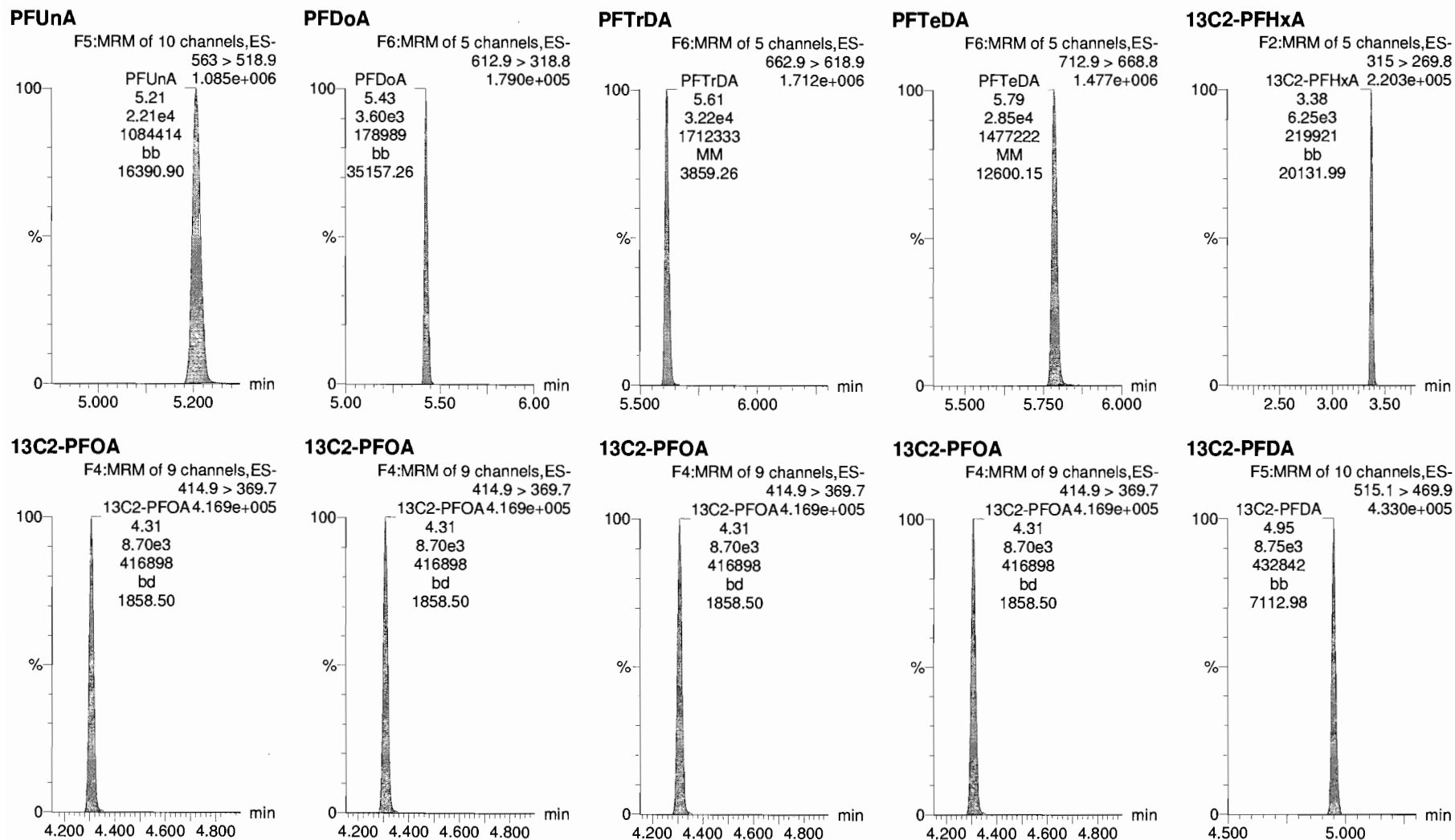
**d3-N-MeFOSAA**



Dataset: X:\G1.PRO\Results\2018\180223G2\180223G2-CRV.qld

Last Altered: Friday, February 23, 2018 17:19:15 Pacific Standard Time  
Printed: Friday, February 23, 2018 17:24:39 Pacific Standard Time

Name: 180223G2\_7, Date: 23-Feb-2018, Time: 14:32:01, ID: ST180223G2-6 PFC CS2 537 18B2305, Description: PFC CS2 537 18B2305



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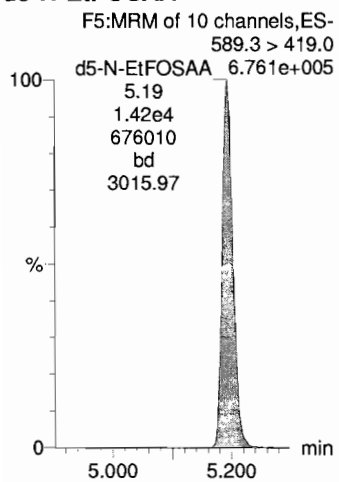
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Last Altered: Friday, February 23, 2018 17:19:15 Pacific Standard Time

Printed: Friday, February 23, 2018 17:24:39 Pacific Standard Time

Name: 180223G2\_7, Date: 23-Feb-2018, Time: 14:32:01, ID: ST180223G2-6 PFC CS2 537 18B2305, Description: PFC CS2 537 18B2305

**d5-N-EtFOSAA**



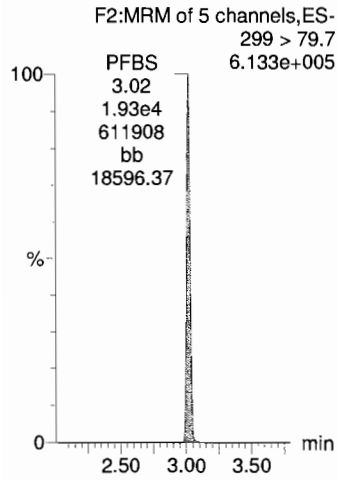
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Last Altered: Friday, February 23, 2018 17:19:15 Pacific Standard Time

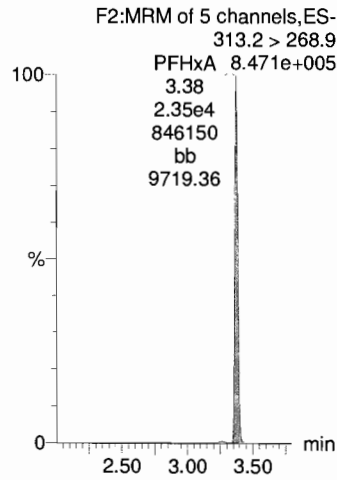
Printed: Friday, February 23, 2018 17:24:39 Pacific Standard Time

Name: 180223G2\_8, Date: 23-Feb-2018, Time: 14:44:25, ID: ST180223G2-7 PFC CS3 537 18B2306, Description: PFC CS3 537 18B2306

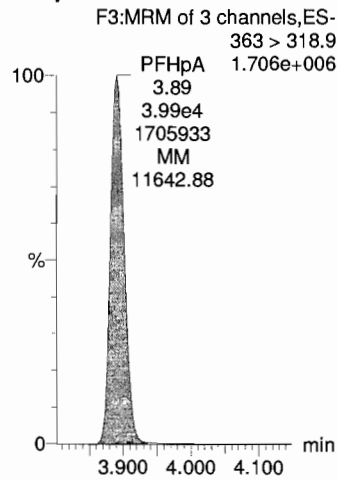
**PFBS**



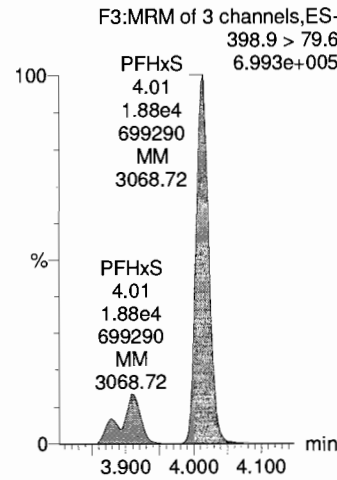
**PFHxA**



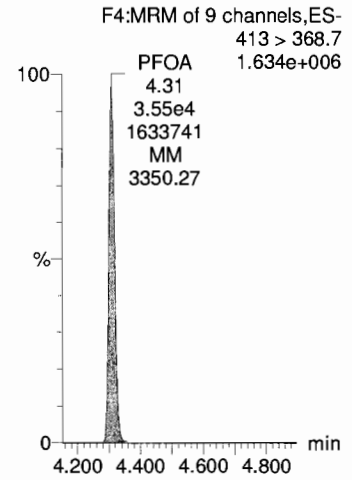
**PFHpA**



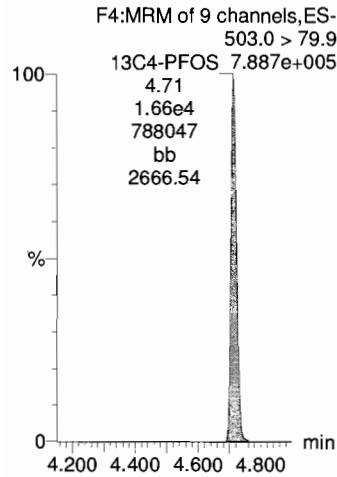
**PFHxS**



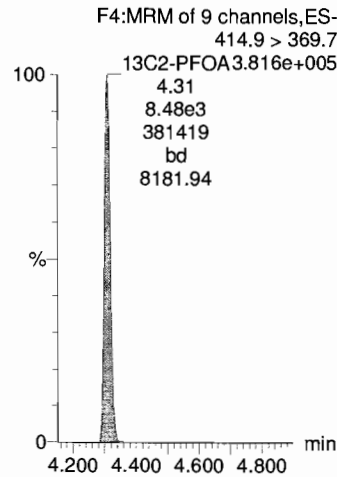
**PFOA**



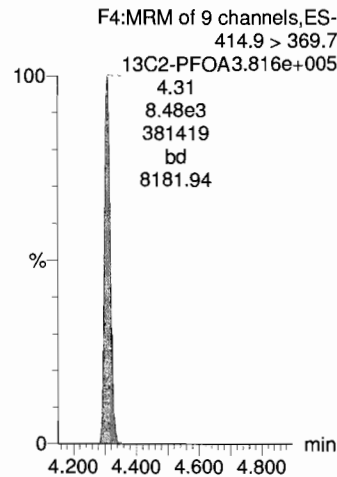
**13C4-PFOS**



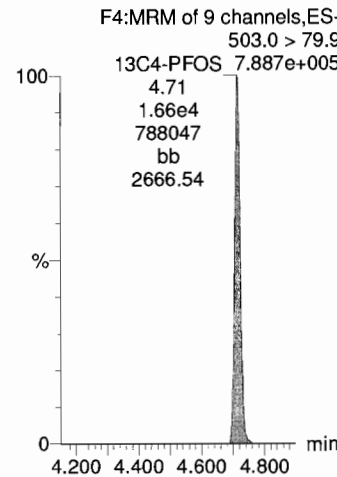
**13C2-PFOA**



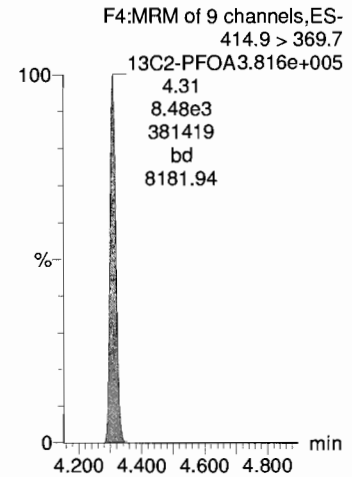
**13C2-PFOA**



**13C4-PFOS**



**13C2-PFOA**



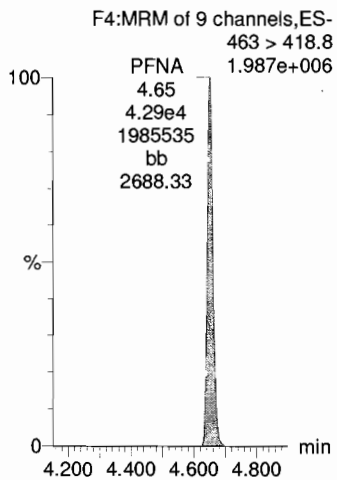
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Last Altered: Friday, February 23, 2018 17:19:15 Pacific Standard Time

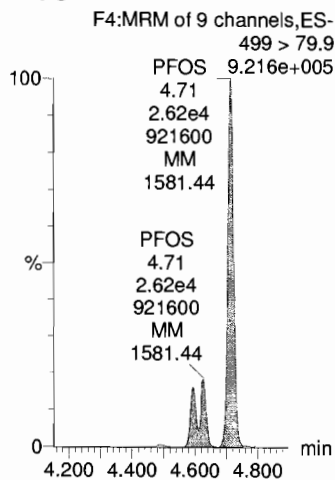
Printed: Friday, February 23, 2018 17:24:39 Pacific Standard Time

Name: 180223G2\_8, Date: 23-Feb-2018, Time: 14:44:25, ID: ST180223G2-7 PFC CS3 537 18B2306, Description: PFC CS3 537 18B2306

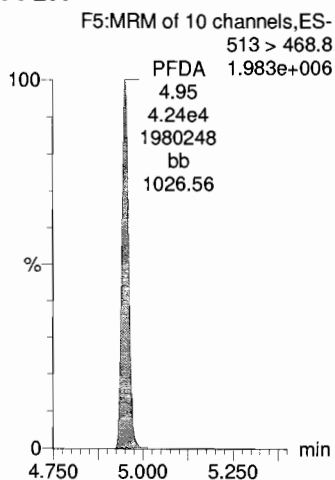
**PFNA**



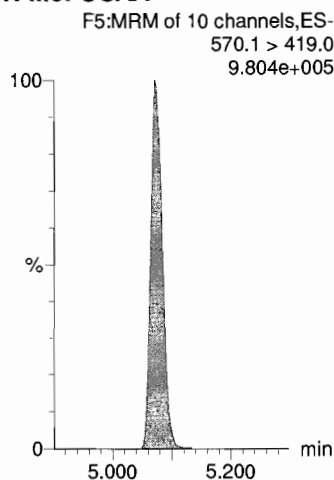
**PFOS**



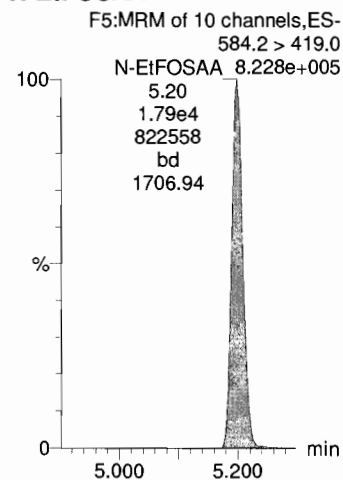
**PFDA**



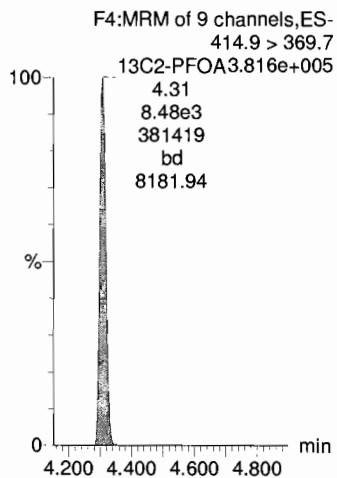
**N-MeFOSAA**



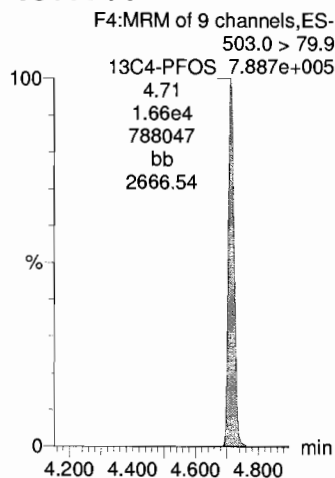
**N-EtFOSAA**



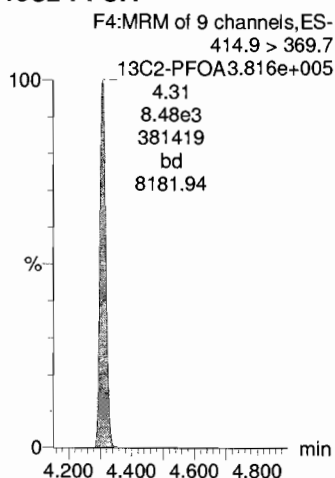
**13C2-PFOA**



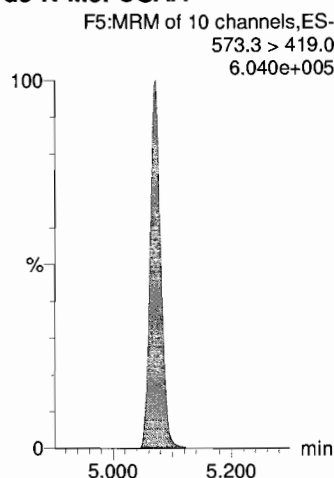
**13C4-PFOS**



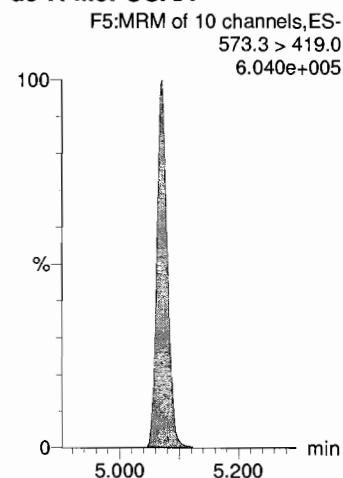
**13C2-PFOA**



**d3-N-MeFOSAA**



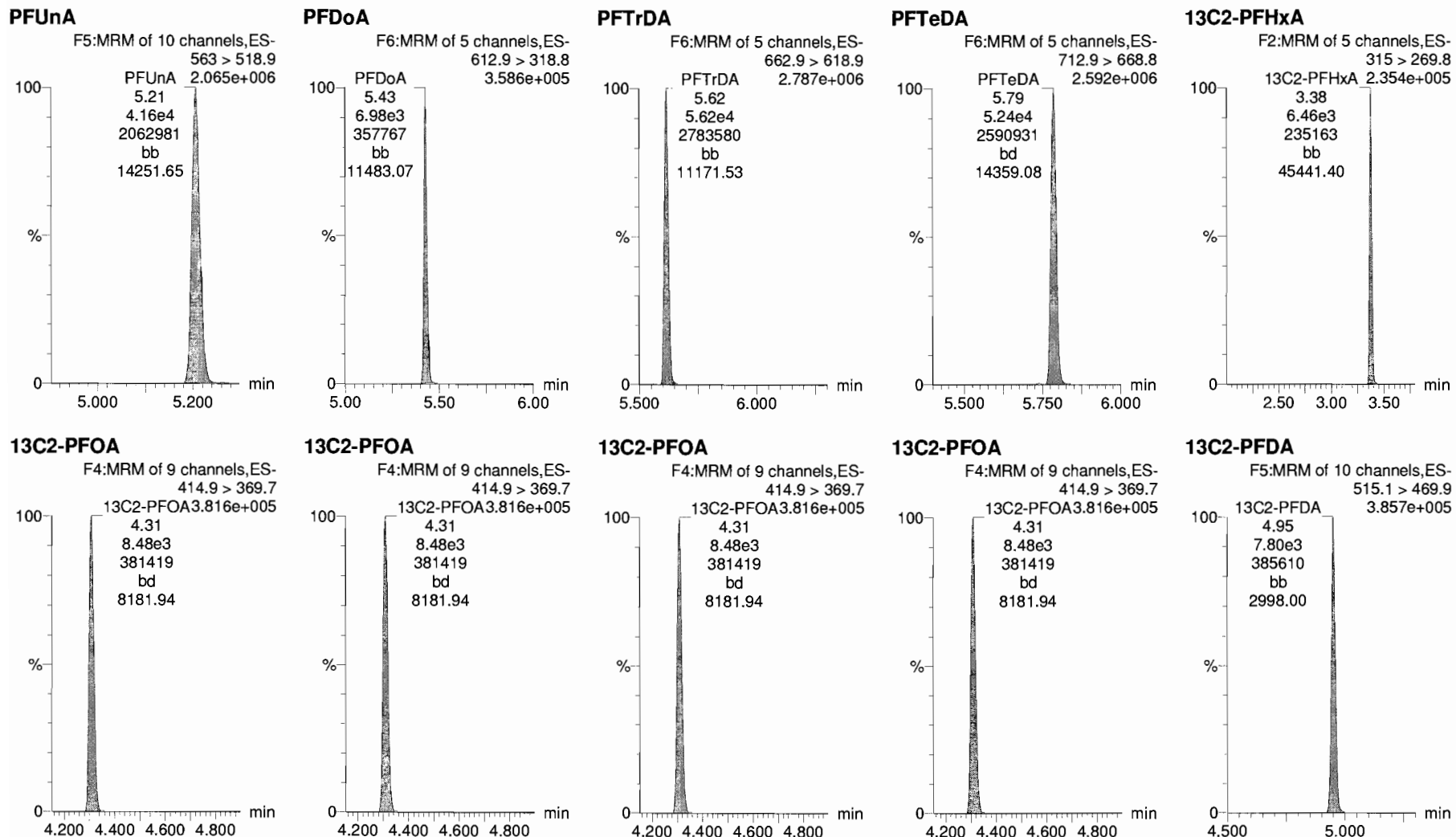
**d3-N-MeFOSAA**



Dataset: X:\G1.PRO\Results\2018\180223G2\180223G2-CRV.qld

Last Altered: Friday, February 23, 2018 17:19:15 Pacific Standard Time  
Printed: Friday, February 23, 2018 17:24:39 Pacific Standard Time

Name: 180223G2\_8, Date: 23-Feb-2018, Time: 14:44:25, ID: ST180223G2-7 PFC CS3 537 18B2306, Description: PFC CS3 537 18B2306



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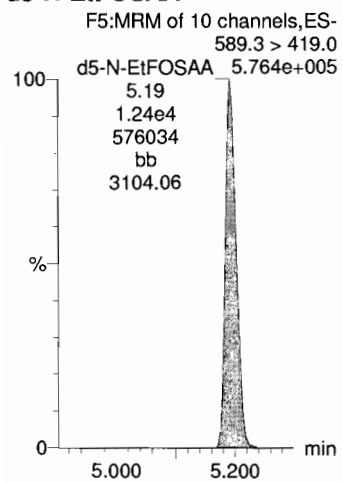
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Last Altered: Friday, February 23, 2018 17:19:15 Pacific Standard Time

Printed: Friday, February 23, 2018 17:24:39 Pacific Standard Time

Name: 180223G2\_8, Date: 23-Feb-2018, Time: 14:44:25, ID: ST180223G2-7 PFC CS3 537 18B2306, Description: PFC CS3 537 18B2306

**d5-N-EtFOSAA**



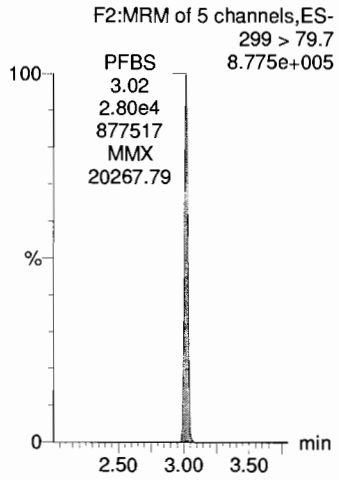
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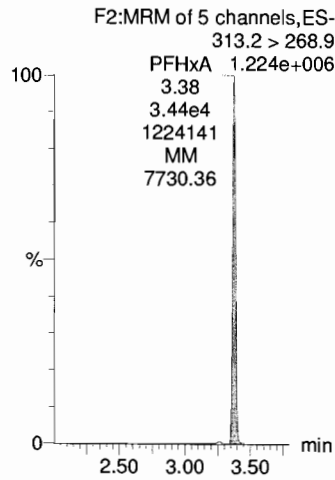
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Name: 180223G2\_9, Date: 23-Feb-2018, Time: 14:56:52, ID: ST180223G2-8 PFC CS4 537 18B2307, Description: PFC CS4 537 18B2307

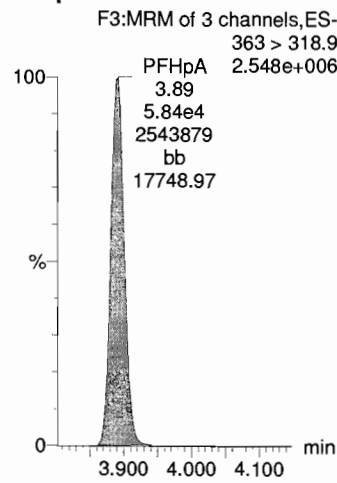
**PFBS**



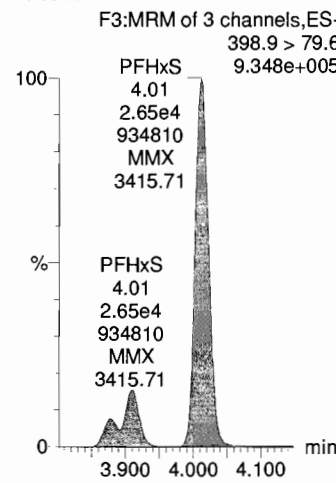
**PFHxA**



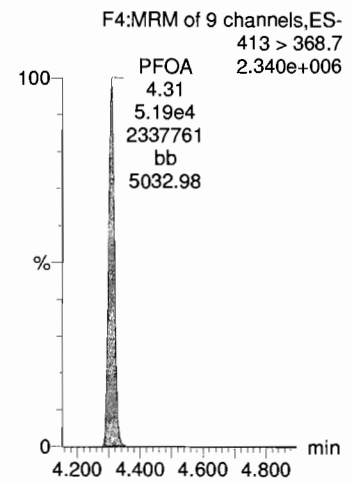
**PFHpA**



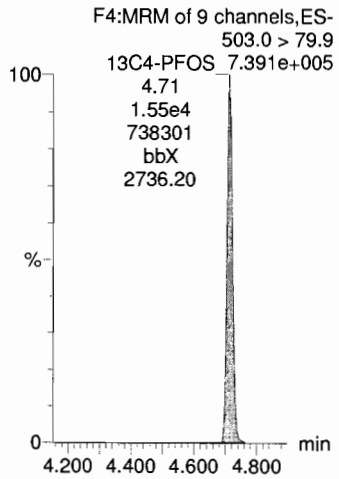
**PFHxS**



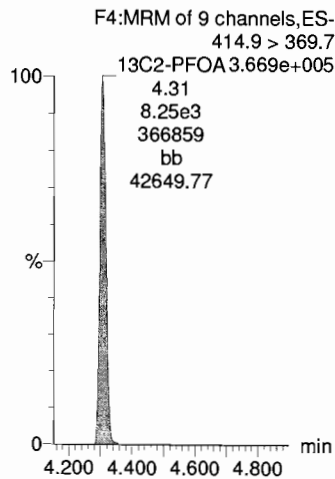
**PFOA**



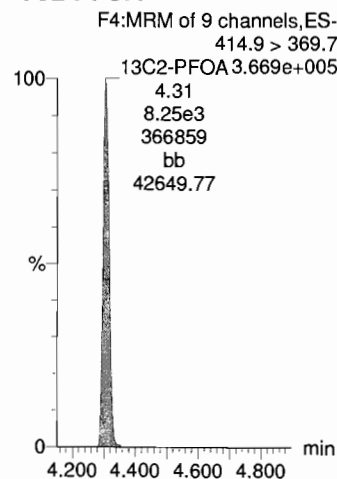
**13C4-PFOS**



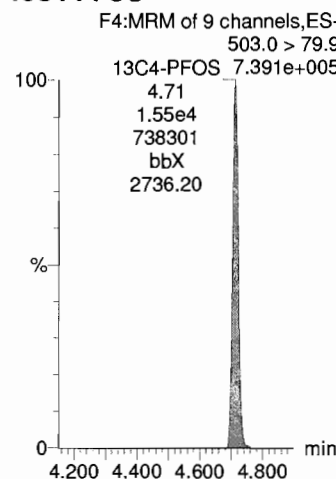
**13C2-PFOA**



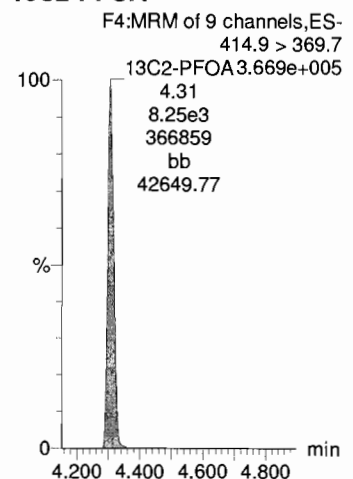
**13C2-PFOA**



**13C4-PFOS**



**13C2-PFOA**



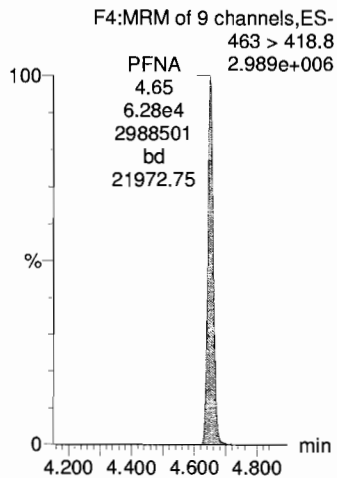


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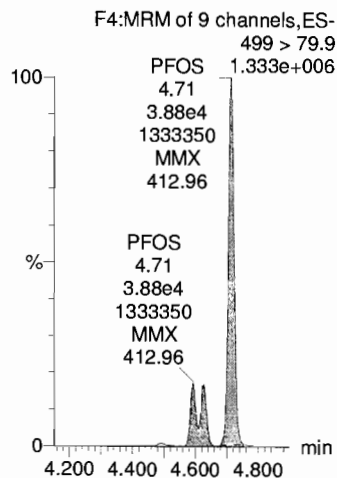
Last Altered: Friday, February 23, 2018 17:19:15 Pacific Standard Time  
Printed: Friday, February 23, 2018 17:24:39 Pacific Standard Time

Name: 180223G2\_9, Date: 23-Feb-2018, Time: 14:56:52, ID: ST180223G2-8 PFC CS4 537 18B2307, Description: PFC CS4 537 18B2307

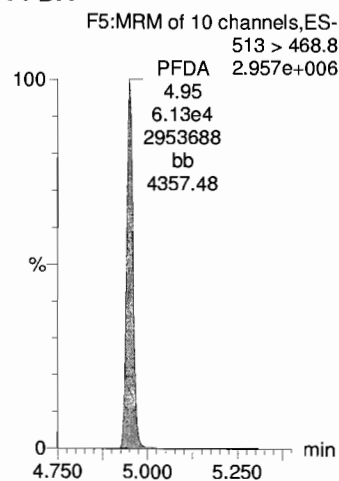
**PFNA**



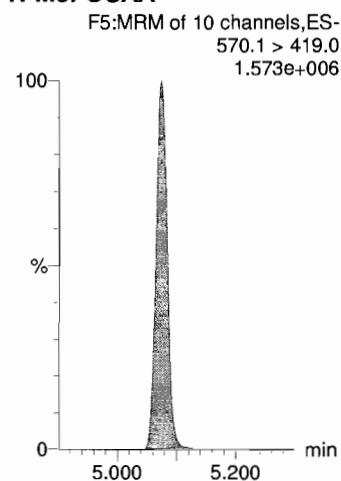
**PFOS**



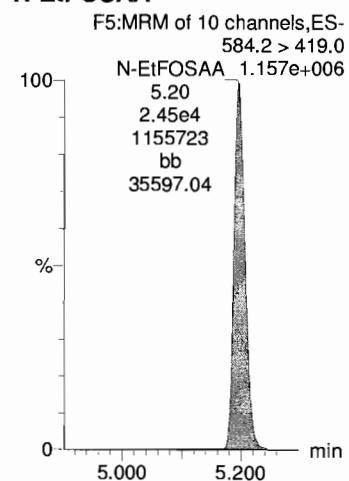
**PFDA**



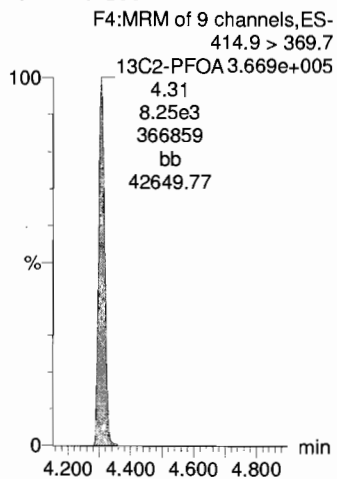
**N-MeFOSAA**



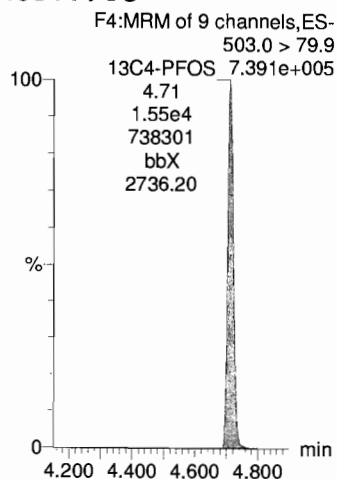
**N-EtFOSAA**



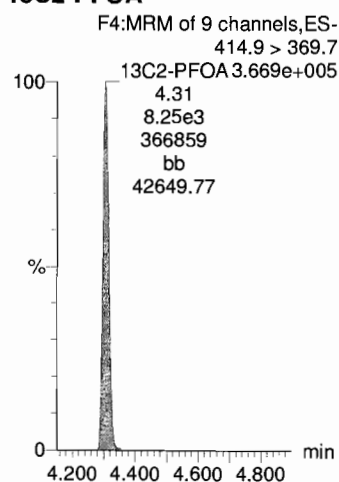
**13C2-PFOA**



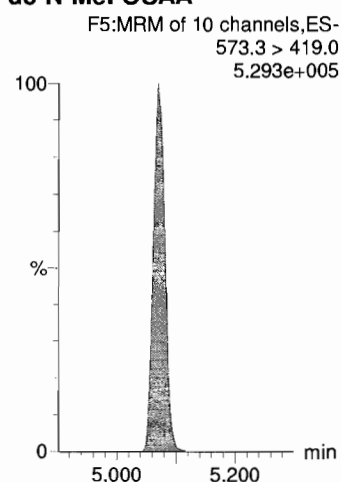
**13C4-PFOS**



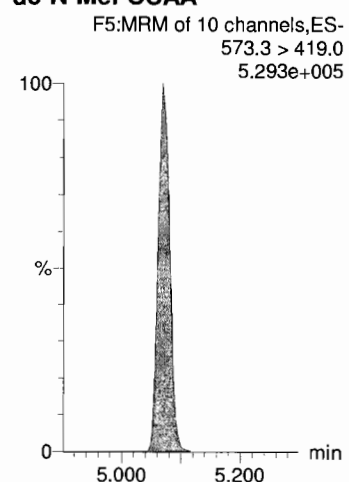
**13C2-PFOA**



**d3-N-MeFOSAA**



**d3-N-MeFOSAA**



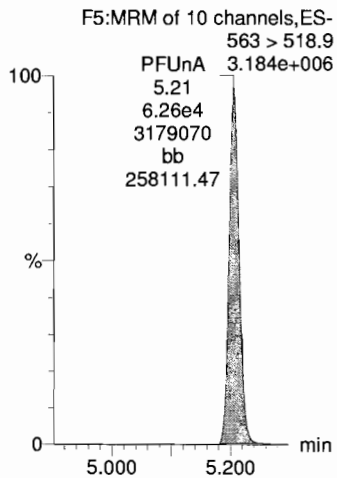
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Last Altered: Friday, February 23, 2018 17:19:15 Pacific Standard Time

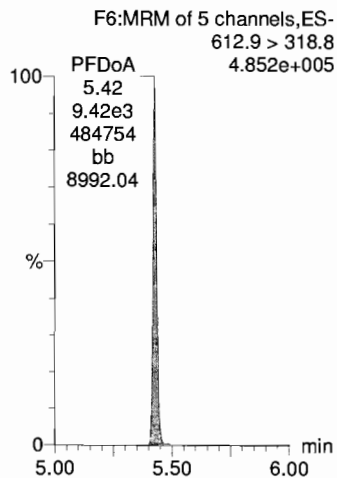
Printed: Friday, February 23, 2018 17:24:39 Pacific Standard Time

Name: 180223G2\_9, Date: 23-Feb-2018, Time: 14:56:52, ID: ST180223G2-8 PFC CS4 537 18B2307, Description: PFC CS4 537 18B2307

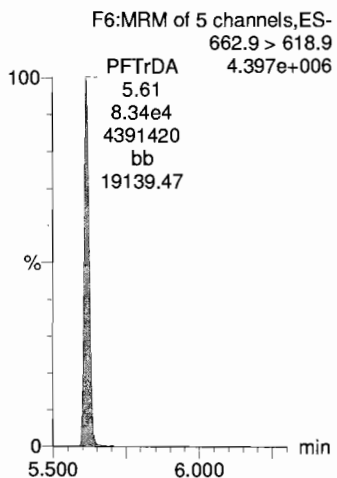
**PFUnA**



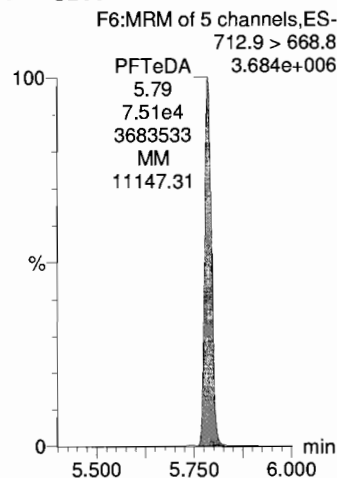
**PFDaA**



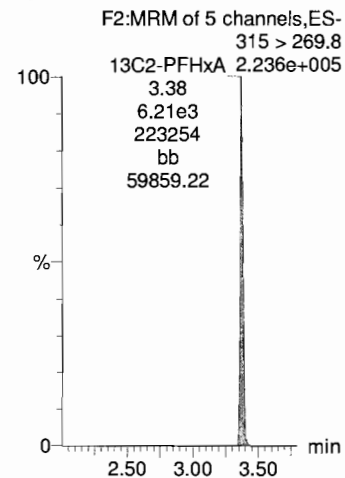
**PFTrDA**



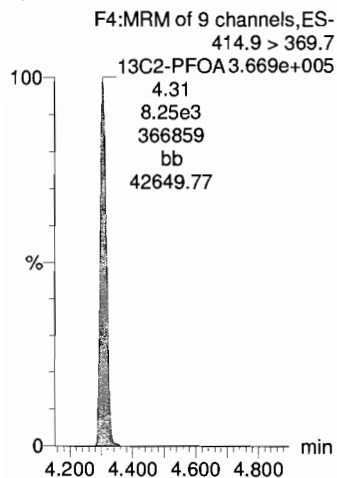
**PFTeDA**



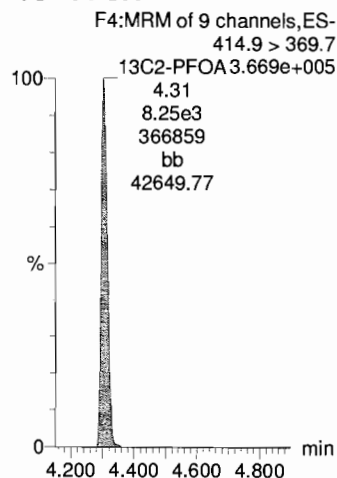
**13C2-PFHxA**



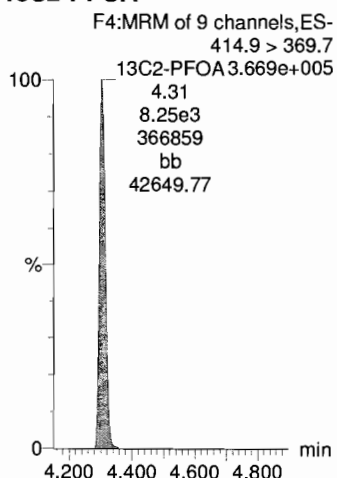
**13C2-PFOA**



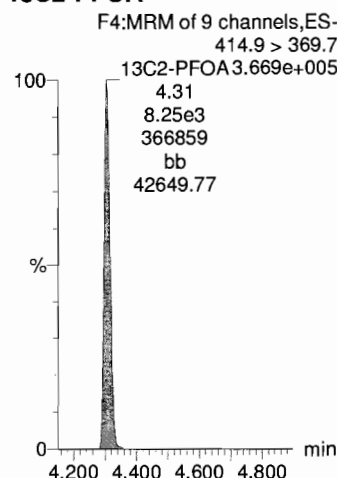
**13C2-PFOA**



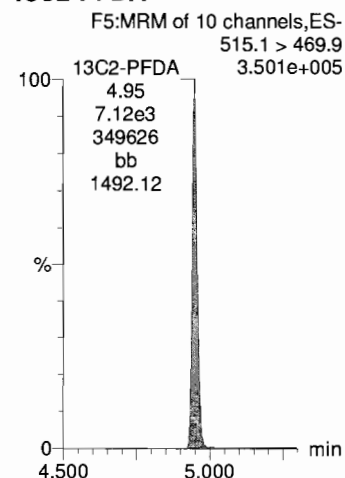
**13C2-PFOA**



**13C2-PFOA**



**13C2-PFDA**



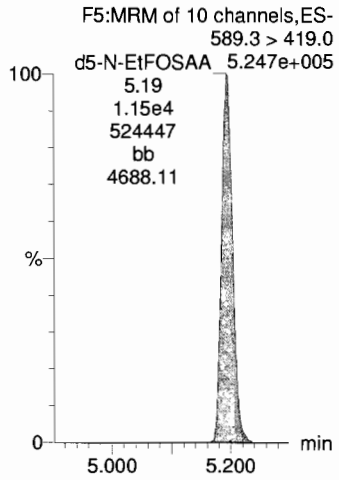
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Last Altered: Friday, February 23, 2018 17:19:15 Pacific Standard Time

Printed: Friday, February 23, 2018 17:24:39 Pacific Standard Time

Name: 180223G2\_9, Date: 23-Feb-2018, Time: 14:56:52, ID: ST180223G2-8 PFC CS4 537 18B2307, Description: PFC CS4 537 18B2307

**d5-N-EtFOSAA**

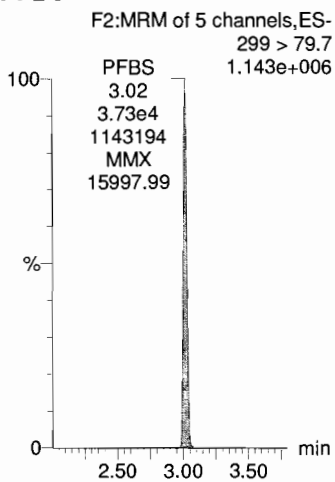


Dataset: X:\G1.PRO\Results\2018\180223G2\180223G2-CRV.qld

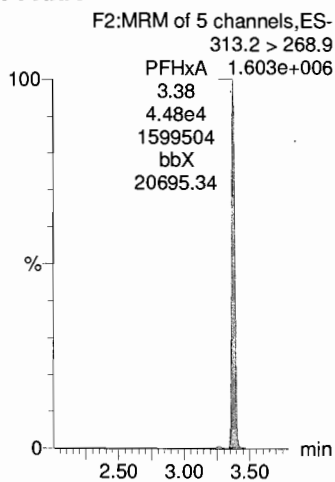
Last Altered: Friday, February 23, 2018 17:19:15 Pacific Standard Time  
Printed: Friday, February 23, 2018 17:24:39 Pacific Standard Time

Name: 180223G2\_10, Date: 23-Feb-2018, Time: 15:09:16, ID: ST180223G2-9 PFC CS5 537 18B2308, Description: PFC CS5 537 18B2308

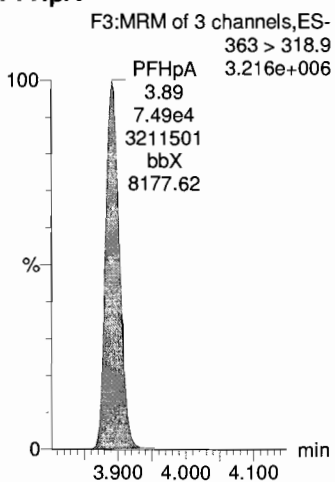
**PFBS**



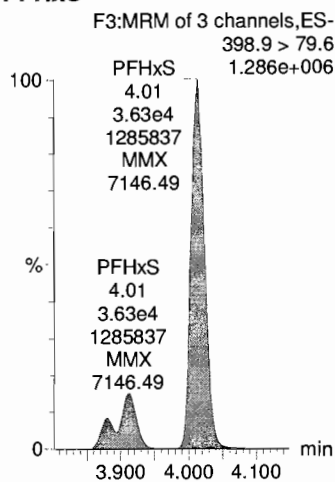
**PFHxA**



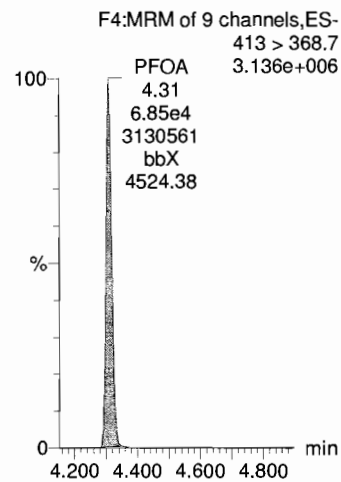
**PFHpA**



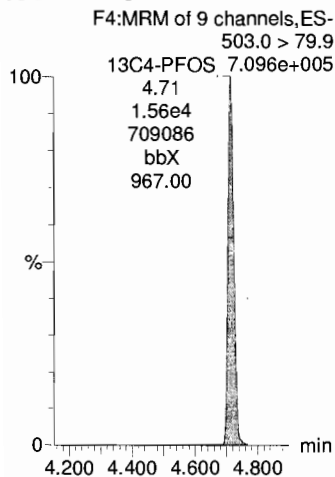
**PFHxS**



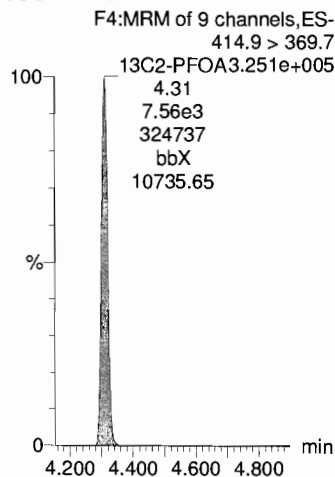
**PFOA**



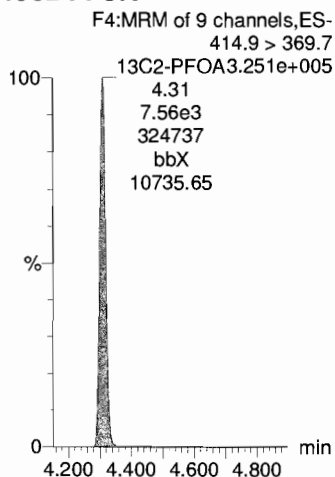
**13C4-PFOS**



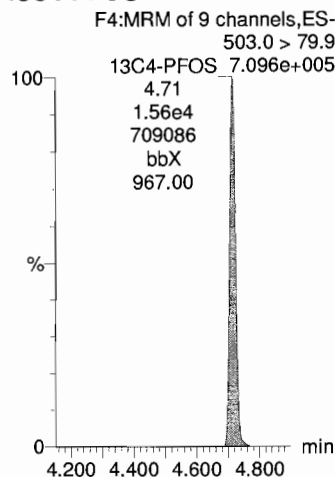
**13C2-PFOA**



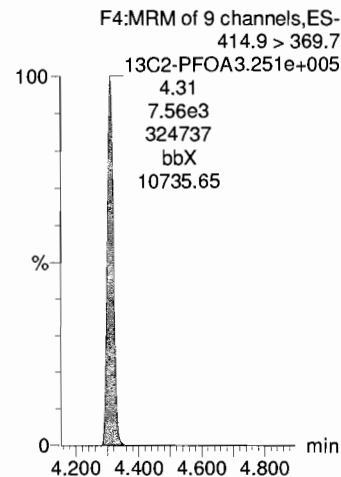
**13C2-PFOA**



**13C4-PFOS**



**13C2-PFOA**



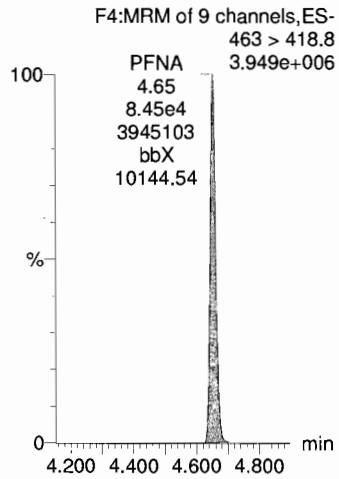
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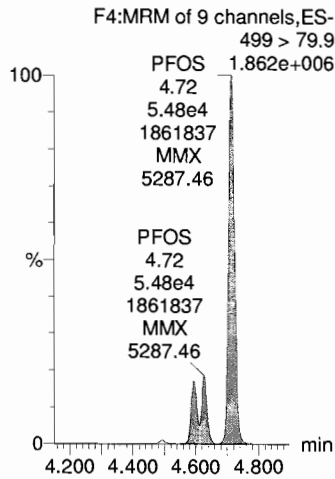
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Name: 180223G2\_10, Date: 23-Feb-2018, Time: 15:09:16, ID: ST180223G2-9 PFC CS5 537 18B2308, Description: PFC CS5 537 18B2308

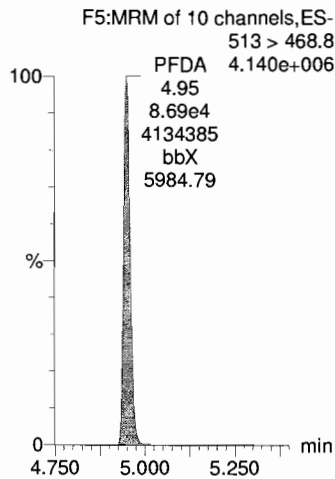
**PFNA**



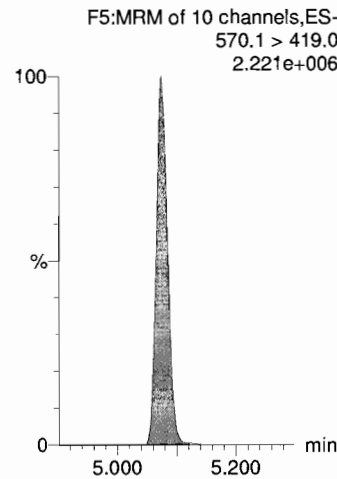
**PFOS**



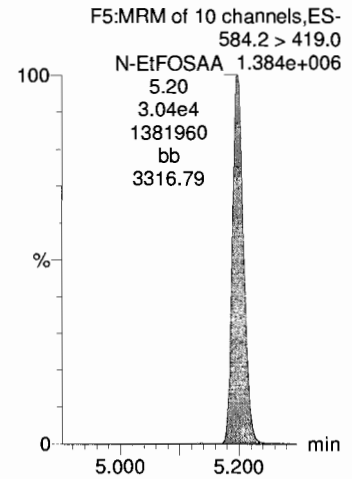
**PFDA**



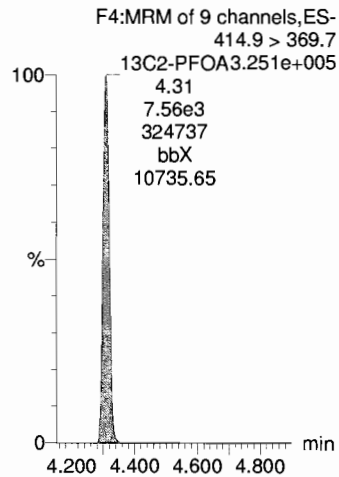
**N-MeFOSAA**



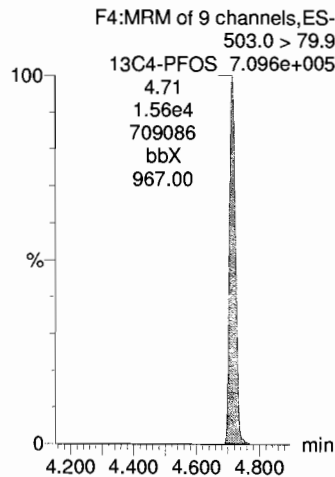
**N-EtFOSAA**



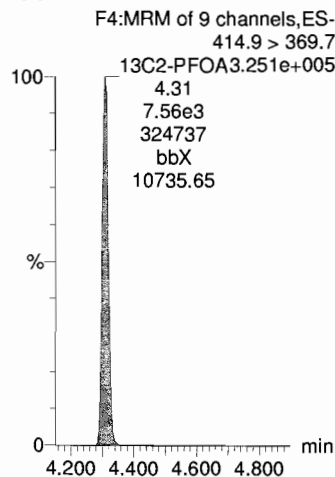
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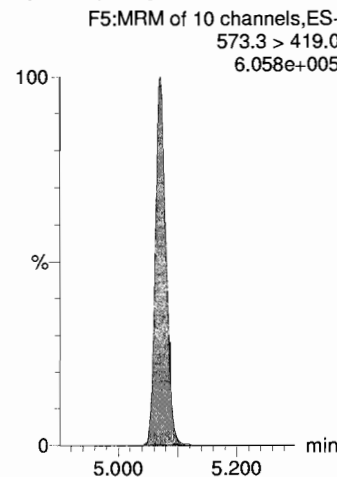
**13C4-PFOS**



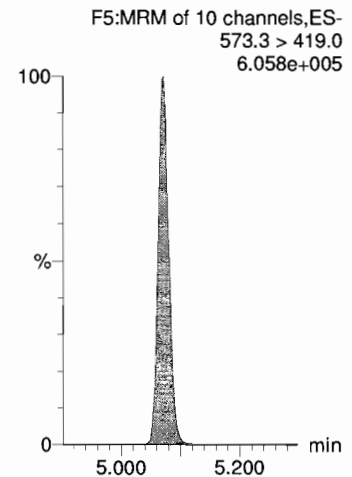
**13C2-PFOA**



**d3-N-MeFOSAA**



**d3-N-MeFOSAA**

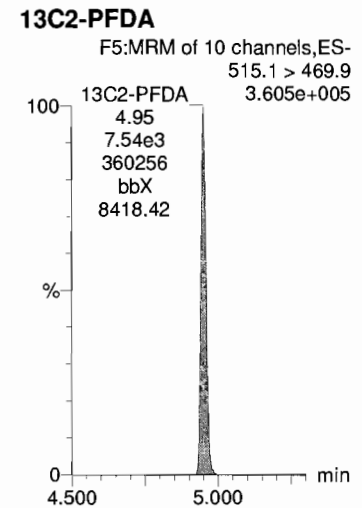
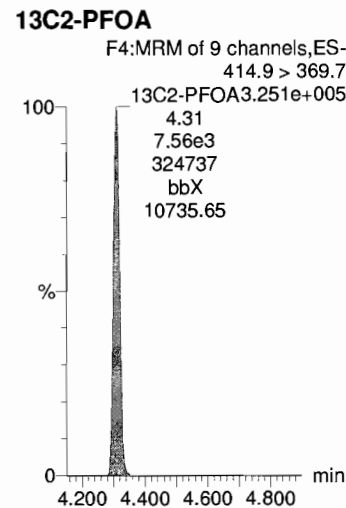
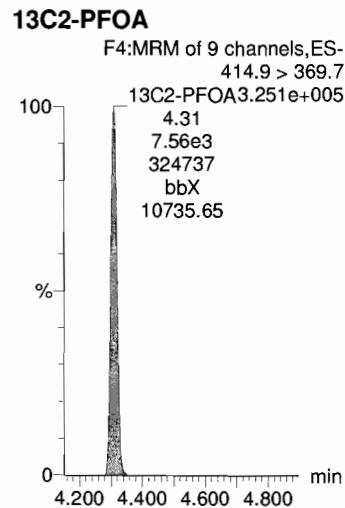
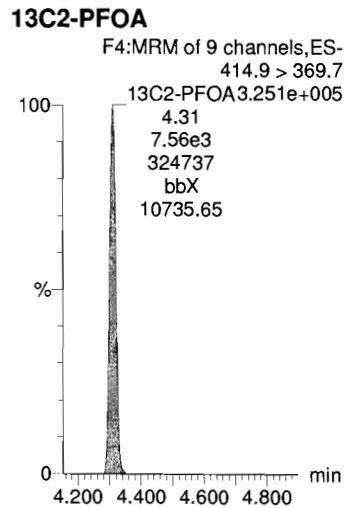
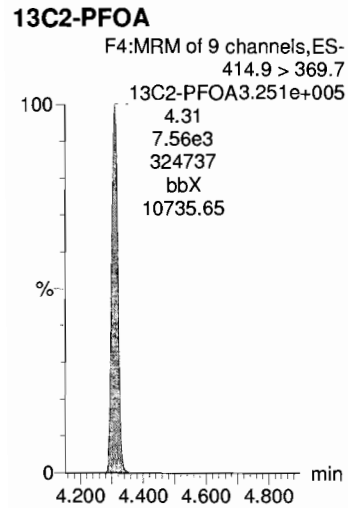
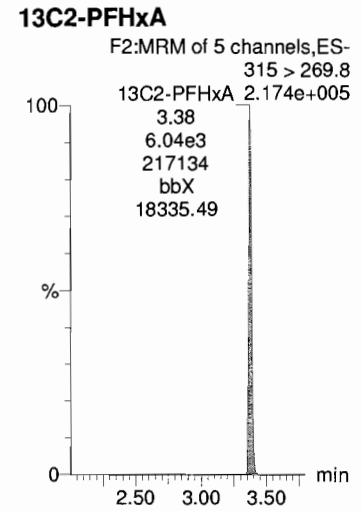
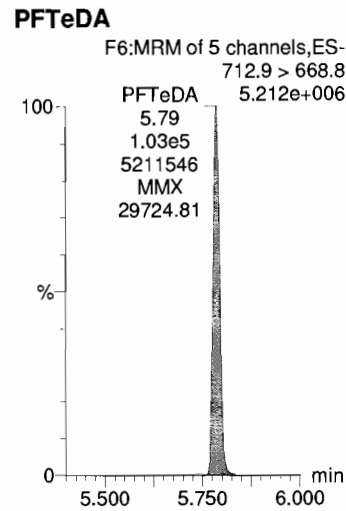
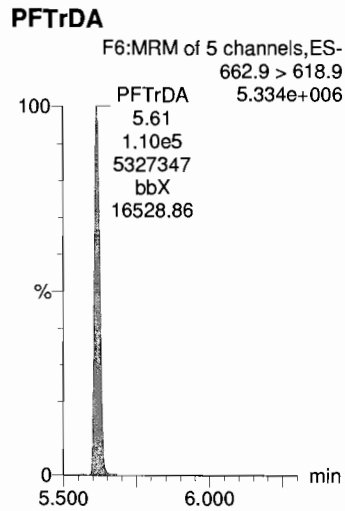
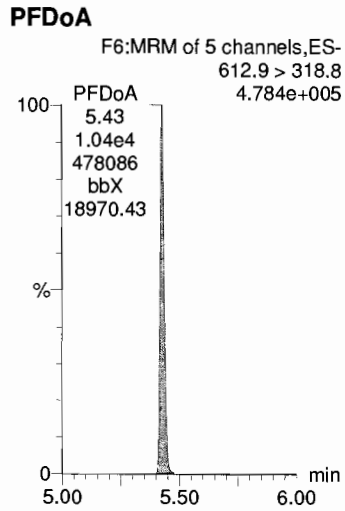
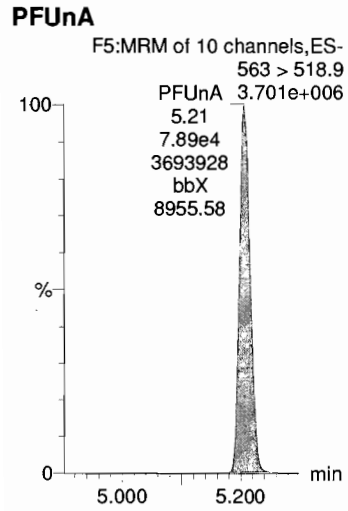


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Printed: Friday, February 23, 2018 17:24:39 Pacific Standard Time

Name: 180223G2\_10, Date: 23-Feb-2018, Time: 15:09:16, ID: ST180223G2-9 PFC CS5 537 18B2308, Description: PFC CS5 537 18B2308



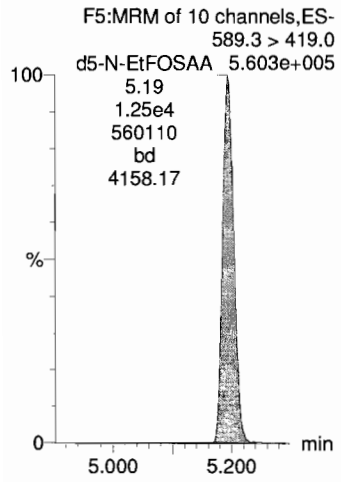
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Last Altered: Friday, February 23, 2018 17:19:15 Pacific Standard Time

Printed: Friday, February 23, 2018 17:24:39 Pacific Standard Time

Name: 180223G2\_10, Date: 23-Feb-2018, Time: 15:09:16, ID: ST180223G2-9 PFC CS5 537 18B2308, Description: PFC CS5 537 18B2308

**d5-N-EtFOSAA**



Dataset: X:\G1.PRO\Results\2018\180223G2\180223G2-12.qld

Last Altered: Friday, February 23, 2018 17:29:48 Pacific Standard Time  
Printed: Friday, February 23, 2018 17:30:15 Pacific Standard Time

*JPA*  
02/24/2018

Method: X:\G1.PRO\MethDB\PFAS\_DW\_L14\_1223.mdb 23 Feb 2018 15:59:15  
Calibration: X:\G1.PRO\CurveDB\C18\_537\_Q1\_02-23-18\_L14.cdb 23 Feb 2018 16:46:11

Name: 180223G2\_12, Date: 23-Feb-2018, Time: 15:34:05, ID: ICV180223G2-1 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	4.38e3	1.84e4	1.0000		3.02	3.02	6.82	9.32	93.2
2	2 PFHxA	313.2 > 268.9	5.03e3	8.33e3	1.0000		3.36	3.38	6.03	10.9	109.0
3	3 PFHpA	363 > 318.9	8.62e3	8.33e3	1.0000		3.88	3.89	10.3	11.0	110.1
4	4 PFHxS	398.9 > 79.6	4.37e3	1.84e4	1.0000		4.00	4.01	6.81	9.73	97.3
5	5 PFOA	413 > 368.7	7.32e3	8.33e3	1.0000		4.31	4.31	8.78	10.5	104.8
6	6 PFNA	463 > 418.8	1.03e4	8.33e3	1.0000		4.65	4.65	12.4	12.2	122.2
7	7 PFOS	499 > 79.9	6.52e3	1.84e4	1.0000		4.71	4.71	10.2	10.6	105.7
8	8 PFDA	513 > 468.8	9.34e3	8.33e3	1.0000		4.88	4.95	11.2	10.2	102.5
9	9 N-MeFOSAA	570.1 > 419.0	4.31e3	1.17e4	1.0000		5.01	5.08	14.7	11.0	109.9
10	10 N-EtFOSAA	584.2 > 419.0	3.95e3	1.17e4	1.0000		5.19	5.20	13.5	12.7	127.3
11	11 PFUnA	563 > 518.9	1.01e4	8.33e3	1.0000		5.14	5.21	12.2	12.1	121.2
12	12 PFDoA	612.9 > 318.8	1.39e3	8.33e3	1.0000		5.34	5.43	1.67	10.5	105.2
13	13 PFTrDA	662.9 > 618.9	1.34e4	8.33e3	1.0000		5.57	5.61	16.0	11.7	116.7
14	14 PFTeDA	712.9 > 668.8	1.13e4	8.33e3	1.0000		5.74	5.78	13.5	10.8	108.4
15	15 13C2-PFHxA	315 > 269.8	6.61e3	8.33e3	1.0000	0.731	3.46	3.38	7.94	10.9	108.5
16	16 13C2-PFDA	515.1 > 469.9	7.73e3	8.33e3	1.0000	0.910	4.91	4.95	9.28	10.2	102.0
17	17 d5-N-EtFOSAA	589.3 > 419.0	1.26e4	1.17e4	1.0000	1.049	5.07	5.19	43.1	41.0	102.6
18	18 13C2-PFOA	414.9 > 369.7	8.33e3	8.33e3	1.0000	1.000	4.41	4.31	10.0	10.0	100.0
19	19 13C4-PFOS	503.0 > 79.9	1.84e4	1.84e4	1.0000	1.000	4.81	4.71	28.7	28.7	100.0
20	20 d3-N-MeFOSAA	573.3 > 419.0	1.17e4	1.17e4	1.0000	1.000	5.16	5.07	40.0	40.0	100.0



Dataset: X:\G1.PRO\Results\2018\180223G2\180223G2-12.qld

Last Altered: Friday, February 23, 2018 17:29:48 Pacific Standard Time

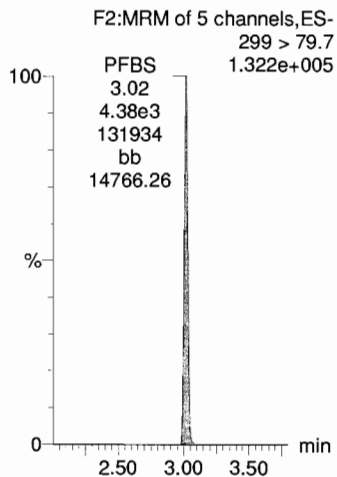
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Method: X:\G1.PRO\MethDB\PFAS\_DW\_L14\_1223.mdb 23 Feb 2018 15:59:15

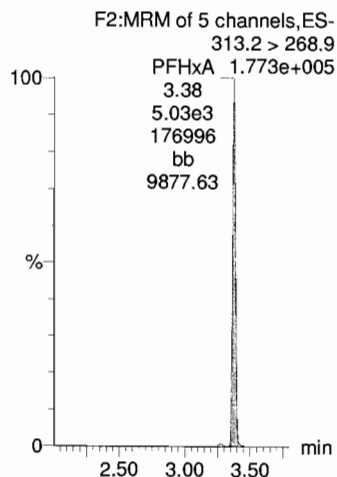
Calibration: X:\G1.PRO\CurveDB\C18\_537\_Q1\_02-23-18\_L14.cdb 23 Feb 2018 16:46:11

Name: 180223G2\_12, Date: 23-Feb-2018, Time: 15:34:05, ID: ICV180223G2-1 PFC ICV 537 18B2309, Description: PFC ICV 537 18B2309

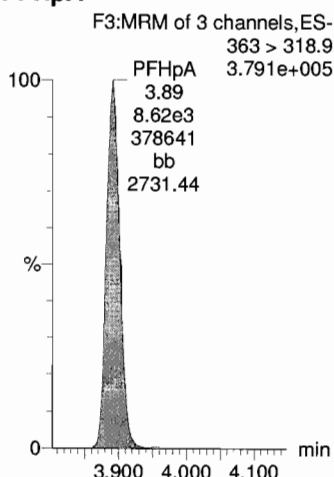
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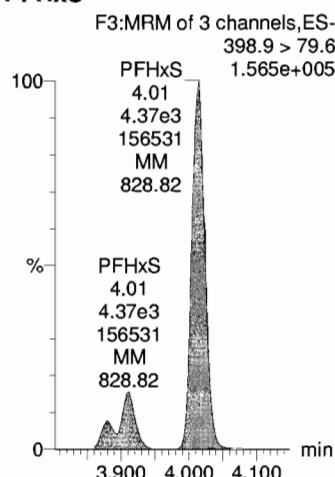
**PFHxA**



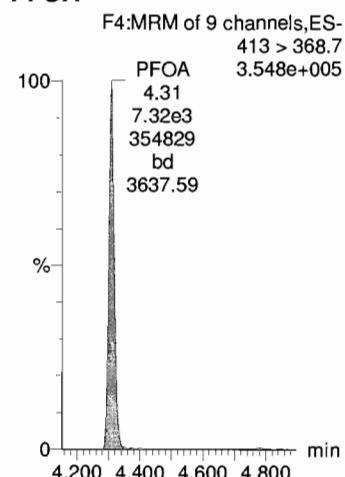
**PFHpA**



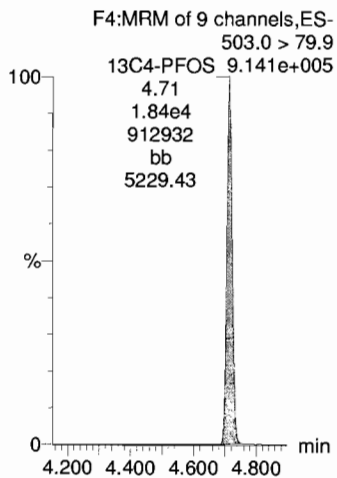
**PFHxS**



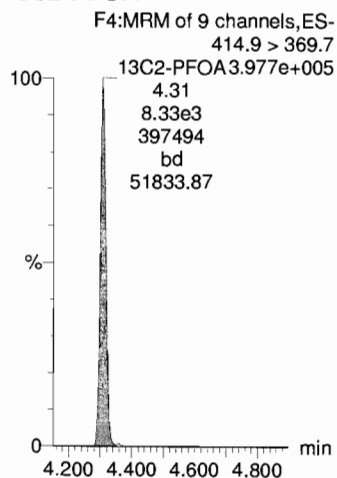
**PFOA**



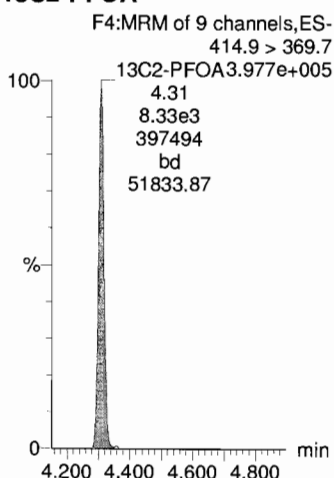
**13C4-PFOS**



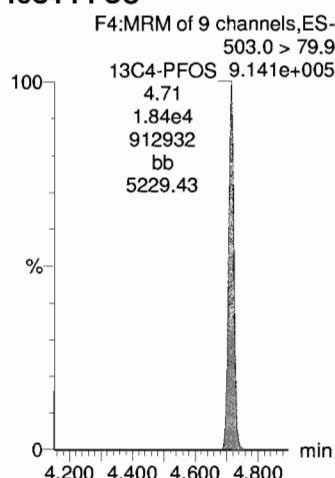
**13C2-PFOA**



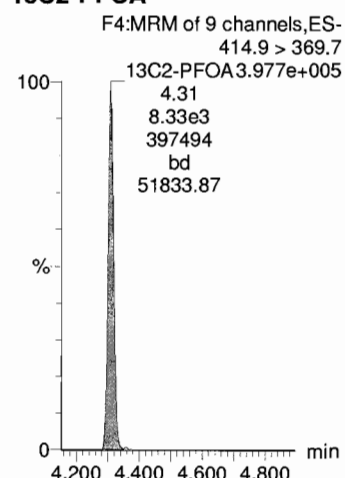
**13C2-PFOA**



**13C4-PFOS**



**13C2-PFOA**



MJT 2/23/2018

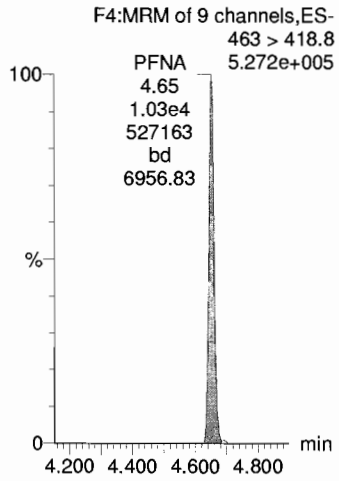
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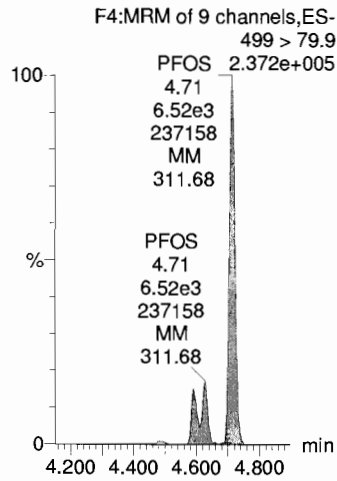
Printed: Friday, February 23, 2018 17:30:15 Pacific Standard Time

Name: 180223G2\_12, Date: 23-Feb-2018, Time: 15:34:05, ID: ICV180223G2-1 PFC ICV 537 18B2309, Description: PFC ICV 537 18B2309

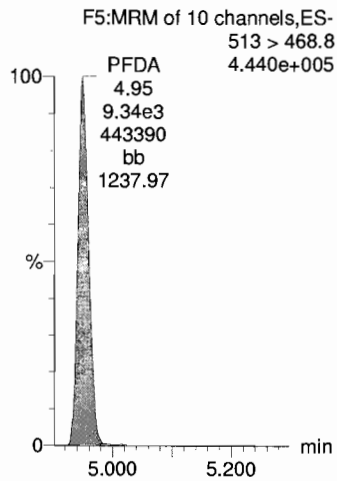
**PFNA**



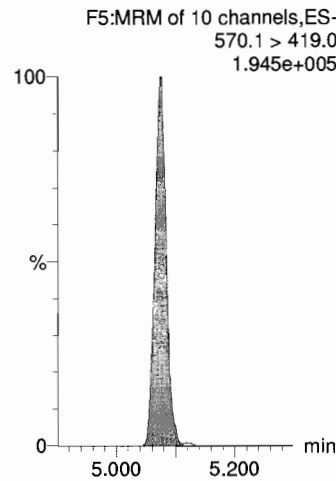
**PFOS**



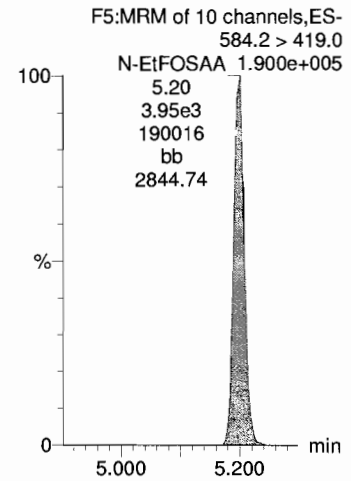
**PFDA**



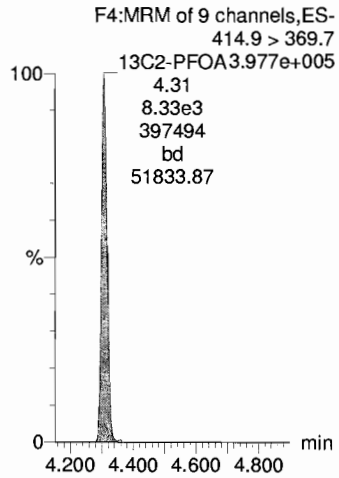
**N-MeFOSAA**



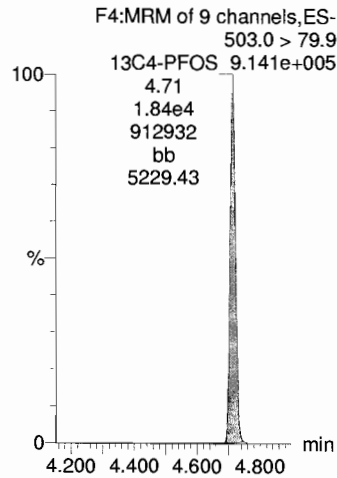
**N-EtFOSAA**



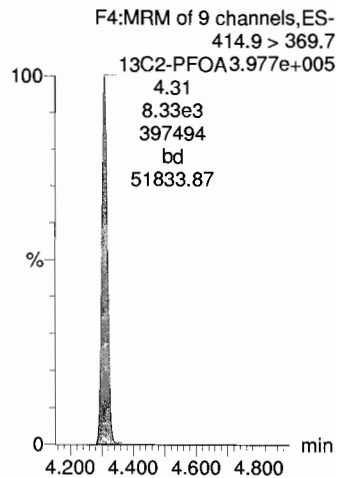
**13C2-PFOA**



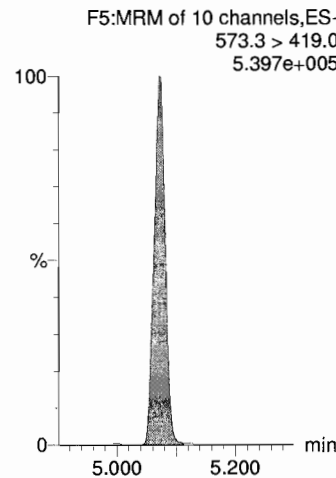
**13C4-PFOS**



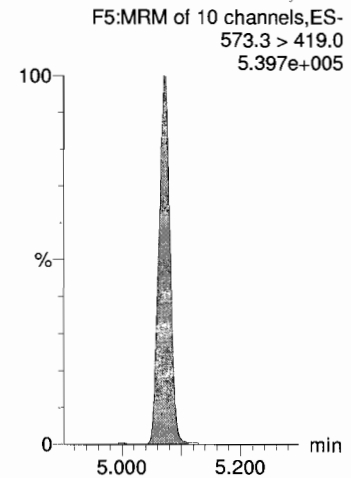
**13C2-PFOA**



**d3-N-MeFOSAA**



**d3-N-MeFOSAA**

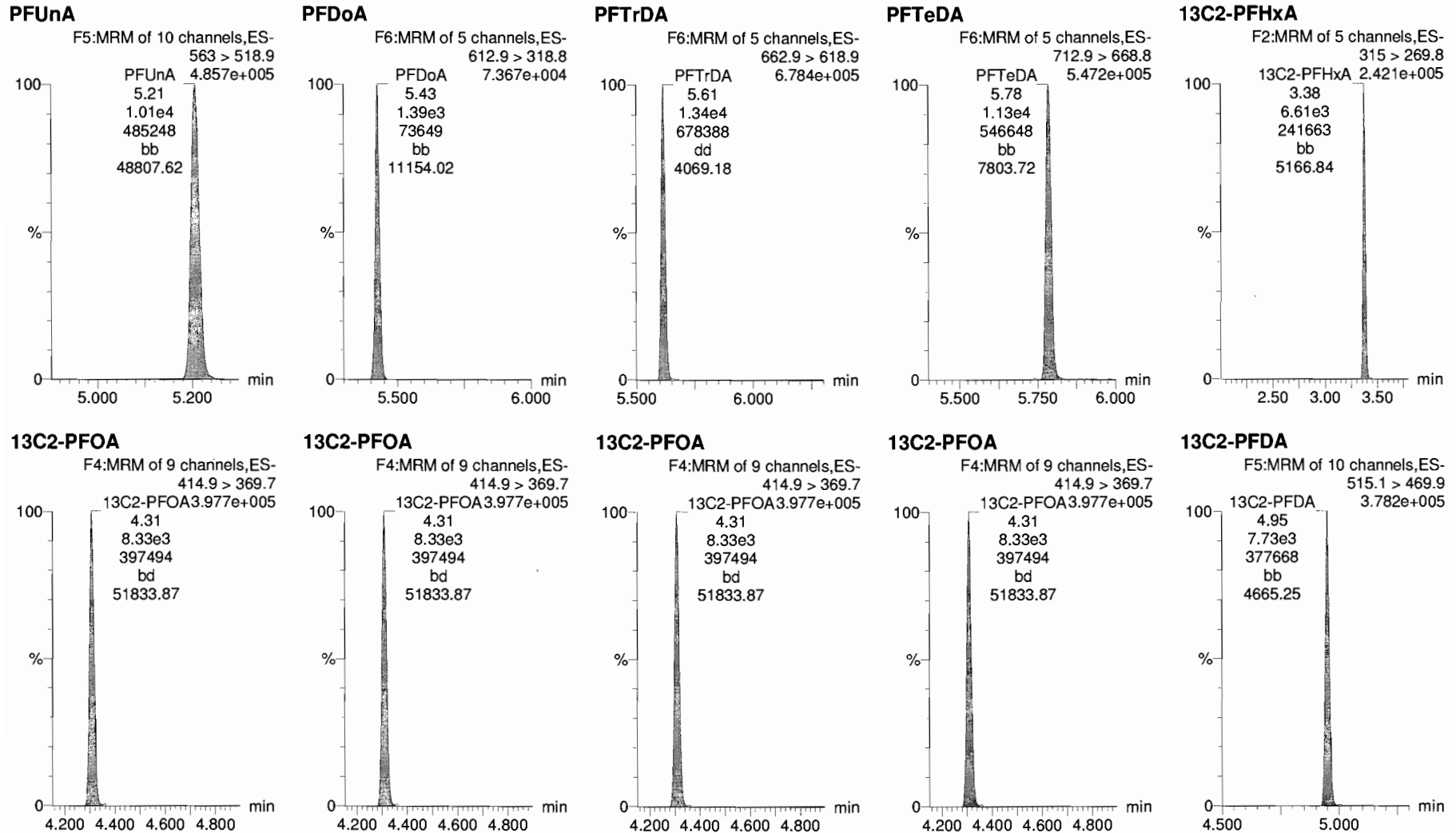


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Last Altered: Friday, February 23, 2018 17:29:48 Pacific Standard Time

Printed: Friday, February 23, 2018 17:30:15 Pacific Standard Time

Name: 180223G2\_12, Date: 23-Feb-2018, Time: 15:34:05, ID: ICV180223G2-1 PFC ICV 537 18B2309, Description: PFC ICV 537 18B2309

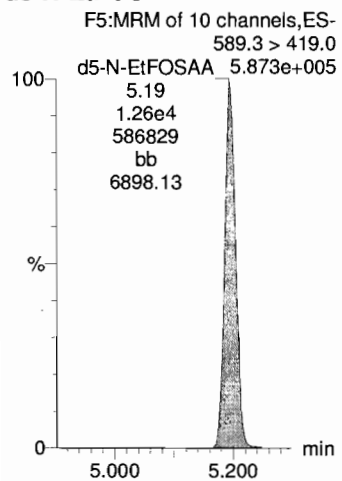


Dataset: X:\G1.PRO\Results\2018\180223G2\180223G2-12.qld

Last Altered: Friday, February 23, 2018 17:29:48 Pacific Standard Time  
Printed: Friday, February 23, 2018 17:30:15 Pacific Standard Time

Name: 180223G2\_12, Date: 23-Feb-2018, Time: 15:34:05, ID: ICV180223G2-1 PFC ICV 537 18B2309, Description: PFC ICV 537 18B2309

**d5-N-EtFOSAA**



MJT 2/23/2018





























**DATA VALIDATION SUMMARY REPORT  
NAS WHIDBEY ISLAND, WASHINGTON**

Client: CH2M HILL, Inc., Corvallis, Oregon  
 SDG: 1800322  
 Laboratory: Vista Analytical Laboratory, El Dorado Hills, California  
 Site: NAS Whidbey Island, Area 6, CTO-4041, Washington  
 Date: May 12, 2018

PFCs			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	WI-A06-RW13-0218	1800322-01	Water
2	WI-A06-FB13-0218	1800322-02	Water
3	WI-A06-RW14-0218	1800322-03	Water
4	WI-A06-FB14-0218	1800322-04	Water
5	WI-A06-RW15-0218	1800322-05	Water
6	WI-A06-FB15-0218	1800322-06	Water
7	WI-A06-RW16-0218	1800322-07	Water
8	WI-A06-FB16-0218	1800322-08	Water

A full data validation was performed on the analytical data for four water samples and four aqueous field blanks sample collected on February 13-14, 2018 by CH2M HILL at the NAS Whidbey Island Area 6 site in Washington. 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 USEPA National Functional Guidelines for Organic Data Review as follows:

- The USEPA “Contract Laboratories Program National Functional Guidelines for Superfund Organic Methods Data Review,” January 2017;
- and the reviewer's professional judgment.

The following data quality indicators were reviewed for this report:

**Organics**

- Date Completeness, Case Narrative & Custody Documentation

- Holding times
- Gas Chromatography/Mass Spectrometry (GC/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 are 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.

### **GC/MS Tuning**

- All criteria were met.

### **Initial Calibration**

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

### Continuing Calibration

- All percent difference (%D) and RRF criteria were met.

### Method Blank

- The method blanks were free of contamination.

### Field QC Blank

- Field QC sample result are summarized in the table below.

Blank ID	Compound	Conc. ng/L	Qualifier	Affected Samples
WI-A06-FB13-0218	None - ND	-	-	-
WI-A06-FB14-0218	PFHxA	0.665	None	All Associated >10X
WI-A06-FB15-0218	None - ND	-	-	-
WI-A06-FB16-0218	None - ND	-	-	-

### Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate %R values.

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

- MS/MSD samples were not analyzed.

### 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 except for the following.

### Target Compound Identification

- All mass spectra and quantitation criteria were met.

Compound Quantitation

- EDS Sample 3 was analyzed at a 5X dilution due to high concentrations of target compounds. The reporting limits were adjusted accordingly. No action was required.

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 Dated: 5/15/18  
Nancy Weaver  
Senior Chemist

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: WI-A06-RW13-0218**

**EPA Method 537**

Client Data		Laboratory Data	
Name:	CH2M Hill	Lab Sample:	1800322-01
Project:	CTO-4041 Clean Whidbey Island	Date Received:	16-Feb-18 09:02
Matrix:	Drinking Water	Column:	BEH C18
Date Collected:	13-Feb-18 15:51		

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.437	4.94	9.87		B8B0124	20-Feb-18	0.253 L	24-Feb-18 21:58	1
PFHxA	0.676	0.654	4.94	9.87	J	B8B0124	20-Feb-18	0.253 L	24-Feb-18 21:58	1
PFHpA	ND	0.526	4.94	9.87		B8B0124	20-Feb-18	0.253 L	24-Feb-18 21:58	1
PFHxS	ND	0.410	4.94	9.87		B8B0124	20-Feb-18	0.253 L	24-Feb-18 21:58	1
PFOA	ND	1.07	4.94	9.87		B8B0124	20-Feb-18	0.253 L	24-Feb-18 21:58	1
PFNA	ND	1.42	4.94	9.87		B8B0124	20-Feb-18	0.253 L	24-Feb-18 21:58	1
PFOS	ND	1.03	4.94	9.87		B8B0124	20-Feb-18	0.253 L	24-Feb-18 21:58	1
PFDA	ND	1.26	4.94	9.87		B8B0124	20-Feb-18	0.253 L	24-Feb-18 21:58	1
MeFOSAA	ND	3.00	4.94	9.87		B8B0124	20-Feb-18	0.253 L	24-Feb-18 21:58	1
EtFOSAA	ND	1.90	4.94	9.87		B8B0124	20-Feb-18	0.253 L	24-Feb-18 21:58	1
PFUnA	ND	0.252	4.94	9.87		B8B0124	20-Feb-18	0.253 L	24-Feb-18 21:58	1
PFDoA	ND	0.940	4.94	9.87		B8B0124	20-Feb-18	0.253 L	24-Feb-18 21:58	1
PFTTrDA	ND	0.931	4.94	9.87		B8B0124	20-Feb-18	0.253 L	24-Feb-18 21:58	1
PFTeDA	ND	0.767	4.94	9.87		B8B0124	20-Feb-18	0.253 L	24-Feb-18 21:58	1
Labeled Standards	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution		
13C2-PFHxA	108	70 - 130		B8B0124	20-Feb-18	0.253 L	24-Feb-18 21:58	1		
13C2-PFDA	83.0	70 - 130		B8B0124	20-Feb-18	0.253 L	24-Feb-18 21:58	1		
d5-EtFOSAA	79.1	70 - 130		B8B0124	20-Feb-18	0.253 L	24-Feb-18 21:58	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 5/2/18

**Sample ID: WI-A06-FB13-0218**

**EPA Method 537**

Client Data		Matrix:		Laboratory Data	
Name:	CH2M Hill	Drinking Water		Lab Sample:	1800322-02
Project:	CTO-4041 Clean Whidbey Island	Date Collected:	13-Feb-18 15:52	Date Received:	16-Feb-18 09:02
				Column:	BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.437	4.94	9.87		B8B0124	20-Feb-18	0.253 L	24-Feb-18 22:10	1
PFHxA	ND	0.654	4.94	9.87		B8B0124	20-Feb-18	0.253 L	24-Feb-18 22:10	1
PFHpA	ND	0.526	4.94	9.87		B8B0124	20-Feb-18	0.253 L	24-Feb-18 22:10	1
PFHxS	ND	0.410	4.94	9.87		B8B0124	20-Feb-18	0.253 L	24-Feb-18 22:10	1
PFOA	ND	1.07	4.94	9.87		B8B0124	20-Feb-18	0.253 L	24-Feb-18 22:10	1
PFNA	ND	1.42	4.94	9.87		B8B0124	20-Feb-18	0.253 L	24-Feb-18 22:10	1
PFOS	ND	1.03	4.94	9.87		B8B0124	20-Feb-18	0.253 L	24-Feb-18 22:10	1
PFDA	ND	1.26	4.94	9.87		B8B0124	20-Feb-18	0.253 L	24-Feb-18 22:10	1
MeFOSAA	ND	3.00	4.94	9.87		B8B0124	20-Feb-18	0.253 L	24-Feb-18 22:10	1
EtFOSAA	ND	1.90	4.94	9.87		B8B0124	20-Feb-18	0.253 L	24-Feb-18 22:10	1
PFUnA	ND	0.252	4.94	9.87		B8B0124	20-Feb-18	0.253 L	24-Feb-18 22:10	1
PFDoA	ND	0.940	4.94	9.87		B8B0124	20-Feb-18	0.253 L	24-Feb-18 22:10	1
PFTrDA	ND	0.931	4.94	9.87		B8B0124	20-Feb-18	0.253 L	24-Feb-18 22:10	1
PFTeDA	ND	0.767	4.94	9.87		B8B0124	20-Feb-18	0.253 L	24-Feb-18 22:10	1
Labeled Standards	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution		
13C2-PFHxA	91.2	70 - 130		B8B0124	20-Feb-18	0.253 L	24-Feb-18 22:10	1		
13C2-PFDA	81.5	70 - 130		B8B0124	20-Feb-18	0.253 L	24-Feb-18 22:10	1		
d5-EtFOSAA	102	70 - 130		B8B0124	20-Feb-18	0.253 L	24-Feb-18 22:10	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.

see SI.2.1.8



**Sample ID: WI-A06-RW14-0218**

**EPA Method 537**

Client Data		Laboratory Data	
Name:	CH2M Hill	Lab Sample:	1800322-03
Project:	CTO-4041 Clean Whidbey Island	Date Received:	16-Feb-18 09:02
Matrix:	Drinking Water	Column:	BEH C18
Date Collected:	14-Feb-18 09:25		

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	58.0	0.453	5.12	10.2		B8B0124	20-Feb-18	0.244 L	26-Feb-18 08:28	1
PFHxA	60.5	0.679	5.12	10.2		B8B0124	20-Feb-18	0.244 L	26-Feb-18 08:28	1
PFHpA	16.3	0.546	5.12	10.2		B8B0124	20-Feb-18	0.244 L	26-Feb-18 08:28	1
PFHxS	260	2.12	25.6	51.2		B8B0124	20-Feb-18	0.244 L	28-Feb-18 11:33	5
PFOA	21.8	1.11	5.12	10.2		B8B0124	20-Feb-18	0.244 L	26-Feb-18 08:28	1
PFNA	ND	1.47	5.12	10.2		B8B0124	20-Feb-18	0.244 L	26-Feb-18 08:28	1
PFOS	7.68	1.06	5.12	10.2		B8B0124	20-Feb-18	0.244 L	26-Feb-18 08:28	1
PFDA	ND	1.31	5.12	10.2		B8B0124	20-Feb-18	0.244 L	26-Feb-18 08:28	1
MeFOSAA	ND	3.11	5.12	10.2		B8B0124	20-Feb-18	0.244 L	26-Feb-18 08:28	1
EtFOSAA	ND	1.98	5.12	10.2		B8B0124	20-Feb-18	0.244 L	26-Feb-18 08:28	1
PFUnA	ND	0.261	5.12	10.2		B8B0124	20-Feb-18	0.244 L	26-Feb-18 08:28	1
PFDoA	ND	0.974	5.12	10.2		B8B0124	20-Feb-18	0.244 L	26-Feb-18 08:28	1
PFTrDA	ND	0.965	5.12	10.2		B8B0124	20-Feb-18	0.244 L	26-Feb-18 08:28	1
PFTeDA	ND	0.795	5.12	10.2		B8B0124	20-Feb-18	0.244 L	26-Feb-18 08:28	1
Labeled Standards	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution		
13C2-PFHxA	89.4	70 - 130		B8B0124	20-Feb-18	0.244 L	26-Feb-18 08:28	1		
13C2-PFDA	71.9	70 - 130		B8B0124	20-Feb-18	0.244 L	26-Feb-18 08:28	1		
d5-EtFOSAA	88.9	70 - 130		B8B0124	20-Feb-18	0.244 L	26-Feb-18 08:28	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, PFOS and PFOA include both linear and branched isomers.  
 Only the linear isomer is reported for all other analytes.

new SL 2/18

**Sample ID: WI-A06-FB14-0218**

**EPA Method 537**

Client Data		Laboratory Data	
Name: CH2M Hill	Matrix: Drinking Water	Lab Sample: 1800322-04	Column: BEH C18
Project: CTO-4041 Clean Whidbey Island	Date Collected: 14-Feb-18 09:26	Date Received: 16-Feb-18 09:02	

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.428	4.83	9.67		B8B0124	20-Feb-18	0.259 L	24-Feb-18 22:35	1
PFHxA	0.665	0.641	4.83	9.67	J	B8B0124	20-Feb-18	0.259 L	24-Feb-18 22:35	1
PFHpA	ND	0.515	4.83	9.67		B8B0124	20-Feb-18	0.259 L	24-Feb-18 22:35	1
PFHxS	ND	0.401	4.83	9.67		B8B0124	20-Feb-18	0.259 L	01-Mar-18 16:48	1
PFOA	ND	1.04	4.83	9.67		B8B0124	20-Feb-18	0.259 L	24-Feb-18 22:35	1
PFNA	ND	1.39	4.83	9.67		B8B0124	20-Feb-18	0.259 L	24-Feb-18 22:35	1
PFOS	ND	1.01	4.83	9.67		B8B0124	20-Feb-18	0.259 L	24-Feb-18 22:35	1
PFDA	ND	1.24	4.83	9.67		B8B0124	20-Feb-18	0.259 L	24-Feb-18 22:35	1
MeFOSAA	ND	2.94	4.83	9.67		B8B0124	20-Feb-18	0.259 L	24-Feb-18 22:35	1
EtFOSAA	ND	1.87	4.83	9.67		B8B0124	20-Feb-18	0.259 L	24-Feb-18 22:35	1
PFUnA	ND	0.247	4.83	9.67		B8B0124	20-Feb-18	0.259 L	24-Feb-18 22:35	1
PFDoA	ND	0.920	4.83	9.67		B8B0124	20-Feb-18	0.259 L	24-Feb-18 22:35	1
PFTTrDA	ND	0.912	4.83	9.67		B8B0124	20-Feb-18	0.259 L	24-Feb-18 22:35	1
PFTeDA	ND	0.751	4.83	9.67		B8B0124	20-Feb-18	0.259 L	24-Feb-18 22:35	1
Labeled Standards	% Recovery	DL	Limits	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	98.2		70 - 130			B8B0124	20-Feb-18	0.259 L	24-Feb-18 22:35	1
13C2-PFDA	76.6		70 - 130			B8B0124	20-Feb-18	0.259 L	24-Feb-18 22:35	1
d5-EtFOSAA	79.6		70 - 130			B8B0124	20-Feb-18	0.259 L	24-Feb-18 22:35	1

DL - Detection Limit  
 LOD - Limit of Detection  
 LOQ - Limit of quantitation  
 LCU-UCU - 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 SL 2/18

**Sample ID: WI-A06-RW15-0218**

**EPA Method 537**

Client Data		Laboratory Data	
Name:	CH2M Hill	Lab Sample:	1800322-05
Project:	CTO-4041 Clean Whidbey Island	Date Received:	16-Feb-18 09:02
Matrix:	Drinking Water	Column:	BEH C18
Date Collected:	14-Feb-18 10:03		

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.435	4.90	9.81		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:39	1
PFHxA	ND	0.650	4.90	9.81		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:39	1
PFHpA	ND	0.523	4.90	9.81		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:39	1
PFHxS	ND	0.407	4.90	9.81		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:39	1
PFOA	ND	1.06	4.90	9.81		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:39	1
PFNA	ND	1.41	4.90	9.81		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:39	1
PFOS	ND	1.02	4.90	9.81		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:39	1
PFDA	ND	1.26	4.90	9.81		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:39	1
MeFOSAA	ND	2.98	4.90	9.81		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:39	1
EiFOSAA	ND	1.89	4.90	9.81		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:39	1
PFUnA	ND	0.250	4.90	9.81		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:39	1
PFDoA	ND	0.934	4.90	9.81		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:39	1
PFTrDA	ND	0.925	4.90	9.81		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:39	1
PFTeDA	ND	0.762	4.90	9.81		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:39	1
Labeled Standards	% Recovery	DL	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
13C2-PFHxA	98.0		70 - 130		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:39	1	
13C2-PFDA	90.0		70 - 130		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:39	1	
d5-EiFOSAA	85.0		70 - 130		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:39	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 SL 2/18*

**Sample ID: WI-A06-FB15-0218**

**EPA Method 537**

Client Data		Laboratory Data		Matrix:		Date Collected:		Date Received:		Column:	
Name:	CH2M Hill	Lab Sample:	1800322-06	Drinking Water	14-Feb-18 10:04	16-Feb-18 09:02	BEH C18				
Project:	CTO-4041 Clean Whidbey Island	Date Received:	16-Feb-18 09:02								
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
PFBS	ND	0.435	4.90	9.82		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:51	I	
PFHxA	ND	0.651	4.90	9.82		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:51	I	
PFHpA	ND	0.523	4.90	9.82		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:51	I	
PFHxS	ND	0.407	4.90	9.82		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:51	I	
PFOA	ND	1.06	4.90	9.82		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:51	I	
PFNA	ND	1.41	4.90	9.82		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:51	I	
PFOS	ND	1.02	4.90	9.82		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:51	I	
PFDA	ND	1.26	4.90	9.82		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:51	I	
MeFOSAA	ND	2.98	4.90	9.82		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:51	I	
EtFOSAA	ND	1.89	4.90	9.82		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:51	I	
PFUnA	ND	0.250	4.90	9.82		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:51	I	
PFDoA	ND	0.934	4.90	9.82		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:51	I	
PFTrDA	ND	0.926	4.90	9.82		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:51	I	
PFTeDA	ND	0.763	4.90	9.82		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:51	I	
Labeled Standards	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution			
13C2-PFHxA	98.4	70 - 130		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:51	I			
13C2-PFDA	89.7	70 - 130		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:51	I			
d5-EtFOSAA	103	70 - 130		B8B0153	27-Feb-18	0.255 L	28-Feb-18 10:51	I			

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 SL12 h8



**Sample ID: WI-A06-RW16-0218**

**EPA Method 537**

Client Data		Laboratory Data	
Name: CH2M Hill	Matrix: Drinking Water	Lab Sample: 1800322-07	Column: BEH C18
Project: CTO-4041 Clean Whidbey Island	Date Collected: 14-Feb-18 11:04	Date Received: 16-Feb-18 09:02	

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.446	5.04	10.1		B8B0124	20-Feb-18	0.248 L	24-Feb-18 23:12	1
PFHxA	0.906	0.668	5.04	10.1	J	B8B0124	20-Feb-18	0.248 L	24-Feb-18 23:12	1
PFHpA	ND	0.537	5.04	10.1		B8B0124	20-Feb-18	0.248 L	24-Feb-18 23:12	1
PFHxS	ND	0.418	5.04	10.1		B8B0124	20-Feb-18	0.248 L	24-Feb-18 23:12	1
PFOA	ND	1.09	5.04	10.1		B8B0124	20-Feb-18	0.248 L	24-Feb-18 23:12	1
PFNA	ND	1.45	5.04	10.1		B8B0124	20-Feb-18	0.248 L	24-Feb-18 23:12	1
PFOS	ND	1.05	5.04	10.1		B8B0124	20-Feb-18	0.248 L	24-Feb-18 23:12	1
PFDA	ND	1.29	5.04	10.1		B8B0124	20-Feb-18	0.248 L	24-Feb-18 23:12	1
MeFOSAA	ND	3.06	5.04	10.1		B8B0124	20-Feb-18	0.248 L	24-Feb-18 23:12	1
EiFOSAA	ND	1.94	5.04	10.1		B8B0124	20-Feb-18	0.248 L	24-Feb-18 23:12	1
PFUnA	ND	0.257	5.04	10.1		B8B0124	20-Feb-18	0.248 L	24-Feb-18 23:12	1
PFDoA	ND	0.958	5.04	10.1		B8B0124	20-Feb-18	0.248 L	24-Feb-18 23:12	1
PFTrDA	ND	0.949	5.04	10.1		B8B0124	20-Feb-18	0.248 L	24-Feb-18 23:12	1
PFTeDA	ND	0.782	5.04	10.1		B8B0124	20-Feb-18	0.248 L	24-Feb-18 23:12	1
Labeled Standards	% Recovery	DL	Limits	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	95.7		70 - 130			B8B0124	20-Feb-18	0.248 L	24-Feb-18 23:12	1
13C2-PFDA	81.7		70 - 130			B8B0124	20-Feb-18	0.248 L	24-Feb-18 23:12	1
d5-EiFOSAA	84.9		70 - 130			B8B0124	20-Feb-18	0.248 L	24-Feb-18 23:12	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 SL 1.8*



**Sample ID: WI-A06-FB16-0218**

**EPA Method 537**

Client Data		Matrix:		Laboratory Data	
Name:	CH2M Hill	Drinking Water		Lab Sample:	1800322-08
Project:	CTO-4041 Clean Whidbey Island	Date Collected:	14-Feb-18 11:05	Date Received:	16-Feb-18 09:02
				Column:	BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.431	4.86	9.72		B8B0124	20-Feb-18	0.257 L	24-Feb-18 23:25	1
PFHxA	ND	0.644	4.86	9.72		B8B0124	20-Feb-18	0.257 L	24-Feb-18 23:25	1
PFHpA	ND	0.518	4.86	9.72		B8B0124	20-Feb-18	0.257 L	24-Feb-18 23:25	1
PFHxS	ND	0.403	4.86	9.72		B8B0124	20-Feb-18	0.257 L	24-Feb-18 23:25	1
PFOA	ND	1.05	4.86	9.72		B8B0124	20-Feb-18	0.257 L	24-Feb-18 23:25	1
PFNA	ND	1.40	4.86	9.72		B8B0124	20-Feb-18	0.257 L	24-Feb-18 23:25	1
PFOS	ND	1.01	4.86	9.72		B8B0124	20-Feb-18	0.257 L	24-Feb-18 23:25	1
PFDA	ND	1.24	4.86	9.72		B8B0124	20-Feb-18	0.257 L	24-Feb-18 23:25	1
MeFOSAA	ND	2.96	4.86	9.72		B8B0124	20-Feb-18	0.257 L	24-Feb-18 23:25	1
EiFOSAA	ND	1.88	4.86	9.72		B8B0124	20-Feb-18	0.257 L	24-Feb-18 23:25	1
PFUnA	ND	0.248	4.86	9.72		B8B0124	20-Feb-18	0.257 L	24-Feb-18 23:25	1
PFDoA	ND	0.925	4.86	9.72		B8B0124	20-Feb-18	0.257 L	24-Feb-18 23:25	1
PFTTrDA	ND	0.917	4.86	9.72		B8B0124	20-Feb-18	0.257 L	24-Feb-18 23:25	1
PFTeDA	ND	0.755	4.86	9.72		B8B0124	20-Feb-18	0.257 L	24-Feb-18 23:25	1
Labeled Standards	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution		
13C2-PFHxA	106	70 - 130		B8B0124	20-Feb-18	0.257 L	24-Feb-18 23:25	1		
13C2-PFDA	85.9	70 - 130		B8B0124	20-Feb-18	0.257 L	24-Feb-18 23:25	1		
d5-EiFOSAA	86.2	70 - 130		B8B0124	20-Feb-18	0.257 L	24-Feb-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.

*see S1,2,1,8*



LOCATION_NAME	SITE_NAME	INSTALLATION_ID	LOCATION_TYPE	LOCATION_TYPE_DESC	SDG	COORD_X	COORD_Y	SAMPLE_MATRIX_DESC	SAMPLE_NAME	SAMPLE_MATRIX	COLLECT_DATE	ANALYTICAL_METHOD_GRP_DESC
		WHIDBEY_ISLAND_NAS			1800322			Water for QC samples	WI-A06-FB14-0218	WQ	14-Feb-18	Perfluoroalkyl Compounds
		WHIDBEY_ISLAND_NAS			1800322			Water for QC samples	WI-A06-FB14-0218	WQ	14-Feb-18	Perfluoroalkyl Compounds
		WHIDBEY_ISLAND_NAS			1800322			Water for QC samples	WI-A06-FB14-0218	WQ	14-Feb-18	Perfluoroalkyl Compounds
		WHIDBEY_ISLAND_NAS			1800322			Water for QC samples	WI-A06-FB14-0218	WQ	14-Feb-18	Perfluoroalkyl Compounds
		WHIDBEY_ISLAND_NAS			1800322			Water for QC samples	WI-A06-FB14-0218	WQ	14-Feb-18	Perfluoroalkyl Compounds
		WHIDBEY_ISLAND_NAS			1800322			Water for QC samples	WI-A06-FB15-0218	WQ	14-Feb-18	Perfluoroalkyl Compounds
		WHIDBEY_ISLAND_NAS			1800322			Water for QC samples	WI-A06-FB15-0218	WQ	14-Feb-18	Perfluoroalkyl Compounds
		WHIDBEY_ISLAND_NAS			1800322			Water for QC samples	WI-A06-FB15-0218	WQ	14-Feb-18	Perfluoroalkyl Compounds
		WHIDBEY_ISLAND_NAS			1800322			Water for QC samples	WI-A06-FB15-0218	WQ	14-Feb-18	Perfluoroalkyl Compounds
		WHIDBEY_ISLAND_NAS			1800322			Water for QC samples	WI-A06-FB15-0218	WQ	14-Feb-18	Perfluoroalkyl Compounds
		WHIDBEY_ISLAND_NAS			1800322			Water for QC samples	WI-A06-FB15-0218	WQ	14-Feb-18	Perfluoroalkyl Compounds
		WHIDBEY_ISLAND_NAS			1800322			Water for QC samples	WI-A06-FB15-0218	WQ	14-Feb-18	Perfluoroalkyl Compounds
		WHIDBEY_ISLAND_NAS			1800322			Water for QC samples	WI-A06-FB15-0218	WQ	14-Feb-18	Perfluoroalkyl Compounds
		WHIDBEY_ISLAND_NAS			1800322			Water for QC samples	WI-A06-FB15-0218	WQ	14-Feb-18	Perfluoroalkyl Compounds
		WHIDBEY_ISLAND_NAS			1800322			Water for QC samples	WI-A06-FB15-0218	WQ	14-Feb-18	Perfluoroalkyl Compounds
		WHIDBEY_ISLAND_NAS			1800322			Water for QC samples	WI-A06-FB15-0218	WQ	14-Feb-18	Perfluoroalkyl Compounds
		WHIDBEY_ISLAND_NAS			1800322			Water for QC samples	WI-A06-FB15-0218	WQ	14-Feb-18	Perfluoroalkyl Compounds
		WHIDBEY_ISLAND_NAS			1800322			Water for QC samples	WI-A06-FB15-0218	WQ	14-Feb-18	Perfluoroalkyl Compounds
		WHIDBEY_ISLAND_NAS			1800322			Water for QC samples	WI-A06-FB16-0218	WQ	14-Feb-18	Perfluoroalkyl Compounds
		WHIDBEY_ISLAND_NAS			1800322			Water for QC samples	WI-A06-FB16-0218	WQ	14-Feb-18	Perfluoroalkyl Compounds
		WHIDBEY_ISLAND_NAS			1800322			Water for QC samples	WI-A06-FB16-0218	WQ	14-Feb-18	Perfluoroalkyl Compounds
		WHIDBEY_ISLAND_NAS			1800322			Water for QC samples	WI-A06-FB16-0218	WQ	14-Feb-18	Perfluoroalkyl Compounds



