



**Off-Base Drinking Water Sample Results,  
Combined Level 2 and Level 4 Laboratory Report,  
Electronic Data Deliverable, Data Validation Report,  
and the Sample Location Figure, SDG 1700466**

*Naval Air Warfare Center Trenton  
Trenton, New Jersey*

August 2019

N62376\_001204  
NAWC TRENTON, NJ  
SSIC 5000-33c

**LABORATORY DATA PACKAGE, 1700466, NAWC TRENTON NJ**  
06/19/2017  
VISTA ANALYTICAL LABORATORY

Approved for public release: distribution unlimited.



June 19, 2017

**Vista Work Order No. 1700466**

Ms. Mary Mang  
Tetra Tech  
661 Andersen Drive, Foster Plaza 7  
Pittsburgh, PA 15220

Dear Ms. Mang,

Enclosed are the amended results for the sample set received at Vista Analytical Laboratory on April 19, 2017. This sample set was analyzed on a rush turn-around time, under your Project Name 'NAWC Trenton, NJ'. The SDG Number is WE08.

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,

A handwritten signature in cursive script that reads "Karen Lopez" followed by a small "for" and a line.

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.*

**SDG Number WE08**

**Vista Work Order No. 1700466**

**Case Narrative**

**Sample Condition on Receipt:**

Ten drinking water samples and ten blank 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. As requested, this report was amended to include Vista's company logo to each individual sample analytical results page.

**Analytical Notes:**

**EPA Method 537**

The drinking water samples were extracted and analyzed for the UCMR list of six 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.

A Laboratory Fortified Blank (LFB) and Laboratory Reagent Blank (LRB) were extracted and analyzed with the preparation batch. No analytes were detected in the LRB 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.

A Laboratory Duplicate was prepared and analyzed using sample "RW07-20170417". A Laboratory Fortified Sample Matrix (LFSM) was prepared and analyzed using sample "RW03-20170417".

In addition, the laboratory QC officer must read and sign a copy of the Quality Assurance Review Form displayed on the next page of this Attachment. Electronic deliverables are not considered to be complete without the accompanying Quality Assurance Review Form.

I Mardha Maier, as the designated Quality Assurance Officer, hereby attest that all electronic deliverables have been thoroughly reviewed and are in agreement with the associated hardcopy data. The enclosed electronic files have been reviewed for accuracy (including significant figures), completeness and format. The laboratory will be responsible for any labor time necessary to correct enclosed electronic deliverables that have been found to be in error. I can be reached at (916) 1673-1570 If there are any questions or problems with the enclosed electronic deliverables.

Signature: Mardha Maier Title: Acting QA Manager Date: 01/25/17

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# Sample Inventory Report

Vista Sample ID	Client Sample ID	Sampled	Received	Components/Containers
1700466-01	RW05-20170417	17-Apr-17 11:25	19-Apr-17 09:04	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1700466-02	FRB-05-20170417	17-Apr-17 11:20	19-Apr-17 09:04	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1700466-03	RW10-20170417	17-Apr-17 12:35	19-Apr-17 09:04	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1700466-04	FRB-10-20170417	17-Apr-17 12:30	19-Apr-17 09:04	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1700466-05	RW18-20170417	17-Apr-17 13:35	19-Apr-17 09:04	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1700466-06	FRB-18-20170417	17-Apr-17 13:30	19-Apr-17 09:04	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1700466-07	RW07-20170417	17-Apr-17 14:10	19-Apr-17 09:04	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1700466-08	FRB-07-20170417	17-Apr-17 14:05	19-Apr-17 09:04	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1700466-09	RW03-20170417	17-Apr-17 17:45	19-Apr-17 09:04	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1700466-10	FRB-03-20170417	17-Apr-17 17:40	19-Apr-17 09:04	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1700466-11	RW16-20170417	17-Apr-17 18:25	19-Apr-17 09:04	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1700466-12	FRB-16-20170417	17-Apr-17 18:20	19-Apr-17 09:04	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1700466-13	RW14-20170418	18-Apr-17 09:20	19-Apr-17 09:04	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1700466-14	FRB-14-20170418	18-Apr-17 09:10	19-Apr-17 09:04	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1700466-15	RW20-20170418	18-Apr-17 10:25	19-Apr-17 09:04	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1700466-16	FRB-20-20170418	18-Apr-17 10:20	19-Apr-17 09:04	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1700466-17	RW06-20170418	18-Apr-17 11:05	19-Apr-17 09:04	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1700466-18	FRB-06-20170418	18-Apr-17 10:55	19-Apr-17 09:04	HDPE Bottle, 250 mL HDPE Bottle, 250 mL

Vista Project: 1700466

Client Project: NAWC Trenton, NJ

# Sample Inventory Report

<b>Vista Sample ID</b>	<b>Client Sample ID</b>	<b>Sampled</b>	<b>Received</b>	<b>Components/Containers</b>
1700466-19	RW01-20170418	18-Apr-17 13:05	19-Apr-17 09:04	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1700466-20	FRB-01-20170418	18-Apr-17 13:00	19-Apr-17 09:04	HDPE Bottle, 250 mL HDPE Bottle, 250 mL



## **ANALYTICAL RESULTS**

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

Matrix: Drinking Water	QC Batch: B7D0096	Lab Sample: B7D0096-BLK1
Sample Size: 0.250 L	Date Extracted: 20-Apr-2017 9:29	Date Analyzed: 20-Apr-17 20:06 Column: BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	3.49	10.0	20.0		SUR 13C2-PFHxA	89.0	70 - 130	
PFHpA	ND	3.70	10.0	20.0		SUR 13C2-PFDA	82.4	70 - 130	
PFHxS	ND	3.46	10.0	20.0					
PFOA	ND	4.54	10.0	20.0					
PFNA	ND	6.34	10.0	20.0					
PFOS	ND	3.05	10.0	20.0					

DL - Detection limit  
 RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit  
 Results reported to DL.  
 When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.  
 Only the linear isomer is reported for all other analytes.

<b>Sample ID: LFB</b>					<b>EPA Method 537</b>		
Matrix: Drinking Water	QC Batch: B7D0096		Lab Sample: B7D0096-BS1				
Sample Size: 0.250 L	Date Extracted: 20-Apr-2017 9:29		Date Analyzed: 20-Apr-17 19:41 Column: BEH C18				
Analyte	Amt Found (ng/L)	Spike Amt	%R	Limits	Labeled Standard	%R	LCL-UCL
PFBS	67.0	70.8	94.6	70 - 130	SUR 13C2-PFHxA	93.5	70 - 130
PFHpA	78.9	80.0	98.6	70 - 130	SUR 13C2-PFDA	89.6	70 - 130
PFHxS	67.4	72.8	92.6	70 - 130			
PFOA	79.3	80.0	99.1	70 - 130			
PFNA	79.7	80.0	99.7	70 - 130			
PFOS	71.3	74.0	96.4	70 - 130			

LCL-UCL - Lower control limit - upper control limit

**Sample ID: RW05-20170417** **EPA Method 537**

<b>Client Data</b>	<b>Sample Data</b>	<b>Laboratory Data</b>
Name: Tetra Tech	Matrix: Drinking Water	Lab Sample: 1700466-01      Date Received: 19-Apr-2017 9:04
Project: NAWC Trenton, NJ	Sample Size: 0.275 L	QC Batch: B7D0096      Date Extracted: 20-Apr-2017 9:29
Date Collected: 17-Apr-2017 11:25		Date Analyzed: 20-Apr-17 20:18 Column: BEH C18
Location:		21-Apr-17 21:31 Column: BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	3.18	9.10	18.2		SUR 13C2-PFHxA	90.0	70 - 130	
PFHpA	ND	3.37	9.10	18.2		SUR 13C2-PFDA	86.3	70 - 130	
PFHxS	ND	3.15	9.10	18.2					
PFOA	ND	4.13	9.10	18.2					
PFNA	ND	5.77	9.10	18.2					
PFOS	ND	2.78	9.10	18.2					

DL - Detection limit  
 RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit  
 Results reported to DL.  
 When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.  
 Only the linear isomer is reported for all other analytes.

**Sample ID: FRB-05-20170417**

**EPA Method 537**

Client Data		Sample Data		Laboratory Data					
Name:	Tetra Tech	Matrix:	Blank Water	Lab Sample:	1700466-02	Date Received:	19-Apr-2017 9:04		
Project:	NAWC Trenton, NJ	Sample Size:	0.288 L	QC Batch:	B7D0096	Date Extracted:	20-Apr-2017 9:29		
Date Collected:	17-Apr-2017 11:20			Date Analyzed:	20-Apr-17 20:30	Column:	BEH C18		
Location:					21-Apr-17 21:44	Column:	BEH C18		
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	3.03	8.68	17.4		SUR 13C2-PFHxA	93.0	70 - 130	
PFHpA	ND	3.21	8.68	17.4		SUR 13C2-PFDA	88.0	70 - 130	
PFHxS	ND	3.00	8.68	17.4					
PFOA	ND	3.94	8.68	17.4					
PFNA	ND	5.50	8.68	17.4					
PFOS	ND	2.65	8.68	17.4					

DL - Detection limit

RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit

Results reported to DL.

When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.

Only the linear isomer is reported for all other analytes.

**Sample ID: RW10-20170417** **EPA Method 537**

<b>Client Data</b> Name: Tetra Tech Project: NAWC Trenton, NJ Date Collected: 17-Apr-2017 12:35 Location:	<b>Sample Data</b> Matrix: Drinking Water Sample Size: 0.276 L	<b>Laboratory Data</b> Lab Sample: 1700466-03      Date Received: 19-Apr-2017 9:04 QC Batch: B7D0096      Date Extracted: 20-Apr-2017 9:29 Date Analyzed: 20-Apr-17 20:43 Column: BEH C18 21-Apr-17 21:56 Column: BEH C18
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Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	3.16	9.06	18.1		SUR 13C2-PFHxA	90.9	70 - 130	
PFHpA	ND	3.35	9.06	18.1		SUR 13C2-PFDA	88.6	70 - 130	
PFHxS	ND	3.14	9.06	18.1					
PFOA	7.88	4.11	9.06	18.1	J				
PFNA	ND	5.75	9.06	18.1					
PFOS	6.46	2.76	9.06	18.1	J				

DL - Detection limit  
RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit  
Results reported to DL.  
When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.  
Only the linear isomer is reported for all other analytes.

**Sample ID: FRB-10-20170417**

**EPA Method 537**

Client Data		Sample Data			Laboratory Data				
Name:	Tetra Tech	Matrix:	Blank Water		Lab Sample:	1700466-04	Date Received:	19-Apr-2017 9:04	
Project:	NAWC Trenton, NJ	Sample Size:	0.277 L		QC Batch:	B7D0096	Date Extracted:	20-Apr-2017 9:29	
Date Collected:	17-Apr-2017 12:30				Date Analyzed:	20-Apr-17 20:55	Column:	BEH C18	
Location:						21-Apr-17 22:08	Column:	BEH C18	
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	3.15	9.02	18.0		SUR 13C2-PFHxA	95.1	70 - 130	
PFHpA	ND	3.34	9.02	18.0		SUR 13C2-PFDA	91.8	70 - 130	
PFHxS	ND	3.12	9.02	18.0					
PFOA	ND	4.10	9.02	18.0					
PFNA	ND	5.72	9.02	18.0					
PFOS	ND	2.75	9.02	18.0					

DL - Detection limit

RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit

Results reported to DL.

When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.

Only the linear isomer is reported for all other analytes.

**Sample ID: RW18-20170417** **EPA Method 537**

<b>Client Data</b> Name: Tetra Tech Project: NAWC Trenton, NJ Date Collected: 17-Apr-2017 13:35 Location:	<b>Sample Data</b> Matrix: Drinking Water Sample Size: 0.278 L	<b>Laboratory Data</b> Lab Sample: 1700466-05      Date Received: 19-Apr-2017 9:04 QC Batch: B7D0096      Date Extracted: 20-Apr-2017 9:29 Date Analyzed: 20-Apr-17 21:08 Column: BEH C18 21-Apr-17 22:21 Column: BEH C18
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Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	3.14	9.00	18.0		SUR 13C2-PFHxA	86.5	70 - 130	
PFHpA	ND	3.33	9.00	18.0		SUR 13C2-PFDA	82.0	70 - 130	
PFHxS	ND	3.11	9.00	18.0					
PFOA	8.07	4.09	9.00	18.0	J				
PFNA	ND	5.71	9.00	18.0					
PFOS	4.10	2.75	9.00	18.0	J				

DL - Detection limit  
RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit  
Results reported to DL.  
When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.  
Only the linear isomer is reported for all other analytes.



**Sample ID: FRB-18-20170417**

**EPA Method 537**

Client Data		Sample Data		Laboratory Data			
Name:	Tetra Tech	Matrix:	Blank Water	Lab Sample:	1700466-06	Date Received:	19-Apr-2017 9:04
Project:	NAWC Trenton, NJ	Sample Size:	0.274 L	QC Batch:	B7D0096	Date Extracted:	20-Apr-2017 9:29
Date Collected:	17-Apr-2017 13:30			Date Analyzed:	20-Apr-17 21:20	Column:	BEH C18
Location:					21-Apr-17 22:33	Column:	BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	3.19	9.13	18.3		SUR 13C2-PFHxA	90.5	70 - 130	
PFHpA	ND	3.38	9.13	18.3		SUR 13C2-PFDA	84.4	70 - 130	
PFHxS	ND	3.16	9.13	18.3					
PFOA	ND	4.14	9.13	18.3					
PFNA	ND	5.79	9.13	18.3					
PFOS	ND	2.78	9.13	18.3					

DL - Detection limit  
 RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit  
 Results reported to DL.  
 When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.  
 Only the linear isomer is reported for all other analytes.

**Sample ID: RW07-20170417** **EPA Method 537**

<b>Client Data</b> Name: Tetra Tech Project: NAWC Trenton, NJ Date Collected: 17-Apr-2017 14:10 Location:	<b>Sample Data</b> Matrix: Drinking Water Sample Size: 0.268 L	<b>Laboratory Data</b> Lab Sample: 1700466-07      Date Received: 19-Apr-2017 9:04 QC Batch: B7D0096      Date Extracted: 20-Apr-2017 9:29 Date Analyzed: 20-Apr-17 21:32 Column: BEH C18 21-Apr-17 22:46 Column: BEH C18
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Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	3.26	9.35	18.7		SUR 13C2-PFHxA	97.6	70 - 130	
PFHpA	ND	3.46	9.35	18.7		SUR 13C2-PFDA	83.0	70 - 130	
PFHxS	ND	3.23	9.35	18.7					
PFOA	7.77	4.24	9.35	18.7	J				
PFNA	ND	5.93	9.35	18.7					
PFOS	3.99	2.85	9.35	18.7	J				

DL - Detection limit  
RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit  
Results reported to DL.  
When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.  
Only the linear isomer is reported for all other analytes.

Sample ID: Duplicate						EPA Method 537			
Source Client ID: RW07-20170417		QC Batch: B7D0096		Lab Sample: B7D0096-DUP1					
Source LabNumber: 1700466-07		Date Extracted: 20-Apr-2017 9:29		Date Analyzed: 20-Apr-17 21:45 Column: BEH C18					
Matrix: Drinking Water				21-Apr-17 22:58 Column: BEH C18					
Sample Size: 0.278 L									
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	3.14	9.00	18.0		SUR 13C2-PFHxA	88.0	70-130	
PFHpA	ND	3.33	9.00	18.0		SUR 13C2-PFDA	82.9	70-130	
PFHxS	ND	3.11	9.00	18.0					
PFOA	8.51	4.09	9.00	18.0	J				
PFNA	ND	5.71	9.00	18.0					
PFOS	4.02	2.74	9.00	18.0	J				

DL - Detection limit

RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit

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

<b>Sample ID: Duplicate</b>					<b>EPA Method 537</b>			
Source Client ID: RW07-20170417					Duplicate Lab Sample: B7D0096-DUP1			
Source LabNumber: 1700466-07								
Matrix: Drinking Water								
<b>Analyte</b>	<b>Dup Conc. (ng/L)</b>	<b>Source Conc.</b>	<b>RPD</b>	<b>RPD Limit</b>	<b>Labeled Standard</b>	<b>Dup %R</b>	<b>Source %R</b>	<b>LCL-UCL</b>
PFBS	ND	ND	NA	30	SUI13C2-PFHxA	88.0	97.6	70 - 130
PFHpA	ND	ND	NA	30	SUI13C2-PFDA	82.9	83.0	70 - 130
PFHxS	ND	ND	NA	30				
PFOA	8.51	7.77	9.16	30				
PFNA	ND	ND	NA	30				
PFOS	4.02	3.99	0.722	30				

LCL-UCL - Lower control limit - upper control limit.

# - Result could not be calculated due to one or more non-detected analytes.

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

**Sample ID: FRB-07-20170417**

**EPA Method 537**

Client Data		Sample Data		Laboratory Data					
Name:	Tetra Tech	Matrix:	Blank Water	Lab Sample:	1700466-08	Date Received:	19-Apr-2017 9:04		
Project:	NAWC Trenton, NJ	Sample Size:	0.287 L	QC Batch:	B7D0096	Date Extracted:	20-Apr-2017 9:29		
Date Collected:	17-Apr-2017 14:05			Date Analyzed:	20-Apr-17 21:57	Column:	BEH C18		
Location:					21-Apr-17 23:10	Column:	BEH C18		
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	3.04	8.72	17.4		SUR 13C2-PFHxA	93.0	70 - 130	
PFHpA	ND	3.23	8.72	17.4		SUR 13C2-PFDA	84.9	70 - 130	
PFHxS	ND	3.02	8.72	17.4					
PFOA	ND	3.96	8.72	17.4					
PFNA	ND	5.53	8.72	17.4					
PFOS	ND	2.66	8.72	17.4					

DL - Detection limit

RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit

Results reported to DL.

When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.

Only the linear isomer is reported for all other analytes.

**Sample ID: RW03-20170417** **EPA Method 537**

<b>Client Data</b>	<b>Sample Data</b>	<b>Laboratory Data</b>
Name: Tetra Tech	Matrix: Drinking Water	Lab Sample: 1700466-09      Date Received: 19-Apr-2017 9:04
Project: NAWC Trenton, NJ	Sample Size: 0.281 L	QC Batch: B7D0096      Date Extracted: 20-Apr-2017 9:29
Date Collected: 17-Apr-2017 17:45		Date Analyzed: 20-Apr-17 22:10 Column: BEH C18
Location:		21-Apr-17 23:23 Column: BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	4.17	3.11	8.90	17.8	J	SUR 13C2-PFHxA	100	70 - 130	
PFHpA	ND	3.29	8.90	17.8		SUR 13C2-PFDA	94.7	70 - 130	
PFHxS	ND	3.08	8.90	17.8					
PFOA	6.73	4.04	8.90	17.8	J				
PFNA	ND	5.64	8.90	17.8					
PFOS	5.58	2.71	8.90	17.8	J				

DL - Detection limit  
 RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit  
 Results reported to DL.  
 When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.  
 Only the linear isomer is reported for all other analytes.

**Sample ID: FRB-03-20170417** **EPA Method 537**

<b>Client Data</b> Name: Tetra Tech Project: NAWC Trenton, NJ Date Collected: 17-Apr-2017 17:40 Location:	<b>Sample Data</b> Matrix: Blank Water Sample Size: 0.278 L	<b>Laboratory Data</b> Lab Sample: 1700466-10      Date Received: 19-Apr-2017 9:04 QC Batch: B7D0096      Date Extracted: 20-Apr-2017 9:29 Date Analyzed: 20-Apr-17 22:34 Column: BEH C18 21-Apr-17 23:48 Column: BEH C18
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Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	3.13	8.98	18.0		SUR 13C2-PFHxA	94.1	70 - 130	
PFHpA	ND	3.32	8.98	18.0		SUR 13C2-PFDA	81.9	70 - 130	
PFHxS	ND	3.11	8.98	18.0					
PFOA	ND	4.08	8.98	18.0					
PFNA	ND	5.69	8.98	18.0					
PFOS	ND	2.74	8.98	18.0					

DL - Detection limit  
RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit  
Results reported to DL.  
When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.  
Only the linear isomer is reported for all other analytes.

**Sample ID: RW16-20170417** **EPA Method 537**

<b>Client Data</b>	<b>Sample Data</b>	<b>Laboratory Data</b>
Name: Tetra Tech	Matrix: Drinking Water	Lab Sample: 1700466-11      Date Received: 19-Apr-2017 9:04
Project: NAWC Trenton, NJ	Sample Size: 0.289 L	QC Batch: B7D0096      Date Extracted: 20-Apr-2017 9:29
Date Collected: 17-Apr-2017 18:25		Date Analyzed: 20-Apr-17 22:47 Column: BEH C18
Location:		22-Apr-17 00:00 Column: BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	3.02	8.65	17.3		SUR 13C2-PFHxA	91.3	70 - 130	
PFHpA	ND	3.20	8.65	17.3		SUR 13C2-PFDA	82.4	70 - 130	
PFHxS	ND	2.99	8.65	17.3					
PFOA	10.3	3.93	8.65	17.3	J				
PFNA	ND	5.48	8.65	17.3					
PFOS	ND	2.64	8.65	17.3					

DL - Detection limit  
 RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit  
 Results reported to DL.  
 When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.  
 Only the linear isomer is reported for all other analytes.



**Sample ID: FRB-16-20170417**

**EPA Method 537**

Client Data		Sample Data		Laboratory Data			
Name:	Tetra Tech	Matrix:	Blank Water	Lab Sample:	1700466-12	Date Received:	19-Apr-2017 9:04
Project:	NAWC Trenton, NJ	Sample Size:	0.281 L	QC Batch:	B7D0096	Date Extracted:	20-Apr-2017 9:29
Date Collected:	17-Apr-2017 18:20			Date Analyzed:	20-Apr-17 22:59	Column:	BEH C18
Location:					22-Apr-17 00:12	Column:	BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	3.11	8.91	17.8		SUR 13C2-PFHxA	94.0	70 - 130	
PFHpA	ND	3.30	8.91	17.8		SUR 13C2-PFDA	82.7	70 - 130	
PFHxS	ND	3.08	8.91	17.8					
PFOA	ND	4.05	8.91	17.8					
PFNA	ND	5.65	8.91	17.8					
PFOS	ND	2.72	8.91	17.8					

DL - Detection limit  
 RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit  
 Results reported to DL.  
 When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.  
 Only the linear isomer is reported for all other analytes.

**Sample ID: RW14-20170418** **EPA Method 537**

<b>Client Data</b> Name: Tetra Tech Project: NAWC Trenton, NJ Date Collected: 18-Apr-2017 9:20 Location:	<b>Sample Data</b> Matrix: Drinking Water Sample Size: 0.284 L	<b>Laboratory Data</b> Lab Sample: 1700466-13      Date Received: 19-Apr-2017 9:04 QC Batch: B7D0096      Date Extracted: 20-Apr-2017 9:29 Date Analyzed: 20-Apr-17 23:12 Column: BEH C18 22-Apr-17 00:25 Column: BEH C18
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Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	48.1	3.07	8.80	17.6		SUR 13C2-PFHxA	93.8	70 - 130	
PFHpA	3.70	3.26	8.80	17.6	J	SUR 13C2-PFDA	83.4	70 - 130	
PFHxS	3.54	3.05	8.80	17.6	J				
PFOA	13.5	4.00	8.80	17.6	J				
PFNA	ND	5.58	8.80	17.6					
PFOS	12.5	2.69	8.80	17.6	J				

DL - Detection limit  
RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit  
Results reported to DL.  
When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.  
Only the linear isomer is reported for all other analytes.

**Sample ID: FRB-14-20170418**

**EPA Method 537**

Client Data		Sample Data			Laboratory Data				
Name:	Tetra Tech	Matrix:	Blank Water		Lab Sample:	1700466-14	Date Received:	19-Apr-2017 9:04	
Project:	NAWC Trenton, NJ	Sample Size:	0.279 L		QC Batch:	B7D0096	Date Extracted:	20-Apr-2017 9:29	
Date Collected:	18-Apr-2017 9:10				Date Analyzed:	20-Apr-17 23:24	Column:	BEH C18	
Location:						22-Apr-17 11:50	Column:	BEH C18	
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	3.12	8.95	17.9		SUR 13C2-PFHxA	95.8	70 - 130	
PFHpA	ND	3.31	8.95	17.9		SUR 13C2-PFDA	82.7	70 - 130	
PFHxS	ND	3.10	8.95	17.9					
PFOA	ND	4.06	8.95	17.9					
PFNA	ND	5.67	8.95	17.9					
PFOS	ND	2.73	8.95	17.9					

DL - Detection limit

RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit

Results reported to DL.

When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.

Only the linear isomer is reported for all other analytes.

**Sample ID: RW20-20170418** **EPA Method 537**

<b>Client Data</b> Name: Tetra Tech Project: NAWC Trenton, NJ Date Collected: 18-Apr-2017 10:25 Location:	<b>Sample Data</b> Matrix: Drinking Water Sample Size: 0.288 L	<b>Laboratory Data</b> Lab Sample: 1700466-15      Date Received: 19-Apr-2017 9:04 QC Batch: B7D0096      Date Extracted: 20-Apr-2017 9:29 Date Analyzed: 20-Apr-17 23:37 Column: BEH C18 22-Apr-17 12:02 Column: BEH C18
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Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	6.45	3.03	8.68	17.4	J	SUR 13C2-PFHxA	81.5	70 - 130	
PFHpA	ND	3.21	8.68	17.4		SUR 13C2-PFDA	77.4	70 - 130	
PFHxS	3.93	3.00	8.68	17.4	J				
PFOA	11.9	3.94	8.68	17.4	J				
PFNA	ND	5.51	8.68	17.4					
PFOS	6.01	2.65	8.68	17.4	J				

DL - Detection limit  
RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit  
Results reported to DL.  
When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.  
Only the linear isomer is reported for all other analytes.

**Sample ID: FRB-20-20170418**

**EPA Method 537**

Client Data		Sample Data		Laboratory Data					
Name:	Tetra Tech	Matrix:	Blank Water	Lab Sample:	1700466-16	Date Received:	19-Apr-2017 9:04		
Project:	NAWC Trenton, NJ	Sample Size:	0.282 L	QC Batch:	B7D0096	Date Extracted:	20-Apr-2017 9:29		
Date Collected:	18-Apr-2017 10:20			Date Analyzed:	20-Apr-17 23:49	Column:	BEH C18		
Location:					22-Apr-17 12:15	Column:	BEH C18		
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	3.09	8.86	17.7		SUR 13C2-PFHxA	86.6	70 - 130	
PFHpA	ND	3.28	8.86	17.7		SUR 13C2-PFDA	74.7	70 - 130	
PFHxS	ND	3.06	8.86	17.7					
PFOA	ND	4.02	8.86	17.7					
PFNA	ND	5.61	8.86	17.7					
PFOS	ND	2.70	8.86	17.7					

DL - Detection limit

RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit

Results reported to DL.

When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.

Only the linear isomer is reported for all other analytes.

**Sample ID: RW06-20170418** **EPA Method 537**

<b>Client Data</b>	<b>Sample Data</b>	<b>Laboratory Data</b>
Name: Tetra Tech	Matrix: Drinking Water	Lab Sample: 1700466-17      Date Received: 19-Apr-2017 9:04
Project: NAWC Trenton, NJ	Sample Size: 0.280 L	QC Batch: B7D0096      Date Extracted: 20-Apr-2017 9:29
Date Collected: 18-Apr-2017 11:05		Date Analyzed: 21-Apr-17 00:01 Column: BEH C18
Location:		22-Apr-17 12:28 Column: BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	3.11	8.92	17.8		SUR 13C2-PFHxA	91.6	70 - 130	
PFHpA	ND	3.30	8.92	17.8		SUR 13C2-PFDA	80.4	70 - 130	
PFHxS	ND	3.09	8.92	17.8					
PFOA	6.91	4.05	8.92	17.8	J				
PFNA	ND	5.66	8.92	17.8					
PFOS	ND	2.72	8.92	17.8					

DL - Detection limit  
 RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit  
 Results reported to DL.  
 When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.  
 Only the linear isomer is reported for all other analytes.

**Sample ID: FRB-06-20170418**

**EPA Method 537**

Client Data		Sample Data		Laboratory Data					
Name:	Tetra Tech	Matrix:	Blank Water	Lab Sample:	1700466-18	Date Received:	19-Apr-2017 9:04		
Project:	NAWC Trenton, NJ	Sample Size:	0.283 L	QC Batch:	B7D0096	Date Extracted:	20-Apr-2017 9:29		
Date Collected:	18-Apr-2017 10:55			Date Analyzed:	21-Apr-17 00:14	Column:	BEH C18		
Location:					22-Apr-17 12:40	Column:	BEH C18		
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	3.08	8.83	17.7		SUR 13C2-PFHxA	91.1	70 - 130	
PFHpA	ND	3.27	8.83	17.7		SUR 13C2-PFDA	81.0	70 - 130	
PFHxS	ND	3.06	8.83	17.7					
PFOA	ND	4.01	8.83	17.7					
PFNA	ND	5.60	8.83	17.7					
PFOS	ND	2.69	8.83	17.7					

DL - Detection limit

RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit

Results reported to DL.

When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.

Only the linear isomer is reported for all other analytes.

**Sample ID: RW01-20170418** **EPA Method 537**

<b>Client Data</b> Name: Tetra Tech Project: NAWC Trenton, NJ Date Collected: 18-Apr-2017 13:05 Location:	<b>Sample Data</b> Matrix: Drinking Water Sample Size: 0.275 L	<b>Laboratory Data</b> Lab Sample: 1700466-19      Date Received: 19-Apr-2017 9:04 QC Batch: B7D0096      Date Extracted: 20-Apr-2017 9:29 Date Analyzed: 21-Apr-17 00:26 Column: BEH C18 22-Apr-17 12:53 Column: BEH C18
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Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	3.17	9.09	18.2		SUR 13C2-PFHxA	89.1	70 - 130	
PFHpA	ND	3.36	9.09	18.2		SUR 13C2-PFDA	85.1	70 - 130	
PFHxS	ND	3.15	9.09	18.2					
PFOA	ND	4.13	9.09	18.2					
PFNA	ND	5.76	9.09	18.2					
PFOS	ND	2.77	9.09	18.2					

DL - Detection limit  
RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit  
Results reported to DL.  
When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.  
Only the linear isomer is reported for all other analytes.



**Sample ID: FRB-01-20170418**

**EPA Method 537**

Client Data		Sample Data		Laboratory Data					
Name:	Tetra Tech	Matrix:	Blank Water	Lab Sample:	1700466-20	Date Received:	19-Apr-2017 9:04		
Project:	NAWC Trenton, NJ	Sample Size:	0.277 L	QC Batch:	B7D0096	Date Extracted:	20-Apr-2017 9:29		
Date Collected:	18-Apr-2017 13:00			Date Analyzed:	21-Apr-17 00:38	Column:	BEH C18		
Location:					22-Apr-17 13:05	Column:	BEH C18		
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	3.96	3.15	9.02	18.0	J	SUR 13C2-PFHxA	96.9	70 - 130	
PFHpA	ND	3.34	9.02	18.0		SUR 13C2-PFDA	80.8	70 - 130	
PFHxS	7.18	3.12	9.02	18.0	J				
PFOA	9.19	4.09	9.02	18.0	J				
PFNA	ND	5.72	9.02	18.0					
PFOS	10.4	2.75	9.02	18.0	J				

DL - Detection limit

RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit

Results reported to DL.

When reported, PFBS, 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>

**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>
Arkansas Department of Environmental Quality	17-015-0
California Department of Health – ELAP	2892
DoD ELAP - A2LA Accredited - ISO/IEC 17025:2005	3091.01
Florida Department of Health	E87777-18
Hawaii Department of Health	N/A
Louisiana Department of Environmental Quality	01977
Maine Department of Health	2016026
Minnesota Department of Health	1175673
Nevada Division of Environmental Protection	CA004132017-1
New Hampshire Environmental Accreditation Program	207716
New Jersey Department of Environmental Protection	CA003
New York Department of Health	11411
Oregon Laboratory Accreditation Program	4042-008
Pennsylvania Department of Environmental Protection	013
Texas Commission on Environmental Quality	T104704189-17-8
Virginia Department of General Services	8621
Washington Department of Ecology	C584
Wisconsin Department of Natural Resources	998036160

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

## NELAP Accredited Test Methods

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

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

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

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

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

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



# CHAIN OF CUSTODY

**For Laboratory Use Only**  
 Laboratory Project ID: 1700466 Temp: 0.3 °C  
 Storage ID: NR-2 Storage Secured: Yes  No

Project ID: NAWC Trenton P.O.#: 1135710 Sampler: Charles Meyer  
 (name)

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

Invoice to: Name Company Address City State Ph# Fax#

Accounts Payable Tetra Tech Inc 661 Andersen Drive Foster Plaza 7 Pittsburgh PA 15220

Relinquished by (printed name and signature) Date Time Received by (printed name and signature) Date Time

Charles Meyer Charles Meyer 4/19/17 18:00 Bettina Benedic Bettina Benedic 8/19/17 0906

Relinquished by (printed name and signature) Date Time Received by (printed name and signature) Date Time

SHIP TO: Vista Analytical Laboratory  
 1104 Windfield Way  
 El Dorado Hills, CA 95762  
 (916) 673-1520 \* Fax (916) 673-0106  
 Method of Shipment: Fed Ex  
 Tracking No.: 8109 8153 9152  
 ATTN: Sample Custodian

Add Analysis(es) Requested			Container(s)		VEHICLES LIST												
Quantity	Type	Matrix	2378-TCDD	2378-TCDD/TCDF	PCDD/PCDF	2378-TCDD	2378-TCDD/TCDF	PCDD/PCDF	2378-TCDD	2378-TCDD/TCDF	TOTALS	COPLANAR PCBs	209 CONGENERS	PBDE	PAH	WHO-29	Misc. EPA 537

Sample ID	Date	Time	Location/Sample Description	Quantity	Type	Matrix	2378-TCDD	2378-TCDD/TCDF	PCDD/PCDF	2378-TCDD	2378-TCDD/TCDF	TOTALS	COPLANAR PCBs	209 CONGENERS	PBDE	PAH	WHO-29	Misc. EPA 537	Comments	
RW05-20170417	4/17/17	11:25	PRESSURE TANK	2	P	DW														
FRB-05-20170417	4/17/17	11:20	PUMP ROOM	2	P	BLK														
RW10-20170417	4/17/17	12:35	PRESSURE TANK	2	P	DW														
FRB-10-20170417	4/17/17	12:30	PUMP ROOM	2	P	BLK														
RW18-20170417	4/17/17	13:35	PRESSURE TANK	2	P	DW														
FRB-18-20170417	4/17/17	13:30	PUMP ROOM	2	P	BLK														
RW07-20170417	4/17/17	14:10	PRESSURE TANK	2	P	DW														
FRB-07-20170417	4/17/17	14:05	PUMP ROOM	2	P	BLK														
RW03-20170417	4/17/17	17:45	PRESSURE TANK	2	P	DW														
FRB-03-20170417	4/17/17	17:40	PUMP ROOM	2	P	BLK														

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

SEND DOCUMENTATION AND RESULTS TO:  
 Name: Mary Mang  
 Company: Tetra Tech  
 Address: 234 Mall Boulevard Suite 260  
 City: King of Prussia State: PA Zip: 19406  
 Phone: 610 382 1174 Fax: 610 491 9695  
 Email: mary.mang@tetratech.com

Container Types: A = 1 Liter Amber, G = Glass Jar  
 P = HDPE, O = Other  
 Bottle Preservation Type: T = Thiosulfate, TZ = Trizma: 20 bottles  
 Matrix Types: AQ = Aqueous, DW = Drinking Water, EF = Effluent, PP = Pulp/Paper, SD = Sediment, SL = Sludge, SO = Soil, WW = Wastewater, B = Blood/Serum, O = Other

# CHAIN OF CUSTODY

**For Laboratory Use Only**  
 Laboratory Project ID: 1700466 Temp: \_\_\_\_\_ °C  
 Storage ID: \_\_\_\_\_ Storage Secured: Yes  No

Project ID: NAWC Trenton P.O.#: 1135710 Sampler: Charles Meyer  
 (name)

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

Invoice to: Name \_\_\_\_\_ Company \_\_\_\_\_ Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Ph# \_\_\_\_\_ Fax# \_\_\_\_\_

Accounts Payable Tetra Tech 661 Andersen Drive Foster Plaza 7 Pittsburgh PA 15226

Relinquished by (printed name and signature) \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_ Received by (printed name and signature) \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_

Charles Meyer 4/18/17 18:00 Bettine Benedict 04/19/17 09:07

Relinquished by (printed name and signature) \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_ Received by (printed name and signature) \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_

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

Method of Shipment: Fed Ex  
 Tracking No.: 8109 8153 9152

Add Analysis(es) Requested			Container(s)													Comments				
Quantity	Type	Matrix	2378-TCDD	2378-TCDD/TCDF	PCDD/F/PCDF	2378-TCDD	2378-TCDD/TCDF	PCDD/F/PCDF	2378-TCDD	2378-TCDD/TCDF	PCDD/F/PCDF	TOTALS	COPLANAR PCBs	209 CONGENERS	PBDE		PAH	WHO-29	Hex EPA 537	UCMR3 LIST

Sample ID	Date	Time	Location/Sample Description	Quantity	Type	Matrix	2378-TCDD	2378-TCDD/TCDF	PCDD/F/PCDF	2378-TCDD	2378-TCDD/TCDF	PCDD/F/PCDF	TOTALS	COPLANAR PCBs	209 CONGENERS	PBDE	PAH	WHO-29	Hex EPA 537	Comments	
RW16-20170417	4/17/17	18:25	Pressure Tank	2	P	DW															
FRB-16-20170417	4/17/17	18:20	Pump Room	2	P	BK															
RW14-20170418	4/18/17	09:20	Pressure Tank	2	P	DW															
FRB-14-20170418	4/18/17	09:10	Pump Room	2	P	BK															
RW20-20170418	4/18/17	10:25	Pressure Tank	2	P	DW															
FRB-20-20170418	4/18/17	10:20	Pump Room	2	P	BK															
RW06-20170418	4/18/17	11:05	Pressure Tank	2	P	DW															
FRB-06-20170418	4/18/17	10:55	Pump Room	2	P	BK															
RW01-20170418	4/18/17	13:05	Pressure Tank	2	P	DW															
FRB-01-20170418	4/18/17	13:00	Pump Room	2	P	BK															

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

SEND DOCUMENTATION AND RESULTS TO:  
 Name: Mary Mang  
 Company: Tetra Tech  
 Address: 234 Mall Boulevard Suite 260  
 City: King of Prussia State: PA Zip: 19406  
 Phone: 610 382 1174 Fax: 610 491 9645  
 Email: mary.mang@tetra.tech.com

Container Types: A = 1 Liter Amber, G = Glass Jar  
 P = HDPE, O = Other: \_\_\_\_\_  
 Bottle Preservation Type: T = Thiosulfate, TZ = Trizma: 20 bottles  
 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 Project #: 1700466 TAT 7

Samples Arrival:	Date/Time <u>04/19/17 0904</u>	Initials: <u>VB/B</u>	Location: <u>WR-2</u>
Logged In:	Date/Time <u>04/19/17 0948</u>	Initials: <u>VB/B</u>	Location: <u>WR-2</u>
Delivered By:	<input checked="" type="radio"/> FedEx	<input type="radio"/> UPS	<input type="radio"/> On Trac
Preservation:	<input checked="" type="radio"/> Ice	<input type="radio"/> Blue Ice	<input type="radio"/> Dry Ice
Temp °C: <u>0.0</u> (uncorrected)	Time: <u>0905</u>	Thermometer ID: IR-1	
Temp °C: <u>0.3</u> (corrected)	Probe used: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		

	YES	NO	NA
Adequate Sample Volume Received? <u>A/B</u>	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?	✓		
Shipping Documentation Present?	✓		
Airbill			
Trk # <u>8109 8153 9152</u>	✓		
Sample Container Intact?	✓		
Sample Custody Seals Intact?			✓
Chain of Custody / Sample Documentation Present?	✓		
COC Anomaly/Sample Acceptance Form completed?	✓		
If Chlorinated or Drinking Water Samples, Acceptable Preservation?	✓		
Preservation Documented:			
Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	<input checked="" type="radio"/> Trizma	<input checked="" type="radio"/> Yes	<input type="radio"/> No
Shipping Container	Vista	<input checked="" type="radio"/> Client	<input type="radio"/> Retain
		<input checked="" type="radio"/> Return	<input type="radio"/> Dispose

Comments: Sample: RW16-20170417 rec'd 2 bottles one with color, the other without color. See picture

Sample label ID: RFB-03-20170417  
COC ID FRB-03-20170417



Chain of Custody Anomaly/Sample Acceptance Form



Client: Tetra Tech
Contact: Mary Mang
Email: mary.mang@tetrattech.com
Phone: 610-382-1174

Workorder Number: 1700466
Date Received: 19-Apr-17 00:00
Documented by/date: B.Benedict 04/19/2017

Please review the following information and complete the Client Authorization section. To comply with NELAC regulations, we must receive authorization before proceeding with sample analysis.

Thank you,

Martha Maier
mmaier@vista-analytical.com
916-673-1520

The following information or item is needed to proceed with analysis:

- Complete Chain-of-Custody
Test Method Requested
Analyte List Requested
Preservative
Sample Identification
Sample Collection Date and/or Time
Collector's Name
Sample Type
Sample Location

X Other: Sample "RW16-20170417" received 2 bottles with this ID, one bottle has color in the sample and the other bottle is with out color.

The following anomalies were noted. Authorization is needed to proceed with analysis.

- Temperature outside < 6°C Range
Sample ID Discrepancy: See comments
Sample Holding Time Missed
Custody Seals Broken
Insufficient Sample Size
Sample Container(s) Broken
Incorrect Container Type

Comments:
COC ID: FRB-03-20170417
Sample label ID: RFB-03-20170417

Client Authorization
Proceed with Analysis: YES NO
Signature and Date Karen Jobs 4-19-2017
Client Comments/Instructions Per Megan Ritchie, analyze the clear bottle first for "RW16-20170417". The sample ID on the COC is correct for "FRB-03-20170417"

## **EXTRACTION INFORMATION**



Process Sheet

Workorder: 1700466

Prep Expiration: 2017-May-01  
Client: Tetra Tech

Workorder Due: 25-Apr-17 00:00

TAT: 6

Method: 537 PFAS DW DoD Unmodified  
Matrix: Drinking Water

Prep Batch: B7D0096

Prep Data Entered: BP 4.21.17  
Date and Initials

Initial Sequence: \_\_\_\_\_

LabSampleID	Recon	ClientSampleID	Date Received	Location	Comments
1700466-01	<input checked="" type="checkbox"/>	RW05-20170417	19-Apr-17 09:04	WR-2 E-5	
1700466-02	<input checked="" type="checkbox"/>	FRB-05-20170417	19-Apr-17 09:04	WR-2 E-5	
1700466-03	<input checked="" type="checkbox"/>	RW10-20170417	19-Apr-17 09:04	WR-2 E-5	
1700466-04	<input checked="" type="checkbox"/>	FRB-10-20170417	19-Apr-17 09:04	WR-2 E-5	
1700466-05	<input checked="" type="checkbox"/>	RW18-20170417	19-Apr-17 09:04	WR-2 E-5	
1700466-06	<input checked="" type="checkbox"/>	FRB-18-20170417	19-Apr-17 09:04	WR-2 E-5	
1700466-07	<input checked="" type="checkbox"/>	RW07-20170417	19-Apr-17 09:04	WR-2 E-5	Duplicate
1700466-08	<input checked="" type="checkbox"/>	FRB-07-20170417	19-Apr-17 09:04	WR-2 E-5	
1700466-09	<input checked="" type="checkbox"/>	RW03-20170417	19-Apr-17 09:04	WR-2 E-5	MS
1700466-10	<input type="checkbox"/>	<del>FRB-03-20170417</del> <sup>REF-03-20170417</sup> <sub>BP 4.20.17</sub>	19-Apr-17 09:04	WR-2 E-5	
1700466-11	<input checked="" type="checkbox"/>	RW16-20170417	19-Apr-17 09:04	WR-2 E-5	
1700466-12	<input checked="" type="checkbox"/>	FRB-16-20170417	19-Apr-17 09:04	WR-2 E-5	
1700466-13	<input checked="" type="checkbox"/>	RW14-20170418	19-Apr-17 09:04	WR-2 E-5	
1700466-14	<input checked="" type="checkbox"/>	FRB-14-20170418	19-Apr-17 09:04	WR-2 E-5	
1700466-15	<input checked="" type="checkbox"/>	RW20-20170418	19-Apr-17 09:04	WR-2 E-5	
1700466-16	<input checked="" type="checkbox"/>	FRB-20-20170418	19-Apr-17 09:04	WR-2 E-5	
1700466-17	<input checked="" type="checkbox"/>	RW06-20170418	19-Apr-17 09:04	WR-2 E-5	
1700466-18	<input checked="" type="checkbox"/>	FRB-06-20170418	19-Apr-17 09:04	WR-2 E-5	
1700466-19	<input checked="" type="checkbox"/>	RW01-20170418	19-Apr-17 09:04	WR-2 E-5	
1700466-20	<input checked="" type="checkbox"/>	FRB-01-20170418	19-Apr-17 09:04	WR-2 E-5	

WO Comments: QSM V.5.0  
MS on sample RW03-20170417 and duplicate on sample RW07-20170417

Vista PM:Martha Maier

Batch: B7D0096

Matrix: Drinking Water

LabNumber	WetWeight (Initial)	% Solids (Extraction Solids)	DryWeight	Final	Extracted	Ext By	Spike	SpikeAmount	ClientMatrix	Analysis
1700466-01	0.27464	NA	NA	1000	20-Apr-17 09:29	BAP			Drinking Water	537 PFAS DW DoD Unm
1700466-02	0.28813			1000	20-Apr-17 09:29	BAP			Drinking Water	537 PFAS DW DoD Unm
1700466-03	0.27586			1000	20-Apr-17 09:29	BAP			Drinking Water	537 PFAS DW DoD Unm
1700466-04	0.27706			1000	20-Apr-17 09:29	BAP			Drinking Water	537 PFAS DW DoD Unm
1700466-05	0.2777			1000	20-Apr-17 09:29	BAP			Drinking Water	537 PFAS DW DoD Unm
1700466-06	0.27394			1000	20-Apr-17 09:29	BAP			Drinking Water	537 PFAS DW DoD Unm
1700466-07	0.26751			1000	20-Apr-17 09:29	BAP			Drinking Water	537 PFAS DW DoD Unm
1700466-08	0.28678			1000	20-Apr-17 09:29	BAP			Drinking Water	537 PFAS DW DoD Unm
1700466-09	0.28093			1000	20-Apr-17 09:29	BAP			Drinking Water	537 PFAS DW DoD Unm
1700466-10	0.27835			1000	20-Apr-17 09:29	BAP			Drinking Water	537 PFAS DW DoD Unm
1700466-11	0.28913			1000	20-Apr-17 09:29	BAP			Drinking Water	537 PFAS DW DoD Unm
1700466-12	0.28055			1000	20-Apr-17 09:29	BAP			Drinking Water	537 PFAS DW DoD Unm
1700466-13	0.28397			1000	20-Apr-17 09:29	BAP			Drinking Water	537 PFAS DW DoD Unm
1700466-14	0.27946			1000	20-Apr-17 09:29	BAP			Drinking Water	537 PFAS DW DoD Unm
1700466-15	0.28787			1000	20-Apr-17 09:29	BAP			Drinking Water	537 PFAS DW DoD Unm
1700466-16	0.28231			1000	20-Apr-17 09:29	BAP			Drinking Water	537 PFAS DW DoD Unm
1700466-17	0.28012			1000	20-Apr-17 09:29	BAP			Drinking Water	537 PFAS DW DoD Unm
1700466-18	0.28301			1000	20-Apr-17 09:29	BAP			Drinking Water	537 PFAS DW DoD Unm
1700466-19	0.27495			1000	20-Apr-17 09:29	BAP			Drinking Water	537 PFAS DW DoD Unm
1700466-20	0.27731			1000	20-Apr-17 09:29	BAP			Drinking Water	537 PFAS DW DoD Unm
B7D0096-BLK1	0.25			1000	20-Apr-17 09:29	BAP				QC
B7D0096-BS1	0.25			1000	20-Apr-17 09:29	BAP	17D1705	20		QC
B7D0096-DUP1	0.2778			1000	20-Apr-17 09:29	BAP				QC
B7D0096-MS1	0.27836			1000	20-Apr-17 09:29	BAP	17D1705	20		QC

BP 4.21.17

PREPARATION BENCH SHEET

Matrix: Drinking Water

Method: 537 PFAS DW DoD Unmodified

B7D0096

Chemist: BP

Prep Date/Time: 20-Apr-17 09:29

Prepared using: LCMS - SPE Extraction-LCMS

C	VISTA Sample ID	Bottle + Sample (g)	Bottle Only (g)	Sample Amt. (L)	NS/NS CHEM/WIT DATE	SPE	RS CHEM/WIT DATE
<input type="checkbox"/>	B7D0096-BLK1 <sup>ⓑ</sup>	N/A	N/A	(0.250)	BP HC 4.20.17	BP HC 4.20.17	BP HC 4.20.17
<input type="checkbox"/>	B7D0096-BS1 <sup>ⓑ</sup>	↓	↓	↓			
<input type="checkbox"/>	B7D0096-DUP1 1700466-07	304.98	27.18	0.2779 //	↓	↓	↓
<input type="checkbox"/>	B7D0096-MS1 1700466-09	305.21	26.85	0.27836 //			
<input type="checkbox"/>	1700466-01	301.16	26.52	0.27464 //			
<input type="checkbox"/>	1700466-02	315.51	27.38	0.28813 //			
<input type="checkbox"/>	1700466-03	303.04	27.18	0.27586 //			
<input type="checkbox"/>	1700466-04	313.73	26.87	0.27706 //			
<input type="checkbox"/>	1700466-05	304.53	26.83	0.2777 //			
<input type="checkbox"/>	1700466-06	301.66	27.72	0.27394 //			
<input type="checkbox"/>	1700466-07	295.14	27.89 <sup>HC 4/20/17</sup>	0.26751 //			
<input type="checkbox"/>	1700466-08	304.98 <sup>BP 4/20/17</sup> 314.65	27.87	0.28678 //			
<input type="checkbox"/>	1700466-09	307.96	27.03	0.28093 //			
<input type="checkbox"/>	1700466-10	305.44	27.09	0.27835 //			
<input type="checkbox"/>	1700466-11	315.84	26.71	0.28913 //			
<input type="checkbox"/>	1700466-12	306.93	26.38	0.28055 //			

NS Name <u>1701704 SOL</u> <sup>ⓑ</sup>	NS Name <u>1701705 SOL</u> <sup>ⓑ</sup>	RS Name <u>1701706 SOL</u> <sup>ⓑ</sup>	SPE Chem: <u>Strata X 33um 500mg/6ml</u>	Check Out: <u>HC 4/20/17</u> Chemist/Date:
			Ele SOLV: <u>MeOH</u>	Check In: <u>NA</u> Chemist/Date:
			Final Volume(s) <u>1ml</u>	Balance ID: <u>HPMSR</u>

Comments: Assume 1 g = 1 mL

ⓑ Triina added to OE's 0.625g HC 4/20/17

PREPARATION BENCH SHEET

Matrix: Drinking Water

B7D0096

Chemist: BP

Method: 537 PFAS DW DoD Unmodified

Prep Date/Time: 20-Apr-17 09:29

Prepared using: LCMS - SPE Extraction-LCMS

C	VISTA Sample ID	Bottle + Sample (g)	Bottle Only (g)	Sample Amt. (L)	IS/NS CHEM/WIT DATE	SPE	RS CHEM/WIT DATE
<input type="checkbox"/>	1700466-13	310.90	27.43	0.28397 =	BP HC 4-20-17	BP HC 4-20-17	BP <del>NS</del> 4-20-17
<input type="checkbox"/>	1700466-14	305.89	26.43	0.27946 =	↓	↓	↓
<input type="checkbox"/>	1700466-15 (A)	<del>309.34</del> 315.15	27.28	0.28787 =			
<input type="checkbox"/>	1700466-16	309.39	27.08	0.28231 =			
<input type="checkbox"/>	1700466-17	306.88	26.76	0.28012 =			
<input type="checkbox"/>	1700466-18	311.03	28.02	0.28301 =			
<input type="checkbox"/>	1700466-19	302.04	27.09	0.27495 =			
<input type="checkbox"/>	1700466-20	304.95	27.64	0.27731 =			

(A) Centrifuged sample to remove particulate BP 4-20-17

IS Name <u>1701704, SOL</u> (S)	NS Name <u>1701705, SOL</u> (V3)	RS Name <u>1701706, SOL</u> (S)	SPE Chem: <u>strata x33um scany/6ml</u>	Check Out: Chemist/Date: <u>HC 4/20/17</u>
			Ele SOLV: <u>MeOH</u>	Check In: Chemist/Date: <u>MA</u>
			Final Volume(s) <u>1ml</u>	Balance ID: <u>HRMS-8</u>

Comments: Assume 1 g = 1 mL

**SAMPLE DATA –EPA METHOD 537**

Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-17.qld

Last Altered: Friday, April 21, 2017 12:30:14 Pacific Daylight Time

Printed: Friday, April 21, 2017 12:32:29 Pacific Daylight Time

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Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: B7D0096-BLK1 LRB 0.25, Description: LRB, Name: 170420G1\_17, Date: 20-Apr-2017, Time: 20:06:03

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1 PFBS	299 > 79.7		8.700e3		0.250			
2	2 PFHpA	363 > 318.9		6.155e3		0.250			
3	3 PFHxS	398.9 > 79.6		8.700e3		0.250			
4	4 PFOA	413 > 368.7	2.840e1	6.155e3		0.250	4.21	0.236	
5	5 PFOS	499 > 79.9		8.700e3		0.250			
6	6 PFNA	463 > 418.8		6.155e3		0.250			
7	7 13C2-PFHxA	315.0 > 269.8	2.458e3	6.155e3	0.449	0.250	3.27	35.6	89.0
8	8 13C2-PFDA	515.1 > 469.9	4.073e3	6.155e3	0.803	0.250	4.85	33.0	82.4
9	9 13C2-PFOA	414.9 > 369.7	6.155e3	6.155e3	1.000	0.250	4.21	40.0	100
10	10 13C4-PFOS	503.0 > 79.9	8.700e3	8.700e3	1.000	0.250	4.61	115	100



Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-17.qld

Last Altered: Friday, April 21, 2017 12:30:14 Pacific Daylight Time

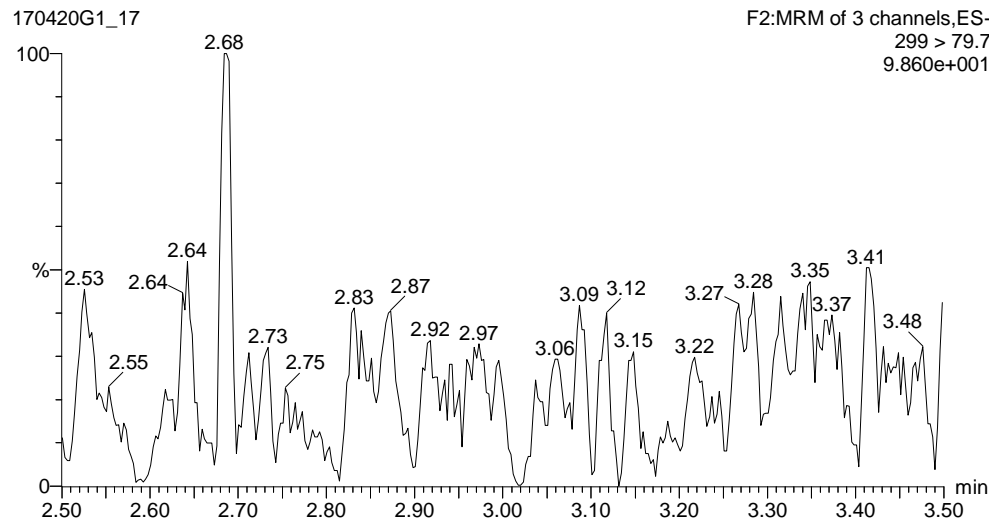
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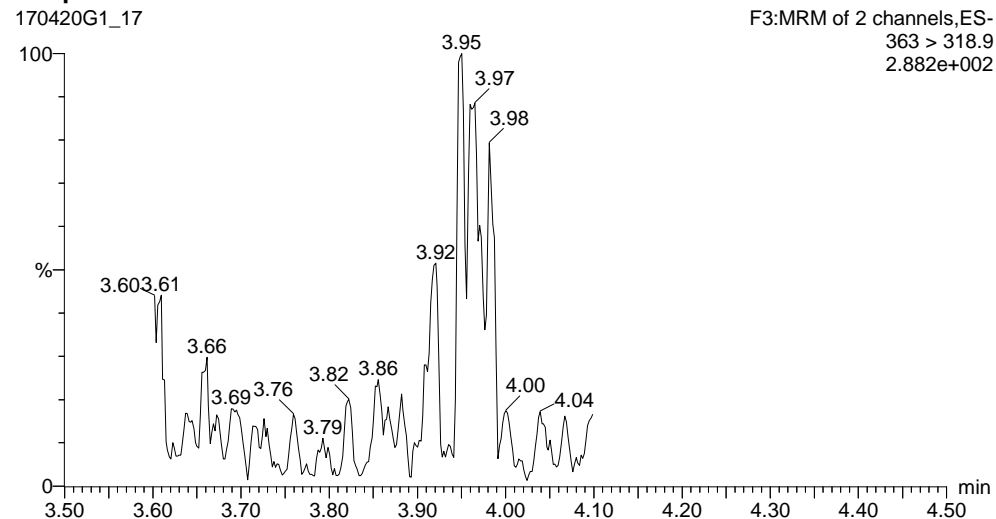
Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: B7D0096-BLK1 LRB 0.25, Description: LRB, Name: 170420G1\_17, Date: 20-Apr-2017, Time: 20:06:03, Instrument: , Lab: , User:

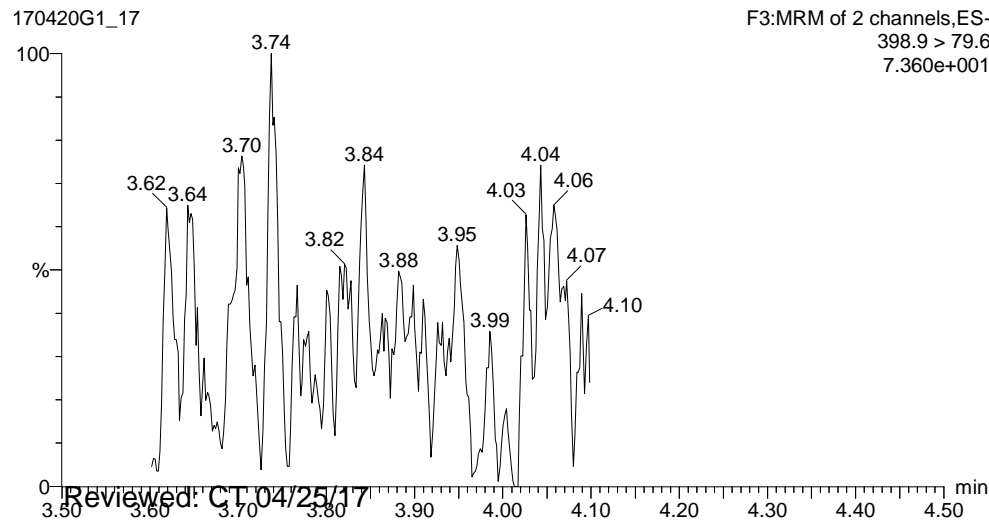
PFBS



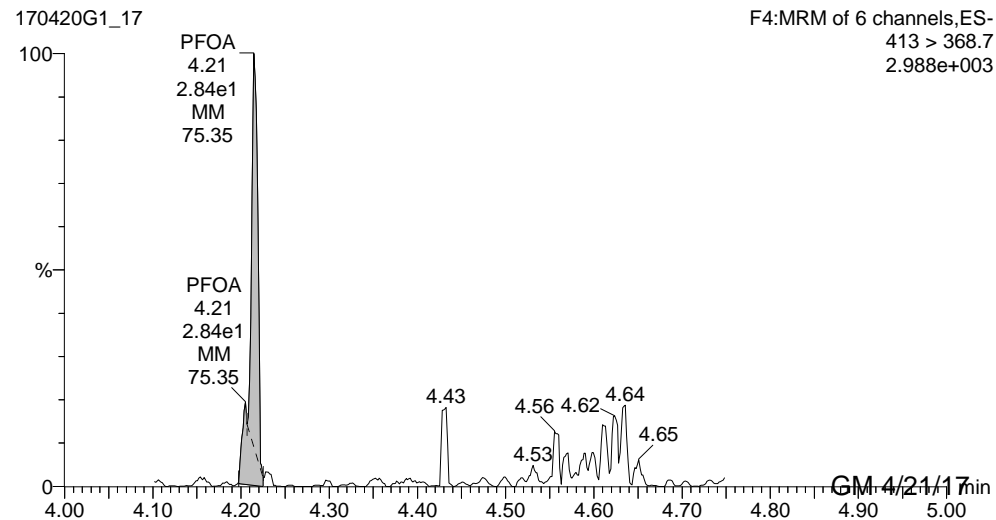
PFHpA



PFHxS



PFOA



Reviewed: CT 04/25/17

GM 4/21/17

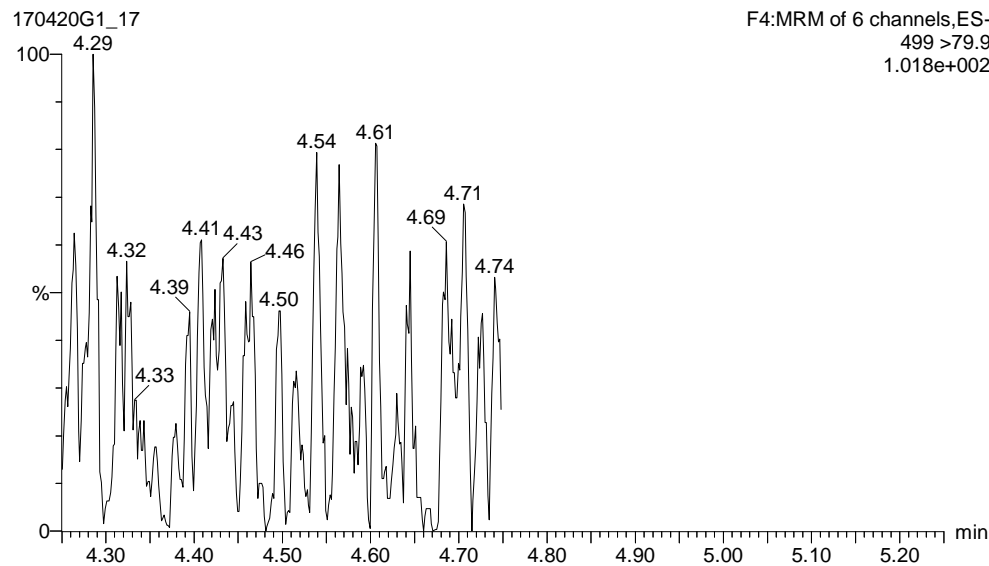
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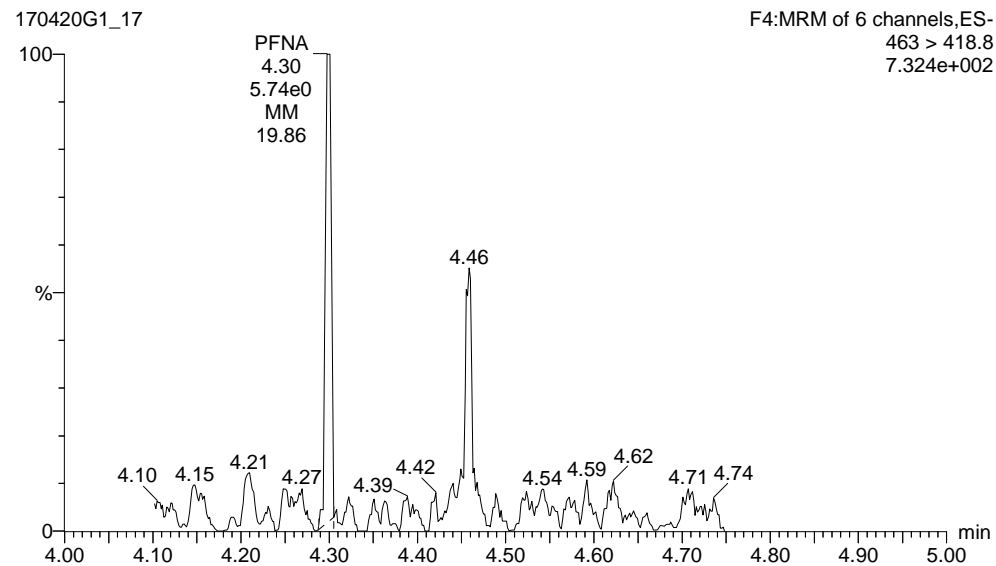
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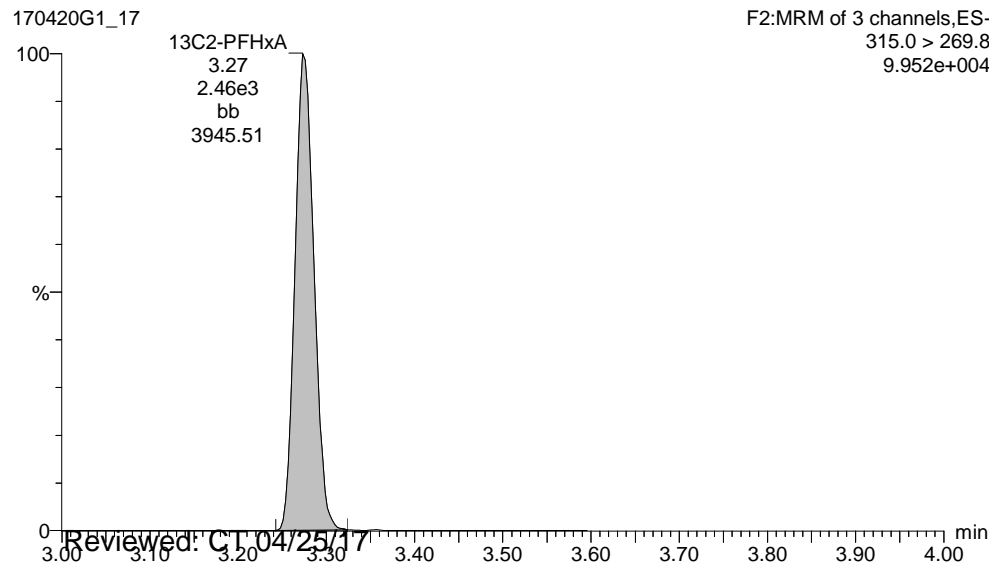
**PFOS**



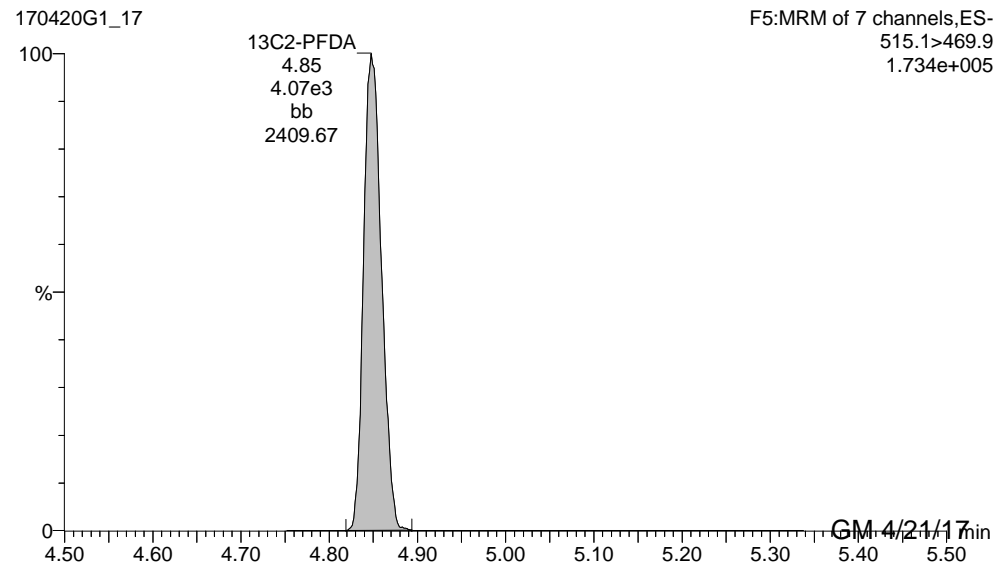
**PFNA**



**13C2-PFHxA**



**13C2-PFDA**



Reviewed: C.T. 04/25/17

Work Order 1700466 Revision 1

GM 4/21/17

Page 48 of 321

Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-17.qld

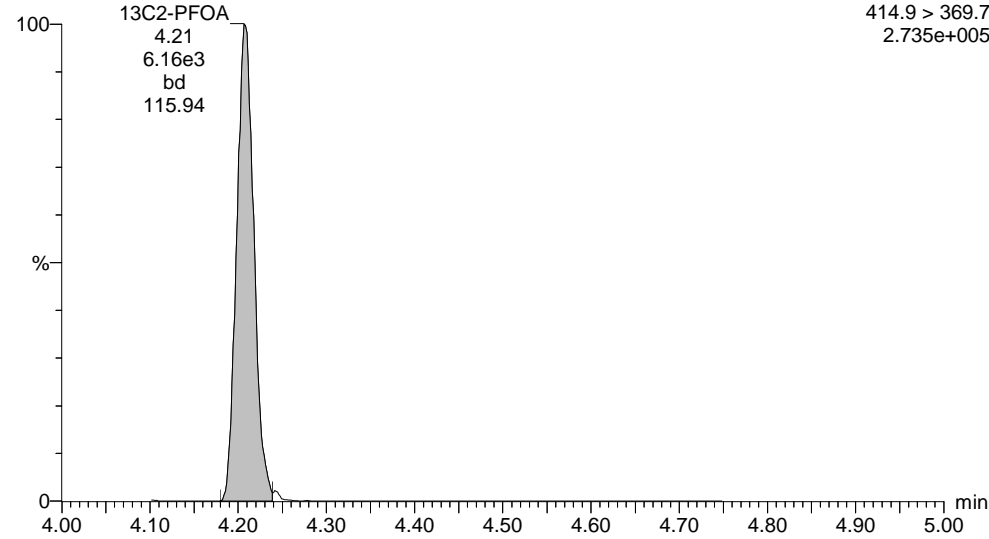
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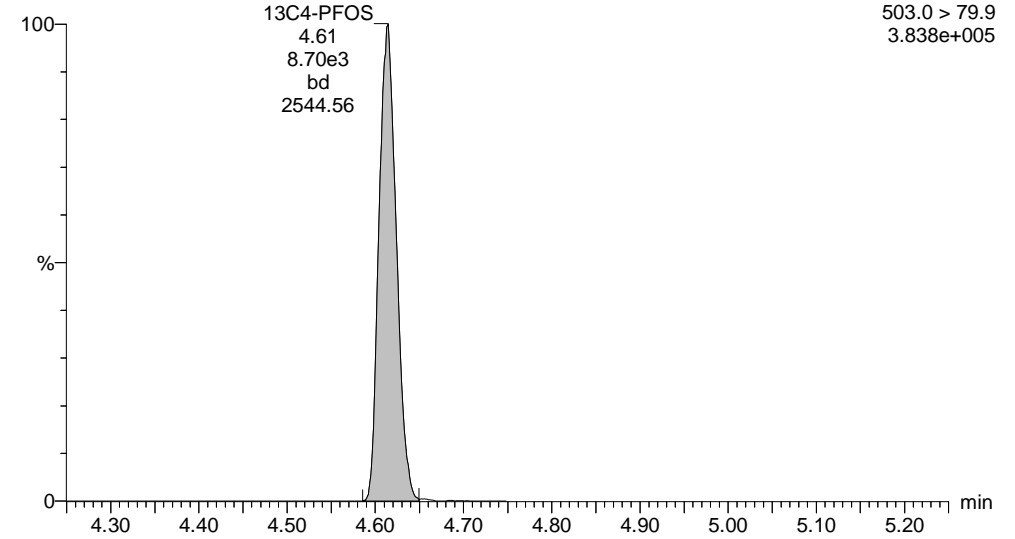
**13C2-PFOA**

170420G1\_17



**13C4-PFOS**

170420G1\_17



Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-15.qld

Last Altered: Friday, April 21, 2017 11:50:48 Pacific Daylight Time

Printed: Friday, April 21, 2017 11:53:06 Pacific Daylight Time

Method: U:\G1.PRO\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

Calibration: U:\G1.PRO\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: B7D0096-BS1 LFB 0.25, Description: LFB, Name: 170420G1\_15, Date: 20-Apr-2017, Time: 19:41:16

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1 PFBS	299 > 79.7	4.714e3	9.121e3		0.250	2.89	67.0	94.6
2	2 PFHpA	363 > 318.9	1.067e4	6.199e3		0.250	3.79	78.9	98.6
3	3 PFHxS	398.9 > 79.6	5.424e3	9.121e3		0.250	3.91	67.4	92.6
4	4 PFOA	413 > 368.7	9.327e3	6.199e3		0.250	4.21	79.3	99.1
5	5 PFOS	499 > 79.9	1.870e3	9.121e3		0.250	4.61	71.3	95.8
6	6 PFNA	463 > 418.8	1.629e4	6.199e3		0.250	4.55	79.7	99.7
7	7 13C2-PFHxA	315.0 > 269.8	2.601e3	6.199e3	0.449	0.250	3.27	37.4	93.5
8	8 13C2-PFDA	515.1 > 469.9	4.460e3	6.199e3	0.803	0.250	4.85	35.9	89.6
9	9 13C2-PFOA	414.9 > 369.7	6.199e3	6.199e3	1.000	0.250	4.21	40.0	100
10	10 13C4-PFOS	503.0 > 79.9	9.121e3	9.121e3	1.000	0.250	4.61	115	100

Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-15.qld

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Printed: Friday, April 21, 2017 11:53:06 Pacific Daylight Time

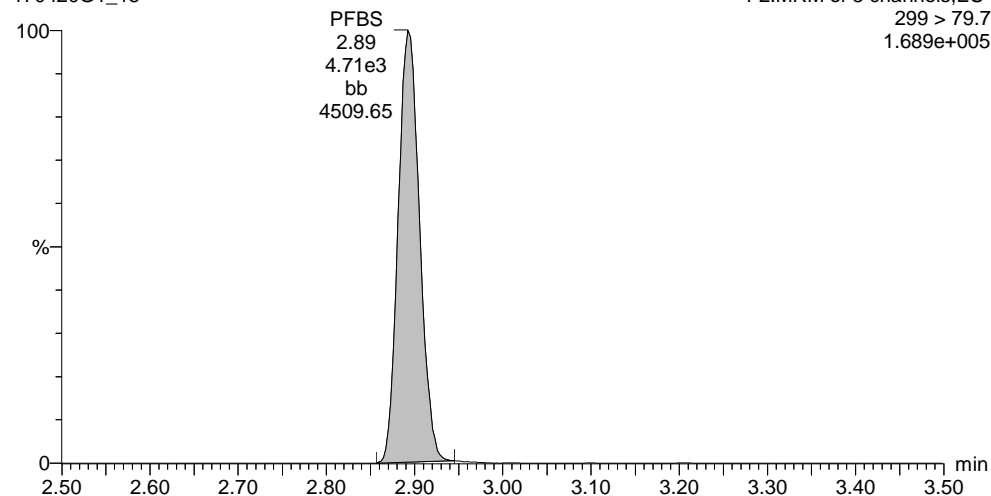
Method: U:\G1.PRO\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

Calibration: U:\G1.PRO\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

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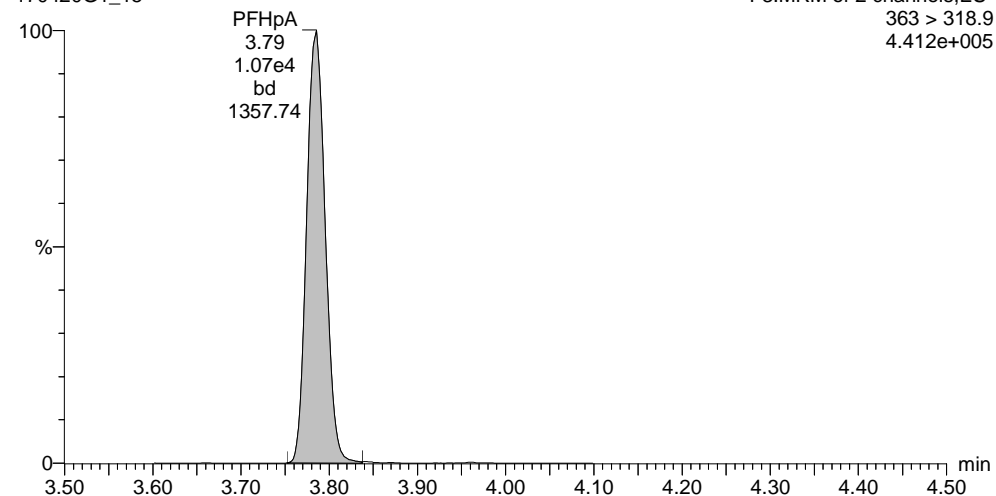
**PFBS**

170420G1\_15



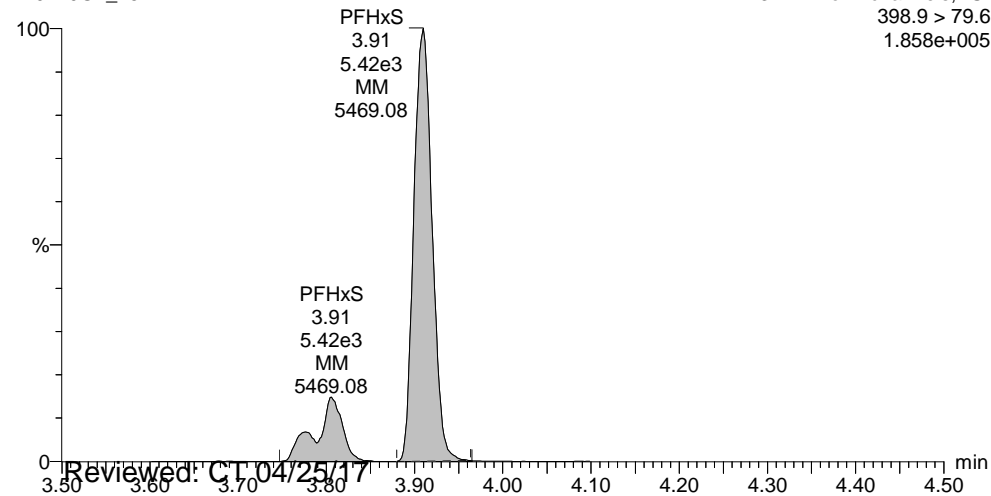
**PFHpA**

170420G1\_15



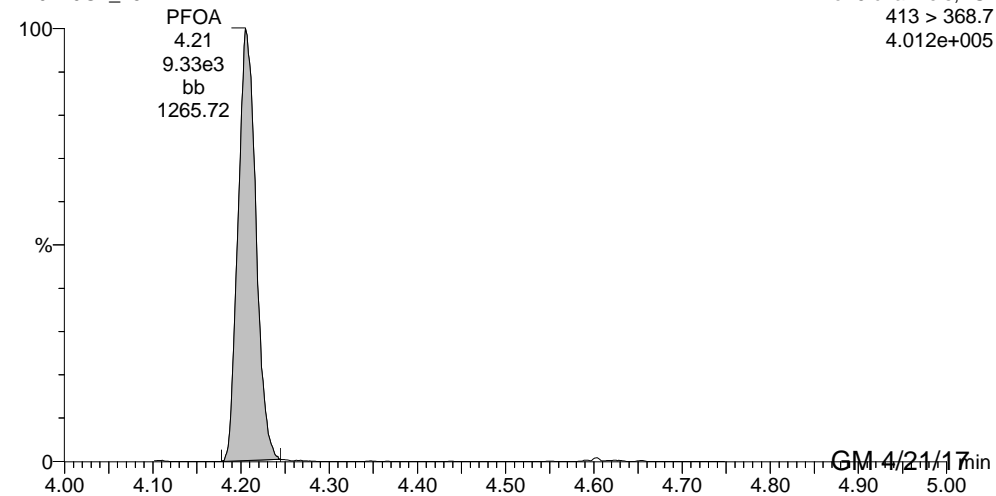
**PFHxS**

170420G1\_15



**PFOA**

170420G1\_15



Reviewed: C.T. 04/25/17

GM 4/21/17

Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-15.qld

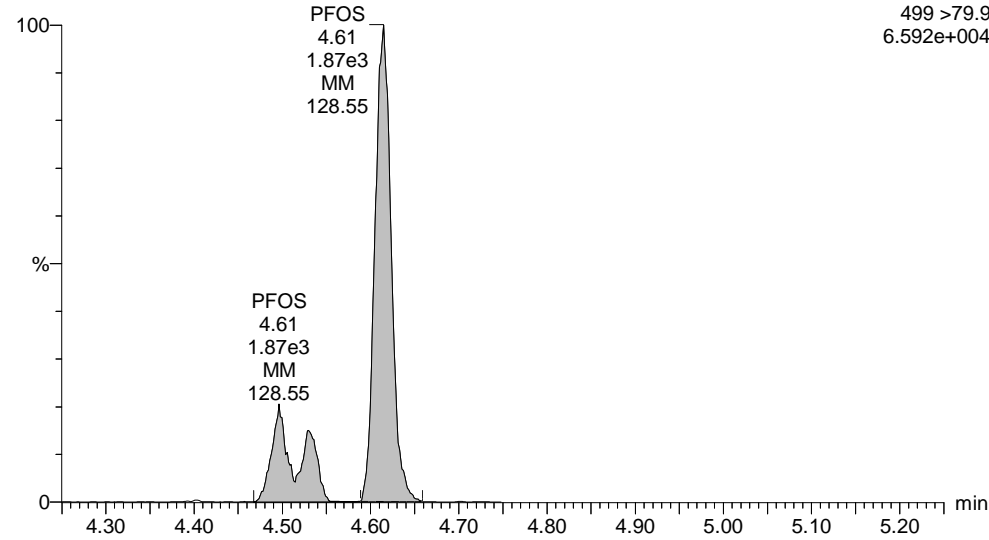
Last Altered: Friday, April 21, 2017 11:50:48 Pacific Daylight Time

Printed: Friday, April 21, 2017 11:53:06 Pacific Daylight Time

ID: B7D0096-BS1 LFB 0.25, Description: LFB, Name: 170420G1\_15, Date: 20-Apr-2017, Time: 19:41:16, Instrument: , Lab: , User:

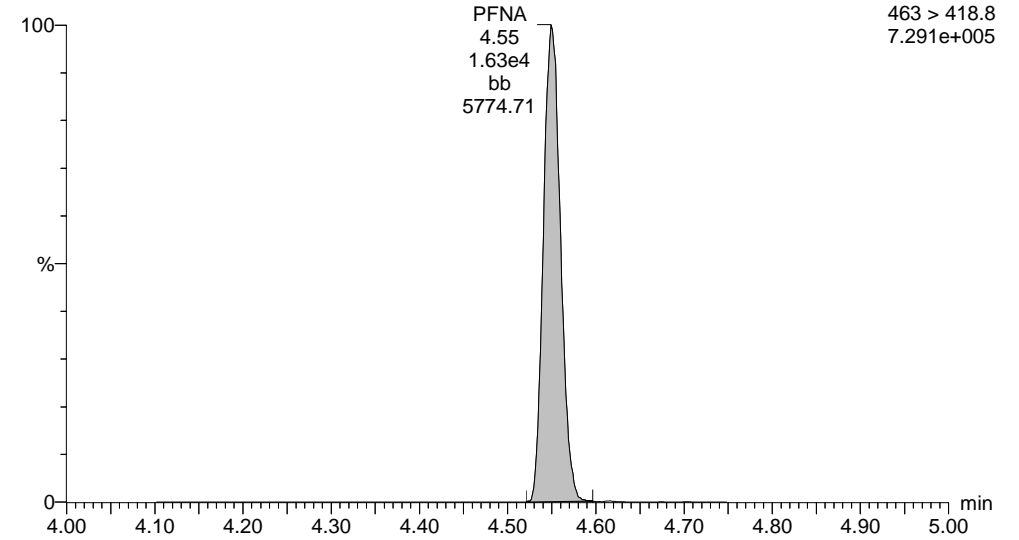
**PFOS**

170420G1\_15



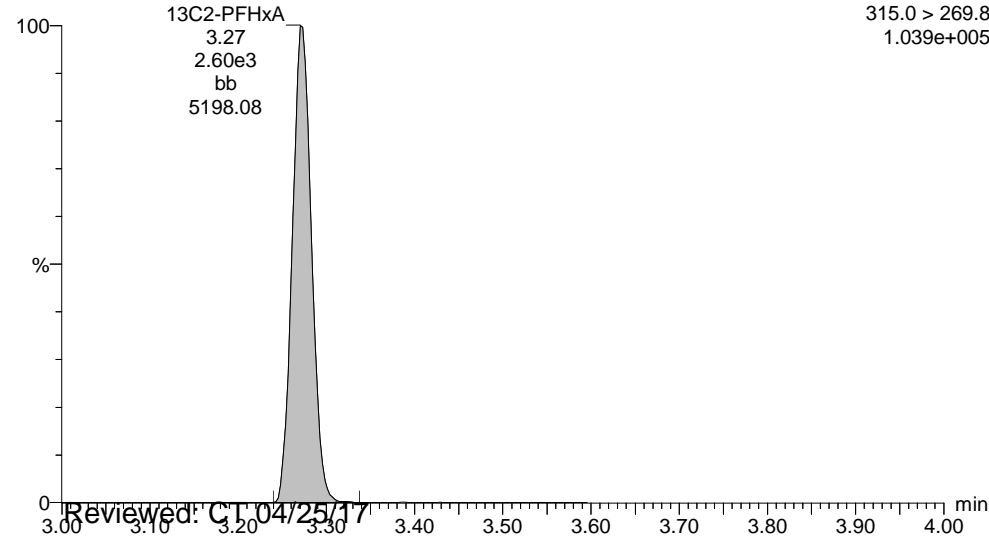
**PFNA**

170420G1\_15



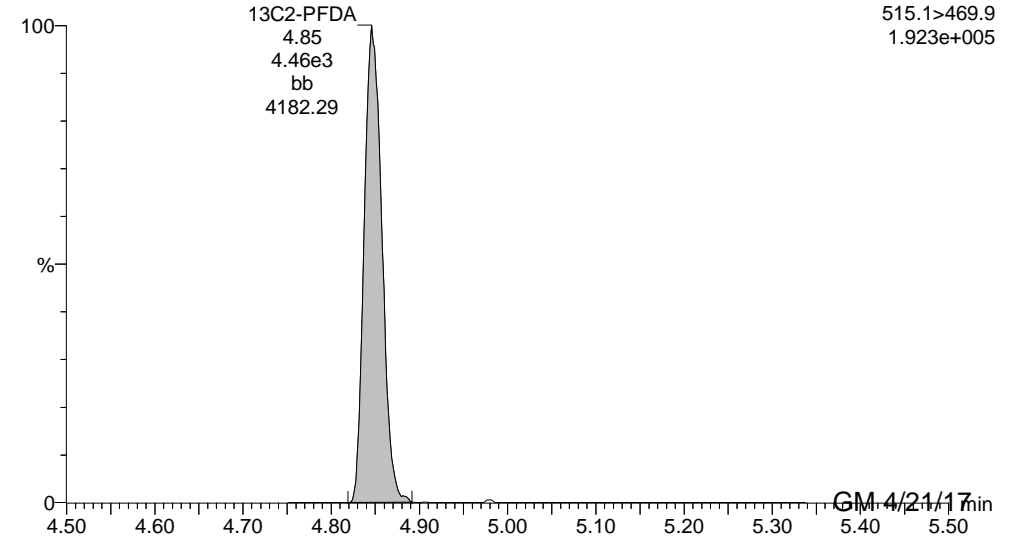
**13C2-PFHxA**

170420G1\_15



**13C2-PFDA**

170420G1\_15



Reviewed: C.T. 04/25/17

GM 4/21/17

Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-15.qld

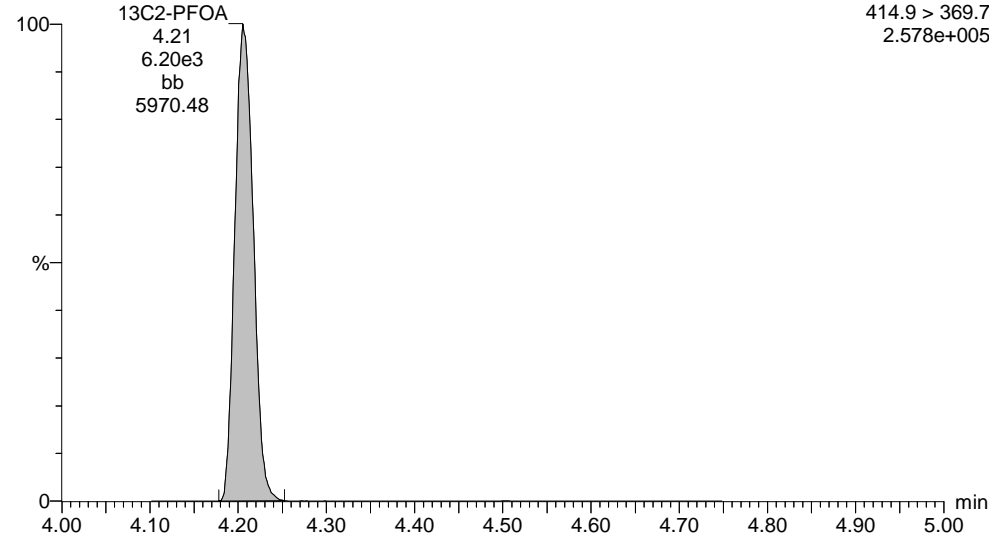
Last Altered: Friday, April 21, 2017 11:50:48 Pacific Daylight Time

Printed: Friday, April 21, 2017 11:53:06 Pacific Daylight Time

ID: B7D0096-BS1 LFB 0.25, Description: LFB, Name: 170420G1\_15, Date: 20-Apr-2017, Time: 19:41:16, Instrument: , Lab: , User:

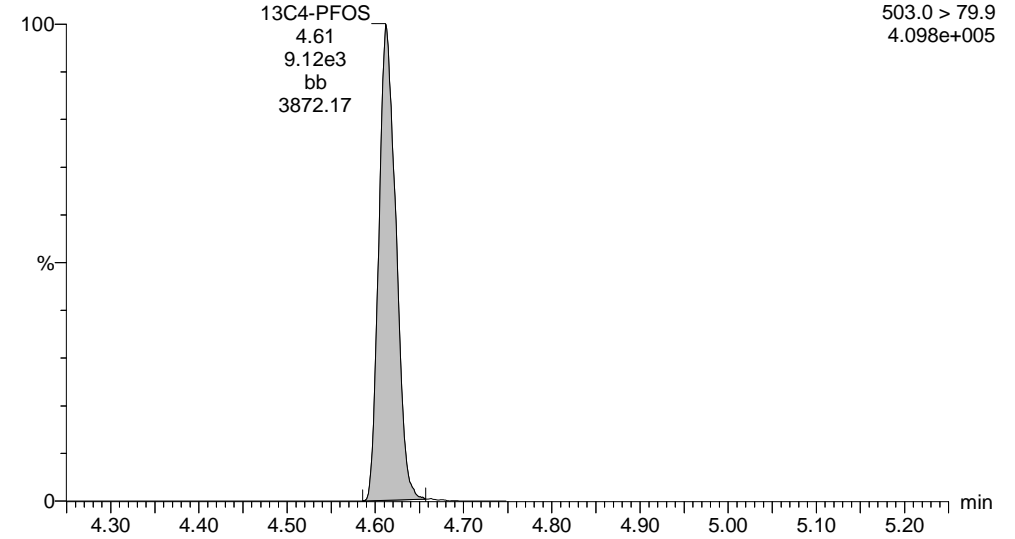
**13C2-PFOA**

170420G1\_15



**13C4-PFOS**

170420G1\_15



Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-18.qld

Last Altered: Friday, April 21, 2017 13:03:44 Pacific Daylight Time

Printed: Friday, April 21, 2017 13:03:53 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: 1700466-01 RW05-20170417 0.25, Description: RW05-20170417, Name: 170420G1\_18, Date: 20-Apr-2017, Time: 20:18:28

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1 PFBS	299 > 79.7	2.302e1	8.671e3		0.275	2.90	0.301	
2	2 PFHpA	363 > 318.9	6.318e1	6.160e3		0.275	3.79	0.416	
3	3 PFHxS	398.9 > 79.6	1.193e2	8.671e3		0.275	3.91	1.35	
4	4 PFOA	413 > 368.7	2.771e2	6.160e3		0.275	4.22	2.10	
5	5 PFOS	499 > 79.9		8.671e3		0.275			
6	6 PFNA	463 > 418.8		6.160e3		0.275			
7	7 13C2-PFHxA	315.0 > 269.8	2.487e3	6.160e3	0.449	0.275	3.27	32.8	90.0
8	8 13C2-PFDA	515.1 > 469.9	4.269e3	6.160e3	0.803	0.275	4.85	31.4	86.3
9	9 13C2-PFOA	414.9 > 369.7	6.160e3	6.160e3	1.000	0.275	4.21	36.4	100
10	10 13C4-PFOS	503.0 > 79.9	8.671e3	8.671e3	1.000	0.275	4.61	105	100



Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-18.qld

Last Altered: Friday, April 21, 2017 13:03:44 Pacific Daylight Time

Printed: Friday, April 21, 2017 13:03:53 Pacific Daylight Time

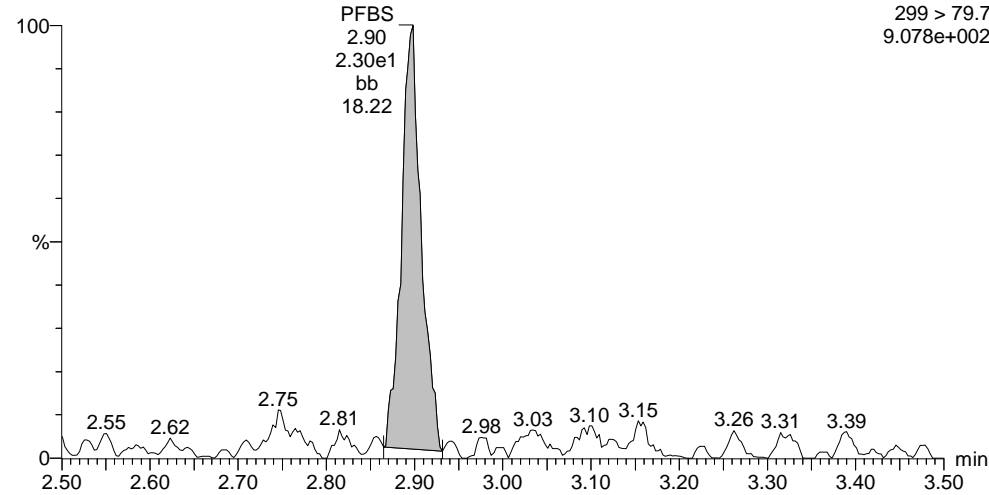
Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: 1700466-01 RW05-20170417 0.25, Description: RW05-20170417, Name: 170420G1\_18, Date: 20-Apr-2017, Time: 20:18:28, Instrument: , Lab: , User:

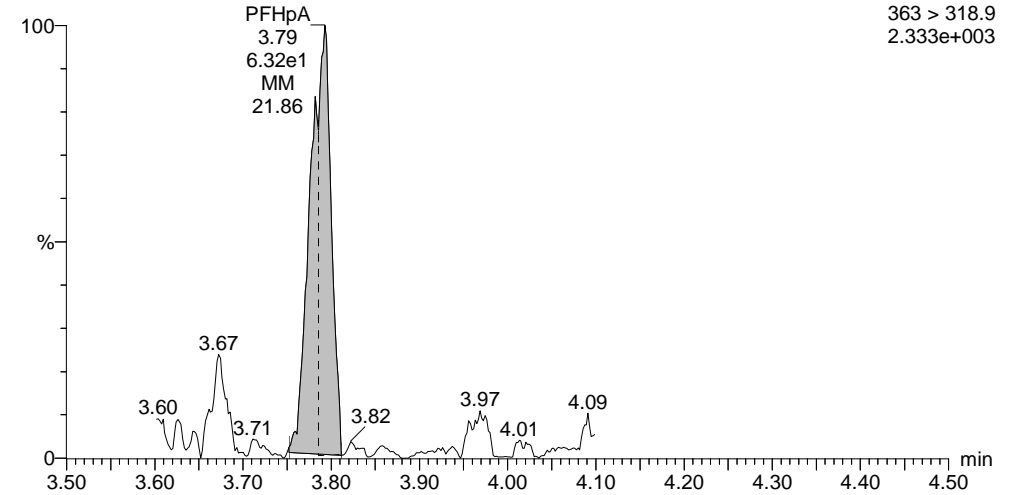
**PFBS**

170420G1\_18



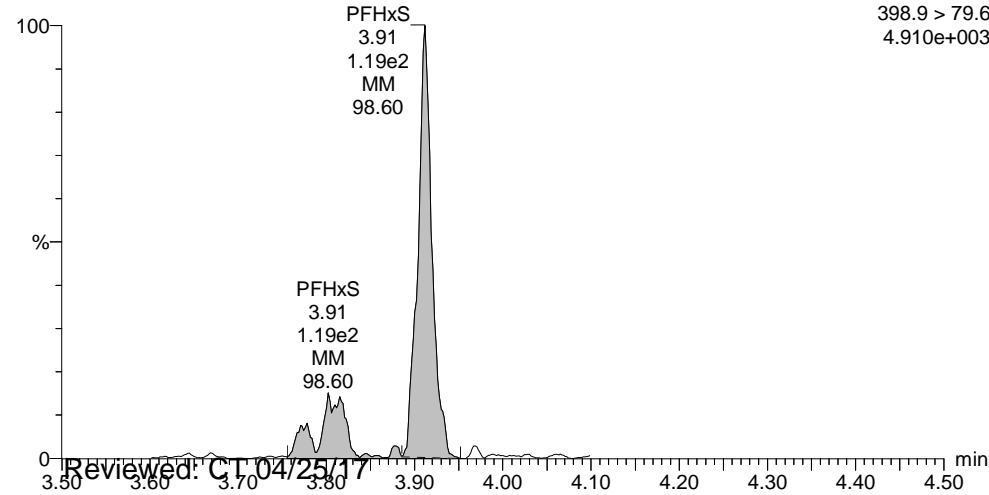
**PFHpA**

170420G1\_18



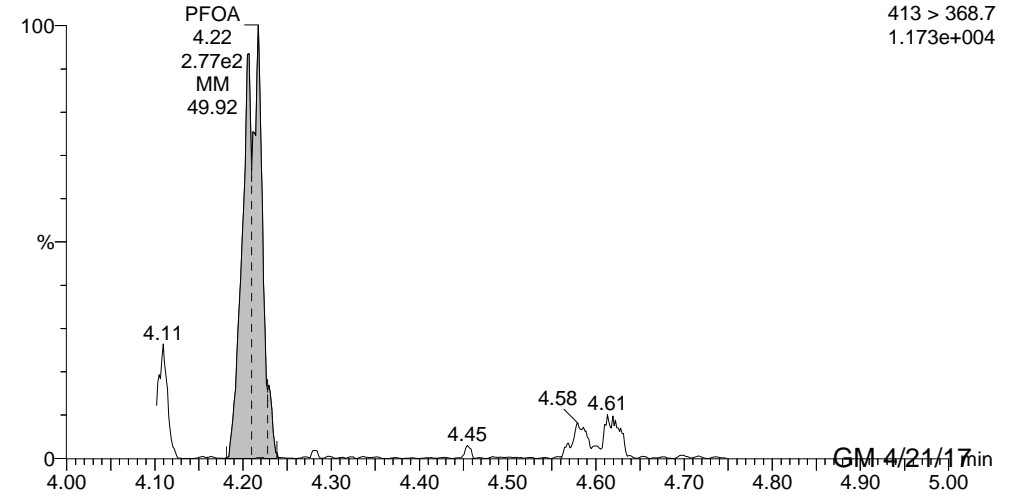
**PFHxS**

170420G1\_18



**PFOA**

170420G1\_18



Reviewed: C1 04/25/17

GM 4/21/17

Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-18.qld

Last Altered: Friday, April 21, 2017 13:03:44 Pacific Daylight Time

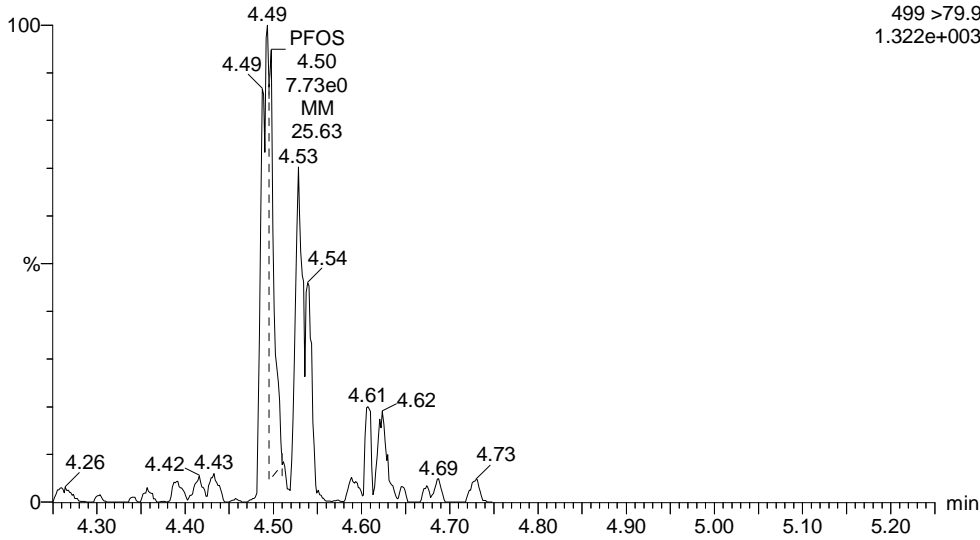
Printed: Friday, April 21, 2017 13:03:53 Pacific Daylight Time

ID: 1700466-01 RW05-20170417 0.25, Description: RW05-20170417, Name: 170420G1\_18, Date: 20-Apr-2017, Time: 20:18:28, Instrument: , Lab: , User:

**PFOS**

170420G1\_18

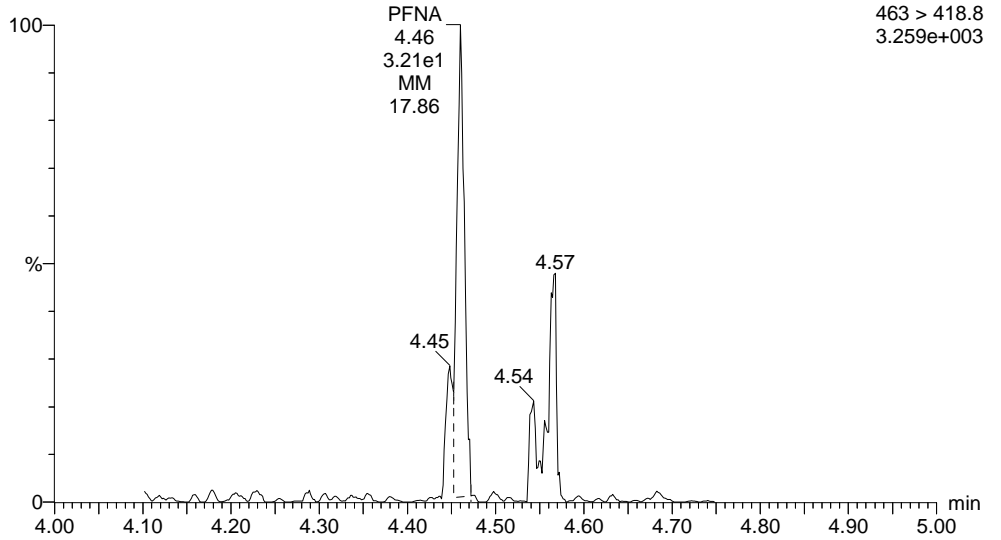
F4:MRM of 6 channels,ES-  
499 >79.9  
1.322e+003



**PFNA**

170420G1\_18

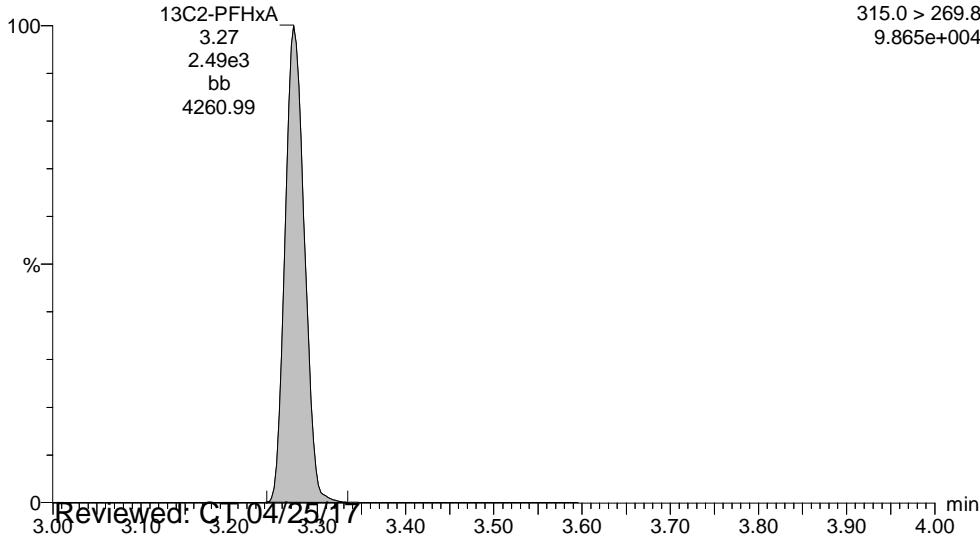
F4:MRM of 6 channels,ES-  
463 > 418.8  
3.259e+003



**13C2-PFHxA**

170420G1\_18

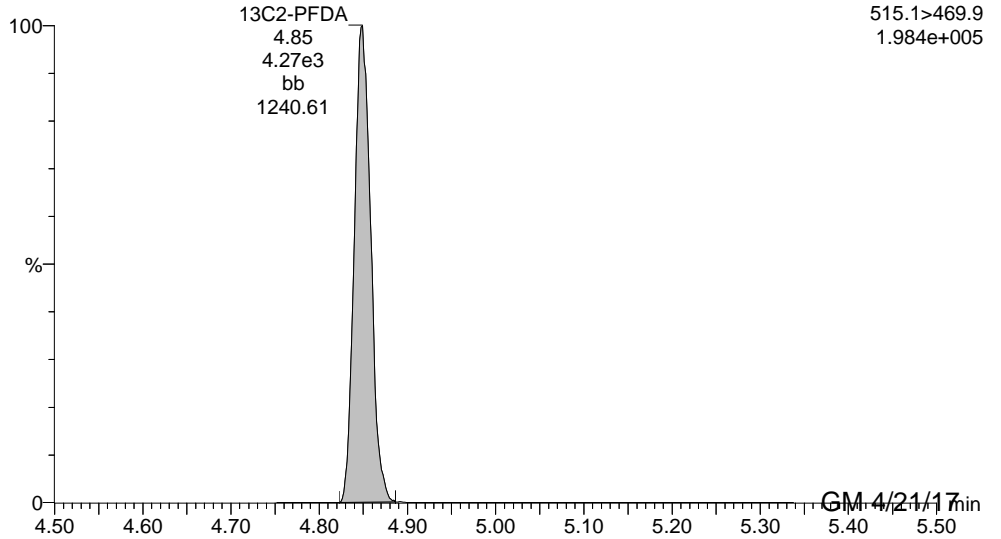
F2:MRM of 3 channels,ES-  
315.0 > 269.8  
9.865e+004



**13C2-PFDA**

170420G1\_18

F5:MRM of 7 channels,ES-  
515.1 >469.9  
1.984e+005



Reviewed: C.T. 04/25/17

GM 4/21/17

Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-18.qld

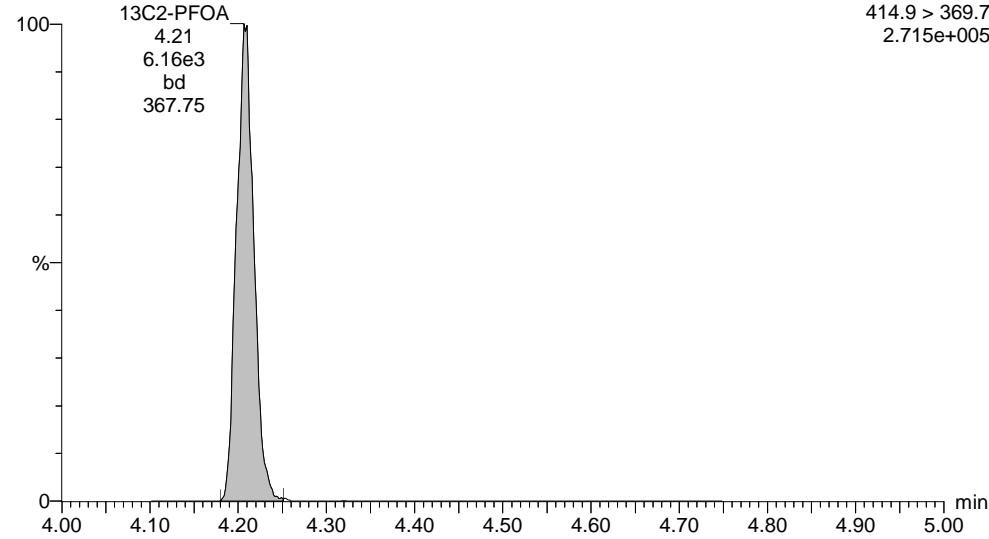
Last Altered: Friday, April 21, 2017 13:03:44 Pacific Daylight Time

Printed: Friday, April 21, 2017 13:03:53 Pacific Daylight Time

ID: 1700466-01 RW05-20170417 0.25, Description: RW05-20170417, Name: 170420G1\_18, Date: 20-Apr-2017, Time: 20:18:28, Instrument: , Lab: , User:

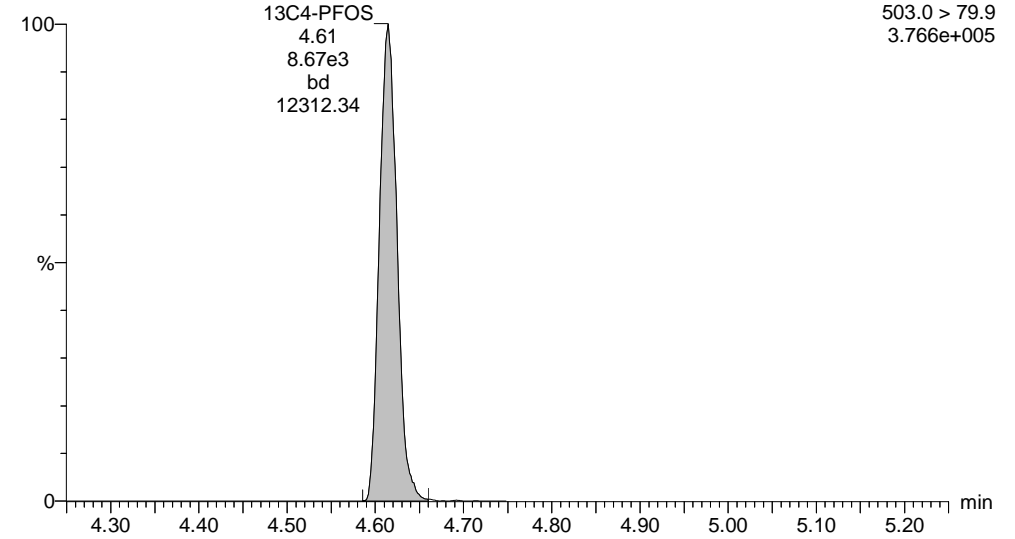
**13C2-PFOA**

170420G1\_18



**13C4-PFOS**

170420G1\_18



Dataset: U:\G1.PRO\Results\2017\170421G3\170421G3-19.qld

Last Altered: Monday, April 24, 2017 11:06:14 Pacific Daylight Time

Printed: Monday, April 24, 2017 11:08:37 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: 1700466-01 RW05-20170417 0.25, Description: RW05-20170417, Name: 170421G3\_19, Date: 21-Apr-2017, Time: 21:31:50

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	4 PFOA	413 > 368.7	4.428e2	6.890e3		0.275	4.22	3.00	
2	7 13C2-PFHxA	315.0 > 269.8	2.732e3	6.890e3	0.449	0.275	3.30	32.2	88.4
3	8 13C2-PFDA	515.1>469.9	4.614e3	6.890e3	0.803	0.275	4.85	30.4	83.4
4	9 13C2-PFOA	414.9 > 369.7	6.890e3	6.890e3	1.000	0.275	4.22	36.4	100

Dataset: U:\G1.PRO\Results\2017\170421G3\170421G3-19.qld

Last Altered: Monday, April 24, 2017 11:06:14 Pacific Daylight Time

Printed: Monday, April 24, 2017 11:08:37 Pacific Daylight Time

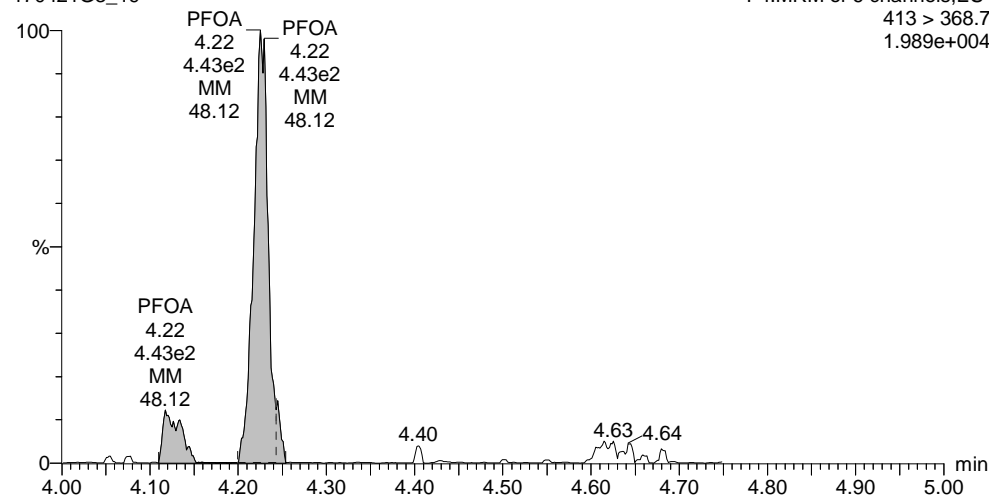
Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: 1700466-01 RW05-20170417 0.25, Description: RW05-20170417, Name: 170421G3\_19, Date: 21-Apr-2017, Time: 21:31:50, Instrument: , Lab: , User:

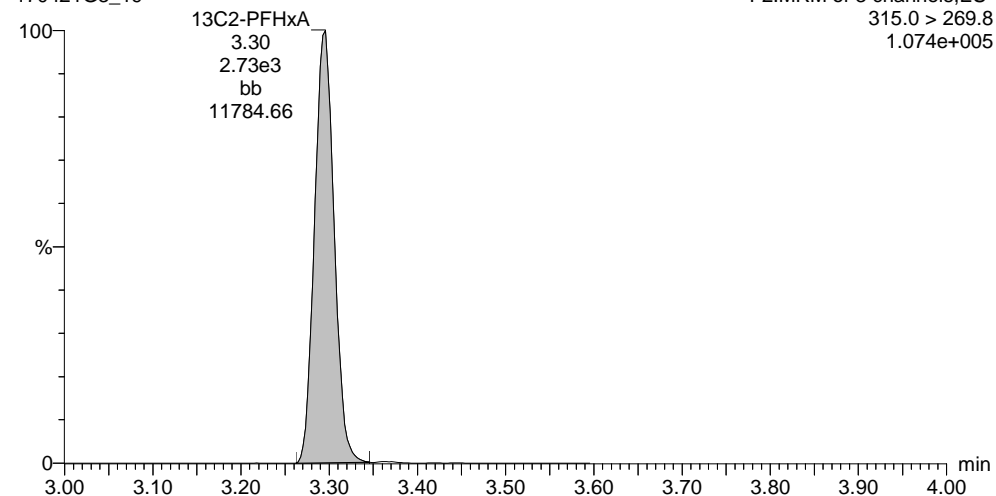
**PFOA**

170421G3\_19



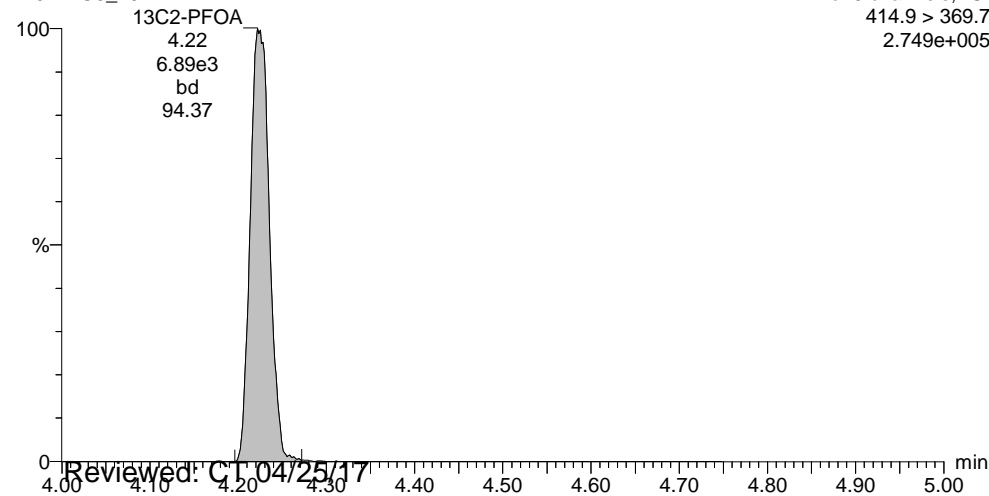
**13C2-PFHxA**

170421G3\_19



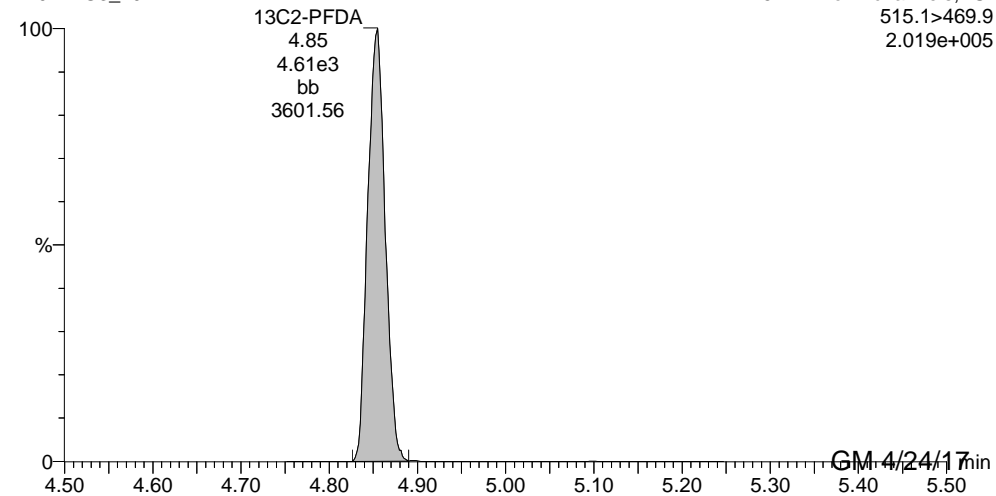
**13C2-PFOA**

170421G3\_19



**13C2-PFDA**

170421G3\_19



Reviewed: C:\04/25/17

GM 4/24/17

Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-19.qld

Last Altered: Friday, April 21, 2017 13:05:27 Pacific Daylight Time

Printed: Friday, April 21, 2017 13:06:02 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: 1700466-02 FRB-05-20170417 0.25, Description: FRB-05-20170417, Name: 170420G1\_19, Date: 20-Apr-2017, Time: 20:30:54

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1 PFBS	299 > 79.7		9.438e3		0.288			
2	2 PFHpA	363 > 318.9		6.322e3		0.288			
3	3 PFHxS	398.9 > 79.6		9.438e3		0.288			
4	4 PFOA	413 > 368.7	2.084e1	6.322e3		0.288	4.21	0.147	
5	5 PFOS	499 > 79.9		9.438e3		0.288			
6	6 PFNA	463 > 418.8		6.322e3		0.288			
7	7 13C2-PFHxA	315.0 > 269.8	2.637e3	6.322e3	0.449	0.288	3.27	32.3	93.0
8	8 13C2-PFDA	515.1 > 469.9	4.468e3	6.322e3	0.803	0.288	4.84	30.6	88.0
9	9 13C2-PFOA	414.9 > 369.7	6.322e3	6.322e3	1.000	0.288	4.21	34.7	100
10	10 13C4-PFOS	503.0 > 79.9	9.438e3	9.438e3	1.000	0.288	4.61	99.6	100

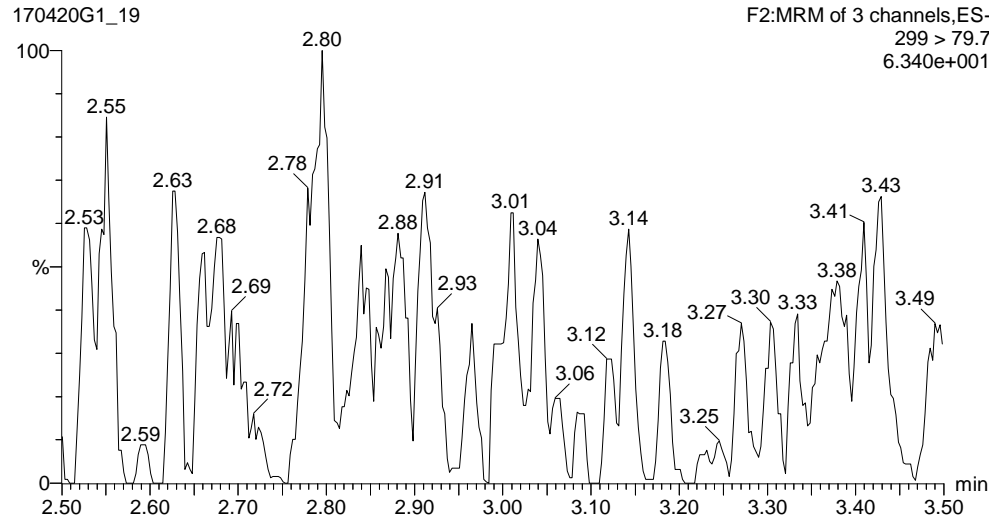
Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-19.qld

Last Altered: Friday, April 21, 2017 13:05:27 Pacific Daylight Time  
Printed: Friday, April 21, 2017 13:06:02 Pacific Daylight Time

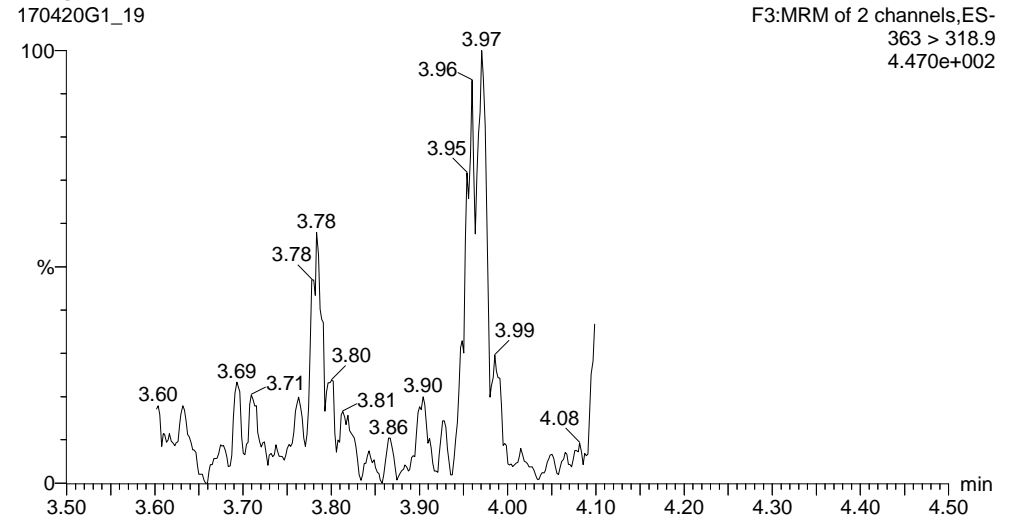
Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59  
Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: 1700466-02 FRB-05-20170417 0.25, Description: FRB-05-20170417, Name: 170420G1\_19, Date: 20-Apr-2017, Time: 20:30:54, Instrument: , Lab: , User:

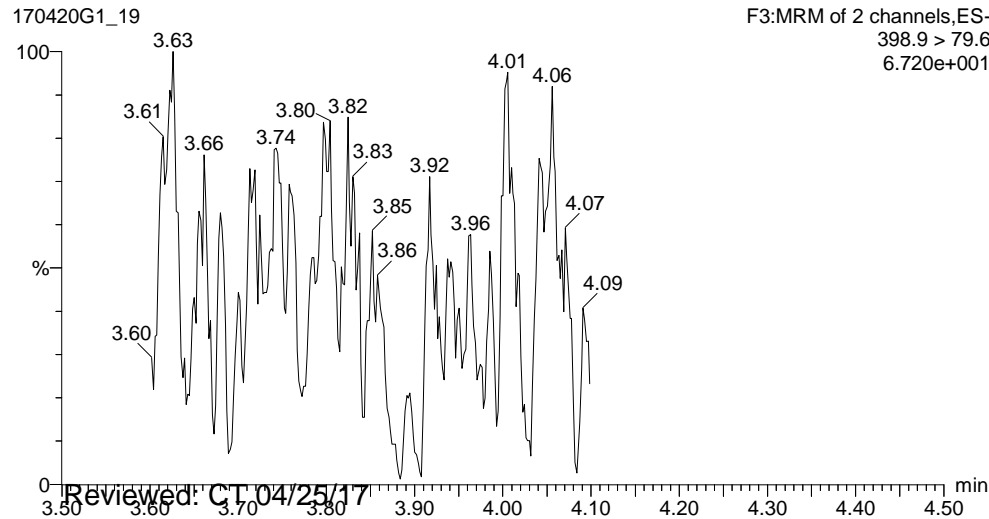
PFBS



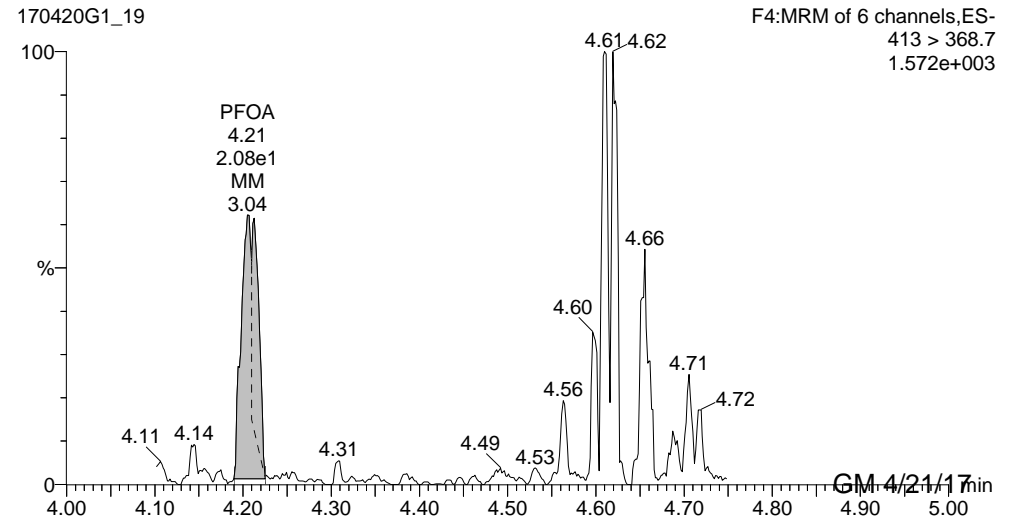
PFHpA



PFHxS



PFOA



Reviewed: CT 04/25/17

GM 4/21/17

Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-19.qld

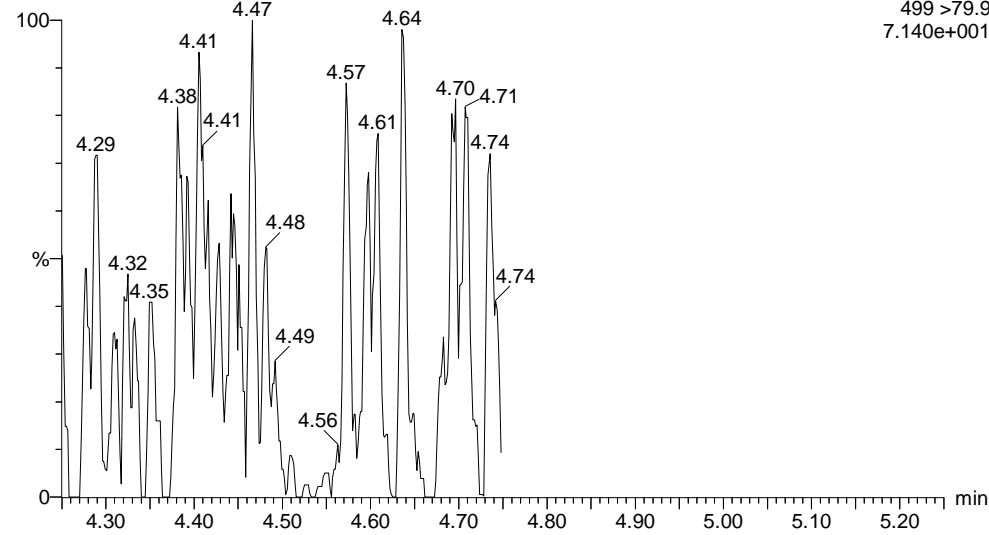
Last Altered: Friday, April 21, 2017 13:05:27 Pacific Daylight Time

Printed: Friday, April 21, 2017 13:06:02 Pacific Daylight Time

ID: 1700466-02 FRB-05-20170417 0.25, Description: FRB-05-20170417, Name: 170420G1\_19, Date: 20-Apr-2017, Time: 20:30:54, Instrument: , Lab: , User:

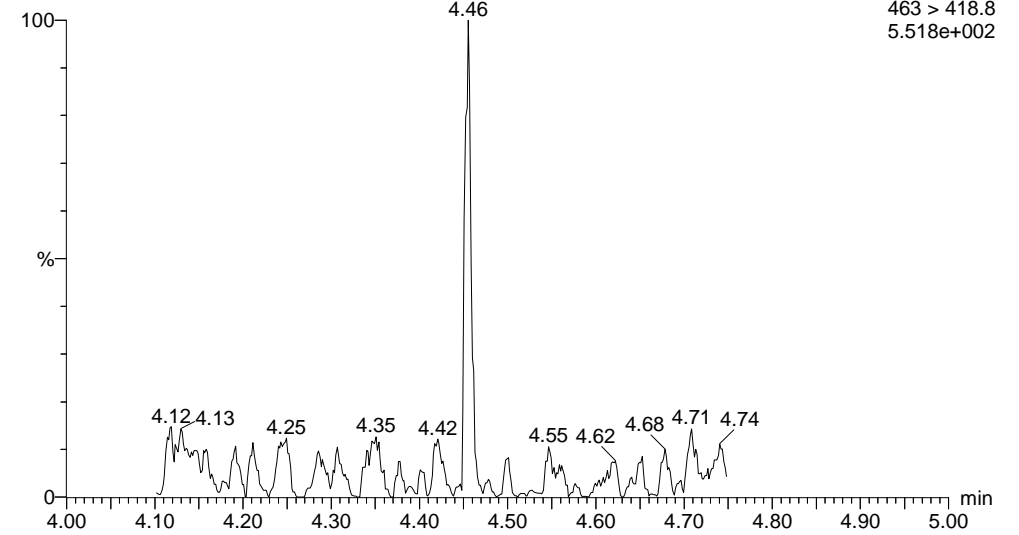
**PFOS**

170420G1\_19



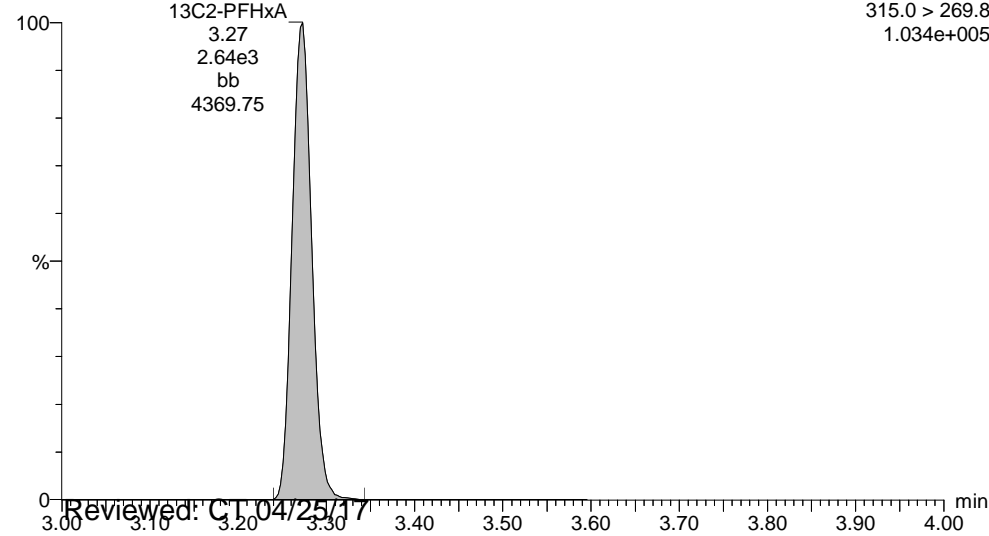
**PFNA**

170420G1\_19



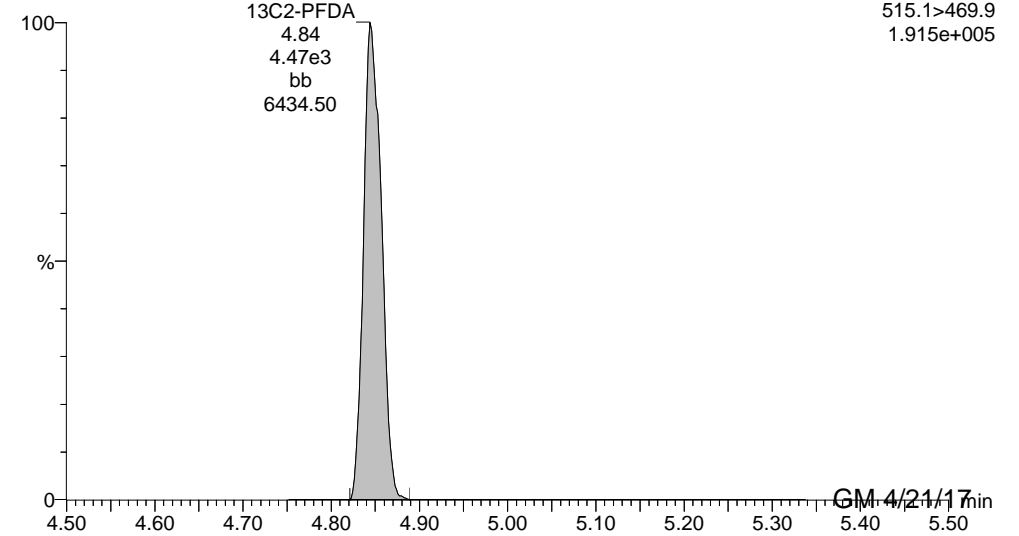
**13C2-PFHxA**

170420G1\_19



**13C2-PFDA**

170420G1\_19



Reviewed: C.T. 04/25/17

GM 4/21/17



Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-19.qld

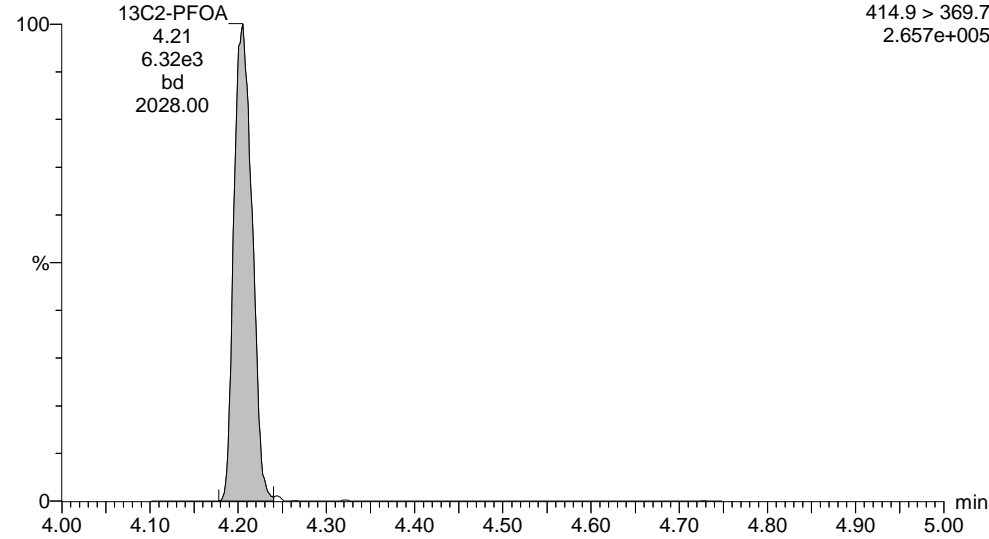
Last Altered: Friday, April 21, 2017 13:05:27 Pacific Daylight Time

Printed: Friday, April 21, 2017 13:06:02 Pacific Daylight Time

ID: 1700466-02 FRB-05-20170417 0.25, Description: FRB-05-20170417, Name: 170420G1\_19, Date: 20-Apr-2017, Time: 20:30:54, Instrument: , Lab: , User:

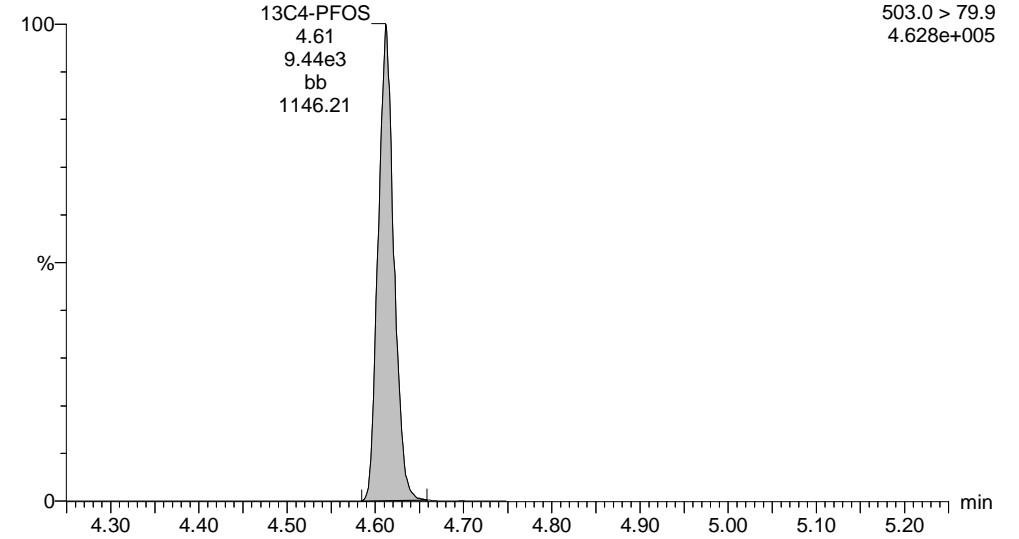
**13C2-PFOA**

170420G1\_19



**13C4-PFOS**

170420G1\_19



Dataset: U:\G1.PRO\Results\2017\170421G3\170421G3-20.qld

Last Altered: Monday, April 24, 2017 11:14:38 Pacific Daylight Time

Printed: Monday, April 24, 2017 11:15:12 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: 1700466-02 FRB-05-20170417 0.25, Description: FRB-05-20170417, Name: 170421G3\_20, Date: 21-Apr-2017, Time: 21:44:13

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	4 PFOA	413 > 368.7	4.405e1	7.559e3		0.288	4.23	0.259	
2	7 13C2-PFHxA	315.0 > 269.8	3.007e3	7.559e3	0.449	0.288	3.30	30.8	88.7
3	8 13C2-PFDA	515.1>469.9	4.879e3	7.559e3	0.803	0.288	4.86	27.9	80.4
4	9 13C2-PFOA	414.9 > 369.7	7.559e3	7.559e3	1.000	0.288	4.23	34.7	100

Dataset: U:\G1.PRO\Results\2017\170421G3\170421G3-20.qld

Last Altered: Monday, April 24, 2017 11:14:38 Pacific Daylight Time

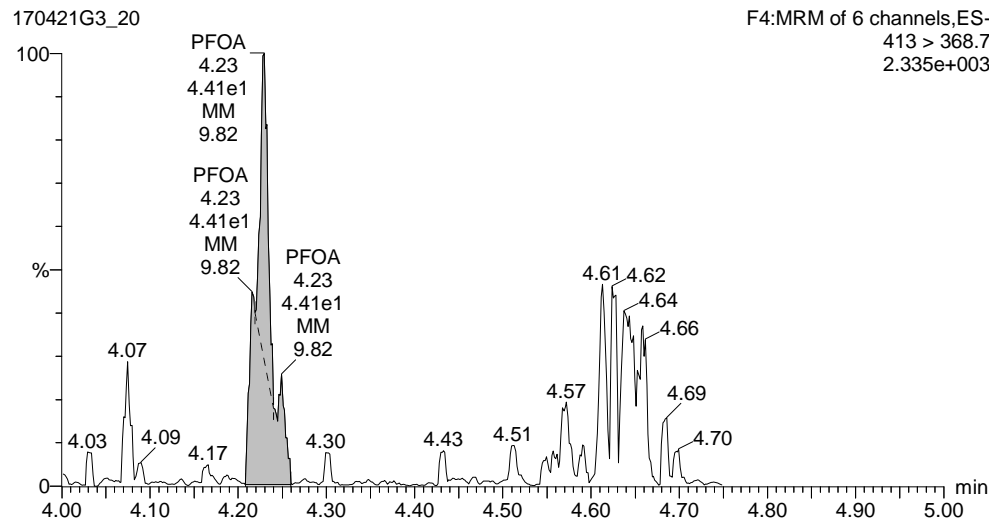
Printed: Monday, April 24, 2017 11:15:12 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

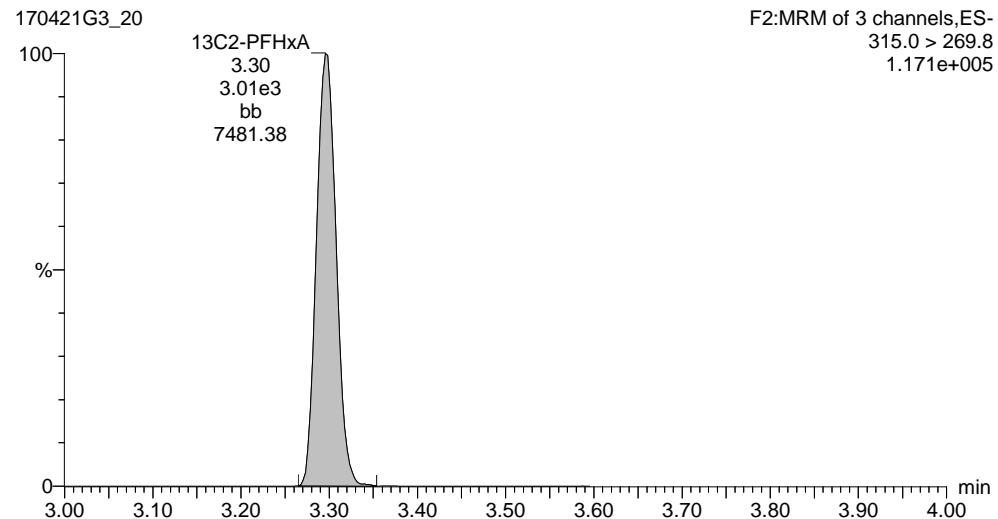
Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: 1700466-02 FRB-05-20170417 0.25, Description: FRB-05-20170417, Name: 170421G3\_20, Date: 21-Apr-2017, Time: 21:44:13, Instrument: , Lab: , User:

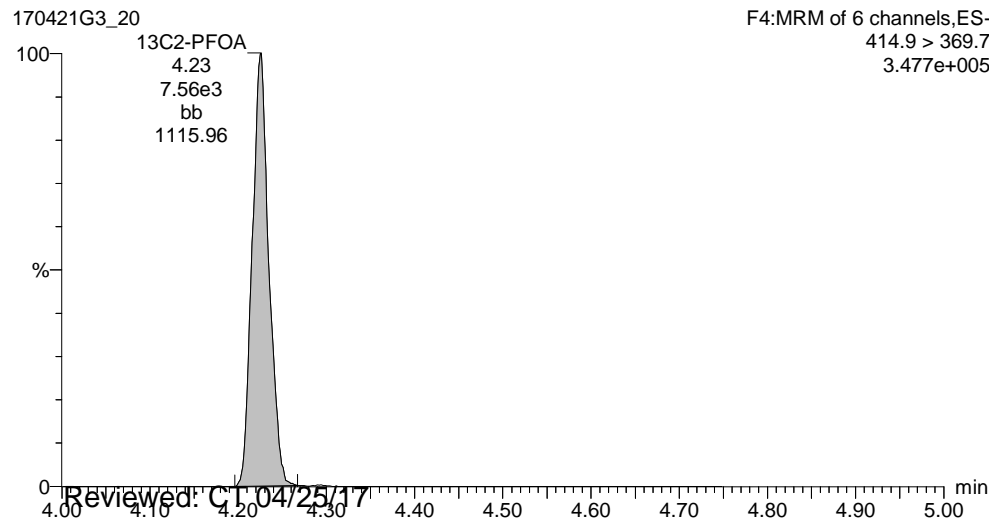
**PFOA**



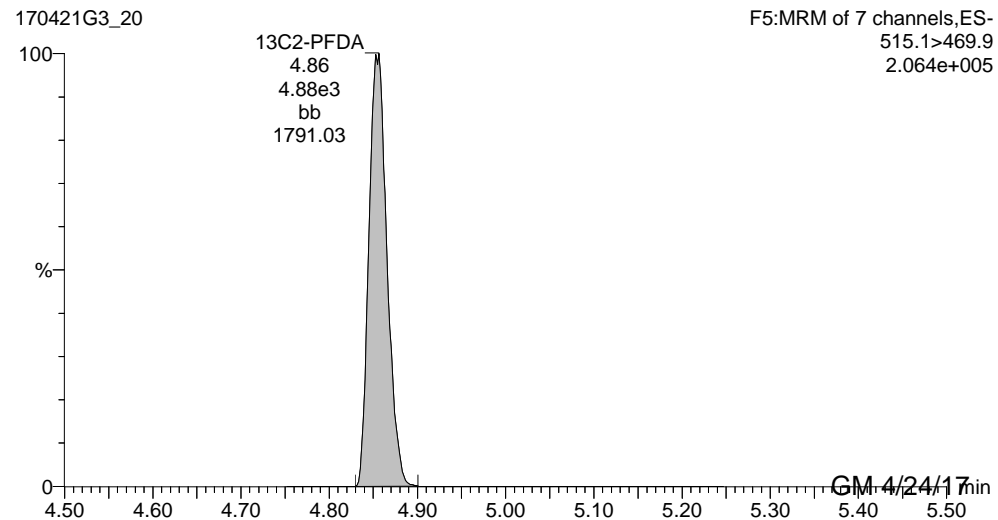
**13C2-PFHxA**



**13C2-PFOA**



**13C2-PFDA**



Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-20.qld

Last Altered: Friday, April 21, 2017 13:09:06 Pacific Daylight Time

Printed: Friday, April 21, 2017 13:09:32 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: 1700466-03 RW10-20170417 0.25, Description: RW10-20170417, Name: 170420G1\_20, Date: 20-Apr-2017, Time: 20:43:19

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1 PFBS	299 > 79.7	5.765e1	8.569e3		0.276	2.90	0.760	
2	2 PFHpA	363 > 318.9	1.949e2	5.981e3		0.276	3.78	1.32	
3	3 PFHxS	398.9 > 79.6	1.019e2	8.569e3		0.276	3.91	1.16	
4	4 PFOA	413 > 368.7	1.053e3	5.981e3		0.276	4.20	8.20	
5	5 PFOS	499 > 79.9	1.856e2	8.569e3		0.276	4.61	6.46	
6	6 PFNA	463 > 418.8	1.323e2	5.981e3		0.276	4.55	0.588	
7	7 13C2-PFHxA	315.0 > 269.8	2.438e3	5.981e3	0.449	0.276	3.27	32.9	90.9
8	8 13C2-PFDA	515.1 > 469.9	4.254e3	5.981e3	0.803	0.276	4.85	32.1	88.6
9	9 13C2-PFOA	414.9 > 369.7	5.981e3	5.981e3	1.000	0.276	4.20	36.3	100
10	10 13C4-PFOS	503.0 > 79.9	8.569e3	8.569e3	1.000	0.276	4.61	104	100

Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-20.qld

Last Altered: Friday, April 21, 2017 13:09:06 Pacific Daylight Time

Printed: Friday, April 21, 2017 13:09:32 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

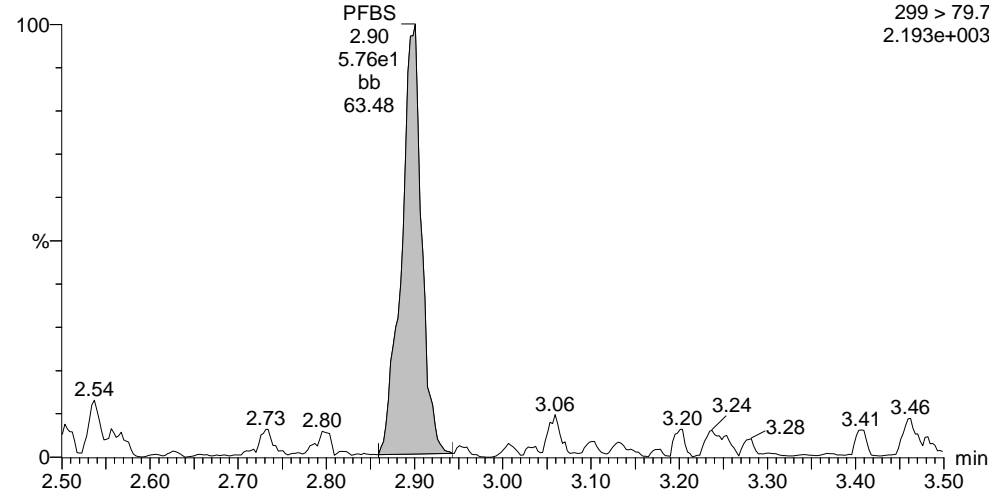
Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: 1700466-03 RW10-20170417 0.25, Description: RW10-20170417, Name: 170420G1\_20, Date: 20-Apr-2017, Time: 20:43:19, Instrument: , Lab: , User:

**PFBS**

170420G1\_20

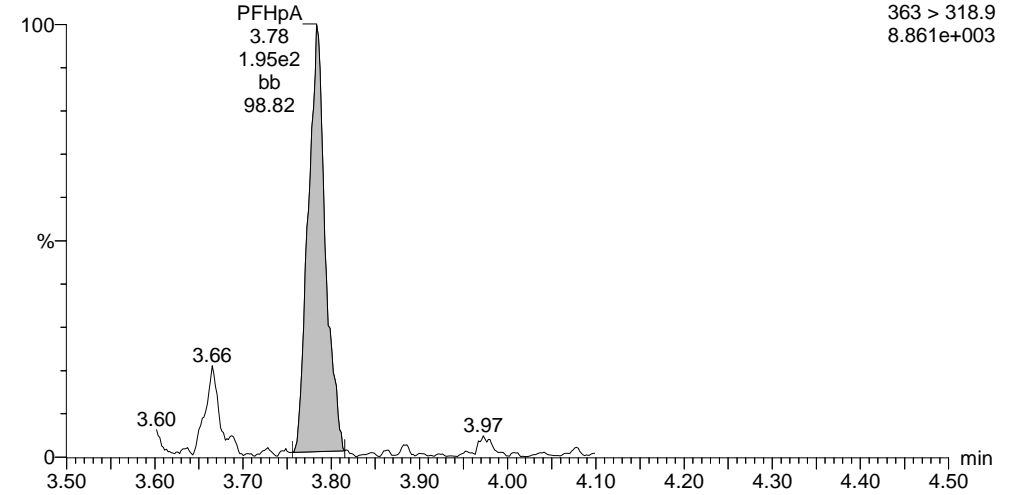
F2:MRM of 3 channels,ES-  
299 > 79.7  
2.193e+003



**PFHpA**

170420G1\_20

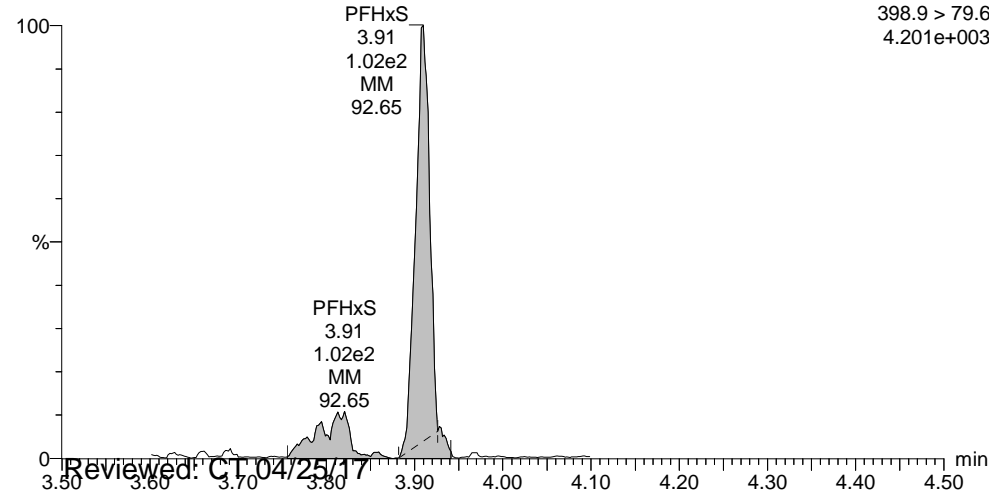
F3:MRM of 2 channels,ES-  
363 > 318.9  
8.861e+003



**PFHxS**

170420G1\_20

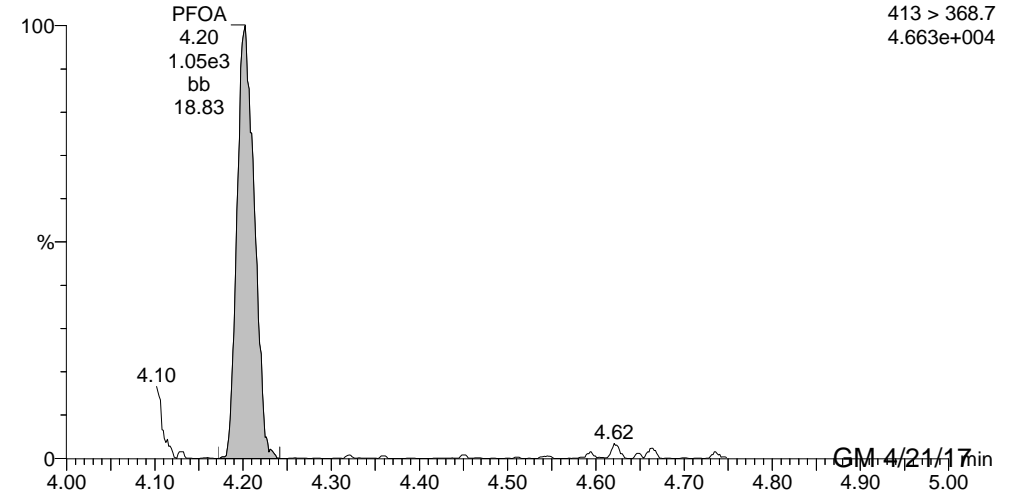
F3:MRM of 2 channels,ES-  
398.9 > 79.6  
4.201e+003



**PFOA**

170420G1\_20

F4:MRM of 6 channels,ES-  
413 > 368.7  
4.663e+004



Reviewed: C1 04/25/17

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Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-20.qld

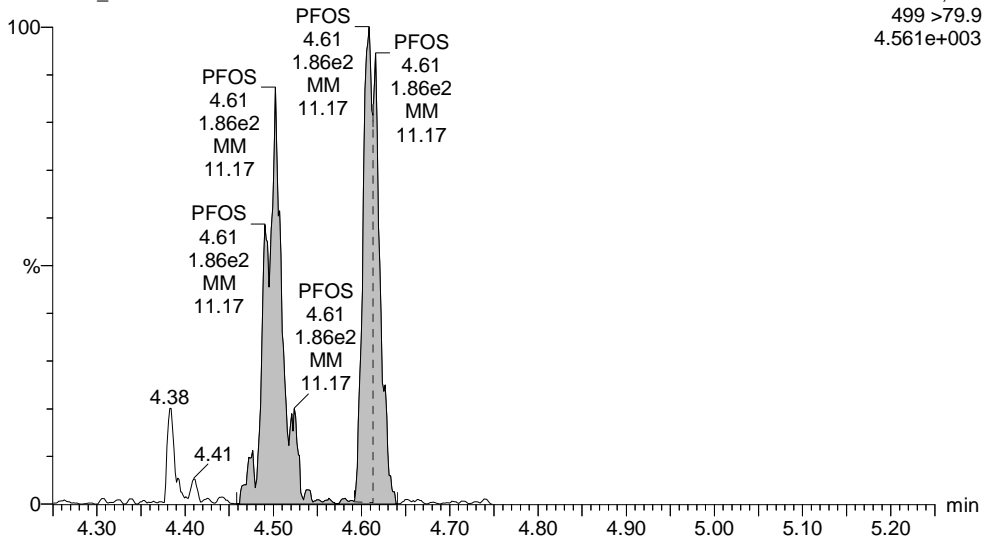
Last Altered: Friday, April 21, 2017 13:09:06 Pacific Daylight Time

Printed: Friday, April 21, 2017 13:09:32 Pacific Daylight Time

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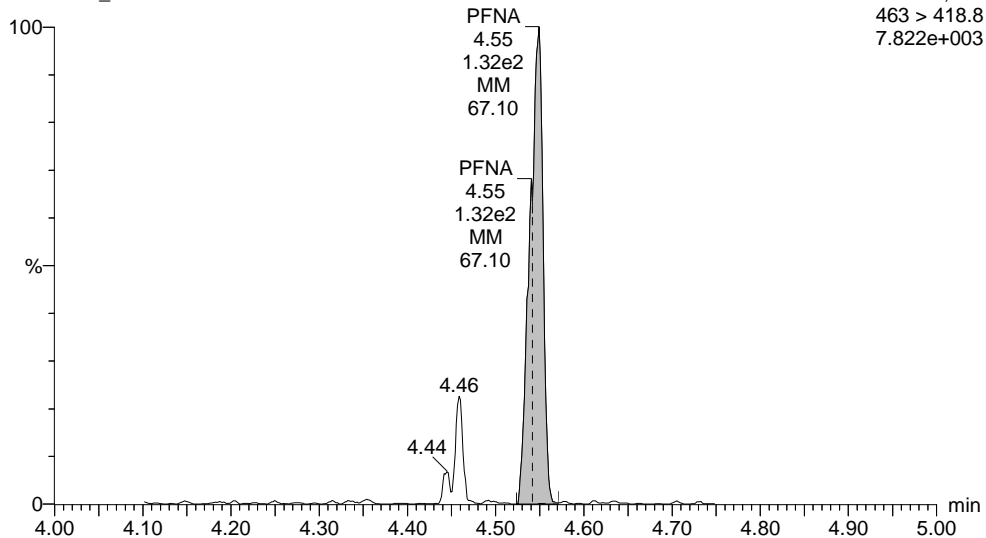
**PFOS**

170420G1\_20



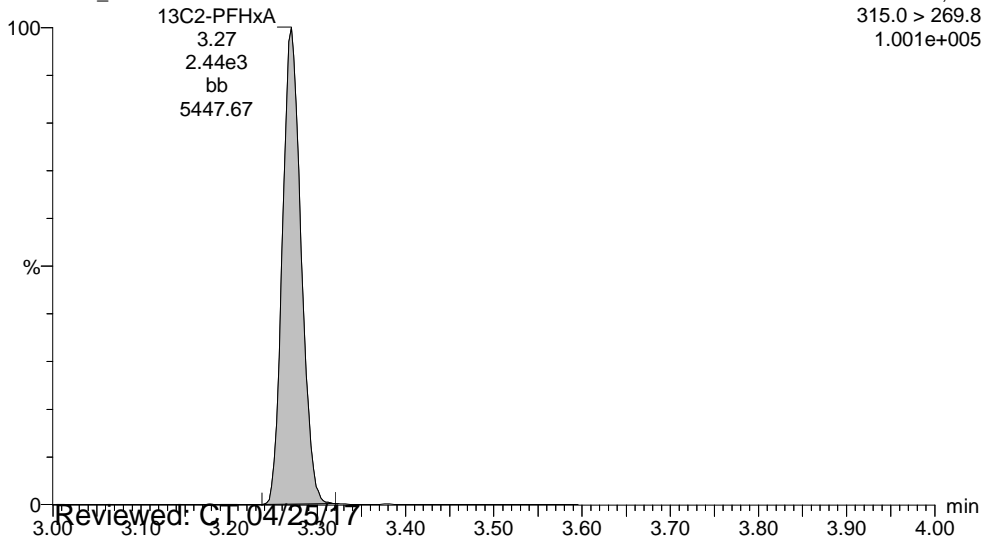
**PFNA**

170420G1\_20



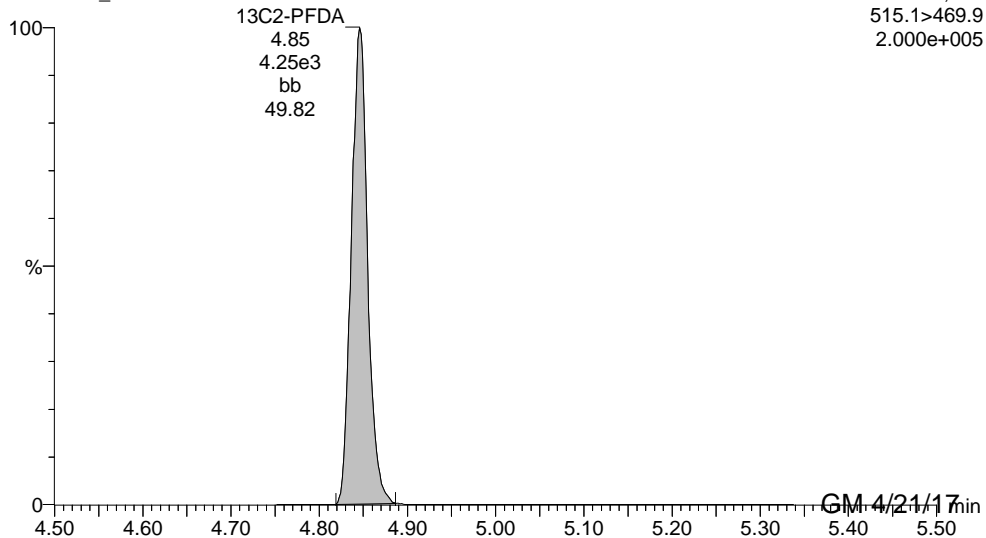
**13C2-PFHxA**

170420G1\_20



**13C2-PFDA**

170420G1\_20



Reviewed: C:\04\25\17

GM 4/21/17

Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-20.qld

Last Altered: Friday, April 21, 2017 13:09:06 Pacific Daylight Time

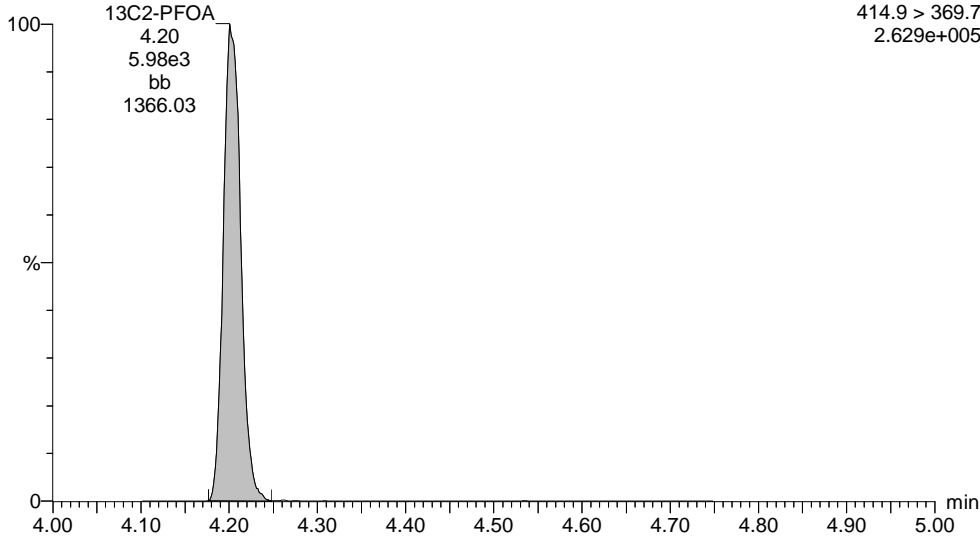
Printed: Friday, April 21, 2017 13:09:32 Pacific Daylight Time

ID: 1700466-03 RW10-20170417 0.25, Description: RW10-20170417, Name: 170420G1\_20, Date: 20-Apr-2017, Time: 20:43:19, Instrument: , Lab: , User:

**13C2-PFOA**

170420G1\_20

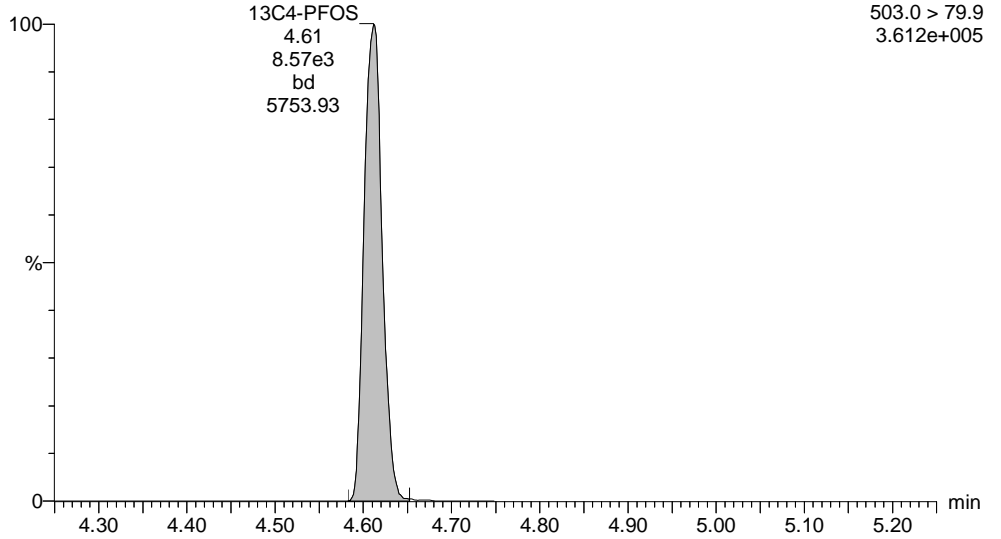
F4:MRM of 6 channels,ES-  
414.9 > 369.7  
2.629e+005



**13C4-PFOS**

170420G1\_20

F4:MRM of 6 channels,ES-  
503.0 > 79.9  
3.612e+005



Dataset: U:\G1.PRO\Results\2017\170421G3\170421G3-21.qld

Last Altered: Monday, April 24, 2017 11:17:57 Pacific Daylight Time

Printed: Monday, April 24, 2017 11:18:30 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: 1700466-03 RW10-20170417 0.25, Description: RW10-20170417, Name: 170421G3\_21, Date: 21-Apr-2017, Time: 21:56:35

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	4 PFOA	413 > 368.7	1.229e3	7.267e3		0.276	4.22	7.88	
2	7 13C2-PFHxA	315.0 > 269.8	2.764e3	7.267e3	0.449	0.276	3.30	30.7	84.8
3	8 13C2-PFDA	515.1>469.9	4.273e3	7.267e3	0.803	0.276	4.85	26.6	73.2
4	9 13C2-PFOA	414.9 > 369.7	7.267e3	7.267e3	1.000	0.276	4.22	36.3	100



Dataset: U:\G1.PRO\Results\2017\170421G3\170421G3-21.qld

Last Altered: Monday, April 24, 2017 11:17:57 Pacific Daylight Time

Printed: Monday, April 24, 2017 11:18:30 Pacific Daylight Time

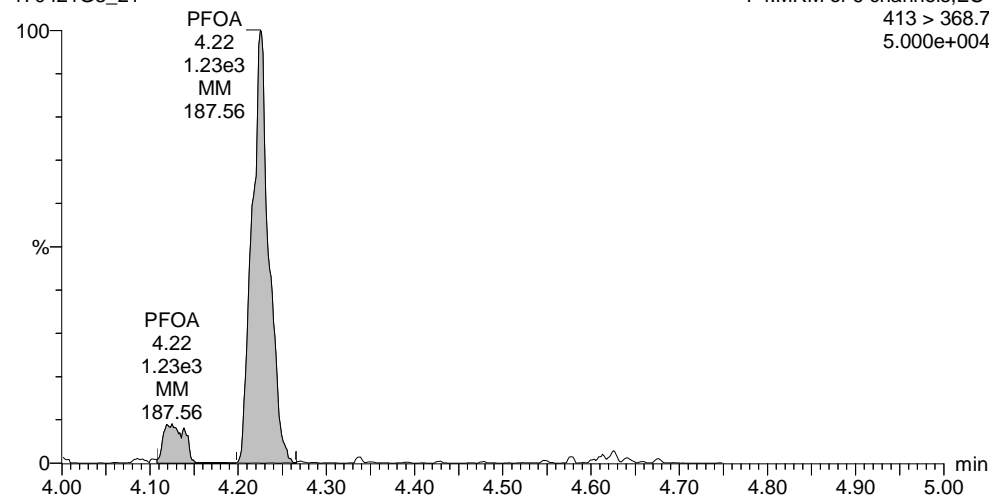
Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: 1700466-03 RW10-20170417 0.25, Description: RW10-20170417, Name: 170421G3\_21, Date: 21-Apr-2017, Time: 21:56:35, Instrument: , Lab: , User:

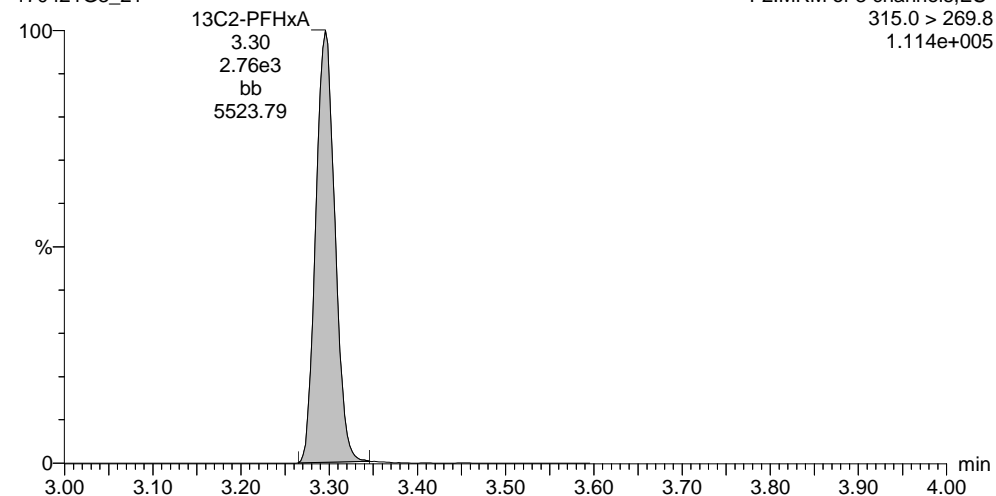
**PFOA**

170421G3\_21



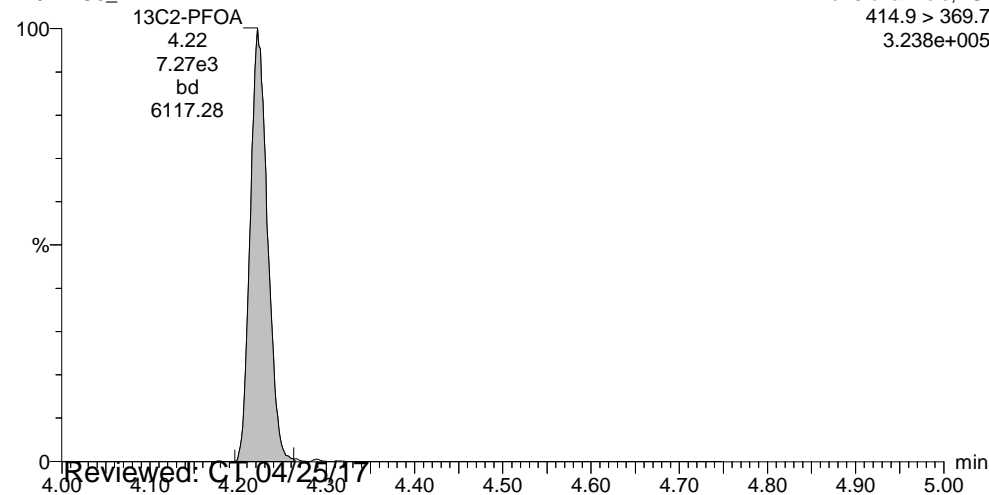
**13C2-PFHxA**

170421G3\_21



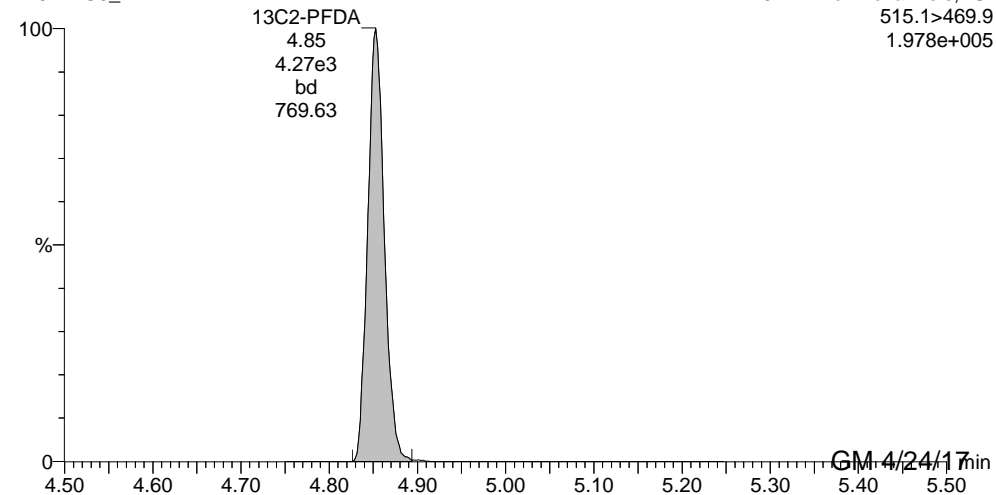
**13C2-PFOA**

170421G3\_21



**13C2-PFDA**

170421G3\_21



Reviewed: C:\04/25/17

GM 4/24/17

Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-21.qld

Last Altered: Friday, April 21, 2017 13:10:39 Pacific Daylight Time

Printed: Friday, April 21, 2017 13:11:09 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: 1700466-04 FRB-10-20170417 0.25, Description: FRB-10-20170417, Name: 170420G1\_21, Date: 20-Apr-2017, Time: 20:55:45

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1 PFBS	299 > 79.7		8.542e3		0.277			
2	2 PFHpA	363 > 318.9		6.368e3		0.277			
3	3 PFHxS	398.9 > 79.6		8.542e3		0.277			
4	4 PFOA	413 > 368.7	2.573e1	6.368e3		0.277	4.21	0.187	
5	5 PFOS	499 > 79.9		8.542e3		0.277			
6	6 PFNA	463 > 418.8		6.368e3		0.277			
7	7 13C2-PFHxA	315.0 > 269.8	2.716e3	6.368e3	0.449	0.277	3.27	34.3	95.1
8	8 13C2-PFDA	515.1 > 469.9	4.693e3	6.368e3	0.803	0.277	4.85	33.1	91.8
9	9 13C2-PFOA	414.9 > 369.7	6.368e3	6.368e3	1.000	0.277	4.20	36.1	100
10	10 13C4-PFOS	503.0 > 79.9	8.542e3	8.542e3	1.000	0.277	4.61	104	100

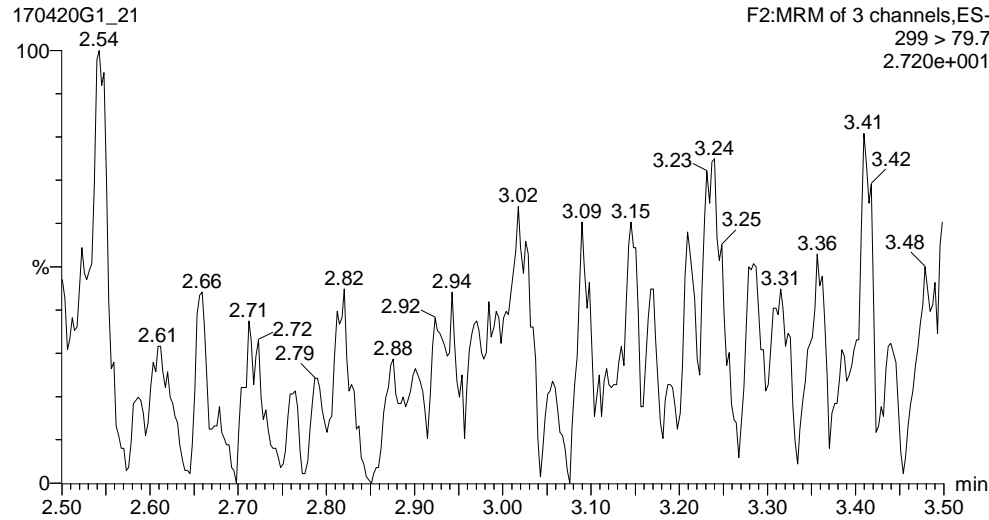
Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-21.qld

Last Altered: Friday, April 21, 2017 13:10:39 Pacific Daylight Time  
Printed: Friday, April 21, 2017 13:11:09 Pacific Daylight Time

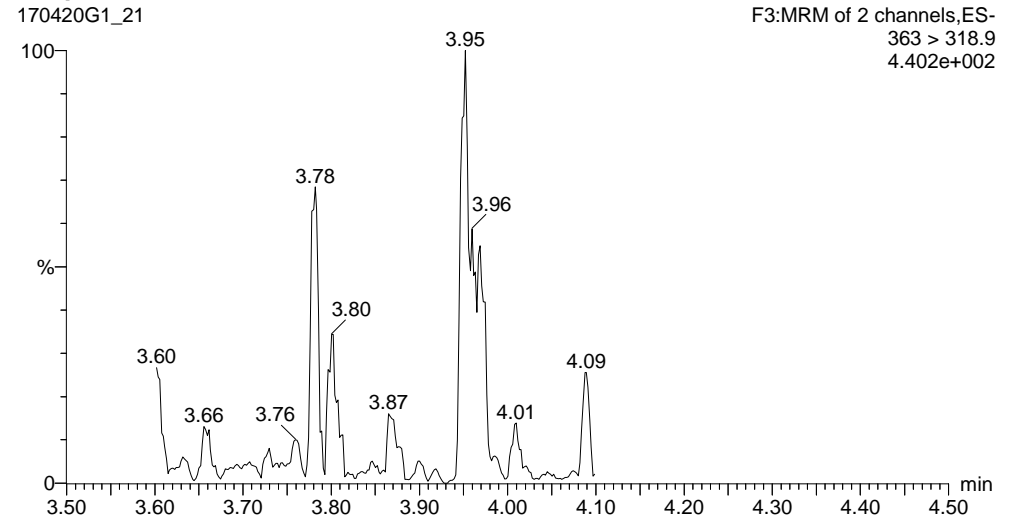
Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59  
Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: 1700466-04 FRB-10-20170417 0.25, Description: FRB-10-20170417, Name: 170420G1\_21, Date: 20-Apr-2017, Time: 20:55:45, Instrument: , Lab: , User:

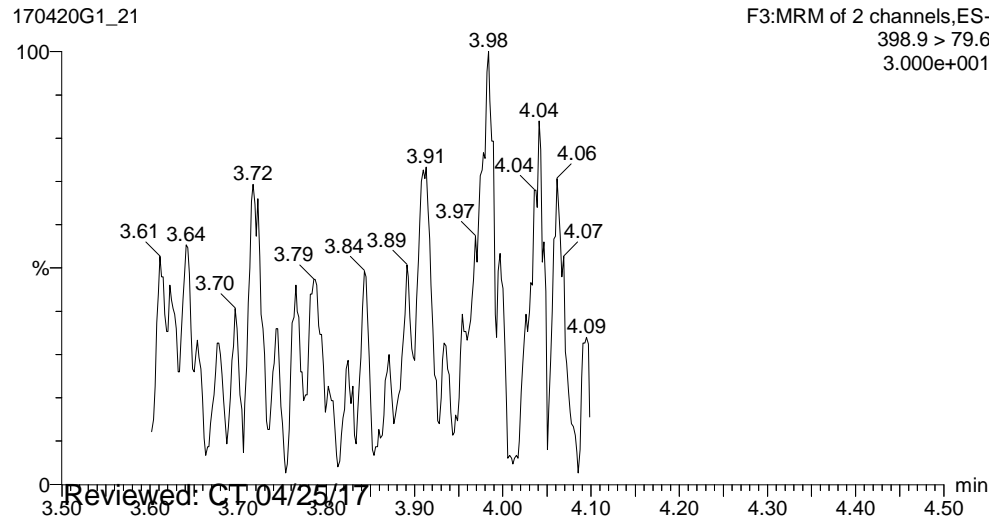
PFBS



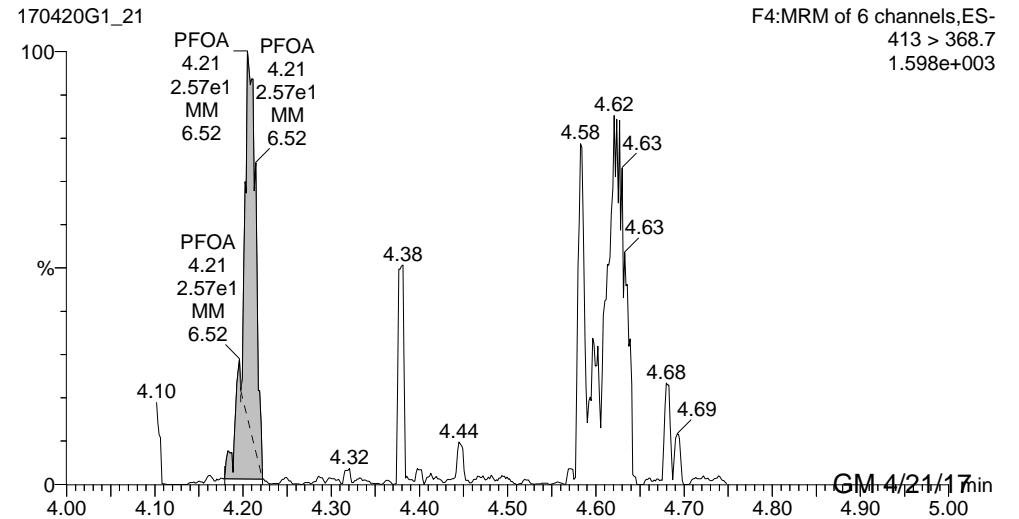
PFHpA



PFHxS



PFOA



Reviewed: CT 04/25/17

Work Order 1700466 Revision 1

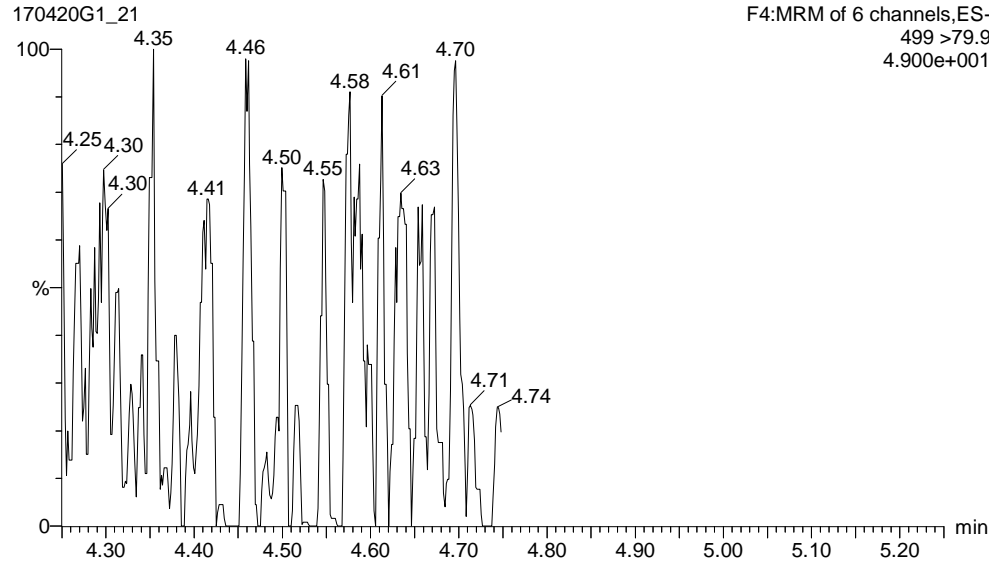
GM 4/21/17

Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-21.qld

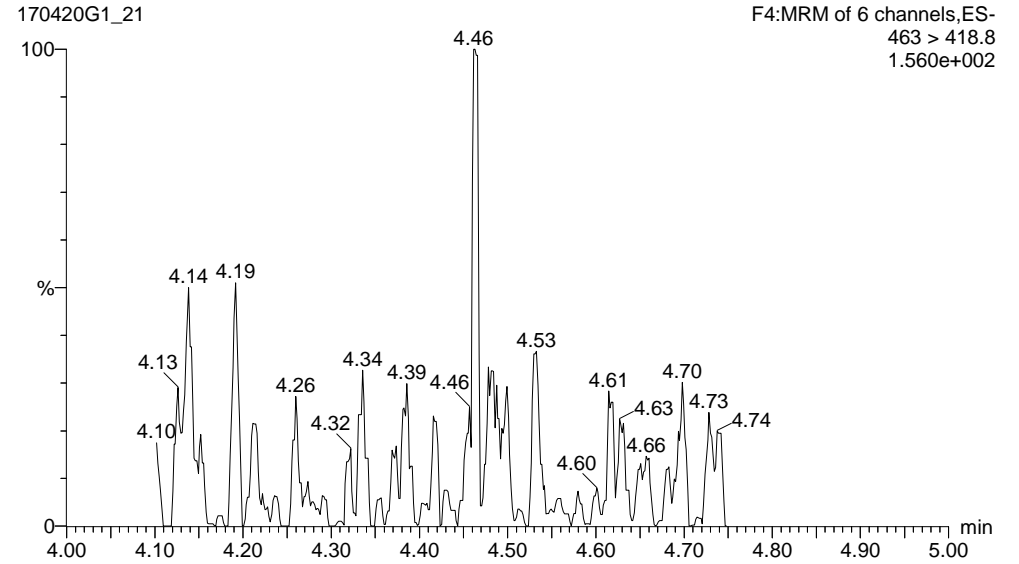
Last Altered: Friday, April 21, 2017 13:10:39 Pacific Daylight Time  
Printed: Friday, April 21, 2017 13:11:09 Pacific Daylight Time

ID: 1700466-04 FRB-10-20170417 0.25, Description: FRB-10-20170417, Name: 170420G1\_21, Date: 20-Apr-2017, Time: 20:55:45, Instrument: , Lab: , User:

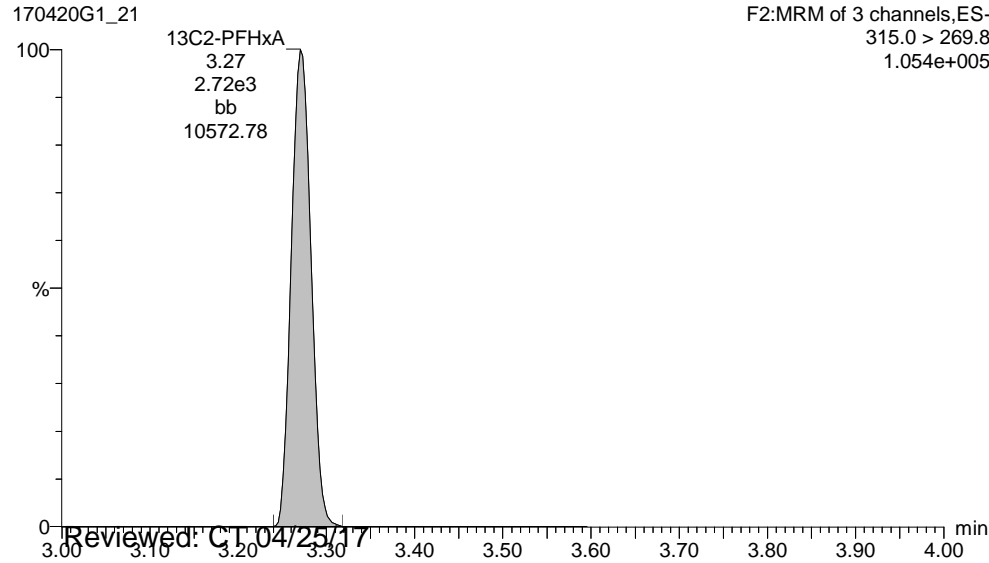
**PFOS**



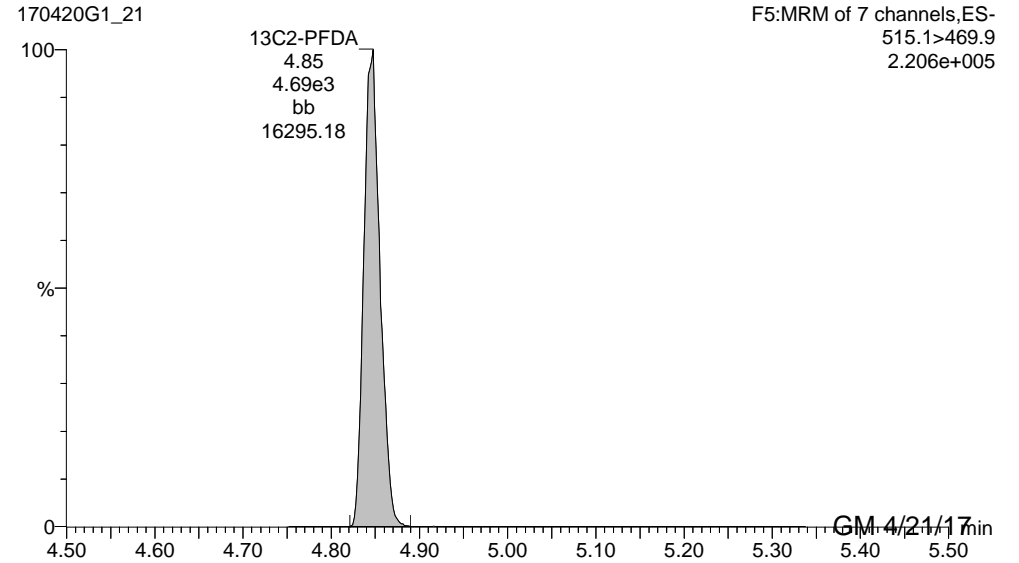
**PFNA**



**13C2-PFHxA**



**13C2-PFDA**



Reviewed: C.T. 04/25/17

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Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-21.qld

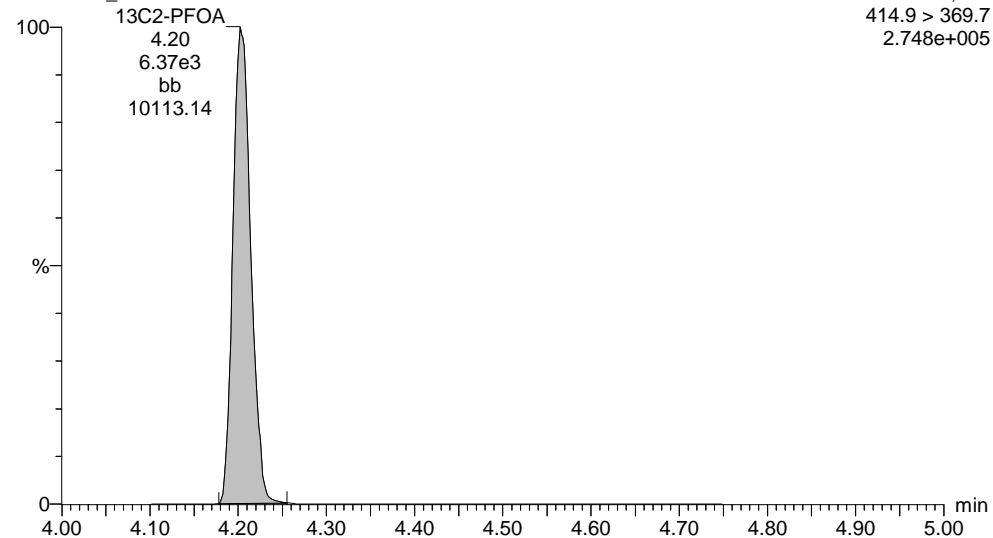
Last Altered: Friday, April 21, 2017 13:10:39 Pacific Daylight Time

Printed: Friday, April 21, 2017 13:11:09 Pacific Daylight Time

ID: 1700466-04 FRB-10-20170417 0.25, Description: FRB-10-20170417, Name: 170420G1\_21, Date: 20-Apr-2017, Time: 20:55:45, Instrument: , Lab: , User:

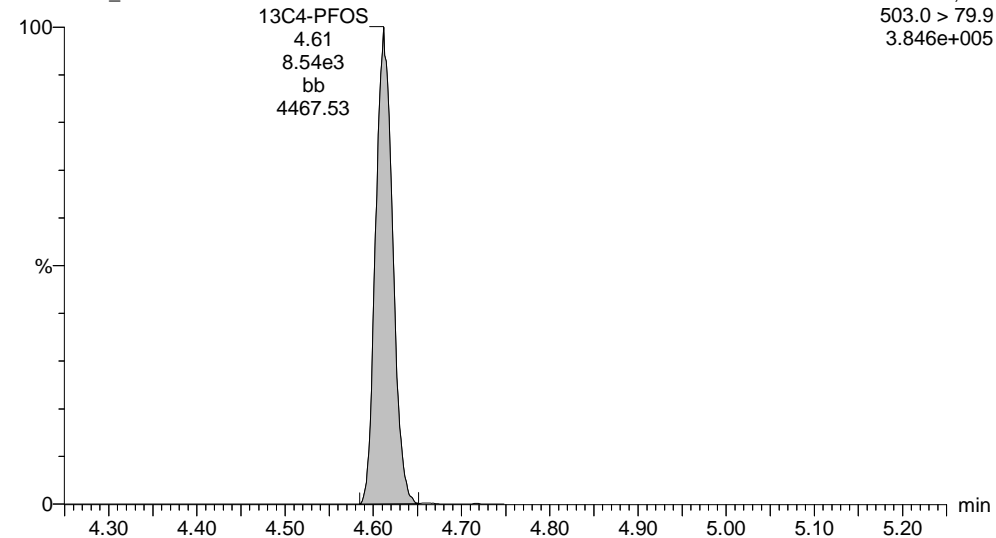
**13C2-PFOA**

170420G1\_21



**13C4-PFOS**

170420G1\_21



Dataset: U:\G1.PRO\Results\2017\170421G3\170421G3-22.qld

Last Altered: Monday, April 24, 2017 11:19:47 Pacific Daylight Time

Printed: Monday, April 24, 2017 11:20:39 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: 1700466-04 FRB-10-20170417 0.25, Description: FRB-10-20170417, Name: 170421G3\_22, Date: 21-Apr-2017, Time: 22:08:59

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	4 PFOA	413 > 368.7	8.261e0	6.594e3		0.277	4.22	0.0579	
2	7 13C2-PFHxA	315.0 > 269.8	2.918e3	6.594e3	0.449	0.277	3.30	35.6	98.7
3	8 13C2-PFDA	515.1>469.9	4.626e3	6.594e3	0.803	0.277	4.85	31.5	87.4
4	9 13C2-PFOA	414.9 > 369.7	6.594e3	6.594e3	1.000	0.277	4.22	36.1	100

Dataset: U:\G1.PRO\Results\2017\170421G3\170421G3-22.qld

Last Altered: Monday, April 24, 2017 11:19:47 Pacific Daylight Time

Printed: Monday, April 24, 2017 11:20:39 Pacific Daylight Time

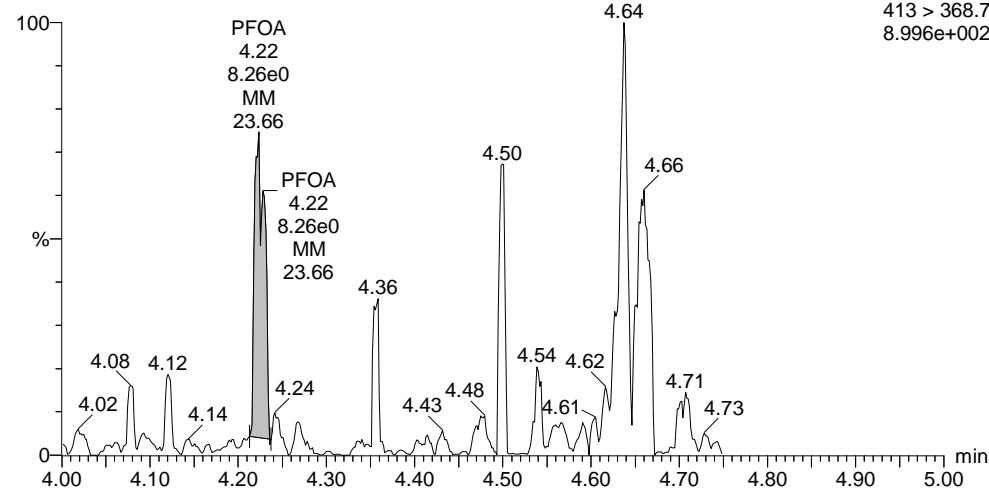
Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: 1700466-04 FRB-10-20170417 0.25, Description: FRB-10-20170417, Name: 170421G3\_22, Date: 21-Apr-2017, Time: 22:08:59, Instrument: , Lab: , User:

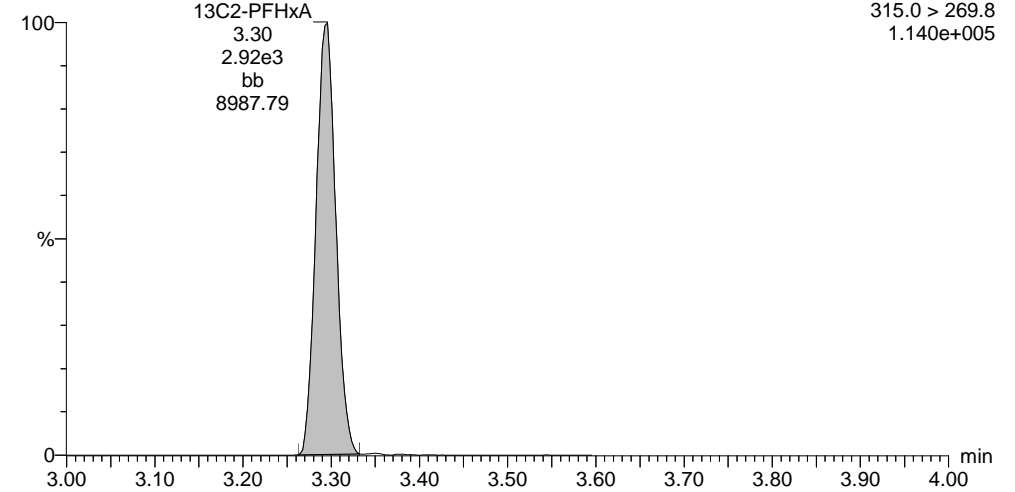
**PFOA**

170421G3\_22



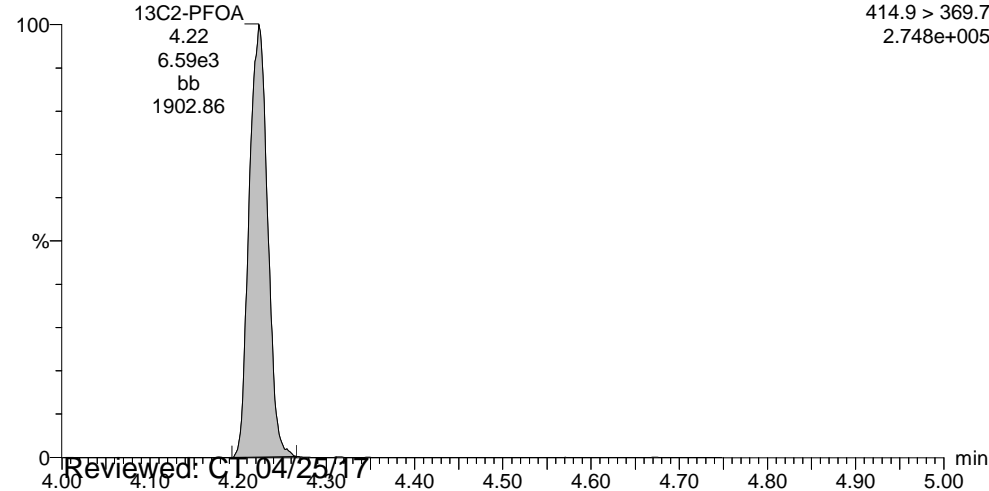
**13C2-PFHxA**

170421G3\_22



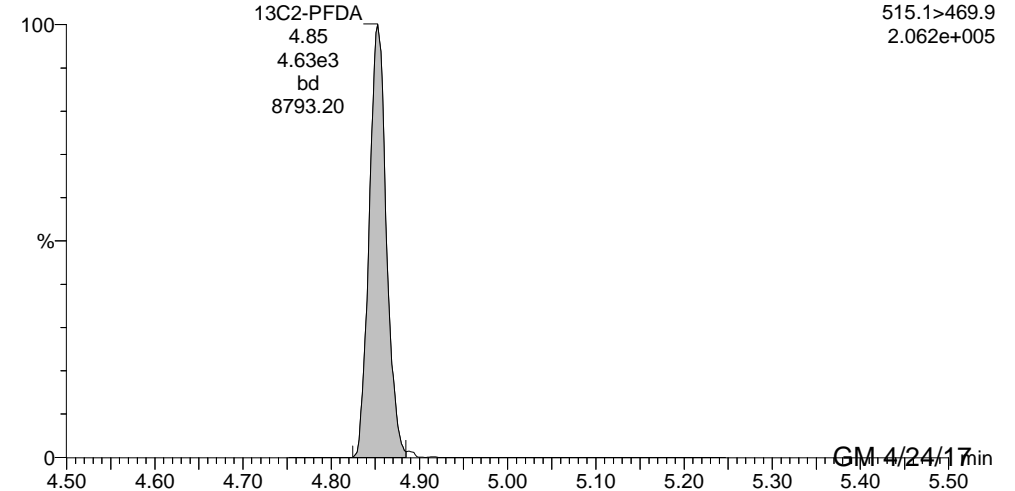
**13C2-PFOA**

170421G3\_22



**13C2-PFDA**

170421G3\_22



Reviewed: C:\04/25/17

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Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-22.qld

Last Altered: Friday, April 21, 2017 13:13:12 Pacific Daylight Time

Printed: Friday, April 21, 2017 13:13:35 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: 1700466-05 RW18-20170417 0.25, Description: RW18-20170417, Name: 170420G1\_22, Date: 20-Apr-2017, Time: 21:08:07

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1 PFBS	299 > 79.7	6.332e1	8.320e3		0.278	2.89	0.854	
2	2 PFHpA	363 > 318.9	3.573e2	6.306e3		0.278	3.78	2.27	
3	3 PFHxS	398.9 > 79.6	1.423e2	8.320e3		0.278	3.90	1.66	
4	4 PFOA	413 > 368.7	1.059e3	6.306e3		0.278	4.20	7.77	
5	5 PFOS	499 > 79.9	1.153e2	8.320e3		0.278	4.49	4.10	
6	6 PFNA	463 > 418.8	3.021e2	6.306e3		0.278	4.54	1.27	
7	7 13C2-PFHxA	315.0 > 269.8	2.447e3	6.306e3	0.449	0.278	3.27	31.2	86.5
8	8 13C2-PFDA	515.1 > 469.9	4.151e3	6.306e3	0.803	0.278	4.85	29.5	82.0
9	9 13C2-PFOA	414.9 > 369.7	6.306e3	6.306e3	1.000	0.278	4.20	36.0	100
10	10 13C4-PFOS	503.0 > 79.9	8.320e3	8.320e3	1.000	0.278	4.61	103	100



Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-22.qld

Last Altered: Friday, April 21, 2017 13:13:12 Pacific Daylight Time

Printed: Friday, April 21, 2017 13:13:35 Pacific Daylight Time

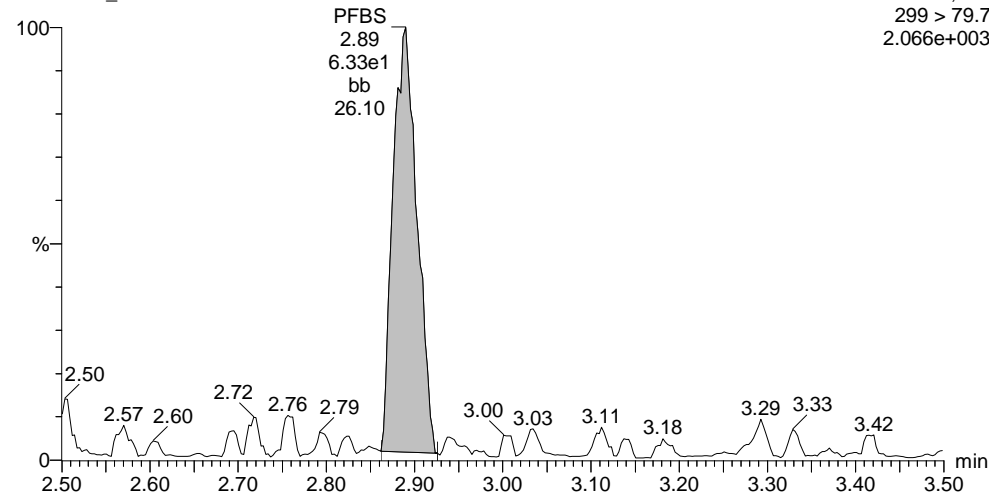
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Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: 1700466-05 RW18-20170417 0.25, Description: RW18-20170417, Name: 170420G1\_22, Date: 20-Apr-2017, Time: 21:08:07, Instrument: , Lab: , User:

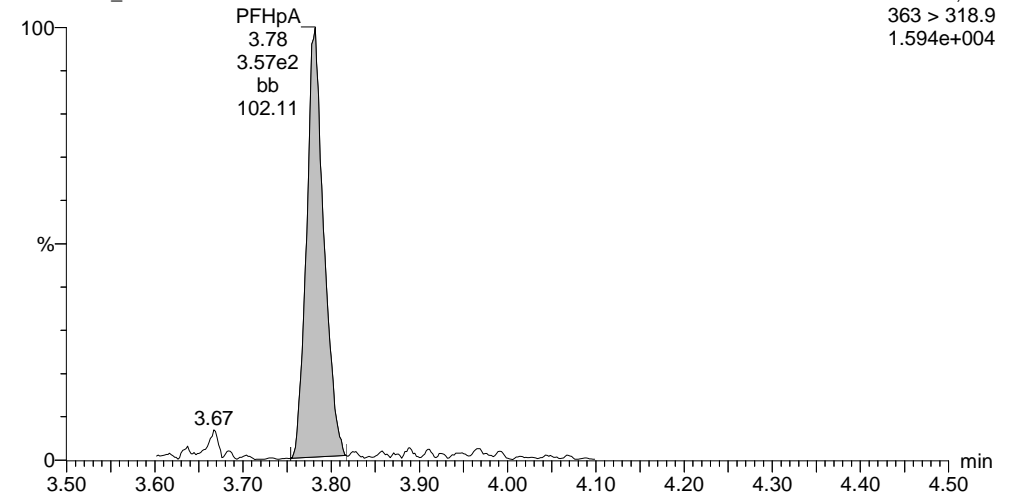
**PFBS**

170420G1\_22



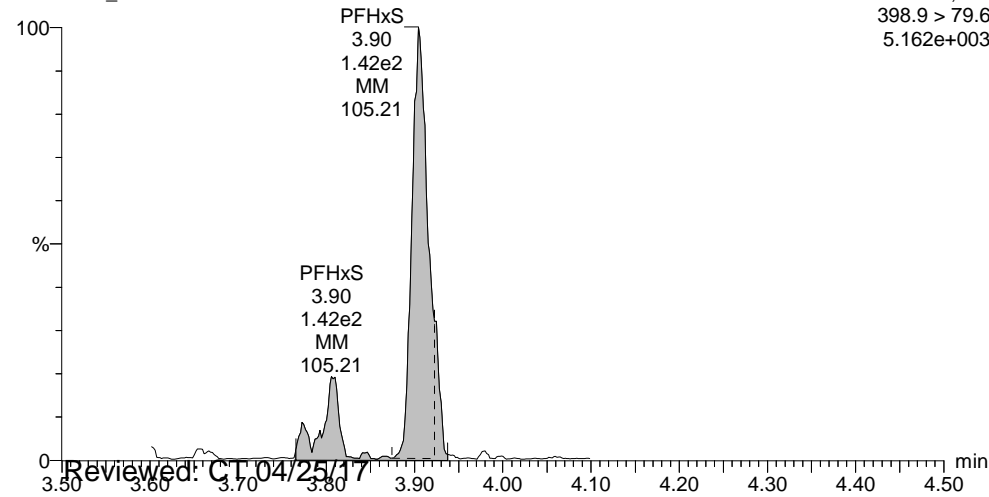
**PFHpA**

170420G1\_22



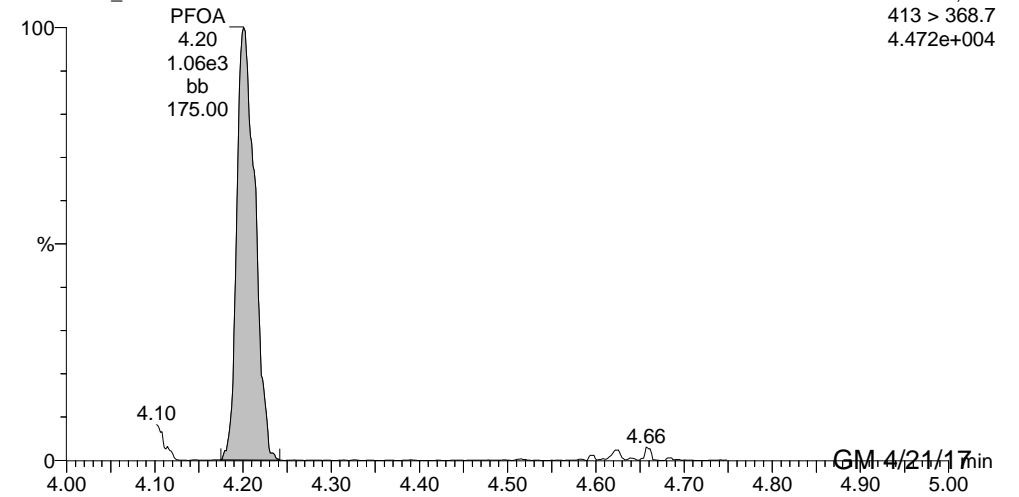
**PFHxS**

170420G1\_22



**PFOA**

170420G1\_22



Reviewed: C:\04\25\17

GM 4/21/17

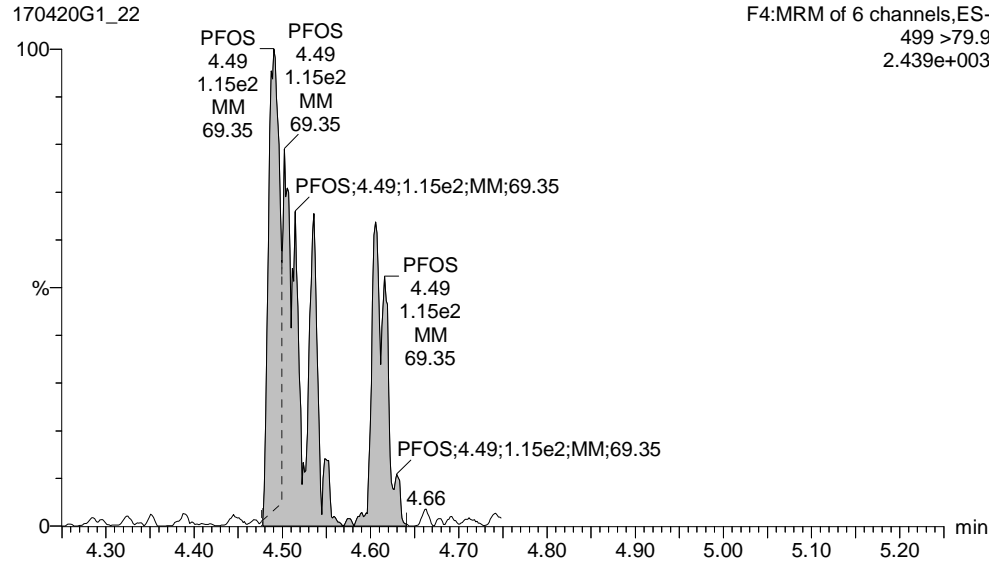
Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-22.qld

Last Altered: Friday, April 21, 2017 13:13:12 Pacific Daylight Time

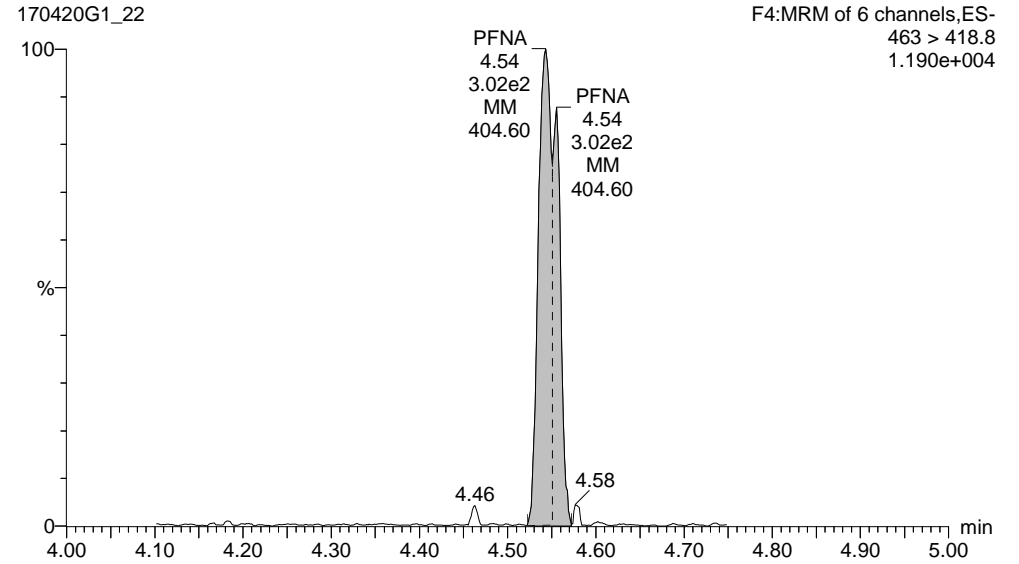
Printed: Friday, April 21, 2017 13:13:35 Pacific Daylight Time

ID: 1700466-05 RW18-20170417 0.25, Description: RW18-20170417, Name: 170420G1\_22, Date: 20-Apr-2017, Time: 21:08:07, Instrument: , Lab: , User:

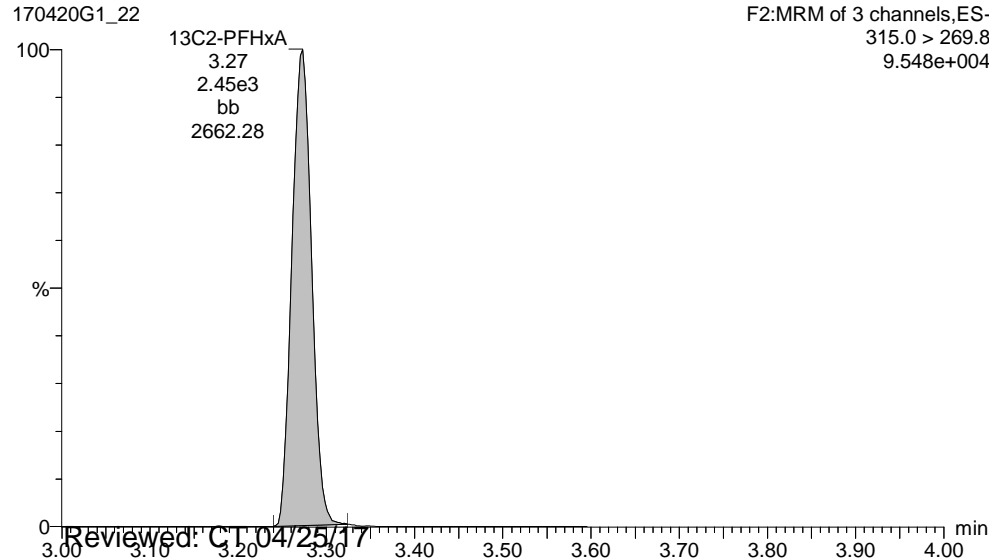
**PFOS**



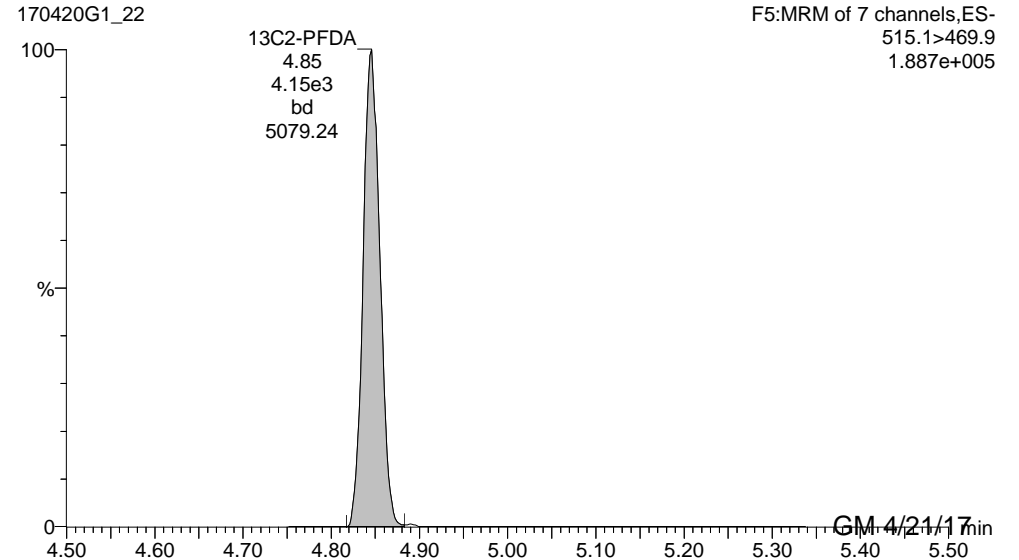
**PFNA**



**13C2-PFHxA**



**13C2-PFDA**



Reviewed: C:\170425\17

GM 4/21/17

Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-22.qld

Last Altered: Friday, April 21, 2017 13:13:12 Pacific Daylight Time

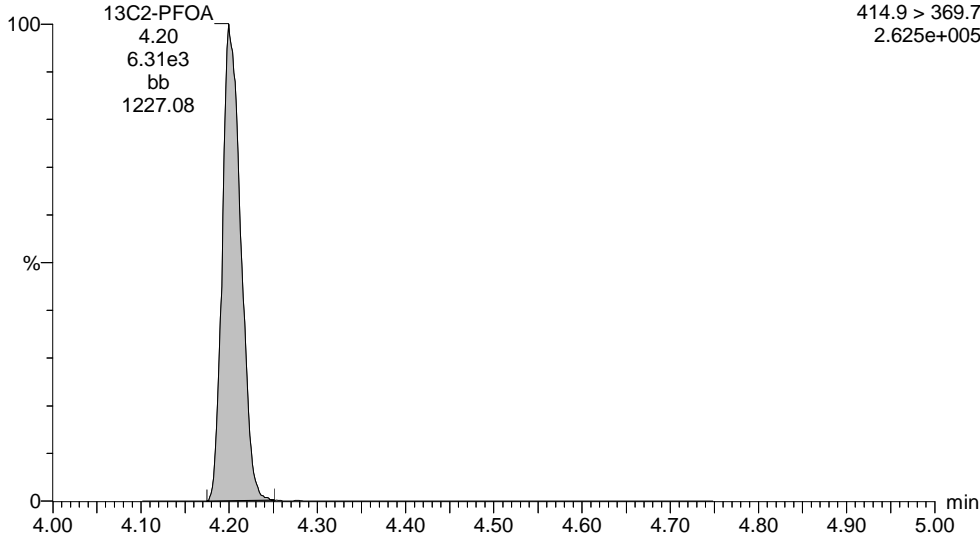
Printed: Friday, April 21, 2017 13:13:35 Pacific Daylight Time

ID: 1700466-05 RW18-20170417 0.25, Description: RW18-20170417, Name: 170420G1\_22, Date: 20-Apr-2017, Time: 21:08:07, Instrument: , Lab: , User:

**13C2-PFOA**

170420G1\_22

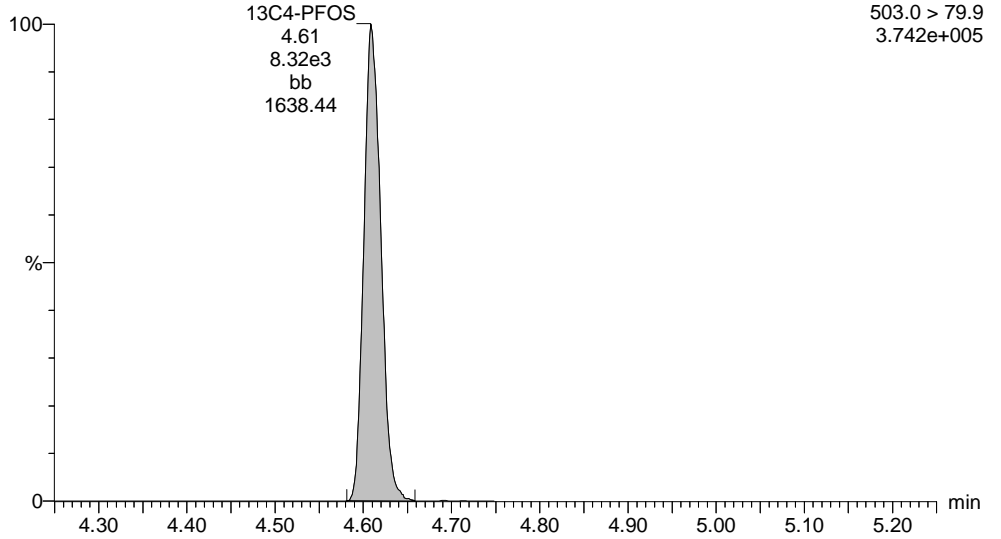
F4:MRM of 6 channels,ES-  
414.9 > 369.7  
2.625e+005



**13C4-PFOS**

170420G1\_22

F4:MRM of 6 channels,ES-  
503.0 > 79.9  
3.742e+005



Dataset: U:\G1.PRO\Results\2017\170421G3\170421G3-23.qld

Last Altered: Monday, April 24, 2017 11:21:43 Pacific Daylight Time

Printed: Monday, April 24, 2017 11:22:06 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: 1700466-05 RW18-20170417 0.25, Description: RW18-20170417, Name: 170421G3\_23, Date: 21-Apr-2017, Time: 22:21:22

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	4 PFOA	413 > 368.7	1.157e3	6.631e3		0.278	4.23	8.07	
2	7 13C2-PFHxA	315.0 > 269.8	2.821e3	6.631e3	0.449	0.278	3.30	34.1	94.8
3	8 13C2-PFDA	515.1>469.9	4.495e3	6.631e3	0.803	0.278	4.85	30.4	84.4
4	9 13C2-PFOA	414.9 > 369.7	6.631e3	6.631e3	1.000	0.278	4.22	36.0	100

Dataset: U:\G1.PRO\Results\2017\170421G3\170421G3-23.qld

Last Altered: Monday, April 24, 2017 11:21:43 Pacific Daylight Time

Printed: Monday, April 24, 2017 11:22:06 Pacific Daylight Time

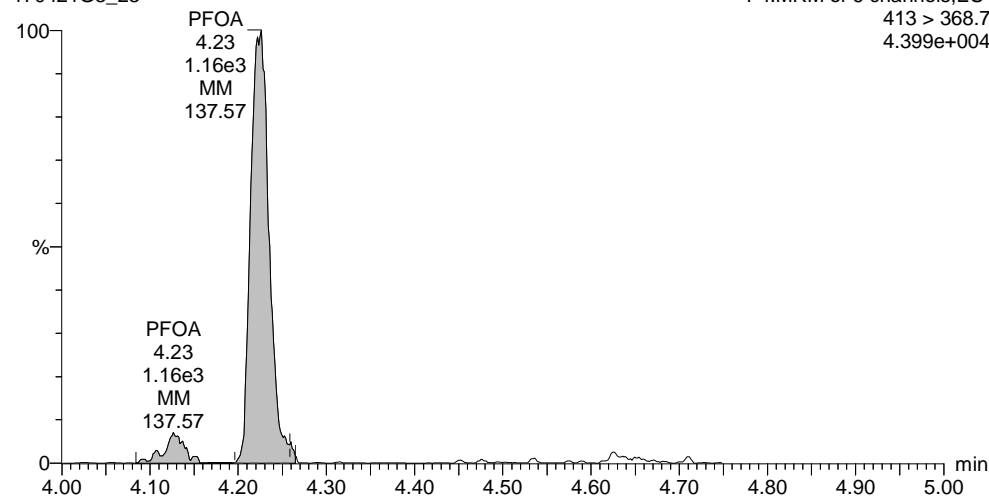
Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: 1700466-05 RW18-20170417 0.25, Description: RW18-20170417, Name: 170421G3\_23, Date: 21-Apr-2017, Time: 22:21:22, Instrument: , Lab: , User:

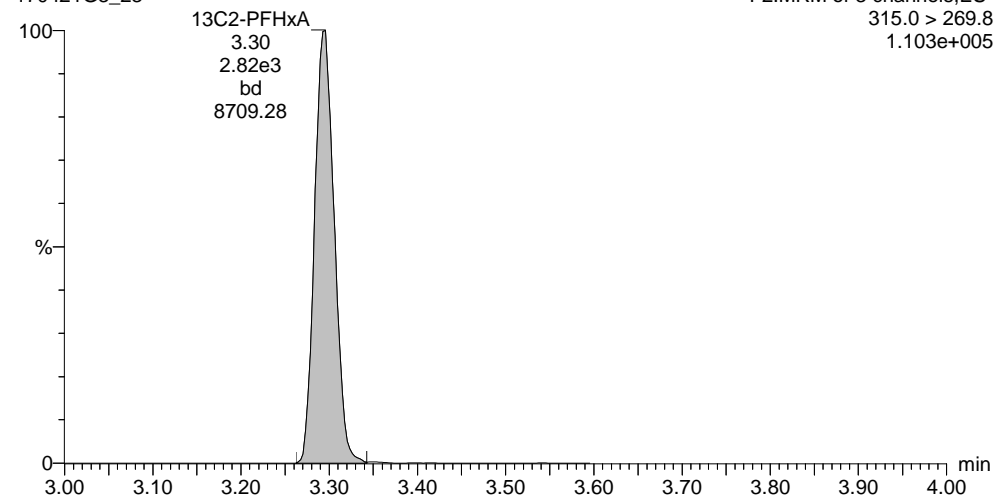
**PFOA**

170421G3\_23



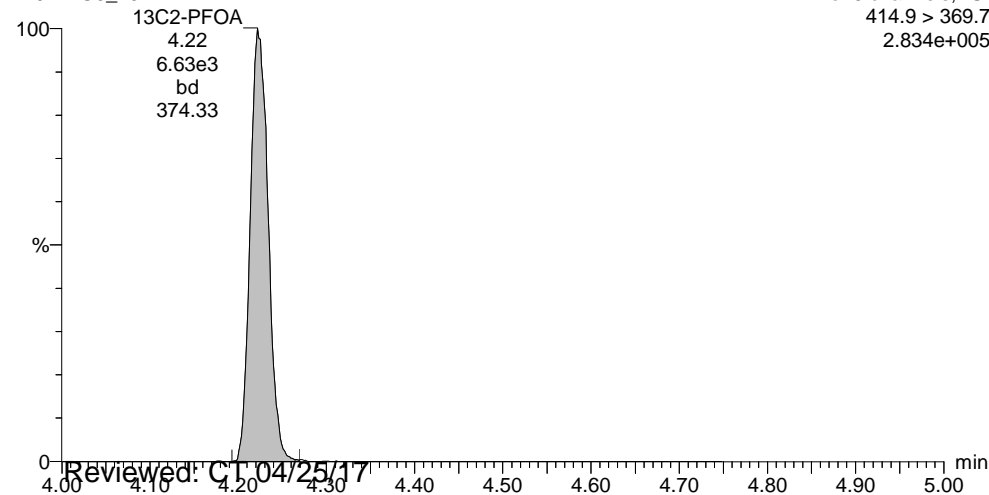
**13C2-PFHxA**

170421G3\_23



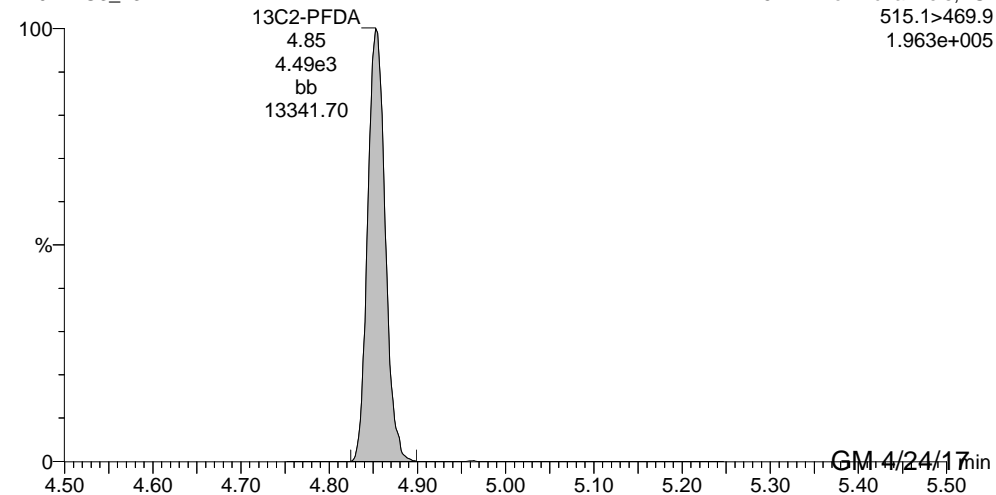
**13C2-PFOA**

170421G3\_23



**13C2-PFDA**

170421G3\_23



Reviewed: C:\04\25\17

GM 4/24/17

Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-23.qld

Last Altered: Friday, April 21, 2017 13:15:00 Pacific Daylight Time

Printed: Friday, April 21, 2017 13:15:21 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: 1700466-06 FRB-18-20170417 0.25, Description: FRB-18-20170417, Name: 170420G1\_23, Date: 20-Apr-2017, Time: 21:20:28

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1 PFBS	299 > 79.7		8.524e3		0.274			
2	2 PFHpA	363 > 318.9	3.980e0	6.598e3		0.274	3.78	0.0245	
3	3 PFHxS	398.9 > 79.6		8.524e3		0.274			
4	4 PFOA	413 > 368.7	1.858e1	6.598e3		0.274	4.21	0.132	
5	5 PFOS	499 > 79.9		8.524e3		0.274			
6	6 PFNA	463 > 418.8	2.195e0	6.598e3		0.274	4.54	0.00890	
7	7 13C2-PFHxA	315.0 > 269.8	2.680e3	6.598e3	0.449	0.274	3.27	33.1	90.5
8	8 13C2-PFDA	515.1 > 469.9	4.471e3	6.598e3	0.803	0.274	4.85	30.8	84.4
9	9 13C2-PFOA	414.9 > 369.7	6.598e3	6.598e3	1.000	0.274	4.21	36.5	100
10	10 13C4-PFOS	503.0 > 79.9	8.524e3	8.524e3	1.000	0.274	4.61	105	100

Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-23.qld

Last Altered: Friday, April 21, 2017 13:15:00 Pacific Daylight Time

Printed: Friday, April 21, 2017 13:15:21 Pacific Daylight Time

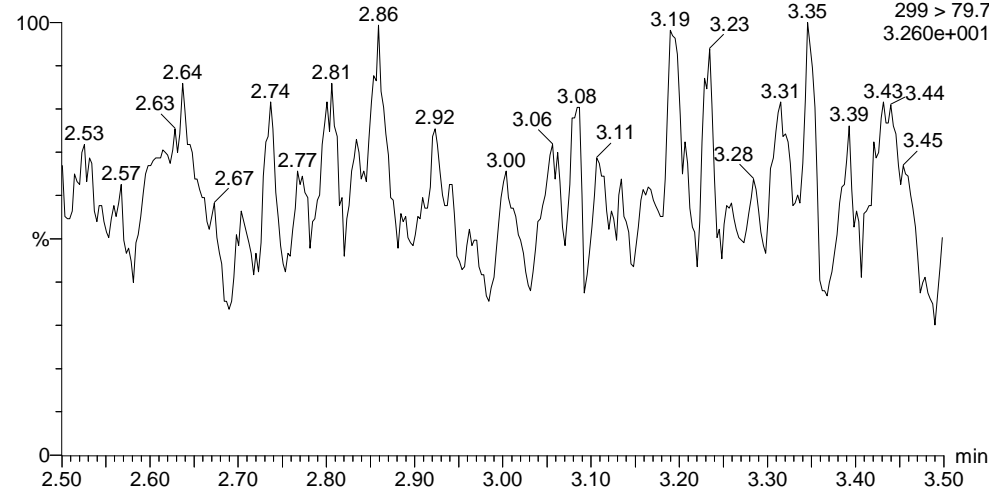
Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: 1700466-06 FRB-18-20170417 0.25, Description: FRB-18-20170417, Name: 170420G1\_23, Date: 20-Apr-2017, Time: 21:20:28, Instrument: , Lab: , User:

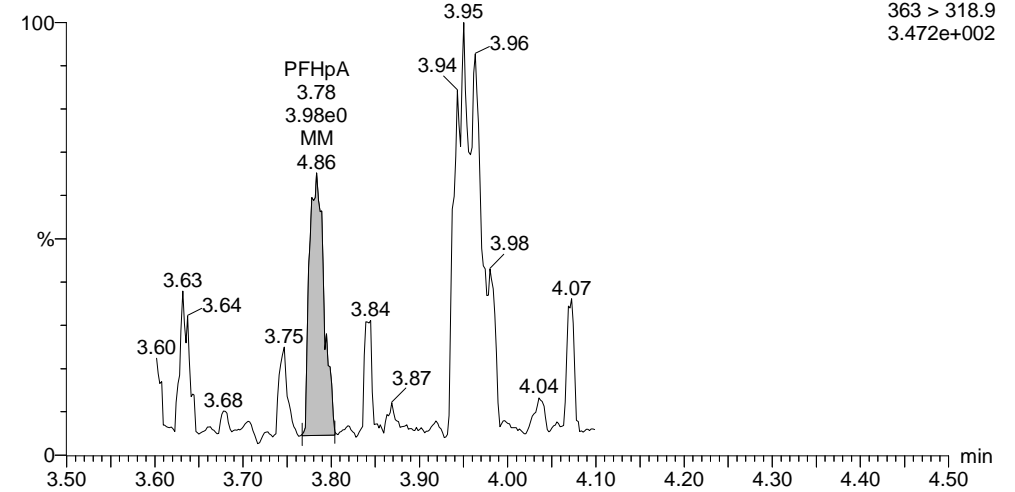
**PFBS**

170420G1\_23



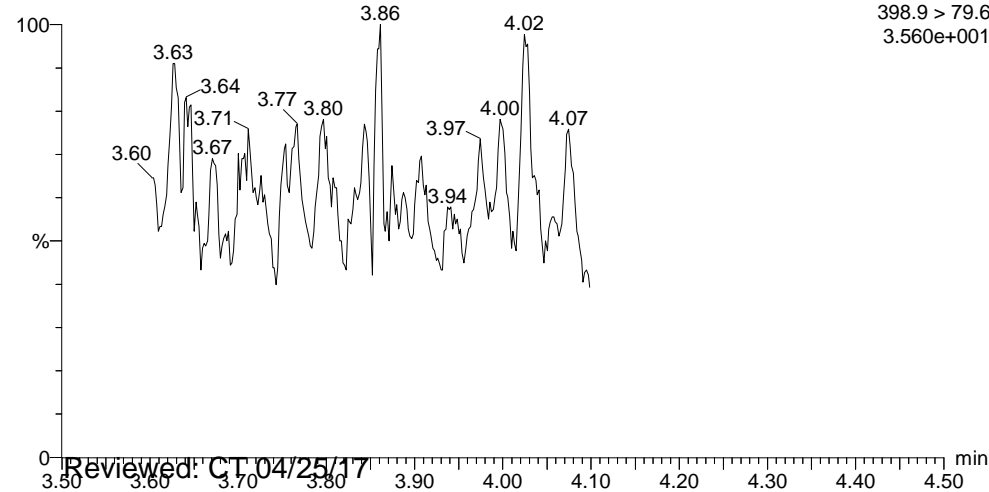
**PFHpA**

170420G1\_23



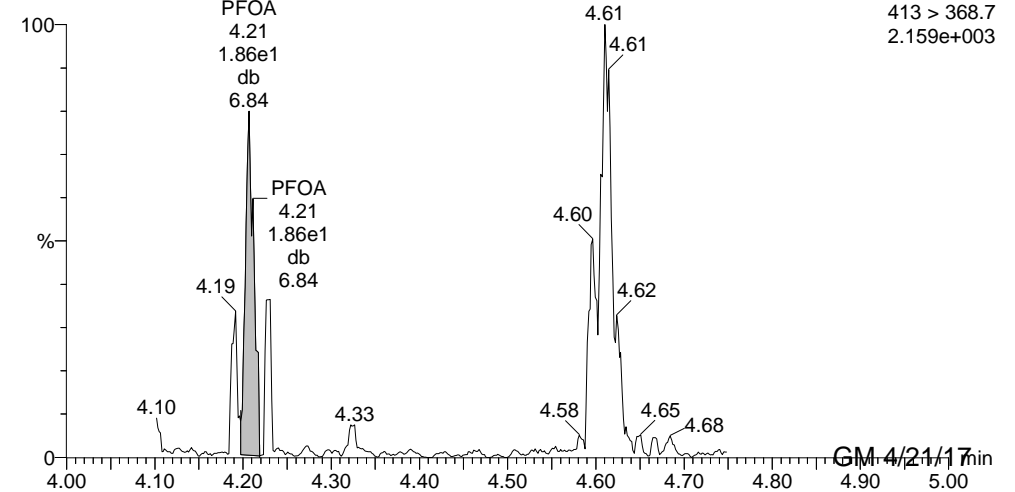
**PFHxS**

170420G1\_23



**PFOA**

170420G1\_23



Reviewed: CT 04/25/17

GM 4/21/17

Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-23.qld

Last Altered: Friday, April 21, 2017 13:15:00 Pacific Daylight Time

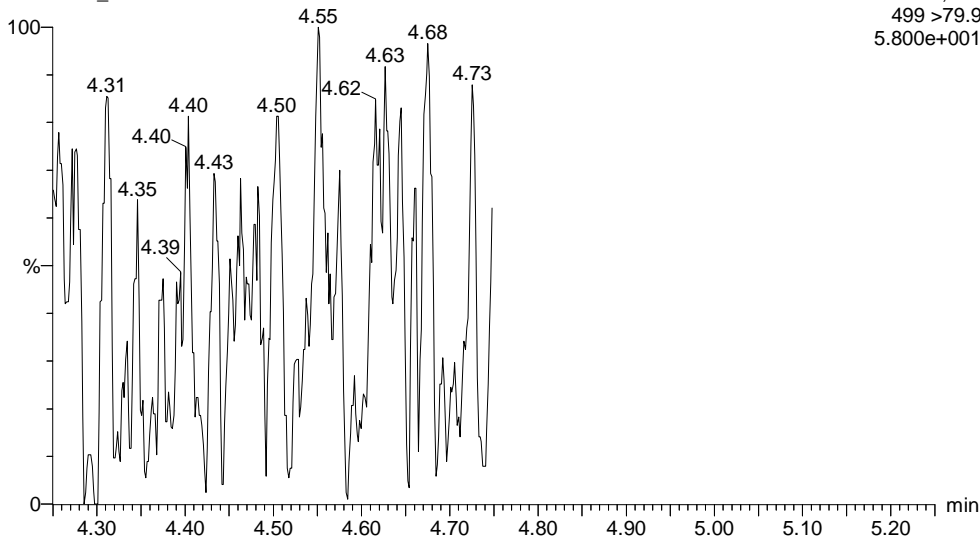
Printed: Friday, April 21, 2017 13:15:21 Pacific Daylight Time

ID: 1700466-06 FRB-18-20170417 0.25, Description: FRB-18-20170417, Name: 170420G1\_23, Date: 20-Apr-2017, Time: 21:20:28, Instrument: , Lab: , User:

**PFOS**

170420G1\_23

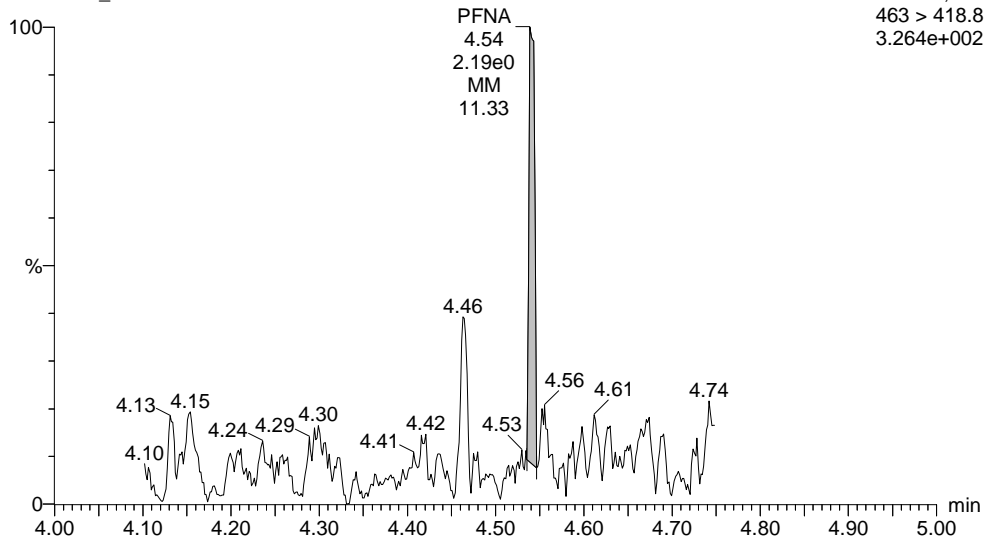
F4:MRM of 6 channels,ES-  
499 >79.9  
5.800e+001



**PFNA**

170420G1\_23

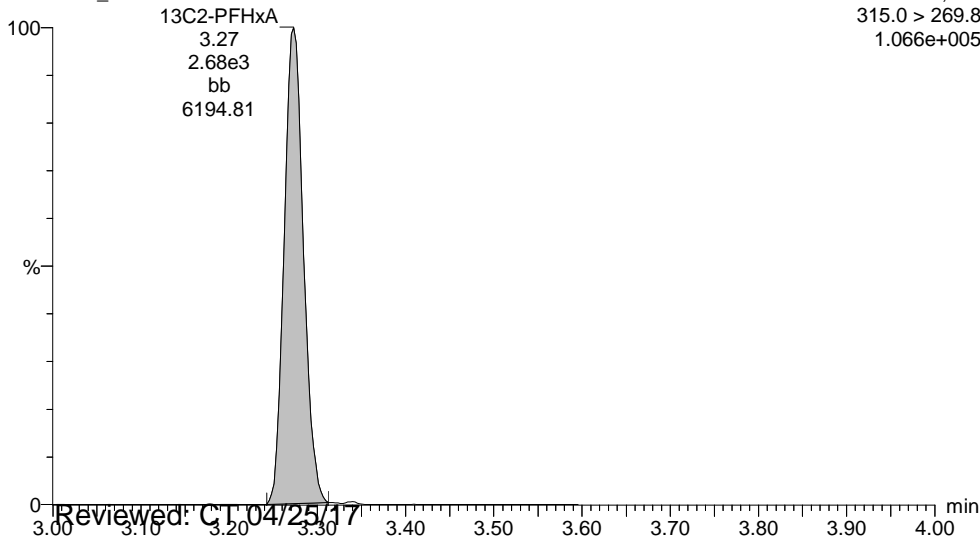
F4:MRM of 6 channels,ES-  
463 > 418.8  
3.264e+002



**13C2-PFHxA**

170420G1\_23

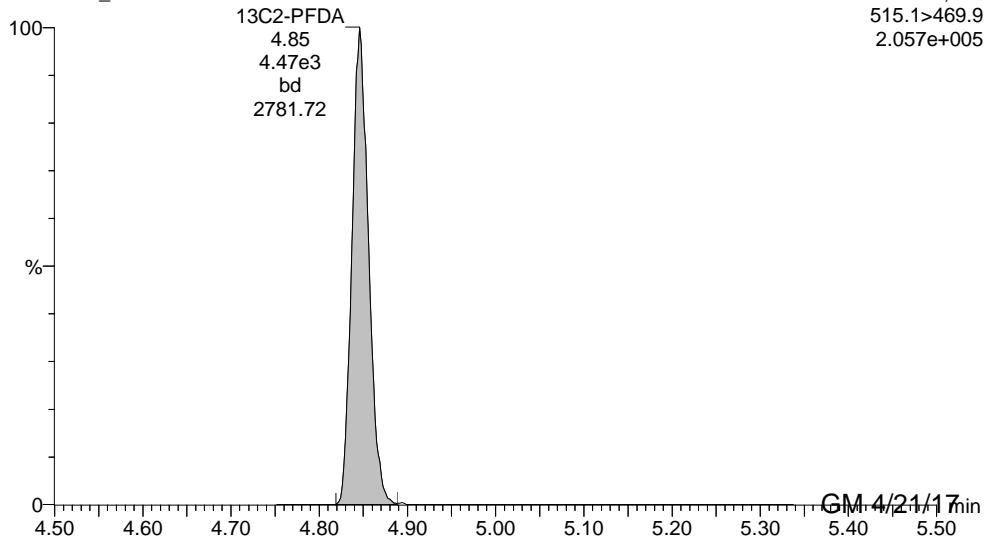
F2:MRM of 3 channels,ES-  
315.0 > 269.8  
1.066e+005



**13C2-PFDA**

170420G1\_23

F5:MRM of 7 channels,ES-  
515.1 >469.9  
2.057e+005



Reviewed: C.T. 04/25/17

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Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-23.qld

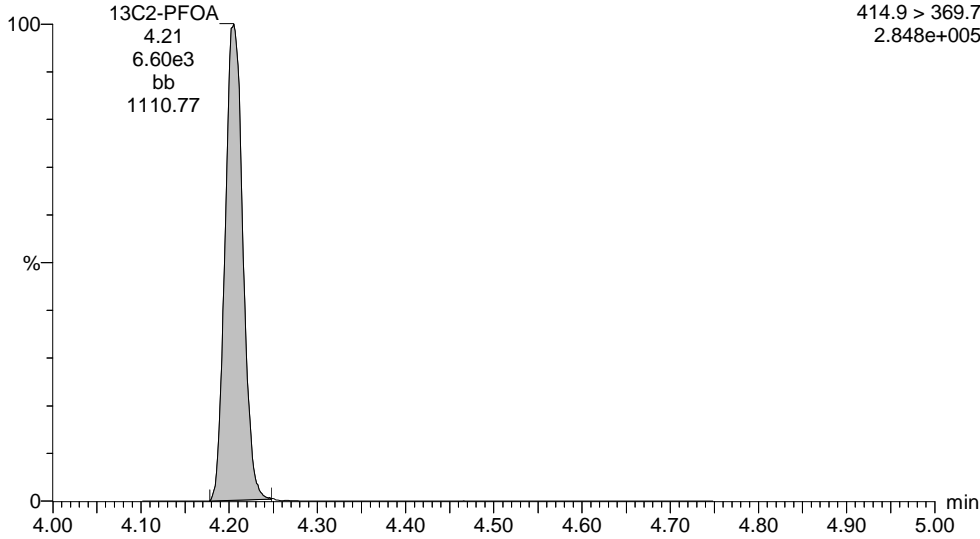
Last Altered: Friday, April 21, 2017 13:15:00 Pacific Daylight Time

Printed: Friday, April 21, 2017 13:15:21 Pacific Daylight Time

ID: 1700466-06 FRB-18-20170417 0.25, Description: FRB-18-20170417, Name: 170420G1\_23, Date: 20-Apr-2017, Time: 21:20:28, Instrument: , Lab: , User:

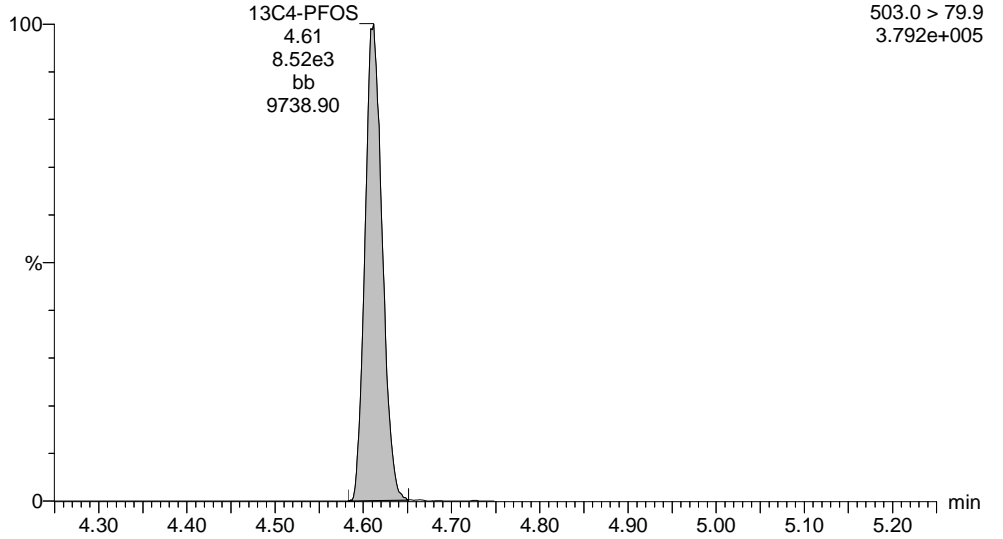
**13C2-PFOA**

170420G1\_23



**13C4-PFOS**

170420G1\_23



Dataset: U:\G1.PRO\Results\2017\170421G3\170421G3-24.qld

Last Altered: Monday, April 24, 2017 11:24:04 Pacific Daylight Time

Printed: Monday, April 24, 2017 11:24:15 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: 1700466-06 FRB-18-20170417 0.25, Description: FRB-18-20170417, Name: 170421G3\_24, Date: 21-Apr-2017, Time: 22:33:47

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	4 PFOA	413 > 368.7	5.812e1	7.180e3		0.274	4.22	0.379	
2	7 13C2-PFHxA	315.0 > 269.8	2.949e3	7.180e3	0.449	0.274	3.30	33.4	91.5
3	8 13C2-PFDA	515.1>469.9	4.358e3	7.180e3	0.803	0.274	4.86	27.6	75.6
4	9 13C2-PFOA	414.9 > 369.7	7.180e3	7.180e3	1.000	0.274	4.22	36.5	100

Dataset: U:\G1.PRO\Results\2017\170421G3\170421G3-24.qld

Last Altered: Monday, April 24, 2017 11:24:04 Pacific Daylight Time

Printed: Monday, April 24, 2017 11:24:15 Pacific Daylight Time

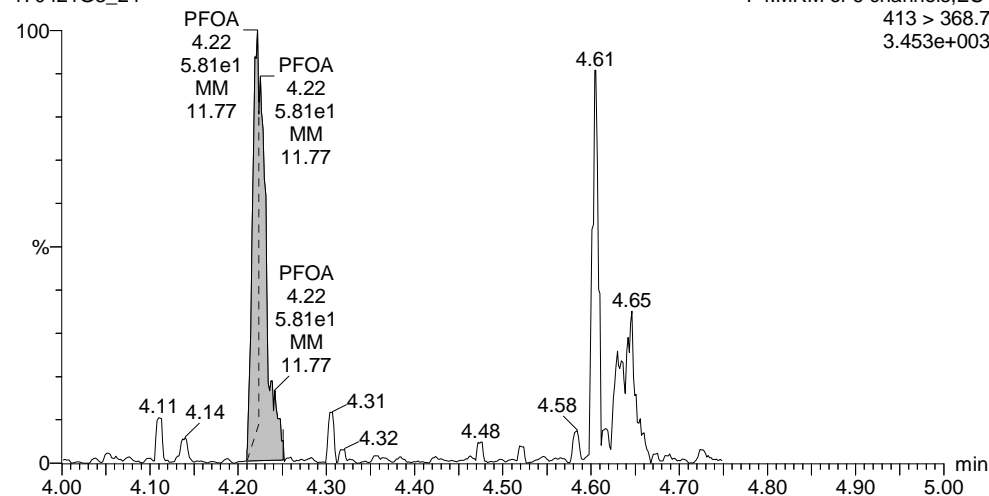
Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: 1700466-06 FRB-18-20170417 0.25, Description: FRB-18-20170417, Name: 170421G3\_24, Date: 21-Apr-2017, Time: 22:33:47, Instrument: , Lab: , User:

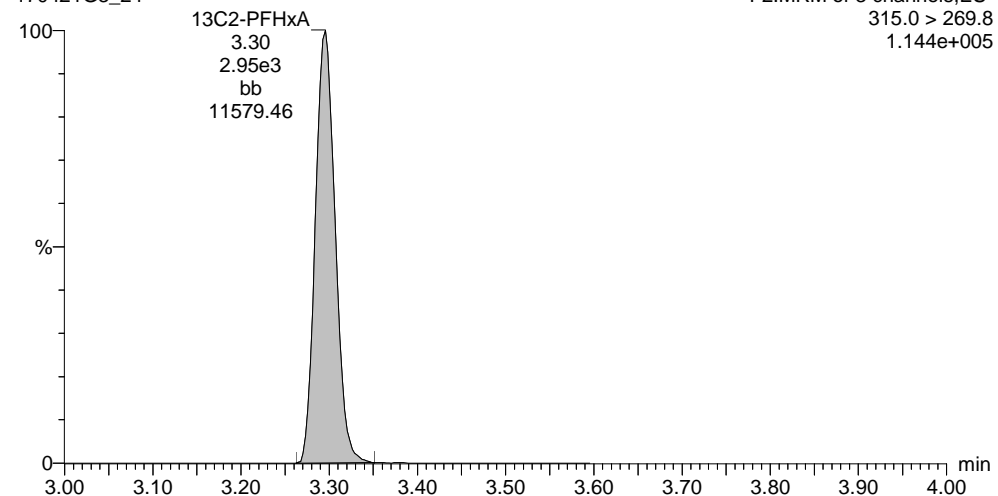
**PFOA**

170421G3\_24



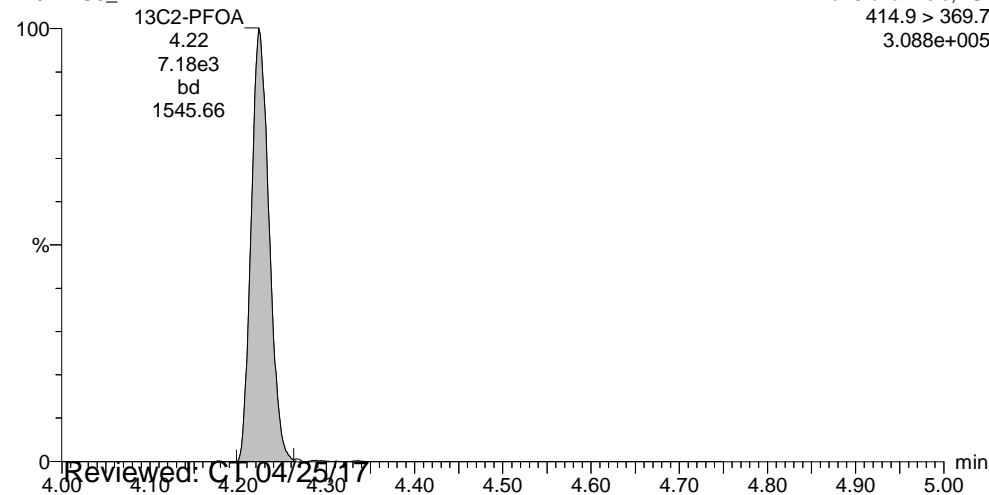
**13C2-PFHxA**

170421G3\_24



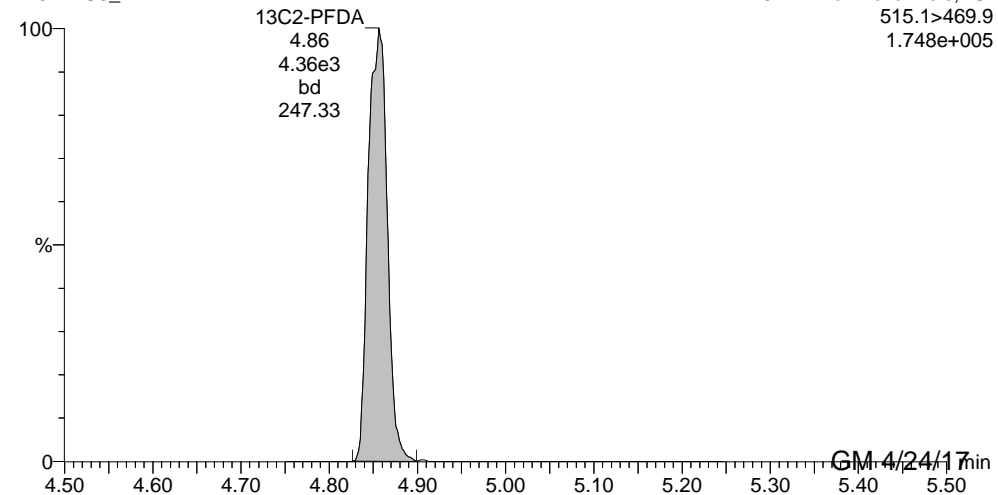
**13C2-PFOA**

170421G3\_24



**13C2-PFDA**

170421G3\_24



Reviewed: C:\04/25/17

GM 4/24/17

Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-24.qld

Last Altered: Friday, April 21, 2017 13:17:37 Pacific Daylight Time

Printed: Friday, April 21, 2017 13:17:54 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: 1700466-07 RW07-20170417 0.25, Description: RW07-20170417, Name: 170420G1\_24, Date: 20-Apr-2017, Time: 21:32:51

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1 PFBS	299 > 79.7	6.980e1	9.006e3		0.268	2.89	0.903	
2	2 PFHpA	363 > 318.9	3.271e2	6.632e3		0.268	3.78	2.05	
3	3 PFHxS	398.9 > 79.6	2.873e2	9.006e3		0.268	3.91	3.22	
4	4 PFOA	413 > 368.7	1.019e3	6.632e3		0.268	4.20	7.38	
5	5 PFOS	499 > 79.9	1.172e2	9.006e3		0.268	4.49	3.99	
6	6 PFNA	463 > 418.8	1.437e2	6.632e3		0.268	4.56	0.594	
7	7 13C2-PFHxA	315.0 > 269.8	2.903e3	6.632e3	0.449	0.268	3.27	36.5	97.6
8	8 13C2-PFDA	515.1 > 469.9	4.421e3	6.632e3	0.803	0.268	4.84	31.0	83.0
9	9 13C2-PFOA	414.9 > 369.7	6.632e3	6.632e3	1.000	0.268	4.21	37.4	100
10	10 13C4-PFOS	503.0 > 79.9	9.006e3	9.006e3	1.000	0.268	4.61	107	100

Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-24.qld

Last Altered: Friday, April 21, 2017 13:17:37 Pacific Daylight Time

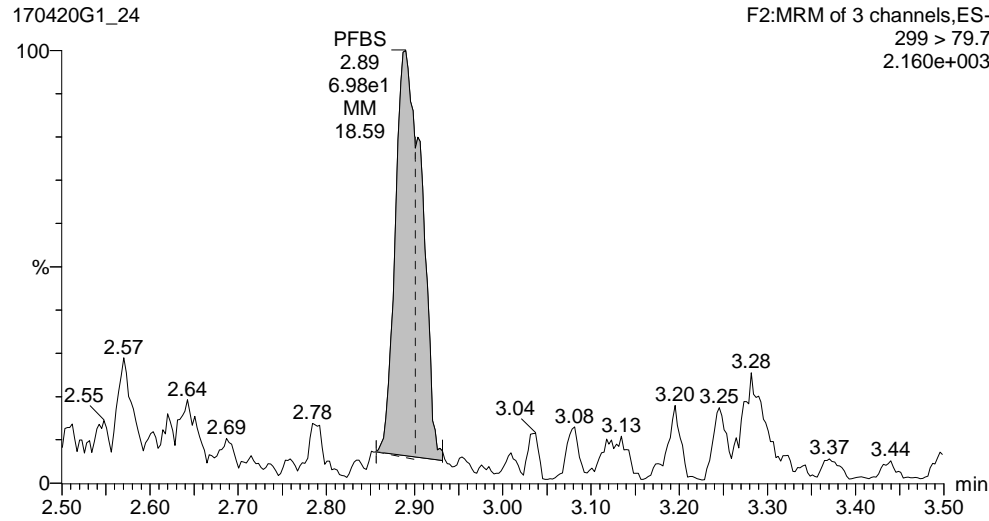
Printed: Friday, April 21, 2017 13:17:54 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

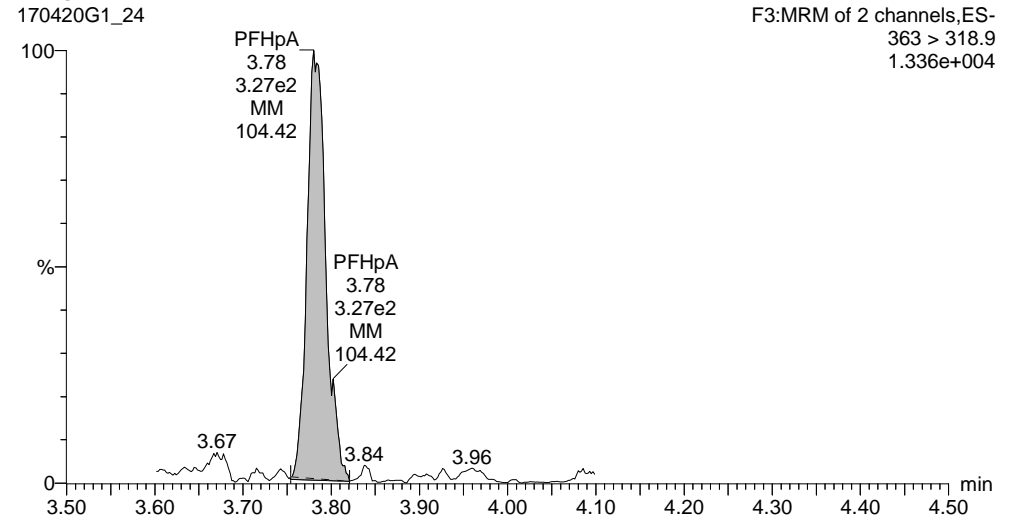
Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: 1700466-07 RW07-20170417 0.25, Description: RW07-20170417, Name: 170420G1\_24, Date: 20-Apr-2017, Time: 21:32:51, Instrument: , Lab: , User:

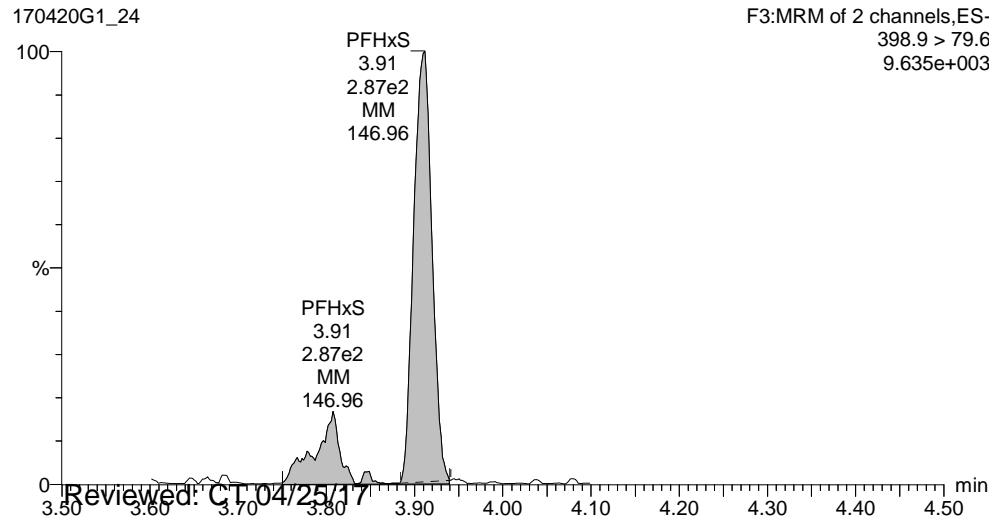
**PFBS**



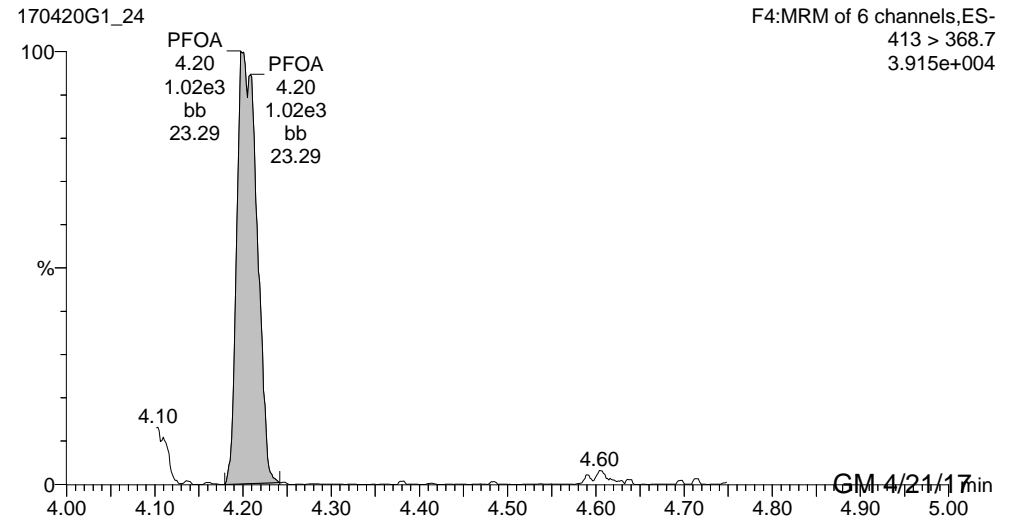
**PFHpA**



**PFHxS**



**PFOA**



Reviewed: C.T. 04/25/17

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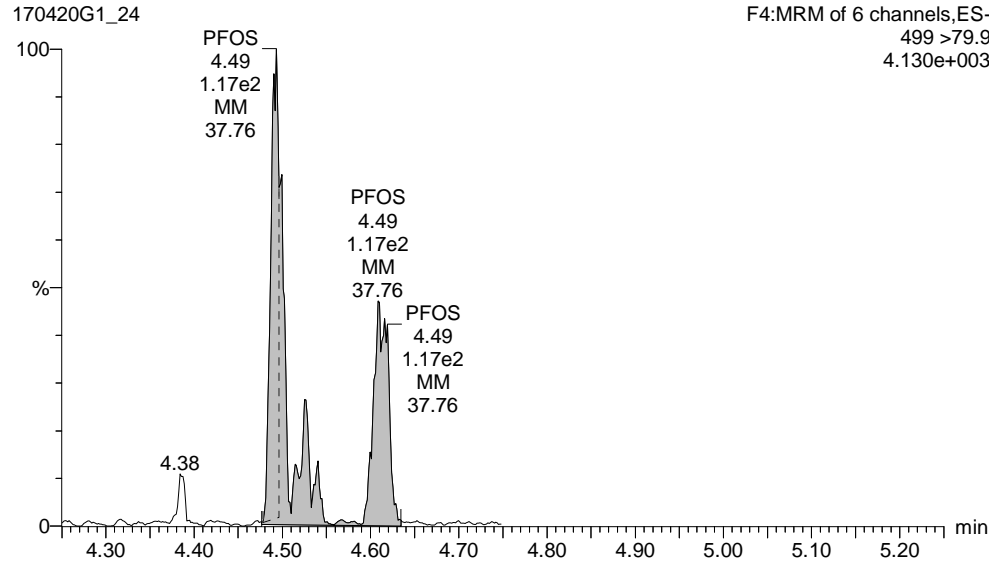
Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-24.qld

Last Altered: Friday, April 21, 2017 13:17:37 Pacific Daylight Time

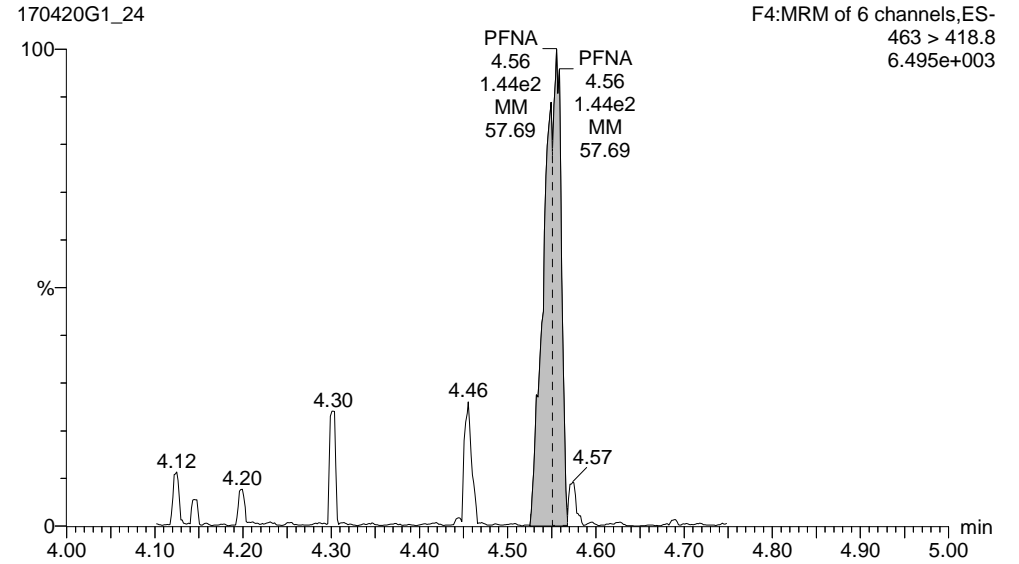
Printed: Friday, April 21, 2017 13:17:54 Pacific Daylight Time

ID: 1700466-07 RW07-20170417 0.25, Description: RW07-20170417, Name: 170420G1\_24, Date: 20-Apr-2017, Time: 21:32:51, Instrument: , Lab: , User:

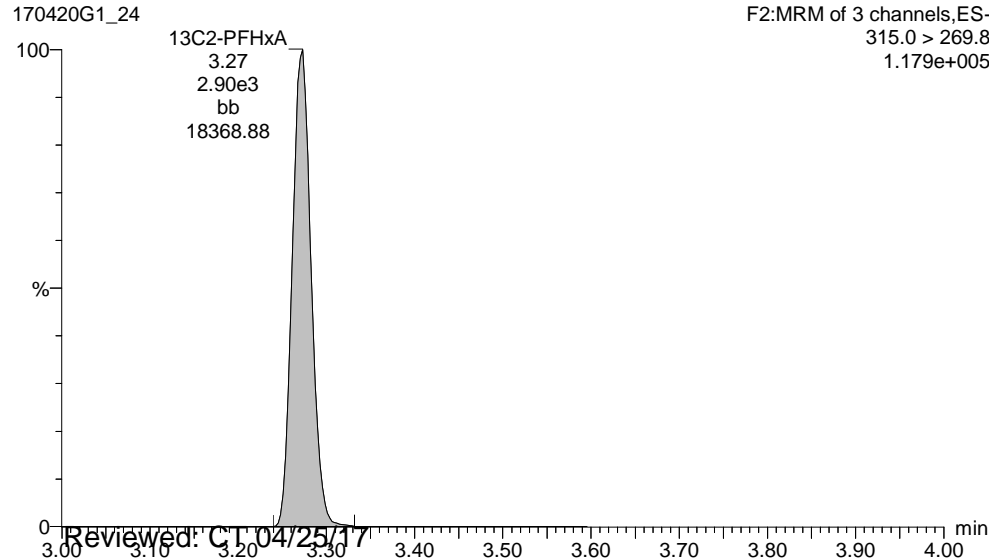
**PFOS**



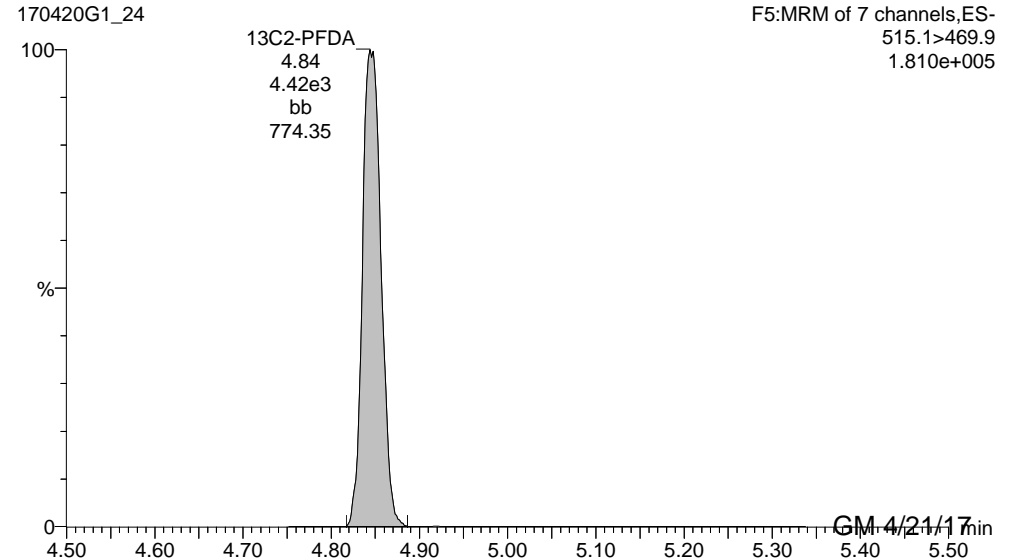
**PFNA**



**13C2-PFHxA**



**13C2-PFDA**



Reviewed: C.T. 04/25/17

GM 4/21/17

Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-24.qld

Last Altered: Friday, April 21, 2017 13:17:37 Pacific Daylight Time

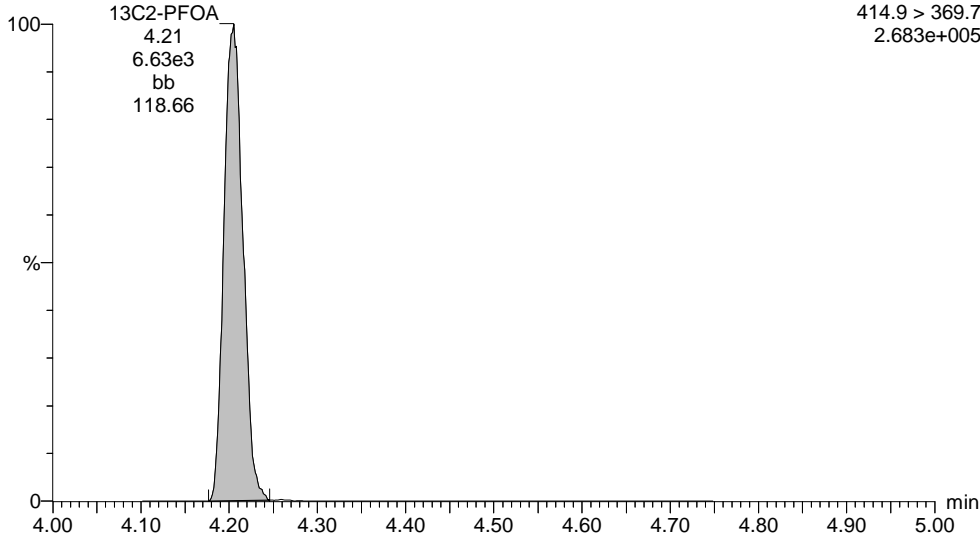
Printed: Friday, April 21, 2017 13:17:54 Pacific Daylight Time

ID: 1700466-07 RW07-20170417 0.25, Description: RW07-20170417, Name: 170420G1\_24, Date: 20-Apr-2017, Time: 21:32:51, Instrument: , Lab: , User:

**13C2-PFOA**

170420G1\_24

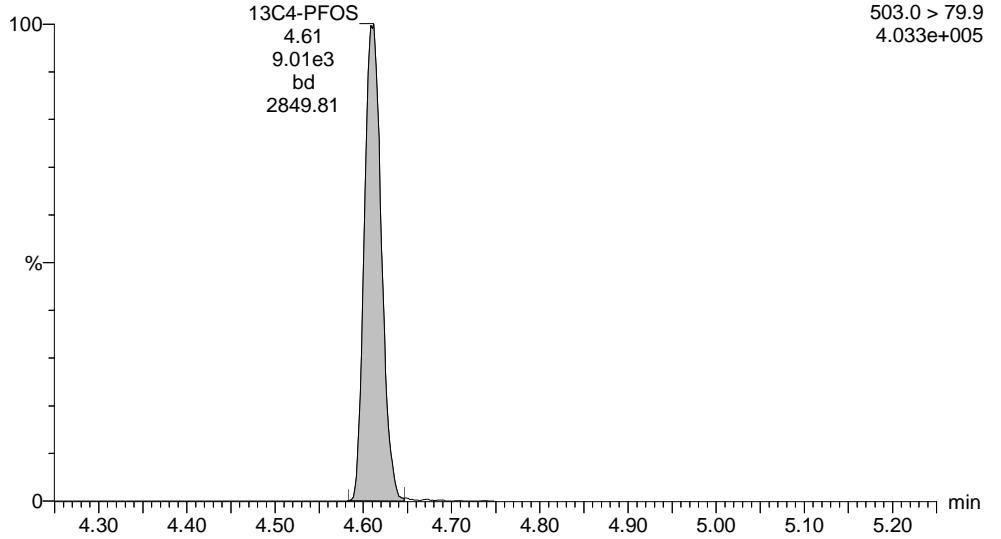
F4:MRM of 6 channels,ES-  
414.9 > 369.7  
2.683e+005



**13C4-PFOS**

170420G1\_24

F4:MRM of 6 channels,ES-  
503.0 > 79.9  
4.033e+005



Dataset: U:\G1.PRO\Results\2017\170421G3\170421G3-25.qld

Last Altered: Monday, April 24, 2017 11:25:00 Pacific Daylight Time

Printed: Monday, April 24, 2017 11:25:31 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: 1700466-07 RW07-20170417 0.25, Description: RW07-20170417, Name: 170421G3\_25, Date: 21-Apr-2017, Time: 22:46:13

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	4 PFOA	413 > 368.7	1.278e3	7.907e3		0.268	4.23	7.77	
2	7 13C2-PFHxA	315.0 > 269.8	2.985e3	7.907e3	0.449	0.268	3.30	31.5	84.1
3	8 13C2-PFDA	515.1 > 469.9	4.921e3	7.907e3	0.803	0.268	4.85	29.0	77.5
4	9 13C2-PFOA	414.9 > 369.7	7.907e3	7.907e3	1.000	0.268	4.22	37.4	100



Dataset: U:\G1.PRO\Results\2017\170421G3\170421G3-25.qld

Last Altered: Monday, April 24, 2017 11:25:00 Pacific Daylight Time

Printed: Monday, April 24, 2017 11:25:31 Pacific Daylight Time

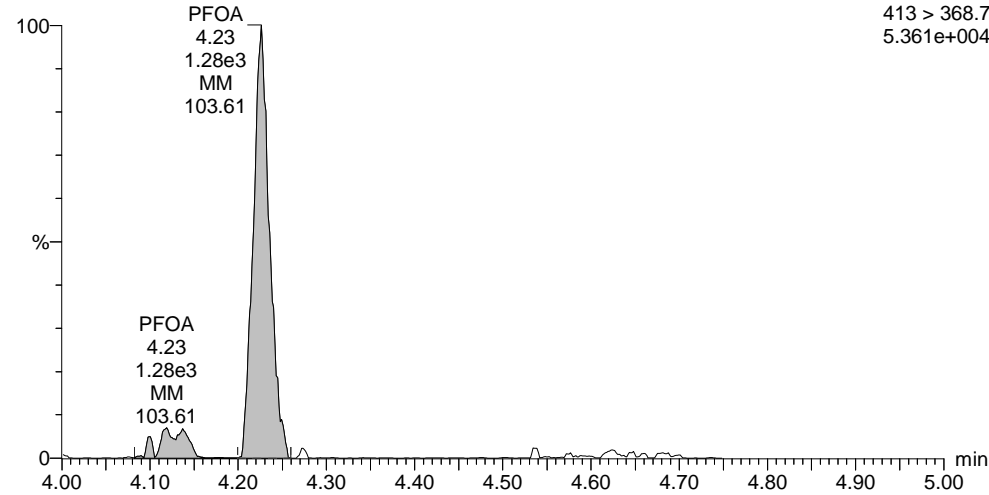
Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: 1700466-07 RW07-20170417 0.25, Description: RW07-20170417, Name: 170421G3\_25, Date: 21-Apr-2017, Time: 22:46:13, Instrument: , Lab: , User:

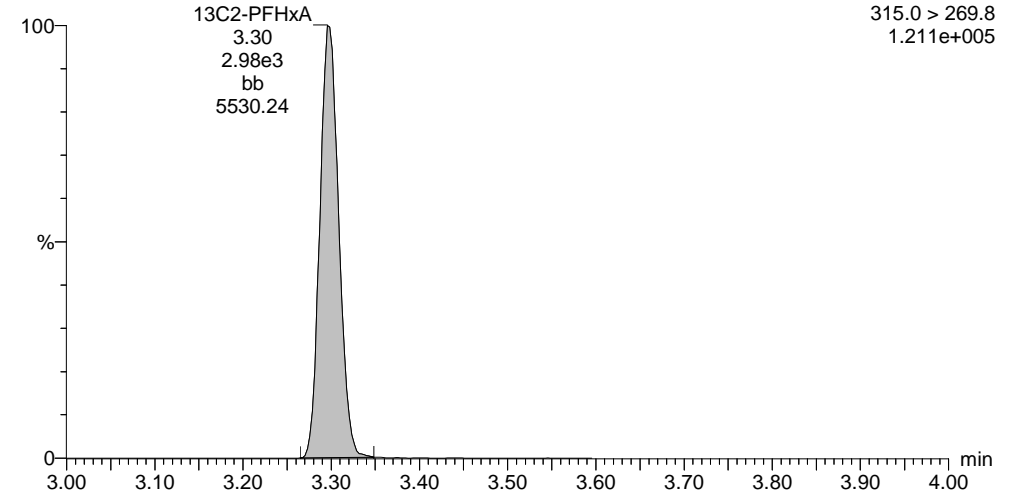
**PFOA**

170421G3\_25



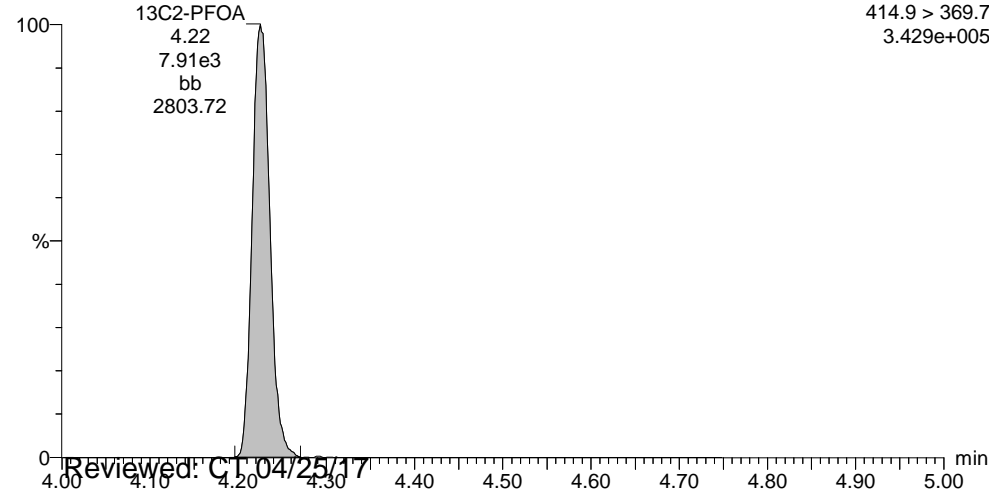
**13C2-PFHxA**

170421G3\_25



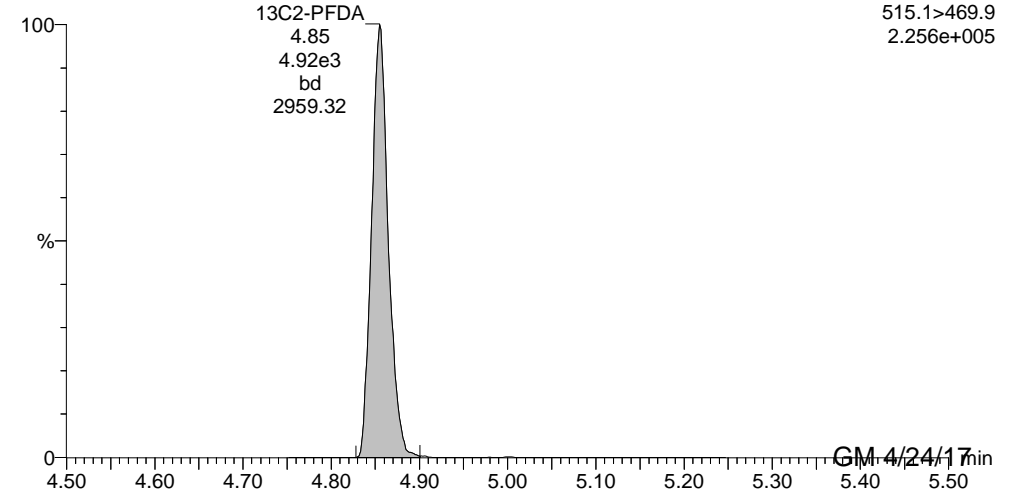
**13C2-PFOA**

170421G3\_25



**13C2-PFDA**

170421G3\_25



Reviewed: C:\04\25\17

GM 4/24/17

Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-25.qld

Last Altered: Friday, April 21, 2017 13:21:59 Pacific Daylight Time

Printed: Friday, April 21, 2017 13:22:25 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: B7D0096-DUP1 Duplicate 0.25, Description: Duplicate, Name: 170420G1\_25, Date: 20-Apr-2017, Time: 21:45:14

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1 PFBS	299 > 79.7	9.965e1	9.043e3		0.278	2.90	1.24	
2	2 PFHpA	363 > 318.9	2.900e2	6.778e3		0.278	3.79	1.72	
3	3 PFHxS	398.9 > 79.6	2.309e2	9.043e3		0.278	3.91	2.48	
4	4 PFOA	413 > 368.7	1.085e3	6.778e3		0.278	4.21	7.40	
5	5 PFOS	499 > 79.9	1.231e2	9.043e3		0.278	4.62	4.02	
6	6 PFNA	463 > 418.8	1.871e2	6.778e3		0.278	4.54	0.728	
7	7 13C2-PFHxA	315.0 > 269.8	2.675e3	6.778e3	0.449	0.278	3.28	31.7	88.0
8	8 13C2-PFDA	515.1 > 469.9	4.511e3	6.778e3	0.803	0.278	4.85	29.8	82.9
9	9 13C2-PFOA	414.9 > 369.7	6.778e3	6.778e3	1.000	0.278	4.21	36.0	100
10	10 13C4-PFOS	503.0 > 79.9	9.043e3	9.043e3	1.000	0.278	4.61	103	100

Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-25.qld

Last Altered: Friday, April 21, 2017 13:21:59 Pacific Daylight Time

Printed: Friday, April 21, 2017 13:22:25 Pacific Daylight Time

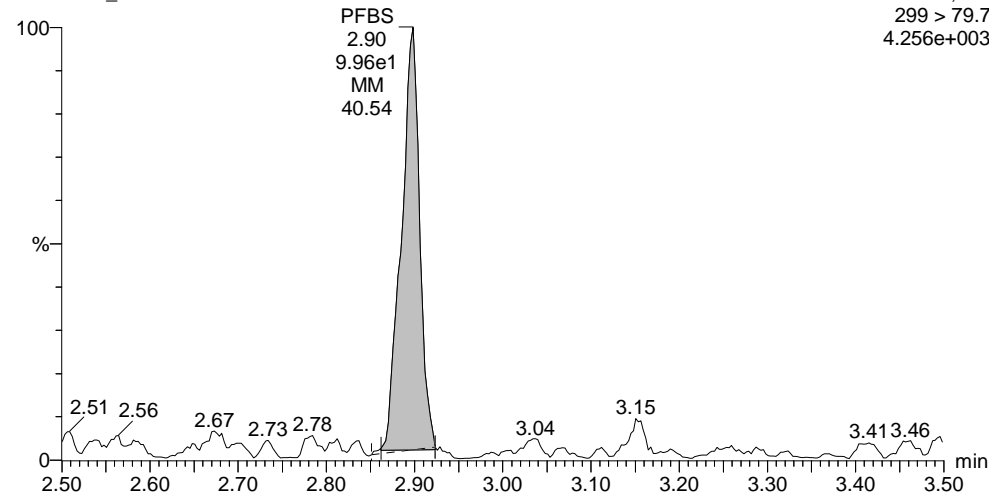
Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: B7D0096-DUP1 Duplicate 0.25, Description: Duplicate, Name: 170420G1\_25, Date: 20-Apr-2017, Time: 21:45:14, Instrument: , Lab: , User:

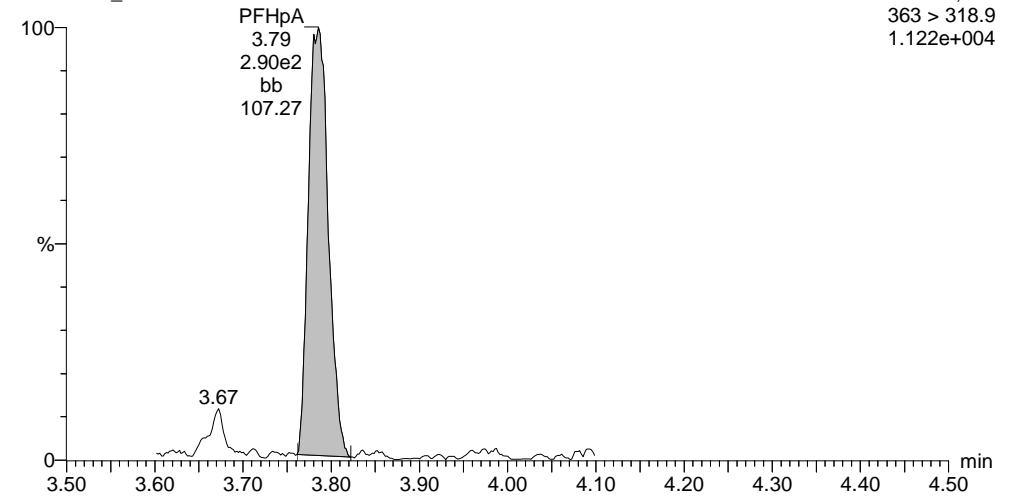
**PFBS**

170420G1\_25



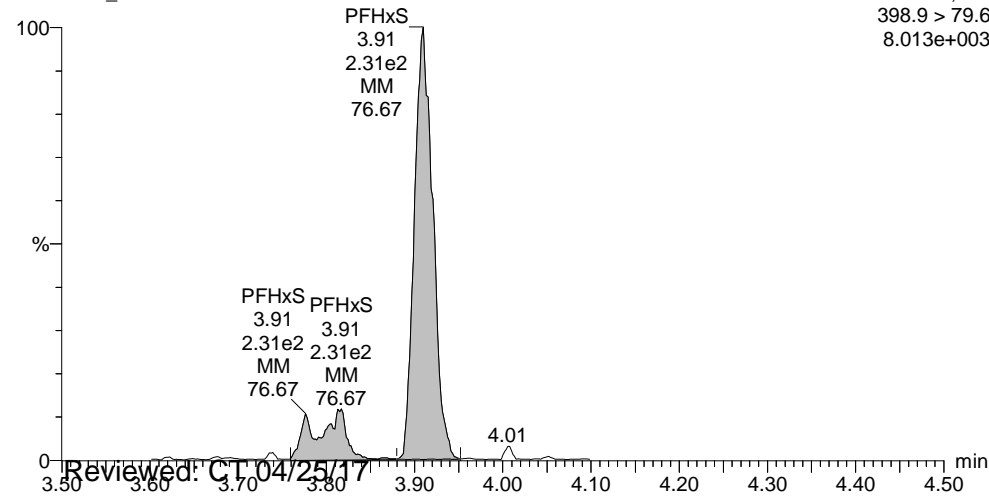
**PFHpA**

170420G1\_25



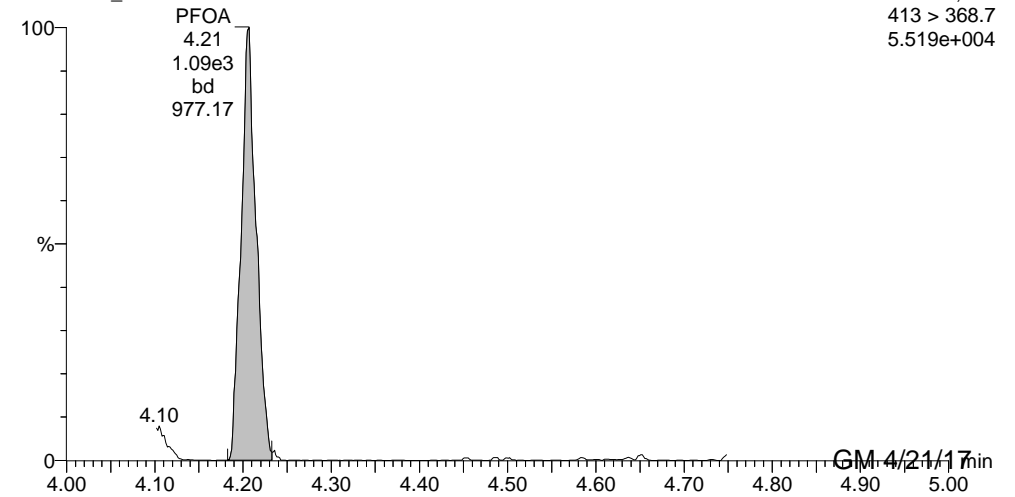
**PFHxS**

170420G1\_25



**PFOA**

170420G1\_25



Reviewed: C1 04/25/17

GM 4/21/17

Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-25.qld

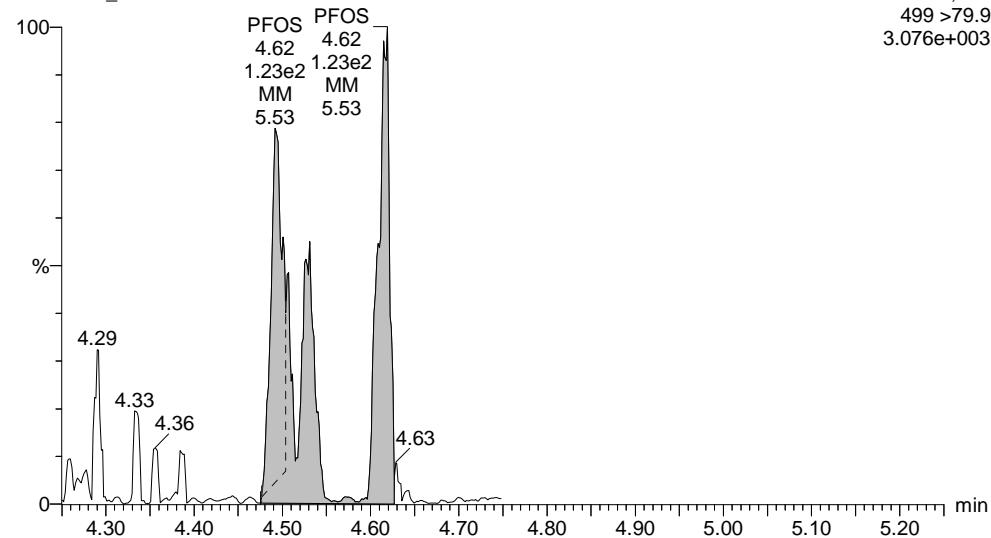
Last Altered: Friday, April 21, 2017 13:21:59 Pacific Daylight Time

Printed: Friday, April 21, 2017 13:22:25 Pacific Daylight Time

ID: B7D0096-DUP1 Duplicate 0.25, Description: Duplicate, Name: 170420G1\_25, Date: 20-Apr-2017, Time: 21:45:14, Instrument: , Lab: , User:

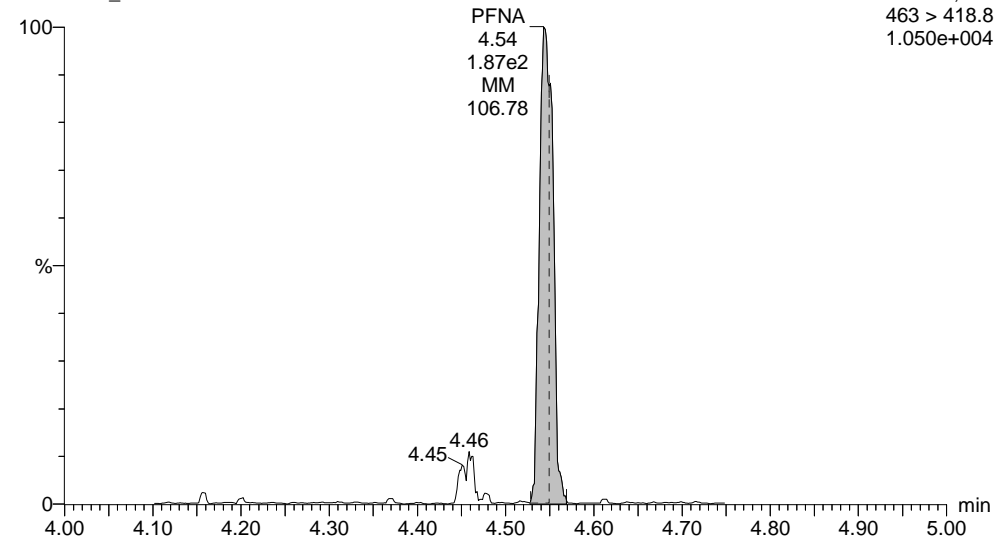
**PFOS**

170420G1\_25



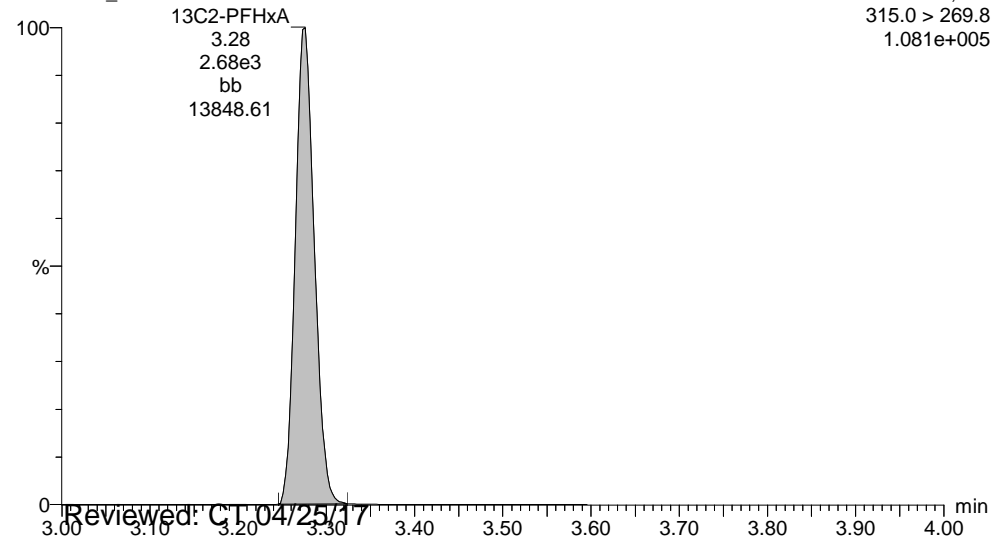
**PFNA**

170420G1\_25



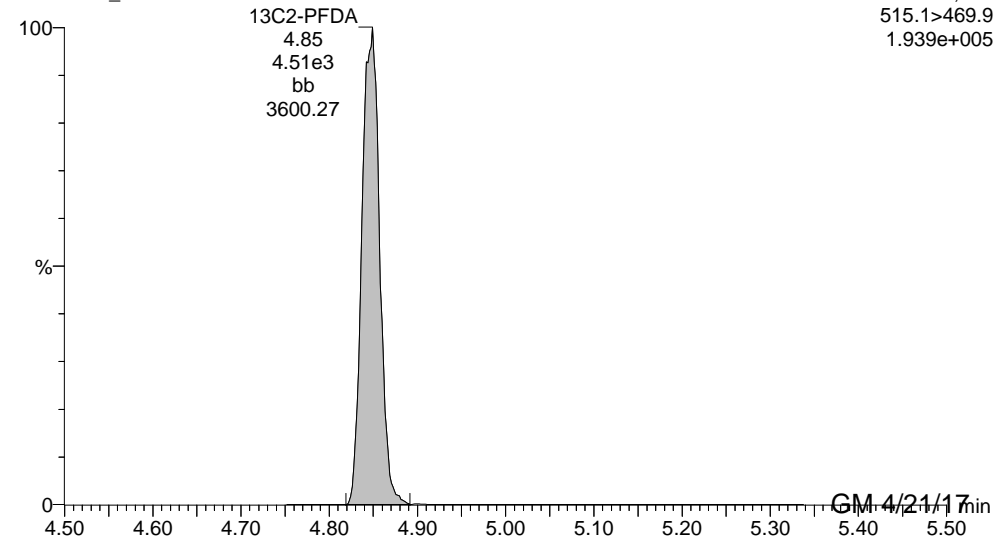
**13C2-PFHxA**

170420G1\_25



**13C2-PFDA**

170420G1\_25



Reviewed: C.T. 04/25/17

GM 4/21/17

Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-25.qld

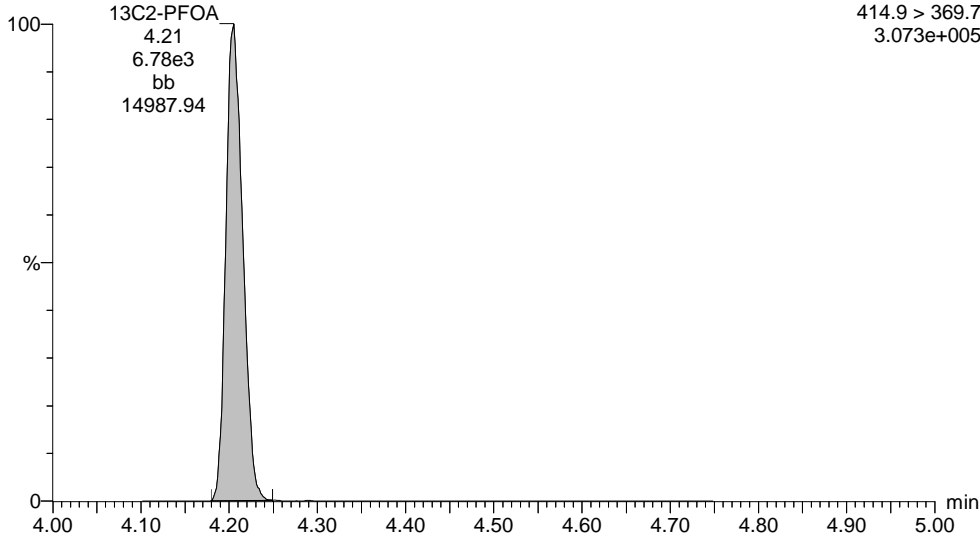
Last Altered: Friday, April 21, 2017 13:21:59 Pacific Daylight Time

Printed: Friday, April 21, 2017 13:22:25 Pacific Daylight Time

ID: B7D0096-DUP1 Duplicate 0.25, Description: Duplicate, Name: 170420G1\_25, Date: 20-Apr-2017, Time: 21:45:14, Instrument: , Lab: , User:

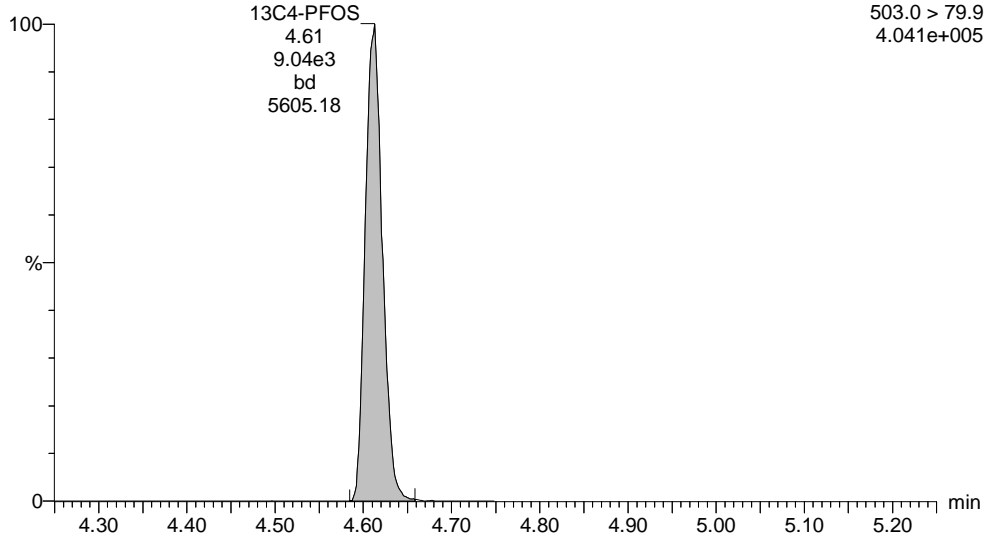
**13C2-PFOA**

170420G1\_25



**13C4-PFOS**

170420G1\_25



Dataset: U:\G1.PRO\Results\2017\170421G3\170421G3-26.qld

Last Altered: Monday, April 24, 2017 11:26:27 Pacific Daylight Time

Printed: Monday, April 24, 2017 11:27:41 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: B7D0096-DUP1 Duplicate 0.25, Description: Duplicate, Name: 170421G3\_26, Date: 21-Apr-2017, Time: 22:58:35

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	4 PFOA	413 > 368.7	1.362e3	7.397e3		0.278	4.22	8.51	
2	7 13C2-PFHxA	315.0 > 269.8	2.788e3	7.397e3	0.449	0.278	3.30	30.2	84.0
3	8 13C2-PFDA	515.1>469.9	4.469e3	7.397e3	0.803	0.278	4.85	27.1	75.2
4	9 13C2-PFOA	414.9 > 369.7	7.397e3	7.397e3	1.000	0.278	4.22	36.0	100

Dataset: U:\G1.PRO\Results\2017\170421G3\170421G3-26.qld

Last Altered: Monday, April 24, 2017 11:26:27 Pacific Daylight Time

Printed: Monday, April 24, 2017 11:27:41 Pacific Daylight Time

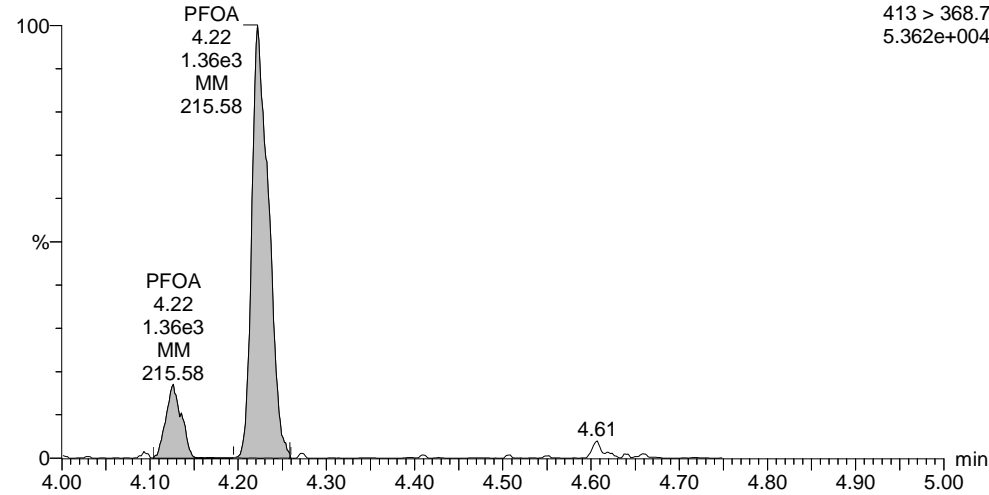
Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: B7D0096-DUP1 Duplicate 0.25, Description: Duplicate, Name: 170421G3\_26, Date: 21-Apr-2017, Time: 22:58:35, Instrument: , Lab: , User:

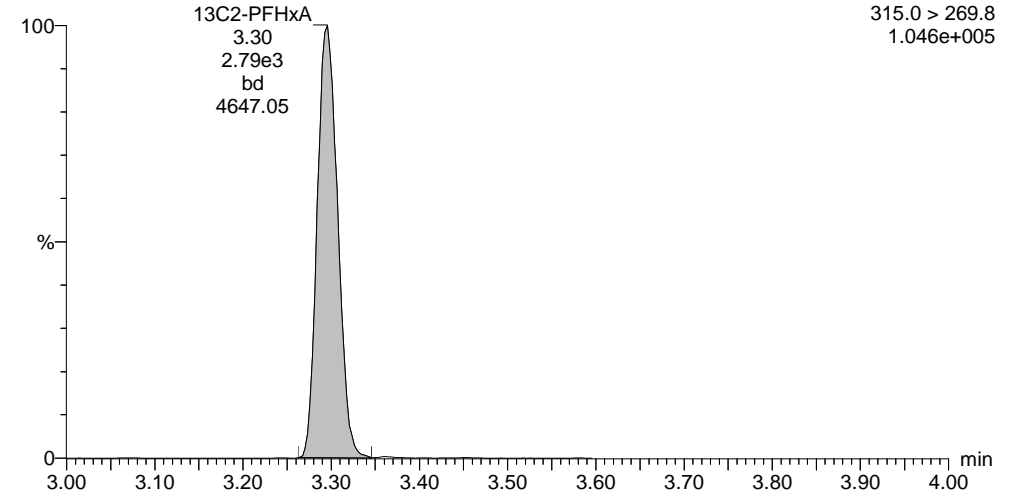
**PFOA**

170421G3\_26



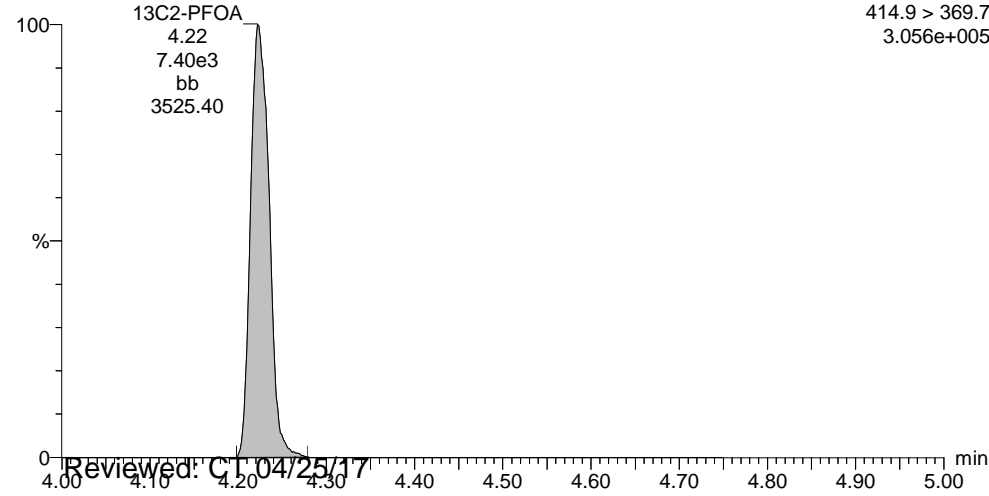
**13C2-PFHxA**

170421G3\_26



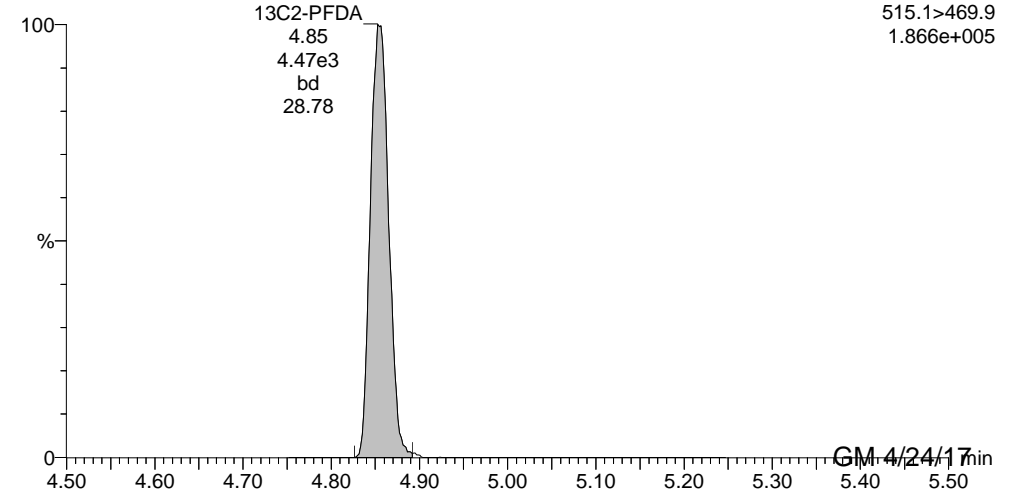
**13C2-PFOA**

170421G3\_26



**13C2-PFDA**

170421G3\_26



Reviewed: C:\04\25\17

GM 4/24/17

Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-26.qld

Last Altered: Friday, April 21, 2017 13:31:13 Pacific Daylight Time

Printed: Friday, April 21, 2017 13:32:15 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: 1700466-08 FRB-07-20170417 0.25, Description: FRB-07-20170417, Name: 170420G1\_26, Date: 20-Apr-2017, Time: 21:57:38

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1 PFBS	299 > 79.7		9.001e3		0.287			
2	2 PFHpA	363 > 318.9		6.612e3		0.287			
3	3 PFHxS	398.9 > 79.6		9.001e3		0.287			
4	4 PFOA	413 > 368.7	1.766e1	6.612e3		0.287	4.21	0.119	
5	5 PFOS	499 > 79.9		9.001e3		0.287			
6	6 PFNA	463 > 418.8		6.612e3		0.287			
7	7 13C2-PFHxA	315.0 > 269.8	2.760e3	6.612e3	0.449	0.287	3.27	32.4	93.0
8	8 13C2-PFDA	515.1 > 469.9	4.509e3	6.612e3	0.803	0.287	4.85	29.6	84.9
9	9 13C2-PFOA	414.9 > 369.7	6.612e3	6.612e3	1.000	0.287	4.20	34.9	100
10	10 13C4-PFOS	503.0 > 79.9	9.001e3	9.001e3	1.000	0.287	4.61	100	100



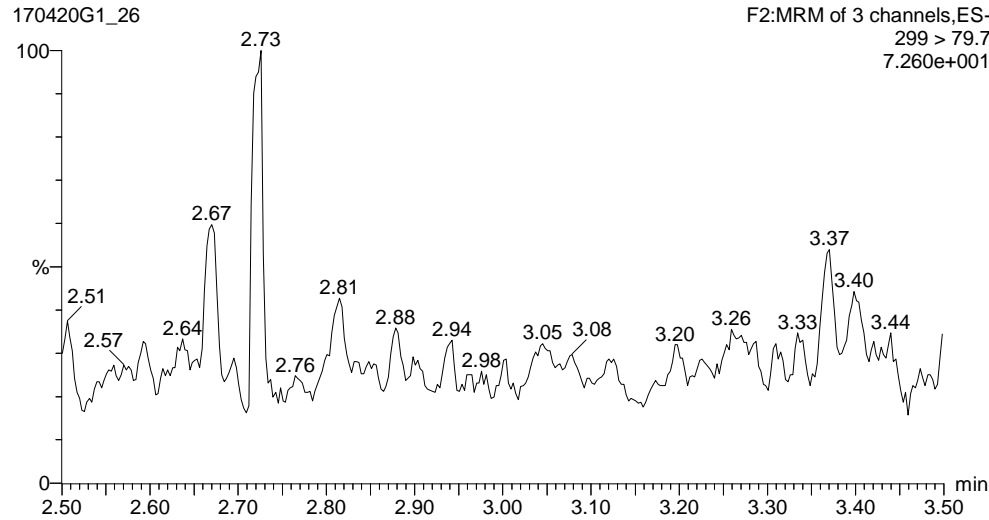
Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-26.qld

Last Altered: Friday, April 21, 2017 13:31:13 Pacific Daylight Time  
Printed: Friday, April 21, 2017 13:32:15 Pacific Daylight Time

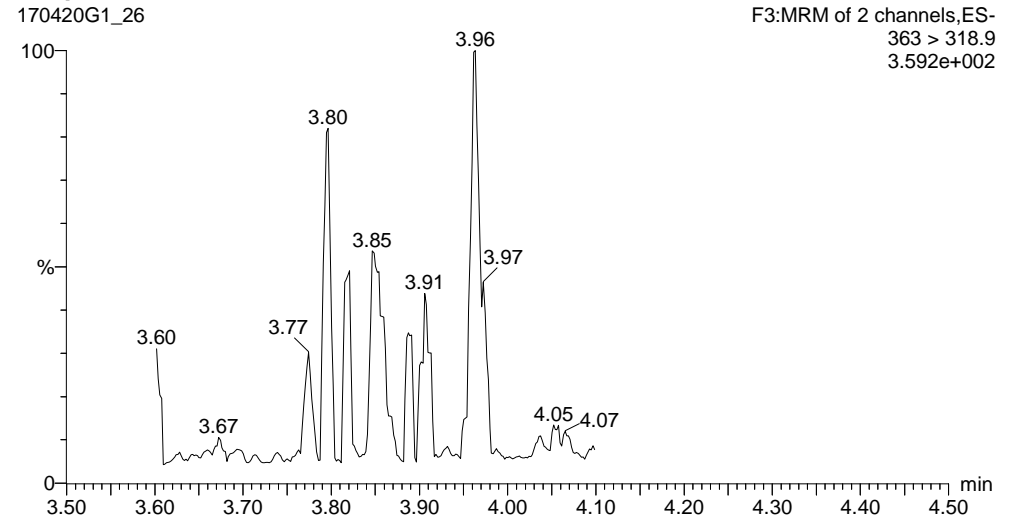
Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59  
Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: 1700466-08 FRB-07-20170417 0.25, Description: FRB-07-20170417, Name: 170420G1\_26, Date: 20-Apr-2017, Time: 21:57:38, Instrument: , Lab: , User:

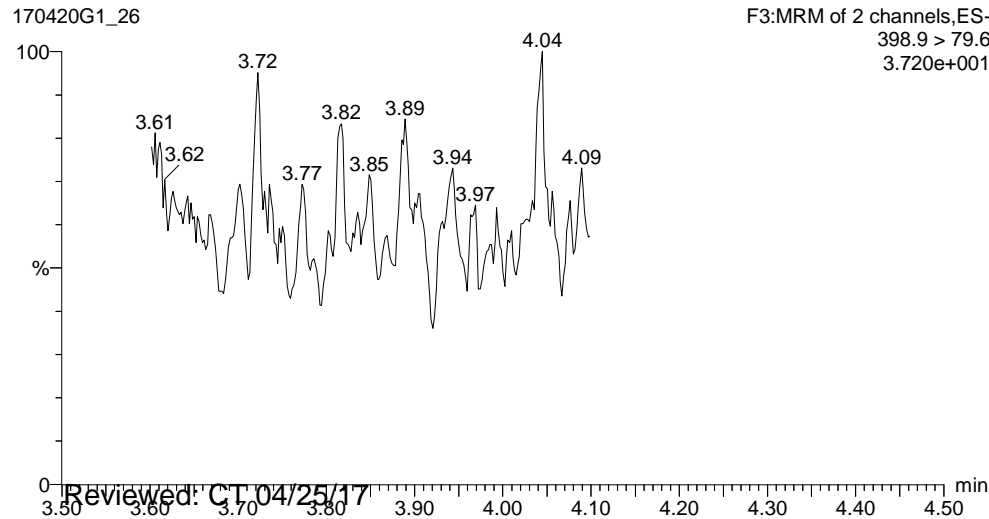
PFBS



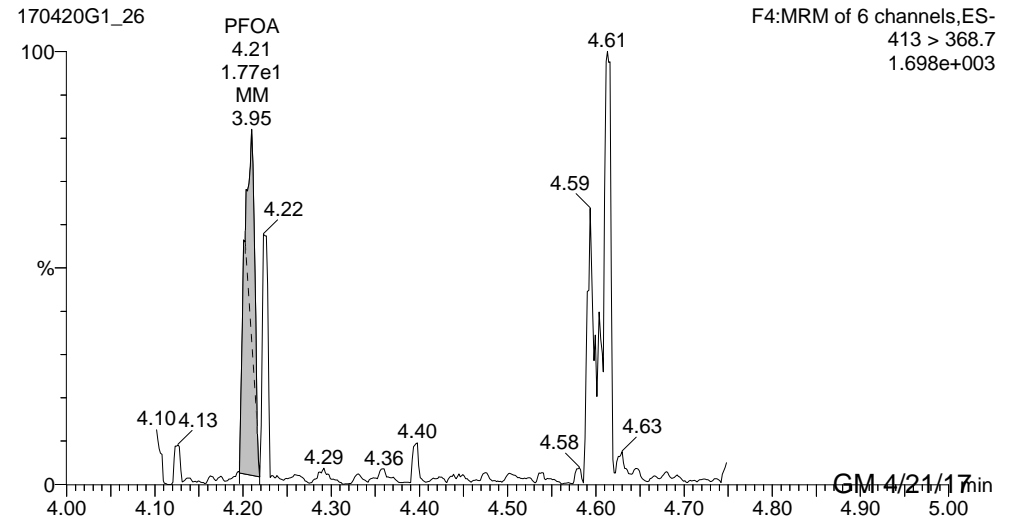
PFHpA



PFHxS



PFOA



Reviewed: CT 04/25/17

GM 4/21/17

Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-26.qld

Last Altered: Friday, April 21, 2017 13:31:13 Pacific Daylight Time

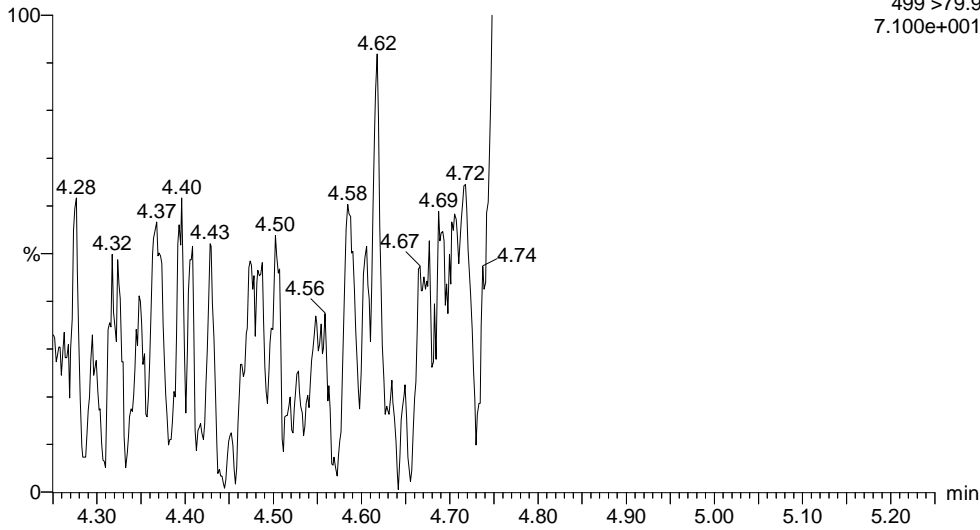
Printed: Friday, April 21, 2017 13:32:15 Pacific Daylight Time

ID: 1700466-08 FRB-07-20170417 0.25, Description: FRB-07-20170417, Name: 170420G1\_26, Date: 20-Apr-2017, Time: 21:57:38, Instrument: , Lab: , User:

**PFOS**

170420G1\_26

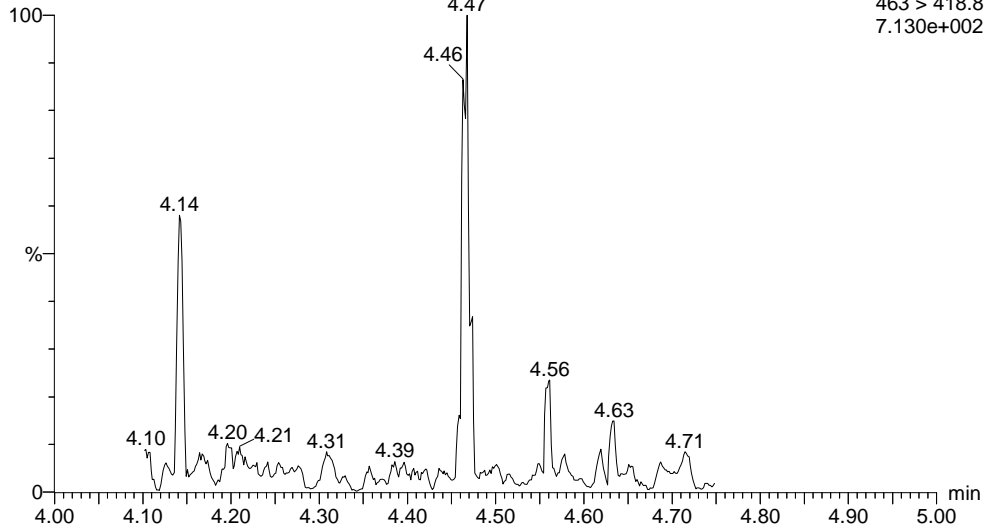
F4:MRM of 6 channels,ES-  
499 >79.9  
7.100e+001



**PFNA**

170420G1\_26

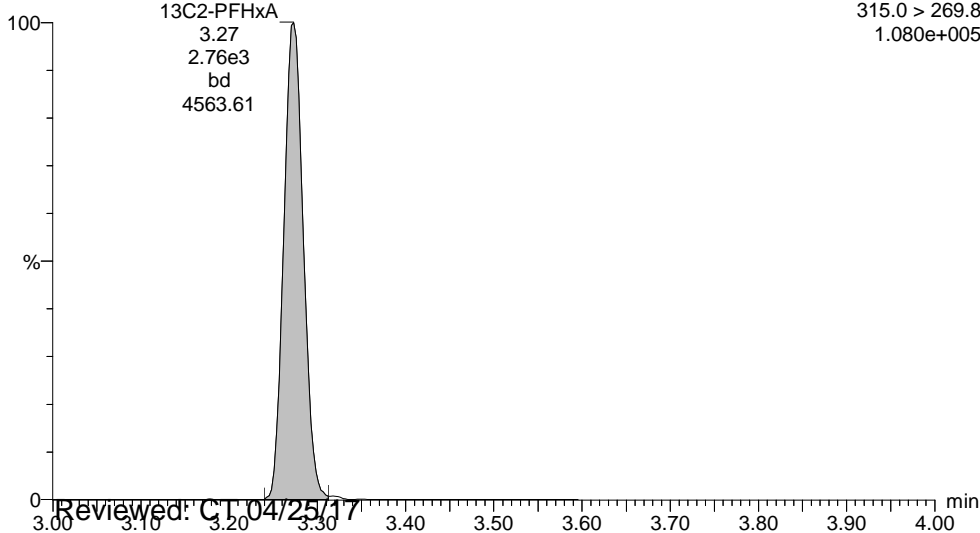
F4:MRM of 6 channels,ES-  
463 > 418.8  
7.130e+002



**13C2-PFHxA**

170420G1\_26

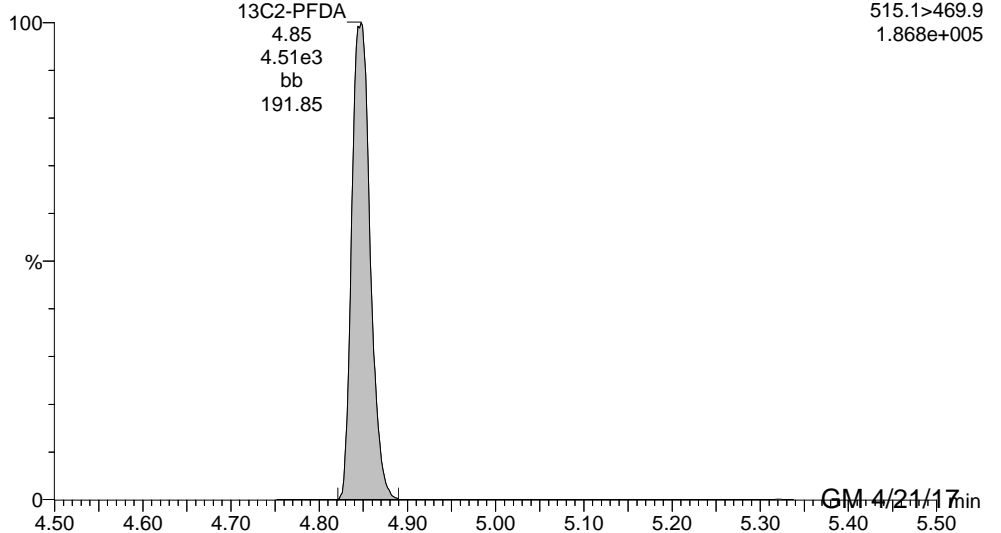
F2:MRM of 3 channels,ES-  
315.0 > 269.8  
1.080e+005



**13C2-PFDA**

170420G1\_26

F5:MRM of 7 channels,ES-  
515.1 >469.9  
1.868e+005



Reviewed: C:\04/25/17

GM 4/21/17

Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-26.qld

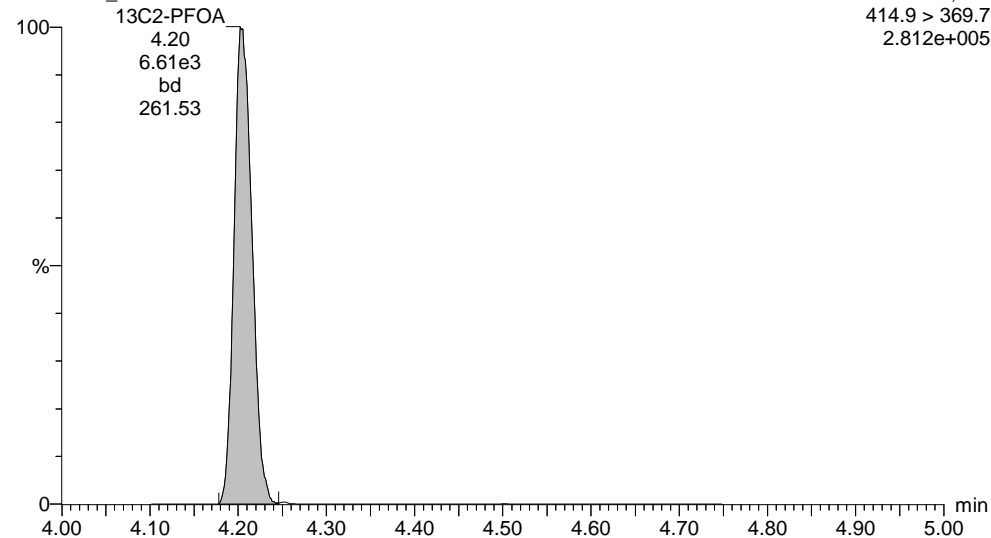
Last Altered: Friday, April 21, 2017 13:31:13 Pacific Daylight Time

Printed: Friday, April 21, 2017 13:32:15 Pacific Daylight Time

ID: 1700466-08 FRB-07-20170417 0.25, Description: FRB-07-20170417, Name: 170420G1\_26, Date: 20-Apr-2017, Time: 21:57:38, Instrument: , Lab: , User:

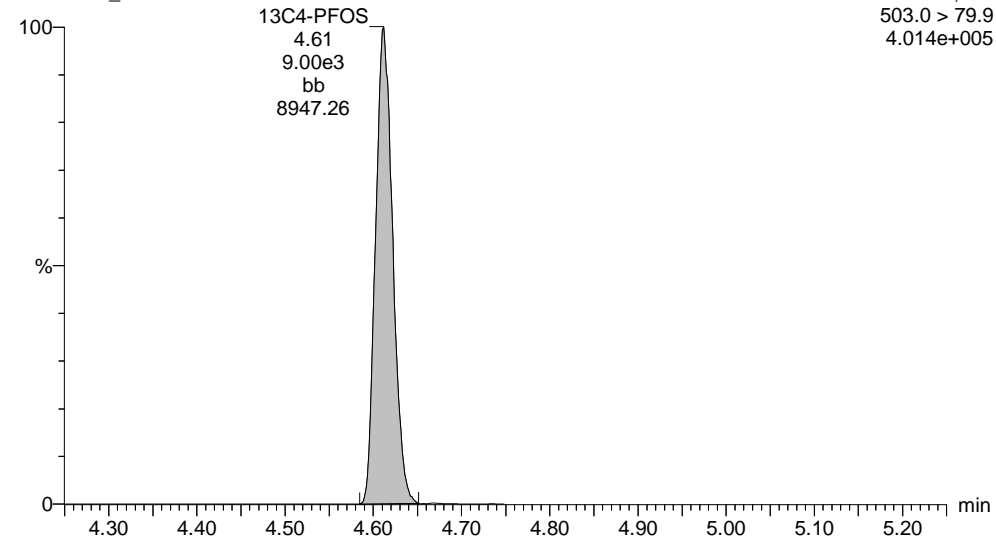
**13C2-PFOA**

170420G1\_26



**13C4-PFOS**

170420G1\_26



Dataset: U:\G1.PRO\Results\2017\170421G3\170421G3-27.qld

Last Altered: Monday, April 24, 2017 11:28:34 Pacific Daylight Time

Printed: Monday, April 24, 2017 11:31:11 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: 1700466-08 FRB-07-20170417 0.25, Description: FRB-07-20170417, Name: 170421G3\_27, Date: 21-Apr-2017, Time: 23:10:56

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	4 PFOA	413 > 368.7	2.350e1	7.410e3		0.287	4.23	0.142	
2	7 13C2-PFHxA	315.0 > 269.8	2.937e3	7.410e3	0.449	0.287	3.30	30.8	88.4
3	8 13C2-PFDA	515.1 > 469.9	4.839e3	7.410e3	0.803	0.287	4.85	28.4	81.3
4	9 13C2-PFOA	414.9 > 369.7	7.410e3	7.410e3	1.000	0.287	4.22	34.9	100

Dataset: U:\G1.PRO\Results\2017\170421G3\170421G3-27.qld

Last Altered: Monday, April 24, 2017 11:28:34 Pacific Daylight Time

Printed: Monday, April 24, 2017 11:31:11 Pacific Daylight Time

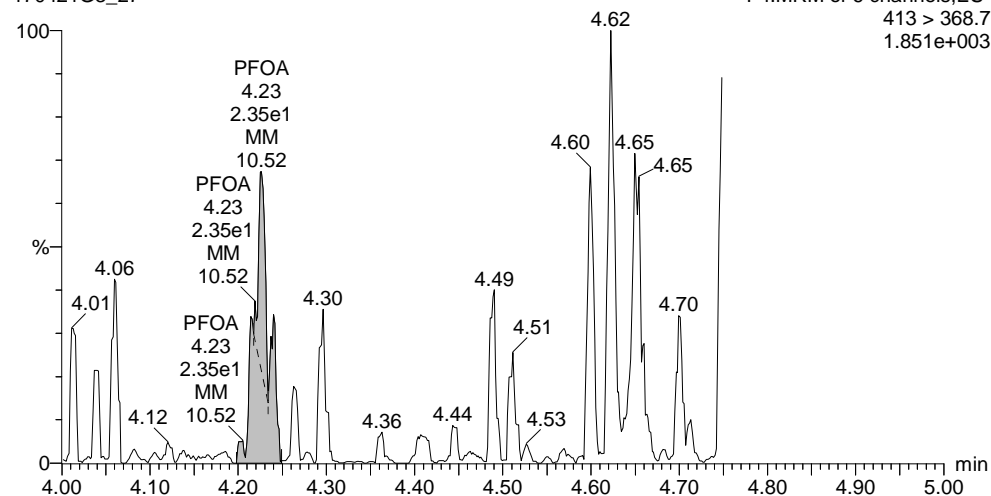
Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: 1700466-08 FRB-07-20170417 0.25, Description: FRB-07-20170417, Name: 170421G3\_27, Date: 21-Apr-2017, Time: 23:10:56, Instrument: , Lab: , User:

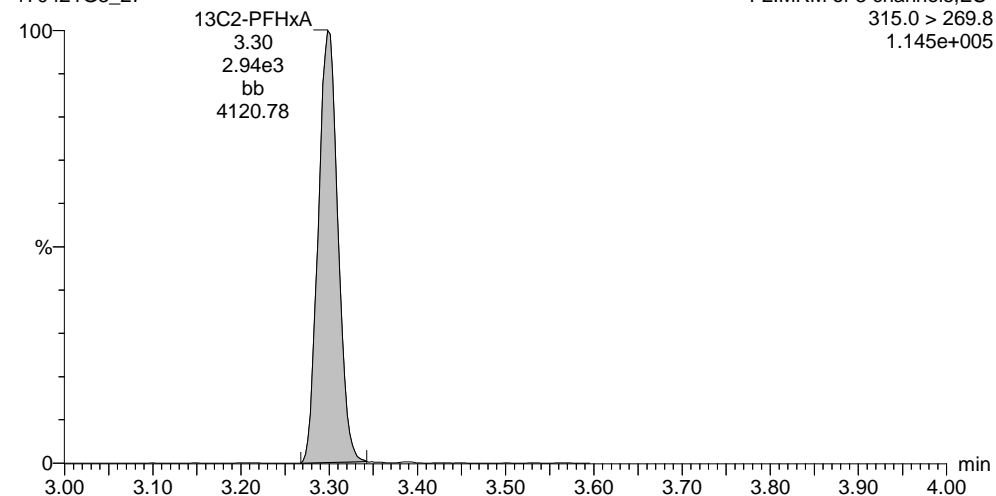
**PFOA**

170421G3\_27



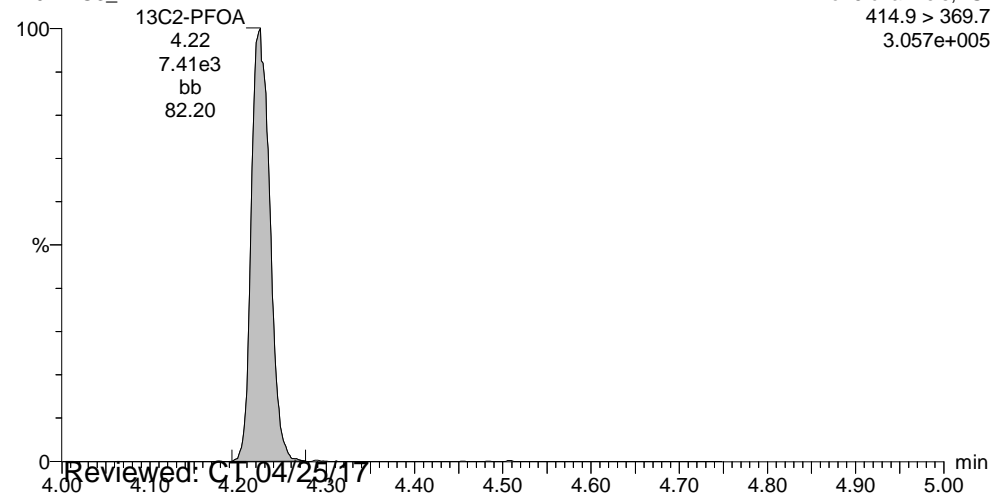
**13C2-PFHxA**

170421G3\_27



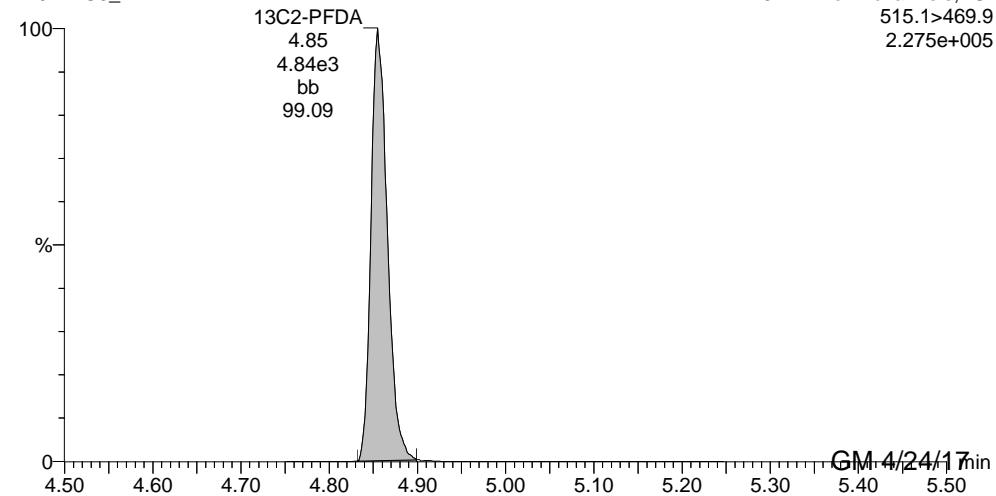
**13C2-PFOA**

170421G3\_27



**13C2-PFDA**

170421G3\_27



Reviewed: C:\04/25/17

GM 4/24/17

Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-27.qld

Last Altered: Friday, April 21, 2017 13:34:39 Pacific Daylight Time

Printed: Friday, April 21, 2017 13:34:55 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: 1700466-09 RW03-20170417 0.25, Description: RW03-20170417, Name: 170420G1\_27, Date: 20-Apr-2017, Time: 22:10:03

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1 PFBS	299 > 79.7	3.099e2	8.261e3		0.281	2.89	4.17	
2	2 PFHpA	363 > 318.9	3.059e2	6.013e3		0.281	3.79	2.02	
3	3 PFHxS	398.9 > 79.6	1.789e2	8.261e3		0.281	3.91	2.08	
4	4 PFOA	413 > 368.7	8.072e2	6.013e3		0.281	4.21	6.14	
5	5 PFOS	499 > 79.9	1.575e2	8.261e3		0.281	4.49	5.58	
6	6 PFNA	463 > 418.8	1.627e2	6.013e3		0.281	4.55	0.706	
7	7 13C2-PFHxA	315.0 > 269.8	2.705e3	6.013e3	0.449	0.281	3.27	35.7	100
8	8 13C2-PFDA	515.1 > 469.9	4.573e3	6.013e3	0.803	0.281	4.85	33.7	94.7
9	9 13C2-PFOA	414.9 > 369.7	6.013e3	6.013e3	1.000	0.281	4.20	35.6	100
10	10 13C4-PFOS	503.0 > 79.9	8.261e3	8.261e3	1.000	0.281	4.61	102	100

Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-27.qld

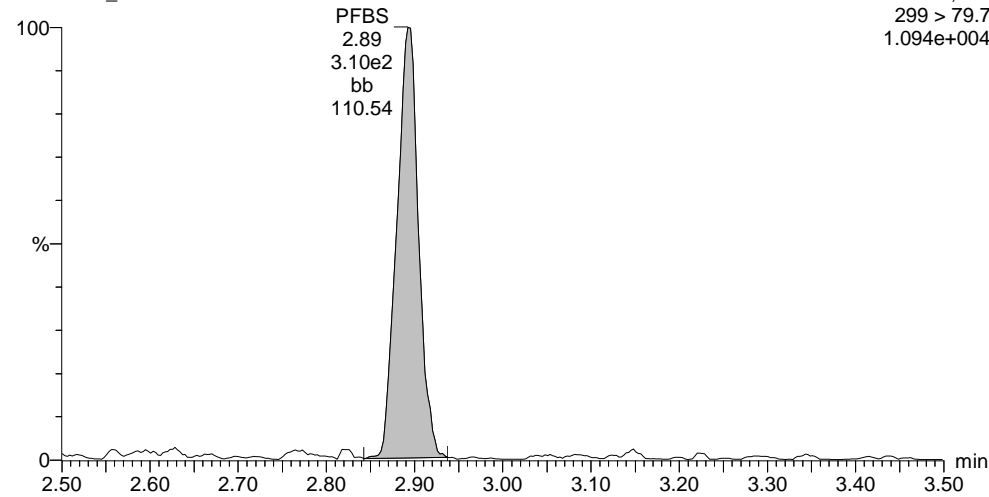
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Printed: Friday, April 21, 2017 13:34:55 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59  
Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: 1700466-09 RW03-20170417 0.25, Description: RW03-20170417, Name: 170420G1\_27, Date: 20-Apr-2017, Time: 22:10:03, Instrument: , Lab: , User:

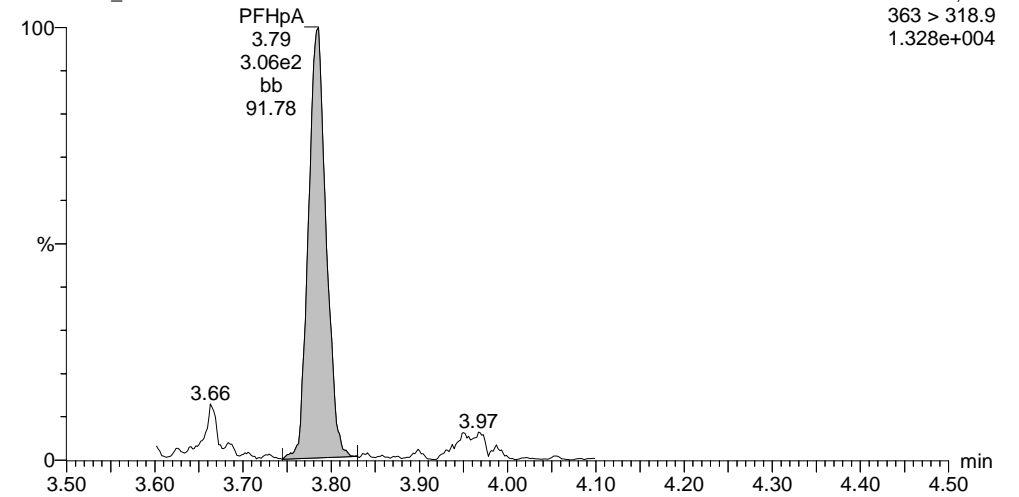
**PFBS**

170420G1\_27



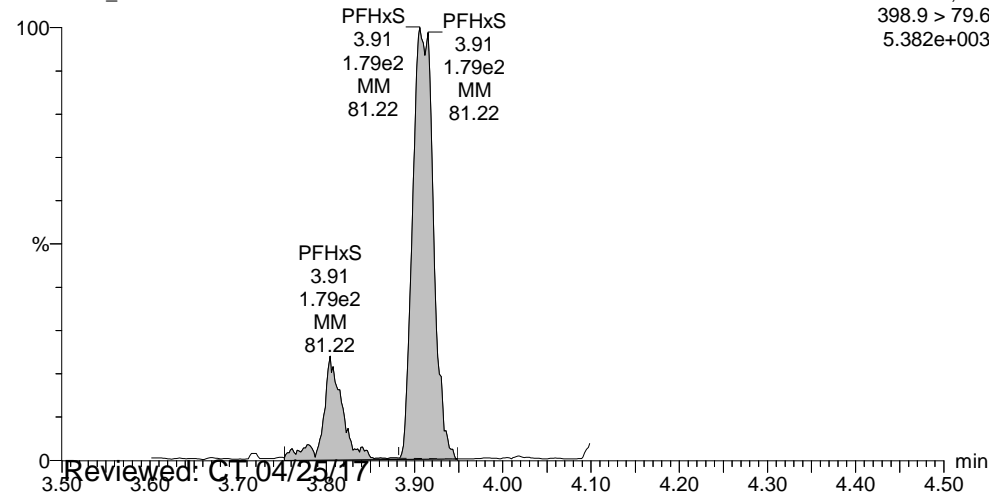
**PFHpA**

170420G1\_27



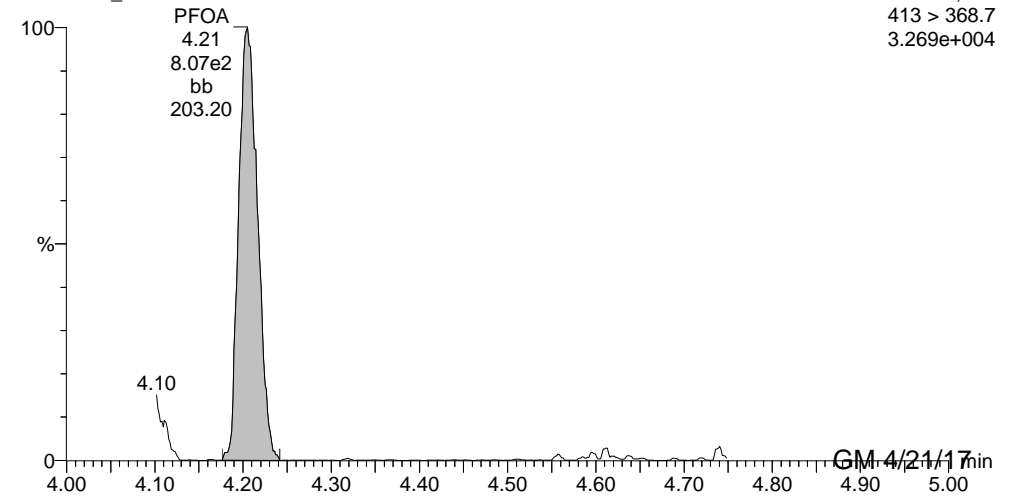
**PFHxS**

170420G1\_27



**PFOA**

170420G1\_27



Reviewed: C1 04/25/17

GM 4/21/17

Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-27.qld

Last Altered: Friday, April 21, 2017 13:34:39 Pacific Daylight Time

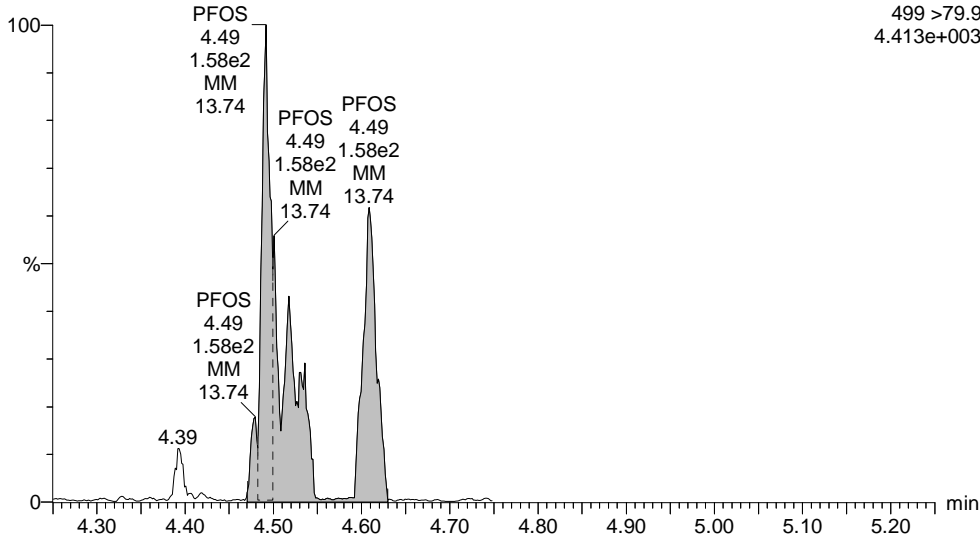
Printed: Friday, April 21, 2017 13:34:55 Pacific Daylight Time

ID: 1700466-09 RW03-20170417 0.25, Description: RW03-20170417, Name: 170420G1\_27, Date: 20-Apr-2017, Time: 22:10:03, Instrument: , Lab: , User:

**PFOS**

170420G1\_27

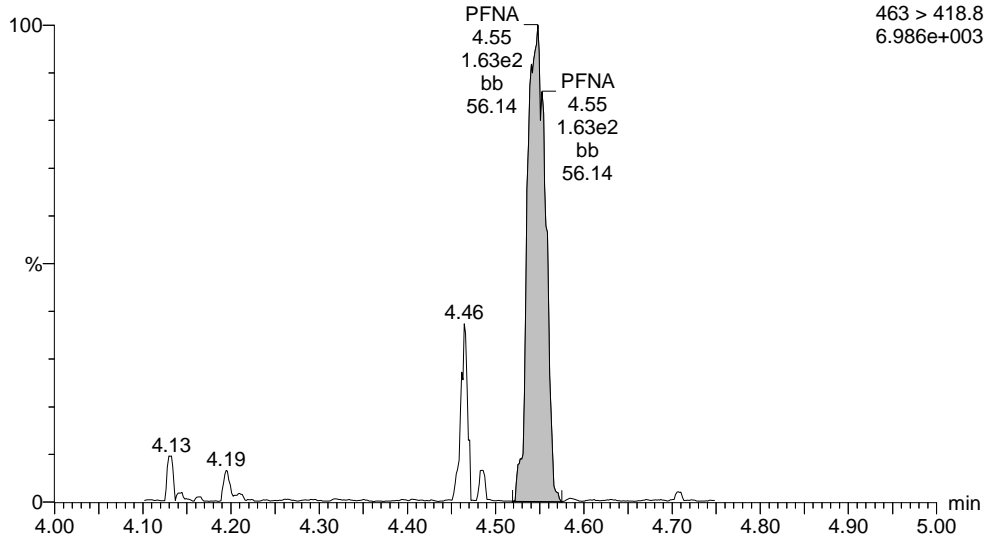
F4:MRM of 6 channels,ES-  
499 >79.9  
4.413e+003



**PFNA**

170420G1\_27

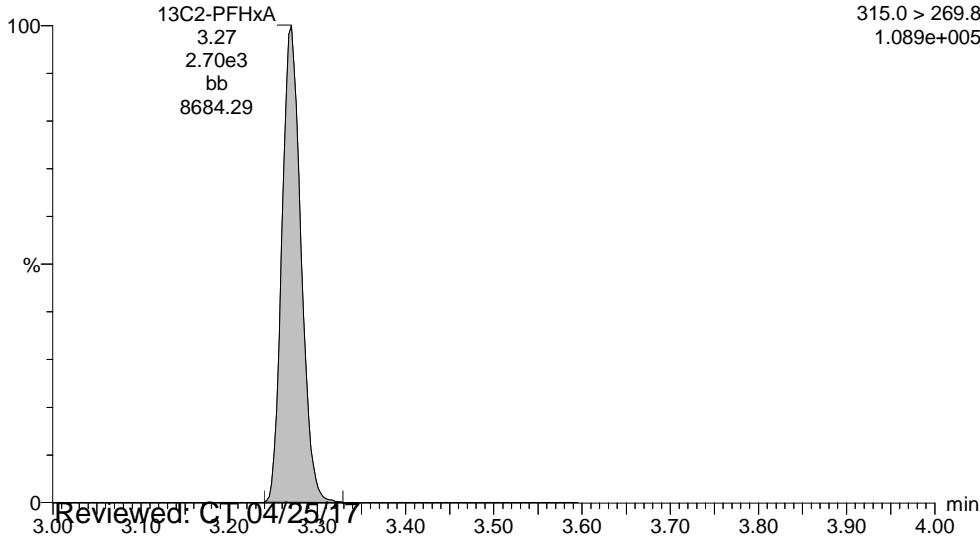
F4:MRM of 6 channels,ES-  
463 > 418.8  
6.986e+003



**13C2-PFHxA**

170420G1\_27

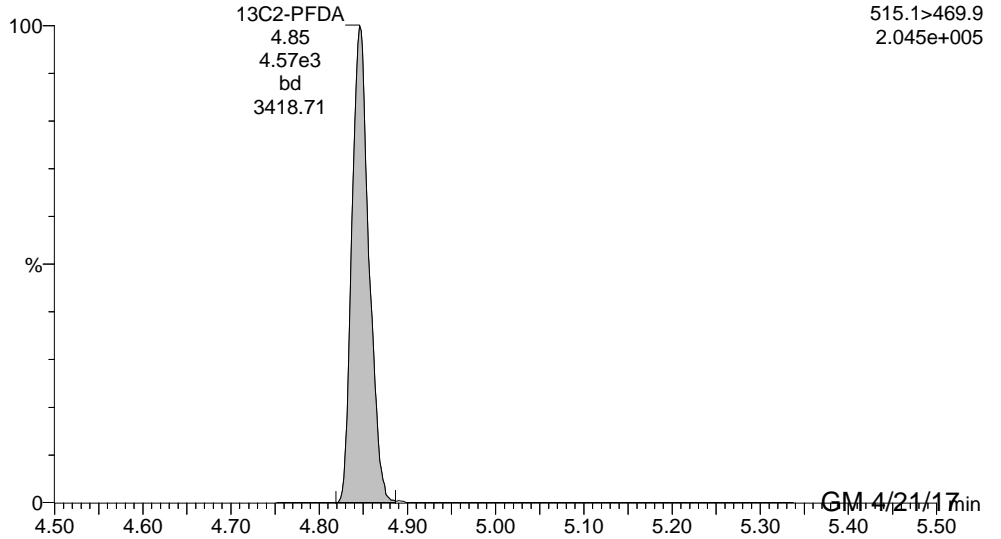
F2:MRM of 3 channels,ES-  
315.0 > 269.8  
1.089e+005



**13C2-PFDA**

170420G1\_27

F5:MRM of 7 channels,ES-  
515.1 >469.9  
2.045e+005



Reviewed: C.T. 04/25/17

GM 4/21/17



Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-27.qld

Last Altered: Friday, April 21, 2017 13:34:39 Pacific Daylight Time

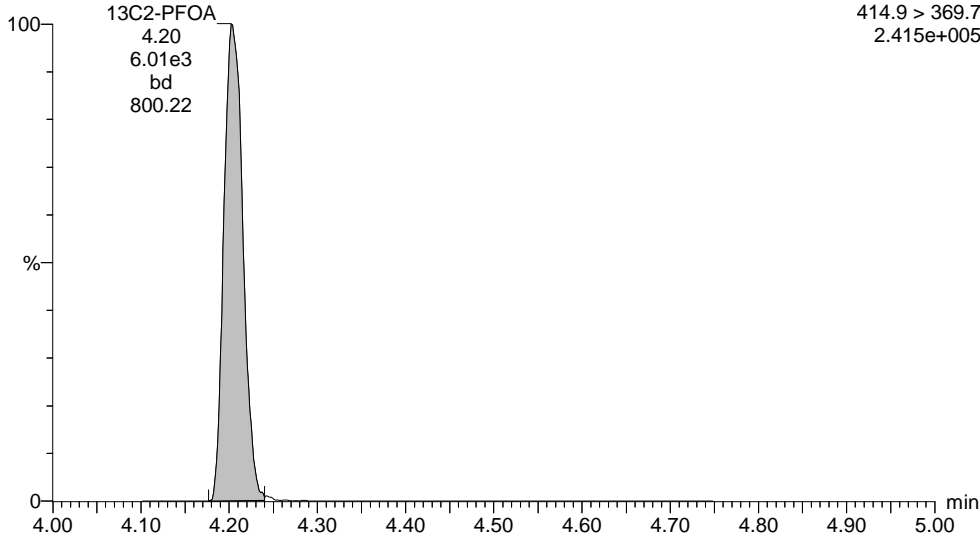
Printed: Friday, April 21, 2017 13:34:55 Pacific Daylight Time

ID: 1700466-09 RW03-20170417 0.25, Description: RW03-20170417, Name: 170420G1\_27, Date: 20-Apr-2017, Time: 22:10:03, Instrument: , Lab: , User:

**13C2-PFOA**

170420G1\_27

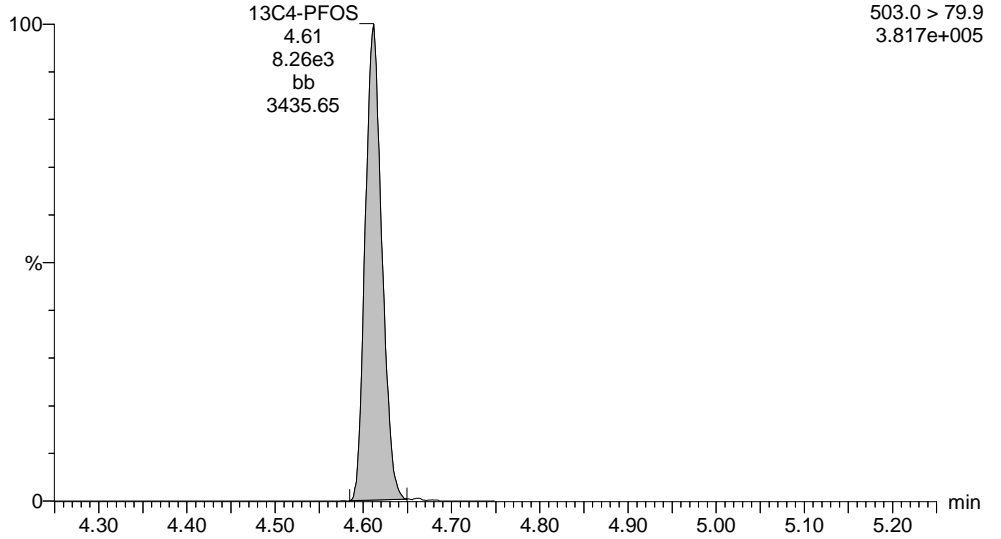
F4:MRM of 6 channels,ES-  
414.9 > 369.7  
2.415e+005



**13C4-PFOS**

170420G1\_27

F4:MRM of 6 channels,ES-  
503.0 > 79.9  
3.817e+005



Dataset: U:\G1.PRO\Results\2017\170421G3\170421G3-28.qld

Last Altered: Monday, April 24, 2017 11:32:00 Pacific Daylight Time

Printed: Monday, April 24, 2017 11:32:25 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: 1700466-09 RW03-20170417 0.25, Description: RW03-20170417, Name: 170421G3\_28, Date: 21-Apr-2017, Time: 23:23:19

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	4 PFOA	413 > 368.7	1.004e3	6.823e3		0.281	4.23	6.73	
2	7 13C2-PFHxA	315.0 > 269.8	3.026e3	6.823e3	0.449	0.281	3.30	35.2	98.9
3	8 13C2-PFDA	515.1>469.9	4.925e3	6.823e3	0.803	0.281	4.86	32.0	89.9
4	9 13C2-PFOA	414.9 > 369.7	6.823e3	6.823e3	1.000	0.281	4.23	35.6	100

Dataset: U:\G1.PRO\Results\2017\170421G3\170421G3-28.qld

Last Altered: Monday, April 24, 2017 11:32:00 Pacific Daylight Time

Printed: Monday, April 24, 2017 11:32:25 Pacific Daylight Time

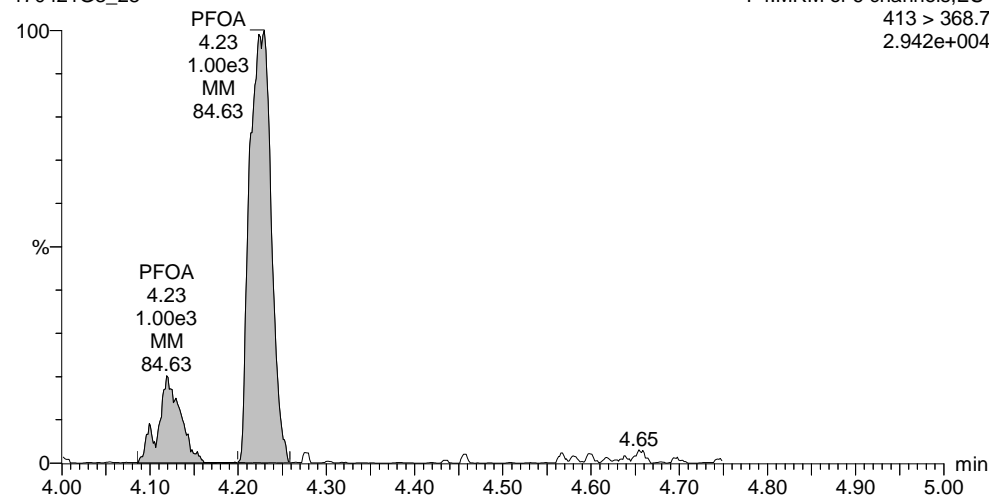
Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: 1700466-09 RW03-20170417 0.25, Description: RW03-20170417, Name: 170421G3\_28, Date: 21-Apr-2017, Time: 23:23:19, Instrument: , Lab: , User:

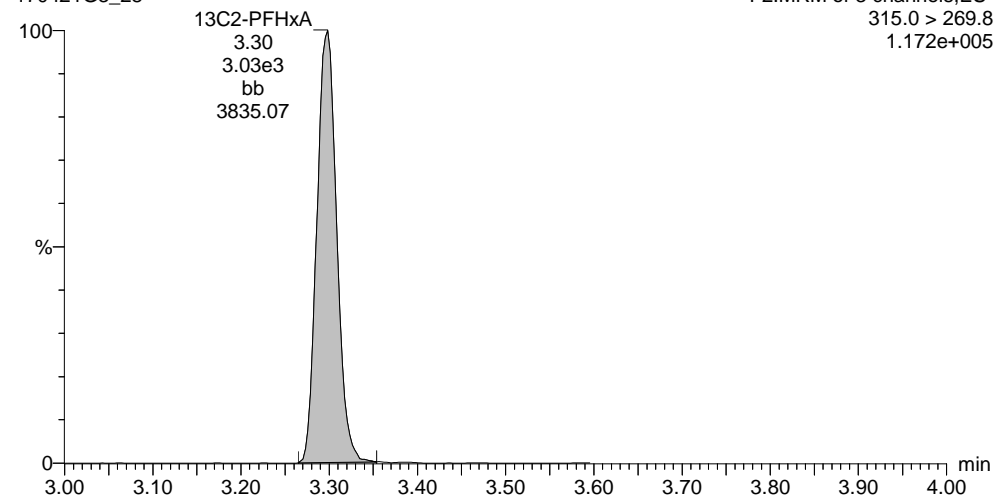
**PFOA**

170421G3\_28



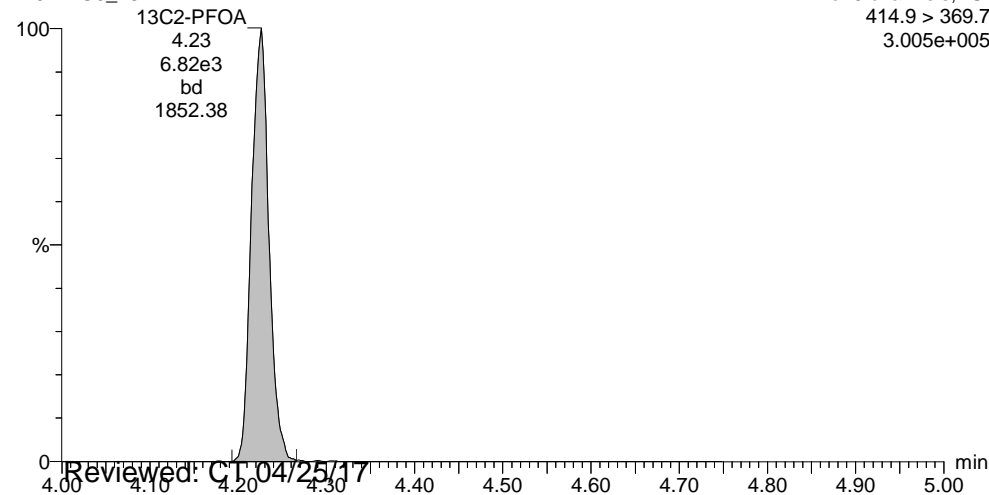
**13C2-PFHxA**

170421G3\_28



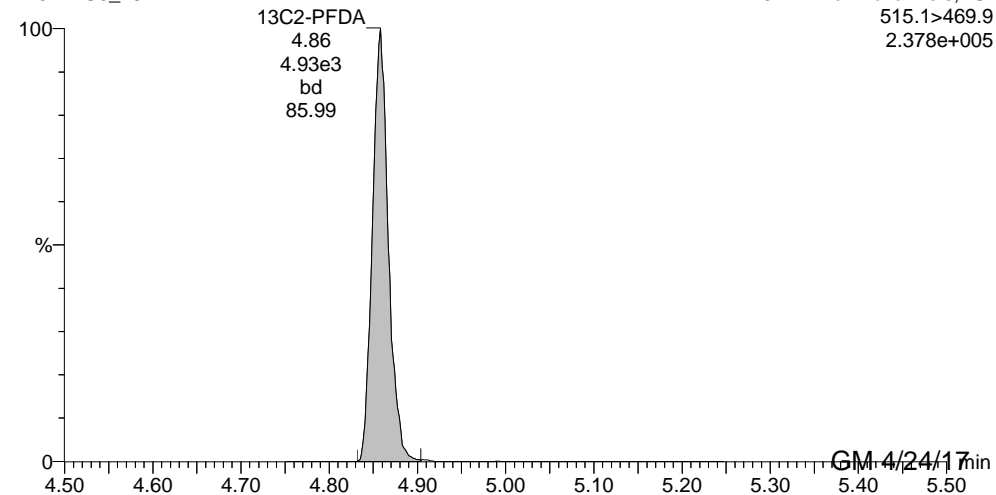
**13C2-PFOA**

170421G3\_28



**13C2-PFDA**

170421G3\_28



Reviewed: C:\04/25/17

GM 4/24/17

Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-28.qld

Last Altered: Friday, April 21, 2017 13:35:59 Pacific Daylight Time

Printed: Friday, April 21, 2017 13:37:01 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: B7D0096-MS1 LFSM 0.25, Description: LFSM, Name: 170420G1\_28, Date: 20-Apr-2017, Time: 22:22:28

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1 PFBS	299 > 79.7	4.690e3	7.393e3		0.278	2.90	74.6	
2	2 PFHpA	363 > 318.9	9.751e3	6.044e3		0.278	3.78	66.3	
3	3 PFHxS	398.9 > 79.6	5.314e3	7.393e3		0.278	3.91	74.1	
4	4 PFOA	413 > 368.7	9.427e3	6.044e3		0.278	4.21	73.9	
5	5 PFOS	499 > 79.9	1.771e3	7.393e3		0.278	4.61	75.7	
6	6 PFNA	463 > 418.8	1.431e4	6.044e3		0.278	4.55	64.3	
7	7 13C2-PFHxA	315.0 > 269.8	2.335e3	6.044e3	0.449	0.278	3.27	30.9	86.1
8	8 13C2-PFDA	515.1 > 469.9	3.869e3	6.044e3	0.803	0.278	4.85	28.6	79.7
9	9 13C2-PFOA	414.9 > 369.7	6.044e3	6.044e3	1.000	0.278	4.20	35.9	100
10	10 13C4-PFOS	503.0 > 79.9	7.393e3	7.393e3	1.000	0.278	4.61	103	100

Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-28.qld

Last Altered: Friday, April 21, 2017 13:35:59 Pacific Daylight Time

Printed: Friday, April 21, 2017 13:37:01 Pacific Daylight Time

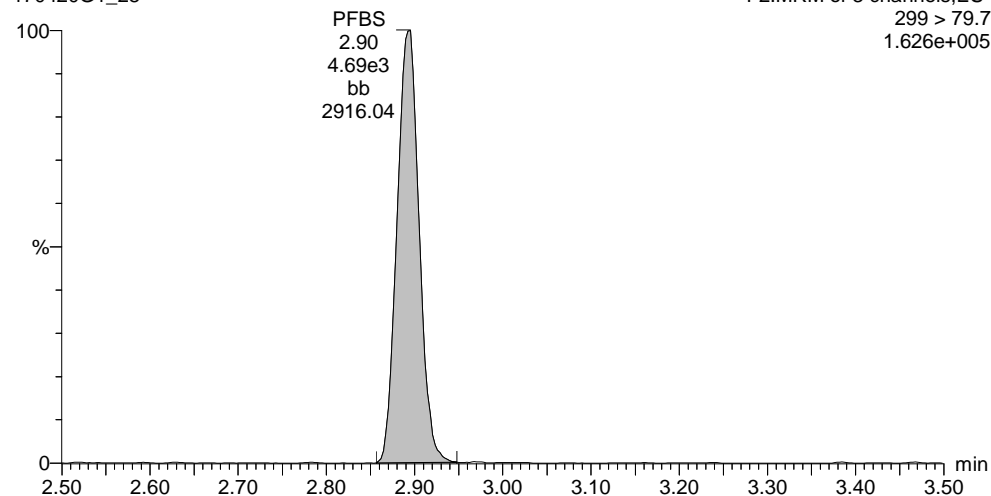
Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: B7D0096-MS1 LFSM 0.25, Description: LFSM, Name: 170420G1\_28, Date: 20-Apr-2017, Time: 22:22:28, Instrument: , Lab: , User:

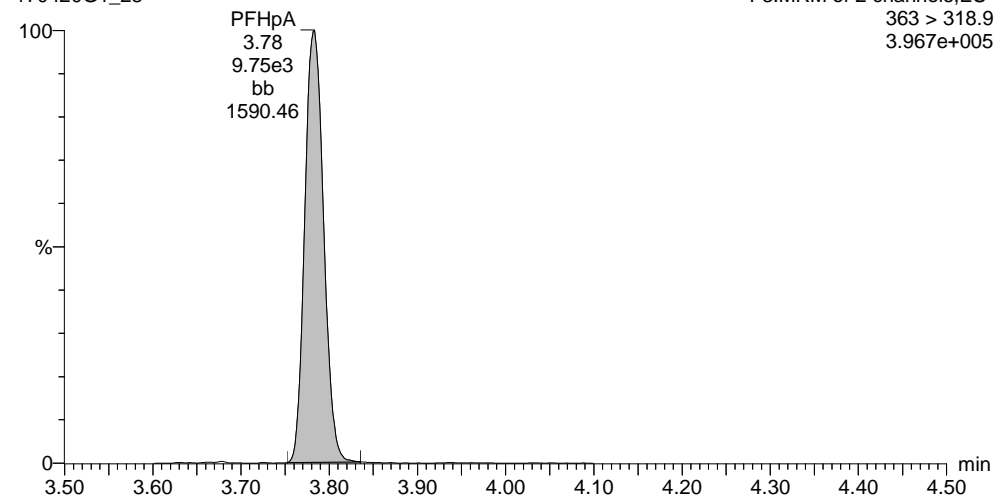
**PFBS**

170420G1\_28



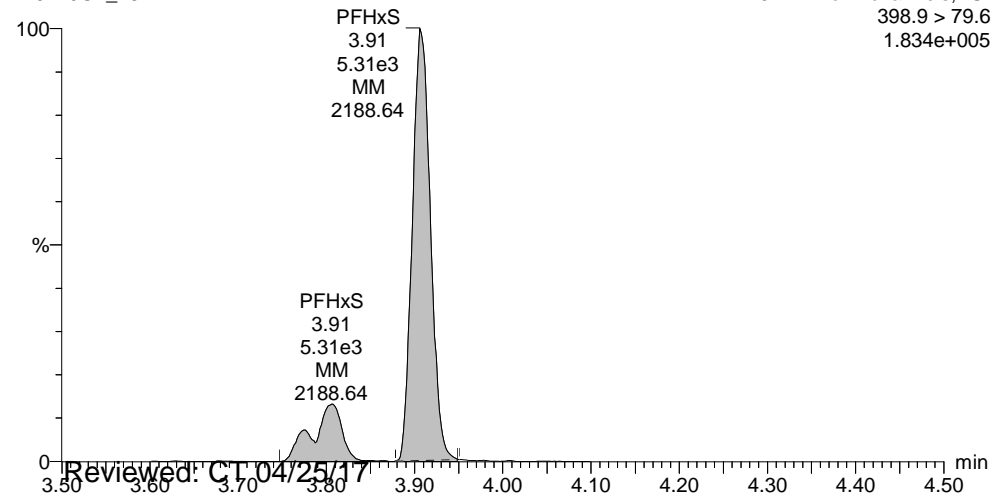
**PFHpA**

170420G1\_28



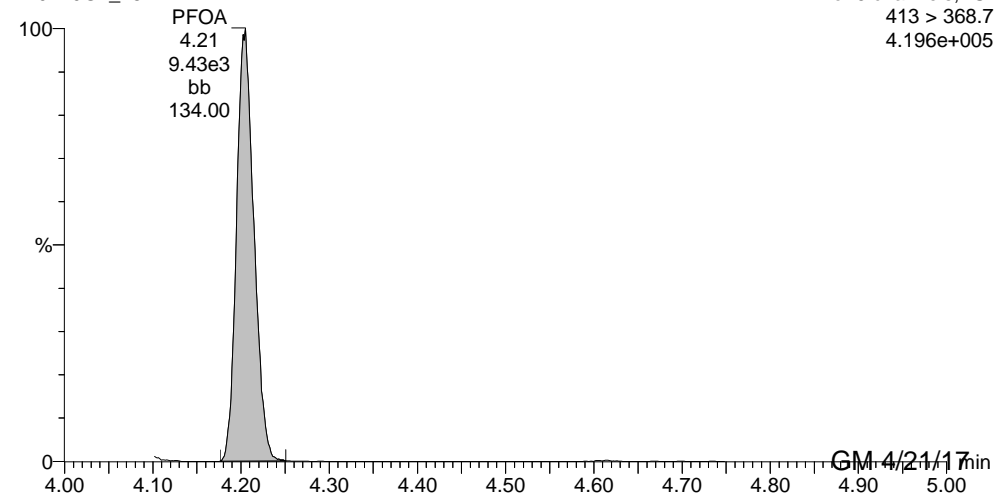
**PFHxS**

170420G1\_28



**PFOA**

170420G1\_28



Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-28.qld

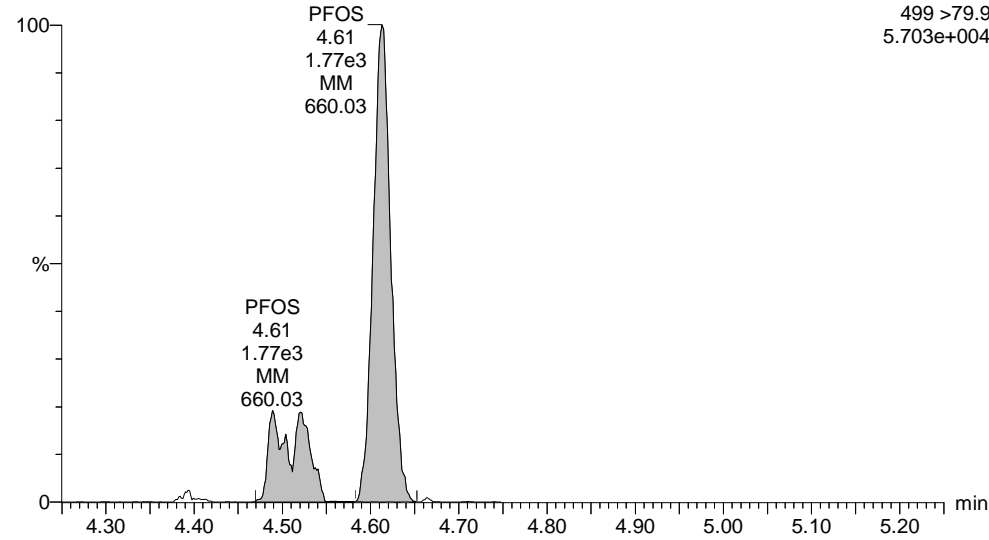
Last Altered: Friday, April 21, 2017 13:35:59 Pacific Daylight Time

Printed: Friday, April 21, 2017 13:37:01 Pacific Daylight Time

ID: B7D0096-MS1 LFSM 0.25, Description: LFSM, Name: 170420G1\_28, Date: 20-Apr-2017, Time: 22:22:28, Instrument: , Lab: , User:

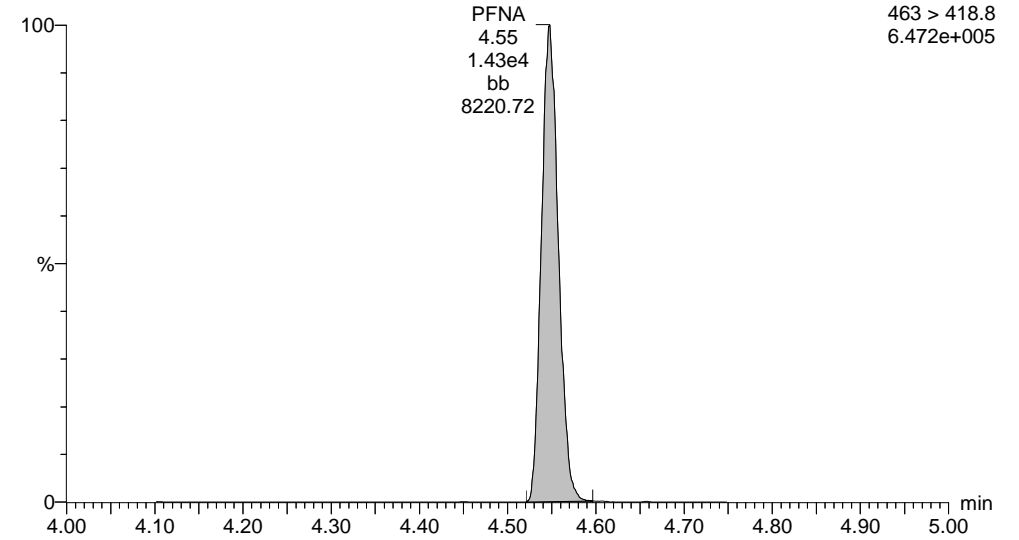
**PFOS**

170420G1\_28



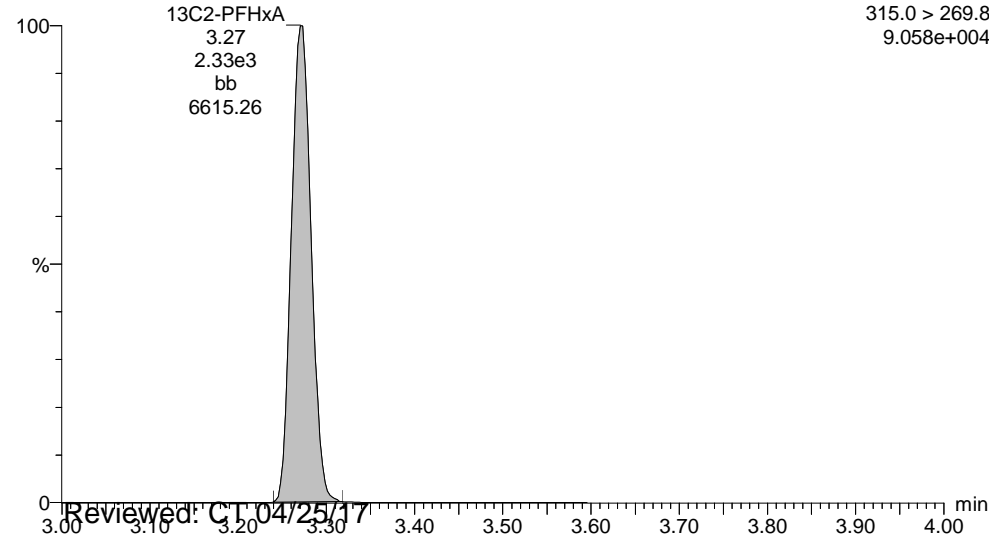
**PFNA**

170420G1\_28



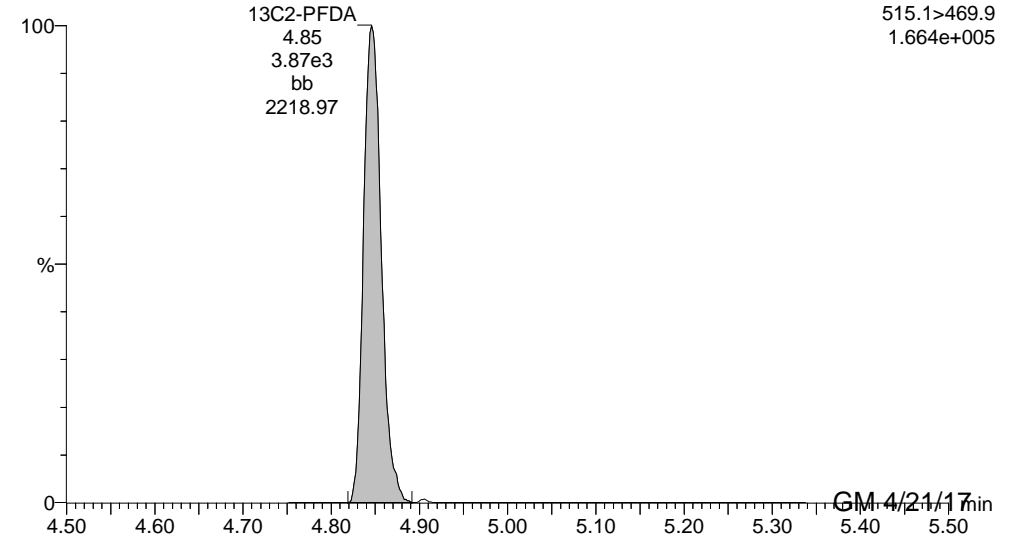
**13C2-PFHxA**

170420G1\_28



**13C2-PFDA**

170420G1\_28



Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-28.qld

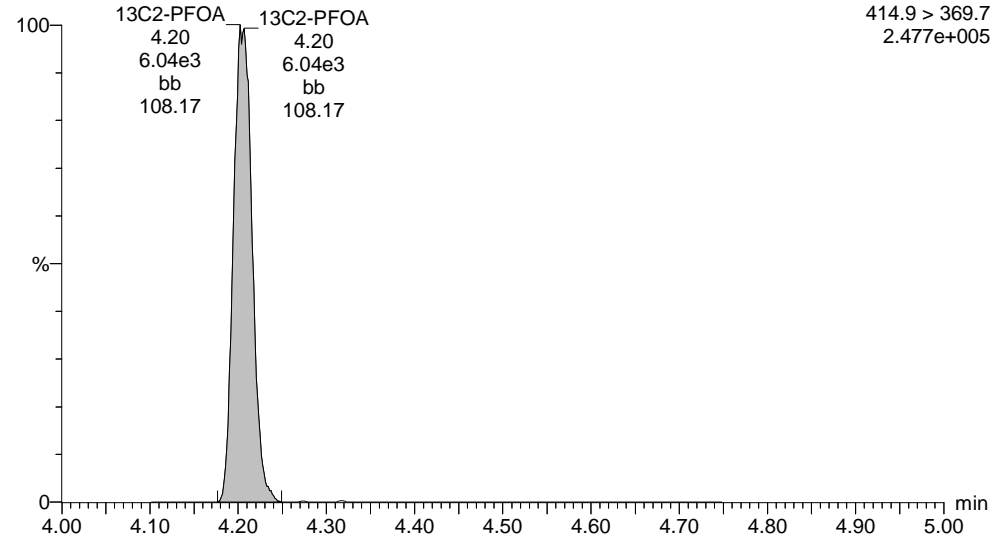
Last Altered: Friday, April 21, 2017 13:35:59 Pacific Daylight Time

Printed: Friday, April 21, 2017 13:37:01 Pacific Daylight Time

ID: B7D0096-MS1 LFSM 0.25, Description: LFSM, Name: 170420G1\_28, Date: 20-Apr-2017, Time: 22:22:28, Instrument: , Lab: , User:

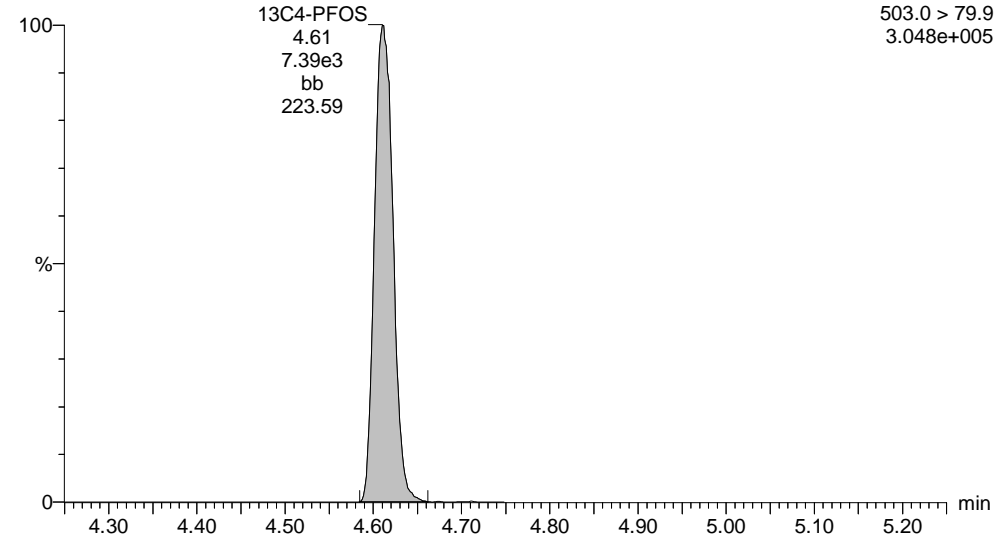
**13C2-PFOA**

170420G1\_28



**13C4-PFOS**

170420G1\_28



Dataset: U:\G1.PRO\Results\2017\170421G3\170421G3-29.qld

Last Altered: Monday, April 24, 2017 13:37:14 Pacific Daylight Time

Printed: Monday, April 24, 2017 13:38:37 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: B7D0096-MS1 LFSM 0.25, Description: LFSM, Name: 170421G3\_29, Date: 21-Apr-2017, Time: 23:35:41

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	4 PFOA	413 > 368.7	1.067e4	6.491e3		0.278	4.22	78.0	
2	7 13C2-PFHxA	315.0 > 269.8	2.572e3	6.491e3	0.449	0.278	3.30	31.7	88.3
3	8 13C2-PFDA	515.1>469.9	4.235e3	6.491e3	0.803	0.278	4.86	29.2	81.3
4	9 13C2-PFOA	414.9 > 369.7	6.491e3	6.491e3	1.000	0.278	4.22	35.9	100



Dataset: U:\G1.PRO\Results\2017\170421G3\170421G3-29.qld

Last Altered: Monday, April 24, 2017 13:37:14 Pacific Daylight Time

Printed: Monday, April 24, 2017 13:38:37 Pacific Daylight Time

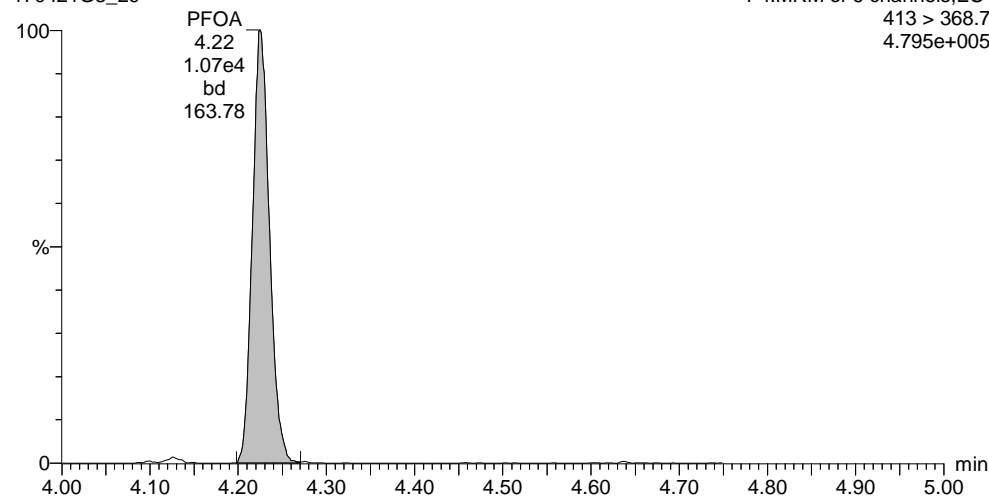
Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: B7D0096-MS1 LFSM 0.25, Description: LFSM, Name: 170421G3\_29, Date: 21-Apr-2017, Time: 23:35:41, Instrument: , Lab: , User:

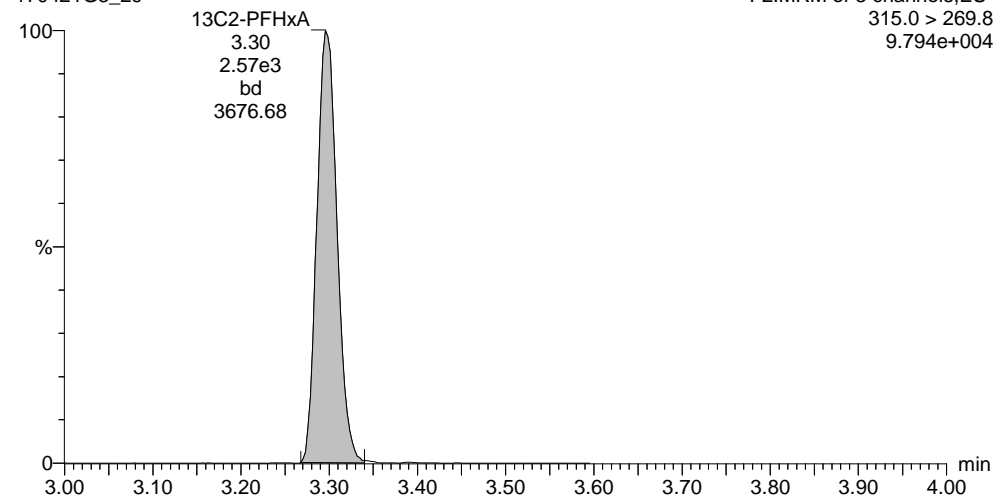
**PFOA**

170421G3\_29



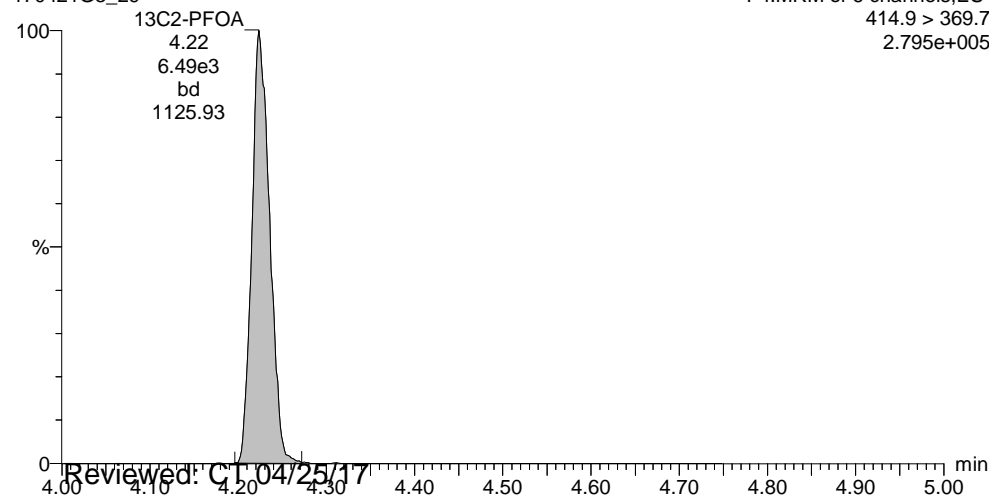
**13C2-PFHxA**

170421G3\_29



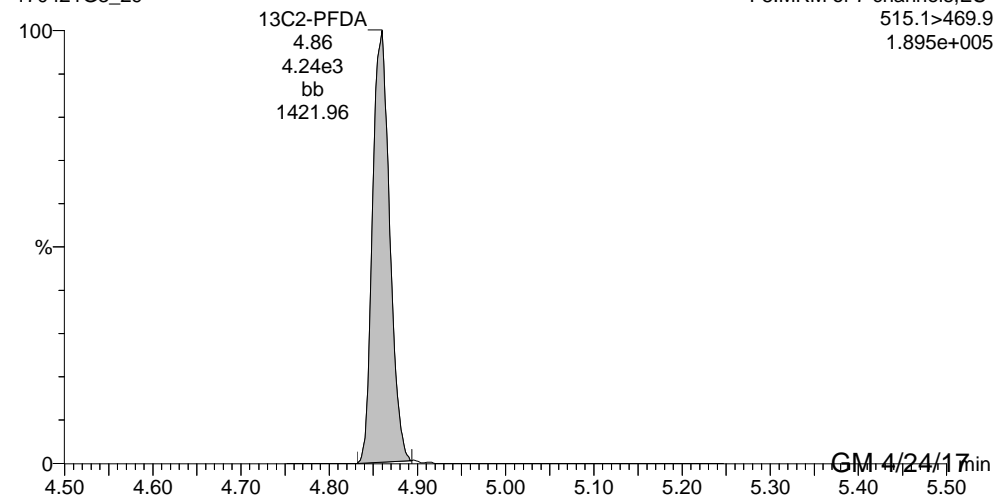
**13C2-PFOA**

170421G3\_29



**13C2-PFDA**

170421G3\_29



Reviewed: C:\04/25/17

GM 4/24/17

Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-29.qld

Last Altered: Friday, April 21, 2017 13:38:26 Pacific Daylight Time

Printed: Friday, April 21, 2017 13:38:58 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: 1700466-10 FRB-03-20170417 0.25, Description: FRB-03-20170417, Name: 170420G1\_29, Date: 20-Apr-2017, Time: 22:34:54

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1 PFBS	299 > 79.7		8.796e3		0.278			
2	2 PFHpA	363 > 318.9	5.503e0	6.852e3		0.278	3.78	0.0321	
3	3 PFHxS	398.9 > 79.6		8.796e3		0.278			
4	4 PFOA	413 > 368.7	1.364e1	6.852e3		0.278	4.21	0.0916	
5	5 PFOS	499 > 79.9		8.796e3		0.278			
6	6 PFNA	463 > 418.8		6.852e3		0.278			
7	7 13C2-PFHxA	315.0 > 269.8	2.893e3	6.852e3	0.449	0.278	3.27	33.8	94.1
8	8 13C2-PFDA	515.1 > 469.9	4.503e3	6.852e3	0.803	0.278	4.85	29.4	81.9
9	9 13C2-PFOA	414.9 > 369.7	6.852e3	6.852e3	1.000	0.278	4.21	35.9	100
10	10 13C4-PFOS	503.0 > 79.9	8.796e3	8.796e3	1.000	0.278	4.61	103	100

Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-29.qld

Last Altered: Friday, April 21, 2017 13:38:26 Pacific Daylight Time

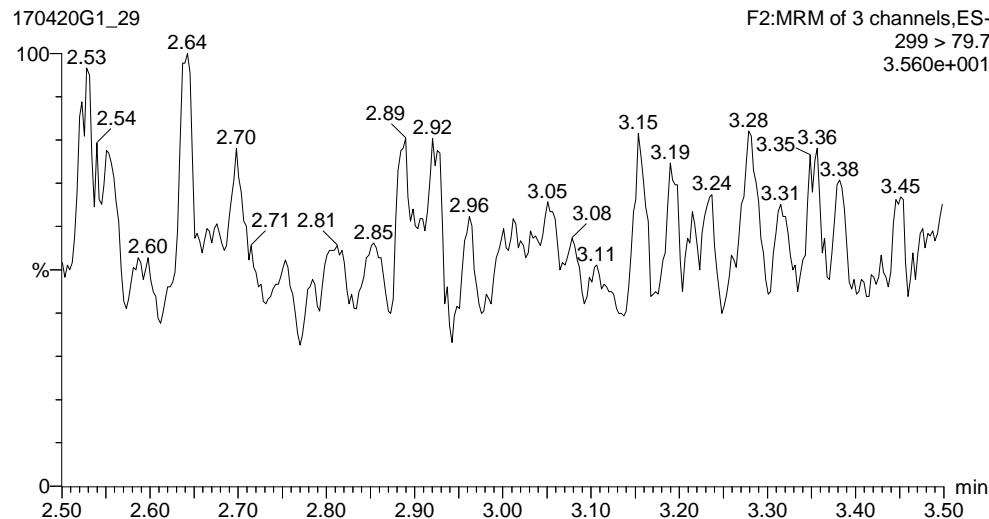
Printed: Friday, April 21, 2017 13:38:58 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

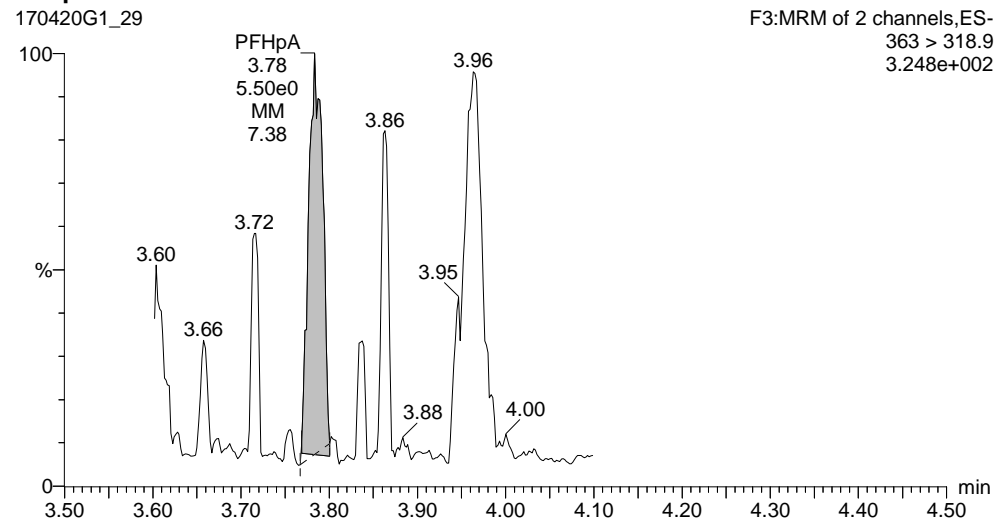
Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: 1700466-10 FRB-03-20170417 0.25, Description: FRB-03-20170417, Name: 170420G1\_29, Date: 20-Apr-2017, Time: 22:34:54, Instrument: , Lab: , User:

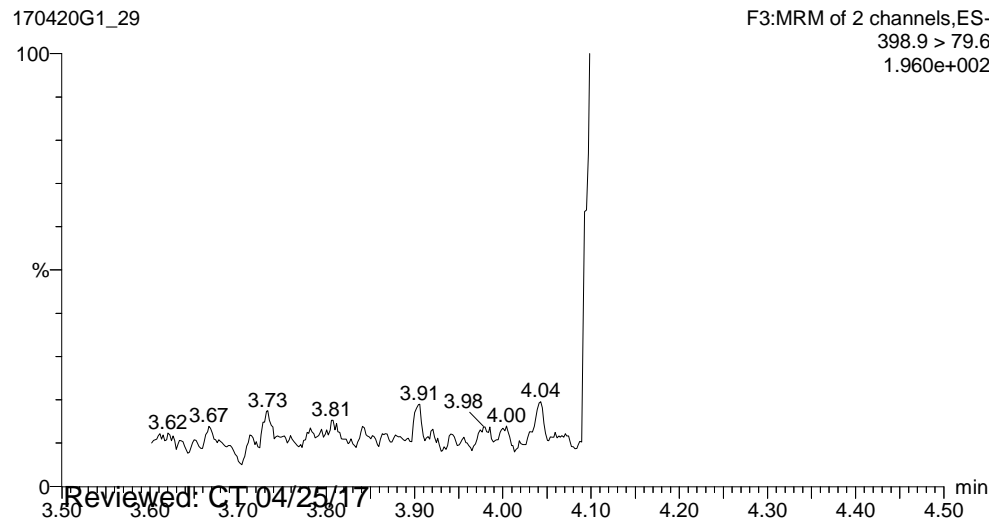
PFBS



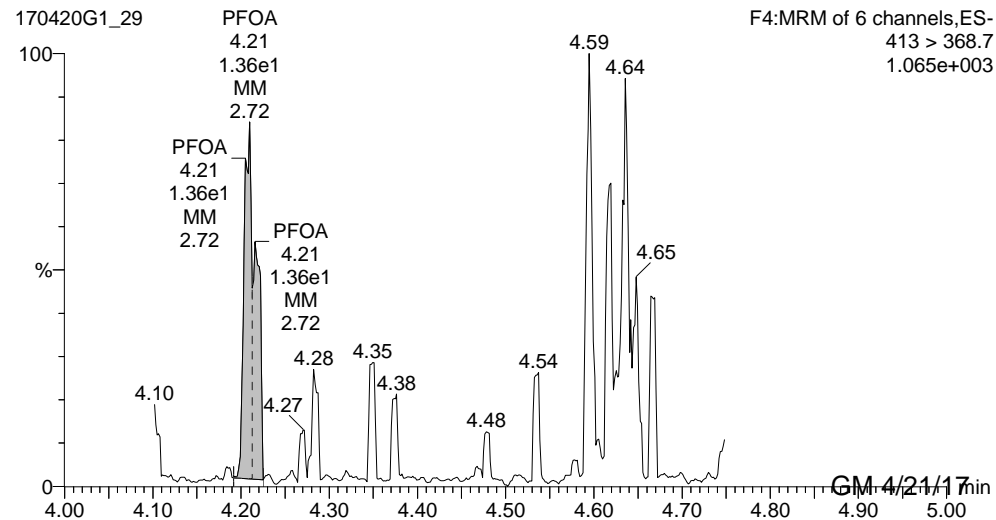
PFHpA



PFHxS



PFOA



Reviewed: CT 04/25/17

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Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-29.qld

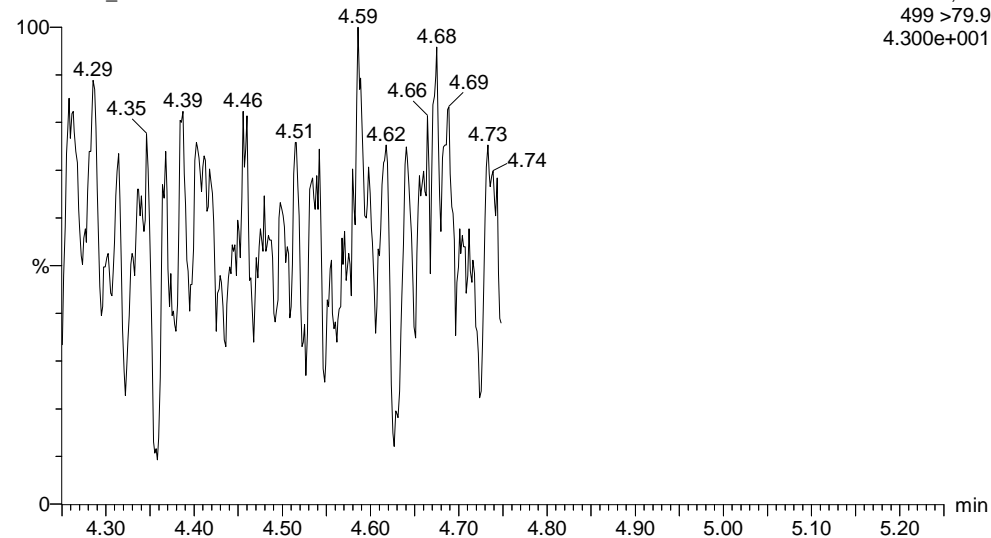
Last Altered: Friday, April 21, 2017 13:38:26 Pacific Daylight Time

Printed: Friday, April 21, 2017 13:38:58 Pacific Daylight Time

ID: 1700466-10 FRB-03-20170417 0.25, Description: FRB-03-20170417, Name: 170420G1\_29, Date: 20-Apr-2017, Time: 22:34:54, Instrument: , Lab: , User:

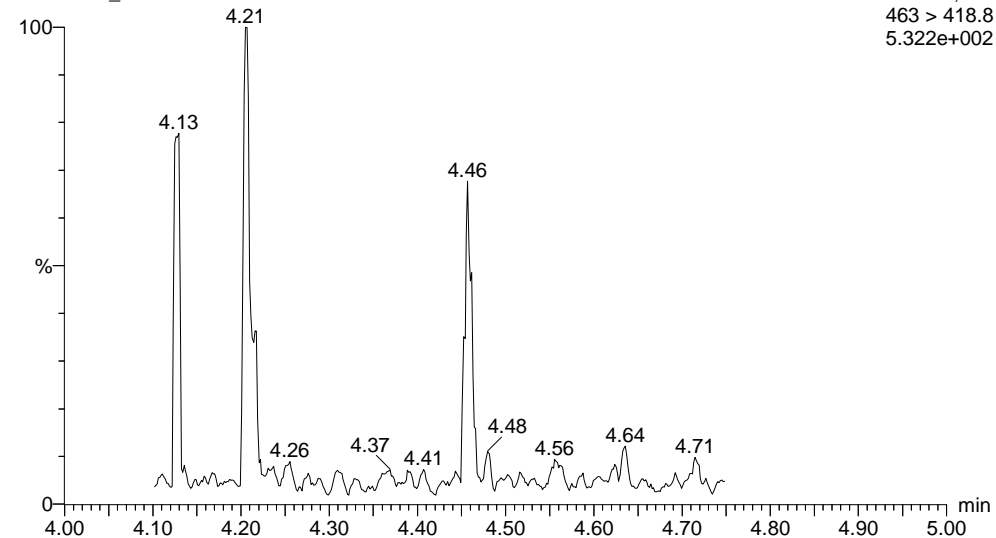
**PFOS**

170420G1\_29



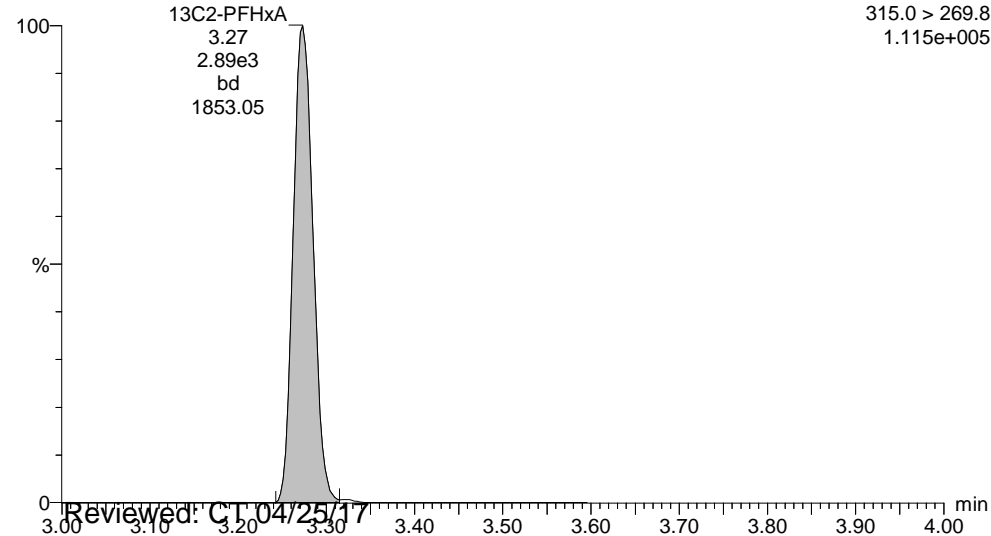
**PFNA**

170420G1\_29



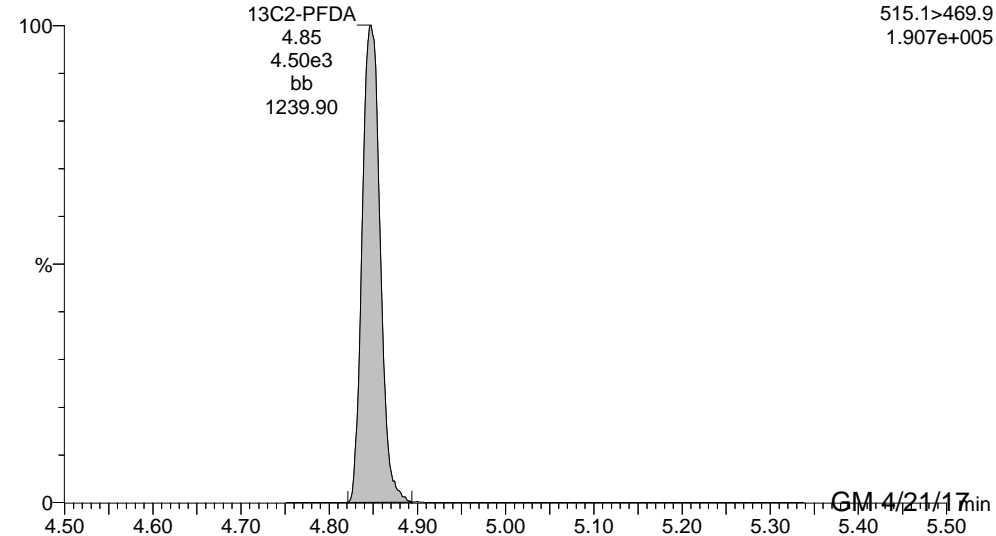
**13C2-PFHxA**

170420G1\_29



**13C2-PFDA**

170420G1\_29



Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-29.qld

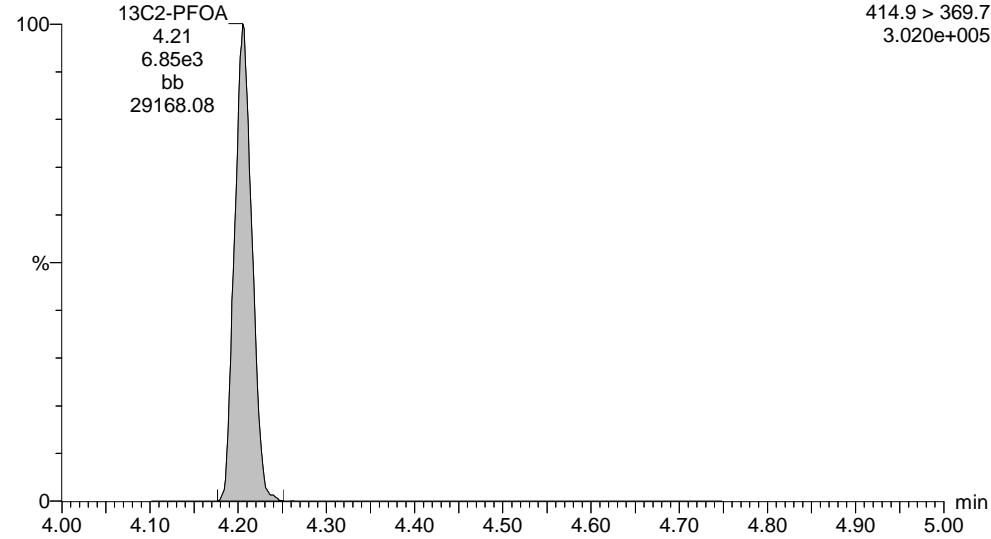
Last Altered: Friday, April 21, 2017 13:38:26 Pacific Daylight Time

Printed: Friday, April 21, 2017 13:38:58 Pacific Daylight Time

ID: 1700466-10 FRB-03-20170417 0.25, Description: FRB-03-20170417, Name: 170420G1\_29, Date: 20-Apr-2017, Time: 22:34:54, Instrument: , Lab: , User:

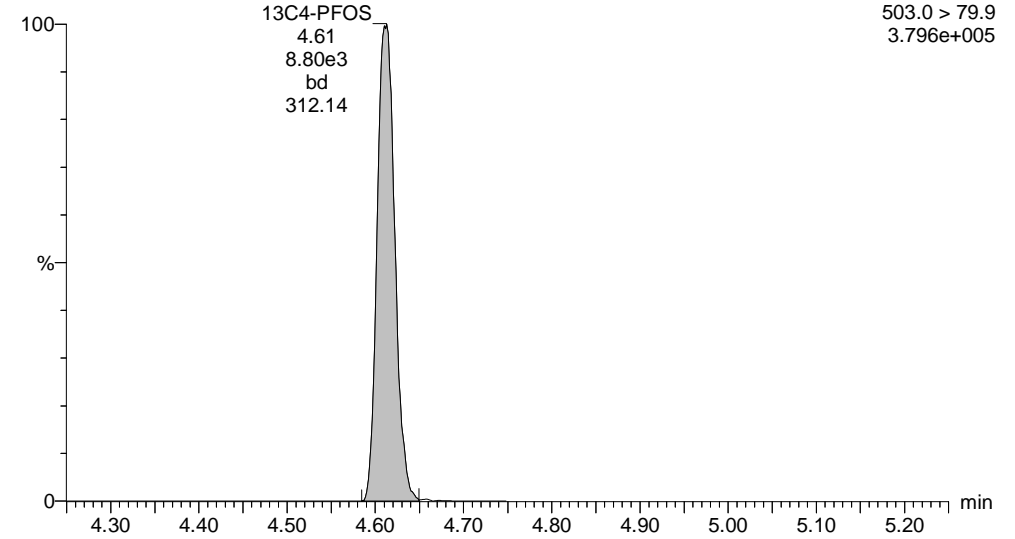
**13C2-PFOA**

170420G1\_29



**13C4-PFOS**

170420G1\_29



Dataset: U:\G1.PRO\Results\2017\170421G3\170421G3-30.qld

Last Altered: Monday, April 24, 2017 13:48:33 Pacific Daylight Time

Printed: Monday, April 24, 2017 13:49:05 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: 1700466-10 FRB-03-20170417 0.25, Description: FRB-03-20170417, Name: 170421G3\_30, Date: 21-Apr-2017, Time: 23:48:05

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	4 PFOA	413 > 368.7	2.184e1	7.511e3		0.278	4.22	0.134	
2	7 13C2-PFHxA	315.0 > 269.8	3.063e3	7.511e3	0.449	0.278	3.30	32.7	90.9
3	8 13C2-PFDA	515.1 > 469.9	4.670e3	7.511e3	0.803	0.278	4.86	27.8	77.5
4	9 13C2-PFOA	414.9 > 369.7	7.511e3	7.511e3	1.000	0.278	4.22	35.9	100

Dataset: U:\G1.PRO\Results\2017\170421G3\170421G3-30.qld

Last Altered: Monday, April 24, 2017 13:48:33 Pacific Daylight Time

Printed: Monday, April 24, 2017 13:49:05 Pacific Daylight Time

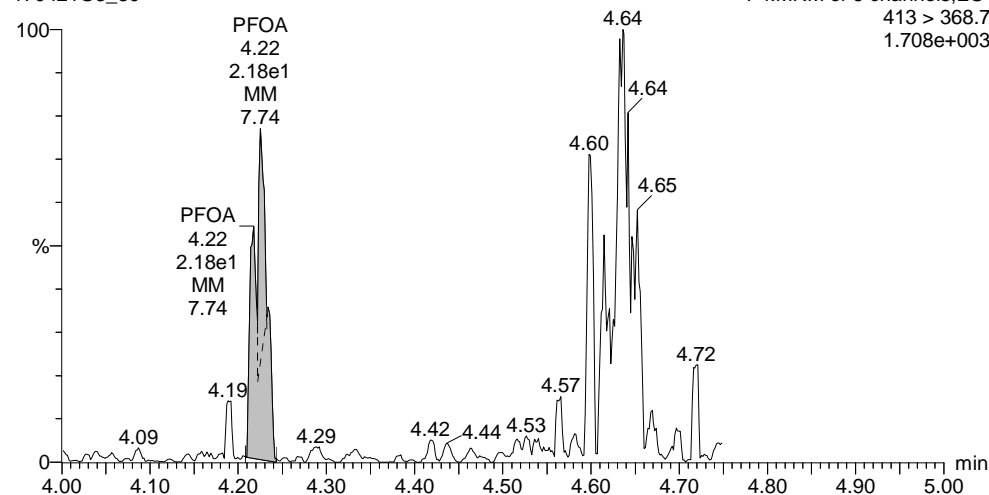
Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: 1700466-10 FRB-03-20170417 0.25, Description: FRB-03-20170417, Name: 170421G3\_30, Date: 21-Apr-2017, Time: 23:48:05, Instrument: , Lab: , User:

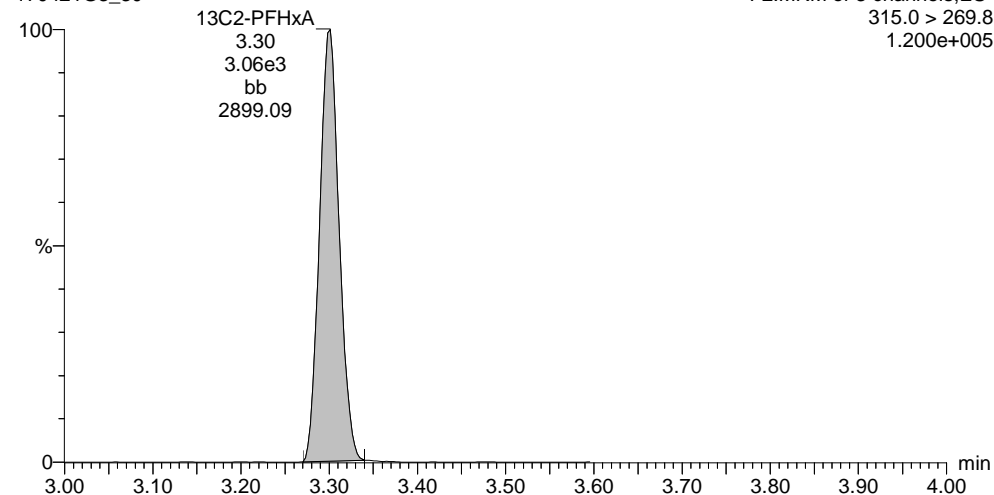
**PFOA**

170421G3\_30



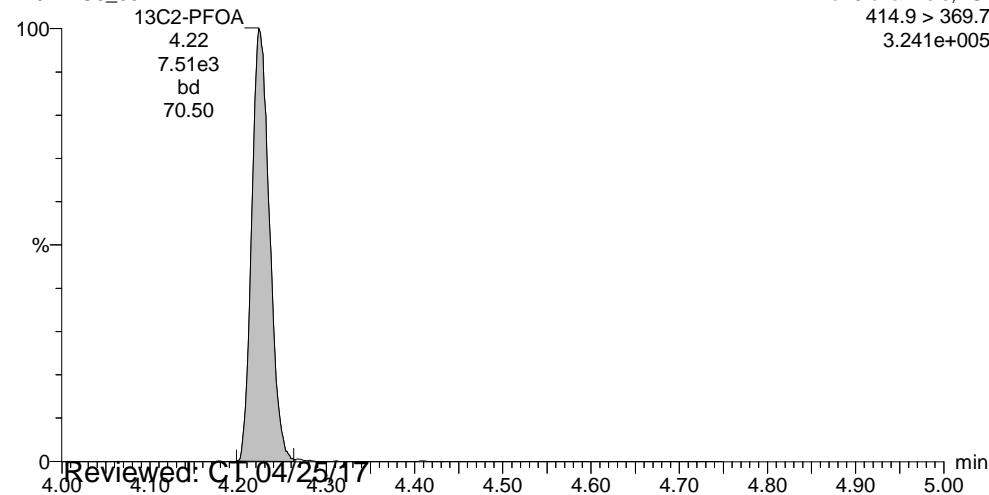
**13C2-PFHxA**

170421G3\_30



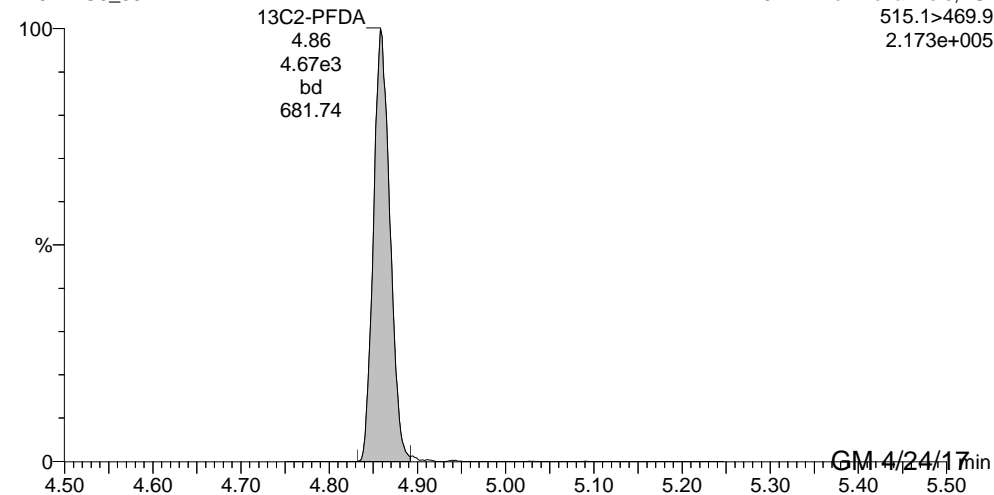
**13C2-PFOA**

170421G3\_30



**13C2-PFDA**

170421G3\_30



Reviewed: C:\170425\17

GM 4/24/17

Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-30.qld

Last Altered: Tuesday, April 25, 2017 11:06:41 AM Pacific Daylight Time

Printed: Tuesday, April 25, 2017 11:07:44 AM Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: 1700466-11 RW16-20170417 0.25, Description: RW16-20170417, Name: 170420G1\_30, Date: 20-Apr-2017, Time: 22:47:14

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1 PFBS	299 > 79.7	8.140e1	8.859e3		0.289	2.89	0.990	
2	2 PFHpA	363 > 318.9	3.576e2	6.652e3		0.289	3.78	2.07	
3	3 PFHxS	398.9 > 79.6	2.168e2	8.859e3		0.289	3.91	2.29	
4	4 PFOA	413 > 368.7	1.231e3	6.652e3		0.289	4.20	8.23	
5	5 PFOS	499 > 79.9	5.934e1	8.859e3		0.289	4.53	1.90	
6	6 PFNA	463 > 418.8	1.306e2	6.652e3		0.289	4.55	0.498	
7	7 13C2-PFHxA	315.0 > 269.8	2.723e3	6.652e3	0.449	0.289	3.27	31.6	91.3
8	8 13C2-PFDA	515.1 > 469.9	4.399e3	6.652e3	0.803	0.289	4.85	28.5	82.4
9	9 13C2-PFOA	414.9 > 369.7	6.652e3	6.652e3	1.000	0.289	4.20	34.6	100
10	10 13C4-PFOS	503.0 > 79.9	8.859e3	8.859e3	1.000	0.289	4.61	99.3	100



Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-30.qld

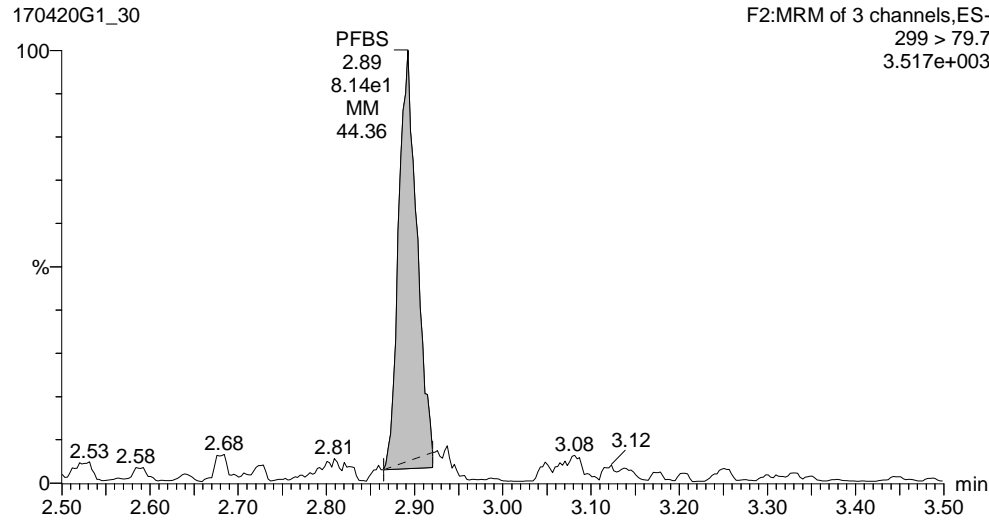
Last Altered: Tuesday, April 25, 2017 11:06:41 AM Pacific Daylight Time

Printed: Tuesday, April 25, 2017 11:07:44 AM Pacific Daylight Time

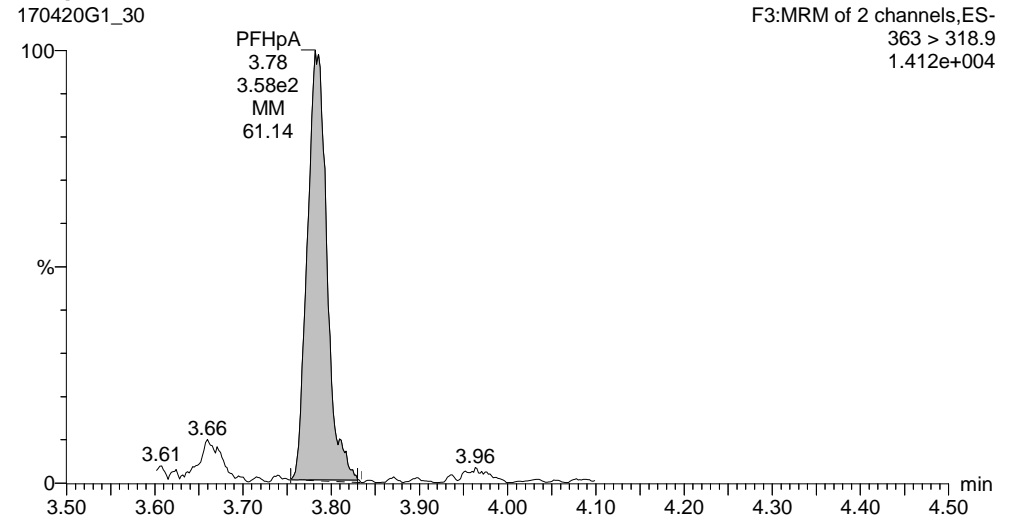
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Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: 1700466-11 RW16-20170417 0.25, Description: RW16-20170417, Name: 170420G1\_30, Date: 20-Apr-2017, Time: 22:47:14, Instrument: , Lab: , User:

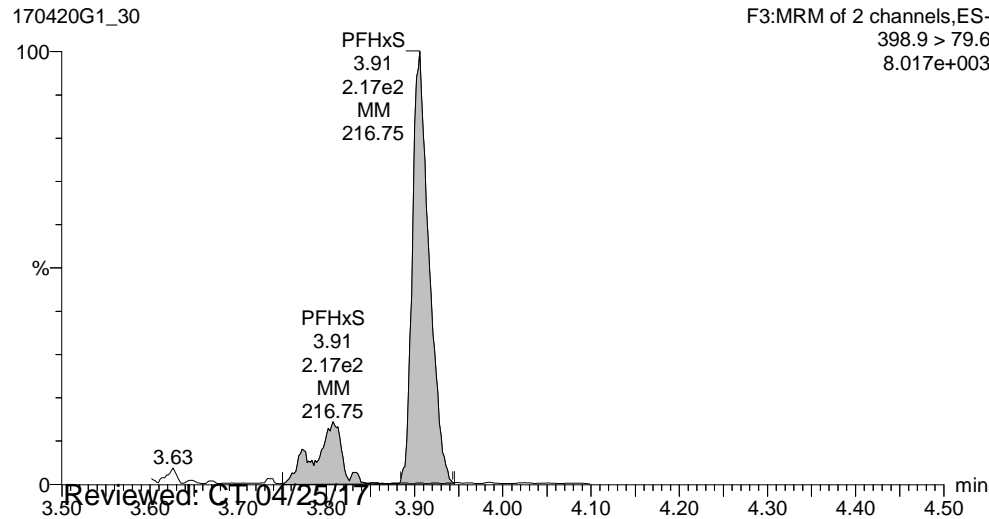
**PFBS**



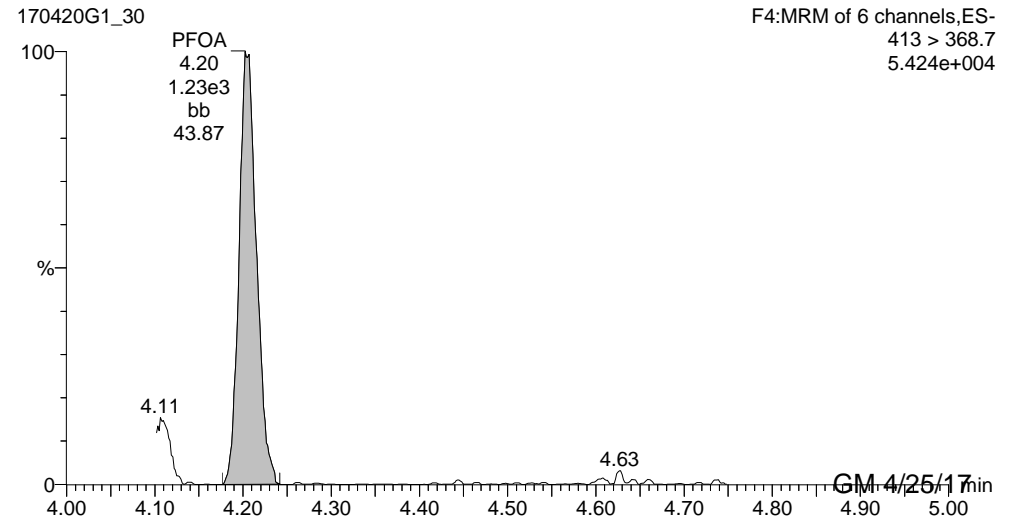
**PFHpA**



**PFHxS**



**PFOA**



Reviewed: C1 04/25/17

GM 4/25/17

Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-30.qld

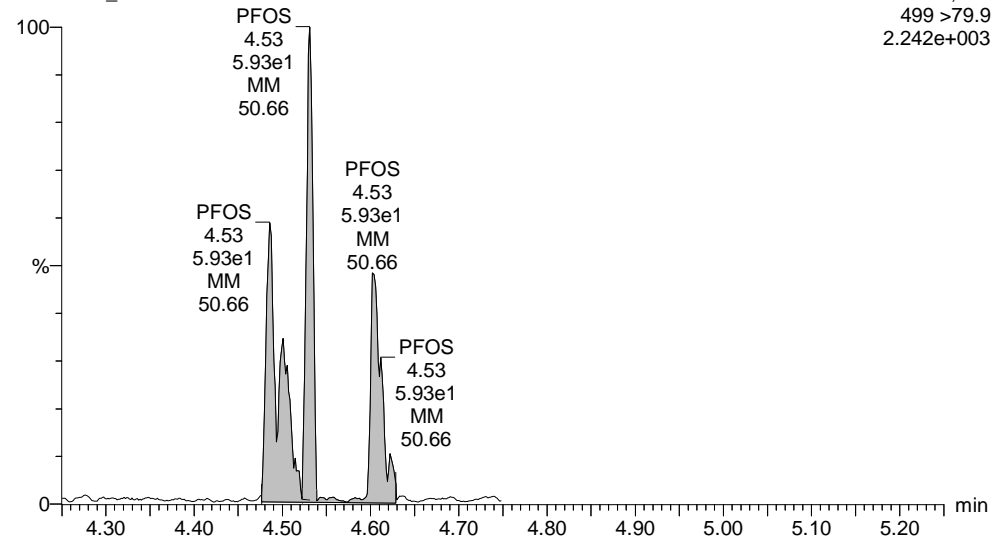
Last Altered: Tuesday, April 25, 2017 11:06:41 AM Pacific Daylight Time

Printed: Tuesday, April 25, 2017 11:07:44 AM Pacific Daylight Time

ID: 1700466-11 RW16-20170417 0.25, Description: RW16-20170417, Name: 170420G1\_30, Date: 20-Apr-2017, Time: 22:47:14, Instrument: , Lab: , User:

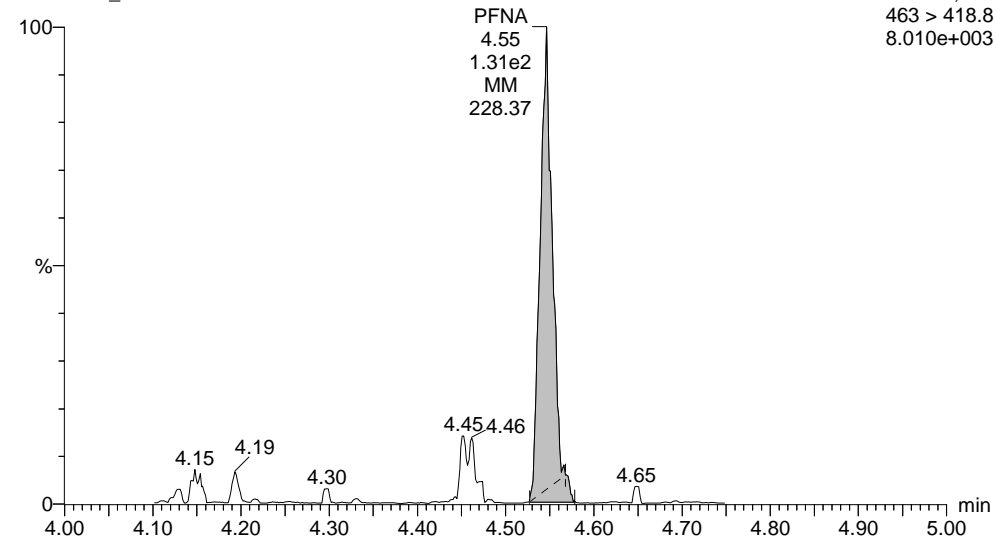
**PFOS**

170420G1\_30



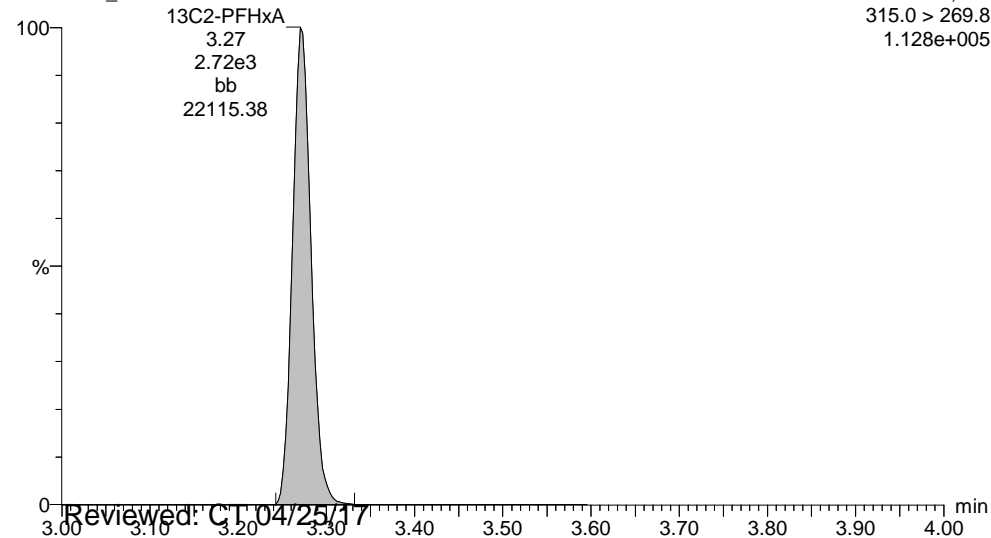
**PFNA**

170420G1\_30



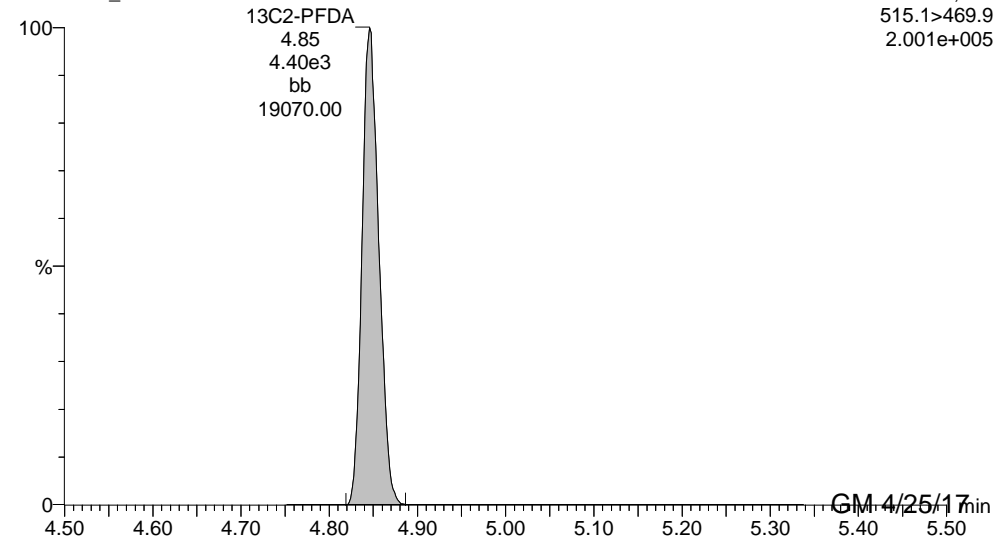
**13C2-PFHxA**

170420G1\_30



**13C2-PFDA**

170420G1\_30



Reviewed: C.T. 04/25/17

GM 4/25/17

Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-30.qld

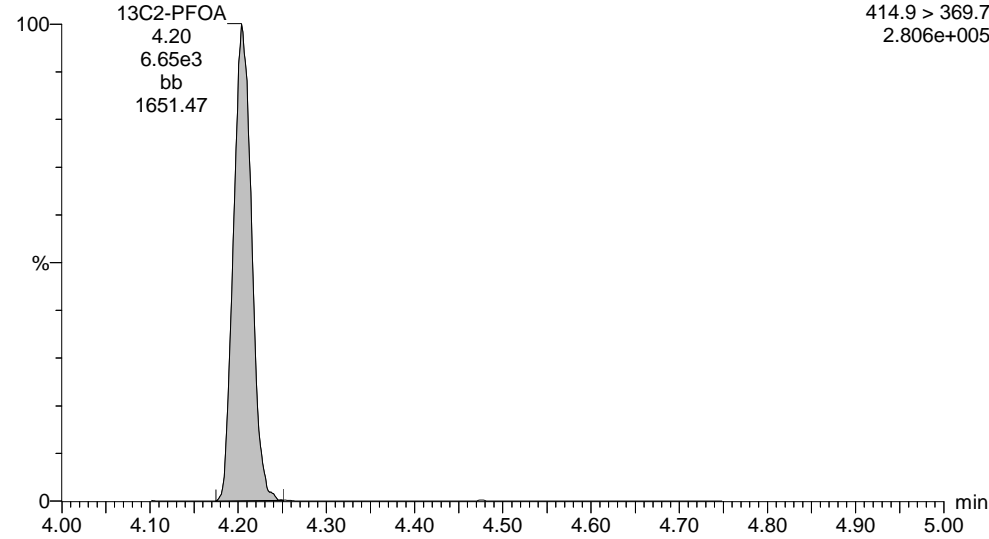
Last Altered: Tuesday, April 25, 2017 11:06:41 AM Pacific Daylight Time

Printed: Tuesday, April 25, 2017 11:07:44 AM Pacific Daylight Time

ID: 1700466-11 RW16-20170417 0.25, Description: RW16-20170417, Name: 170420G1\_30, Date: 20-Apr-2017, Time: 22:47:14, Instrument: , Lab: , User:

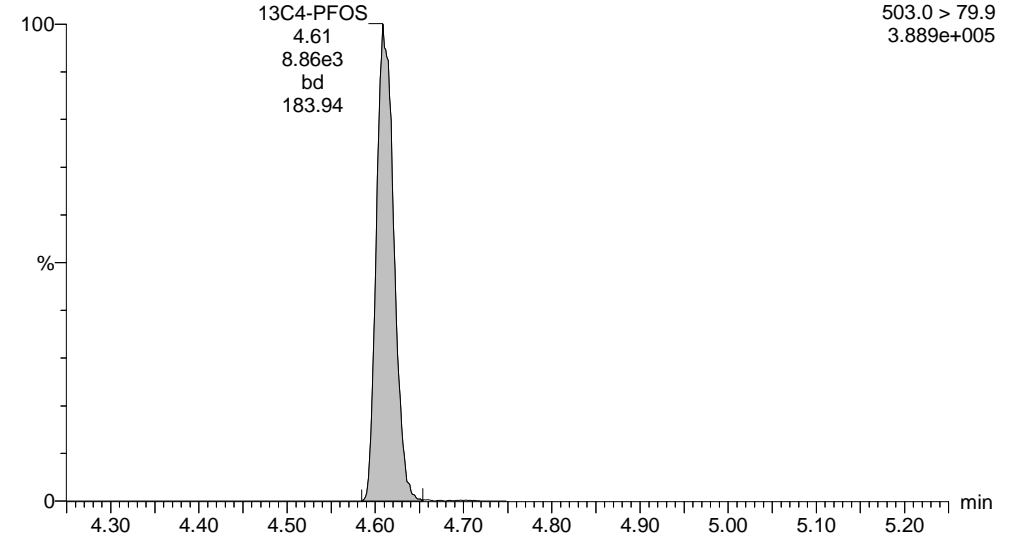
**13C2-PFOA**

170420G1\_30



**13C4-PFOS**

170420G1\_30



Dataset: U:\G1.PRO\Results\2017\170421G3\170421G3-31.qld

Last Altered: Tuesday, April 25, 2017 11:10:19 AM Pacific Daylight Time

Printed: Tuesday, April 25, 2017 11:11:20 AM Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: 1700466-11 RW16-20170417 0.25, Description: RW16-20170417, Name: 170421G3\_31, Date: 22-Apr-2017, Time: 00:00:29

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	4 PFOA	413 > 368.7	1.738e3	7.475e3		0.289	4.22	10.3	
2	7 13C2-PFHxA	315.0 > 269.8	2.875e3	7.475e3	0.449	0.289	3.30	29.7	85.7
3	8 13C2-PFDA	515.1>469.9	4.753e3	7.475e3	0.803	0.289	4.86	27.4	79.2
4	9 13C2-PFOA	414.9 > 369.7	7.475e3	7.475e3	1.000	0.289	4.22	34.6	100

Dataset: U:\G1.PRO\Results\2017\170421G3\170421G3-31.qld

Last Altered: Tuesday, April 25, 2017 11:10:19 AM Pacific Daylight Time

Printed: Tuesday, April 25, 2017 11:11:20 AM Pacific Daylight Time

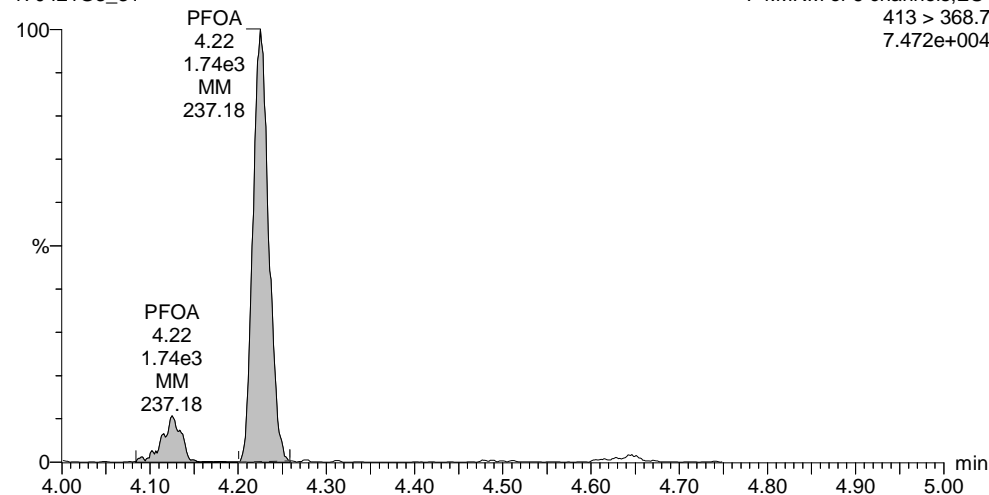
Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: 1700466-11 RW16-20170417 0.25, Description: RW16-20170417, Name: 170421G3\_31, Date: 22-Apr-2017, Time: 00:00:29, Instrument: , Lab: , User:

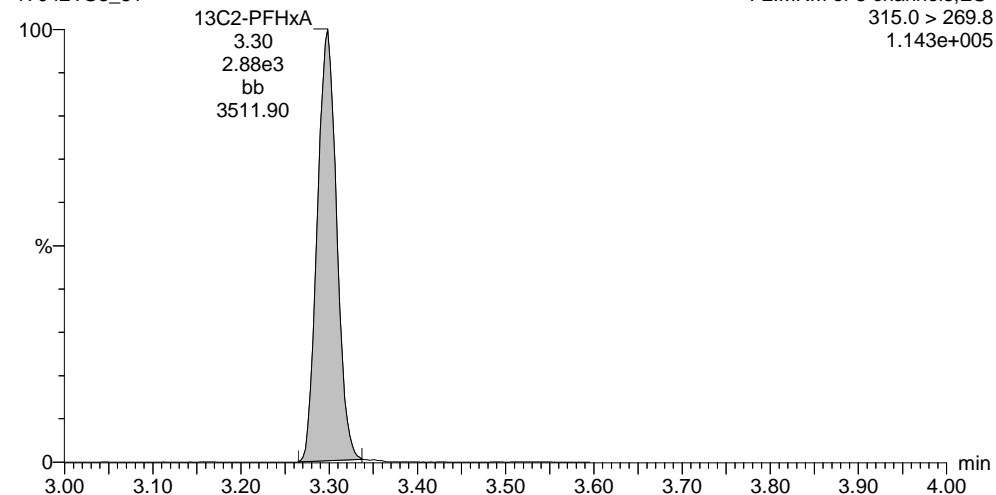
**PFOA**

170421G3\_31



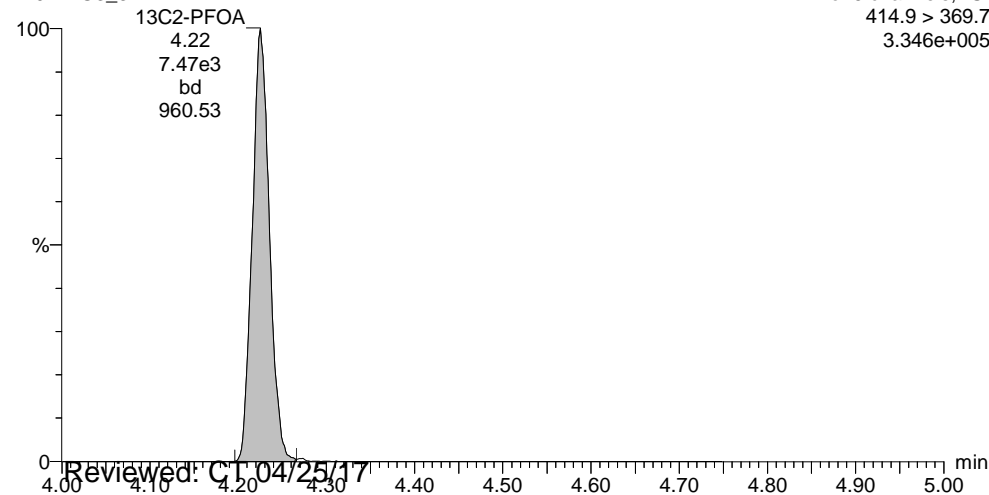
**13C2-PFHxA**

170421G3\_31



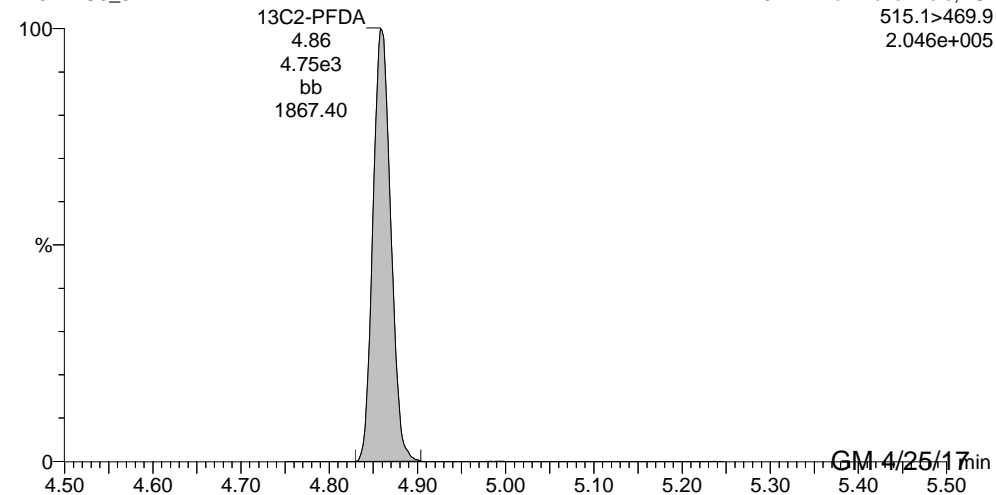
**13C2-PFOA**

170421G3\_31



**13C2-PFDA**

170421G3\_31



Reviewed: C1 04/25/17

GM 4/25/17

Dataset: U:\G1.PRO\Results\2017\170421G3\170421G3-32.qld

Last Altered: Monday, April 24, 2017 13:53:59 Pacific Daylight Time

Printed: Monday, April 24, 2017 13:54:40 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: 1700466-12 FRB-16-20170417 0.25, Description: FRB-16-20170417, Name: 170421G3\_32, Date: 22-Apr-2017, Time: 00:12:53

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	4 PFOA	413 > 368.7	8.525e0	6.623e3		0.281	4.22	0.0588	
2	7 13C2-PFHxA	315.0 > 269.8	2.856e3	6.623e3	0.449	0.281	3.30	34.3	96.1
3	8 13C2-PFDA	515.1>469.9	4.771e3	6.623e3	0.803	0.281	4.86	32.0	89.7
4	9 13C2-PFOA	414.9 > 369.7	6.623e3	6.623e3	1.000	0.281	4.23	35.6	100

Dataset: U:\G1.PRO\Results\2017\170421G3\170421G3-32.qld

Last Altered: Monday, April 24, 2017 13:53:59 Pacific Daylight Time

Printed: Monday, April 24, 2017 13:54:40 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

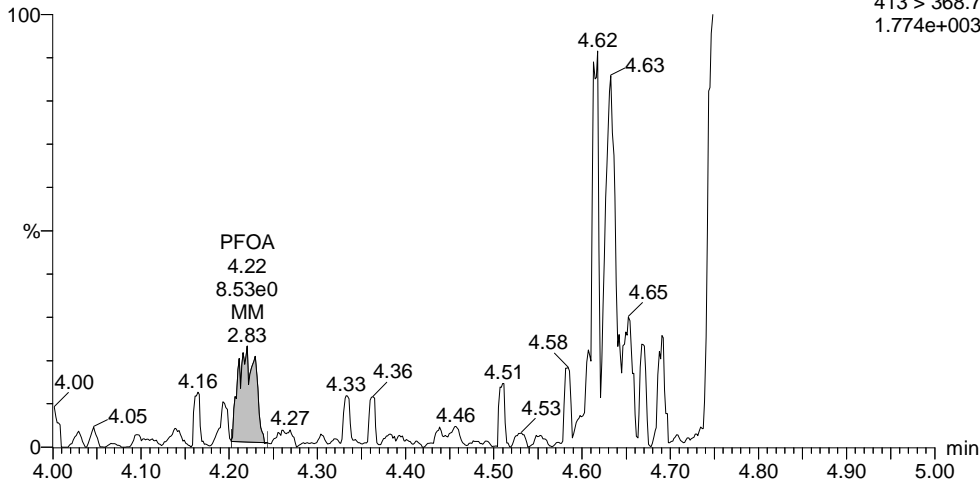
Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: 1700466-12 FRB-16-20170417 0.25, Description: FRB-16-20170417, Name: 170421G3\_32, Date: 22-Apr-2017, Time: 00:12:53, Instrument: , Lab: , User:

**PFOA**

170421G3\_32

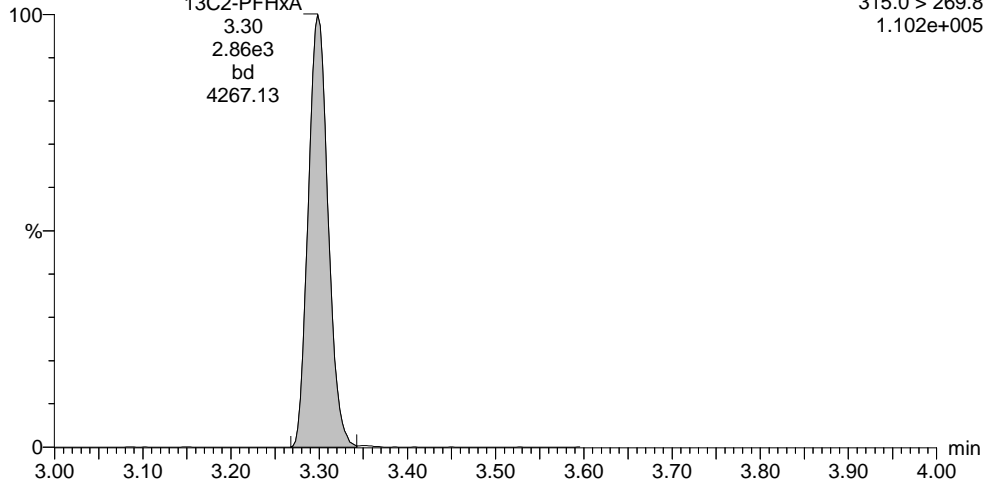
F4:MRM of 6 channels,ES-  
413 > 368.7  
1.774e+003



**13C2-PFHxA**

170421G3\_32

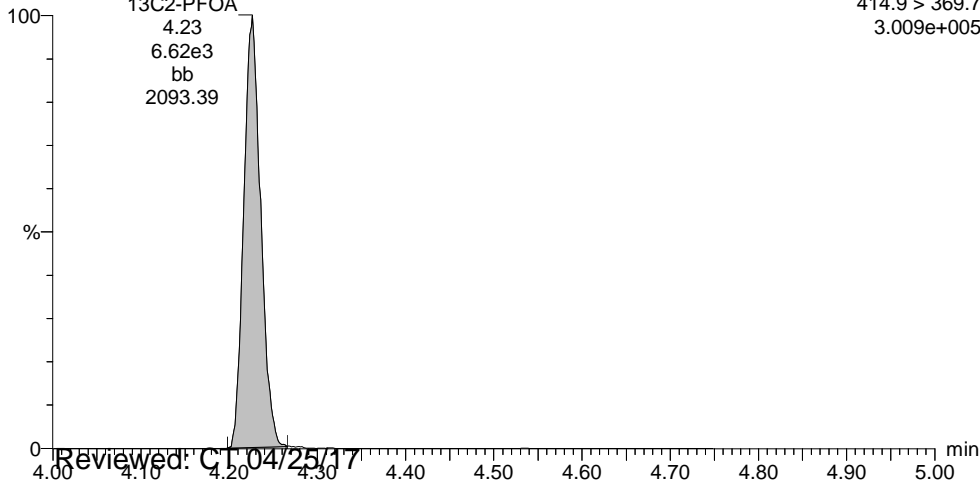
F2:MRM of 3 channels,ES-  
315.0 > 269.8  
1.102e+005



**13C2-PFOA**

170421G3\_32

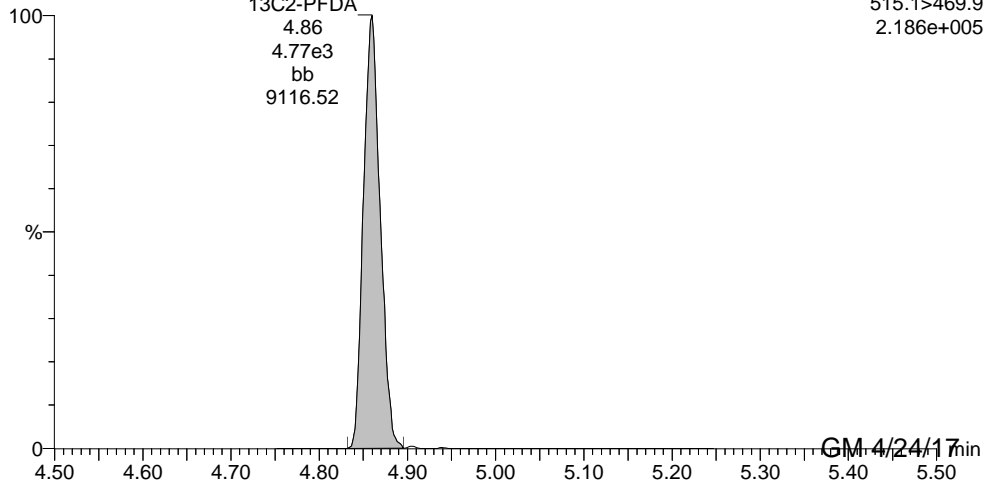
F4:MRM of 6 channels,ES-  
414.9 > 369.7  
3.009e+005



**13C2-PFDA**

170421G3\_32

F5:MRM of 7 channels,ES-  
515.1 > 469.9  
2.186e+005



Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-32.qld

Last Altered: Friday, April 21, 2017 13:44:42 Pacific Daylight Time

Printed: Monday, April 24, 2017 09:29:17 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: 1700466-13 RW14-20170418 0.25, Description: RW14-20170418, Name: 170420G1\_32, Date: 20-Apr-2017, Time: 23:12:14

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1 PFBS	299 > 79.7	3.541e3	8.358e3		0.283	2.89	48.1	
2	2 PFHpA	363 > 318.9	6.310e2	6.710e3		0.283	3.78	3.70	
3	3 PFHxS	398.9 > 79.6	3.102e2	8.358e3		0.283	3.91	3.54	
4	4 PFOA	413 > 368.7	1.487e3	6.710e3		0.283	4.20	10.1	
5	5 PFOS	499 > 79.9	3.587e2	8.358e3		0.283	4.62	12.5	
6	6 PFNA	463 > 418.8	2.233e2	6.710e3		0.283	4.55	0.861	
7	7 13C2-PFHxA	315.0 > 269.8	2.824e3	6.710e3	0.449	0.283	3.27	33.1	93.8
8	8 13C2-PFDA	515.1 > 469.9	4.492e3	6.710e3	0.803	0.283	4.85	29.4	83.4
9	9 13C2-PFOA	414.9 > 369.7	6.710e3	6.710e3	1.000	0.283	4.20	35.3	100
10	10 13C4-PFOS	503.0 > 79.9	8.358e3	8.358e3	1.000	0.283	4.61	101	100



Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-32.qld

Last Altered: Friday, April 21, 2017 13:44:42 Pacific Daylight Time

Printed: Monday, April 24, 2017 09:29:17 Pacific Daylight Time

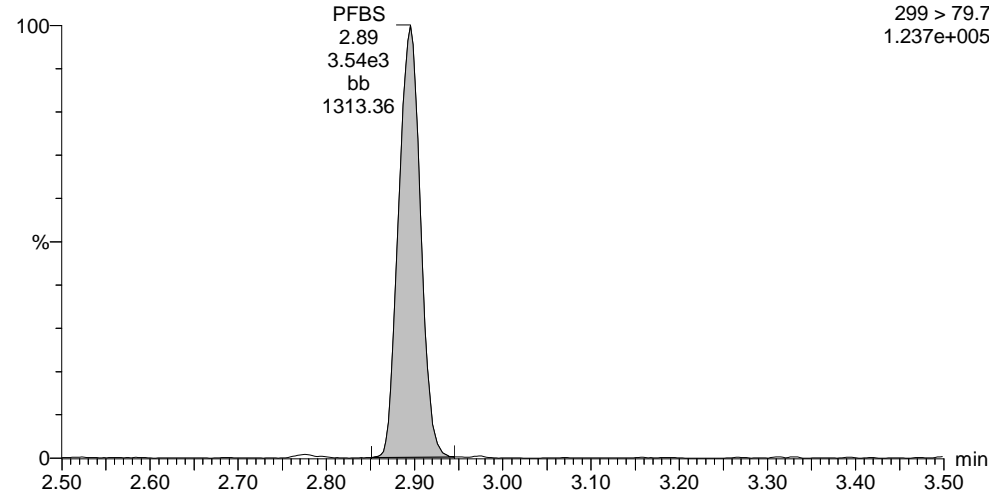
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ID: 1700466-13 RW14-20170418 0.25, Description: RW14-20170418, Name: 170420G1\_32, Date: 20-Apr-2017, Time: 23:12:14, Instrument: , Lab: , User:

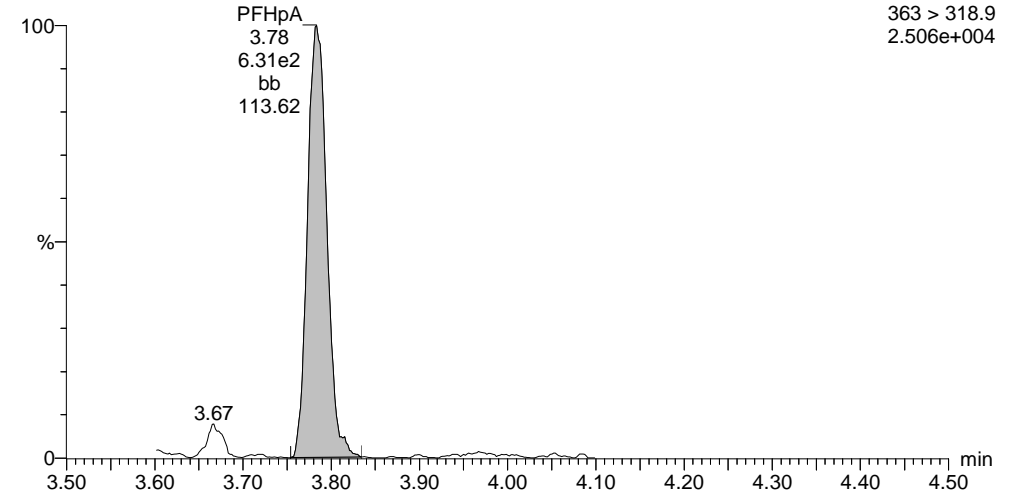
**PFBS**

170420G1\_32



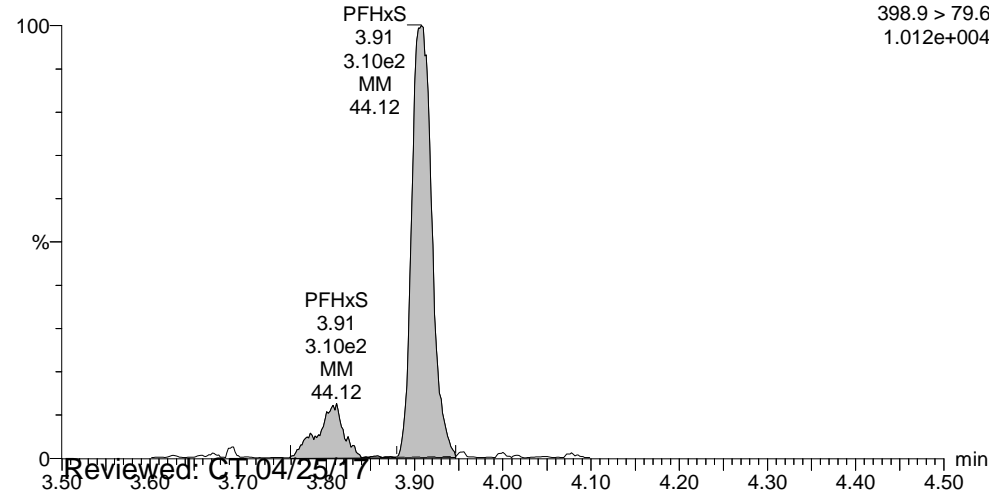
**PFHpA**

170420G1\_32



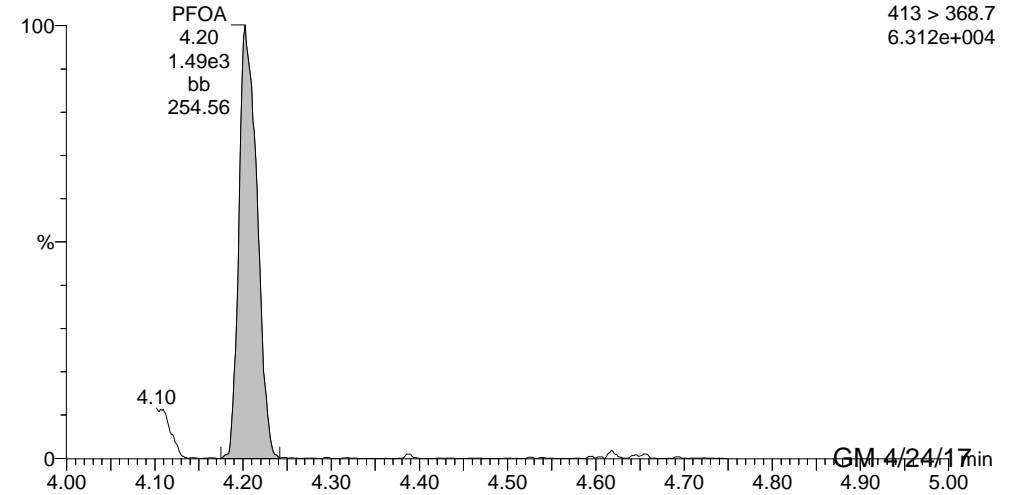
**PFHxS**

170420G1\_32



**PFOA**

170420G1\_32



Reviewed: C1 04/25/17

GM 4/24/17

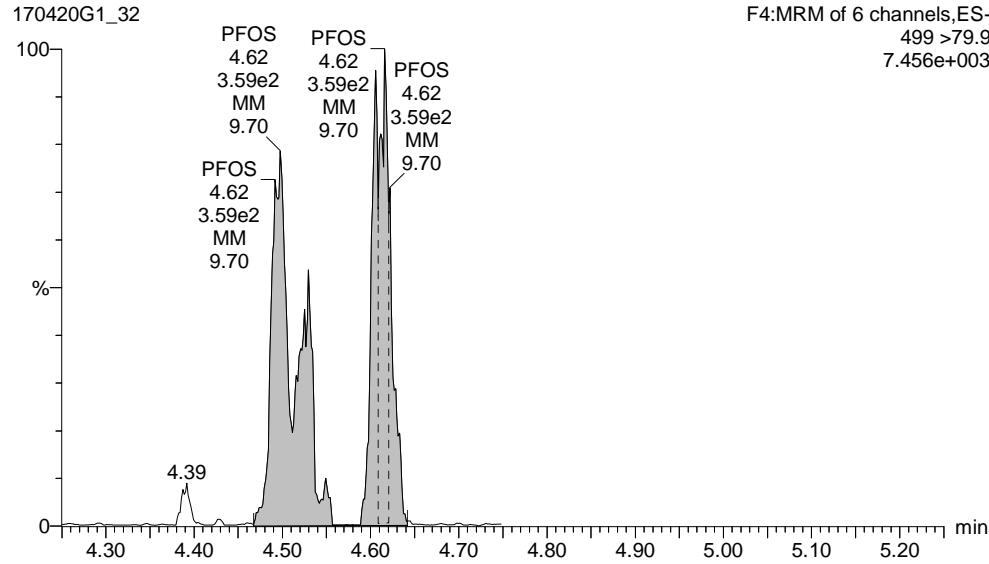
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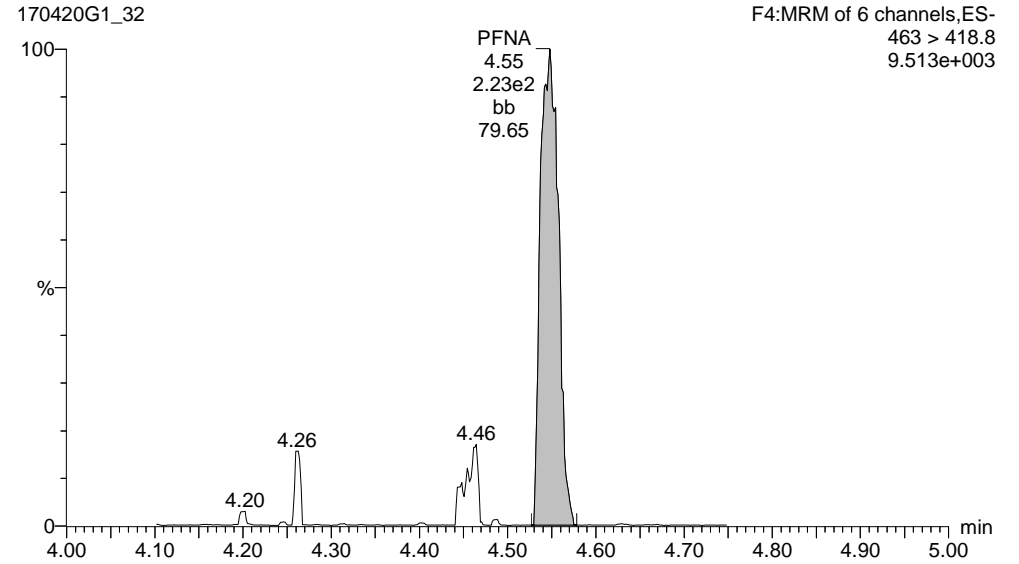
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ID: 1700466-13 RW14-20170418 0.25, Description: RW14-20170418, Name: 170420G1\_32, Date: 20-Apr-2017, Time: 23:12:14, Instrument: , Lab: , User:

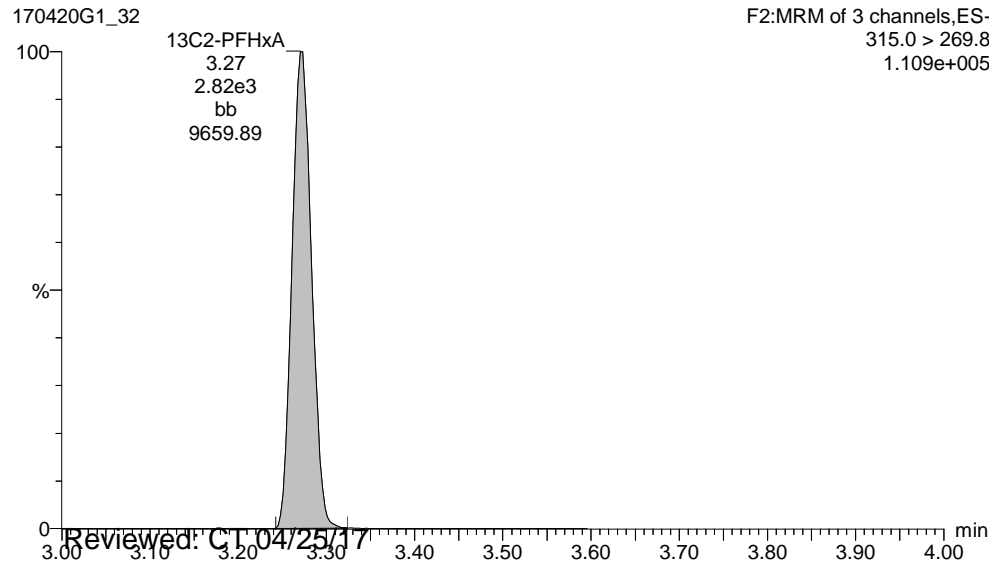
**PFOS**



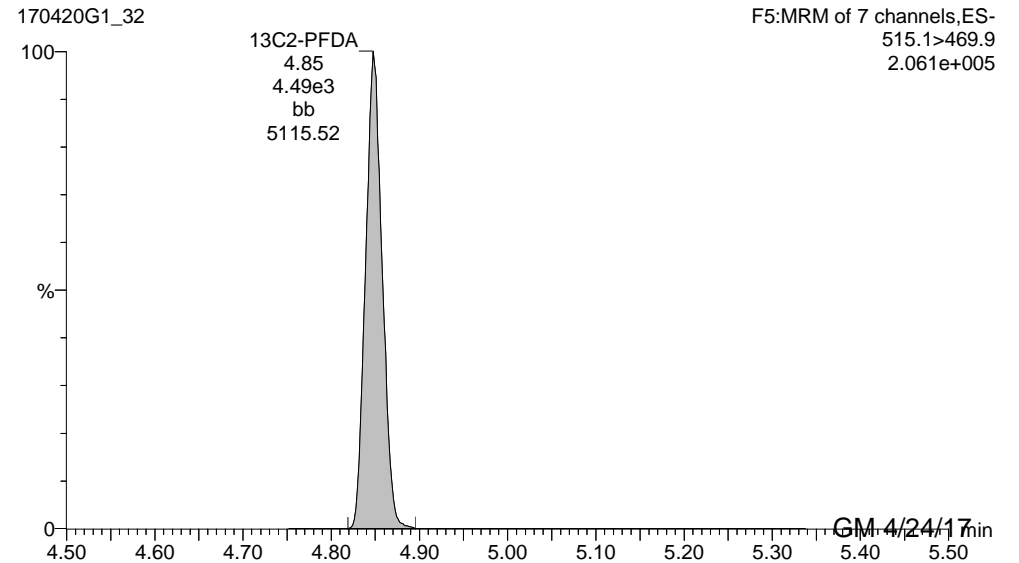
**PFNA**



**13C2-PFHxA**



**13C2-PFDA**



Reviewed: C.T. 04/25/17

GM 4/24/17

Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-32.qld

Last Altered: Friday, April 21, 2017 13:44:42 Pacific Daylight Time

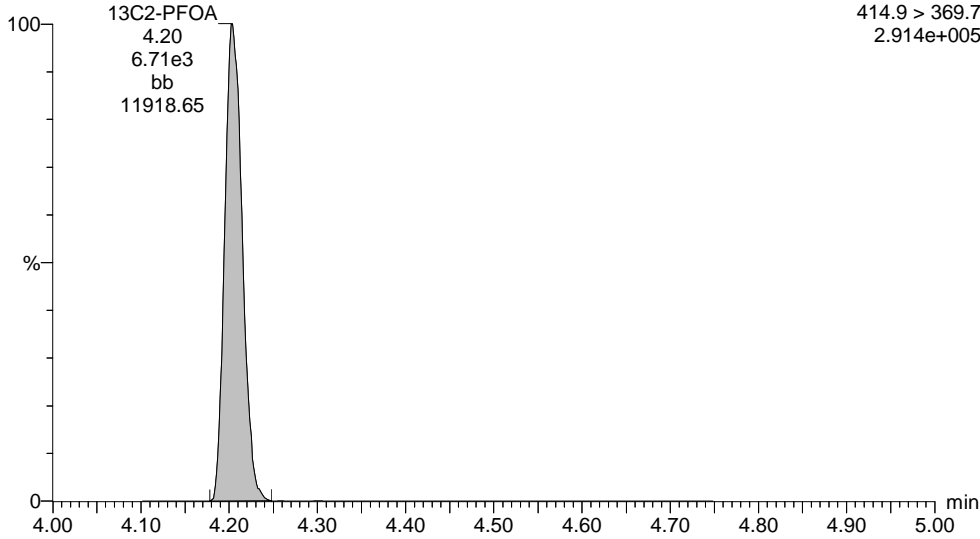
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ID: 1700466-13 RW14-20170418 0.25, Description: RW14-20170418, Name: 170420G1\_32, Date: 20-Apr-2017, Time: 23:12:14, Instrument: , Lab: , User:

**13C2-PFOA**

170420G1\_32

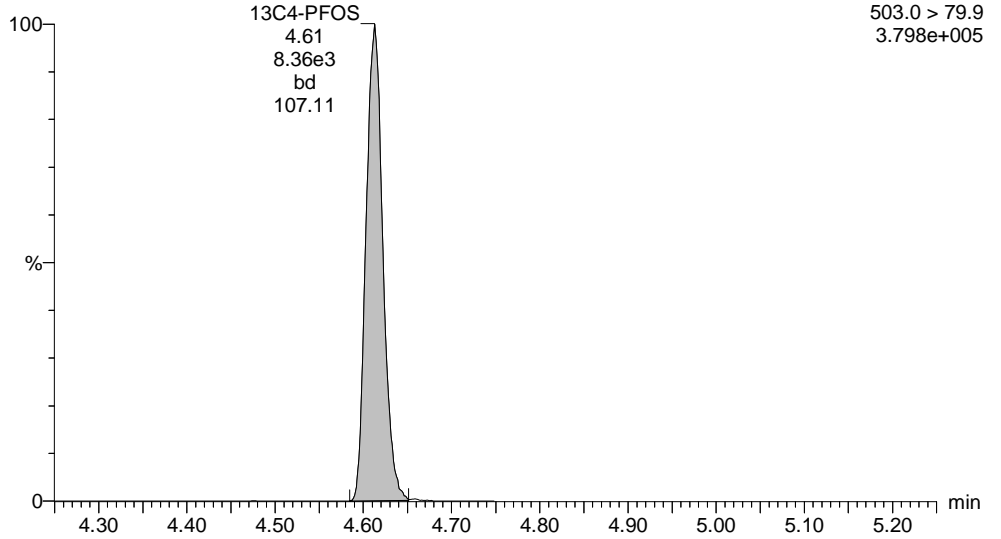
F4:MRM of 6 channels,ES-  
414.9 > 369.7  
2.914e+005



**13C4-PFOS**

170420G1\_32

F4:MRM of 6 channels,ES-  
503.0 > 79.9  
3.798e+005



Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-32.qld

Last Altered: Friday, April 21, 2017 13:44:42 Pacific Daylight Time

Printed: Monday, April 24, 2017 09:29:17 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: 1700466-13 RW14-20170418 0.25, Description: RW14-20170418, Name: 170420G1\_32, Date: 20-Apr-2017, Time: 23:12:14

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1 PFBS	299 > 79.7	3.541e3	8.358e3		0.283	2.89	48.1	
2	2 PFHpA	363 > 318.9	6.310e2	6.710e3		0.283	3.78	3.70	
3	3 PFHxS	398.9 > 79.6	3.102e2	8.358e3		0.283	3.91	3.54	
4	4 PFOA	413 > 368.7	1.487e3	6.710e3		0.283	4.20	10.1	
5	5 PFOS	499 > 79.9	3.587e2	8.358e3		0.283	4.62	12.5	
6	6 PFNA	463 > 418.8	2.233e2	6.710e3		0.283	4.55	0.861	
7	7 13C2-PFHxA	315.0 > 269.8	2.824e3	6.710e3	0.449	0.283	3.27	33.1	93.8
8	8 13C2-PFDA	515.1 > 469.9	4.492e3	6.710e3	0.803	0.283	4.85	29.4	83.4
9	9 13C2-PFOA	414.9 > 369.7	6.710e3	6.710e3	1.000	0.283	4.20	35.3	100
10	10 13C4-PFOS	503.0 > 79.9	8.358e3	8.358e3	1.000	0.283	4.61	101	100

Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-32.qld

Last Altered: Friday, April 21, 2017 13:44:42 Pacific Daylight Time

Printed: Monday, April 24, 2017 09:29:17 Pacific Daylight Time

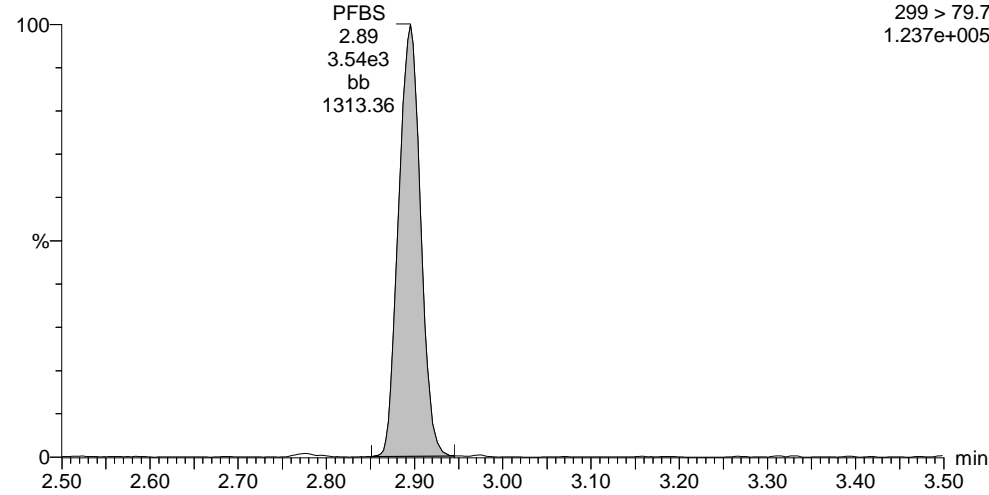
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Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: 1700466-13 RW14-20170418 0.25, Description: RW14-20170418, Name: 170420G1\_32, Date: 20-Apr-2017, Time: 23:12:14, Instrument: , Lab: , User:

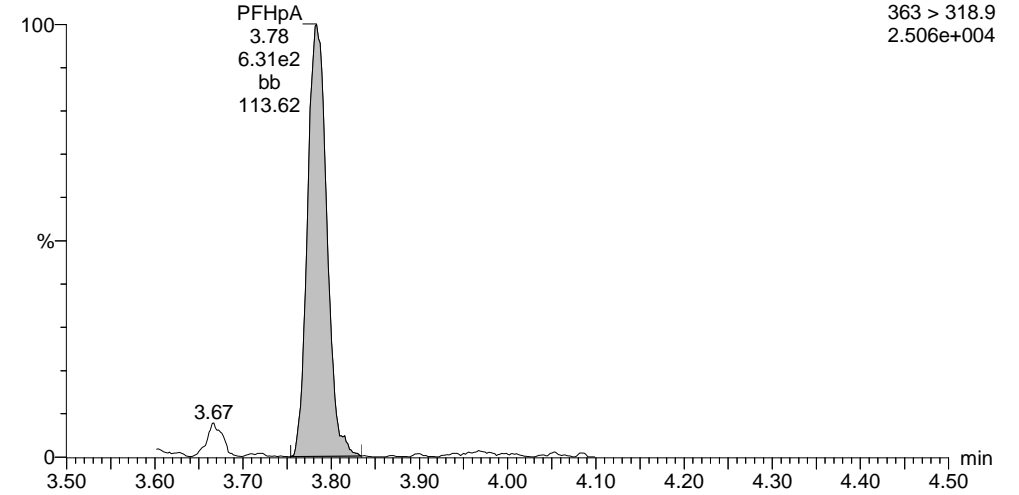
**PFBS**

170420G1\_32



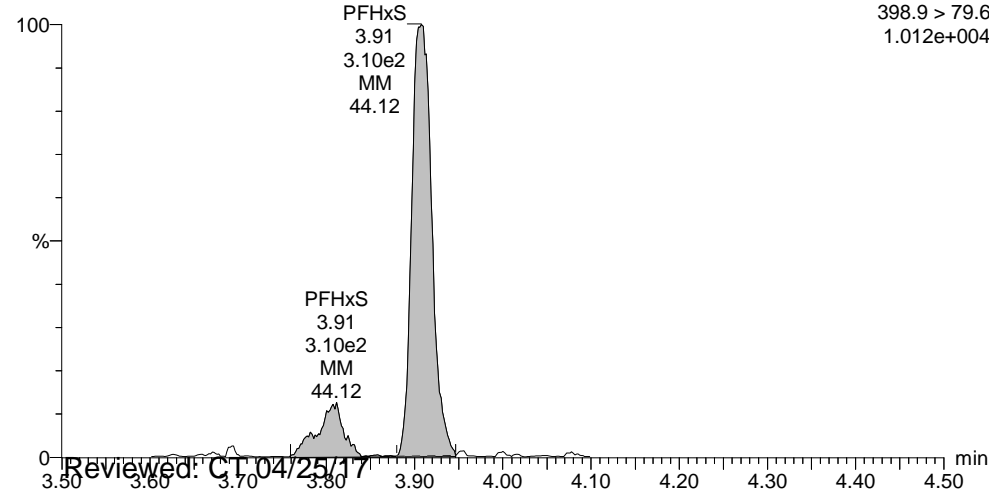
**PFHpA**

170420G1\_32



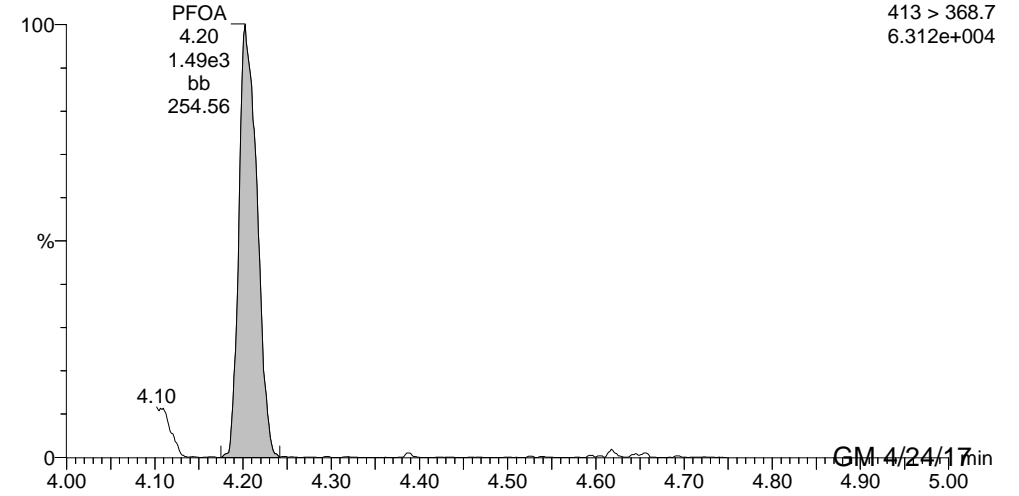
**PFHxS**

170420G1\_32



**PFOA**

170420G1\_32



Reviewed: C1 04/25/17

GM 4/24/17

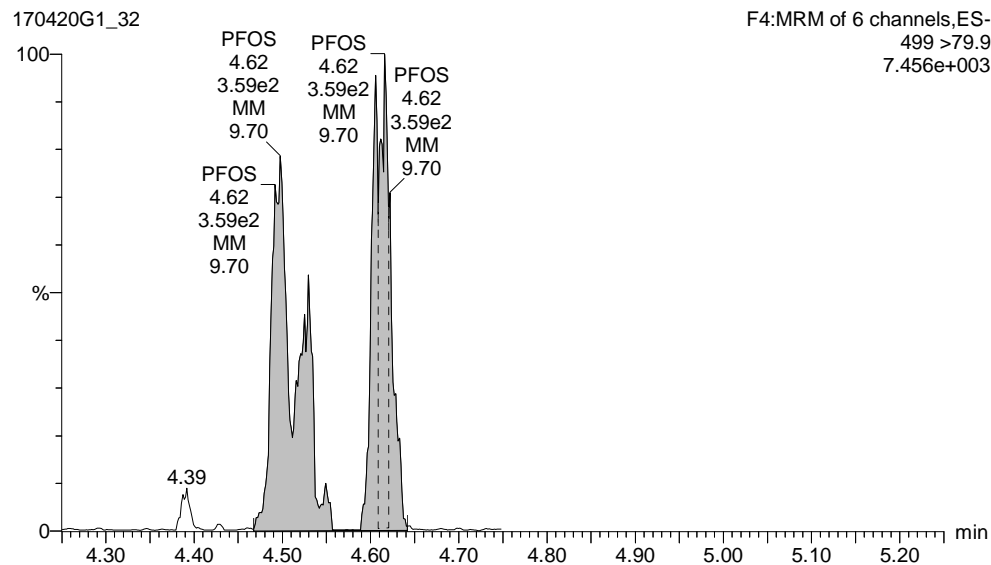
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Last Altered: Friday, April 21, 2017 13:44:42 Pacific Daylight Time

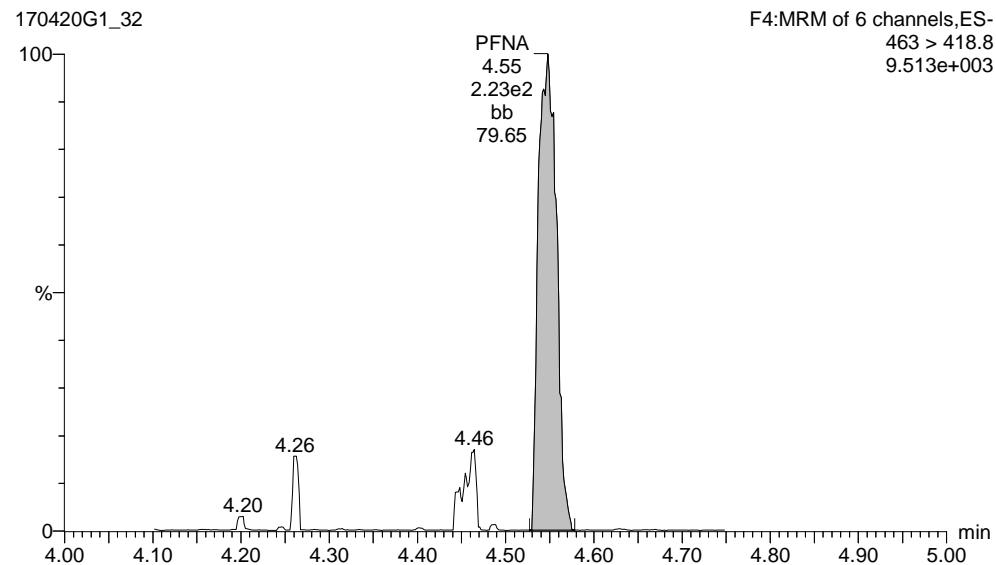
Printed: Monday, April 24, 2017 09:29:17 Pacific Daylight Time

ID: 1700466-13 RW14-20170418 0.25, Description: RW14-20170418, Name: 170420G1\_32, Date: 20-Apr-2017, Time: 23:12:14, Instrument: , Lab: , User:

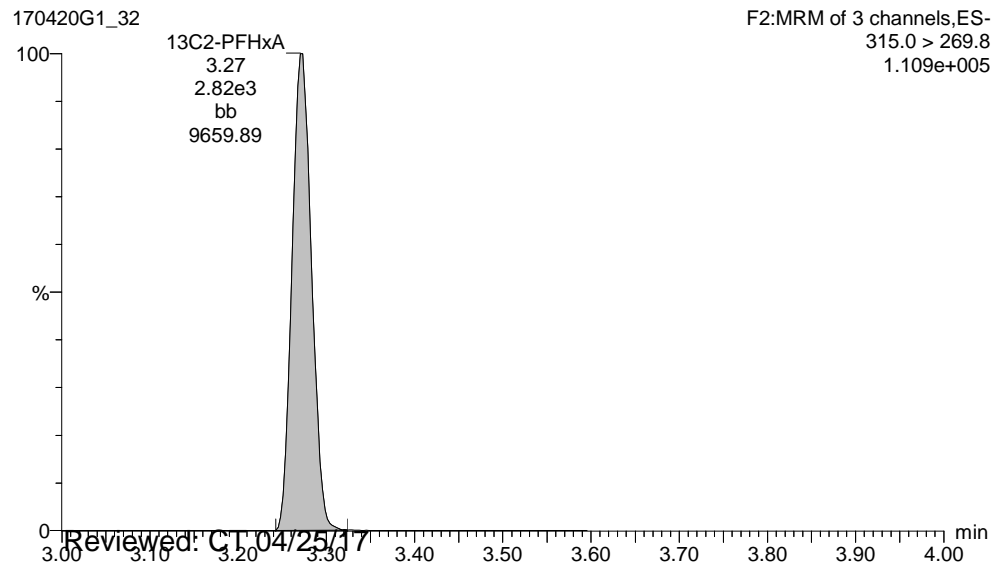
**PFOS**



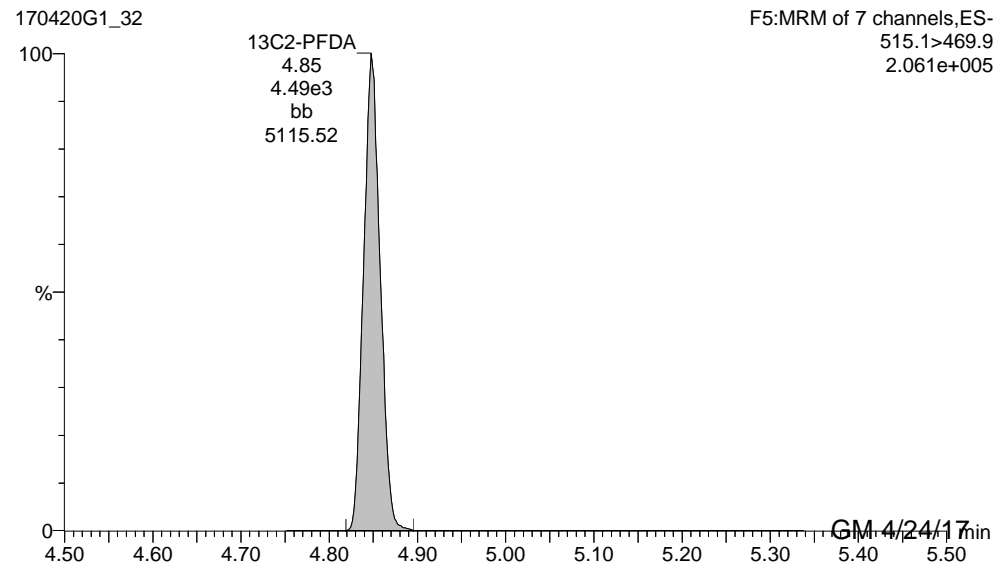
**PFNA**



**13C2-PFHxA**



**13C2-PFDA**



Reviewed: C.T. 04/25/17

GM 4/24/17

Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-32.qld

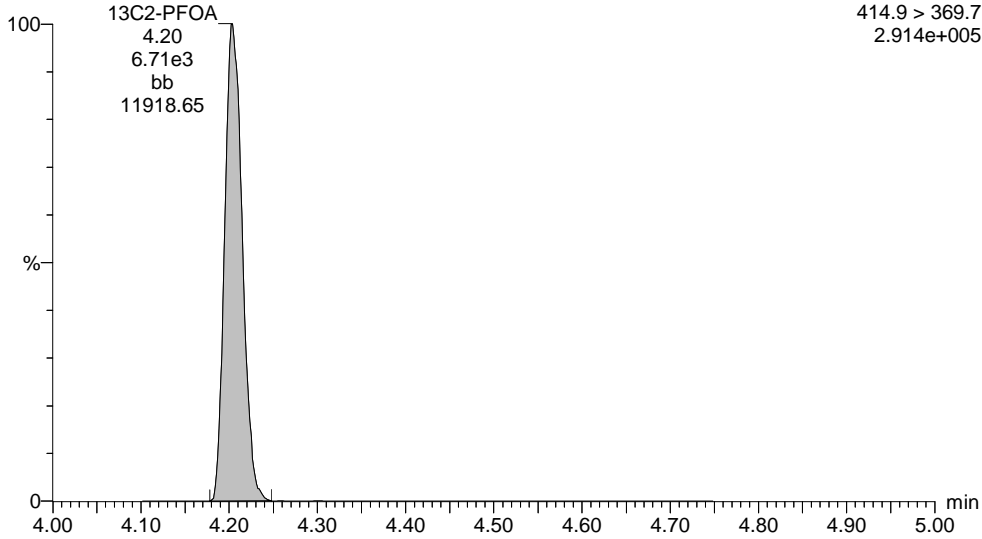
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Printed: Monday, April 24, 2017 09:29:17 Pacific Daylight Time

ID: 1700466-13 RW14-20170418 0.25, Description: RW14-20170418, Name: 170420G1\_32, Date: 20-Apr-2017, Time: 23:12:14, Instrument: , Lab: , User:

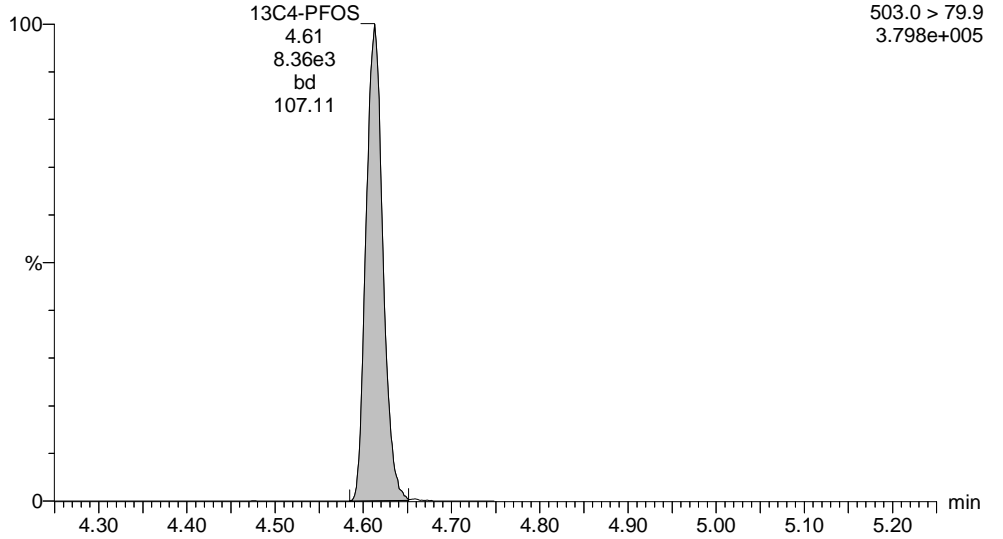
**13C2-PFOA**

170420G1\_32



**13C4-PFOS**

170420G1\_32



Dataset: U:\G1.PRO\Results\2017\170421G3\170421G3-33.qld

Last Altered: Monday, April 24, 2017 13:55:38 Pacific Daylight Time

Printed: Monday, April 24, 2017 13:56:18 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: 1700466-13 RW14-20170418 0.25, Description: RW14-20170418, Name: 170421G3\_33, Date: 22-Apr-2017, Time: 00:25:18

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	4 PFOA	413 > 368.7	2.107e3	7.084e3		0.283	4.23	13.5	
2	7 13C2-PFHxA	315.0 > 269.8	2.902e3	7.084e3	0.449	0.283	3.30	32.2	91.3
3	8 13C2-PFDA	515.1 > 469.9	4.487e3	7.084e3	0.803	0.283	4.86	27.8	78.9
4	9 13C2-PFOA	414.9 > 369.7	7.084e3	7.084e3	1.000	0.283	4.22	35.3	100



Dataset: U:\G1.PRO\Results\2017\170421G3\170421G3-33.qld

Last Altered: Monday, April 24, 2017 13:55:38 Pacific Daylight Time

Printed: Monday, April 24, 2017 13:56:18 Pacific Daylight Time

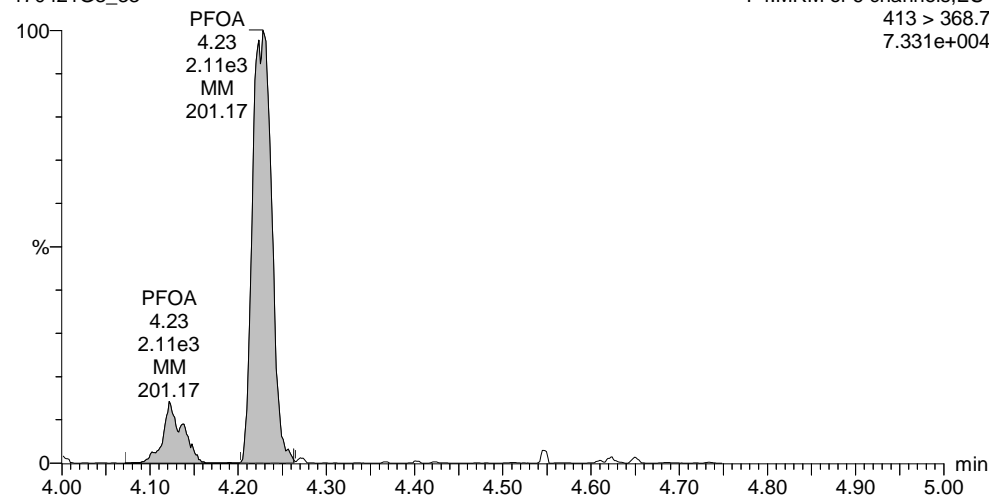
Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: 1700466-13 RW14-20170418 0.25, Description: RW14-20170418, Name: 170421G3\_33, Date: 22-Apr-2017, Time: 00:25:18, Instrument: , Lab: , User:

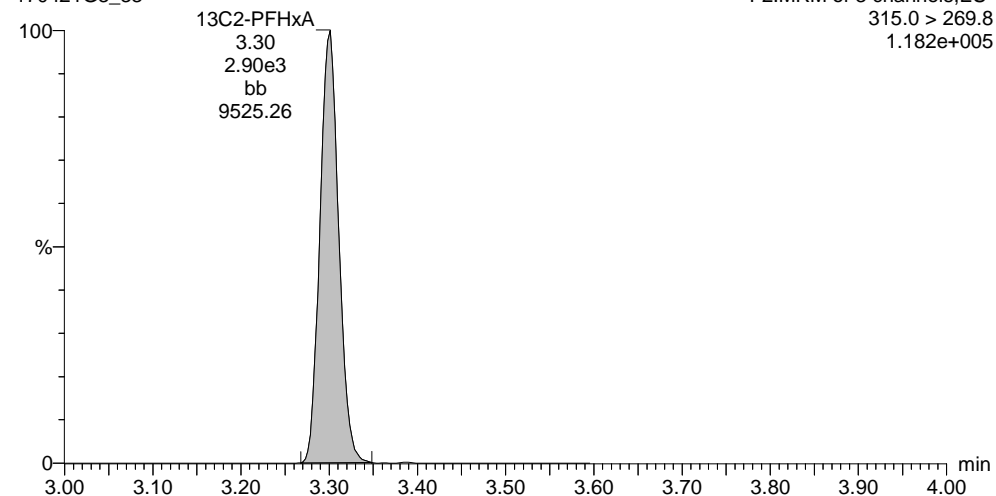
**PFOA**

170421G3\_33



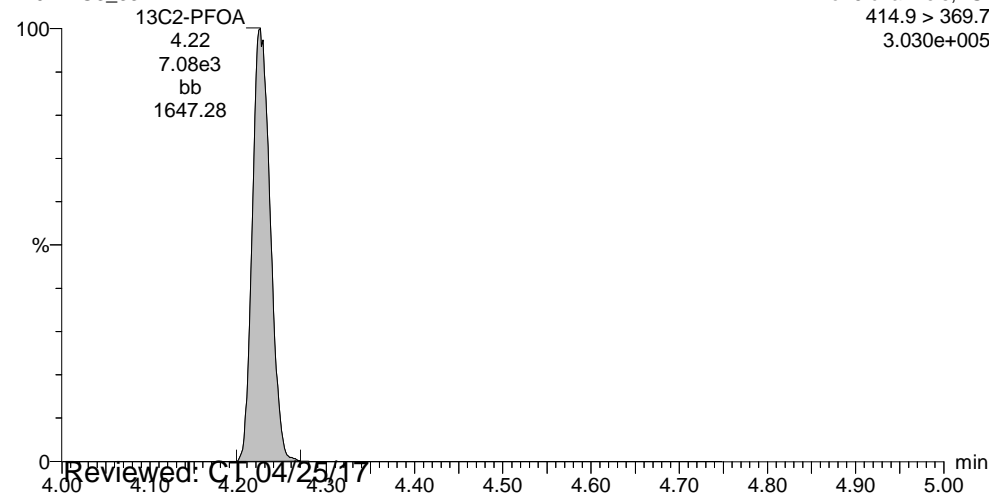
**13C2-PFHxA**

170421G3\_33



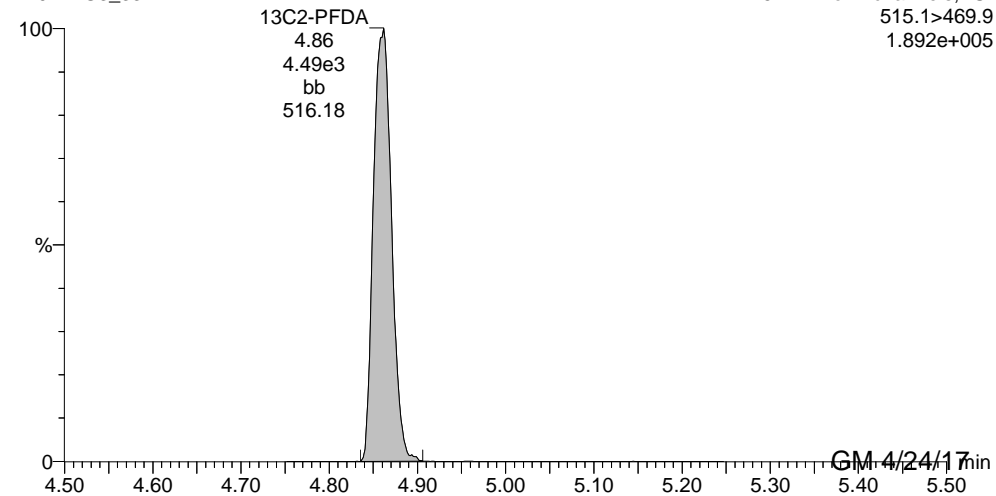
**13C2-PFOA**

170421G3\_33



**13C2-PFDA**

170421G3\_33



Reviewed: C1 04/25/17

GM 4/24/17

Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-33.qld

Last Altered: Tuesday, April 25, 2017 11:15:52 Pacific Daylight Time

Printed: Tuesday, April 25, 2017 11:16:49 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: 1700466-14 FRB-14-20170418 0.25, Description: FRB-14-20170418, Name: 170420G1\_33, Date: 20-Apr-2017, Time: 23:24:37

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1 PFBS	299 > 79.7		8.014e3		0.279			
2	2 PFHpA	363 > 318.9	5.002e0	6.124e3		0.279	3.78	0.0325	
3	3 PFHxS	398.9 > 79.6		8.014e3		0.279			
4	4 PFOA	413 > 368.7	2.445e1	6.124e3		0.279	4.20	0.183	
5	5 PFOS	499 > 79.9		8.014e3		0.279			
6	6 PFNA	463 > 418.8		6.124e3		0.279			
7	7 13C2-PFHxA	315.0 > 269.8	2.632e3	6.124e3	0.449	0.279	3.27	34.3	95.8
8	8 13C2-PFDA	515.1 > 469.9	4.066e3	6.124e3	0.803	0.279	4.85	29.6	82.7
9	9 13C2-PFOA	414.9 > 369.7	6.124e3	6.124e3	1.000	0.279	4.21	35.8	100
10	10 13C4-PFOS	503.0 > 79.9	8.014e3	8.014e3	1.000	0.279	4.61	103	100

Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-33.qld

Last Altered: Tuesday, April 25, 2017 11:15:52 Pacific Daylight Time

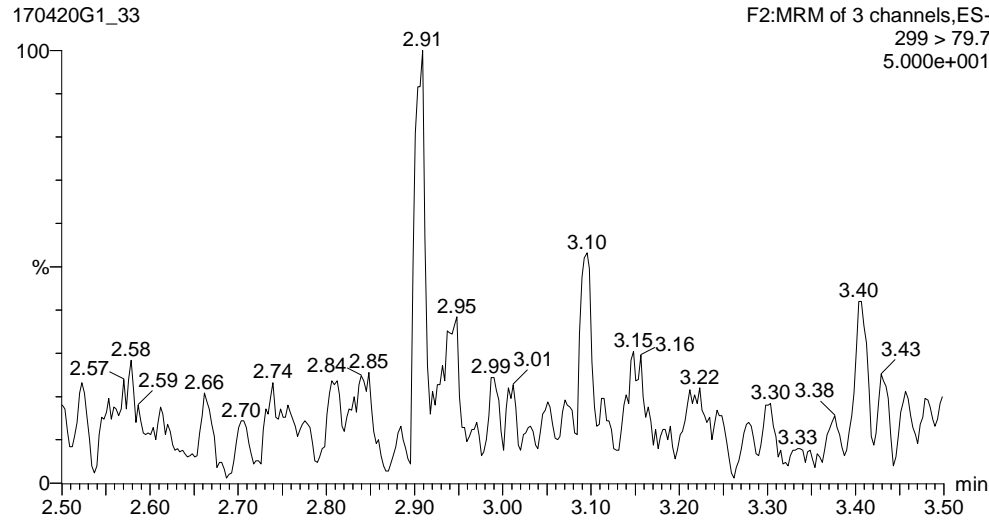
Printed: Tuesday, April 25, 2017 11:16:49 Pacific Daylight Time

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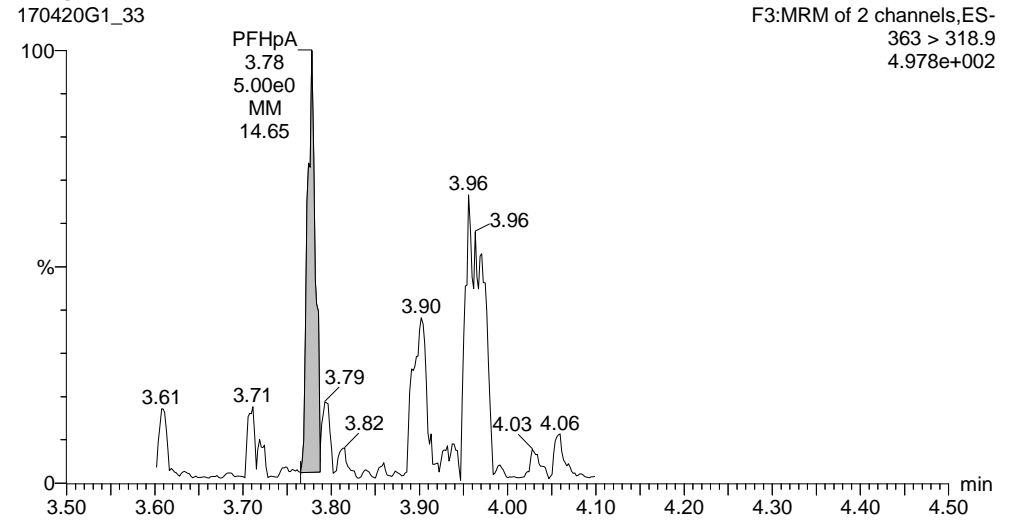
Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: 1700466-14 FRB-14-20170418 0.25, Description: FRB-14-20170418, Name: 170420G1\_33, Date: 20-Apr-2017, Time: 23:24:37, Instrument: , Lab: , User:

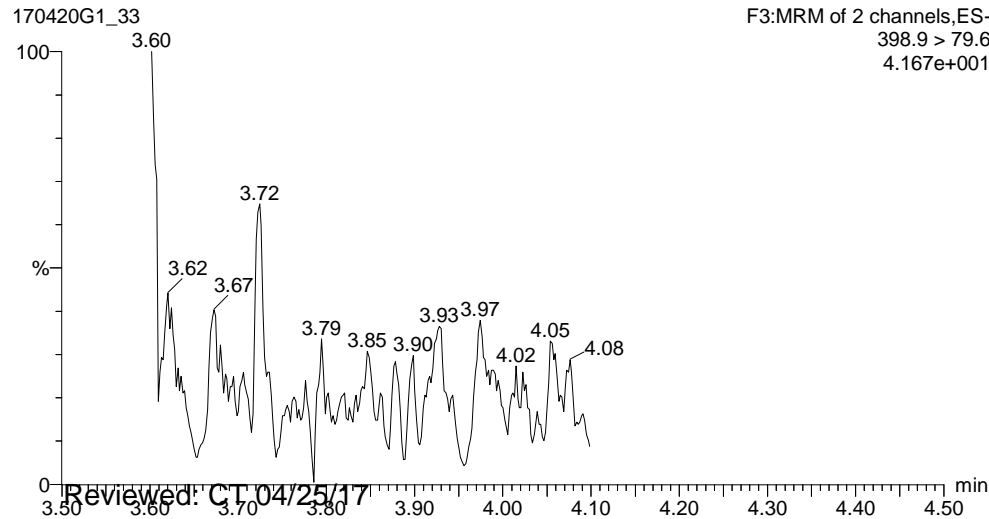
PFBS



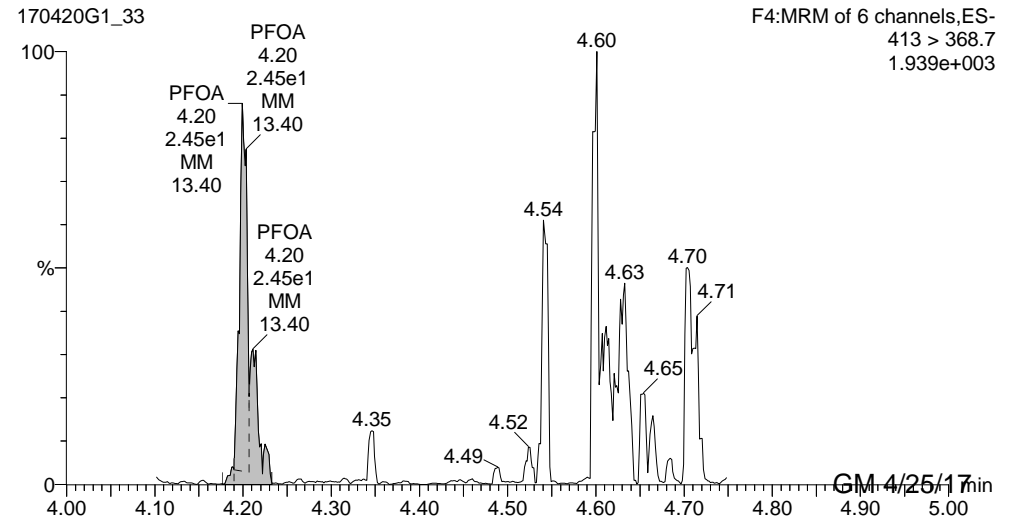
PFHpA



PFHxS



PFOA



Reviewed: CT 04/25/17

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Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-33.qld

Last Altered: Tuesday, April 25, 2017 11:15:52 Pacific Daylight Time

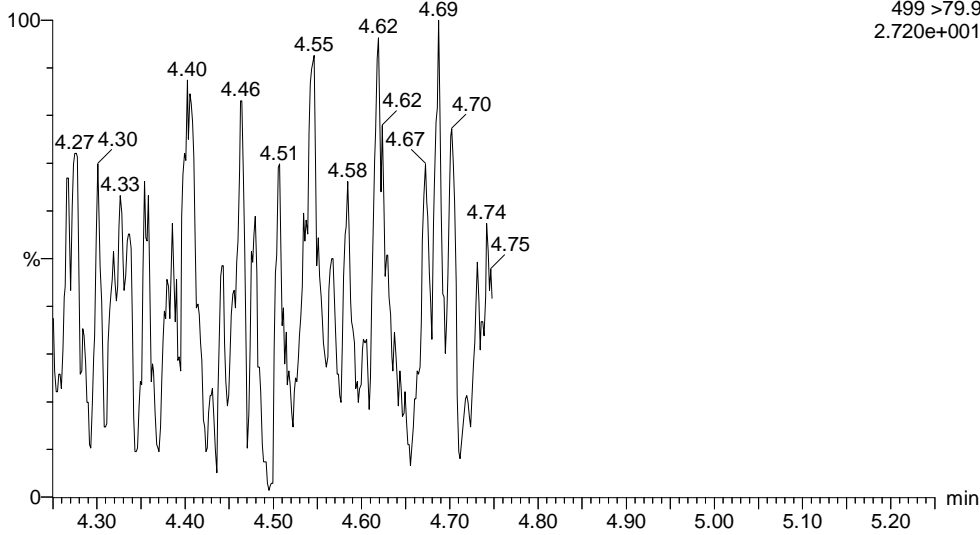
Printed: Tuesday, April 25, 2017 11:16:49 Pacific Daylight Time

ID: 1700466-14 FRB-14-20170418 0.25, Description: FRB-14-20170418, Name: 170420G1\_33, Date: 20-Apr-2017, Time: 23:24:37, Instrument: , Lab: , User:

**PFOS**

170420G1\_33

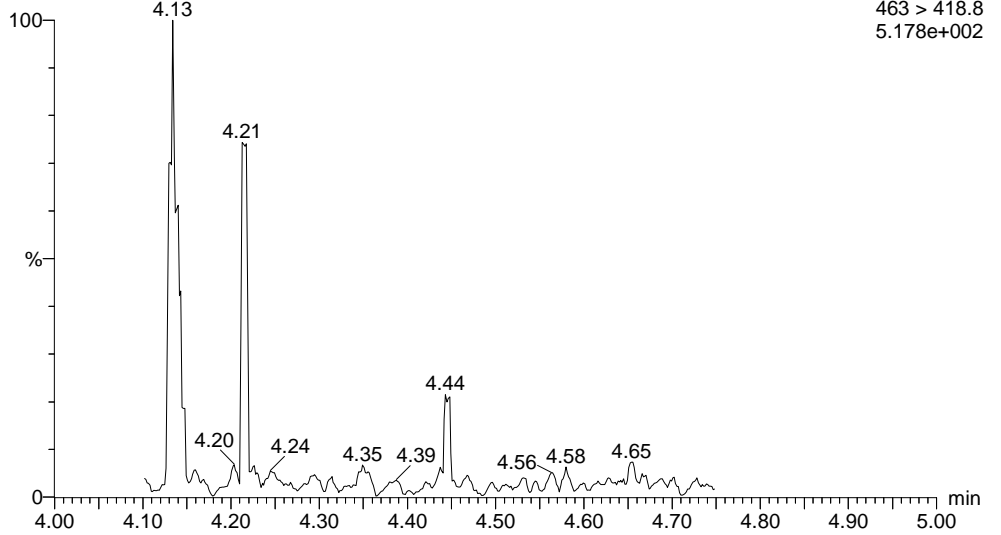
F4:MRM of 6 channels,ES-  
499 >79.9  
2.720e+001



**PFNA**

170420G1\_33

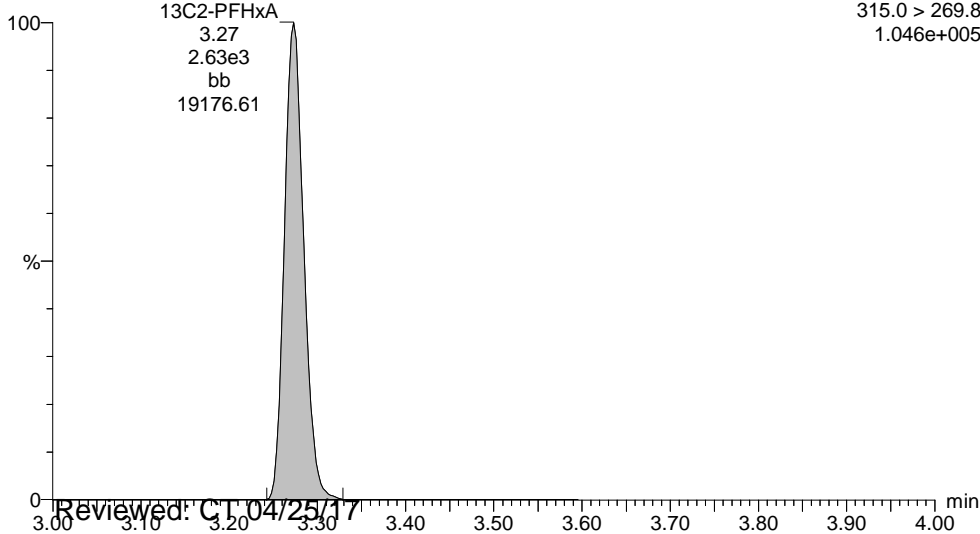
F4:MRM of 6 channels,ES-  
463 > 418.8  
5.178e+002



**13C2-PFHxA**

170420G1\_33

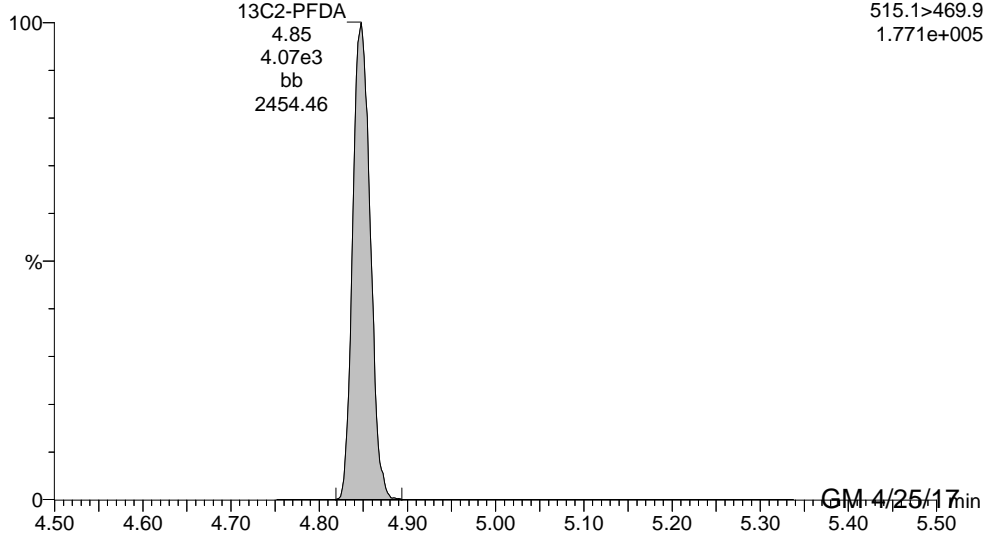
F2:MRM of 3 channels,ES-  
315.0 > 269.8  
1.046e+005



**13C2-PFDA**

170420G1\_33

F5:MRM of 7 channels,ES-  
515.1 >469.9  
1.771e+005



Reviewed: C.T. 04/25/17

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Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-33.qld

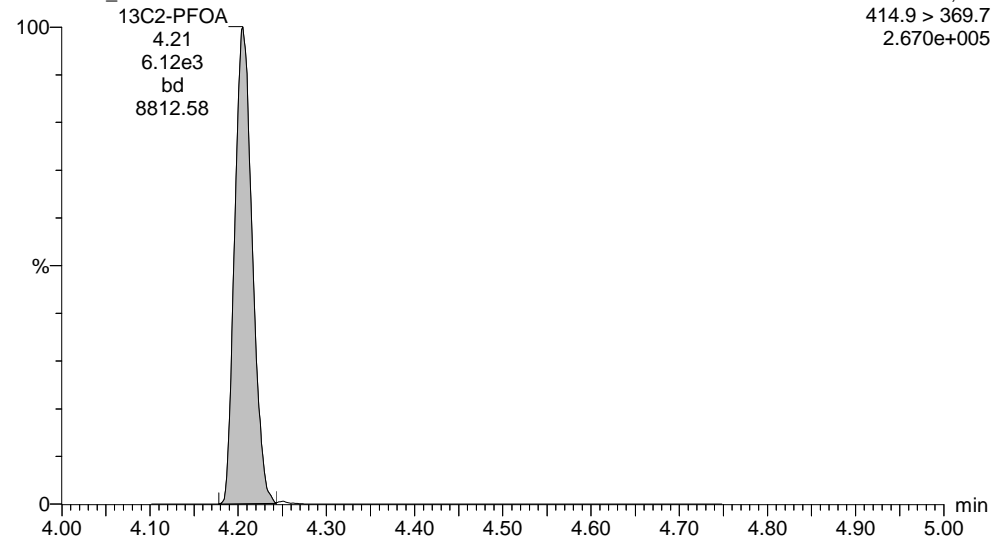
Last Altered: Tuesday, April 25, 2017 11:15:52 Pacific Daylight Time

Printed: Tuesday, April 25, 2017 11:16:49 Pacific Daylight Time

ID: 1700466-14 FRB-14-20170418 0.25, Description: FRB-14-20170418, Name: 170420G1\_33, Date: 20-Apr-2017, Time: 23:24:37, Instrument: , Lab: , User:

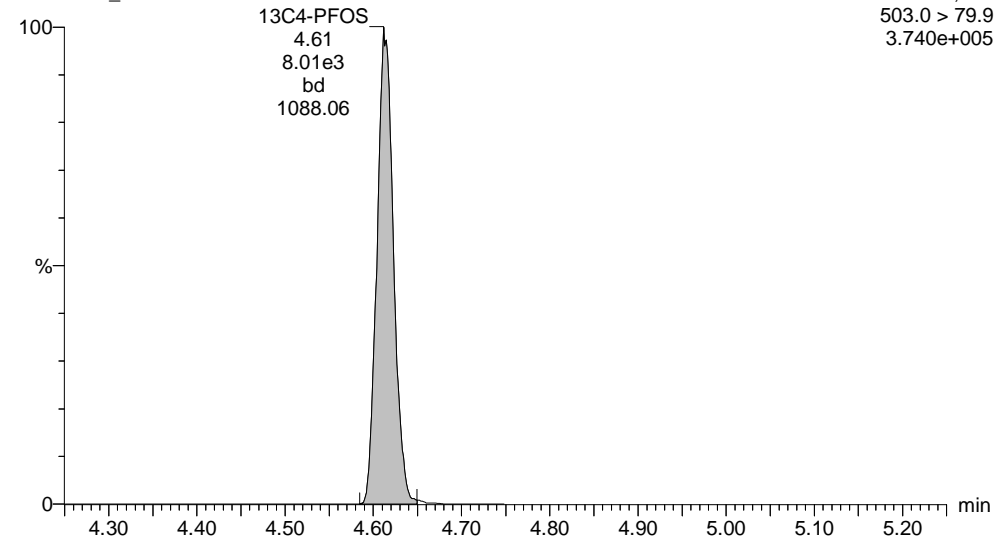
**13C2-PFOA**

170420G1\_33



**13C4-PFOS**

170420G1\_33



Dataset: U:\G1.PRO\Results\2017\170422G1\170422G1-04.qld

Last Altered: Monday, April 24, 2017 14:39:00 Pacific Daylight Time

Printed: Monday, April 24, 2017 14:47:06 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: 1700466-14 FRB-14-20170418 0.25, Description: FRB-14-20170418, Name: 170422G1\_4, Date: 22-Apr-2017, Time: 11:50:33

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	4 PFOA	413 > 368.7	2.471e1	6.760e3		0.279	4.25	0.168	
2	7 13C2-PFHxA	315.0 > 269.8	2.644e3	6.760e3	0.449	0.279	3.33	31.2	87.2
3	8 13C2-PFDA	515.1>469.9	4.233e3	6.760e3	0.803	0.279	4.87	27.9	78.0
4	9 13C2-PFOA	414.9 > 369.7	6.760e3	6.760e3	1.000	0.279	4.25	35.8	100

Dataset: U:\G1.PRO\Results\2017\170422G1\170422G1-04.qld

Last Altered: Monday, April 24, 2017 14:39:00 Pacific Daylight Time

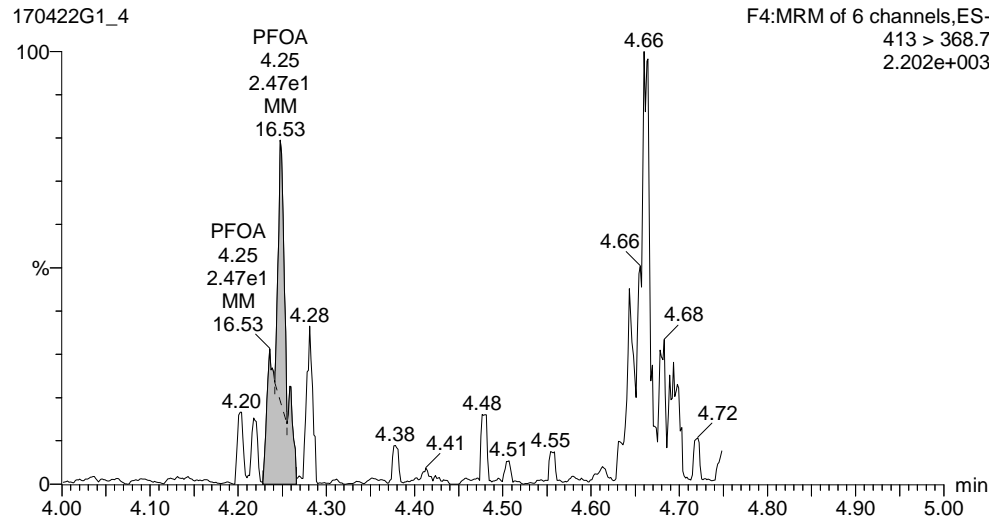
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Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

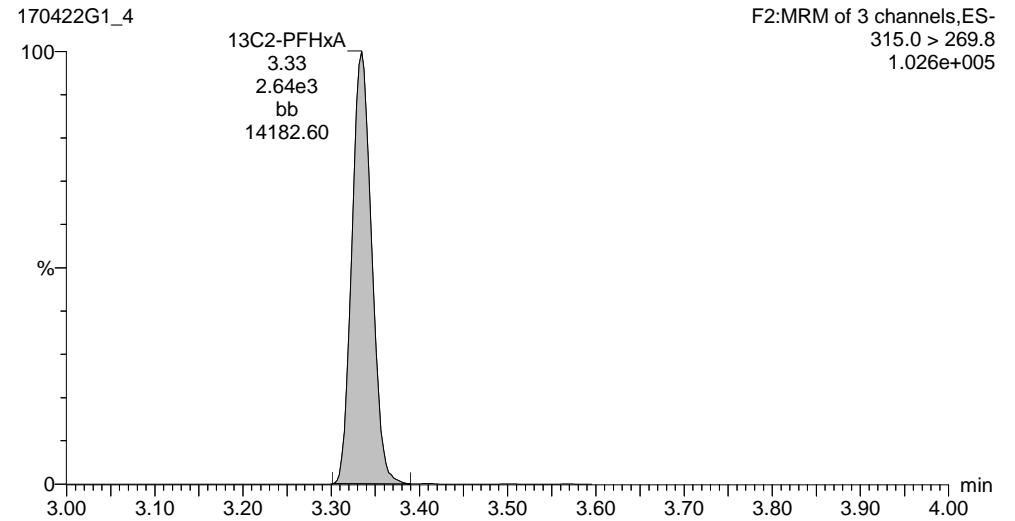
Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: 1700466-14 FRB-14-20170418 0.25, Description: FRB-14-20170418, Name: 170422G1\_4, Date: 22-Apr-2017, Time: 11:50:33, Instrument: , Lab: , User:

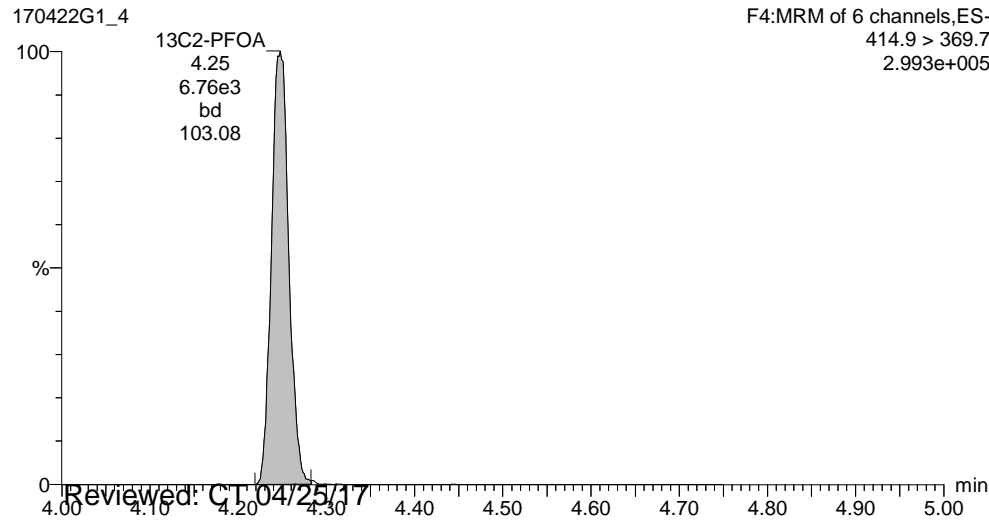
**PFOA**



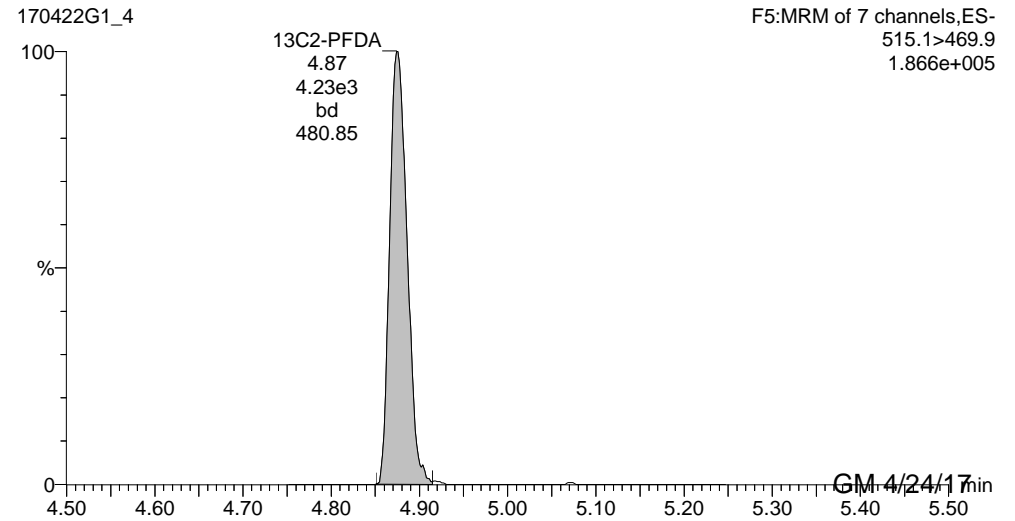
**13C2-PFHxA**



**13C2-PFOA**



**13C2-PFDA**



Reviewed: C:\04/25/17

GM 4/24/17

Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-34.qld

Last Altered: Monday, April 24, 2017 09:36:01 Pacific Daylight Time

Printed: Monday, April 24, 2017 09:36:17 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: 1700466-15 RW20-20170418 0.25, Description: RW20-20170418, Name: 170420G1\_34, Date: 20-Apr-2017, Time: 23:37:01

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1 PFBS	299 > 79.7	5.499e2	9.259e3		0.288	2.90	6.45	
2	2 PFHpA	363 > 318.9	5.345e2	7.136e3		0.288	3.78	2.90	
3	3 PFHxS	398.9 > 79.6	3.873e2	9.259e3		0.288	3.91	3.93	
4	4 PFOA	413 > 368.7	1.665e3	7.136e3		0.288	4.20	10.4	
5	5 PFOS	499 > 79.9	1.947e2	9.259e3		0.288	4.50	6.01	
6	6 PFNA	463 > 418.8	1.948e2	7.136e3		0.288	4.54	0.696	
7	7 13C2-PFHxA	315.0 > 269.8	2.608e3	7.136e3	0.449	0.288	3.27	28.3	81.5
8	8 13C2-PFDA	515.1 > 469.9	4.436e3	7.136e3	0.803	0.288	4.84	26.9	77.4
9	9 13C2-PFOA	414.9 > 369.7	7.136e3	7.136e3	1.000	0.288	4.21	34.7	100
10	10 13C4-PFOS	503.0 > 79.9	9.259e3	9.259e3	1.000	0.288	4.61	99.7	100



Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-34.qld

Last Altered: Monday, April 24, 2017 09:36:01 Pacific Daylight Time

Printed: Monday, April 24, 2017 09:36:17 Pacific Daylight Time

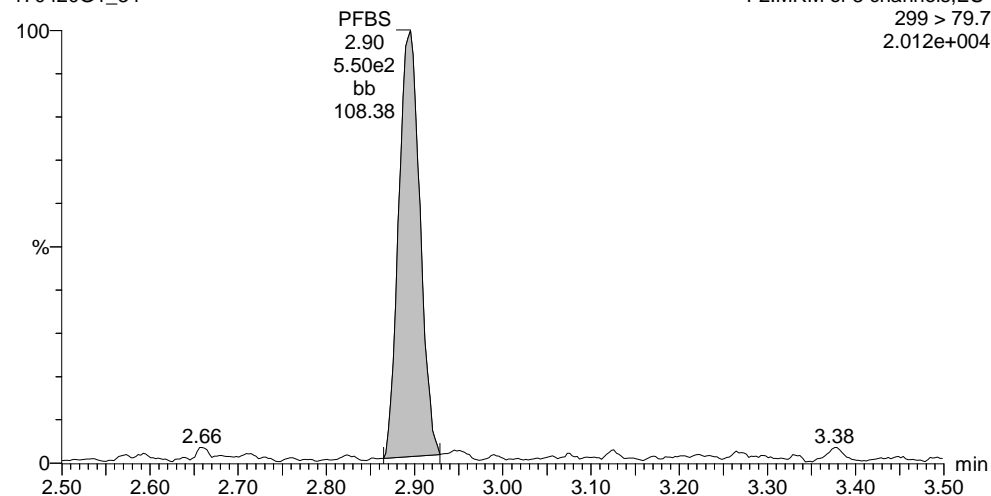
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Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: 1700466-15 RW20-20170418 0.25, Description: RW20-20170418, Name: 170420G1\_34, Date: 20-Apr-2017, Time: 23:37:01, Instrument: , Lab: , User:

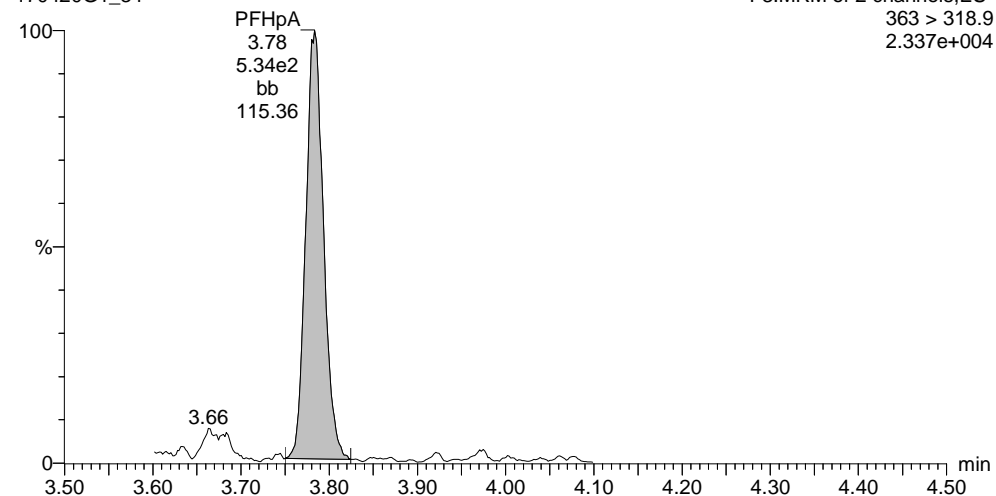
**PFBS**

170420G1\_34



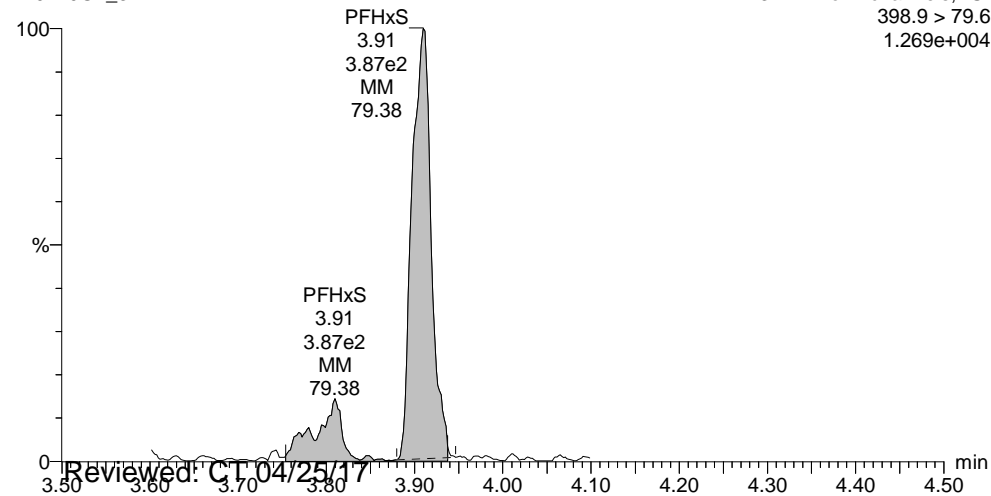
**PFHpA**

170420G1\_34



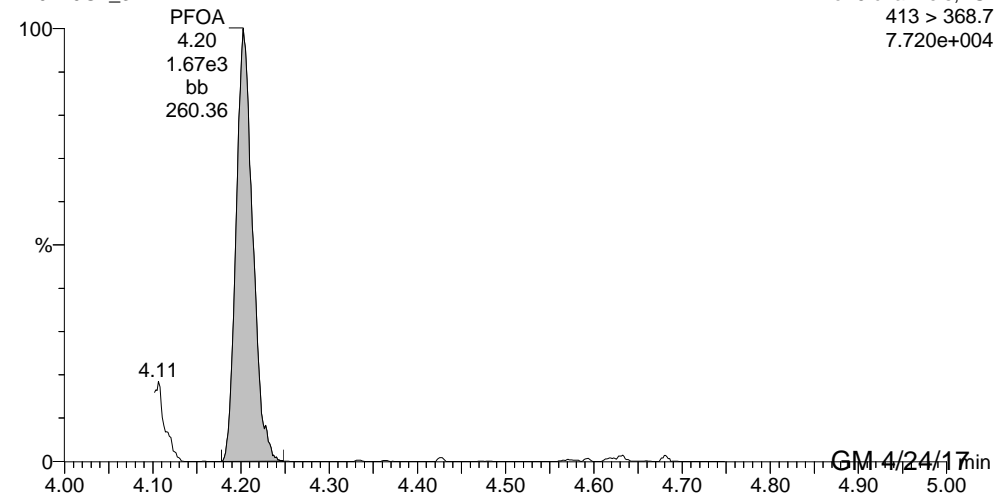
**PFHxS**

170420G1\_34



**PFOA**

170420G1\_34



Reviewed: CT 04/25/17

GM 4/24/17

Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-34.qld

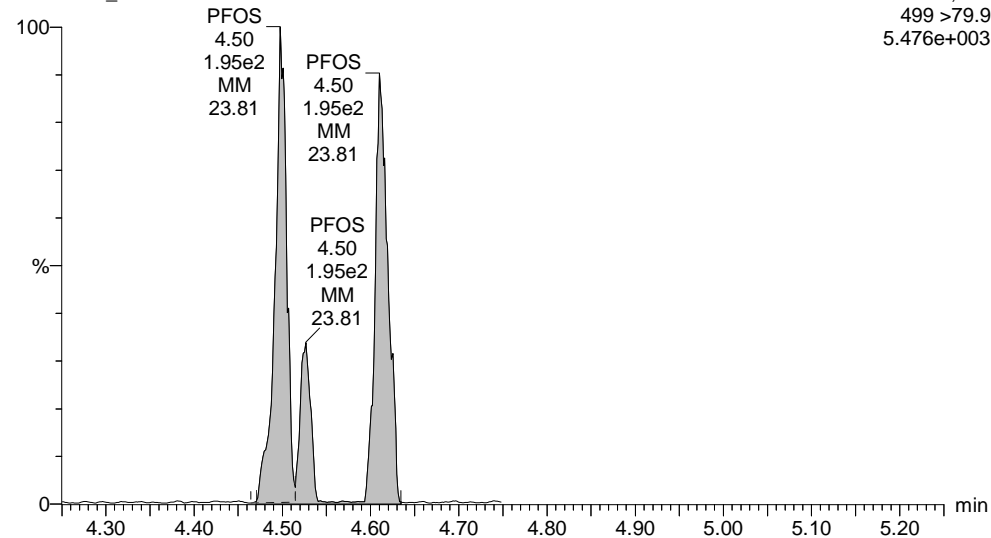
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Printed: Monday, April 24, 2017 09:36:17 Pacific Daylight Time

ID: 1700466-15 RW20-20170418 0.25, Description: RW20-20170418, Name: 170420G1\_34, Date: 20-Apr-2017, Time: 23:37:01, Instrument: , Lab: , User:

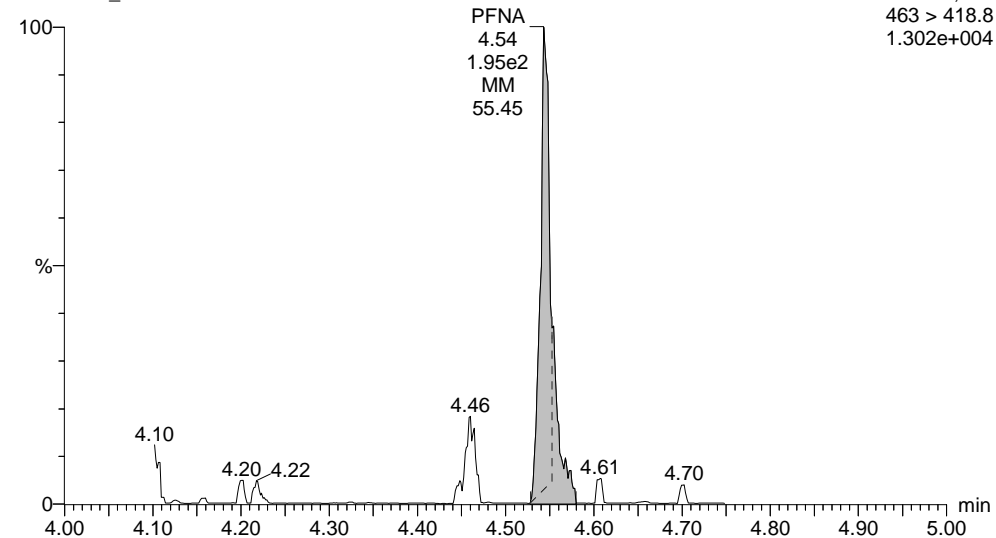
**PFOS**

170420G1\_34



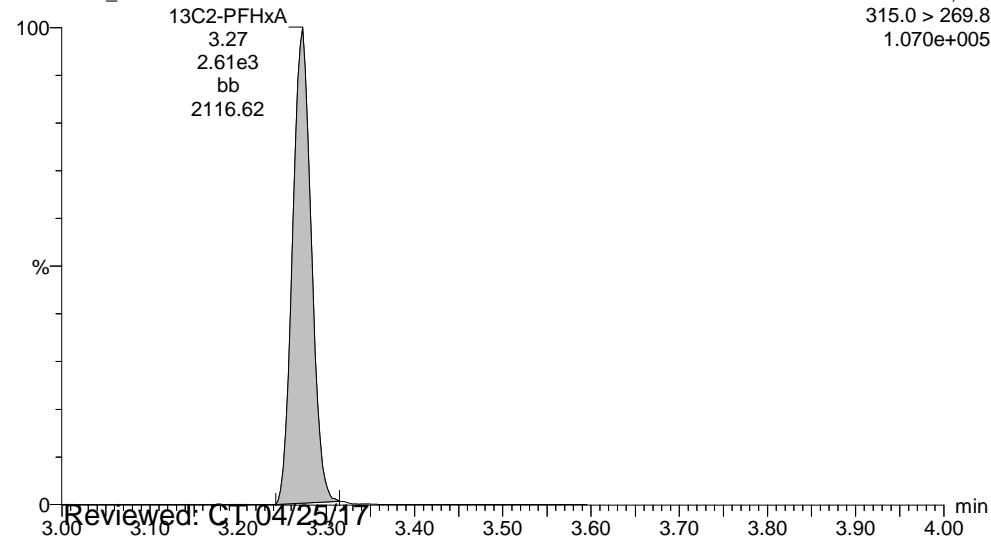
**PFNA**

170420G1\_34



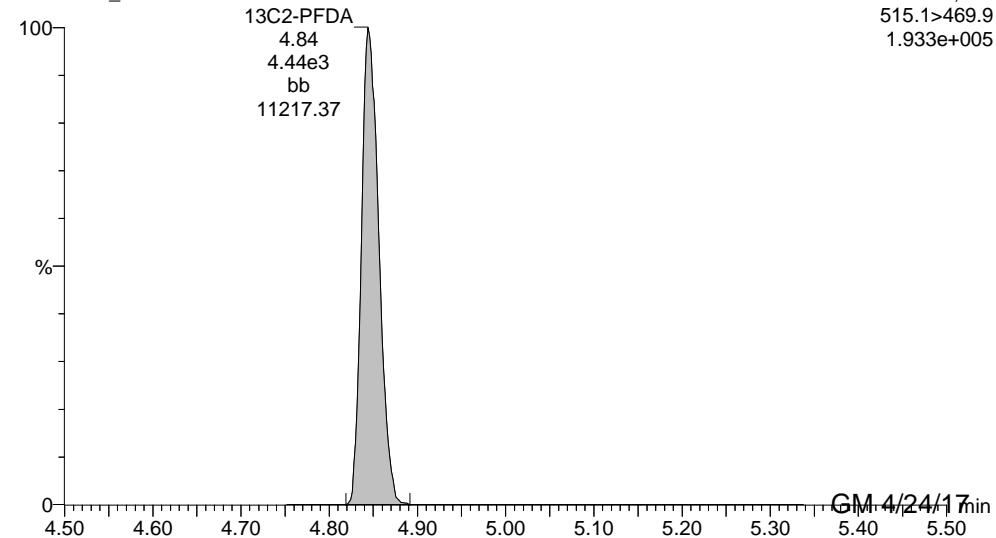
**13C2-PFHxA**

170420G1\_34



**13C2-PFDA**

170420G1\_34



Reviewed: C.T. 04/25/17

GM 4/24/17

Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-34.qld

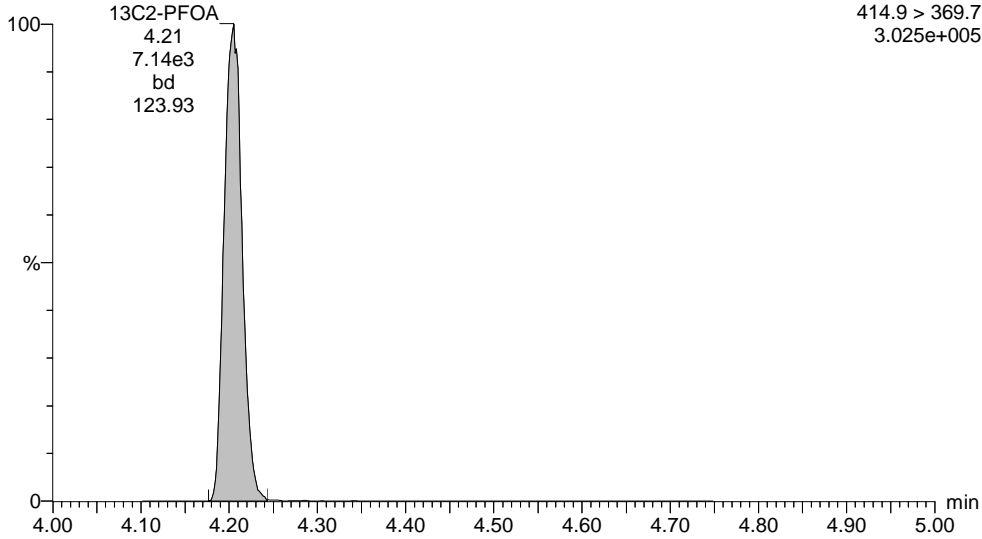
Last Altered: Monday, April 24, 2017 09:36:01 Pacific Daylight Time

Printed: Monday, April 24, 2017 09:36:17 Pacific Daylight Time

ID: 1700466-15 RW20-20170418 0.25, Description: RW20-20170418, Name: 170420G1\_34, Date: 20-Apr-2017, Time: 23:37:01, Instrument: , Lab: , User:

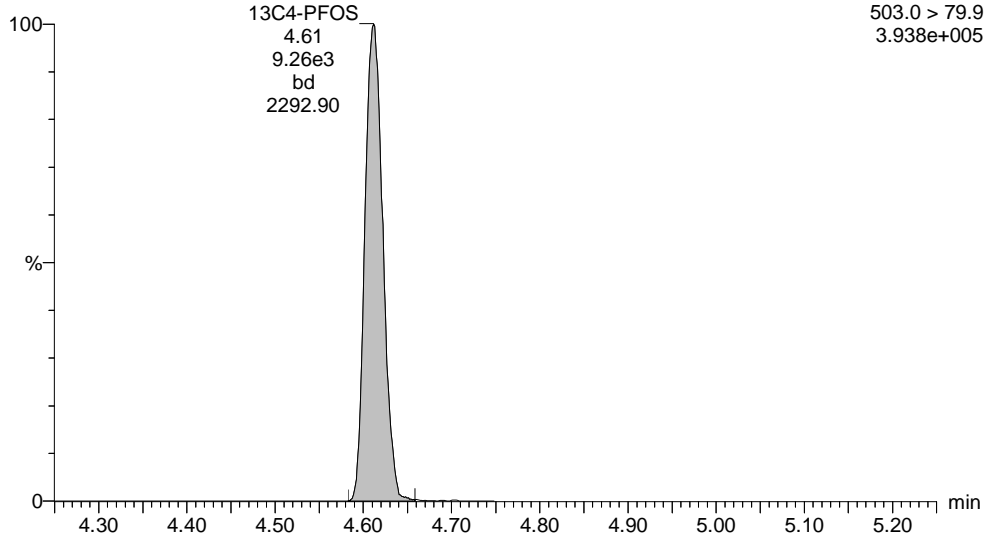
**13C2-PFOA**

170420G1\_34



**13C4-PFOS**

170420G1\_34



Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-34.qld

Last Altered: Monday, April 24, 2017 09:36:01 Pacific Daylight Time

Printed: Monday, April 24, 2017 09:36:17 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: 1700466-15 RW20-20170418 0.25, Description: RW20-20170418, Name: 170420G1\_34, Date: 20-Apr-2017, Time: 23:37:01

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1 PFBS	299 > 79.7	5.499e2	9.259e3		0.288	2.90	6.45	
2	2 PFHpA	363 > 318.9	5.345e2	7.136e3		0.288	3.78	2.90	
3	3 PFHxS	398.9 > 79.6	3.873e2	9.259e3		0.288	3.91	3.93	
4	4 PFOA	413 > 368.7	1.665e3	7.136e3		0.288	4.20	10.4	
5	5 PFOS	499 > 79.9	1.947e2	9.259e3		0.288	4.50	6.01	
6	6 PFNA	463 > 418.8	1.948e2	7.136e3		0.288	4.54	0.696	
7	7 13C2-PFHxA	315.0 > 269.8	2.608e3	7.136e3	0.449	0.288	3.27	28.3	81.5
8	8 13C2-PFDA	515.1 > 469.9	4.436e3	7.136e3	0.803	0.288	4.84	26.9	77.4
9	9 13C2-PFOA	414.9 > 369.7	7.136e3	7.136e3	1.000	0.288	4.21	34.7	100
10	10 13C4-PFOS	503.0 > 79.9	9.259e3	9.259e3	1.000	0.288	4.61	99.7	100

Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-34.qld

Last Altered: Monday, April 24, 2017 09:36:01 Pacific Daylight Time

Printed: Monday, April 24, 2017 09:36:17 Pacific Daylight Time

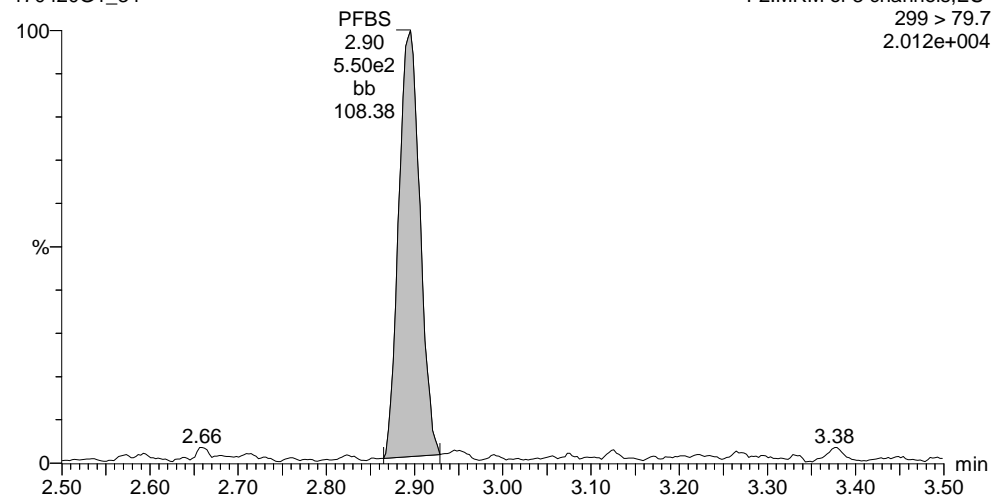
Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: 1700466-15 RW20-20170418 0.25, Description: RW20-20170418, Name: 170420G1\_34, Date: 20-Apr-2017, Time: 23:37:01, Instrument: , Lab: , User:

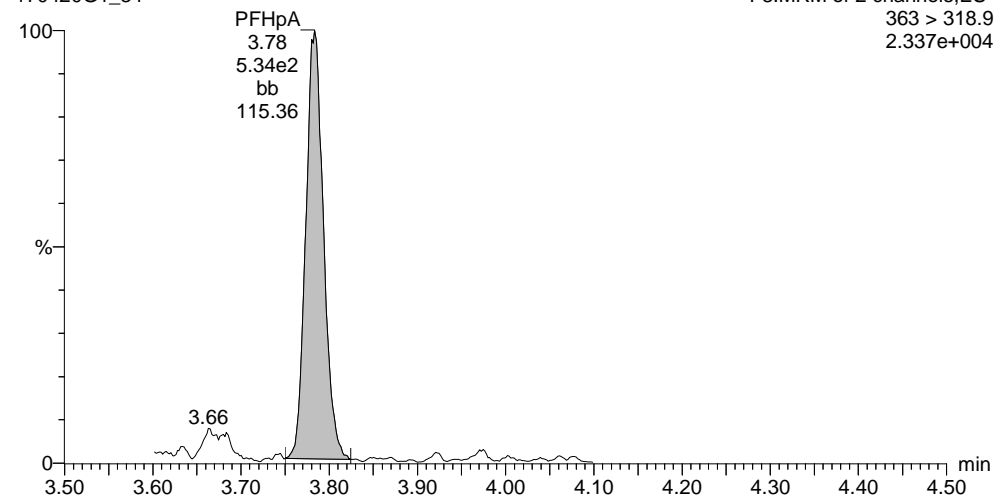
**PFBS**

170420G1\_34



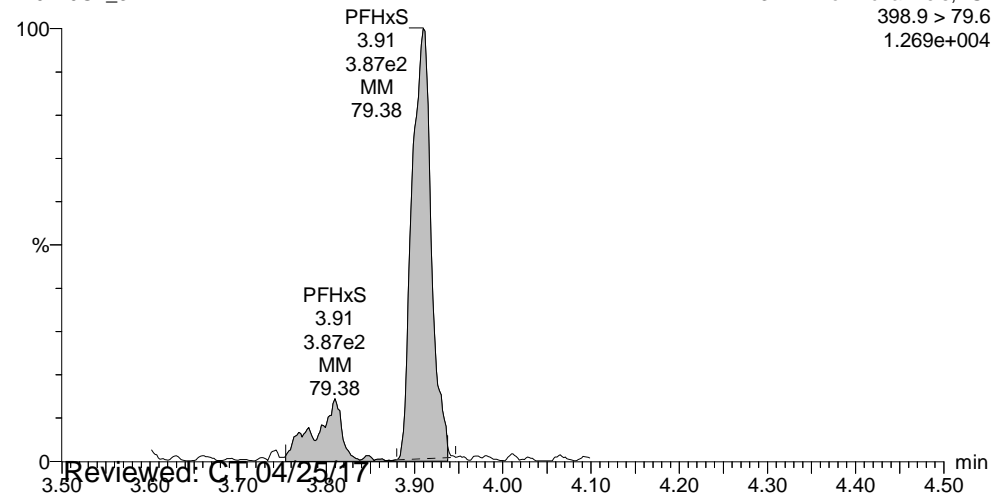
**PFHpA**

170420G1\_34



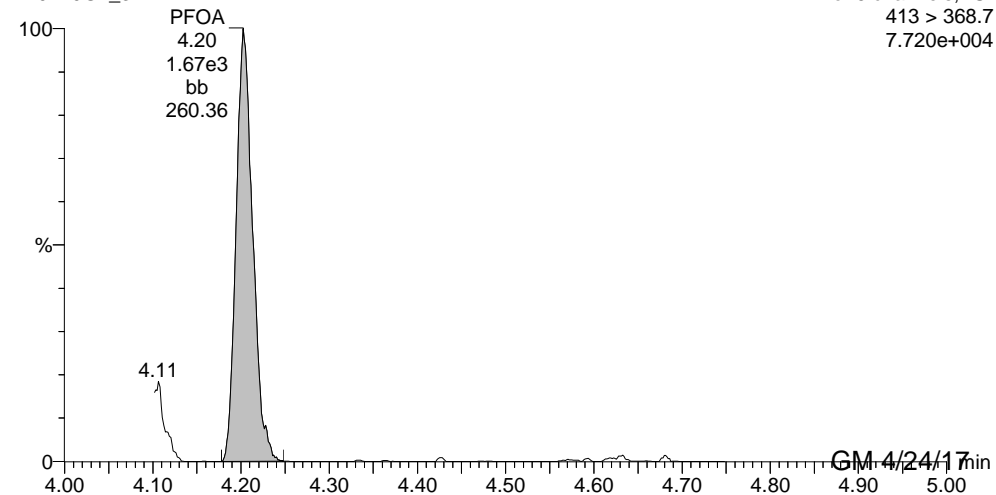
**PFHxS**

170420G1\_34



**PFOA**

170420G1\_34



Reviewed: CT 04/25/17

GM 4/24/17

Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-34.qld

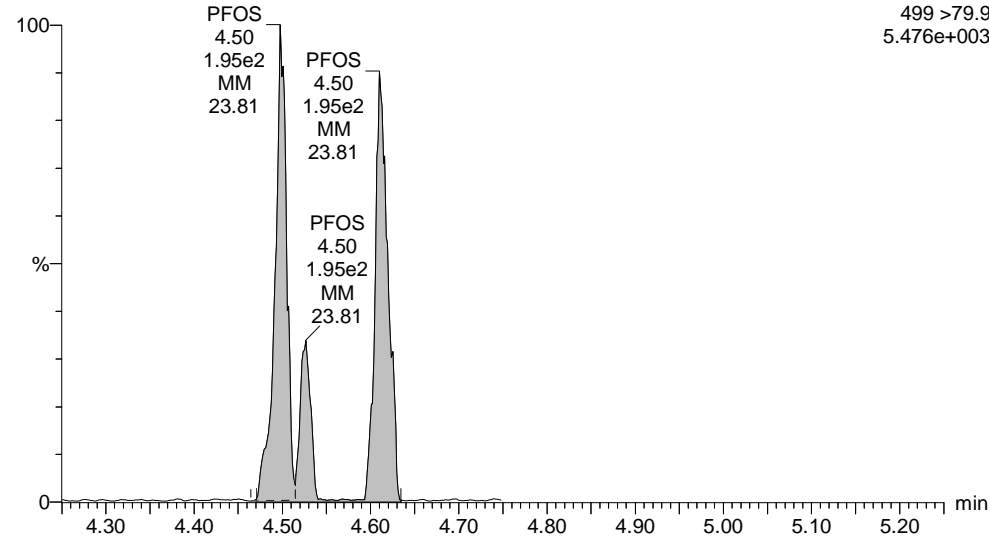
Last Altered: Monday, April 24, 2017 09:36:01 Pacific Daylight Time

Printed: Monday, April 24, 2017 09:36:17 Pacific Daylight Time

ID: 1700466-15 RW20-20170418 0.25, Description: RW20-20170418, Name: 170420G1\_34, Date: 20-Apr-2017, Time: 23:37:01, Instrument: , Lab: , User:

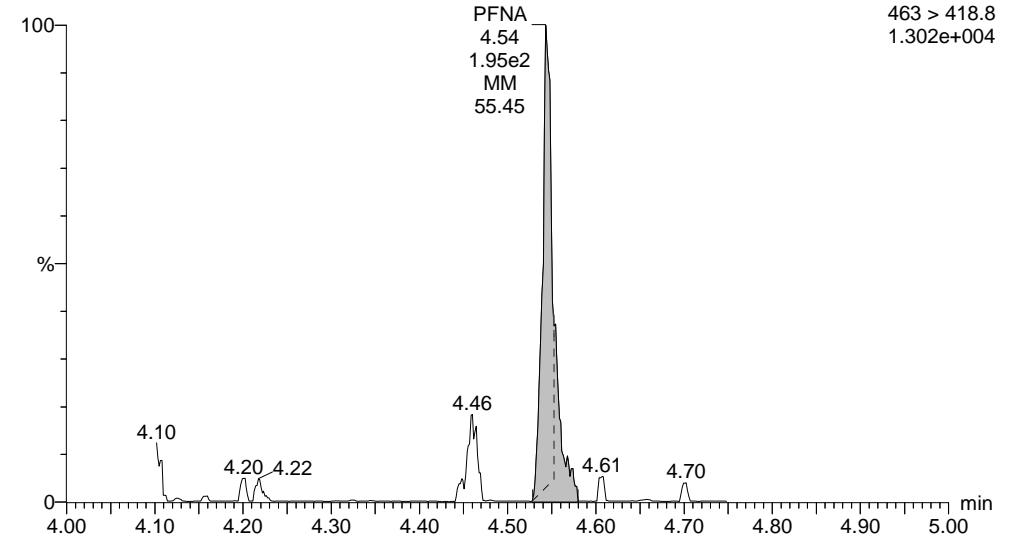
**PFOS**

170420G1\_34



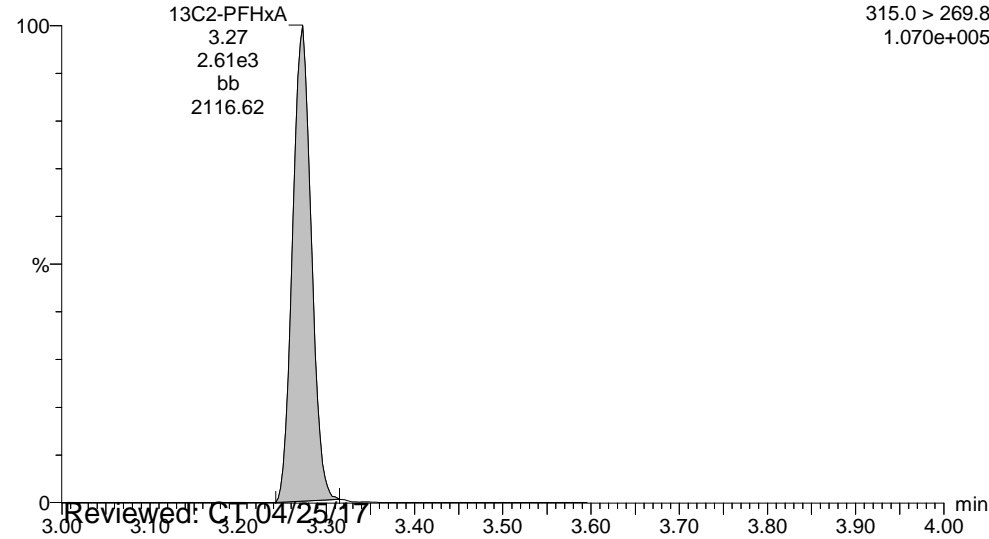
**PFNA**

170420G1\_34



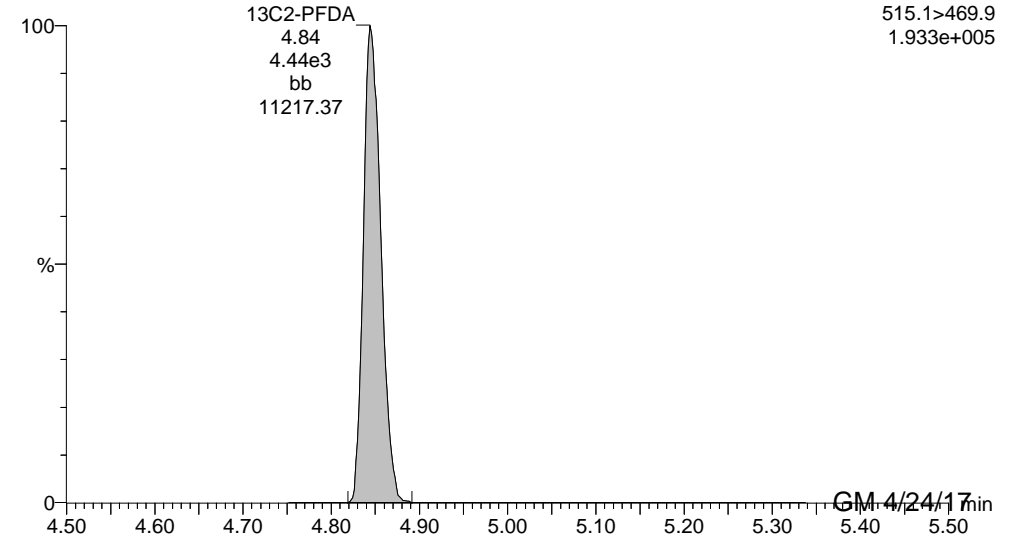
**13C2-PFHxA**

170420G1\_34



**13C2-PFDA**

170420G1\_34



Reviewed: C.T. 04/25/17

GM 4/24/17

Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-34.qld

Last Altered: Monday, April 24, 2017 09:36:01 Pacific Daylight Time

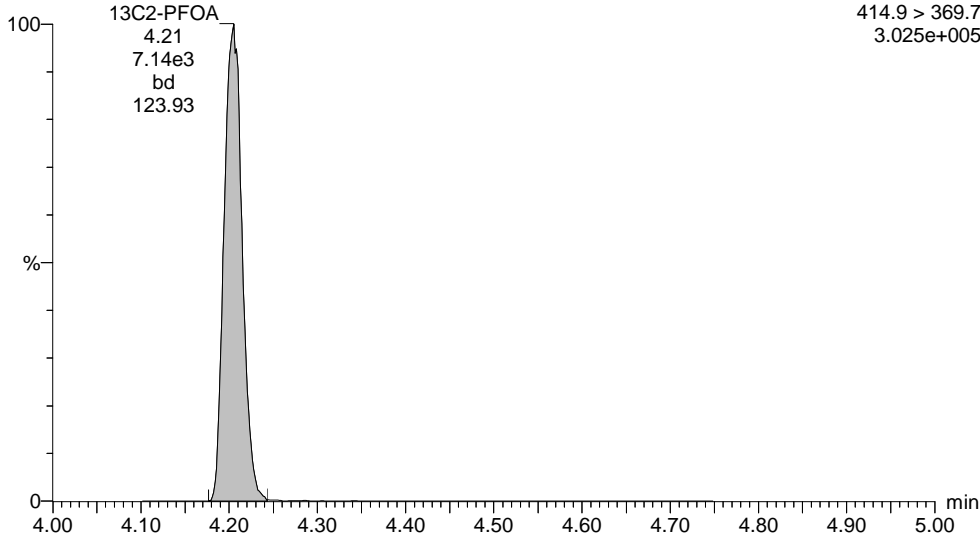
Printed: Monday, April 24, 2017 09:36:17 Pacific Daylight Time

ID: 1700466-15 RW20-20170418 0.25, Description: RW20-20170418, Name: 170420G1\_34, Date: 20-Apr-2017, Time: 23:37:01, Instrument: , Lab: , User:

**13C2-PFOA**

170420G1\_34

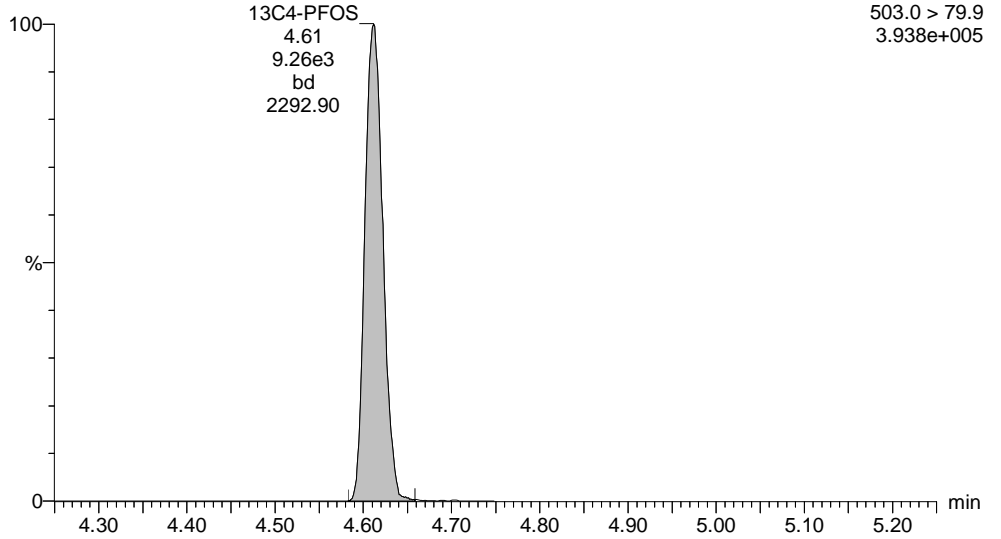
F4:MRM of 6 channels,ES-  
414.9 > 369.7  
3.025e+005



**13C4-PFOS**

170420G1\_34

F4:MRM of 6 channels,ES-  
503.0 > 79.9  
3.938e+005



Dataset: U:\G1.PRO\Results\2017\170422G1\170422G1-05.qld

Last Altered: Monday, April 24, 2017 14:49:00 Pacific Daylight Time

Printed: Monday, April 24, 2017 14:54:30 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: 1700466-15 RW20-20170418 0.25, Description: RW20-20170418, Name: 170422G1\_5, Date: 22-Apr-2017, Time: 12:02:56

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	4 PFOA	413 > 368.7	2.058e3	7.742e3		0.288	4.24	11.9	
2	7 13C2-PFHxA	315.0 > 269.8	2.900e3	7.742e3	0.449	0.288	3.33	29.0	83.5
3	8 13C2-PFDA	515.1>469.9	4.665e3	7.742e3	0.803	0.288	4.87	26.1	75.1
4	9 13C2-PFOA	414.9 > 369.7	7.742e3	7.742e3	1.000	0.288	4.24	34.7	100



Dataset: U:\G1.PRO\Results\2017\170422G1\170422G1-05.qld

Last Altered: Monday, April 24, 2017 14:49:00 Pacific Daylight Time

Printed: Monday, April 24, 2017 14:54:30 Pacific Daylight Time

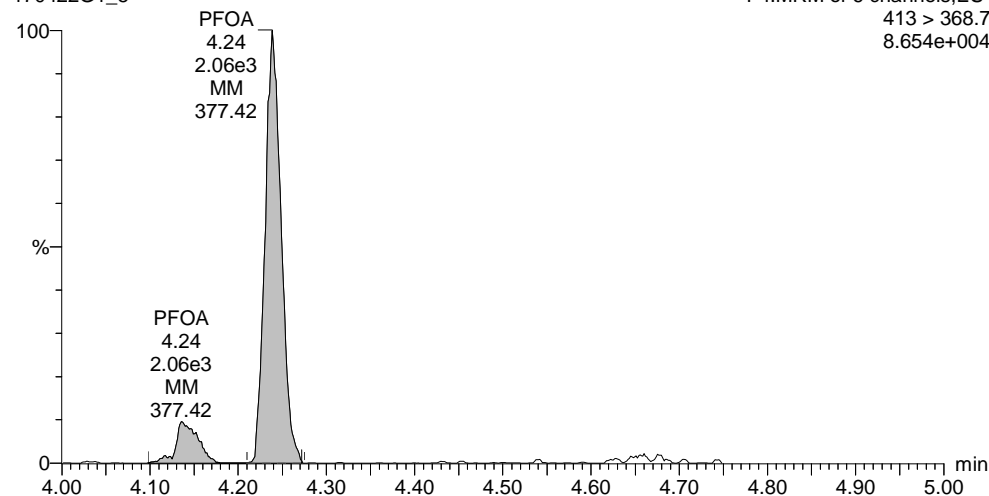
Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: 1700466-15 RW20-20170418 0.25, Description: RW20-20170418, Name: 170422G1\_5, Date: 22-Apr-2017, Time: 12:02:56, Instrument: , Lab: , User:

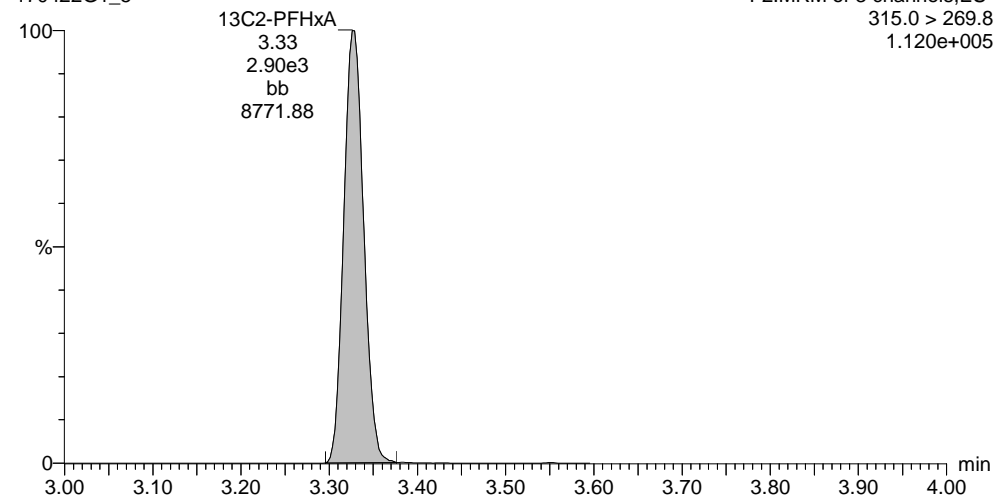
**PFOA**

170422G1\_5



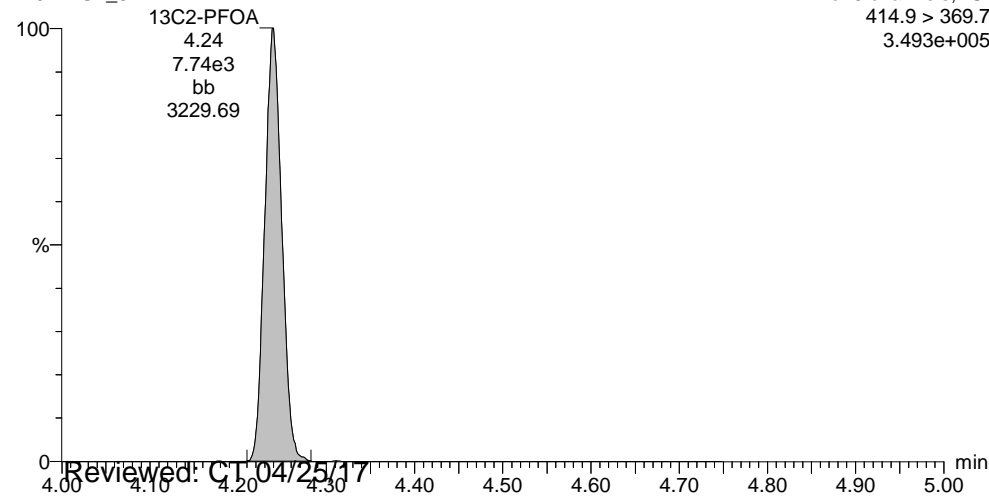
**13C2-PFHxA**

170422G1\_5



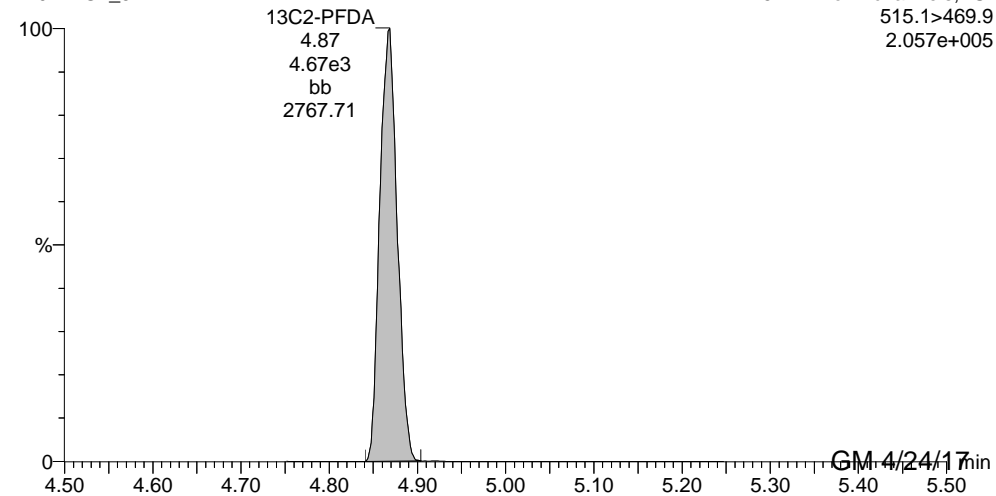
**13C2-PFOA**

170422G1\_5



**13C2-PFDA**

170422G1\_5



Reviewed: C.T. 04/25/17

GM 4/24/17

Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-35.qld

Last Altered: Monday, April 24, 2017 09:41:25 Pacific Daylight Time

Printed: Monday, April 24, 2017 09:41:53 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: 1700466-16 FRB-20-20170418 0.25, Description: FRB-20-20170418, Name: 170420G1\_35, Date: 20-Apr-2017, Time: 23:49:24

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1 PFBS	299 > 79.7		8.864e3		0.282			
2	2 PFHpA	363 > 318.9	4.787e0	6.992e3		0.282	3.79	0.0270	
3	3 PFHxS	398.9 > 79.6		8.864e3		0.282			
4	4 PFOA	413 > 368.7	5.324e0	6.992e3		0.282	4.22	0.0346	
5	5 PFOS	499 > 79.9		8.864e3		0.282			
6	6 PFNA	463 > 418.8		6.992e3		0.282			
7	7 13C2-PFHxA	315.0 > 269.8	2.717e3	6.992e3	0.449	0.282	3.27	30.7	86.6
8	8 13C2-PFDA	515.1 > 469.9	4.192e3	6.992e3	0.803	0.282	4.85	26.5	74.7
9	9 13C2-PFOA	414.9 > 369.7	6.992e3	6.992e3	1.000	0.282	4.20	35.4	100
10	10 13C4-PFOS	503.0 > 79.9	8.864e3	8.864e3	1.000	0.282	4.61	102	100

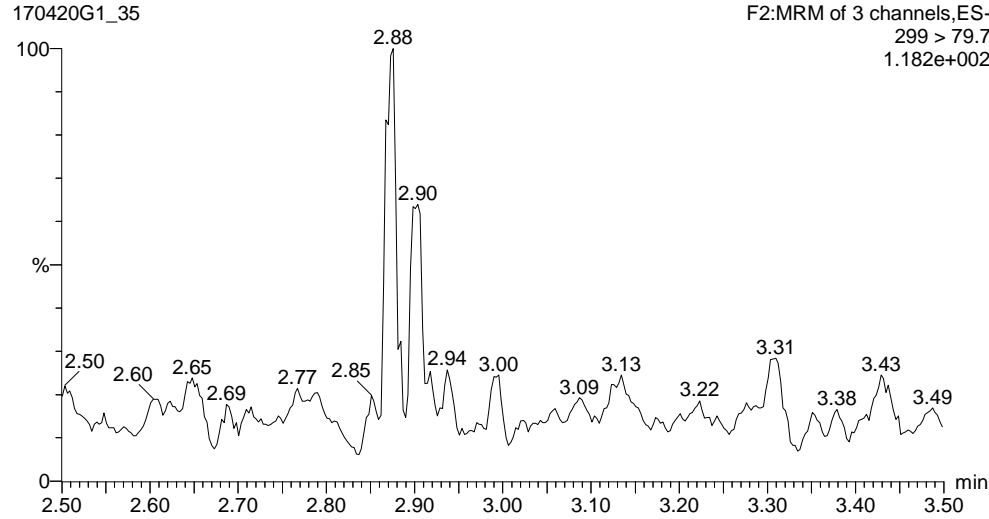
Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-35.qld

Last Altered: Monday, April 24, 2017 09:41:25 Pacific Daylight Time  
Printed: Monday, April 24, 2017 09:41:53 Pacific Daylight Time

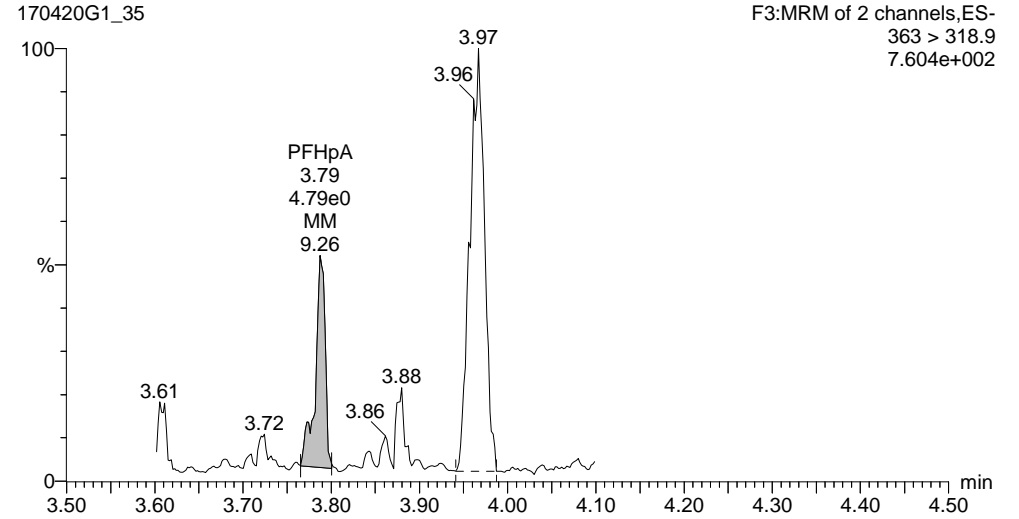
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Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: 1700466-16 FRB-20-20170418 0.25, Description: FRB-20-20170418, Name: 170420G1\_35, Date: 20-Apr-2017, Time: 23:49:24, Instrument: , Lab: , User:

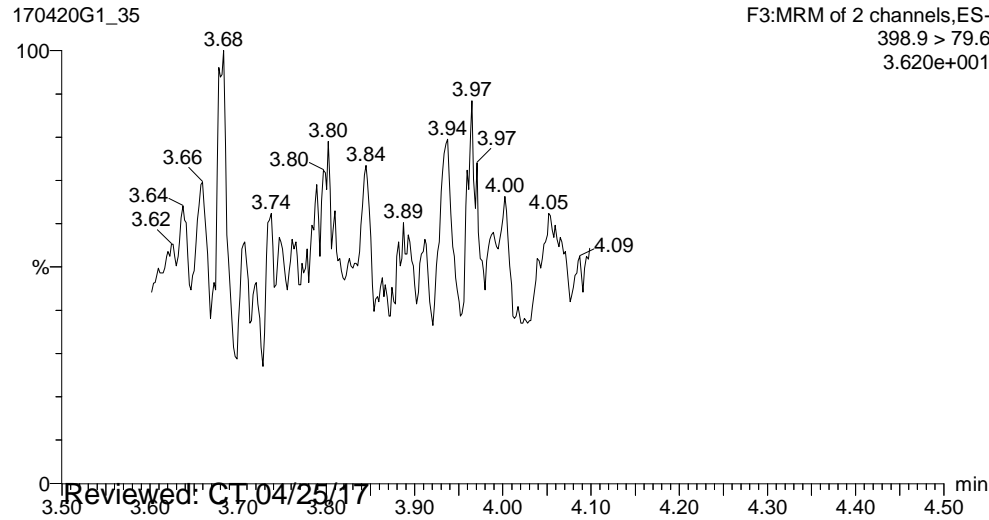
PFBS



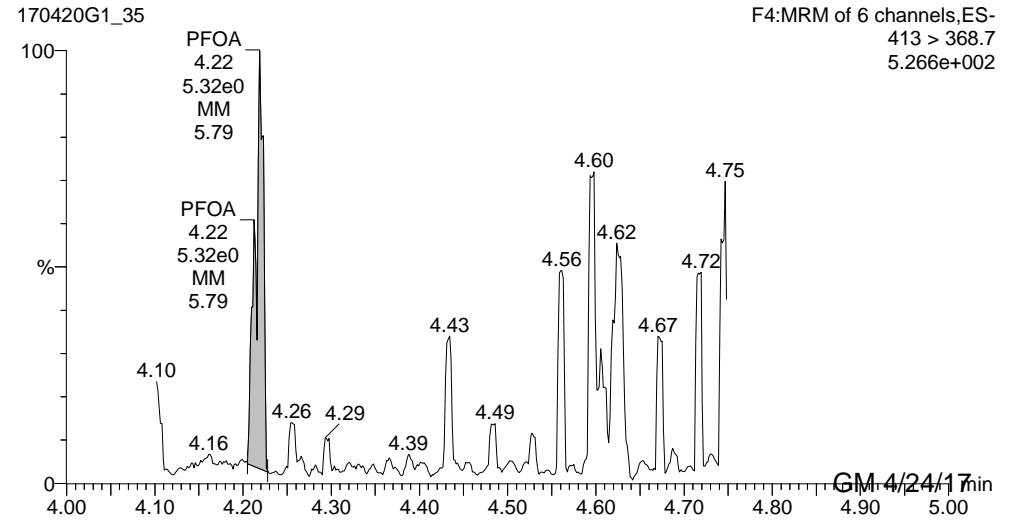
PFHpA



PFHxS



PFOA



Reviewed: CT 04/25/17

GM 4/24/17

Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-35.qld

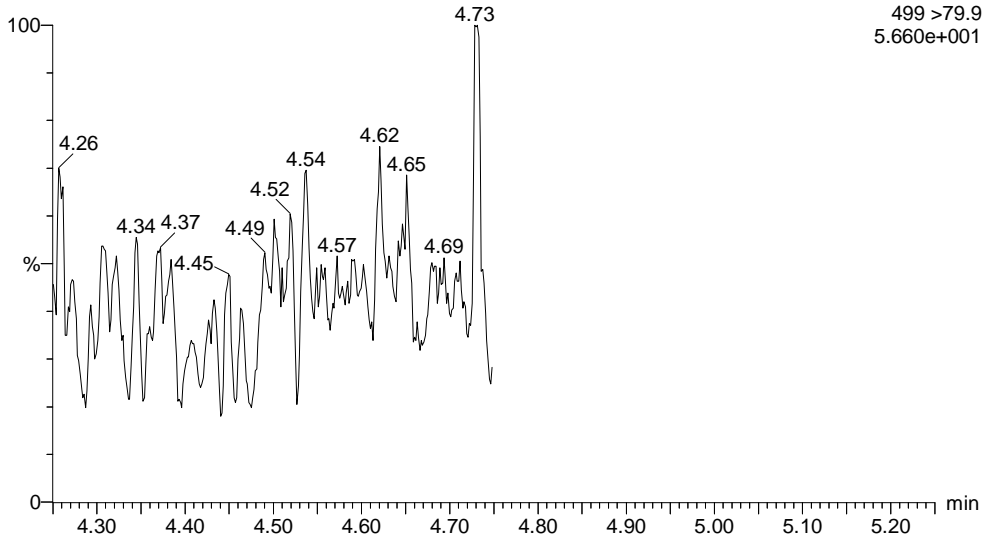
Last Altered: Monday, April 24, 2017 09:41:25 Pacific Daylight Time

Printed: Monday, April 24, 2017 09:41:53 Pacific Daylight Time

ID: 1700466-16 FRB-20-20170418 0.25, Description: FRB-20-20170418, Name: 170420G1\_35, Date: 20-Apr-2017, Time: 23:49:24, Instrument: , Lab: , User:

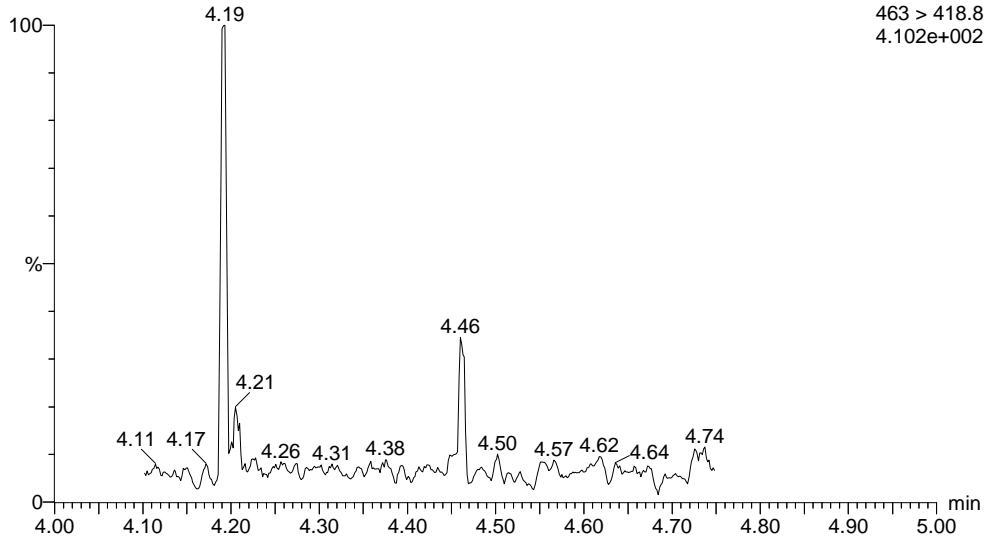
**PFOS**

170420G1\_35



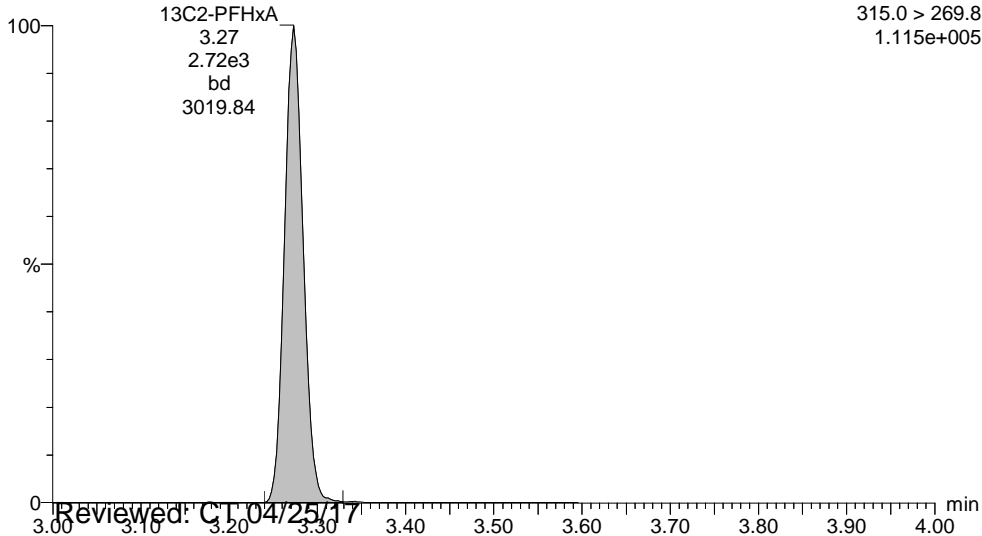
**PFNA**

170420G1\_35



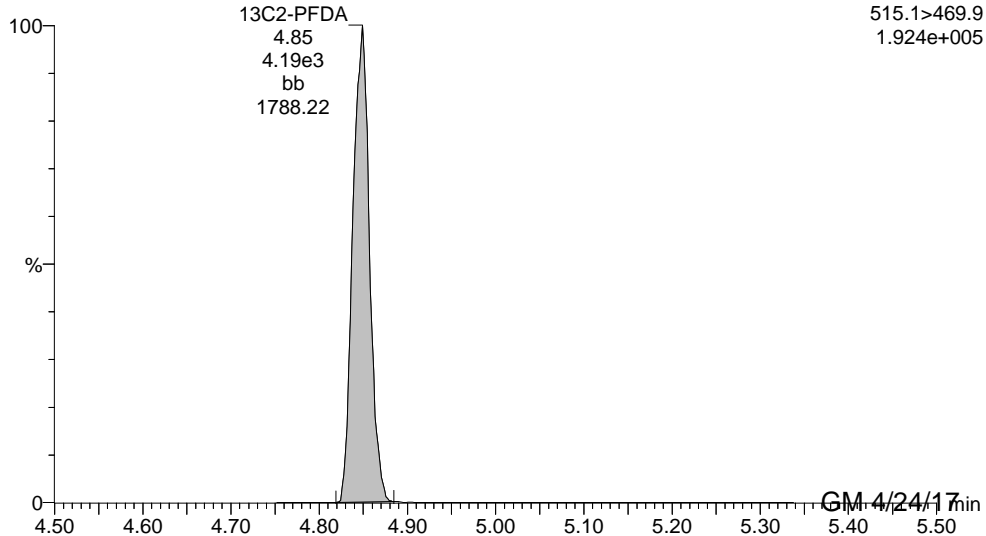
**13C2-PFHxA**

170420G1\_35



**13C2-PFDA**

170420G1\_35



Reviewed: C:\04/25/17

GM 4/24/17

Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-35.qld

Last Altered: Monday, April 24, 2017 09:41:25 Pacific Daylight Time

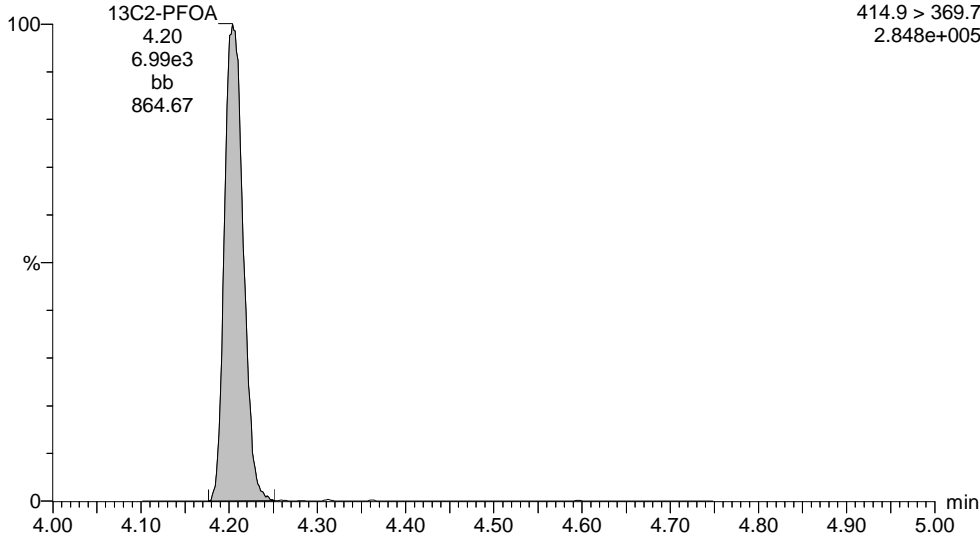
Printed: Monday, April 24, 2017 09:41:53 Pacific Daylight Time

ID: 1700466-16 FRB-20-20170418 0.25, Description: FRB-20-20170418, Name: 170420G1\_35, Date: 20-Apr-2017, Time: 23:49:24, Instrument: , Lab: , User:

**13C2-PFOA**

170420G1\_35

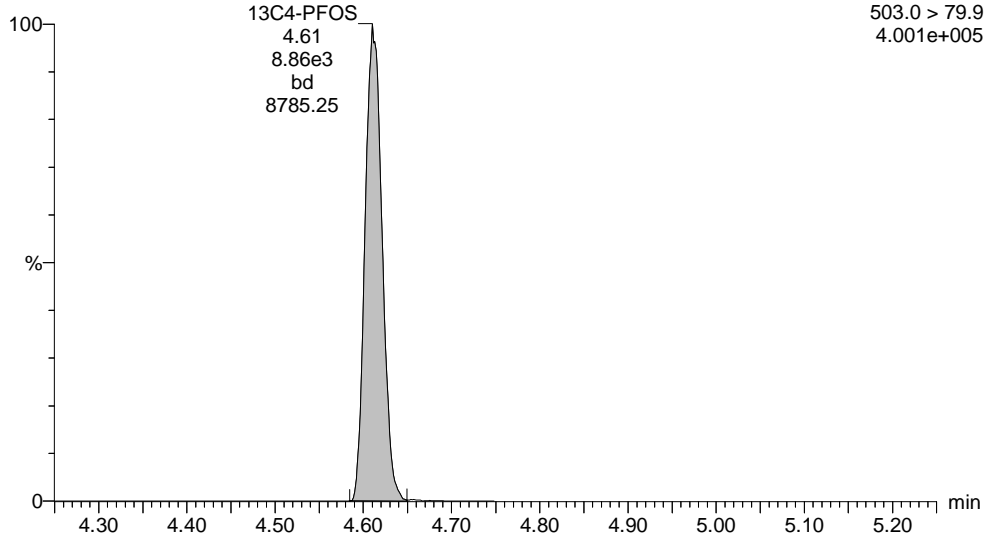
F4:MRM of 6 channels,ES-  
414.9 > 369.7  
2.848e+005



**13C4-PFOS**

170420G1\_35

F4:MRM of 6 channels,ES-  
503.0 > 79.9  
4.001e+005



Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-35.qld

Last Altered: Monday, April 24, 2017 09:41:25 Pacific Daylight Time

Printed: Monday, April 24, 2017 09:41:53 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: 1700466-16 FRB-20-20170418 0.25, Description: FRB-20-20170418, Name: 170420G1\_35, Date: 20-Apr-2017, Time: 23:49:24

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1 PFBS	299 > 79.7		8.864e3		0.282			
2	2 PFHpA	363 > 318.9	4.787e0	6.992e3		0.282	3.79	0.0270	
3	3 PFHxS	398.9 > 79.6		8.864e3		0.282			
4	4 PFOA	413 > 368.7	5.324e0	6.992e3		0.282	4.22	0.0346	
5	5 PFOS	499 > 79.9		8.864e3		0.282			
6	6 PFNA	463 > 418.8		6.992e3		0.282			
7	7 13C2-PFHxA	315.0 > 269.8	2.717e3	6.992e3	0.449	0.282	3.27	30.7	86.6
8	8 13C2-PFDA	515.1 > 469.9	4.192e3	6.992e3	0.803	0.282	4.85	26.5	74.7
9	9 13C2-PFOA	414.9 > 369.7	6.992e3	6.992e3	1.000	0.282	4.20	35.4	100
10	10 13C4-PFOS	503.0 > 79.9	8.864e3	8.864e3	1.000	0.282	4.61	102	100

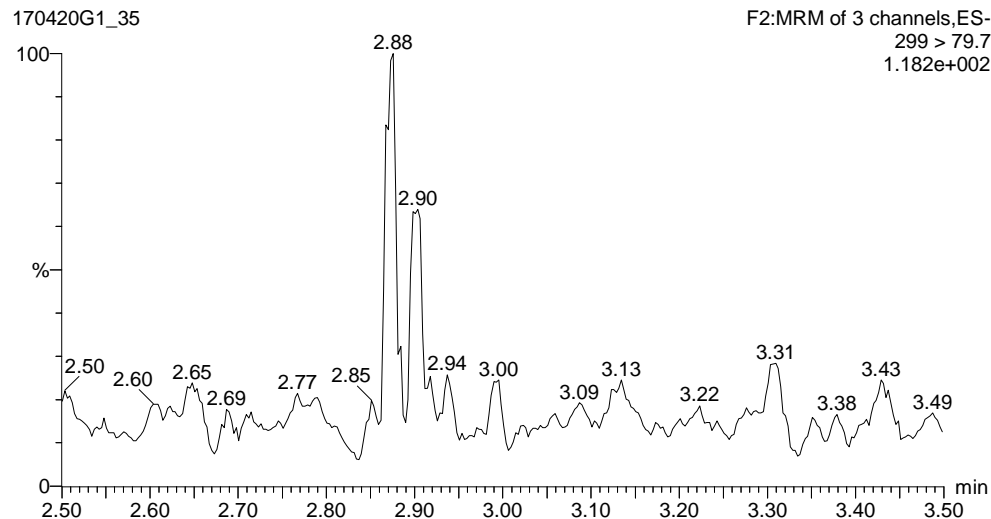
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Last Altered: Monday, April 24, 2017 09:41:25 Pacific Daylight Time  
Printed: Monday, April 24, 2017 09:41:53 Pacific Daylight Time

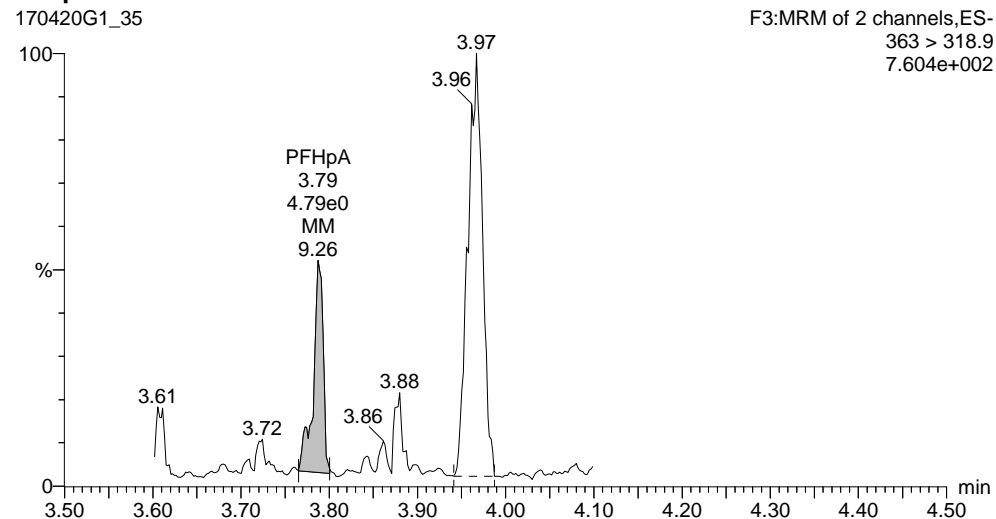
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Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: 1700466-16 FRB-20-20170418 0.25, Description: FRB-20-20170418, Name: 170420G1\_35, Date: 20-Apr-2017, Time: 23:49:24, Instrument: , Lab: , User:

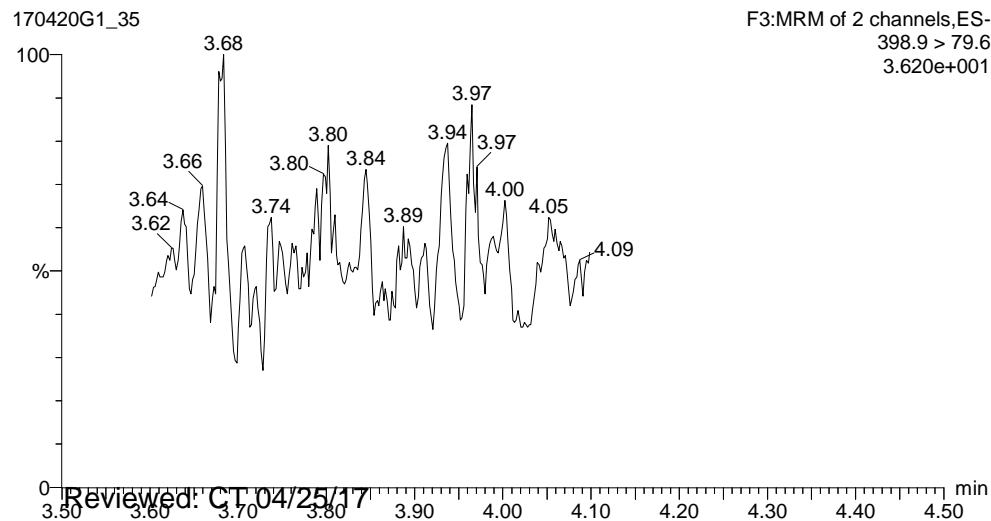
PFBS



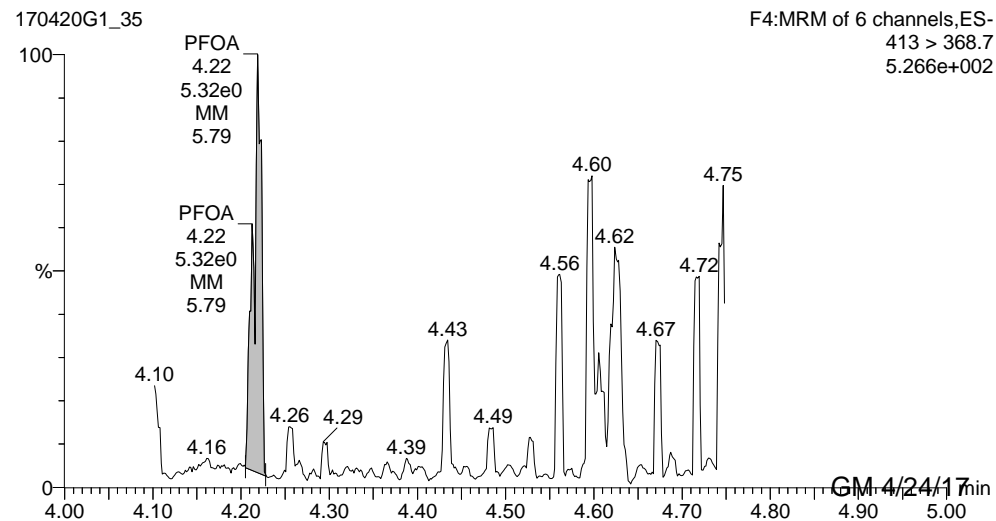
PFHpA



PFHxS



PFOA



Reviewed: CT 04/25/17

GM 4/24/17

Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-35.qld

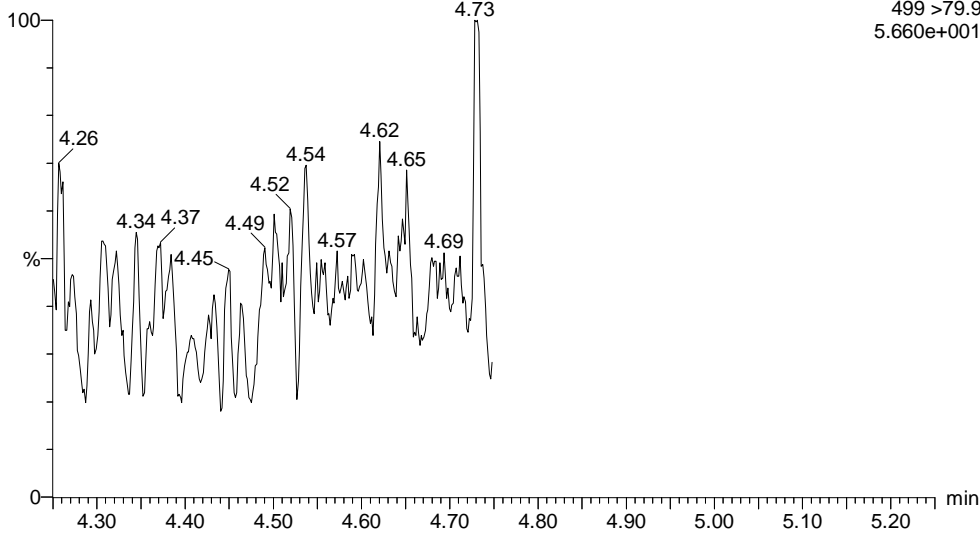
Last Altered: Monday, April 24, 2017 09:41:25 Pacific Daylight Time

Printed: Monday, April 24, 2017 09:41:53 Pacific Daylight Time

ID: 1700466-16 FRB-20-20170418 0.25, Description: FRB-20-20170418, Name: 170420G1\_35, Date: 20-Apr-2017, Time: 23:49:24, Instrument: , Lab: , User:

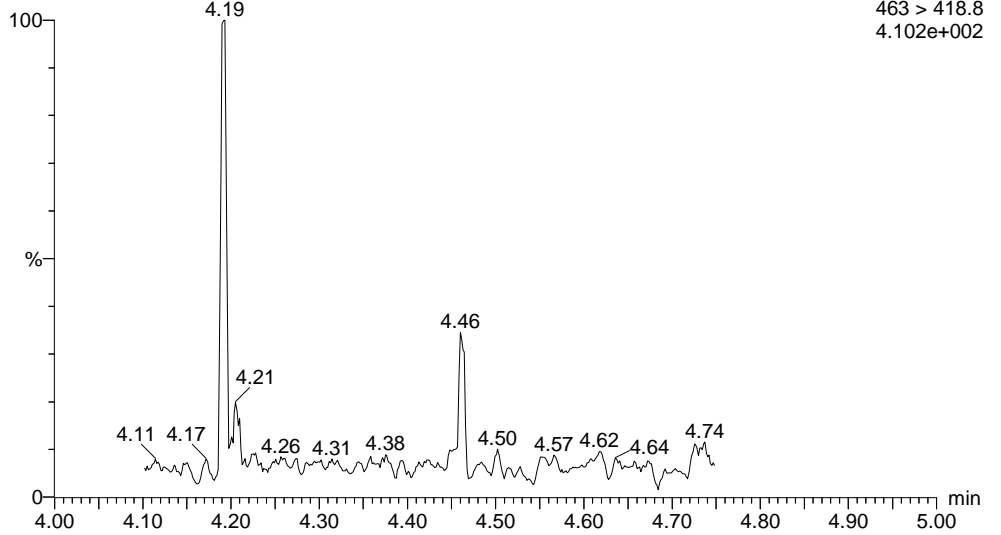
**PFOS**

170420G1\_35



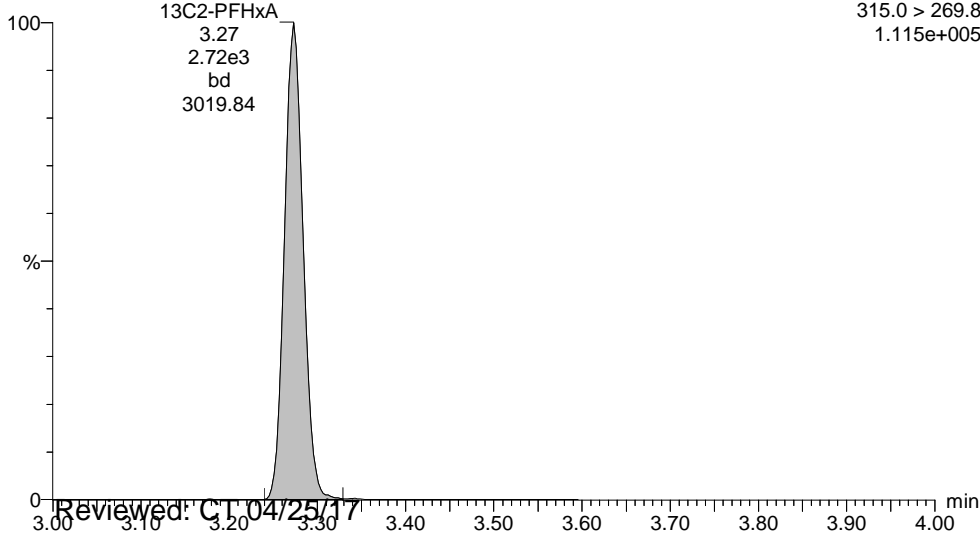
**PFNA**

170420G1\_35



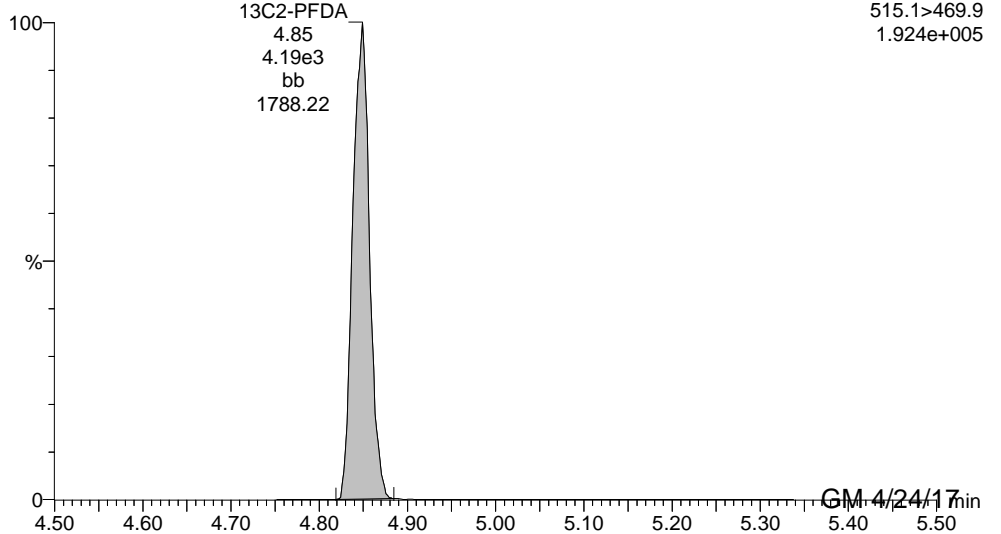
**13C2-PFHxA**

170420G1\_35



**13C2-PFDA**

170420G1\_35



Reviewed: C:\04/25/17

GM 4/24/17



Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-35.qld

Last Altered: Monday, April 24, 2017 09:41:25 Pacific Daylight Time

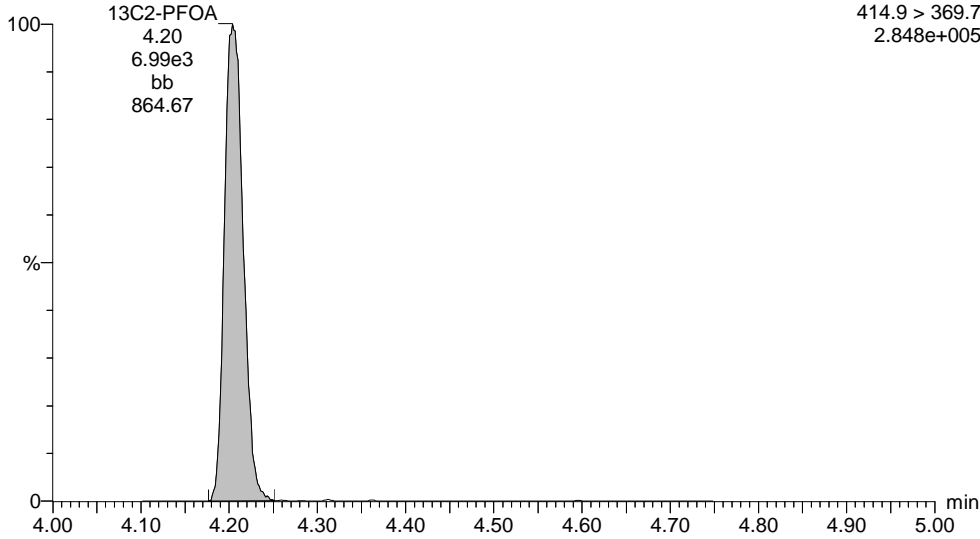
Printed: Monday, April 24, 2017 09:41:53 Pacific Daylight Time

ID: 1700466-16 FRB-20-20170418 0.25, Description: FRB-20-20170418, Name: 170420G1\_35, Date: 20-Apr-2017, Time: 23:49:24, Instrument: , Lab: , User:

**13C2-PFOA**

170420G1\_35

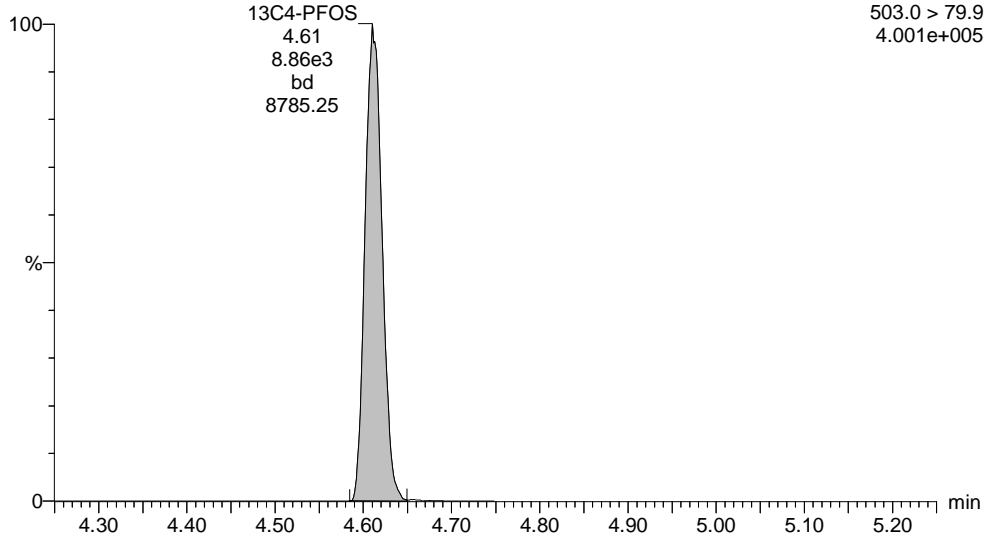
F4:MRM of 6 channels,ES-  
414.9 > 369.7  
2.848e+005



**13C4-PFOS**

170420G1\_35

F4:MRM of 6 channels,ES-  
503.0 > 79.9  
4.001e+005



Dataset: U:\G1.PRO\Results\2017\170422G1\170422G1-06.qld

Last Altered: Monday, April 24, 2017 14:55:22 Pacific Daylight Time

Printed: Monday, April 24, 2017 14:56:03 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: 1700466-16 FRB-20-20170418 0.25, Description: FRB-20-20170418, Name: 170422G1\_6, Date: 22-Apr-2017, Time: 12:15:20

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	4 PFOA	413 > 368.7	1.434e1	7.742e3		0.282	4.22	0.0841	
2	7 13C2-PFHxA	315.0 > 269.8	2.896e3	7.742e3	0.449	0.282	3.30	29.5	83.4
3	8 13C2-PFDA	515.1>469.9	4.787e3	7.742e3	0.803	0.282	4.85	27.3	77.0
4	9 13C2-PFOA	414.9 > 369.7	7.742e3	7.742e3	1.000	0.282	4.22	35.4	100

Dataset: U:\G1.PRO\Results\2017\170422G1\170422G1-06.qld

Last Altered: Monday, April 24, 2017 14:55:22 Pacific Daylight Time

Printed: Monday, April 24, 2017 14:56:03 Pacific Daylight Time

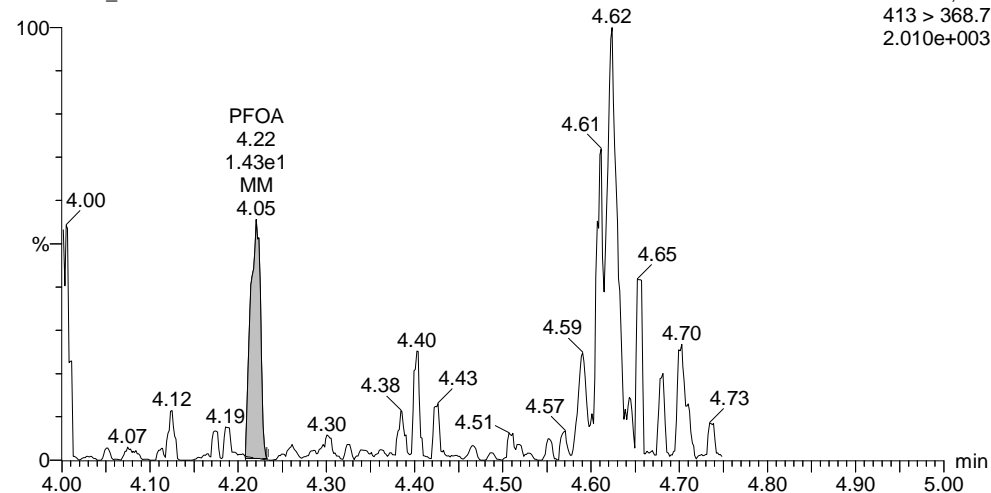
Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: 1700466-16 FRB-20-20170418 0.25, Description: FRB-20-20170418, Name: 170422G1\_6, Date: 22-Apr-2017, Time: 12:15:20, Instrument: , Lab: , User:

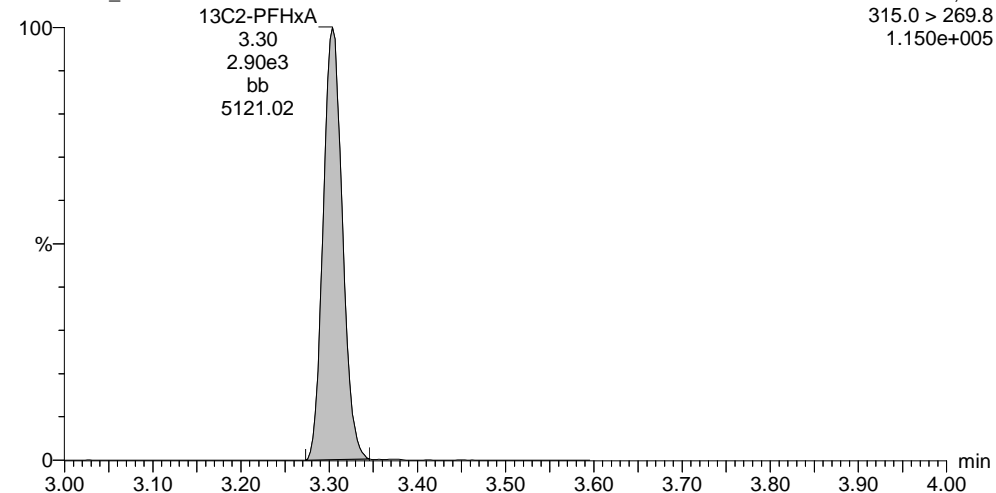
**PFOA**

170422G1\_6



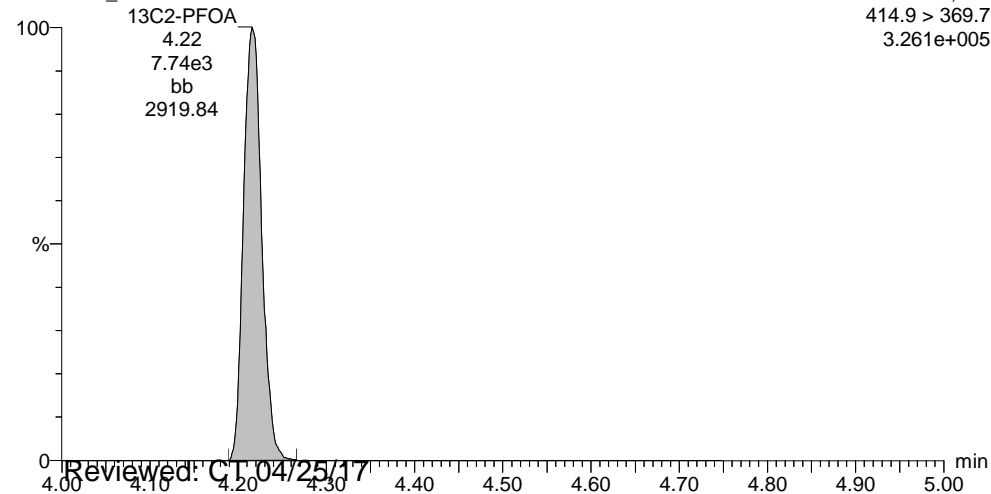
**13C2-PFHxA**

170422G1\_6



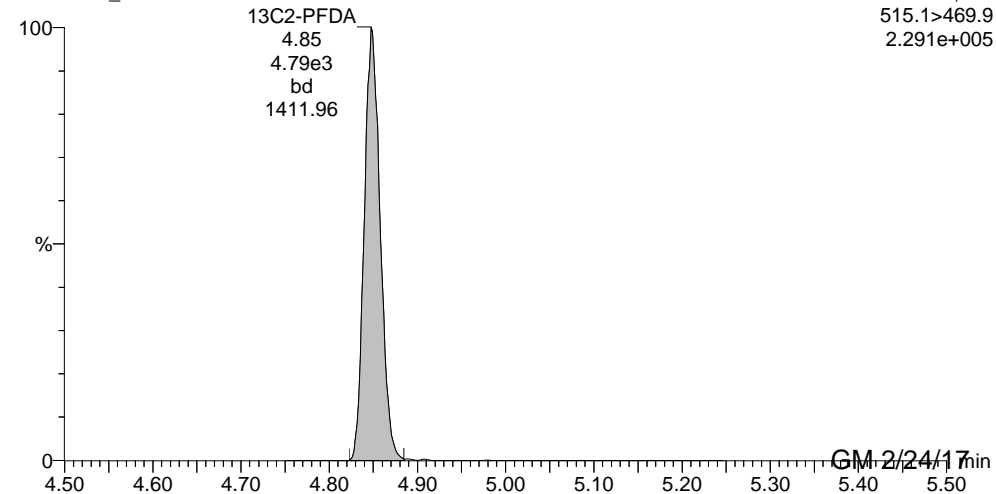
**13C2-PFOA**

170422G1\_6



**13C2-PFDA**

170422G1\_6



Reviewed: C1 04/25/17

GM 2/24/17

Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-36.qld

Last Altered: Monday, April 24, 2017 09:45:44 Pacific Daylight Time

Printed: Monday, April 24, 2017 09:46:09 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: 1700466-17 RW06-20170418 0.25, Description: RW06-20170418, Name: 170420G1\_36, Date: 21-Apr-2017, Time: 00:01:49

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1 PFBS	299 > 79.7	8.519e1	9.102e3		0.280	2.90	1.04	
2	2 PFHpA	363 > 318.9	3.037e2	6.964e3		0.280	3.78	1.73	
3	3 PFHxS	398.9 > 79.6	2.013e2	9.102e3		0.280	3.91	2.13	
4	4 PFOA	413 > 368.7	8.745e2	6.964e3		0.280	4.21	5.76	
5	5 PFOS	499 > 79.9	5.505e1	9.102e3		0.280	4.62	1.77	
6	6 PFNA	463 > 418.8	1.977e2	6.964e3		0.280	4.55	0.743	
7	7 13C2-PFHxA	315.0 > 269.8	2.862e3	6.964e3	0.449	0.280	3.27	32.7	91.6
8	8 13C2-PFDA	515.1 > 469.9	4.497e3	6.964e3	0.803	0.280	4.85	28.7	80.4
9	9 13C2-PFOA	414.9 > 369.7	6.964e3	6.964e3	1.000	0.280	4.20	35.7	100
10	10 13C4-PFOS	503.0 > 79.9	9.102e3	9.102e3	1.000	0.280	4.61	102	100

Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-36.qld

Last Altered: Monday, April 24, 2017 09:45:44 Pacific Daylight Time

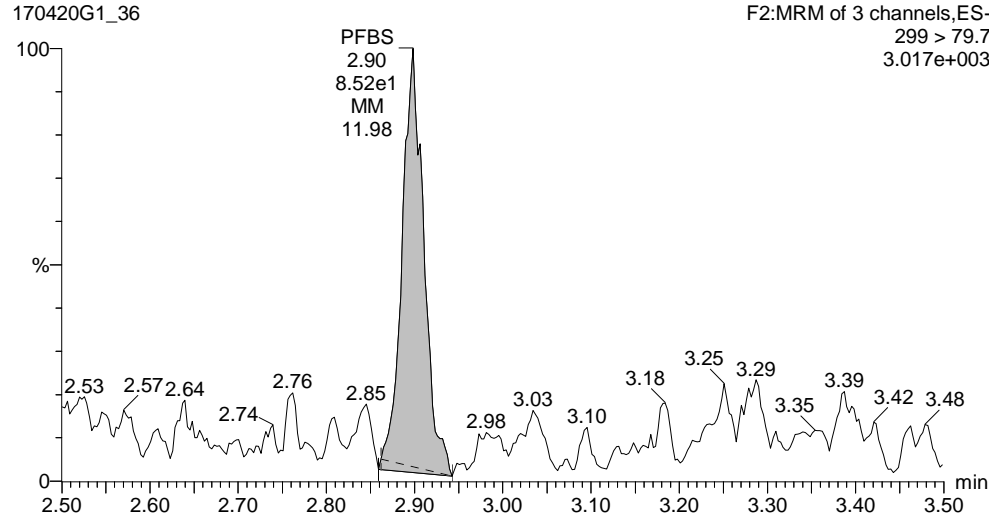
Printed: Monday, April 24, 2017 09:46:09 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

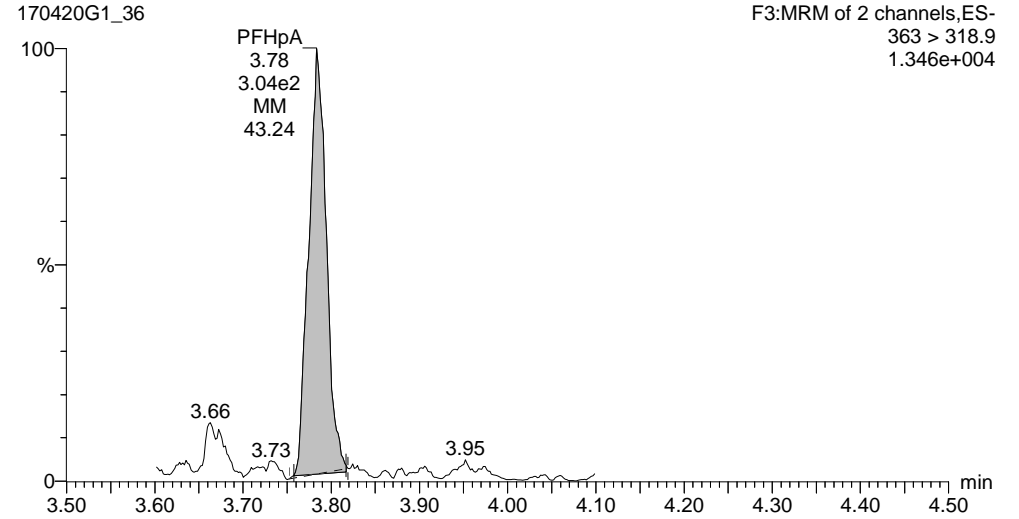
Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: 1700466-17 RW06-20170418 0.25, Description: RW06-20170418, Name: 170420G1\_36, Date: 21-Apr-2017, Time: 00:01:49, Instrument: , Lab: , User:

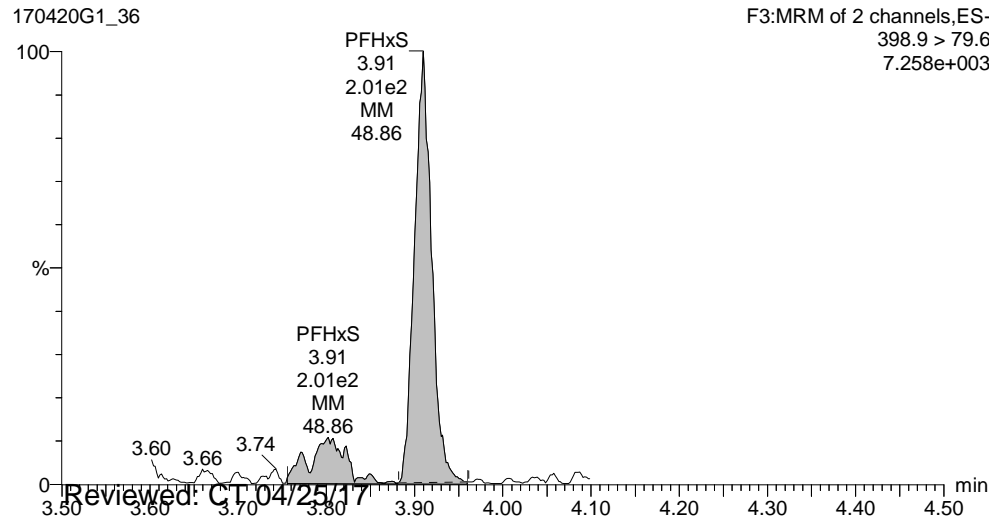
**PFBS**



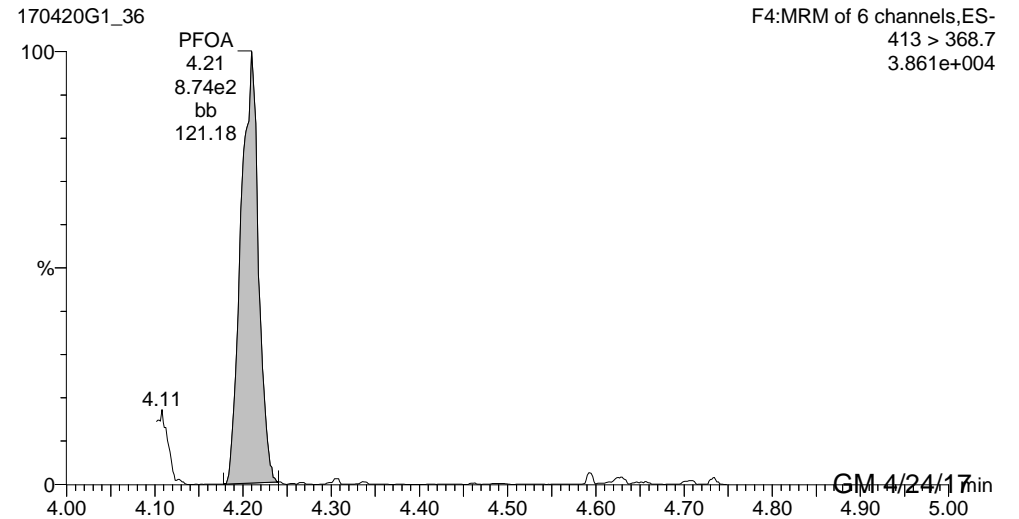
**PFHpA**



**PFHxS**



**PFOA**



Reviewed: C.T. 04/25/17

GM 4/24/17

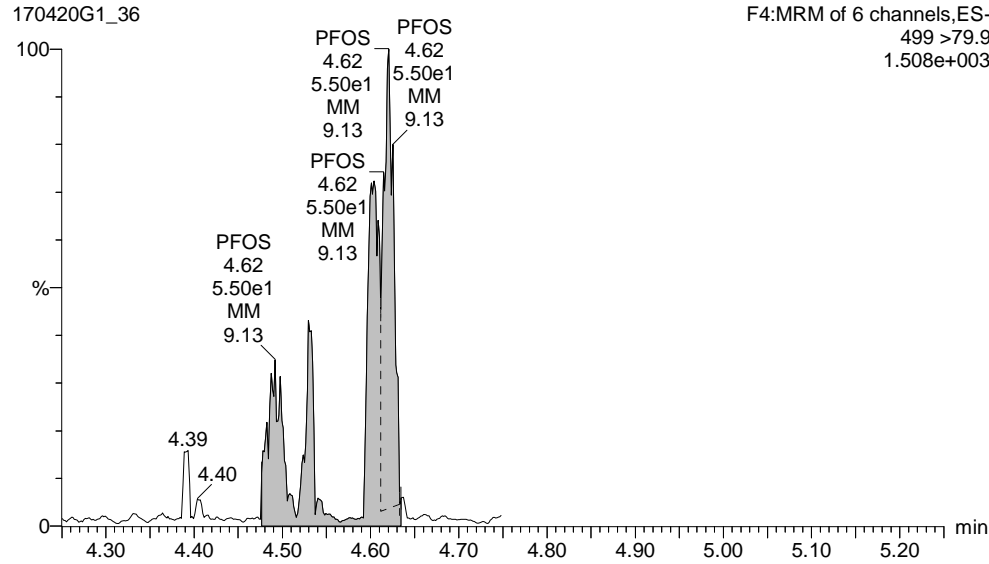
Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-36.qld

Last Altered: Monday, April 24, 2017 09:45:44 Pacific Daylight Time

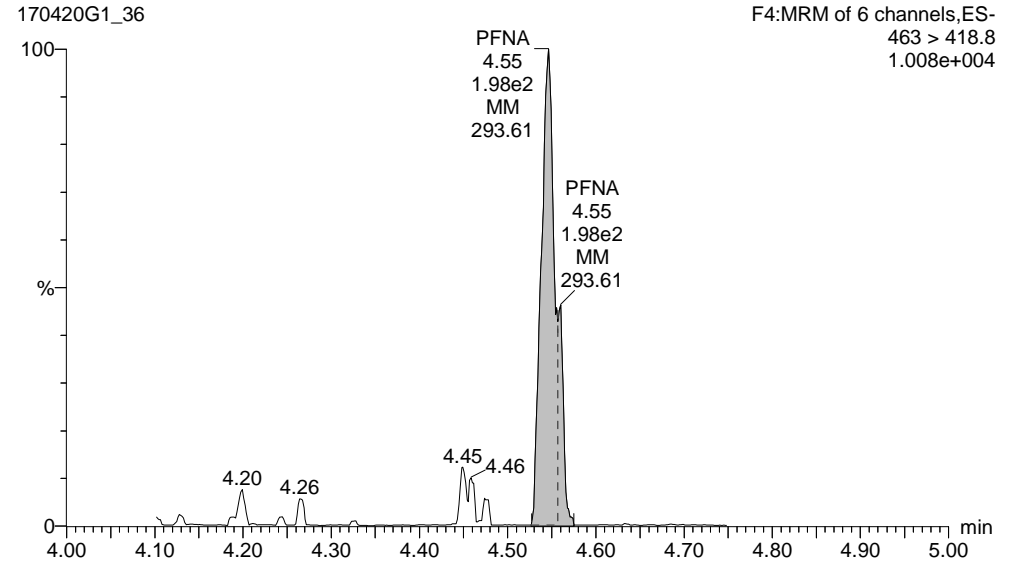
Printed: Monday, April 24, 2017 09:46:09 Pacific Daylight Time

ID: 1700466-17 RW06-20170418 0.25, Description: RW06-20170418, Name: 170420G1\_36, Date: 21-Apr-2017, Time: 00:01:49, Instrument: , Lab: , User:

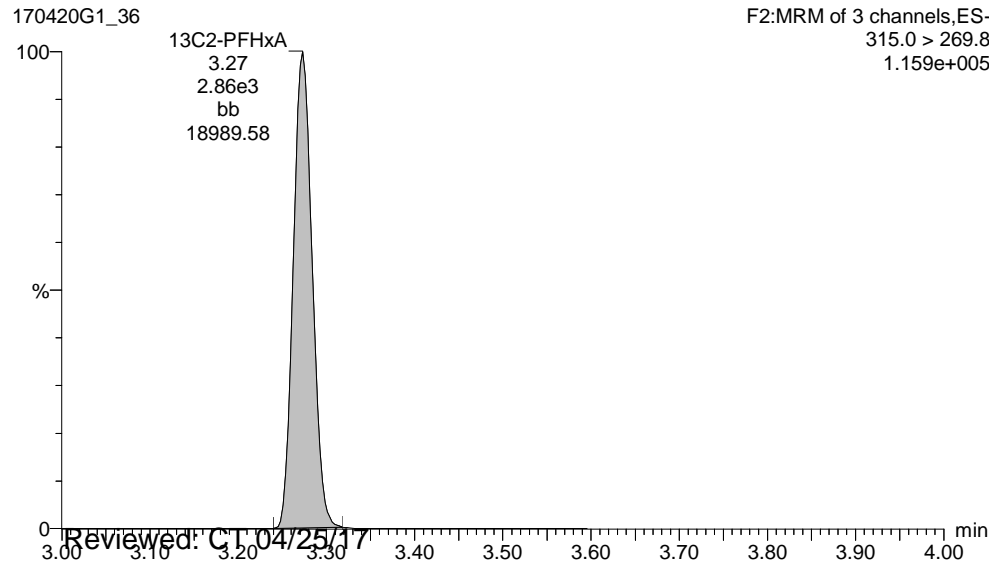
**PFOS**



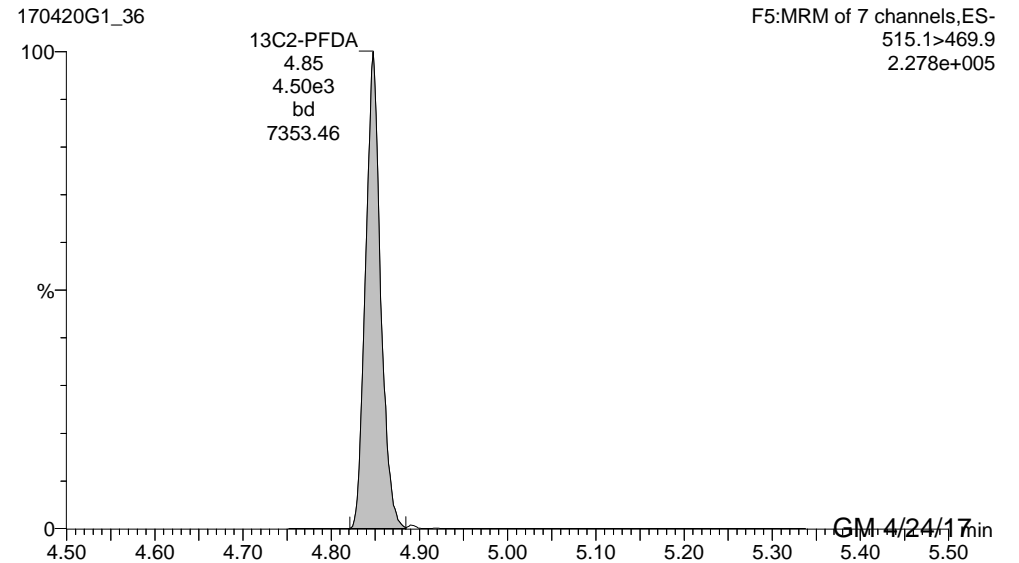
**PFNA**



**13C2-PFHxA**



**13C2-PFDA**



Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-36.qld

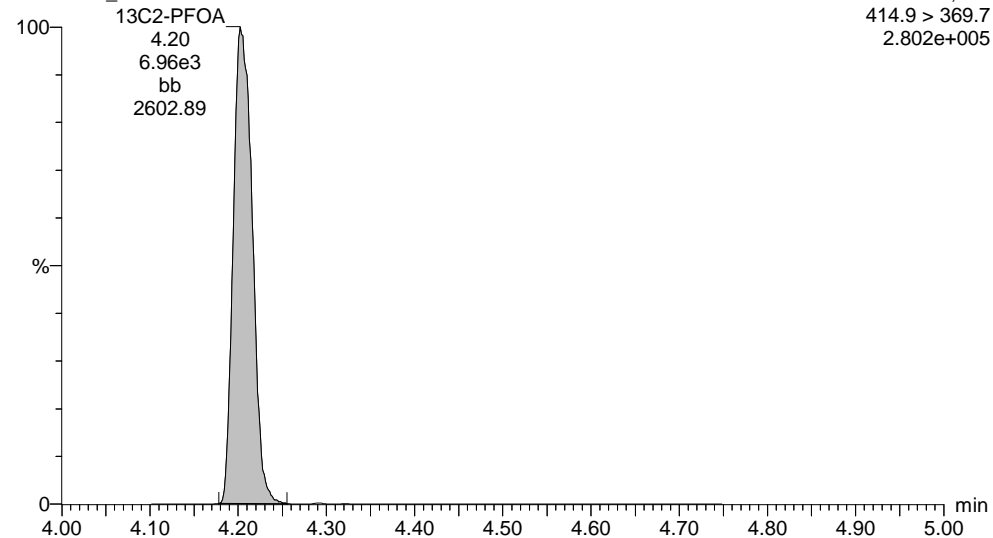
Last Altered: Monday, April 24, 2017 09:45:44 Pacific Daylight Time

Printed: Monday, April 24, 2017 09:46:09 Pacific Daylight Time

ID: 1700466-17 RW06-20170418 0.25, Description: RW06-20170418, Name: 170420G1\_36, Date: 21-Apr-2017, Time: 00:01:49, Instrument: , Lab: , User:

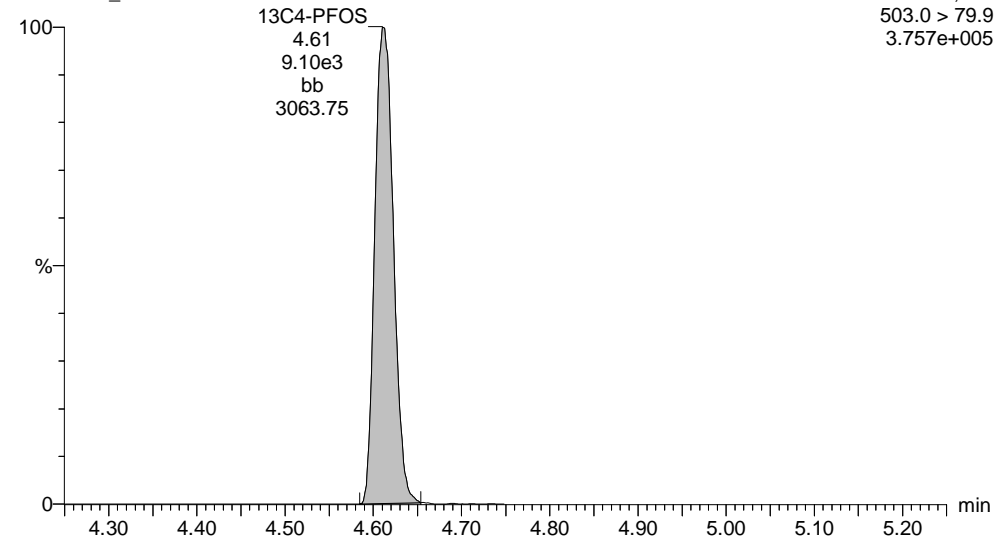
**13C2-PFOA**

170420G1\_36



**13C4-PFOS**

170420G1\_36



Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-36.qld

Last Altered: Monday, April 24, 2017 09:45:44 Pacific Daylight Time

Printed: Monday, April 24, 2017 09:46:09 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: 1700466-17 RW06-20170418 0.25, Description: RW06-20170418, Name: 170420G1\_36, Date: 21-Apr-2017, Time: 00:01:49

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1 PFBS	299 > 79.7	8.519e1	9.102e3		0.280	2.90	1.04	
2	2 PFHpA	363 > 318.9	3.037e2	6.964e3		0.280	3.78	1.73	
3	3 PFHxS	398.9 > 79.6	2.013e2	9.102e3		0.280	3.91	2.13	
4	4 PFOA	413 > 368.7	8.745e2	6.964e3		0.280	4.21	5.76	
5	5 PFOS	499 > 79.9	5.505e1	9.102e3		0.280	4.62	1.77	
6	6 PFNA	463 > 418.8	1.977e2	6.964e3		0.280	4.55	0.743	
7	7 13C2-PFHxA	315.0 > 269.8	2.862e3	6.964e3	0.449	0.280	3.27	32.7	91.6
8	8 13C2-PFDA	515.1 > 469.9	4.497e3	6.964e3	0.803	0.280	4.85	28.7	80.4
9	9 13C2-PFOA	414.9 > 369.7	6.964e3	6.964e3	1.000	0.280	4.20	35.7	100
10	10 13C4-PFOS	503.0 > 79.9	9.102e3	9.102e3	1.000	0.280	4.61	102	100



Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-36.qld

Last Altered: Monday, April 24, 2017 09:45:44 Pacific Daylight Time

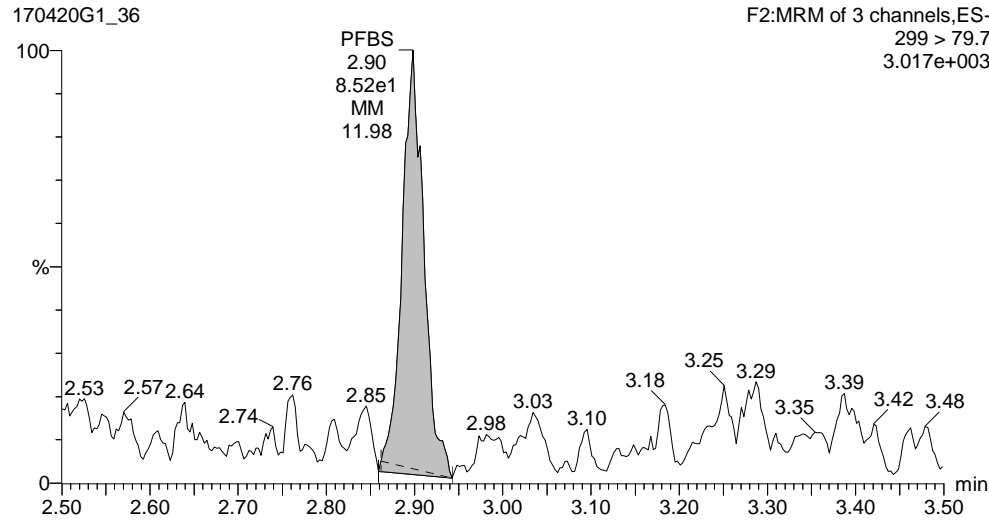
Printed: Monday, April 24, 2017 09:46:09 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

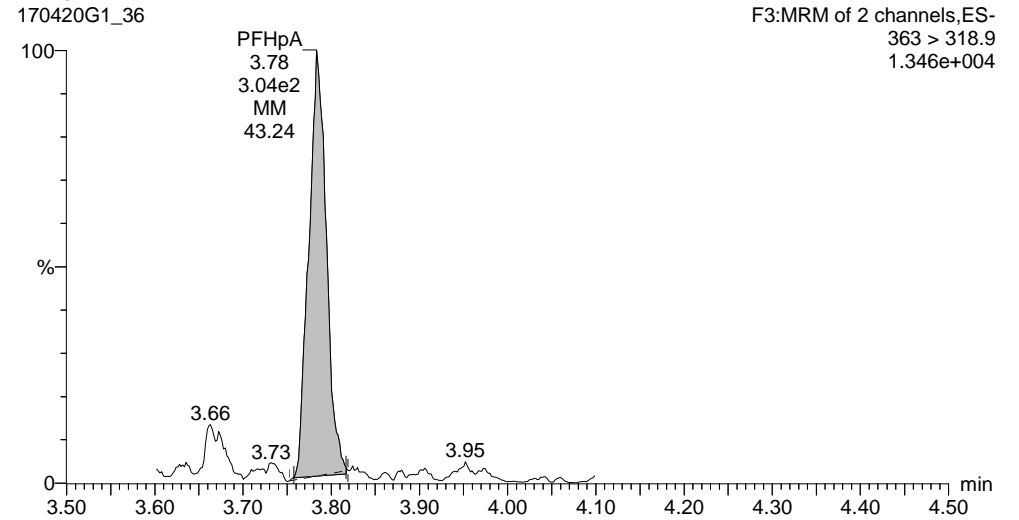
Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: 1700466-17 RW06-20170418 0.25, Description: RW06-20170418, Name: 170420G1\_36, Date: 21-Apr-2017, Time: 00:01:49, Instrument: , Lab: , User:

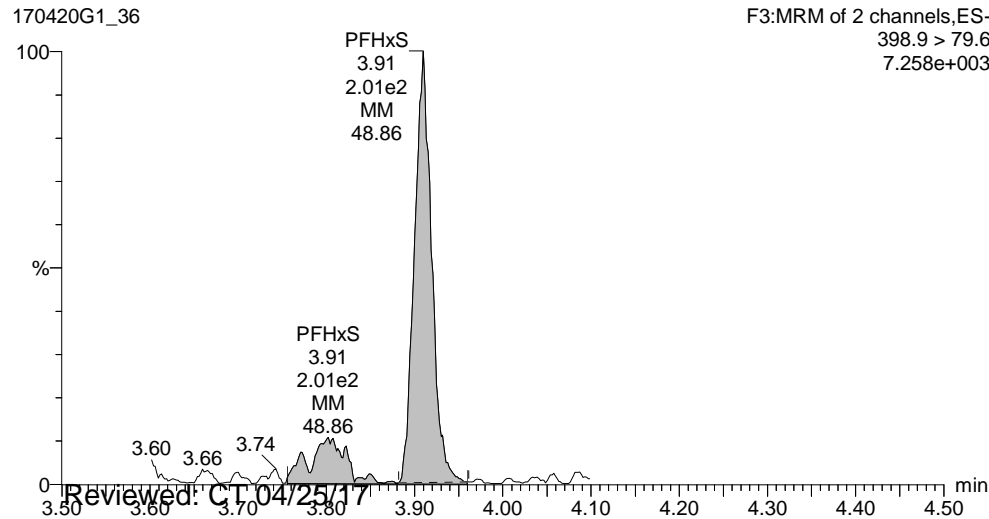
**PFBS**



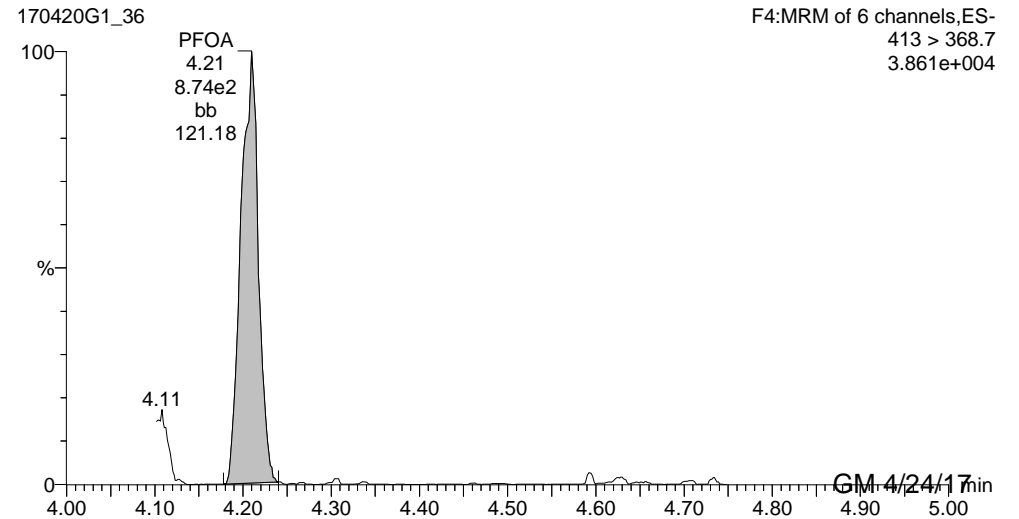
**PFHpA**



**PFHxS**



**PFOA**



Reviewed: C.T. 04/25/17

GM 4/24/17

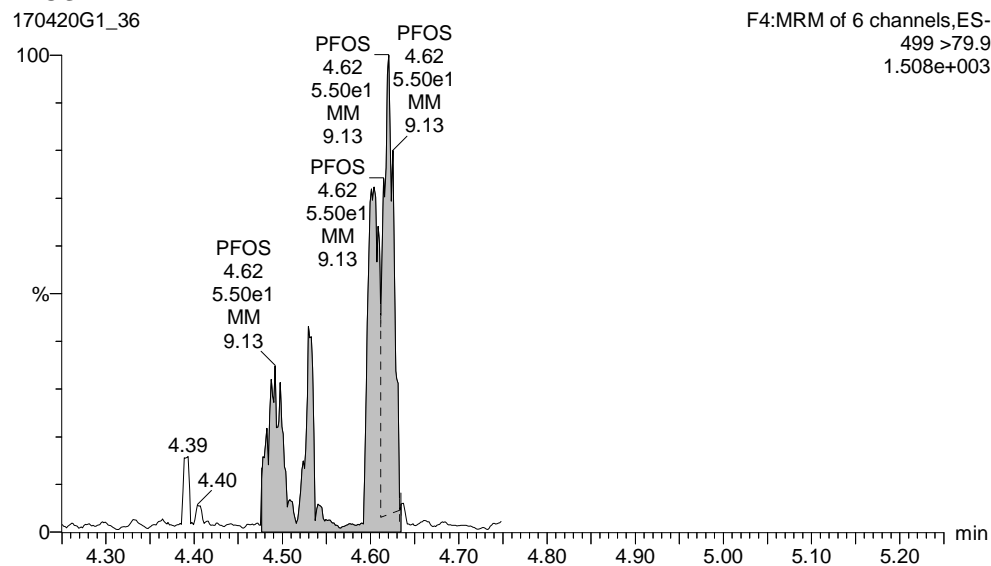
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Last Altered: Monday, April 24, 2017 09:45:44 Pacific Daylight Time

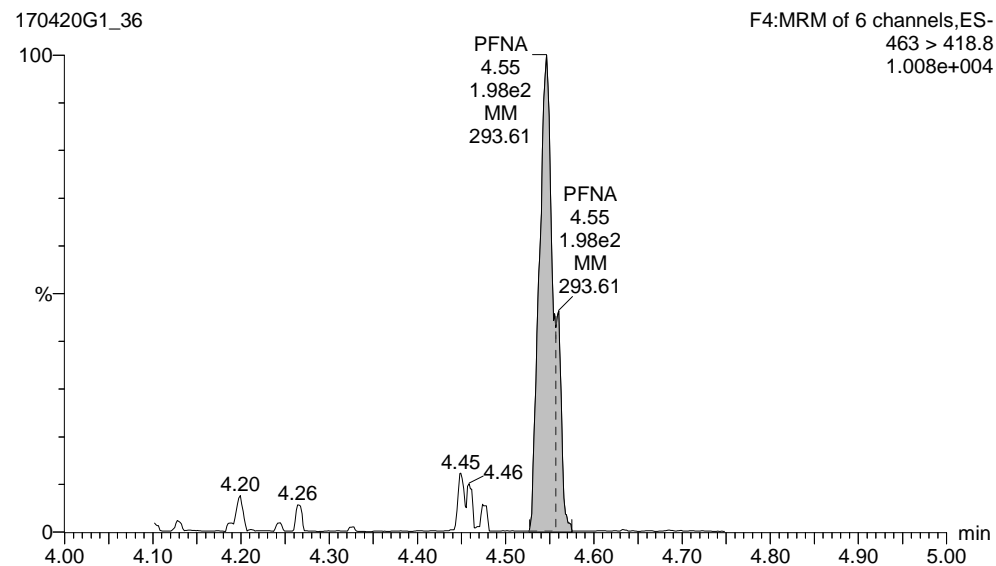
Printed: Monday, April 24, 2017 09:46:09 Pacific Daylight Time

ID: 1700466-17 RW06-20170418 0.25, Description: RW06-20170418, Name: 170420G1\_36, Date: 21-Apr-2017, Time: 00:01:49, Instrument: , Lab: , User:

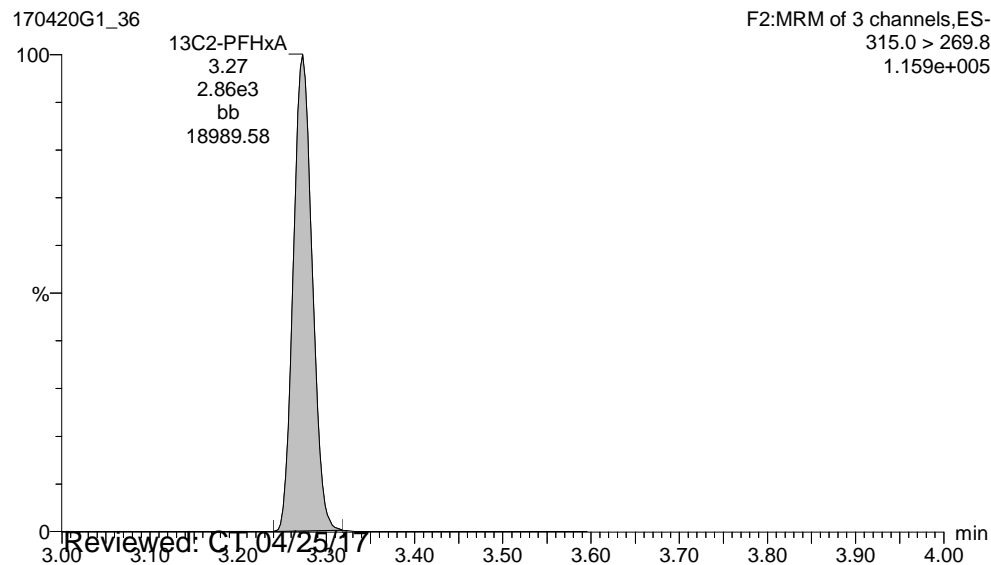
**PFOS**



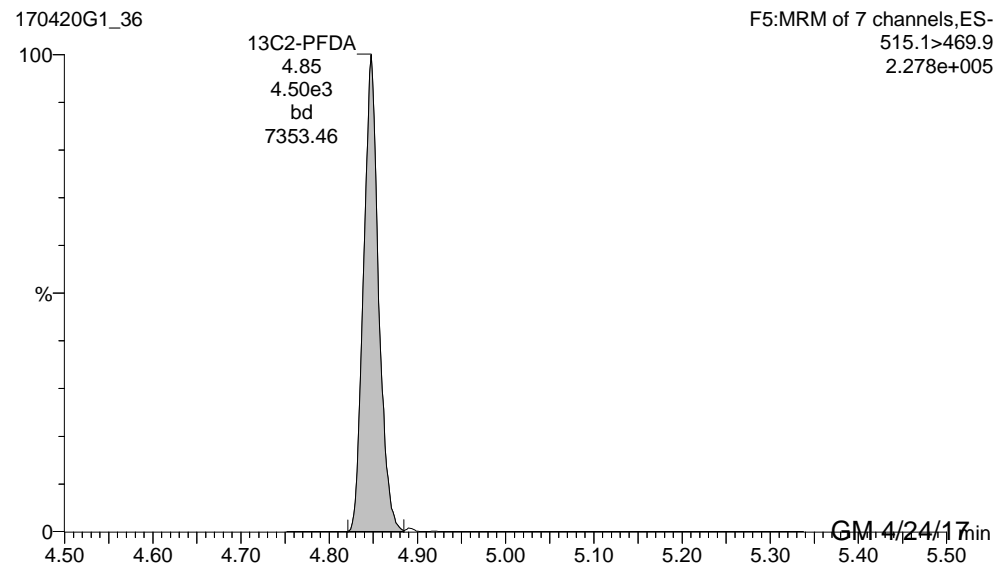
**PFNA**



**13C2-PFHxA**



**13C2-PFDA**



Reviewed: C.T. 04/25/17

GM 4/24/17

Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-36.qld

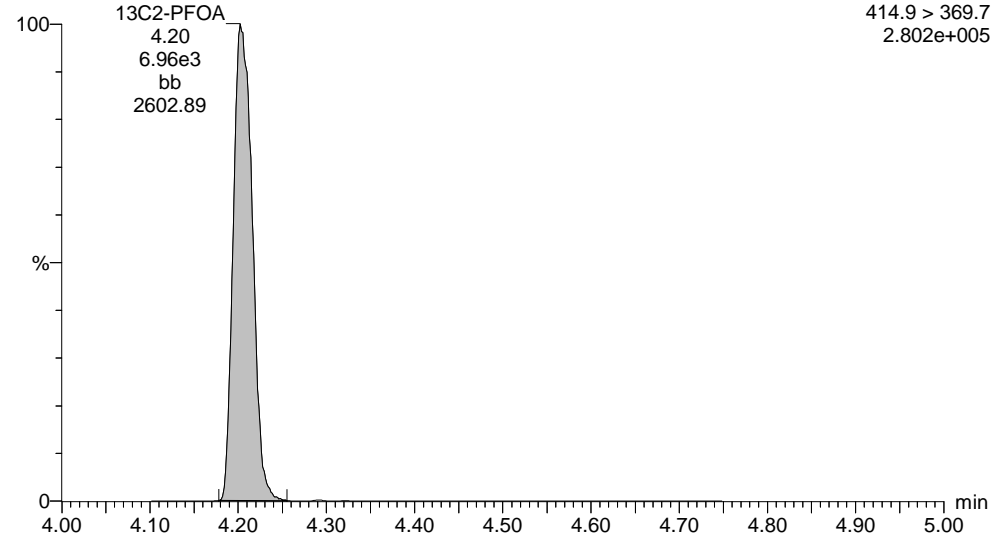
Last Altered: Monday, April 24, 2017 09:45:44 Pacific Daylight Time

Printed: Monday, April 24, 2017 09:46:09 Pacific Daylight Time

ID: 1700466-17 RW06-20170418 0.25, Description: RW06-20170418, Name: 170420G1\_36, Date: 21-Apr-2017, Time: 00:01:49, Instrument: , Lab: , User:

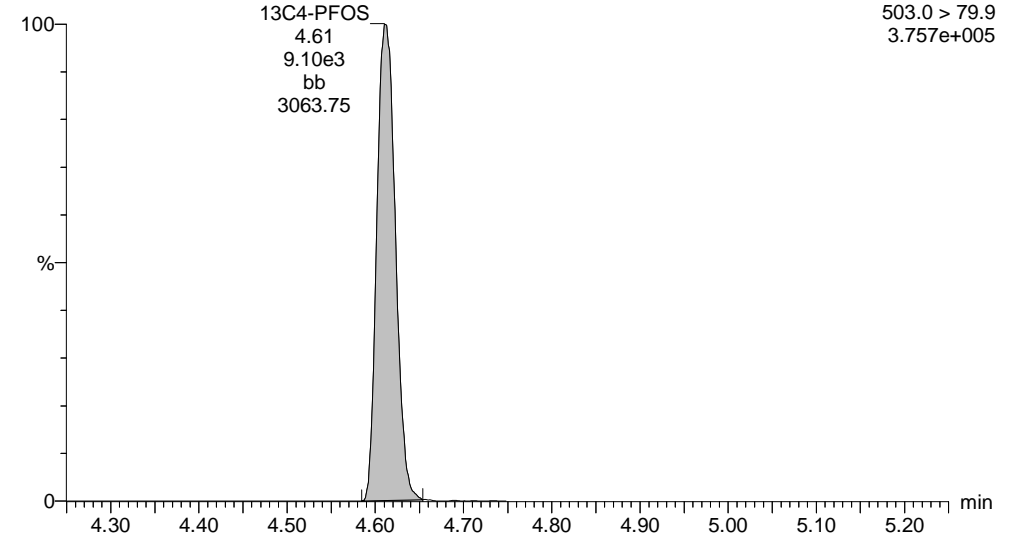
**13C2-PFOA**

170420G1\_36



**13C4-PFOS**

170420G1\_36



Dataset: U:\G1.PRO\Results\2017\170422G1\170422G1-07.qld

Last Altered: Monday, April 24, 2017 14:57:18 Pacific Daylight Time

Printed: Monday, April 24, 2017 14:57:59 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: 1700466-17 RW06-20170418 0.25, Description: RW06-20170418, Name: 170422G1\_7, Date: 22-Apr-2017, Time: 12:28:09

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	4 PFOA	413 > 368.7	1.201e3	7.971e3		0.280	4.20	6.91	
2	7 13C2-PFHxA	315.0 > 269.8	3.024e3	7.971e3	0.449	0.280	3.27	30.2	84.6
3	8 13C2-PFDA	515.1 > 469.9	5.247e3	7.971e3	0.803	0.280	4.84	29.3	82.0
4	9 13C2-PFOA	414.9 > 369.7	7.971e3	7.971e3	1.000	0.280	4.21	35.7	100

Dataset: U:\G1.PRO\Results\2017\170422G1\170422G1-07.qld

Last Altered: Monday, April 24, 2017 14:57:18 Pacific Daylight Time

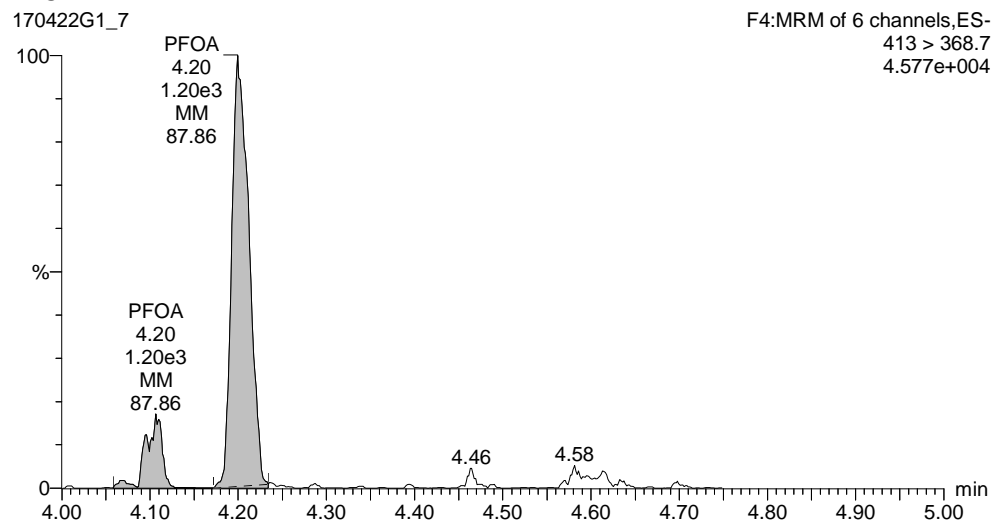
Printed: Monday, April 24, 2017 14:57:59 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

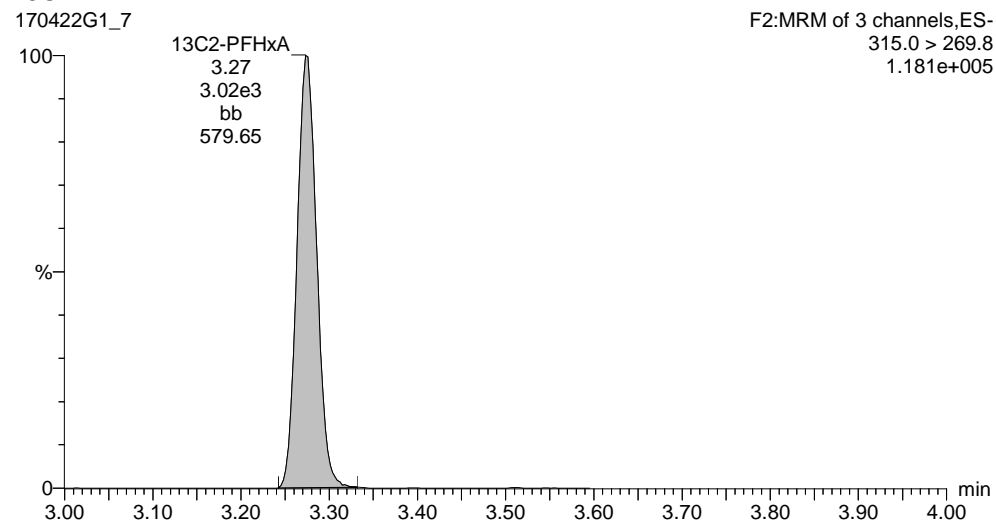
Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: 1700466-17 RW06-20170418 0.25, Description: RW06-20170418, Name: 170422G1\_7, Date: 22-Apr-2017, Time: 12:28:09, Instrument: , Lab: , User:

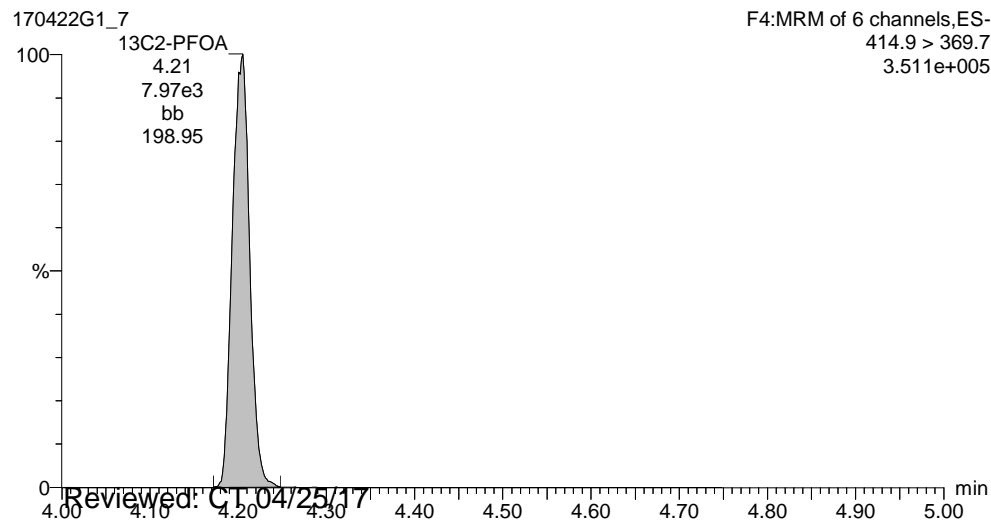
**PFOA**



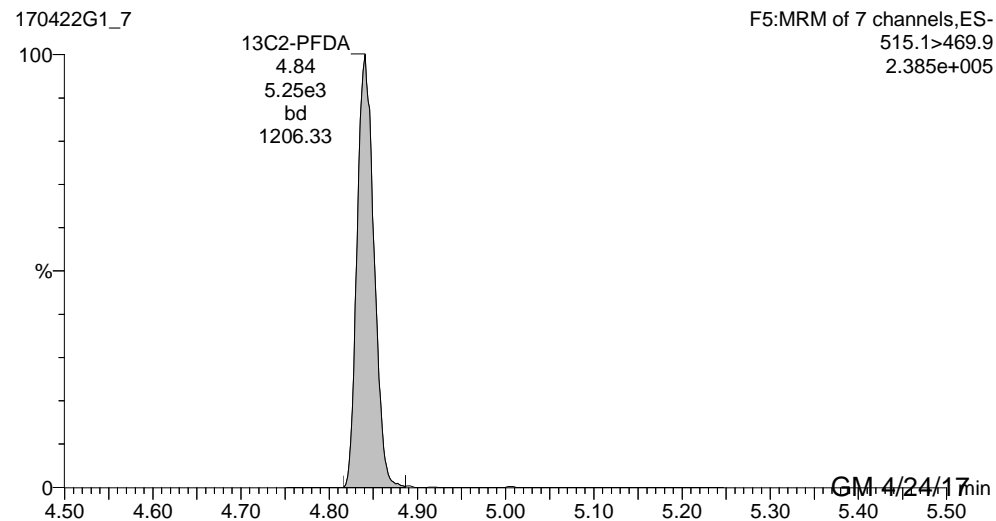
**13C2-PFHxA**



**13C2-PFOA**



**13C2-PFDA**



Reviewed: C:\04/25/17

GM 4/24/17

Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-37.qld

Last Altered: Monday, April 24, 2017 09:47:15 Pacific Daylight Time

Printed: Monday, April 24, 2017 09:47:45 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: 1700466-18 FRB-06-20170418 0.25, Description: FRB-06-20170418, Name: 170420G1\_37, Date: 21-Apr-2017, Time: 00:14:14

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1 PFBS	299 > 79.7		8.627e3		0.283			
2	2 PFHpA	363 > 318.9		6.404e3		0.283			
3	3 PFHxS	398.9 > 79.6		8.627e3		0.283			
4	4 PFOA	413 > 368.7	1.796e1	6.404e3		0.283	4.21	0.127	
5	5 PFOS	499 > 79.9		8.627e3		0.283			
6	6 PFNA	463 > 418.8		6.404e3		0.283			
7	7 13C2-PFHxA	315.0 > 269.8	2.616e3	6.404e3	0.449	0.283	3.27	32.2	91.1
8	8 13C2-PFDA	515.1 > 469.9	4.167e3	6.404e3	0.803	0.283	4.85	28.6	81.0
9	9 13C2-PFOA	414.9 > 369.7	6.404e3	6.404e3	1.000	0.283	4.21	35.3	100
10	10 13C4-PFOS	503.0 > 79.9	8.627e3	8.627e3	1.000	0.283	4.61	101	100

Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-37.qld

Last Altered: Monday, April 24, 2017 09:47:15 Pacific Daylight Time

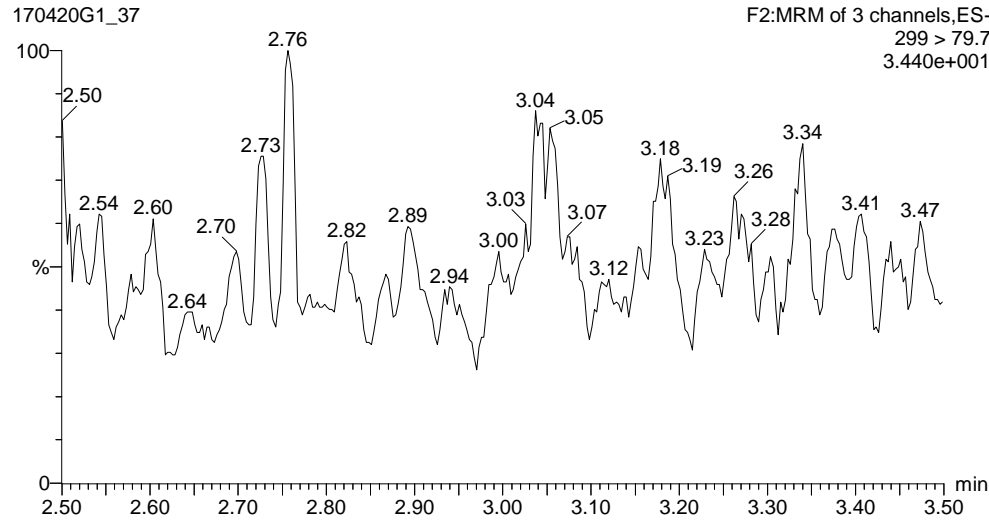
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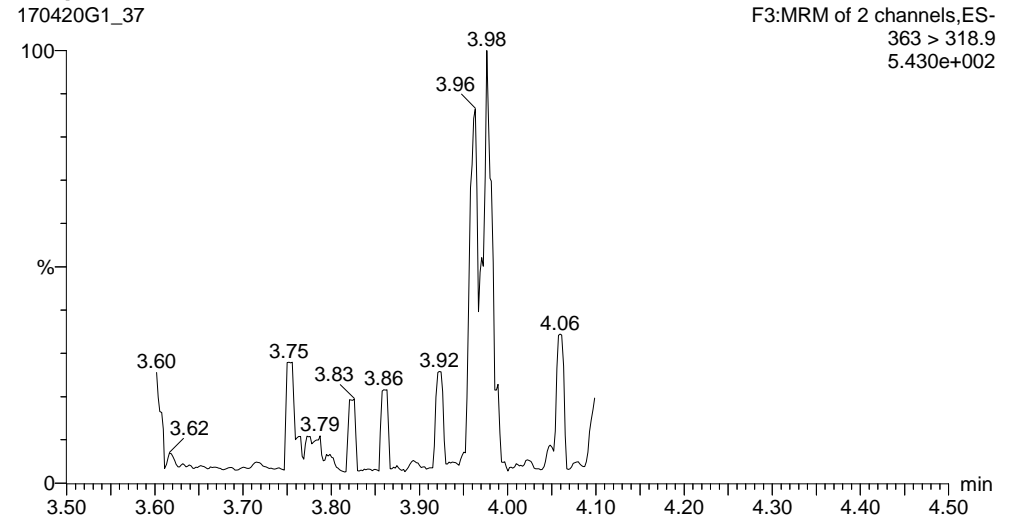
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ID: 1700466-18 FRB-06-20170418 0.25, Description: FRB-06-20170418, Name: 170420G1\_37, Date: 21-Apr-2017, Time: 00:14:14, Instrument: , Lab: , User:

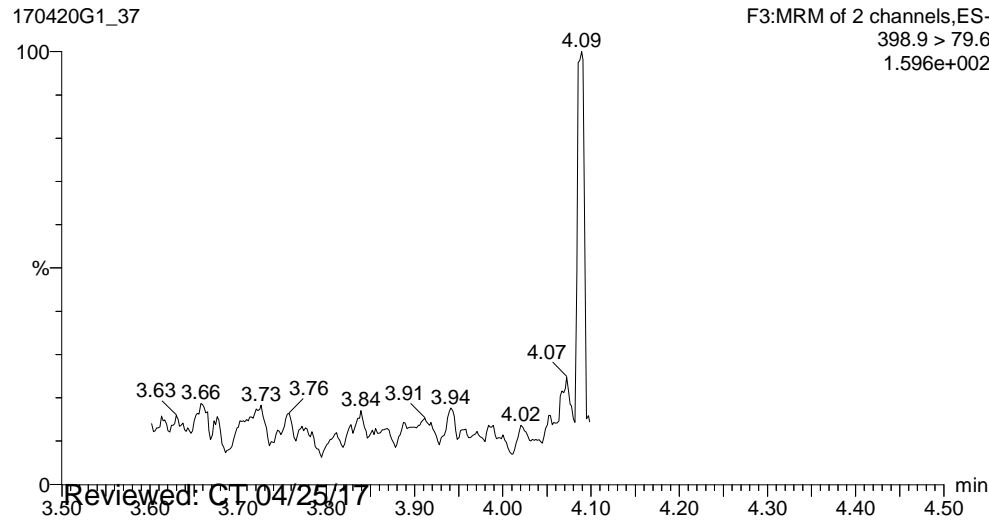
PFBS



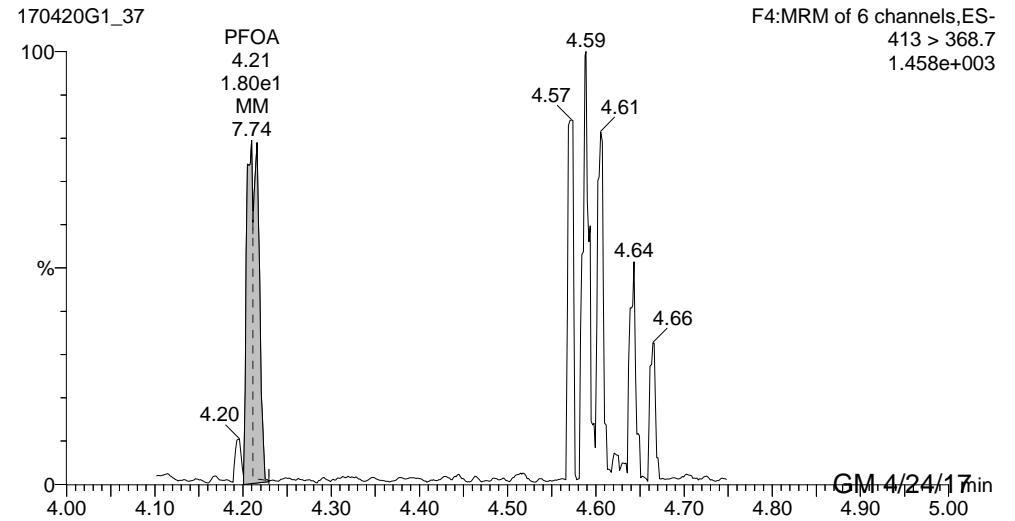
PFHpA



PFHxS



PFOA



Reviewed: CT 04/25/17

GM 4/24/17

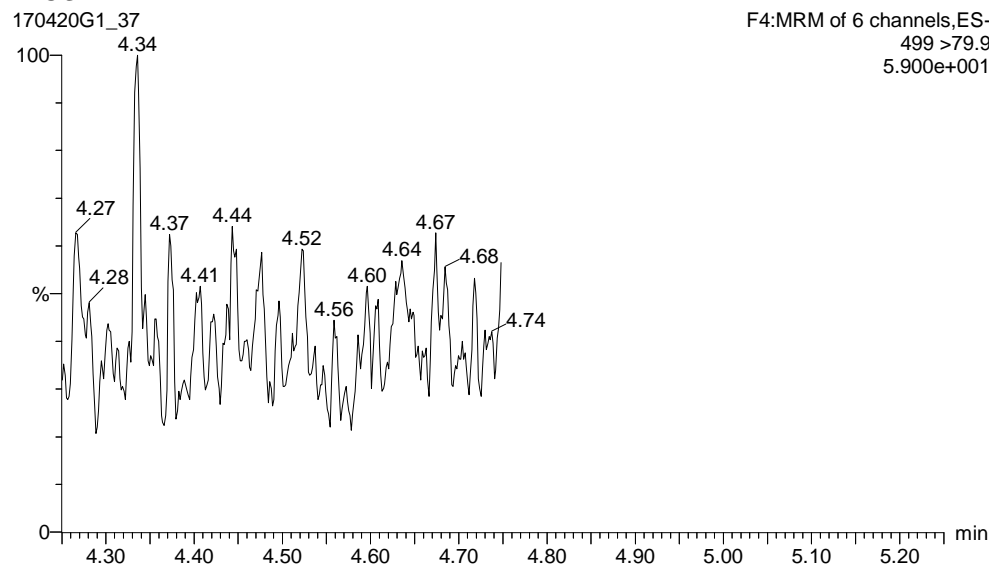
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Last Altered: Monday, April 24, 2017 09:47:15 Pacific Daylight Time

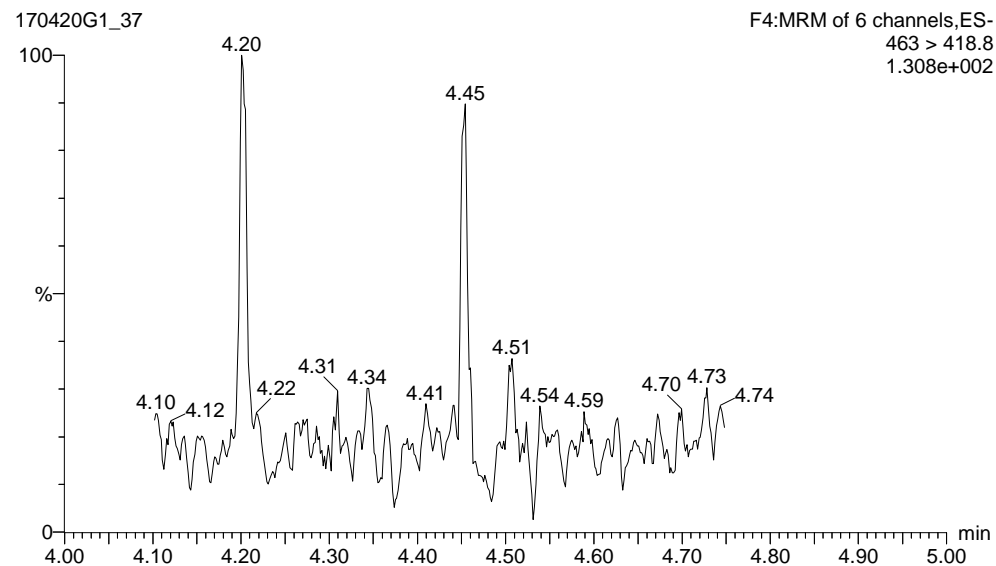
Printed: Monday, April 24, 2017 09:47:45 Pacific Daylight Time

ID: 1700466-18 FRB-06-20170418 0.25, Description: FRB-06-20170418, Name: 170420G1\_37, Date: 21-Apr-2017, Time: 00:14:14, Instrument: , Lab: , User:

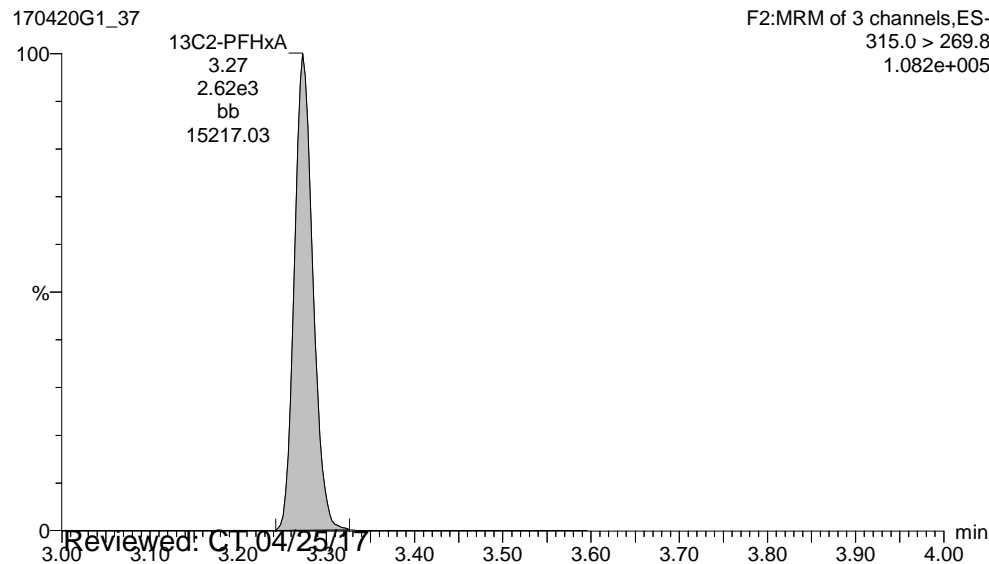
**PFOS**



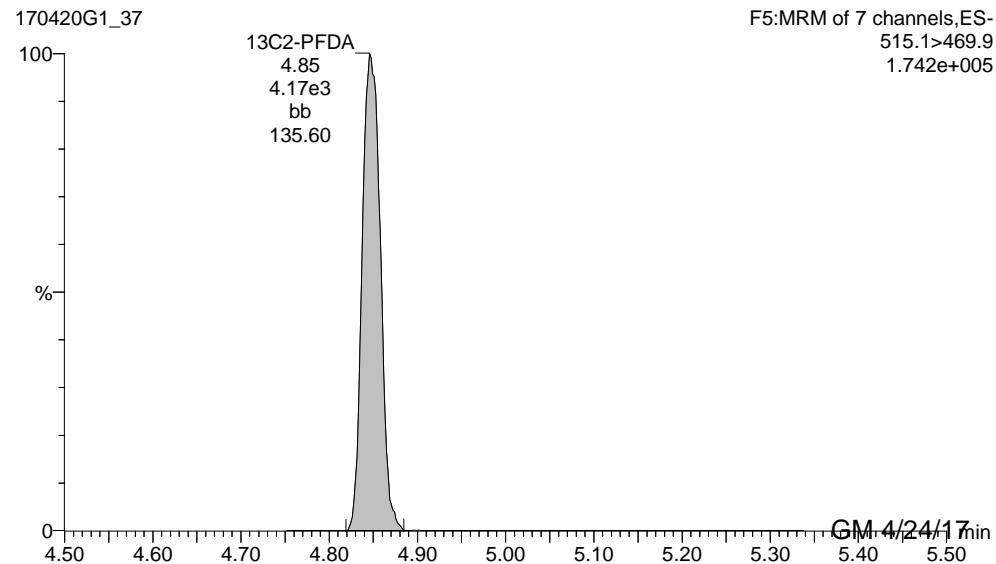
**PFNA**



**13C2-PFHxA**



**13C2-PFDA**



Reviewed: C.T. 04/25/17

GM 4/24/17



Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-37.qld

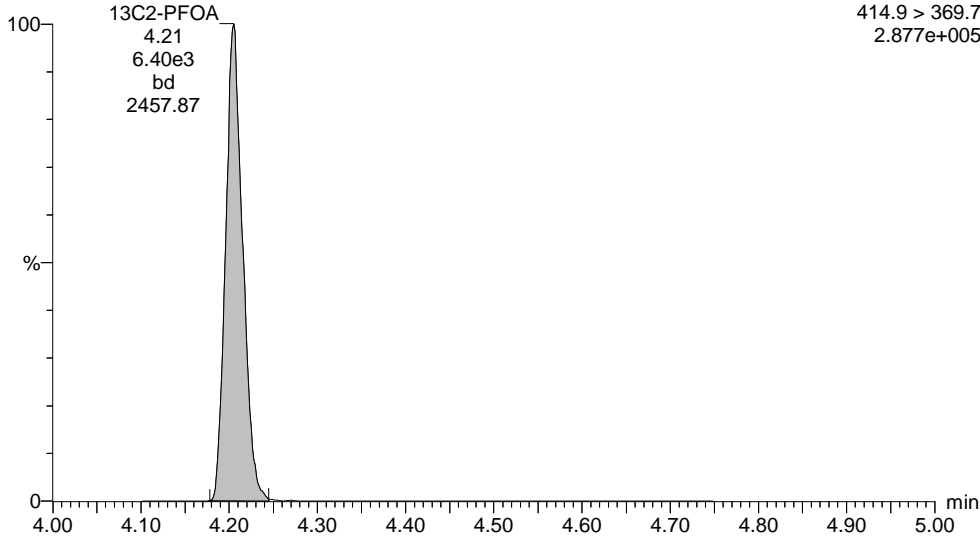
Last Altered: Monday, April 24, 2017 09:47:15 Pacific Daylight Time

Printed: Monday, April 24, 2017 09:47:45 Pacific Daylight Time

ID: 1700466-18 FRB-06-20170418 0.25, Description: FRB-06-20170418, Name: 170420G1\_37, Date: 21-Apr-2017, Time: 00:14:14, Instrument: , Lab: , User:

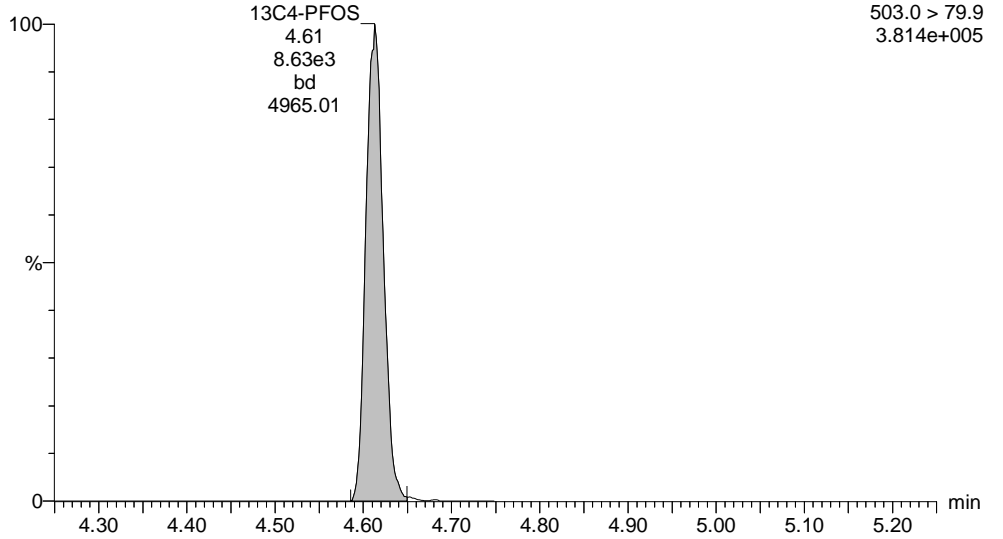
**13C2-PFOA**

170420G1\_37



**13C4-PFOS**

170420G1\_37



Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-37.qld

Last Altered: Monday, April 24, 2017 09:47:15 Pacific Daylight Time

Printed: Monday, April 24, 2017 09:47:45 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: 1700466-18 FRB-06-20170418 0.25, Description: FRB-06-20170418, Name: 170420G1\_37, Date: 21-Apr-2017, Time: 00:14:14

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1 PFBS	299 > 79.7		8.627e3		0.283			
2	2 PFHpA	363 > 318.9		6.404e3		0.283			
3	3 PFHxS	398.9 > 79.6		8.627e3		0.283			
4	4 PFOA	413 > 368.7	1.796e1	6.404e3		0.283	4.21	0.127	
5	5 PFOS	499 > 79.9		8.627e3		0.283			
6	6 PFNA	463 > 418.8		6.404e3		0.283			
7	7 13C2-PFHxA	315.0 > 269.8	2.616e3	6.404e3	0.449	0.283	3.27	32.2	91.1
8	8 13C2-PFDA	515.1 > 469.9	4.167e3	6.404e3	0.803	0.283	4.85	28.6	81.0
9	9 13C2-PFOA	414.9 > 369.7	6.404e3	6.404e3	1.000	0.283	4.21	35.3	100
10	10 13C4-PFOS	503.0 > 79.9	8.627e3	8.627e3	1.000	0.283	4.61	101	100

Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-37.qld

Last Altered: Monday, April 24, 2017 09:47:15 Pacific Daylight Time

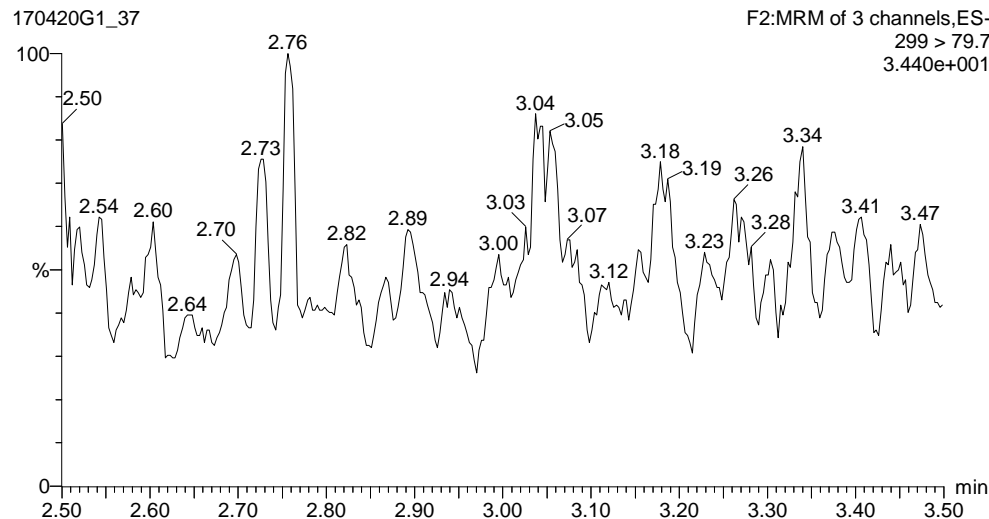
Printed: Monday, April 24, 2017 09:47:45 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

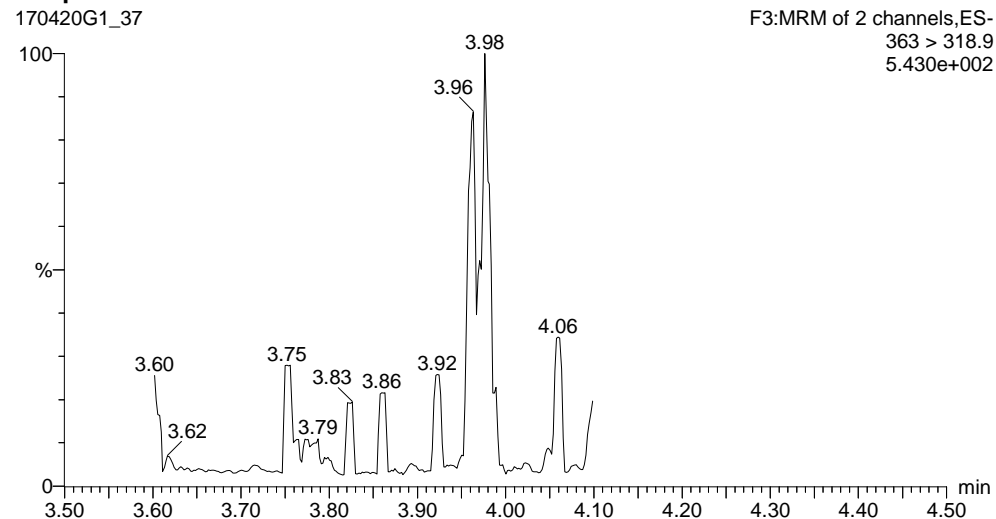
Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: 1700466-18 FRB-06-20170418 0.25, Description: FRB-06-20170418, Name: 170420G1\_37, Date: 21-Apr-2017, Time: 00:14:14, Instrument: , Lab: , User:

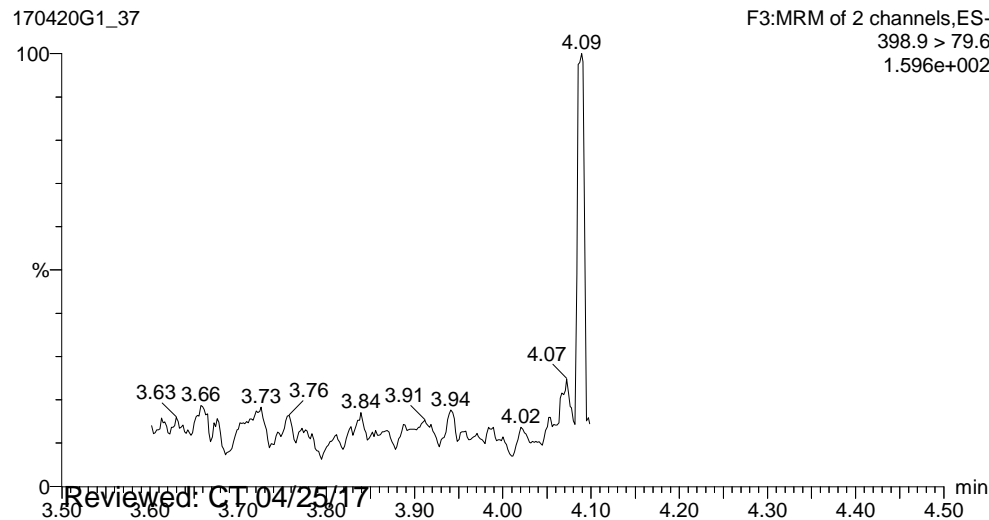
**PFBS**



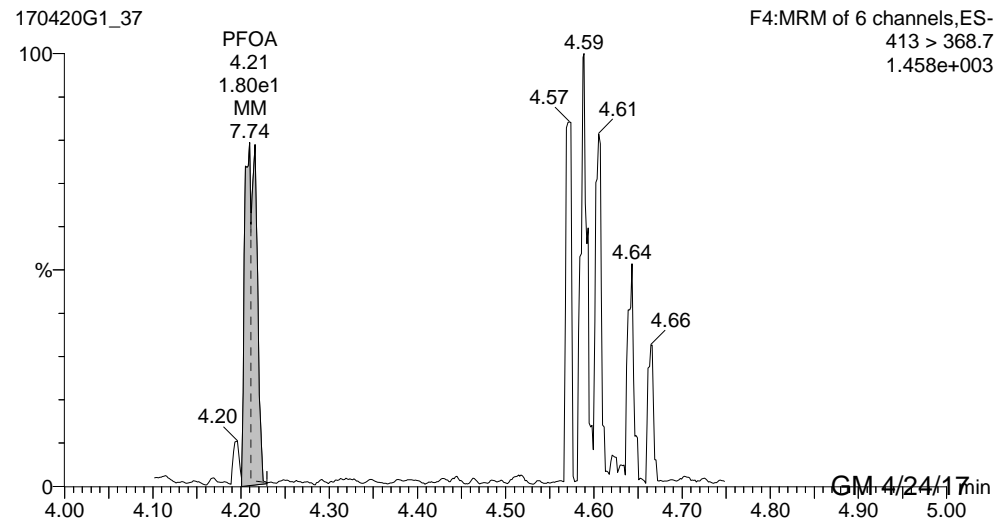
**PFHpA**



**PFHxS**



**PFOA**



Reviewed: CT 04/25/17

GM 4/24/17

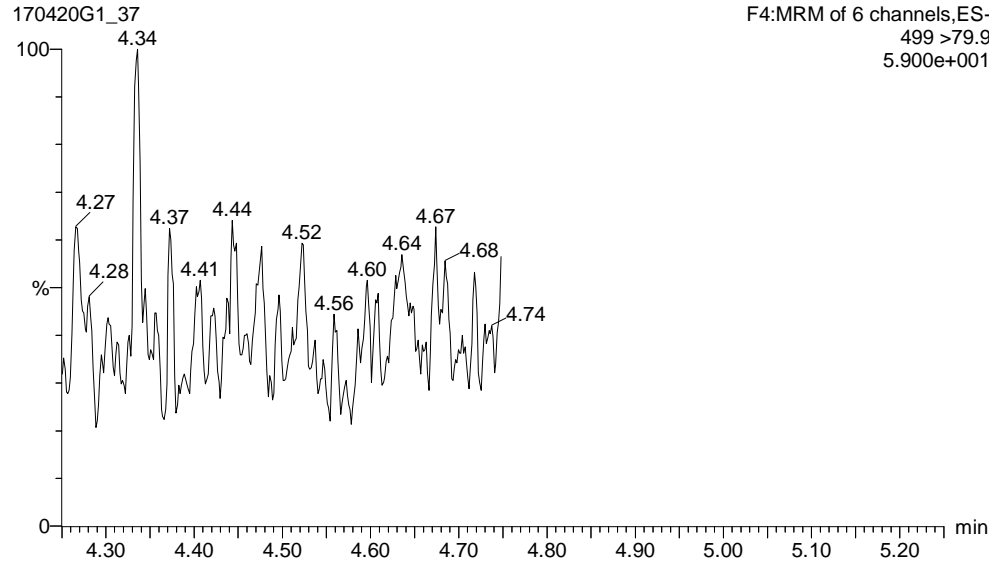
Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-37.qld

Last Altered: Monday, April 24, 2017 09:47:15 Pacific Daylight Time

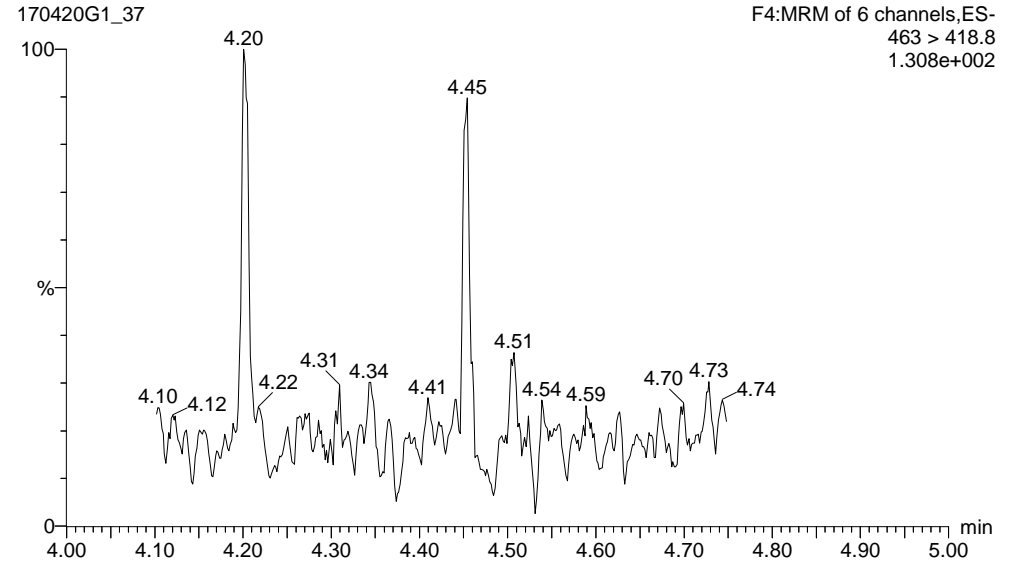
Printed: Monday, April 24, 2017 09:47:45 Pacific Daylight Time

ID: 1700466-18 FRB-06-20170418 0.25, Description: FRB-06-20170418, Name: 170420G1\_37, Date: 21-Apr-2017, Time: 00:14:14, Instrument: , Lab: , User:

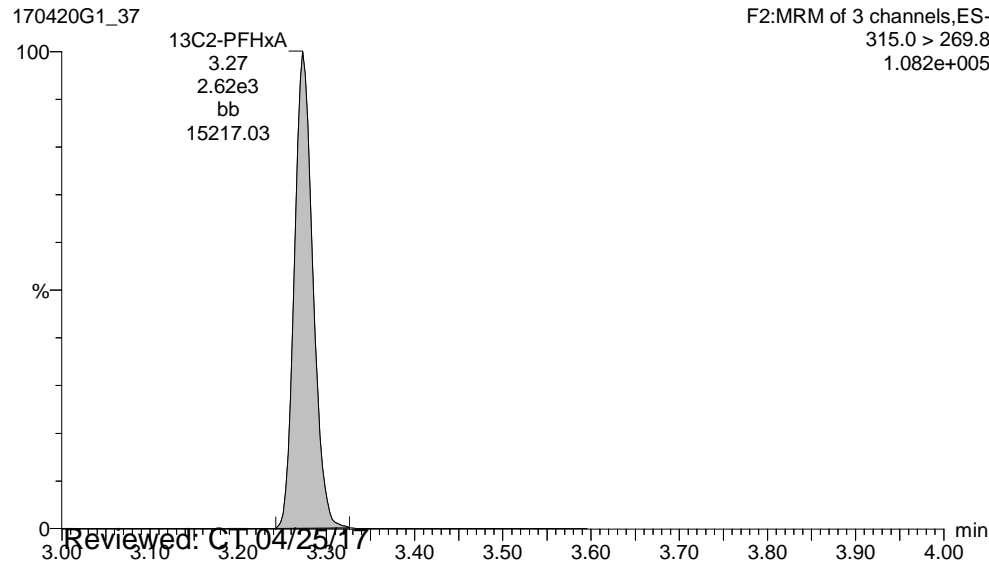
**PFOS**



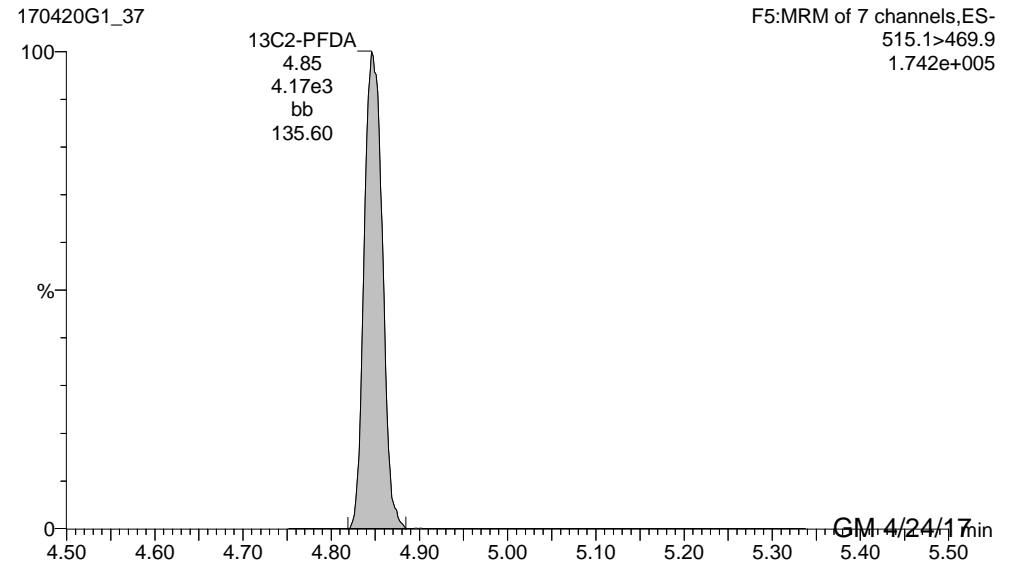
**PFNA**



**13C2-PFHxA**



**13C2-PFDA**



Reviewed: C.T. 04/25/17

GM 4/24/17

Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-37.qld

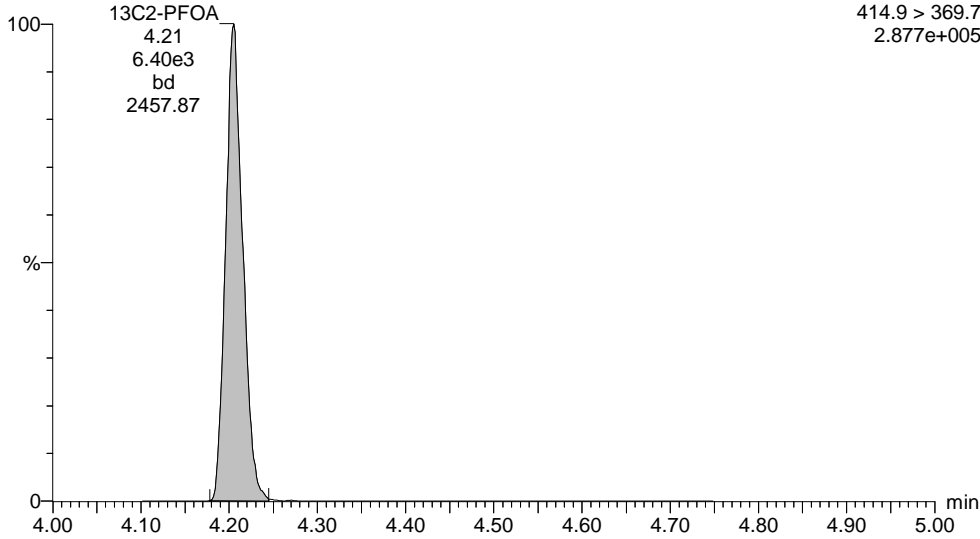
Last Altered: Monday, April 24, 2017 09:47:15 Pacific Daylight Time

Printed: Monday, April 24, 2017 09:47:45 Pacific Daylight Time

ID: 1700466-18 FRB-06-20170418 0.25, Description: FRB-06-20170418, Name: 170420G1\_37, Date: 21-Apr-2017, Time: 00:14:14, Instrument: , Lab: , User:

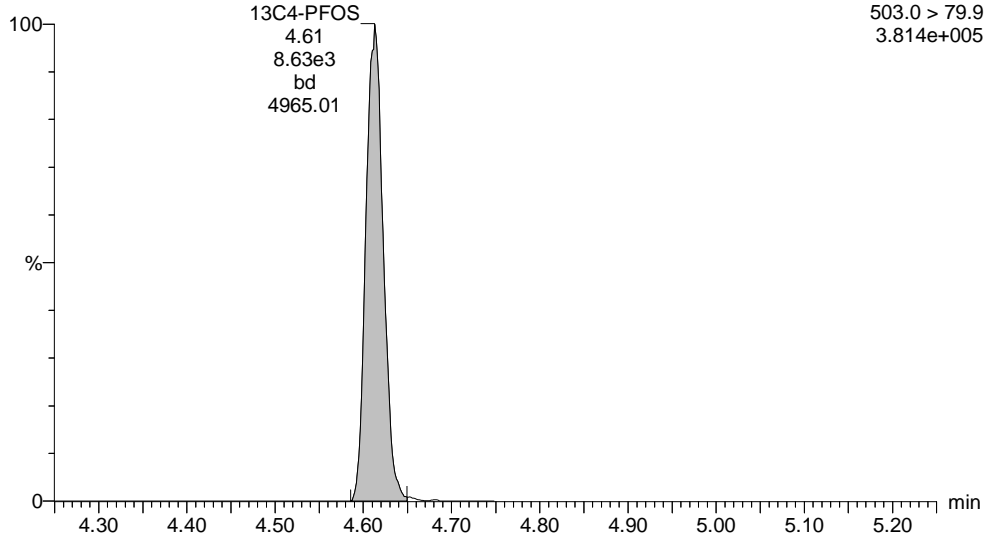
**13C2-PFOA**

170420G1\_37



**13C4-PFOS**

170420G1\_37



Dataset: U:\G1.PRO\Results\2017\170422G1\170422G1-08.qld

Last Altered: Monday, April 24, 2017 15:00:06 Pacific Daylight Time

Printed: Monday, April 24, 2017 15:00:35 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: 1700466-18 FRB-06-20170418 0.25, Description: FRB-06-20170418, Name: 170422G1\_8, Date: 22-Apr-2017, Time: 12:40:50

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	4 PFOA	413 > 368.7	1.520e1	7.176e3		0.283	4.21	0.0959	
2	7 13C2-PFHxA	315.0 > 269.8	2.953e3	7.176e3	0.449	0.283	3.28	32.4	91.7
3	8 13C2-PFDA	515.1>469.9	4.716e3	7.176e3	0.803	0.283	4.84	28.9	81.9
4	9 13C2-PFOA	414.9 > 369.7	7.176e3	7.176e3	1.000	0.283	4.20	35.3	100

Dataset: U:\G1.PRO\Results\2017\170422G1\170422G1-08.qld

Last Altered: Monday, April 24, 2017 15:00:06 Pacific Daylight Time

Printed: Monday, April 24, 2017 15:00:35 Pacific Daylight Time

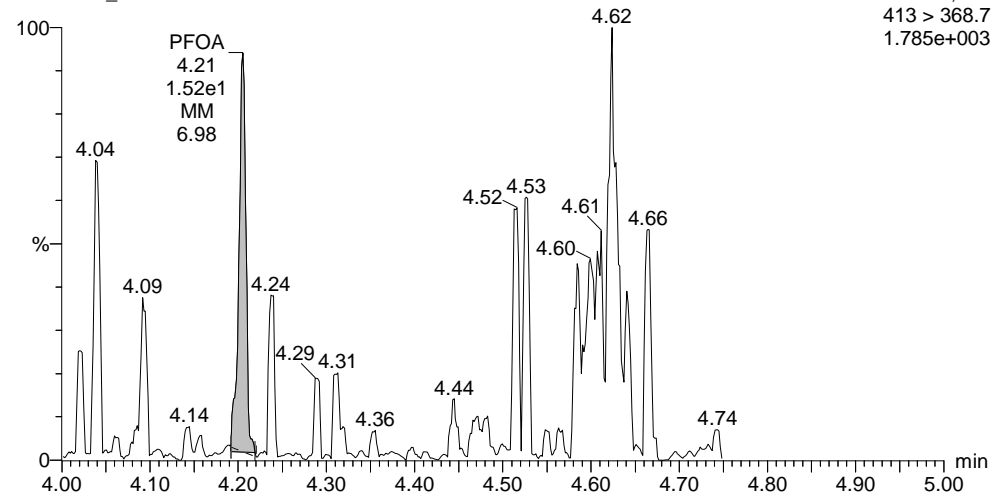
Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: 1700466-18 FRB-06-20170418 0.25, Description: FRB-06-20170418, Name: 170422G1\_8, Date: 22-Apr-2017, Time: 12:40:50, Instrument: , Lab: , User:

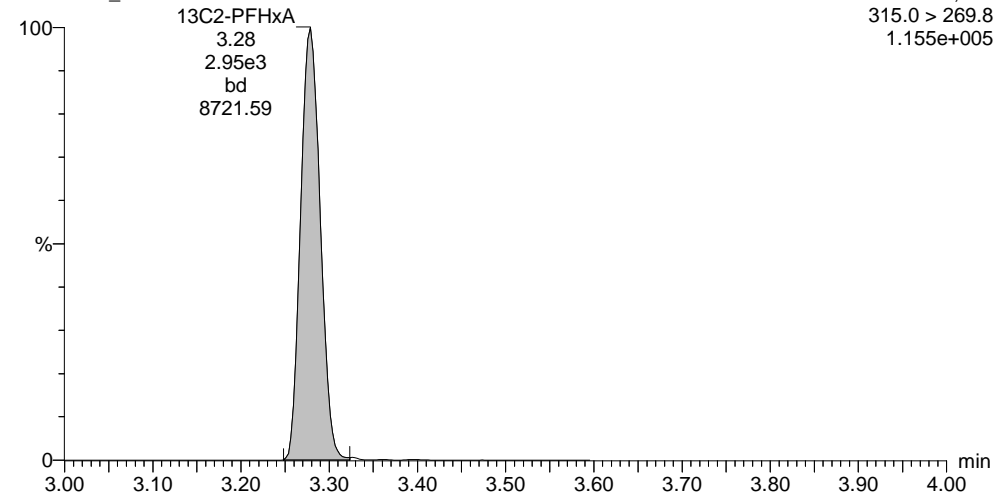
**PFOA**

170422G1\_8



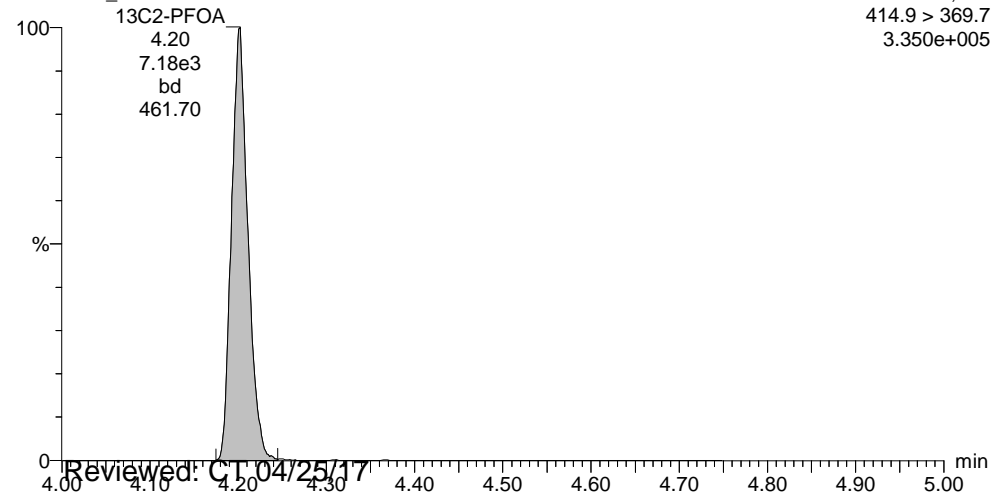
**13C2-PFHxA**

170422G1\_8



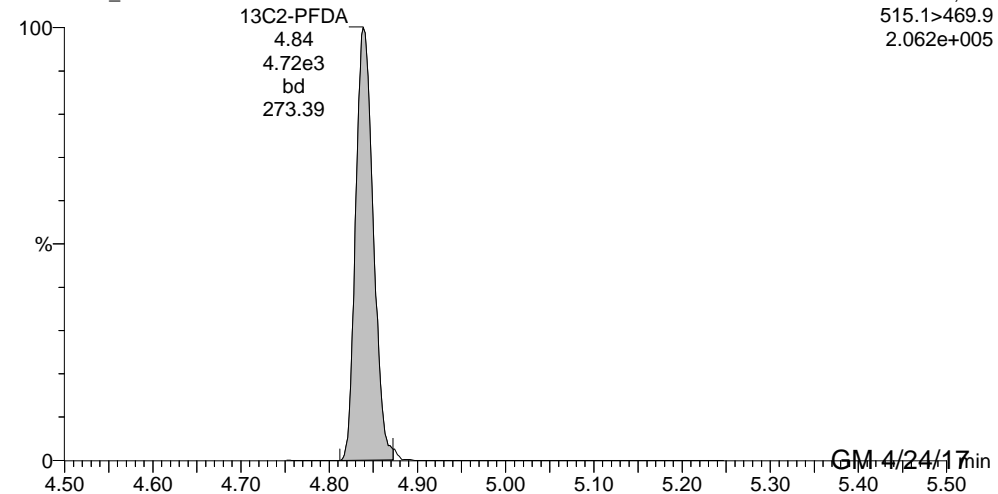
**13C2-PFOA**

170422G1\_8



**13C2-PFDA**

170422G1\_8



Reviewed: C:\04/25/17

GM 4/24/17

Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-38.qld

Last Altered: Monday, April 24, 2017 09:48:57 Pacific Daylight Time

Printed: Monday, April 24, 2017 09:49:16 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: 1700466-19 RW01-20170418 0.25, Description: RW01-20170418, Name: 170420G1\_38, Date: 21-Apr-2017, Time: 00:26:36

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1 PFBS	299 > 79.7		8.560e3		0.275			
2	2 PFHpA	363 > 318.9		6.338e3		0.275			
3	3 PFHxS	398.9 > 79.6		8.560e3		0.275			
4	4 PFOA	413 > 368.7	1.970e1	6.338e3		0.275	4.20	0.145	
5	5 PFOS	499 > 79.9		8.560e3		0.275			
6	6 PFNA	463 > 418.8		6.338e3		0.275			
7	7 13C2-PFHxA	315.0 > 269.8	2.534e3	6.338e3	0.449	0.275	3.27	32.4	89.1
8	8 13C2-PFDA	515.1 > 469.9	4.331e3	6.338e3	0.803	0.275	4.85	31.0	85.1
9	9 13C2-PFOA	414.9 > 369.7	6.338e3	6.338e3	1.000	0.275	4.21	36.4	100
10	10 13C4-PFOS	503.0 > 79.9	8.560e3	8.560e3	1.000	0.275	4.61	104	100



Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-38.qld

Last Altered: Monday, April 24, 2017 09:48:57 Pacific Daylight Time

Printed: Monday, April 24, 2017 09:49:16 Pacific Daylight Time

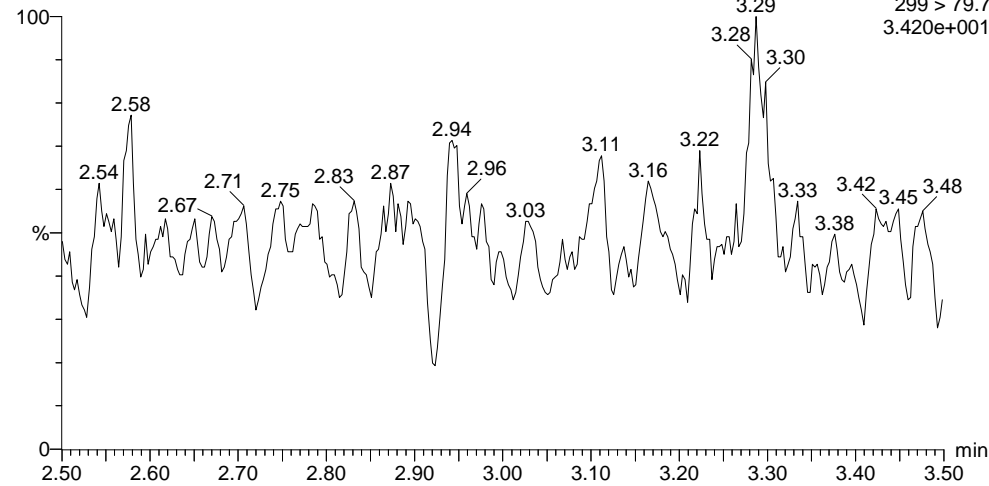
Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: 1700466-19 RW01-20170418 0.25, Description: RW01-20170418, Name: 170420G1\_38, Date: 21-Apr-2017, Time: 00:26:36, Instrument: , Lab: , User:

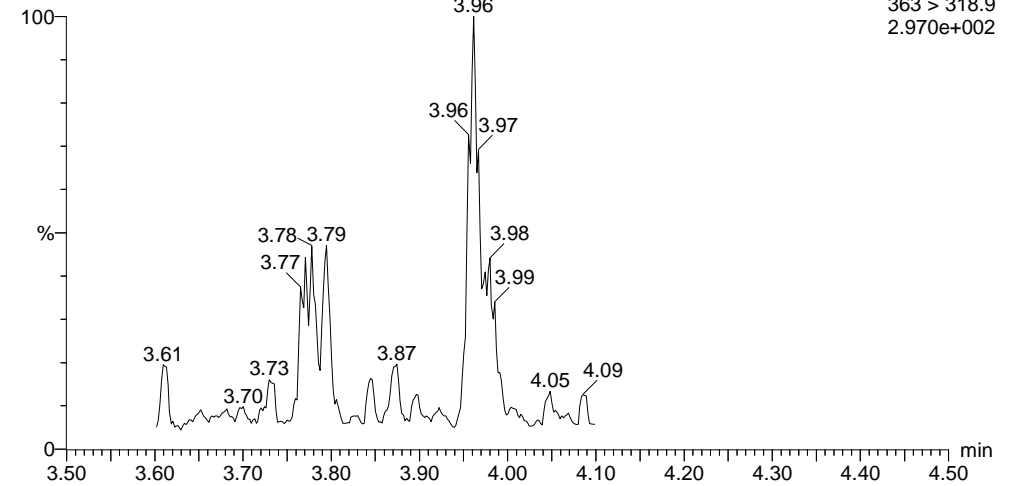
PFBS

170420G1\_38



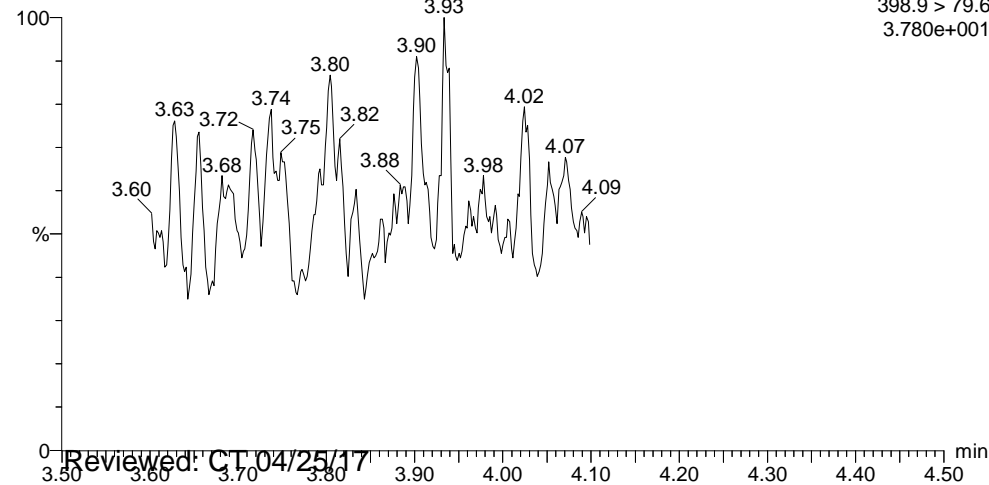
PFHpA

170420G1\_38



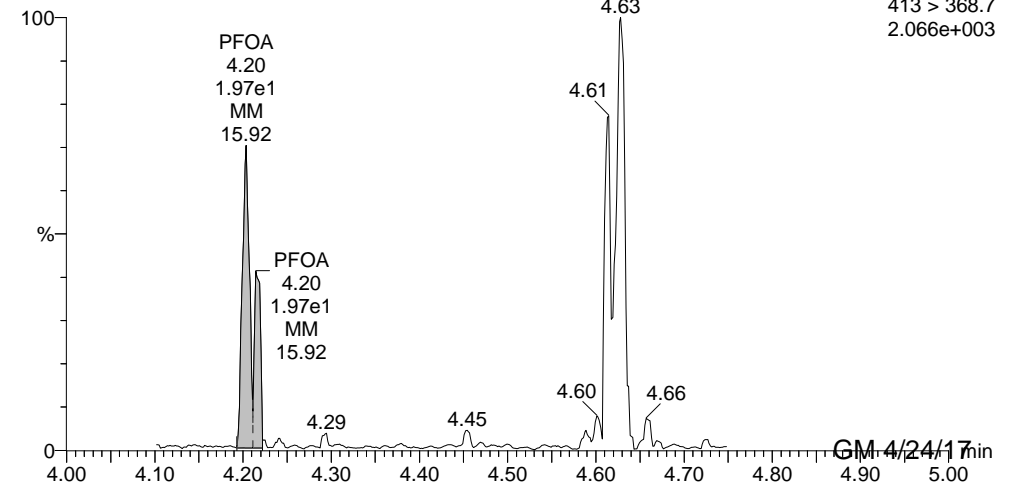
PFHxS

170420G1\_38



PFOA

170420G1\_38



Reviewed: CT 04/25/17

GM 4/24/17

Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-38.qld

Last Altered: Monday, April 24, 2017 09:48:57 Pacific Daylight Time

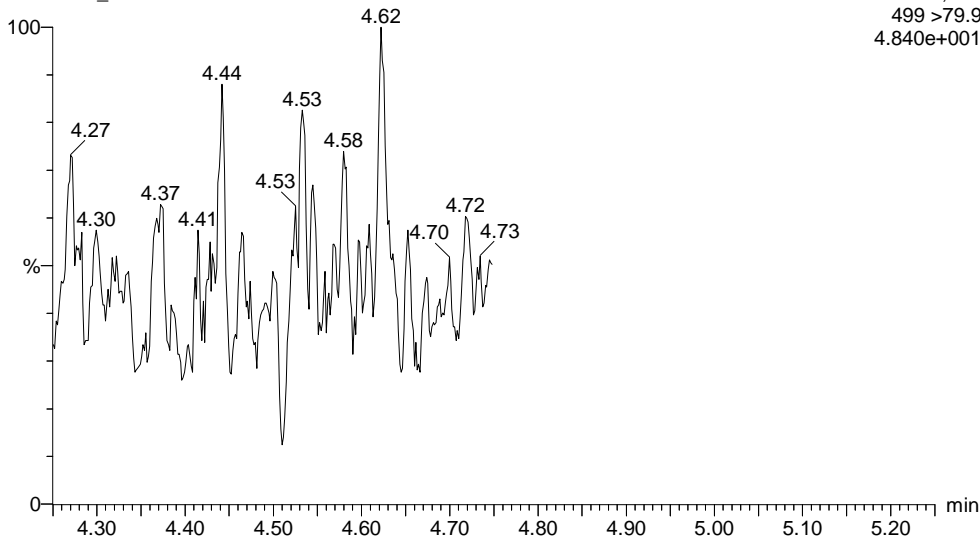
Printed: Monday, April 24, 2017 09:49:16 Pacific Daylight Time

ID: 1700466-19 RW01-20170418 0.25, Description: RW01-20170418, Name: 170420G1\_38, Date: 21-Apr-2017, Time: 00:26:36, Instrument: , Lab: , User:

**PFOS**

170420G1\_38

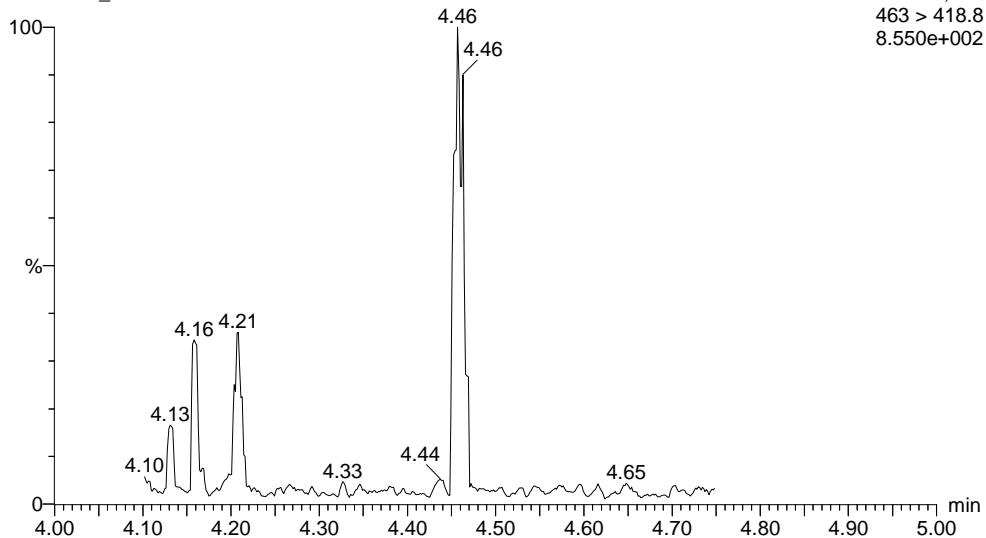
F4:MRM of 6 channels,ES-  
499 >79.9  
4.840e+001



**PFNA**

170420G1\_38

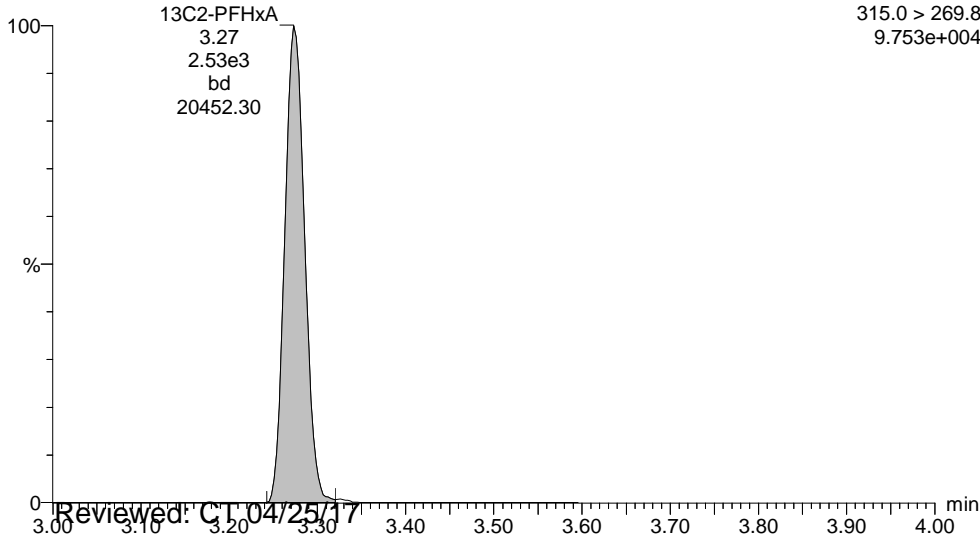
F4:MRM of 6 channels,ES-  
463 > 418.8  
8.550e+002



**13C2-PFHxA**

170420G1\_38

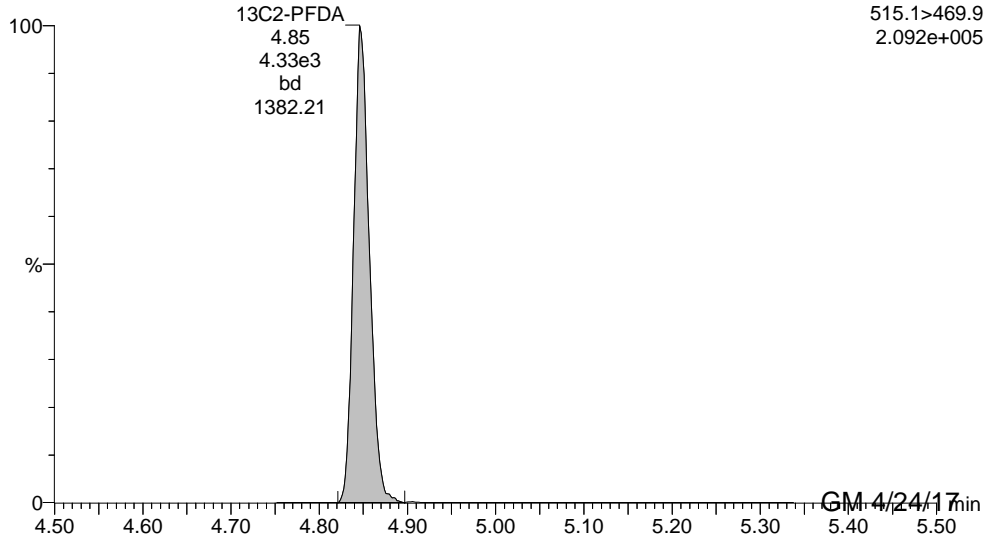
F2:MRM of 3 channels,ES-  
315.0 > 269.8  
9.753e+004



**13C2-PFDA**

170420G1\_38

F5:MRM of 7 channels,ES-  
515.1 >469.9  
2.092e+005



Reviewed: C.T. 04/25/17

GM 4/24/17

Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-38.qld

Last Altered: Monday, April 24, 2017 09:48:57 Pacific Daylight Time

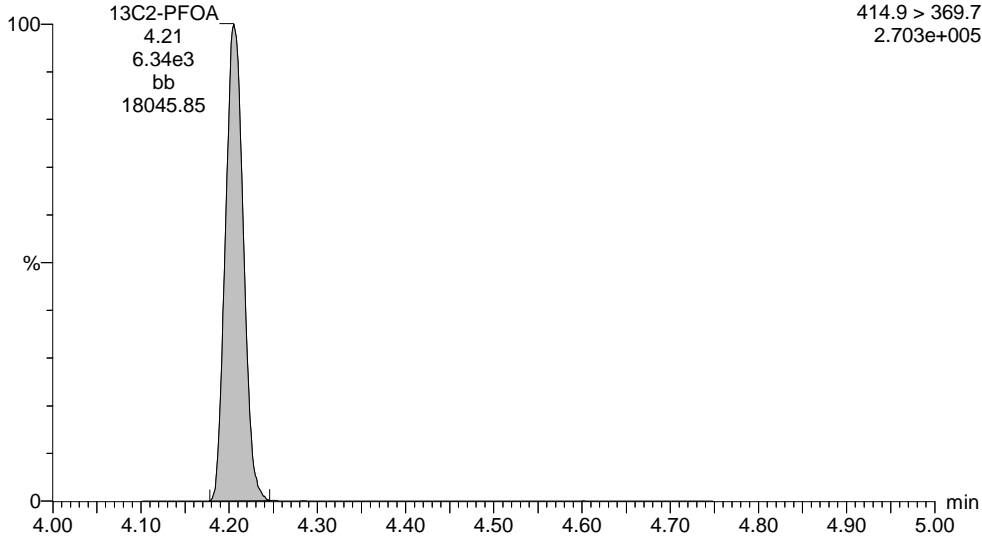
Printed: Monday, April 24, 2017 09:49:16 Pacific Daylight Time

ID: 1700466-19 RW01-20170418 0.25, Description: RW01-20170418, Name: 170420G1\_38, Date: 21-Apr-2017, Time: 00:26:36, Instrument: , Lab: , User:

**13C2-PFOA**

170420G1\_38

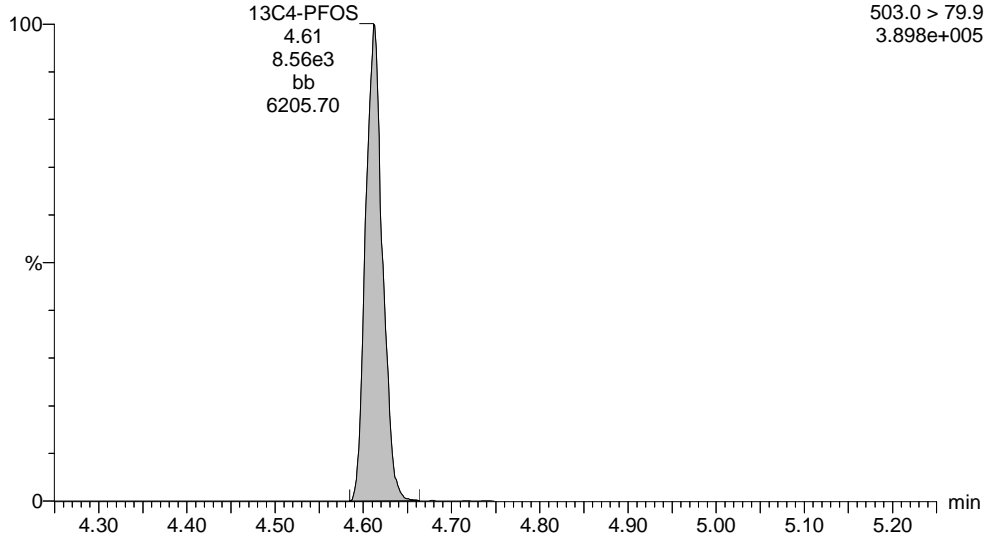
F4:MRM of 6 channels,ES-  
414.9 > 369.7  
2.703e+005



**13C4-PFOS**

170420G1\_38

F4:MRM of 6 channels,ES-  
503.0 > 79.9  
3.898e+005



Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-38.qld

Last Altered: Monday, April 24, 2017 09:48:57 Pacific Daylight Time

Printed: Monday, April 24, 2017 09:49:16 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: 1700466-19 RW01-20170418 0.25, Description: RW01-20170418, Name: 170420G1\_38, Date: 21-Apr-2017, Time: 00:26:36

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1 PFBS	299 > 79.7		8.560e3		0.275			
2	2 PFHpA	363 > 318.9		6.338e3		0.275			
3	3 PFHxS	398.9 > 79.6		8.560e3		0.275			
4	4 PFOA	413 > 368.7	1.970e1	6.338e3		0.275	4.20	0.145	
5	5 PFOS	499 > 79.9		8.560e3		0.275			
6	6 PFNA	463 > 418.8		6.338e3		0.275			
7	7 13C2-PFHxA	315.0 > 269.8	2.534e3	6.338e3	0.449	0.275	3.27	32.4	89.1
8	8 13C2-PFDA	515.1 > 469.9	4.331e3	6.338e3	0.803	0.275	4.85	31.0	85.1
9	9 13C2-PFOA	414.9 > 369.7	6.338e3	6.338e3	1.000	0.275	4.21	36.4	100
10	10 13C4-PFOS	503.0 > 79.9	8.560e3	8.560e3	1.000	0.275	4.61	104	100

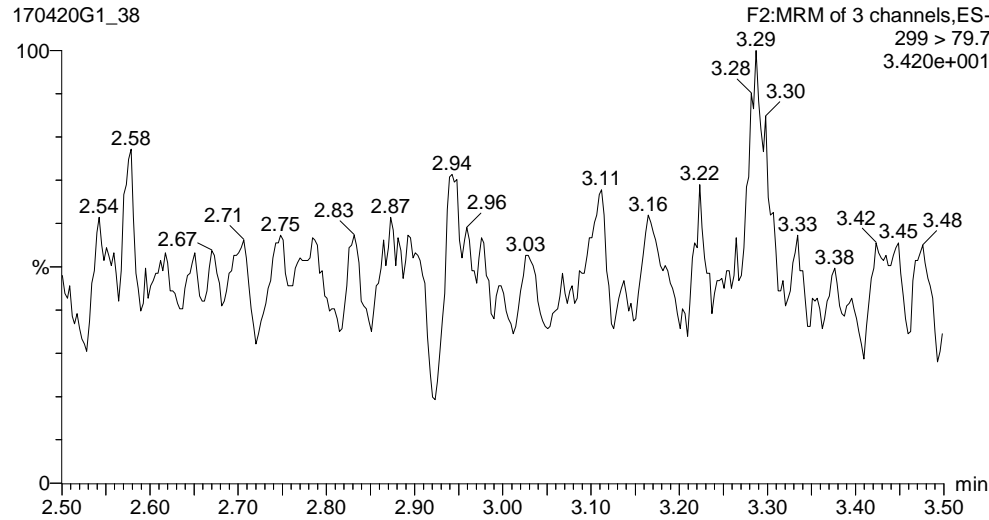
Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-38.qld

Last Altered: Monday, April 24, 2017 09:48:57 Pacific Daylight Time  
Printed: Monday, April 24, 2017 09:49:16 Pacific Daylight Time

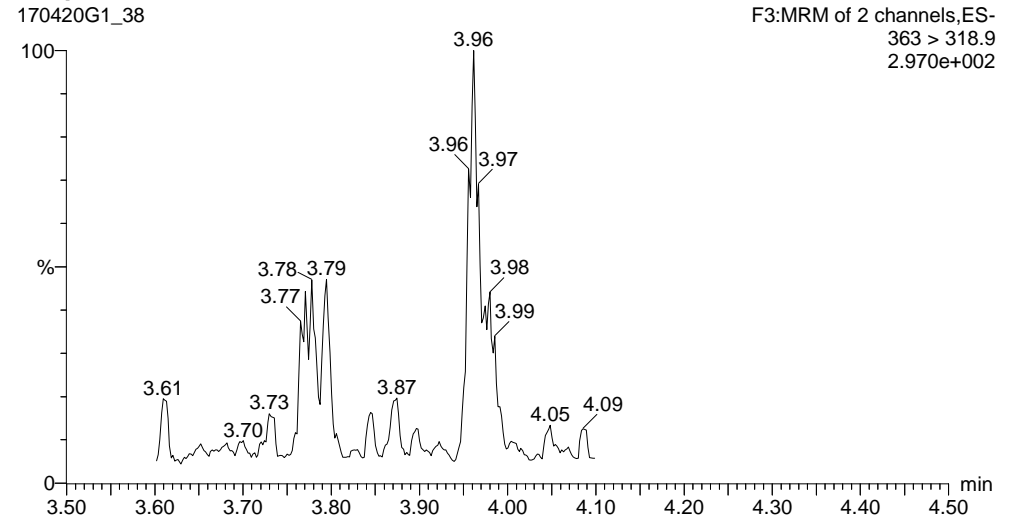
Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59  
Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: 1700466-19 RW01-20170418 0.25, Description: RW01-20170418, Name: 170420G1\_38, Date: 21-Apr-2017, Time: 00:26:36, Instrument: , Lab: , User:

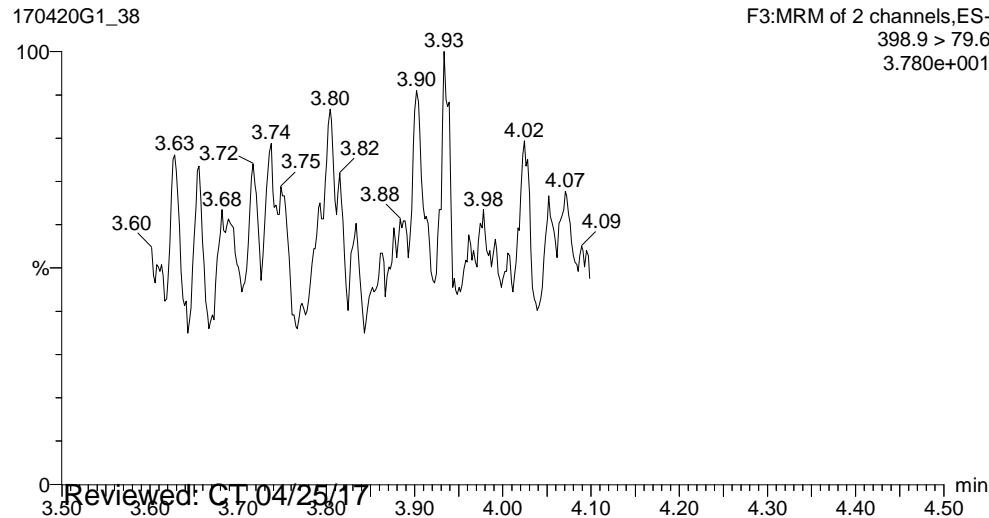
PFBS



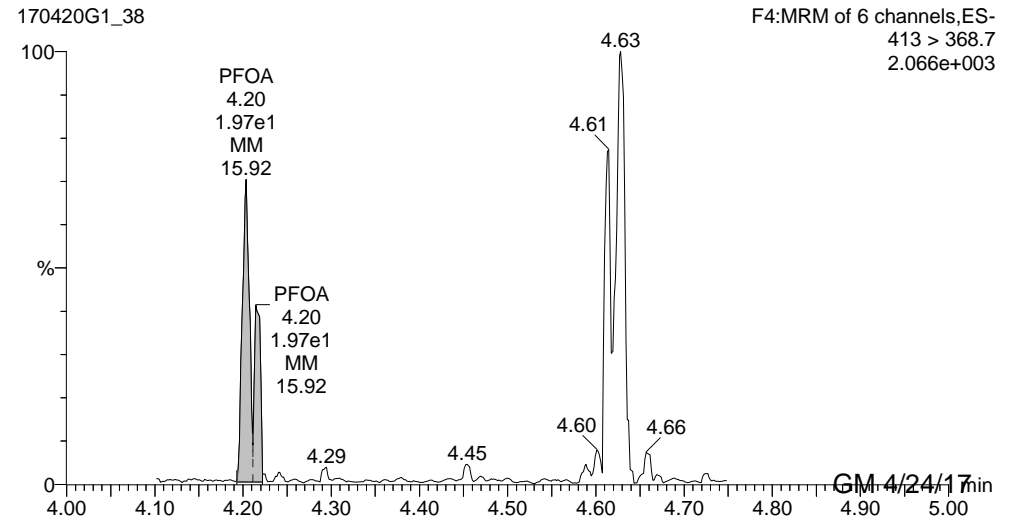
PFHpA



PFHxS



PFOA



Reviewed: CT 04/25/17

GM 4/24/17

Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-38.qld

Last Altered: Monday, April 24, 2017 09:48:57 Pacific Daylight Time

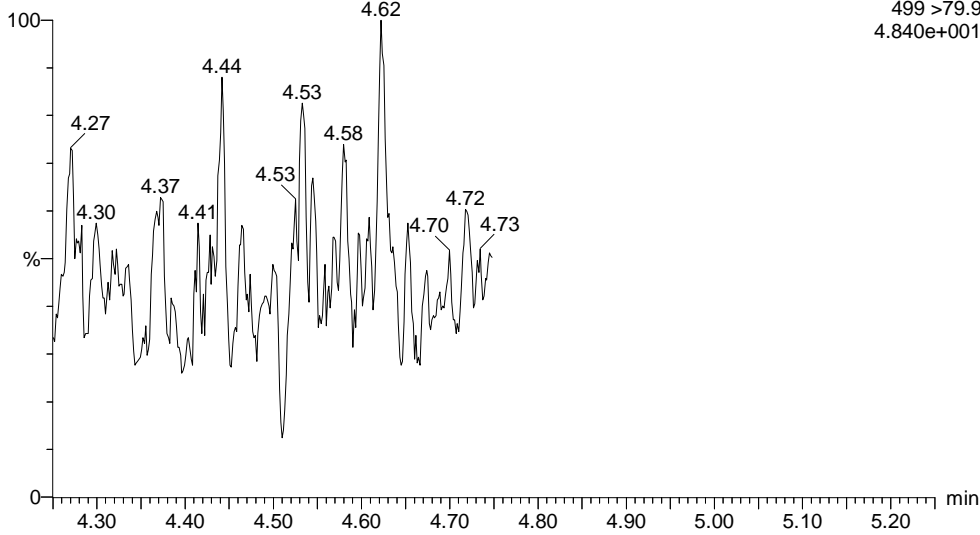
Printed: Monday, April 24, 2017 09:49:16 Pacific Daylight Time

ID: 1700466-19 RW01-20170418 0.25, Description: RW01-20170418, Name: 170420G1\_38, Date: 21-Apr-2017, Time: 00:26:36, Instrument: , Lab: , User:

**PFOS**

170420G1\_38

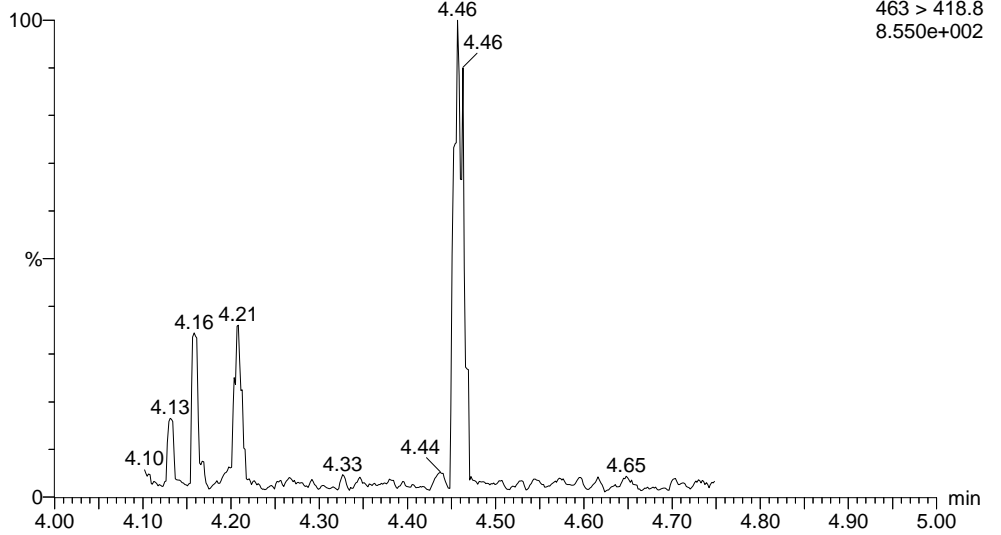
F4:MRM of 6 channels,ES-  
499 >79.9  
4.840e+001



**PFNA**

170420G1\_38

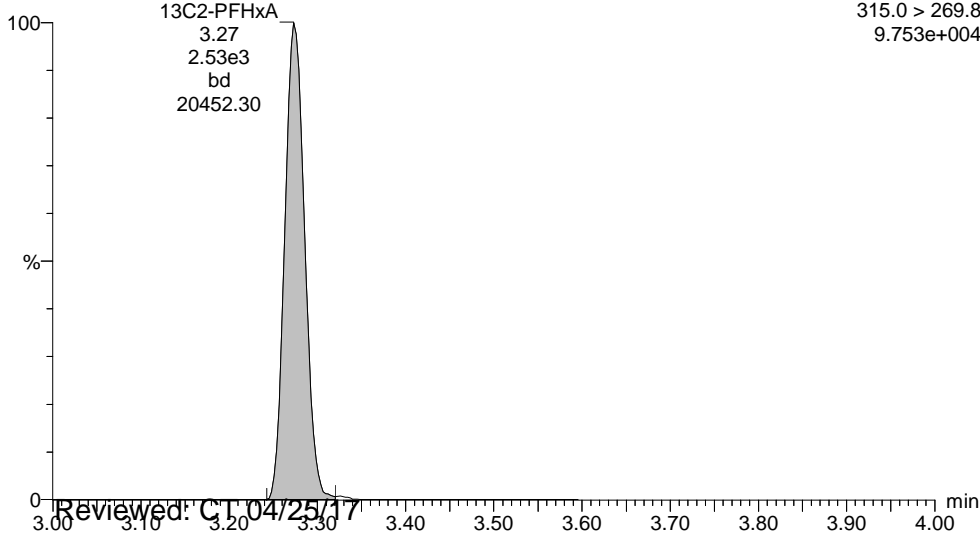
F4:MRM of 6 channels,ES-  
463 > 418.8  
8.550e+002



**13C2-PFHxA**

170420G1\_38

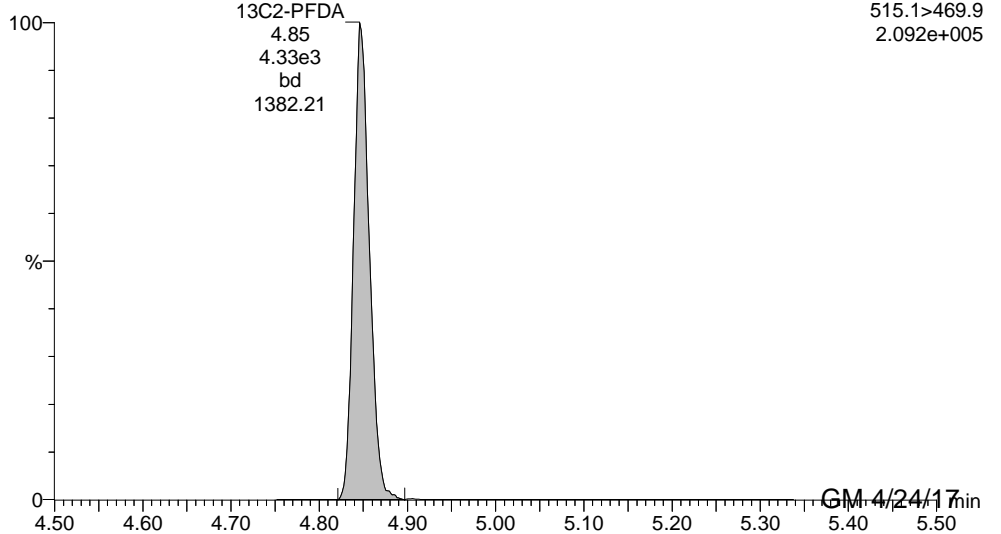
F2:MRM of 3 channels,ES-  
315.0 > 269.8  
9.753e+004



**13C2-PFDA**

170420G1\_38

F5:MRM of 7 channels,ES-  
515.1>469.9  
2.092e+005



Reviewed: C.T. 04/25/17

GM 4/24/17

Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-38.qld

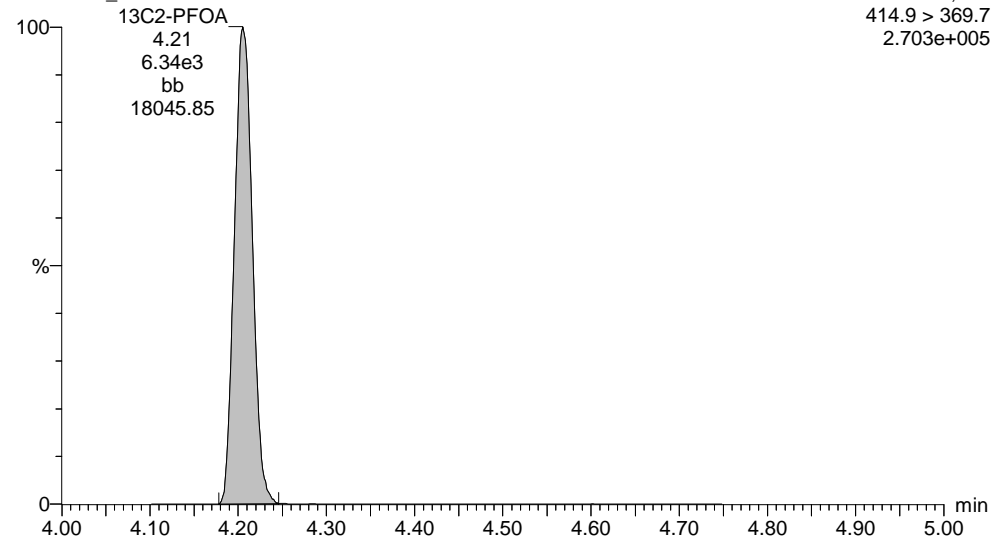
Last Altered: Monday, April 24, 2017 09:48:57 Pacific Daylight Time

Printed: Monday, April 24, 2017 09:49:16 Pacific Daylight Time

ID: 1700466-19 RW01-20170418 0.25, Description: RW01-20170418, Name: 170420G1\_38, Date: 21-Apr-2017, Time: 00:26:36, Instrument: , Lab: , User:

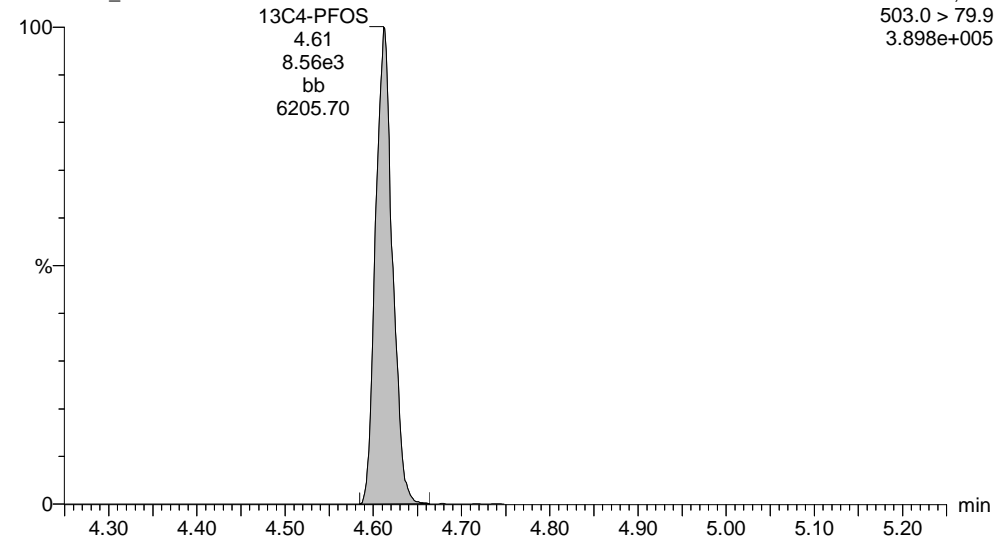
**13C2-PFOA**

170420G1\_38



**13C4-PFOS**

170420G1\_38



Dataset: U:\G1.PRO\Results\2017\170422G1\170422G1-09.qld

Last Altered: Monday, April 24, 2017 15:08:43 Pacific Daylight Time

Printed: Monday, April 24, 2017 15:09:17 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: 1700466-19 RW01-20170418 0.25, Description: RW01-20170418, Name: 170422G1\_9, Date: 22-Apr-2017, Time: 12:53:15

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	4 PFOA	413 > 368.7	4.208e1	6.520e3		0.275	4.20	0.301	
2	7 13C2-PFHxA	315.0 > 269.8	2.789e3	6.520e3	0.449	0.275	3.28	34.7	95.3
3	8 13C2-PFDA	515.1 > 469.9	4.330e3	6.520e3	0.803	0.275	4.84	30.1	82.7
4	9 13C2-PFOA	414.9 > 369.7	6.520e3	6.520e3	1.000	0.275	4.20	36.4	100



Dataset: U:\G1.PRO\Results\2017\170422G1\170422G1-09.qld

Last Altered: Monday, April 24, 2017 15:08:43 Pacific Daylight Time

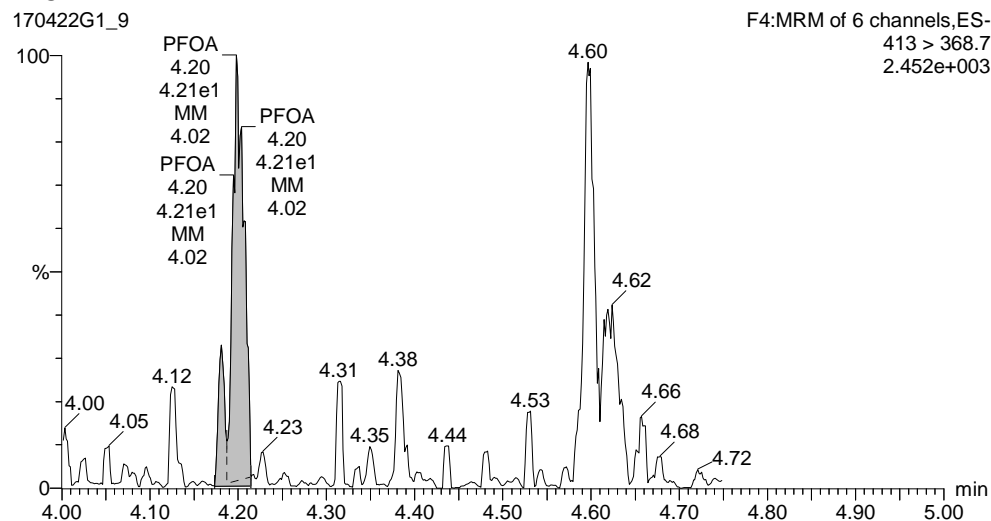
Printed: Monday, April 24, 2017 15:09:17 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

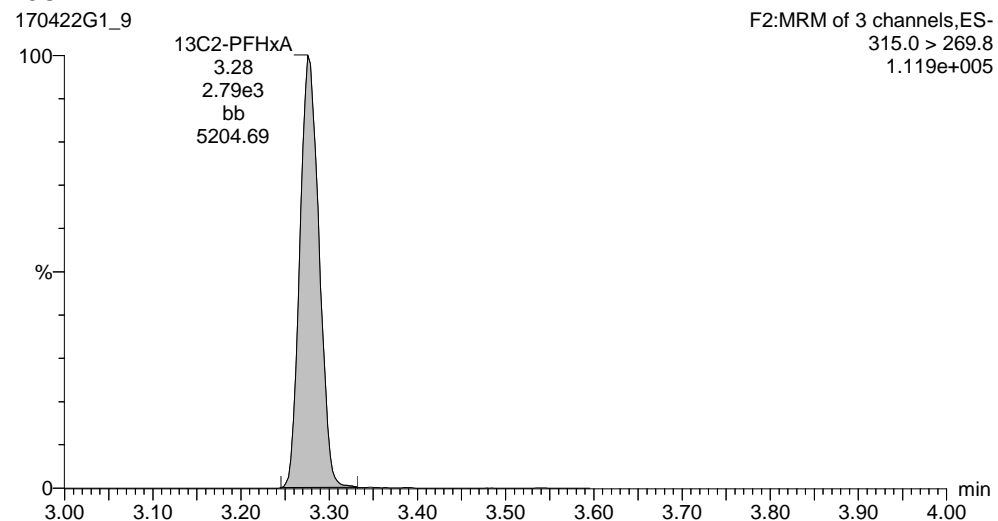
Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: 1700466-19 RW01-20170418 0.25, Description: RW01-20170418, Name: 170422G1\_9, Date: 22-Apr-2017, Time: 12:53:15, Instrument: , Lab: , User:

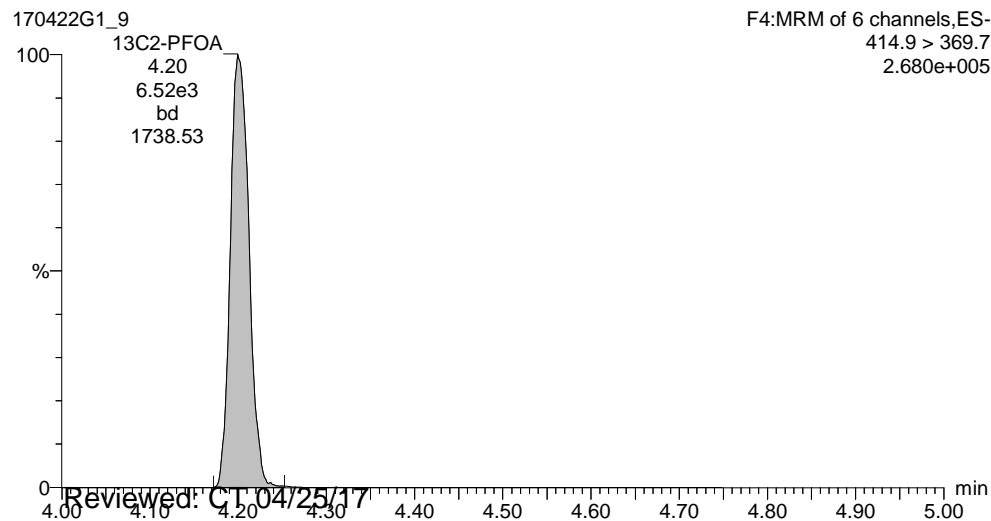
**PFOA**



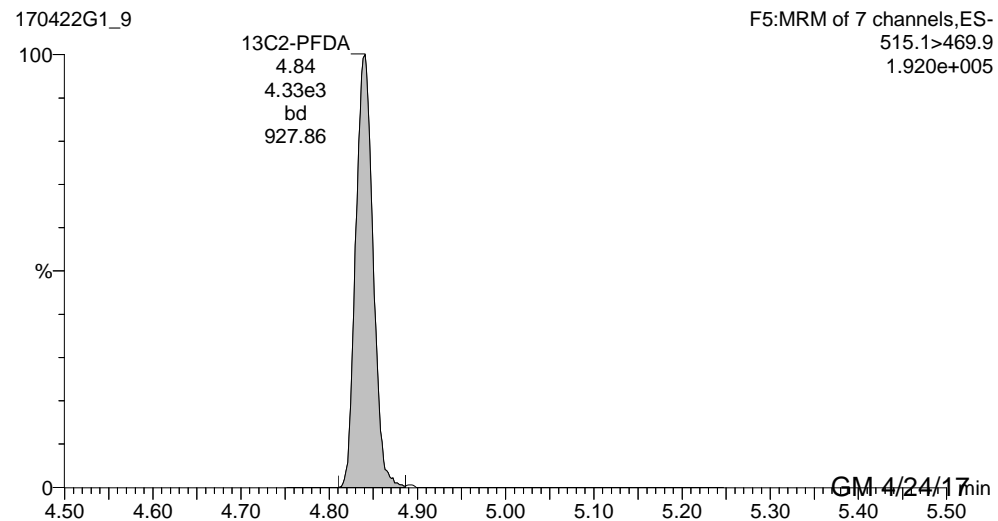
**13C2-PFHxA**



**13C2-PFOA**



**13C2-PFDA**



Reviewed: C:\04/25/17

GM 4/24/17

Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-39.qld

Last Altered: Monday, April 24, 2017 09:51:12 Pacific Daylight Time

Printed: Monday, April 24, 2017 09:51:46 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: 1700466-20 FRB-01-20170418 0.25, Description: FRB-01-20170418, Name: 170420G1\_39, Date: 21-Apr-2017, Time: 00:38:59

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1 PFBS	299 > 79.7	2.966e2	8.430e3		0.277	2.90	3.96	
2	2 PFHpA	363 > 318.9	3.924e2	6.567e3		0.277	3.78	2.40	
3	3 PFHxS	398.9 > 79.6	6.192e2	8.430e3		0.277	3.91	7.18	
4	4 PFOA	413 > 368.7	1.147e3	6.567e3		0.277	4.21	8.09	
5	5 PFOS	499 > 79.9	2.946e2	8.430e3		0.277	4.49	10.4	
6	6 PFNA	463 > 418.8	2.478e2	6.567e3		0.277	4.55	0.998	
7	7 13C2-PFHxA	315.0 > 269.8	2.853e3	6.567e3	0.449	0.277	3.27	34.9	96.9
8	8 13C2-PFDA	515.1 > 469.9	4.258e3	6.567e3	0.803	0.277	4.85	29.1	80.8
9	9 13C2-PFOA	414.9 > 369.7	6.567e3	6.567e3	1.000	0.277	4.21	36.1	100
10	10 13C4-PFOS	503.0 > 79.9	8.430e3	8.430e3	1.000	0.277	4.61	103	100

Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-39.qld

Last Altered: Monday, April 24, 2017 09:51:12 Pacific Daylight Time

Printed: Monday, April 24, 2017 09:51:46 Pacific Daylight Time

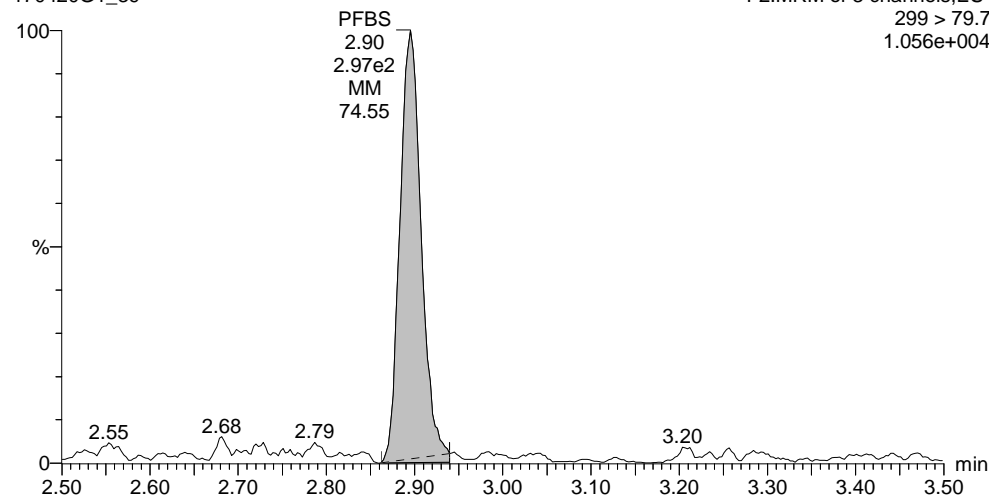
Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: 1700466-20 FRB-01-20170418 0.25, Description: FRB-01-20170418, Name: 170420G1\_39, Date: 21-Apr-2017, Time: 00:38:59, Instrument: , Lab: , User:

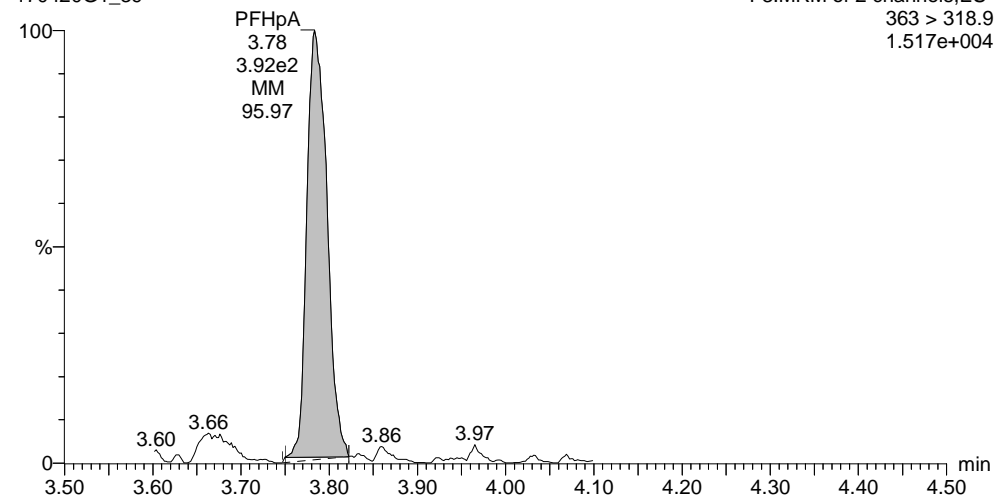
**PFBS**

170420G1\_39



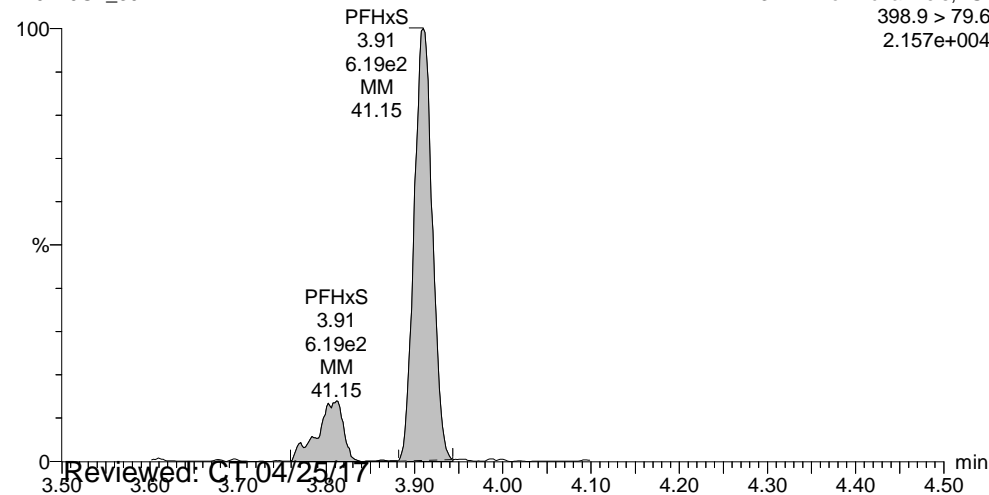
**PFHpA**

170420G1\_39



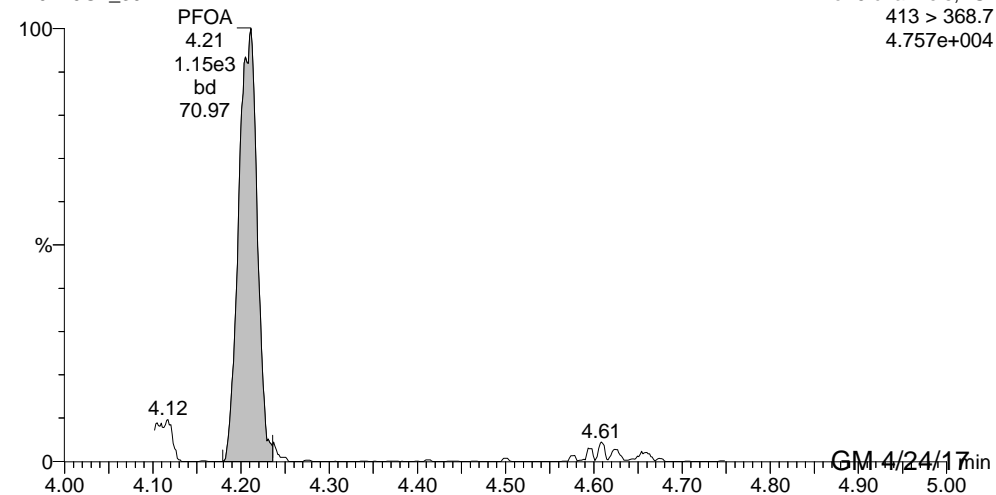
**PFHxS**

170420G1\_39



**PFOA**

170420G1\_39



Reviewed: C1 04/25/17

Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-39.qld

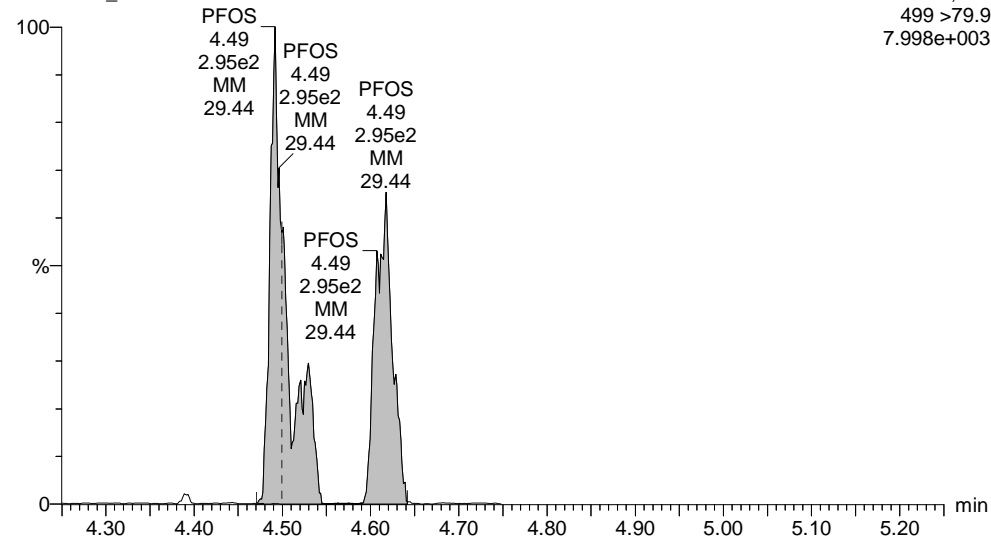
Last Altered: Monday, April 24, 2017 09:51:12 Pacific Daylight Time

Printed: Monday, April 24, 2017 09:51:46 Pacific Daylight Time

ID: 1700466-20 FRB-01-20170418 0.25, Description: FRB-01-20170418, Name: 170420G1\_39, Date: 21-Apr-2017, Time: 00:38:59, Instrument: , Lab: , User:

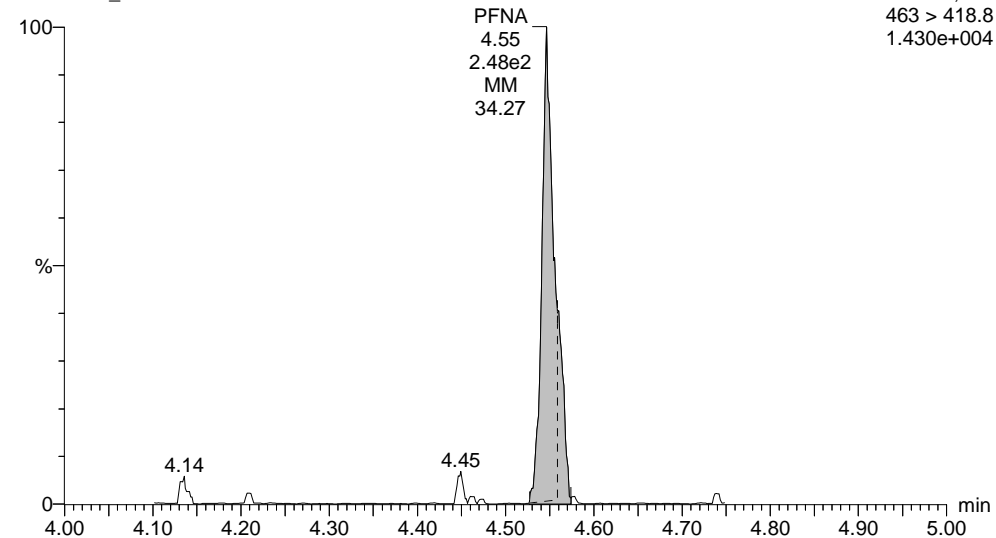
**PFOS**

170420G1\_39



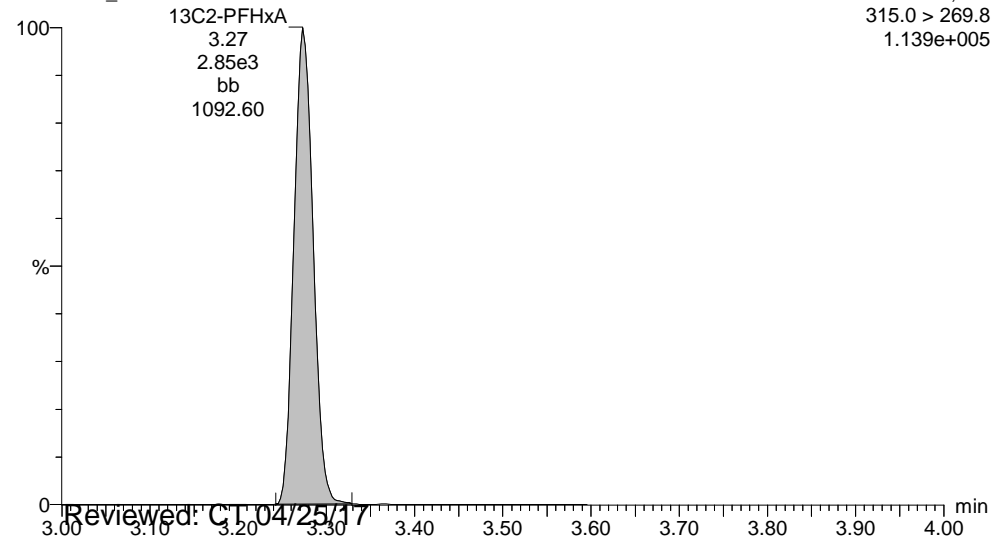
**PFNA**

170420G1\_39



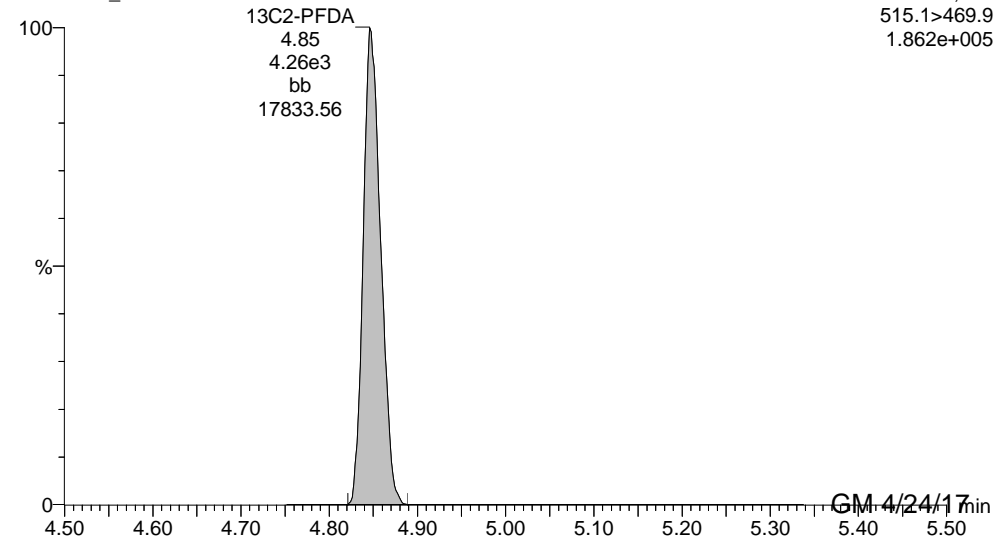
**13C2-PFHxA**

170420G1\_39



**13C2-PFDA**

170420G1\_39



Reviewed: C:\04/25/17

GM 4/24/17

Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-39.qld

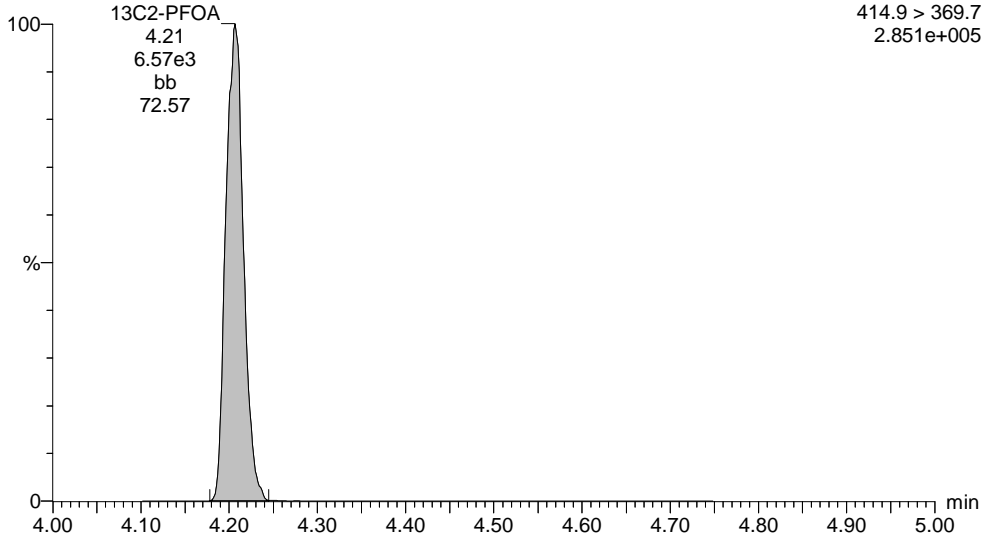
Last Altered: Monday, April 24, 2017 09:51:12 Pacific Daylight Time

Printed: Monday, April 24, 2017 09:51:46 Pacific Daylight Time

ID: 1700466-20 FRB-01-20170418 0.25, Description: FRB-01-20170418, Name: 170420G1\_39, Date: 21-Apr-2017, Time: 00:38:59, Instrument: , Lab: , User:

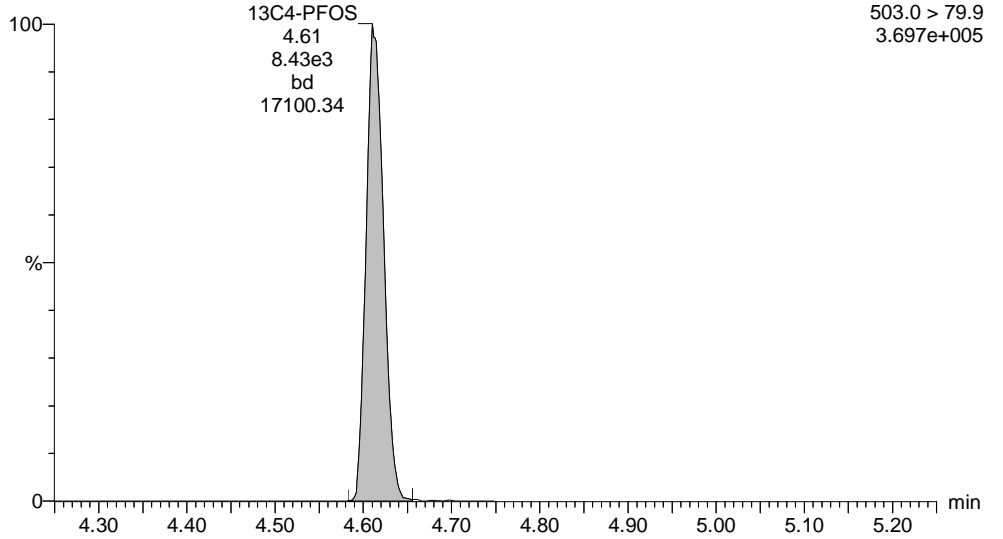
**13C2-PFOA**

170420G1\_39



**13C4-PFOS**

170420G1\_39



Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-39.qld

Last Altered: Monday, April 24, 2017 09:51:12 Pacific Daylight Time

Printed: Monday, April 24, 2017 09:51:46 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: 1700466-20 FRB-01-20170418 0.25, Description: FRB-01-20170418, Name: 170420G1\_39, Date: 21-Apr-2017, Time: 00:38:59

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1 PFBS	299 > 79.7	2.966e2	8.430e3		0.277	2.90	3.96	
2	2 PFHpA	363 > 318.9	3.924e2	6.567e3		0.277	3.78	2.40	
3	3 PFHxS	398.9 > 79.6	6.192e2	8.430e3		0.277	3.91	7.18	
4	4 PFOA	413 > 368.7	1.147e3	6.567e3		0.277	4.21	8.09	
5	5 PFOS	499 > 79.9	2.946e2	8.430e3		0.277	4.49	10.4	
6	6 PFNA	463 > 418.8	2.478e2	6.567e3		0.277	4.55	0.998	
7	7 13C2-PFHxA	315.0 > 269.8	2.853e3	6.567e3	0.449	0.277	3.27	34.9	96.9
8	8 13C2-PFDA	515.1 > 469.9	4.258e3	6.567e3	0.803	0.277	4.85	29.1	80.8
9	9 13C2-PFOA	414.9 > 369.7	6.567e3	6.567e3	1.000	0.277	4.21	36.1	100
10	10 13C4-PFOS	503.0 > 79.9	8.430e3	8.430e3	1.000	0.277	4.61	103	100

Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-39.qld

Last Altered: Monday, April 24, 2017 09:51:12 Pacific Daylight Time

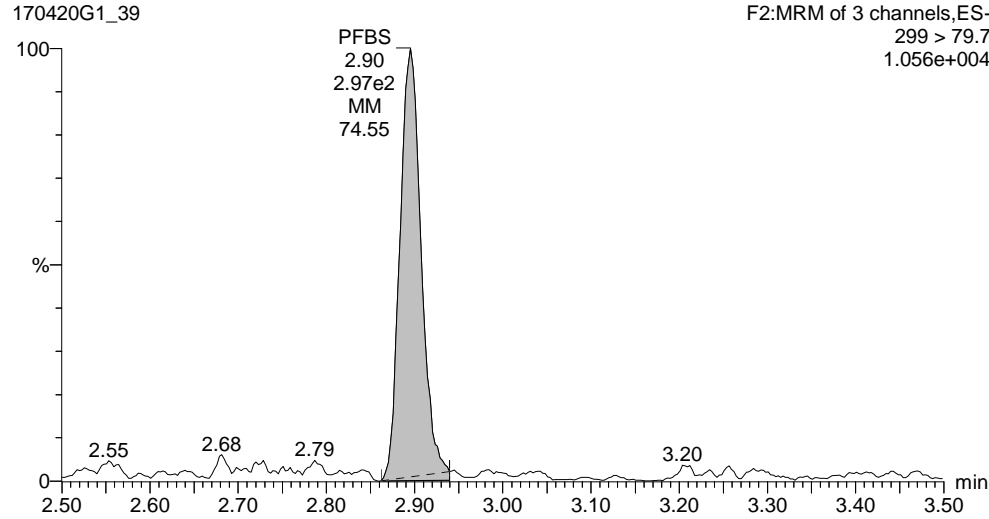
Printed: Monday, April 24, 2017 09:51:46 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

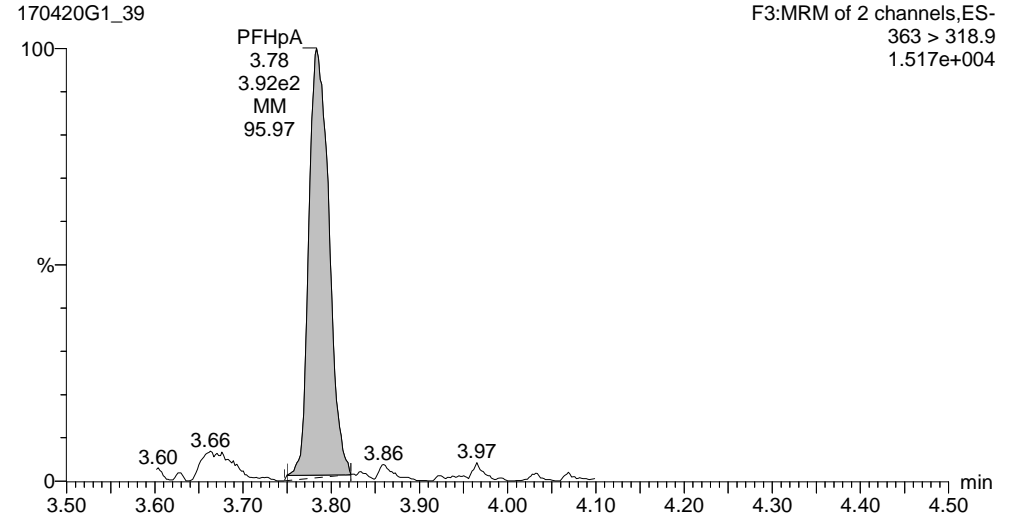
Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: 1700466-20 FRB-01-20170418 0.25, Description: FRB-01-20170418, Name: 170420G1\_39, Date: 21-Apr-2017, Time: 00:38:59, Instrument: , Lab: , User:

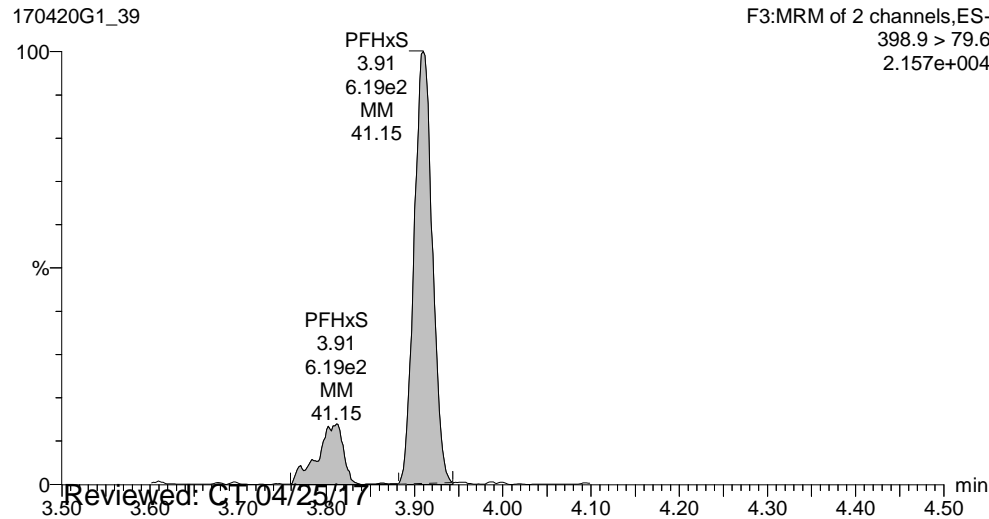
**PFBS**



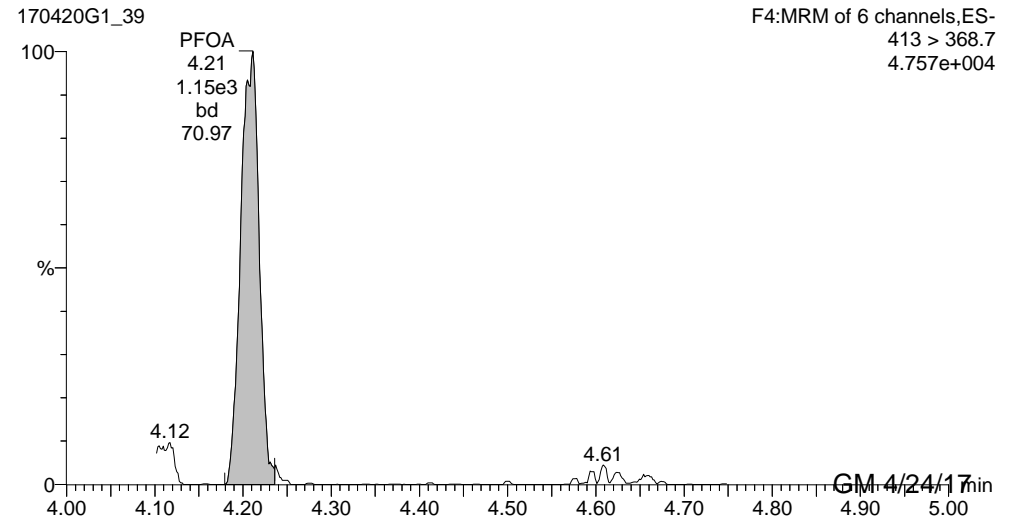
**PFHpA**



**PFHxS**



**PFOA**



Reviewed: C1 04/25/17

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Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-39.qld

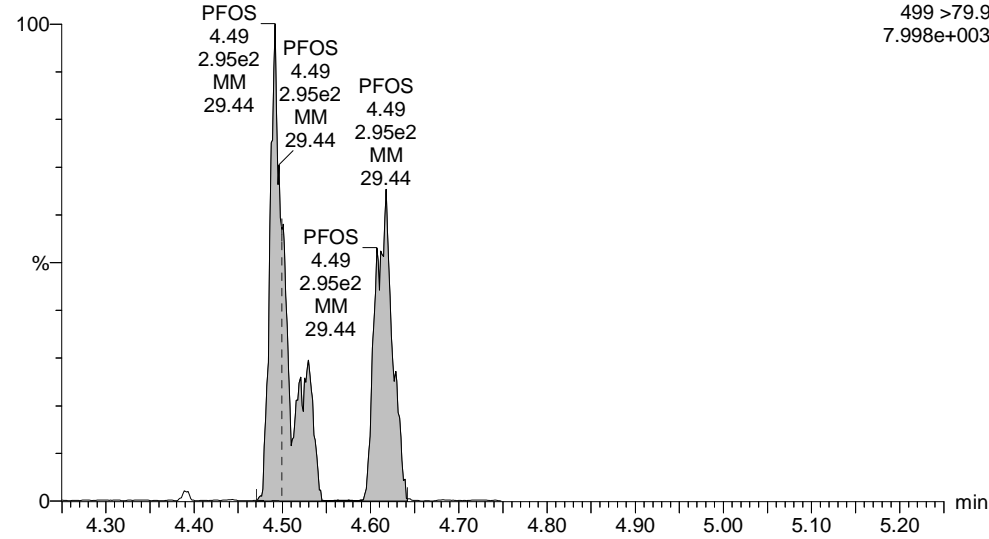
Last Altered: Monday, April 24, 2017 09:51:12 Pacific Daylight Time

Printed: Monday, April 24, 2017 09:51:46 Pacific Daylight Time

ID: 1700466-20 FRB-01-20170418 0.25, Description: FRB-01-20170418, Name: 170420G1\_39, Date: 21-Apr-2017, Time: 00:38:59, Instrument: , Lab: , User:

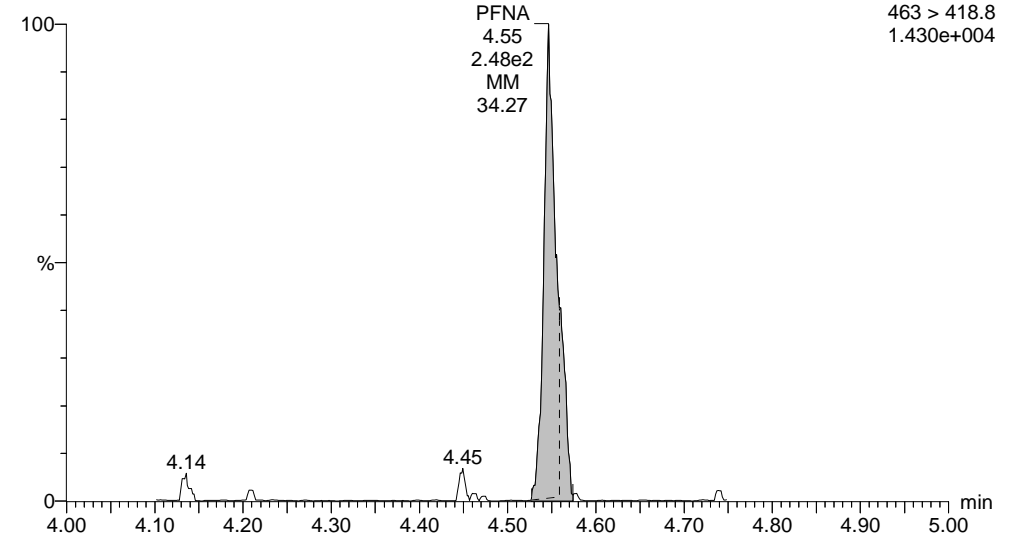
**PFOS**

170420G1\_39



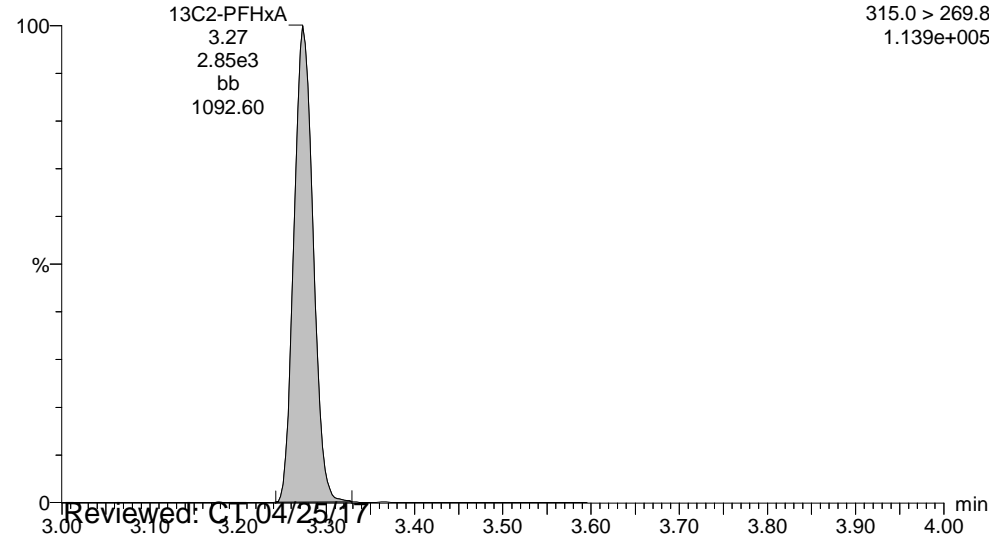
**PFNA**

170420G1\_39



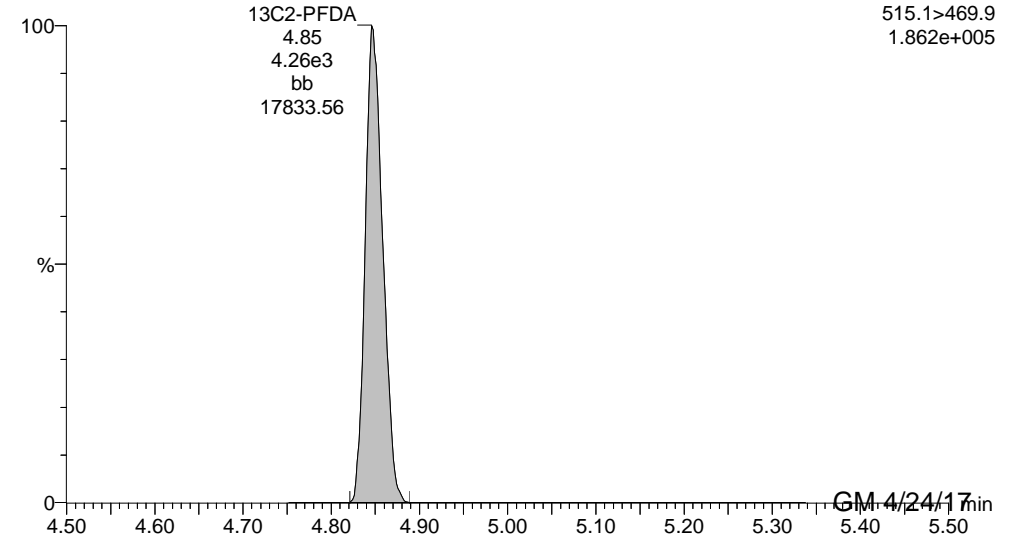
**13C2-PFHxA**

170420G1\_39



**13C2-PFDA**

170420G1\_39



Reviewed: C:\04/25/17

GM 4/24/17



Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-39.qld

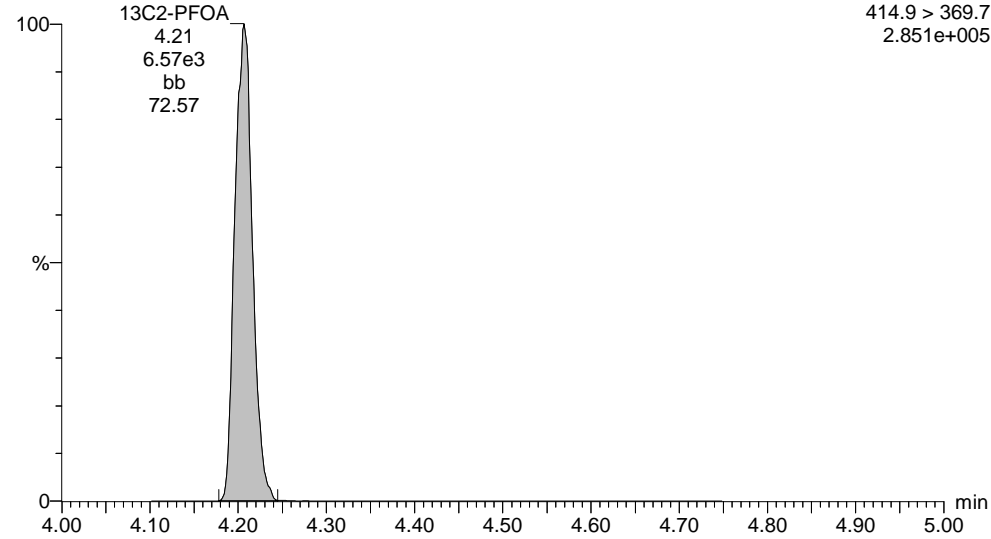
Last Altered: Monday, April 24, 2017 09:51:12 Pacific Daylight Time

Printed: Monday, April 24, 2017 09:51:46 Pacific Daylight Time

ID: 1700466-20 FRB-01-20170418 0.25, Description: FRB-01-20170418, Name: 170420G1\_39, Date: 21-Apr-2017, Time: 00:38:59, Instrument: , Lab: , User:

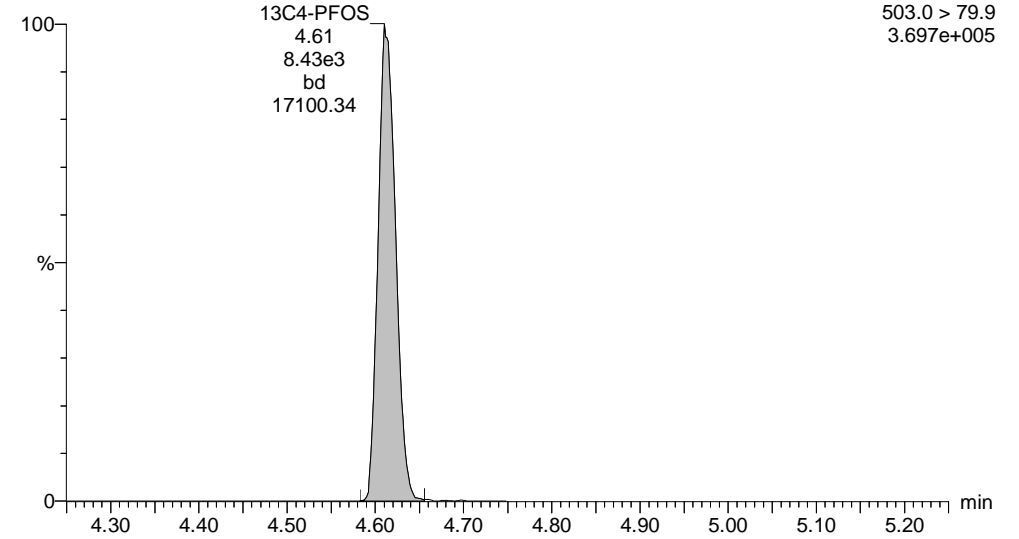
**13C2-PFOA**

170420G1\_39



**13C4-PFOS**

170420G1\_39



Dataset: U:\G1.PRO\Results\2017\170422G1\170422G1-10.qld

Last Altered: Monday, April 24, 2017 15:10:10 Pacific Daylight Time

Printed: Monday, April 24, 2017 15:11:05 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: 1700466-20 FRB-01-20170418 0.25, Description: FRB-01-20170418, Name: 170422G1\_10, Date: 22-Apr-2017, Time: 13:05:41

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	4 PFOA	413 > 368.7	1.343e3	6.774e3		0.277	4.20	9.19	
2	7 13C2-PFHxA	315.0 > 269.8	2.911e3	6.774e3	0.449	0.277	3.28	34.5	95.8
3	8 13C2-PFDA	515.1>469.9	4.760e3	6.774e3	0.803	0.277	4.84	31.6	87.5
4	9 13C2-PFOA	414.9 > 369.7	6.774e3	6.774e3	1.000	0.277	4.20	36.1	100

Dataset: U:\G1.PRO\Results\2017\170422G1\170422G1-10.qld

Last Altered: Monday, April 24, 2017 15:10:10 Pacific Daylight Time

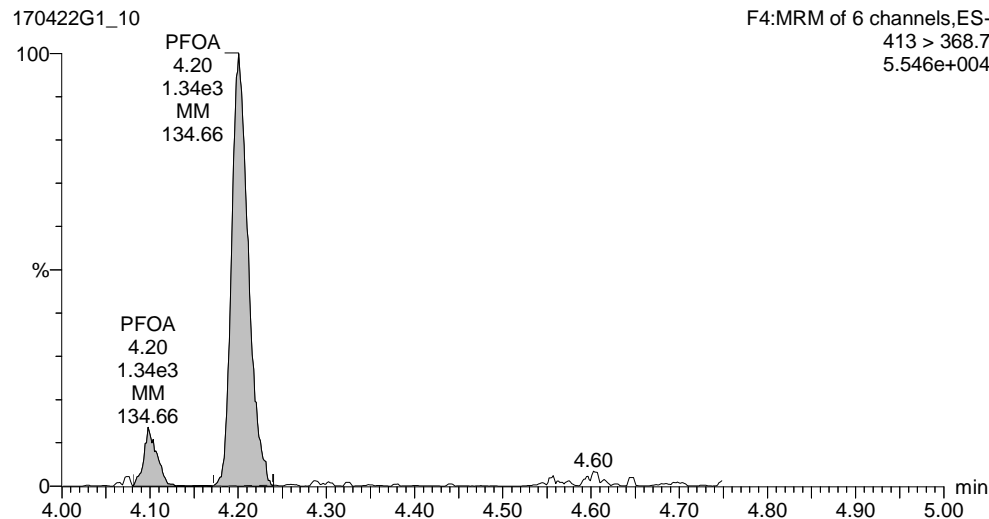
Printed: Monday, April 24, 2017 15:11:05 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

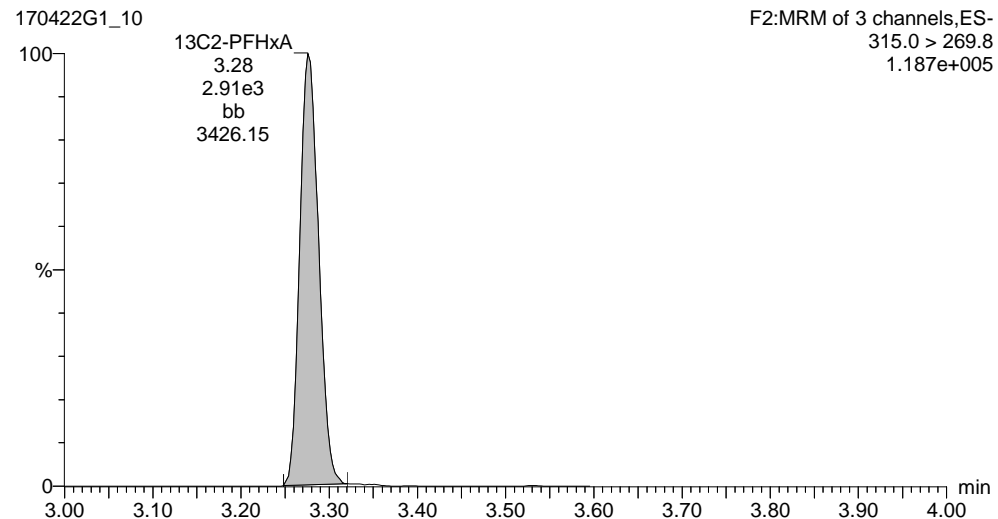
Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: 1700466-20 FRB-01-20170418 0.25, Description: FRB-01-20170418, Name: 170422G1\_10, Date: 22-Apr-2017, Time: 13:05:41, Instrument: , Lab: , User:

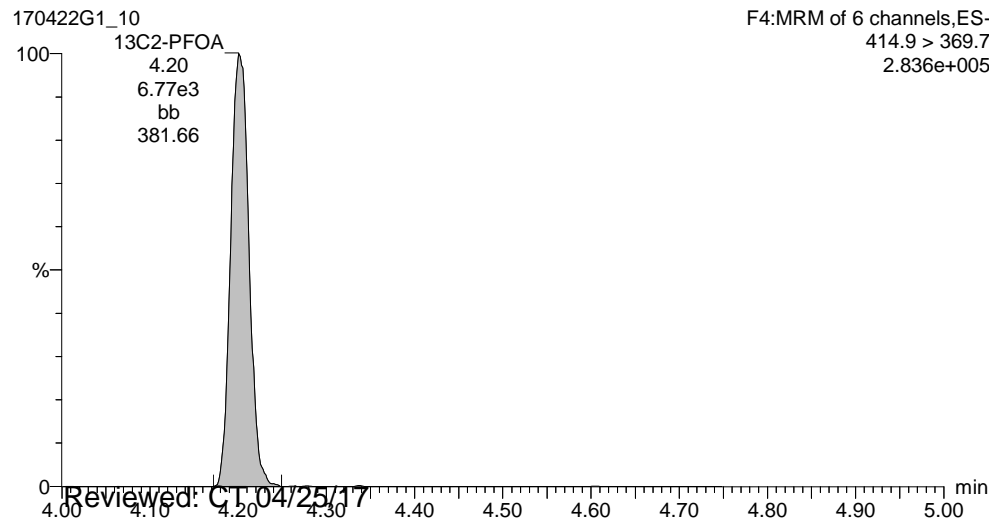
**PFOA**



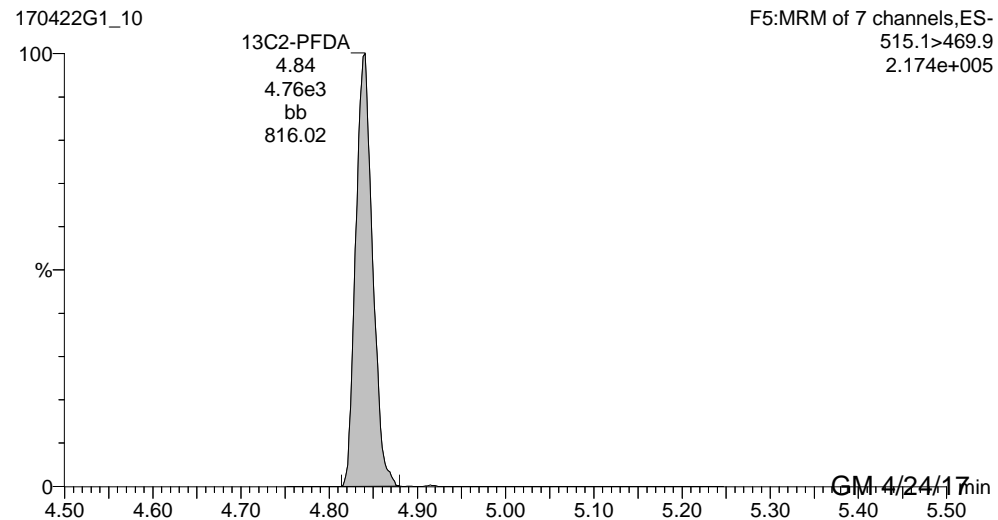
**13C2-PFHxA**



**13C2-PFOA**



**13C2-PFDA**



Reviewed: C:\04/25/17

GM 4/24/17

## **CONTINUING CALIBRATION**

Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-41.qld

Last Altered: Friday, April 21, 2017 12:45:08 Pacific Daylight Time  
Printed: Tuesday, April 25, 2017 13:52:15 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59  
Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

Name: 170420G1\_41, Date: 21-Apr-2017, Time: 01:03:47, ID: ST170420G1-11 PFC CS3 17D2013, Description: PFC CS3 17D2013

#	Name	Trace	Response	IS Resp	RRF	Wt/Vol	RT	Conc.	%Rec
1	1 PFBS	299 > 79.7	6.75e3	1.24e4		1.000	2.90	17.7	100.0
2	2 PFHpA	363 > 318.9	1.57e4	1.02e4		1.000	3.79	17.6	88.0
3	3 PFHxS	398.9 > 79.6	8.25e3	1.24e4		1.000	3.91	19.0	104.5
4	4 PFOA	413 > 368.7	1.39e4	1.02e4		1.000	4.21	18.0	89.9
5	5 PFOS	499 > 79.9	2.59e3	1.24e4		1.000	4.61	18.2	97.9
6	6 PFNA	463 > 418.8	2.28e4	1.02e4		1.000	4.55	16.9	84.5
7	7 13C2-PFHxA	315.0 > 269.8	4.57e3	1.02e4	0.449	1.000	3.27	10.0	100.2
8	8 13C2-PFDA	515.1 > 469.9	6.63e3	1.02e4	0.803	1.000	4.85	8.13	81.3
9	9 13C2-PFOA	414.9 > 369.7	1.02e4	1.02e4	1.000	1.000	4.21	10.0	100.0
10	10 13C4-PFOS	503.0 > 79.9	1.24e4	1.24e4	1.000	1.000	4.62	28.7	100.0

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AC  
4/25/17

Dataset: Untitled

Last Altered: Tuesday, April 25, 2017 13:55:37 Pacific Daylight Time  
Printed: Tuesday, April 25, 2017 13:56:13 Pacific Daylight Time

Method: U:\G1.PRO\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59  
Calibration: U:\G1.PRO\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

Compound name: PFBS

	Name	ID	Acq.Date	Acq.Time
1	170420G1_1	IPA	20-Apr-17	16:46:55
2	170420G1_2	ST170420G1-1 PFC CS-3 17D2007	20-Apr-17	16:59:38
3	170420G1_3	ST170420G1-2 PFC CS-2 17D2008	20-Apr-17	17:12:23
4	170420G1_4	ST170420G1-3 PFC CS-1 17D2009	20-Apr-17	17:24:44
5	170420G1_5	ST170420G1-4 PFC CS0 17D2010	20-Apr-17	17:37:07
6	170420G1_6	ST170420G1-5 PFC CS1 17D2011	20-Apr-17	17:49:31
7	170420G1_7	ST170420G1-6 PFC CS2 17D2012	20-Apr-17	18:01:56
8	170420G1_8	ST170420G1-7 PFC CS3 17D2013	20-Apr-17	18:14:20
9	170420G1_9	ST170420G1-8 PFC CS4 17D2014	20-Apr-17	18:26:46
10	170420G1_10	ST170420G1-9 PFC CS5 17D2015	20-Apr-17	18:39:14
11	170420G1_11	ST170420G1-10 PFC CS6 17D2016	20-Apr-17	18:51:40
12	170420G1_12	IPA	20-Apr-17	19:04:03
13	170420G1_13	SS170420G1-1 PFC SSS 17D2017	20-Apr-17	19:16:27
14	170420G1_14	IPA	20-Apr-17	19:28:50
15	170420G1_15	B7D0096-BS1 LFB 0.25	20-Apr-17	19:41:16
16	170420G1_16	IPA	20-Apr-17	19:53:38
17	170420G1_17	B7D0096-BLK1 LRB 0.25	20-Apr-17	20:06:03
18	170420G1_18	1700466-01 RW05-20170417 0.25	20-Apr-17	20:18:28
19	170420G1_19	1700466-02 FRB-05-20170417 0.25	20-Apr-17	20:30:54
20	170420G1_20	1700466-03 RW10-20170417 0.25	20-Apr-17	20:43:19
21	170420G1_21	1700466-04 FRB-10-20170417 0.25	20-Apr-17	20:55:45
22	170420G1_22	1700466-05 RW18-20170417 0.25	20-Apr-17	21:08:07
23	170420G1_23	1700466-06 FRB-18-20170417 0.25	20-Apr-17	21:20:28
24	170420G1_24	1700466-07 RW07-20170417 0.25	20-Apr-17	21:32:51
25	170420G1_25	B7D0096-DUP1 Duplicate 0.25	20-Apr-17	21:45:14
26	170420G1_26	1700466-08 FRB-07-20170417 0.25	20-Apr-17	21:57:38
27	170420G1_27	1700466-09 RW03-20170417 0.25	20-Apr-17	22:10:03
28	170420G1_28	B7D0096-MS1 LFSM 0.25	20-Apr-17	22:22:28
29	170420G1_29	1700466-10 FRB-03-20170417 0.25	20-Apr-17	22:34:54
30	170420G1_30	1700466-11 RW16-20170417 0.25	20-Apr-17	22:47:14
31	170420G1_31	1700466-12 FRB-16-20170417 0.25	20-Apr-17	22:59:51

Dataset: Untitled

Last Altered: Tuesday, April 25, 2017 13:55:37 Pacific Daylight Time

Printed: Tuesday, April 25, 2017 13:56:13 Pacific Daylight Time

Compound name: PFBS

	Name	ID	Acq.Date	Acq.Time
32	170420G1_32	1700466-13 RW14-20170418 0.25	20-Apr-17	23:12:14
33	170420G1_33	1700466-14 FRB-14-20170418 0.25	20-Apr-17	23:24:37
34	170420G1_34	1700466-15 RW20-20170418 0.25	20-Apr-17	23:37:01
35	170420G1_35	1700466-16 FRB-20-20170418 0.25	20-Apr-17	23:49:24
36	170420G1_36	1700466-17 RW06-20170418 0.25	21-Apr-17	00:01:49
37	170420G1_37	1700466-18 FRB-06-20170418 0.25	21-Apr-17	00:14:14
38	170420G1_38	1700466-19 RW01-20170418 0.25	21-Apr-17	00:26:36
39	170420G1_39	1700466-20 FRB-01-20170418 0.25	21-Apr-17	00:38:59
40	170420G1_40	IPA	21-Apr-17	00:51:22
41	170420G1_41	ST170420G1-11 PFC CS3 17D2013	21-Apr-17	01:03:47
42	170420G1_42	IPA	21-Apr-17	01:16:13

# LC Calibration Standards Review Checklist

Q1

Calibration ID:	L M H	ION Ratio	Concentration	C-Cals Name	Sign Date	Correct I-Cal	Manual Integrations	
<u>ST170420G1-11</u>	<u>(L M H)</u>	<u>N/A</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<u>N/A</u> <input checked="" type="checkbox"/>
_____	L M H	<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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_____	L M H	<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: 4/5/17

Run Log Present:

# of Samples per Sequence Checked:

Reviewed By: CP 4/25/17  
Initials/Date

**Comments:**



Dataset: Untitled

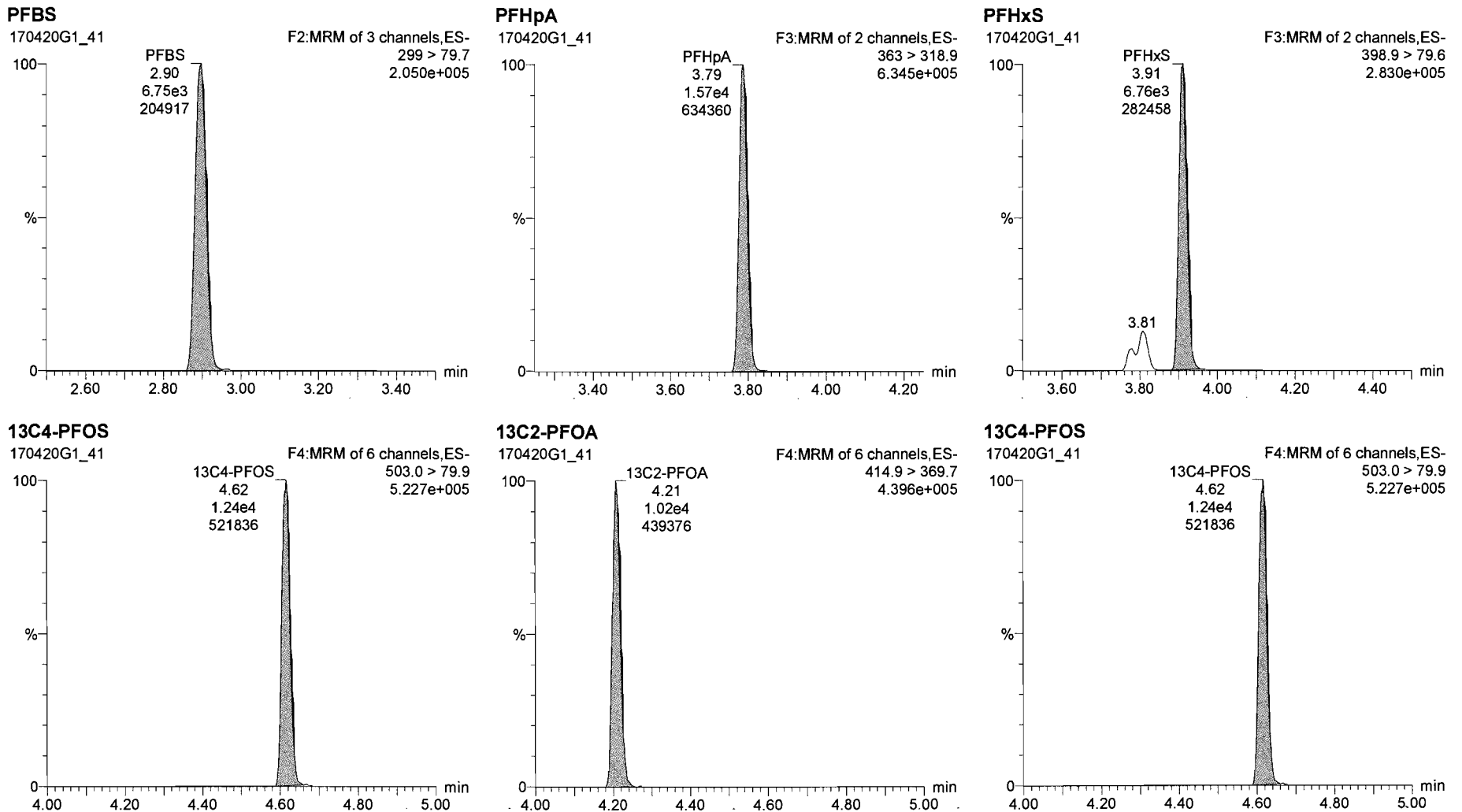
Last Altered: Tuesday, April 25, 2017 13:52:50 Pacific Daylight Time

Printed: Tuesday, April 25, 2017 13:53:28 Pacific Daylight Time

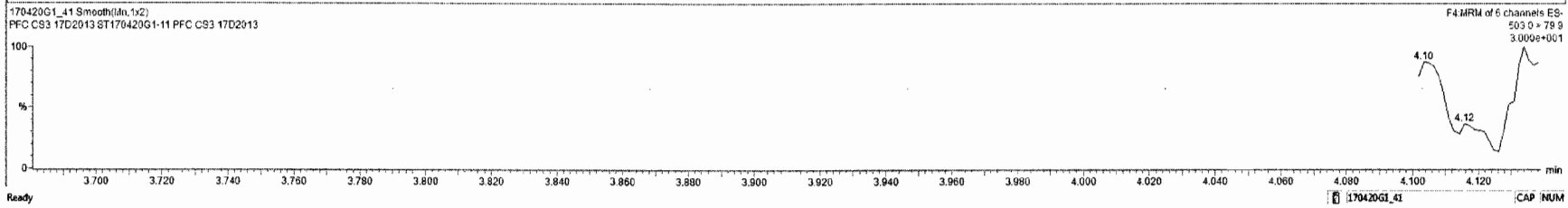
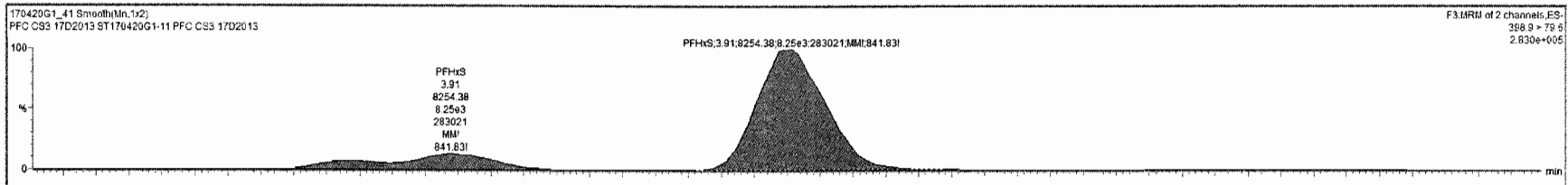
Method: U:\G1.PRO\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

Calibration: U:\G1.PRO\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

Name: 170420G1\_41, Date: 21-Apr-2017, Time: 01:03:47, ID: ST170420G1-11 PFC CS3 17D2013, Description: PFC CS3 17D2013



Name	Resp	RRF	wt/Vol	RT	RA	WY	Calc	NRes	DL	EMPC
1 PFBS	8.75e3		1.000	2.90			17.7	100	0.00170	
2 PFHpA	1.57e4		1.000	3.79			17.8	88.0	0.00414	
3 PFHxS	8.25e3		1.000	3.91			16.8	100	0.00294	
4 PFOA	1.39e4		1.000	4.21			18.0	89.9	0.353	
5 PFOS	2.59e3		1.000	4.61			18.2	97.9	0.603	
6 PFNA	2.28e4		1.000	4.55			15.9	84.2	0.00191	
7 13C2-PFHxA	4.57e3	0.45	1.000	3.27			10.0	100	0.000727	
8 13C2-PFOA	6.63e3	0.80	1.000	4.85			8.13	81.3	0.00402	
9 13C2-PFOA	1.02e4	1.00	1.000	4.21			10.0	100	0.188	
10 13C4-PFOS	1.24e4	1.00	1.000	4.62			28.7	100	0.0293	

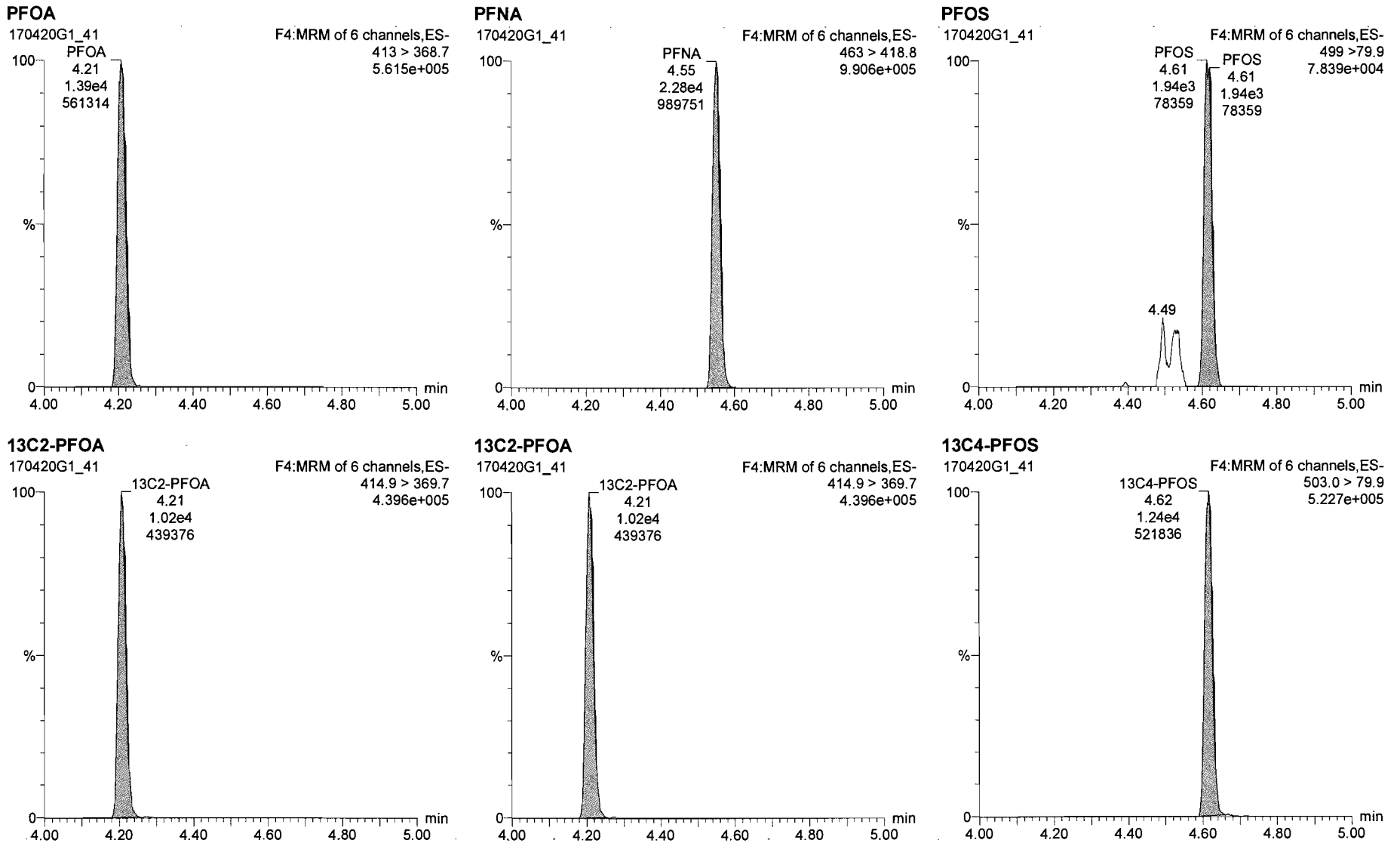


Dataset: Untitled

Last Altered: Tuesday, April 25, 2017 13:52:50 Pacific Daylight Time

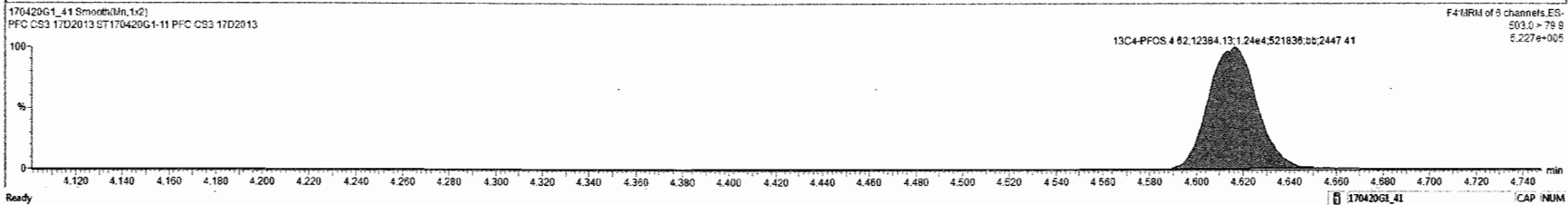
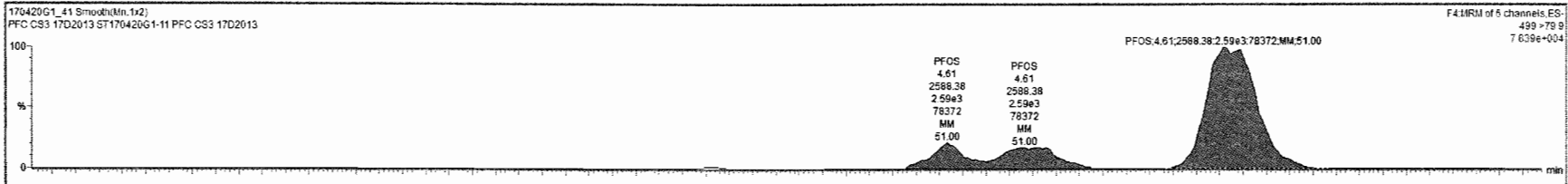
Printed: Tuesday, April 25, 2017 13:53:28 Pacific Daylight Time

Name: 170420G1\_41, Date: 21-Apr-2017, Time: 01:03:47, ID: ST170420G1-11 PFC CS3 17D2013, Description: PFC CS3 17D2013



170420G1\_41 - ST170420G1-11 PFC CS3 17D2013 - PFC CS3 17D2013

Name	Resp	RRF	Wt/WT	RT	RA	Qty	Conc	%Rec	DL	EMPC
1 PFBS	6.75e3	1.000	2.90				17.7	100	0.00170	
2 PFHpA	1.57e4	1.000	3.79				17.6	88.0	0.00414	
3 PFHxS	8.25e3	1.000	3.91				18.0	105	0.0434	
4 PFDA	1.39e4	1.000	4.21				18.0	89.9	0.353	
5 PFOS	2.59e3	1.000	4.61				18.2	87.8	0.663	
6 PFNA	2.28e4	1.000	4.55				15.9	64.5	0.00181	
7 13C2-PFHpA	4.57e3	0.45	1.000	3.27			10.0	100	0.000727	
8 13C2-PFDA	6.63e3	0.80	1.000	4.85			8.13	81.3	0.00402	
9 13C2-PFOA	1.02e4	1.00	1.000	4.21			10.0	100	0.188	
10 13C4-PFOS	1.24e4	1.00	1.000	4.62			26.7	100	0.6293	



Dataset: Untitled

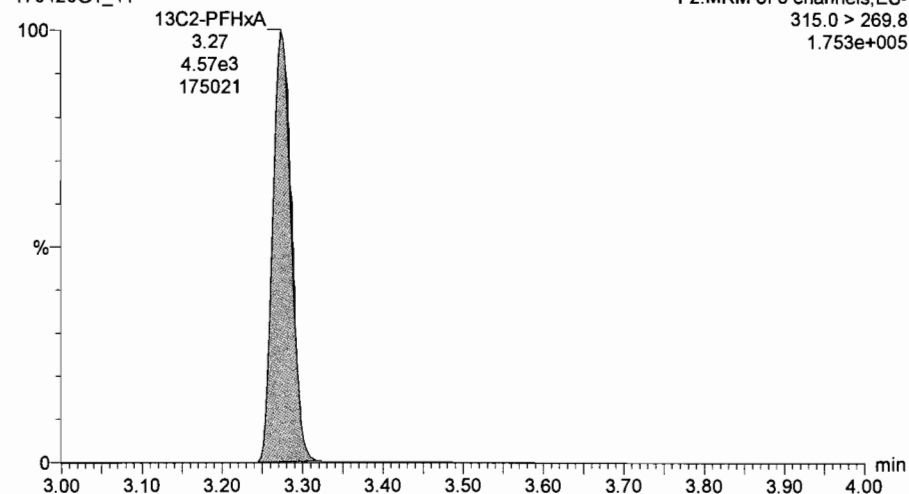
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Printed: Tuesday, April 25, 2017 13:53:28 Pacific Daylight Time

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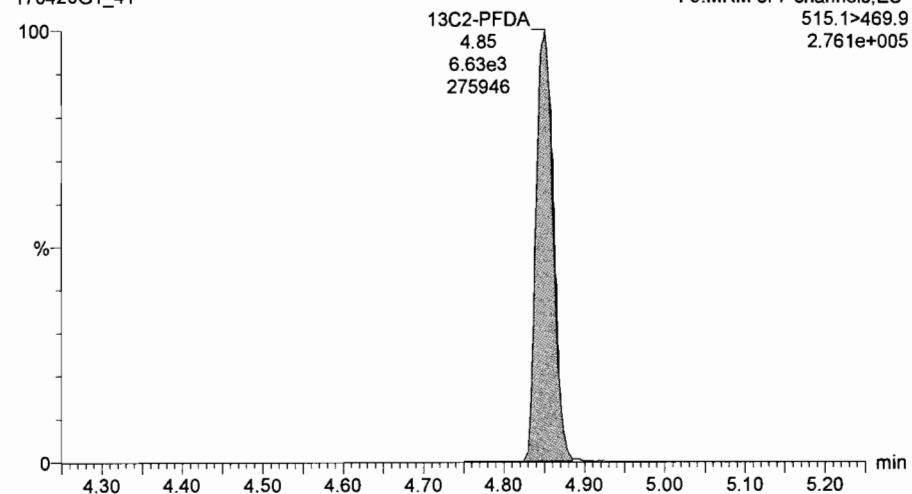
**13C2-PFHxA**

170420G1\_41



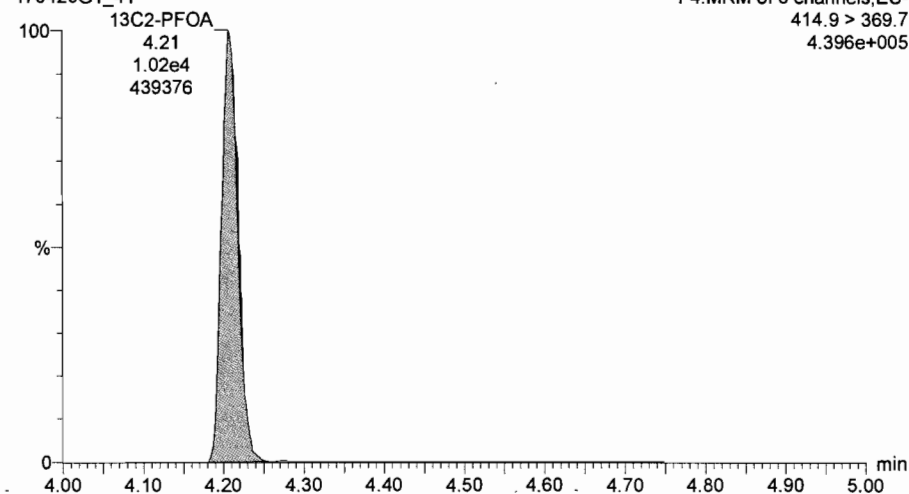
**13C2-PFDA**

170420G1\_41



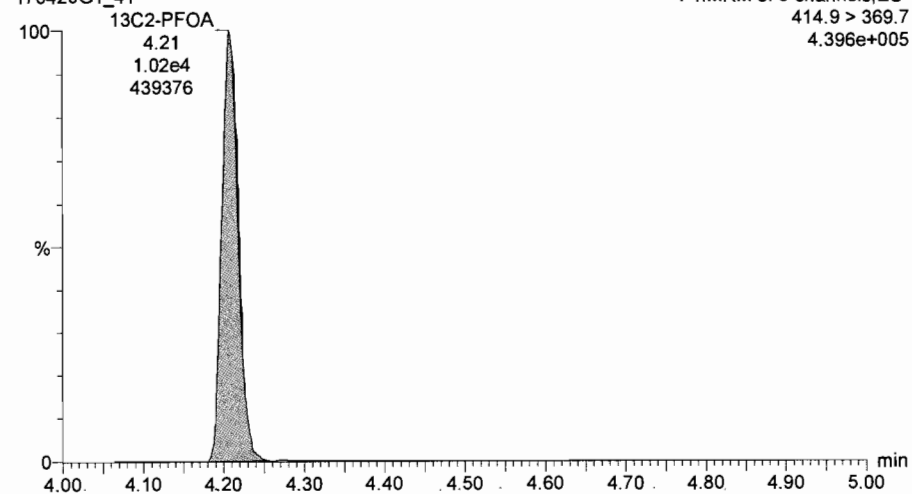
**13C2-PFOA**

170420G1\_41



**13C2-PFOA**

170420G1\_41



Dataset: U:\G1.PRO\Results\2017\170421G3\170421G3-2.qld

Last Altered: Monday, April 24, 2017 08:46:35 Pacific Daylight Time  
Printed: Monday, April 24, 2017 08:48:11 Pacific Daylight Time

Method: U:\G1.PRO\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59  
Calibration: U:\G1.PRO\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

Name: 170421G3\_2, Date: 21-Apr-2017, Time: 18:01:05, ID: ST170421G3-1 PFC CS-2 17D2008, Description: PFC CS-2 17D2008

#	Name	Trace	Response	IS Resp	RRF	Wt/Vol	RT	Conc.	%Rec
1	1 PFBS	299 > 79.7	3.72e2	1.21e4		1.000	2.91	0.964	108.9
2	2 PFHpA	363 > 318.9	8.14e2	9.37e3		1.000	3.80	0.969	96.9
3	3 PFHxS	398.9 > 79.6	4.00e2	1.21e4		1.000	3.92	0.897	98.6
4	4 PFOA	413 > 368.7	7.69e2	9.37e3		1.000	4.22	1.05	105.2
5	5 PFOS	499 > 79.9	9.99e1	1.21e4		1.000	4.61	0.679	73.0
6	6 PFNA	463 > 418.8	1.19e3	9.37e3		1.000	4.56	0.929	92.9
7	7 13C2-PFHxA	315.0 > 269.8	3.91e3	9.37e3	0.449	1.000	3.29	9.30	93.0
8	8 13C2-PFDA	515.1 > 469.9	6.90e3	9.37e3	0.803	1.000	4.85	9.17	91.7
9	9 13C2-PFOA	414.9 > 369.7	9.37e3	9.37e3	1.000	1.000	4.22	10.0	100.0
10	10 13C4-PFOS	503.0 > 79.9	1.21e4	1.21e4	1.000	1.000	4.62	28.7	100.0

70-130  
↓  
AC  
4/24/17

Dataset: Untitled

Last Altered: Monday, April 24, 2017 08:56:50 Pacific Daylight Time

Printed: Monday, April 24, 2017 08:59:26 Pacific Daylight Time

Method: U:\G1.PRO\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59  
Calibration: U:\G1.PRO\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

Compound name: PFBS

	Name	ID	Acq.Date	Acq Time
1	170421G3_1	IPA	21-Apr-17	17:48:24
2	170421G3_2	ST170421G3-1 PFC CS-2 17D2008	21-Apr-17	18:01:05
3	170421G3_3	IPA	21-Apr-17	18:13:27
4	170421G3_4	B7D0069-BS1 LFB 0.5	21-Apr-17	18:25:52
5	170421G3_5	B7D0099-BS1 LFB 0.25	21-Apr-17	18:38:17
6	170421G3_6	IPA	21-Apr-17	18:50:41
7	170421G3_7	B7D0069-BLK1 LRB 0.5	21-Apr-17	19:03:07
8	170421G3_8	B7D0099-BLK1 LRB 0.25	21-Apr-17	19:15:32
9	170421G3_9	1700483-01 ME-RW01-0417 0.25	21-Apr-17	19:27:53
10	170421G3_10	1700483-02 ME-FB01-0417 0.25	21-Apr-17	19:40:16
11	170421G3_11	1700483-03 ME-RW02-0417 0.25	21-Apr-17	19:52:38
12	170421G3_12	B7D0099-MS1 LFSM 0.25	21-Apr-17	20:05:02
13	170421G3_13	B7D0099-MSD1 LFSMD 0.25	21-Apr-17	20:17:25
14	170421G3_14	1700483-04 ME-FB02-0417 0.25	21-Apr-17	20:29:52
15	170421G3_15	1700387-01 PT# 38292 0.001	21-Apr-17	20:42:16
16	170421G3_16	B7D0096-BS1 LFB 0.25	21-Apr-17	20:54:42
17	170421G3_17	IPA	21-Apr-17	21:07:03
18	170421G3_18	B7D0096-BLK1 LRB 0.25	21-Apr-17	21:19:29
19	170421G3_19	1700466-01 RW05-20170417 0.25	21-Apr-17	21:31:50
20	170421G3_20	1700466-02 FRB-05-20170417 0.25	21-Apr-17	21:44:13
21	170421G3_21	1700466-03 RW10-20170417 0.25	21-Apr-17	21:56:35
22	170421G3_22	1700466-04 FRB-10-20170417 0.25	21-Apr-17	22:08:59
23	170421G3_23	1700466-05 RW18-20170417 0.25	21-Apr-17	22:21:22
24	170421G3_24	1700466-06 FRB-18-20170417 0.25	21-Apr-17	22:33:47
25	170421G3_25	1700466-07 RW07-20170417 0.25	21-Apr-17	22:46:13
26	170421G3_26	B7D0096-DUP1 Duplicate 0.25	21-Apr-17	22:58:35
27	170421G3_27	1700466-08 FRB-07-20170417 0.25	21-Apr-17	23:10:56
28	170421G3_28	1700466-09 RW03-20170417 0.25	21-Apr-17	23:23:19
29	170421G3_29	B7D0096-MS1 LFSM 0.25	21-Apr-17	23:35:41
30	170421G3_30	1700466-10 FRB-03-20170417 0.25	21-Apr-17	23:48:05
31	170421G3_31	1700466-11 RW16-20170417 0.25	22-Apr-17	00:00:29

Dataset: Untitled

Last Altered: Monday, April 24, 2017 08:56:50 Pacific Daylight Time

Printed: Monday, April 24, 2017 08:59:26 Pacific Daylight Time

Compound name: PFBS

	Name	ID	Acq.Date	Acq.Time
32	170421G3_32	1700466-12 FRB-16-20170417 0.25	22-Apr-17	00:12:53
33	170421G3_33	1700466-13 RW14-20170418 0.25	22-Apr-17	00:25:18
34	170421G3_34	IPA	22-Apr-17	00:37:41
35	170421G3_35	ST170421G3-2 PFC CS2 17D2012	22-Apr-17	00:50:05
36	170421G3_36	IPA	22-Apr-17	01:02:28



# LC Calibration Standards Review Checklist

Q1

Calibration ID:	ION Ratio	Concentration	C-Cals Name	Sign Date	Correct I-Cal	Manual Integrations	N/A
<u>ST170421G3-1</u> (L) M H	<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"/>
<u>↓ -2</u> (L) M H	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> (A)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
_____ L M H	<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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_____ L M H	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____ L M H	<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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_____ L M H	<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: 4/5/17

Run Log Present:

# of Samples per Sequence Checked:

Reviewed By: elm 4/24/17  
Initials/Date

**Comments:**  
 (A) Does not meet criteria for PFNA. not used. AC 4/24/17

Dataset: Untitled

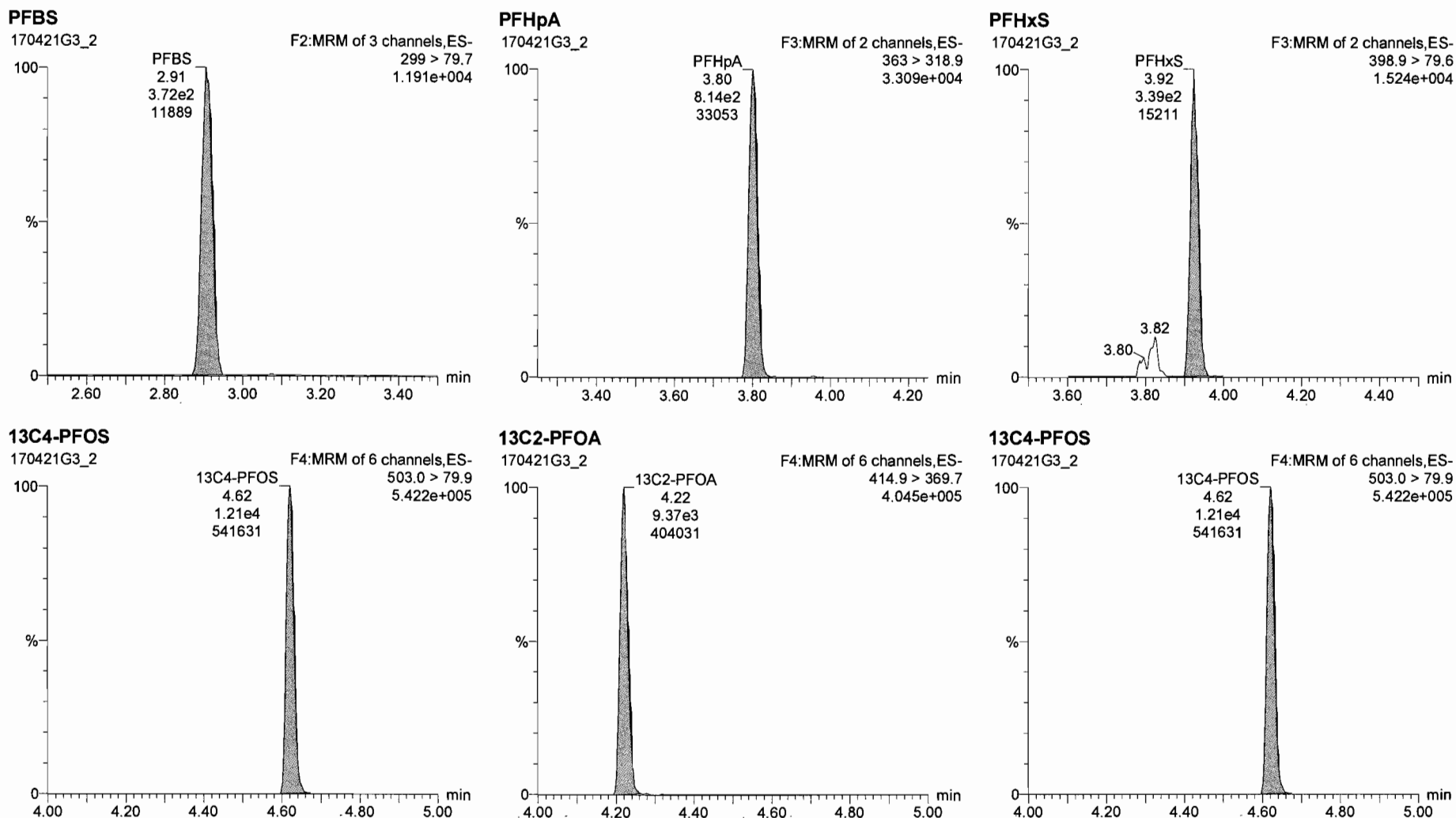
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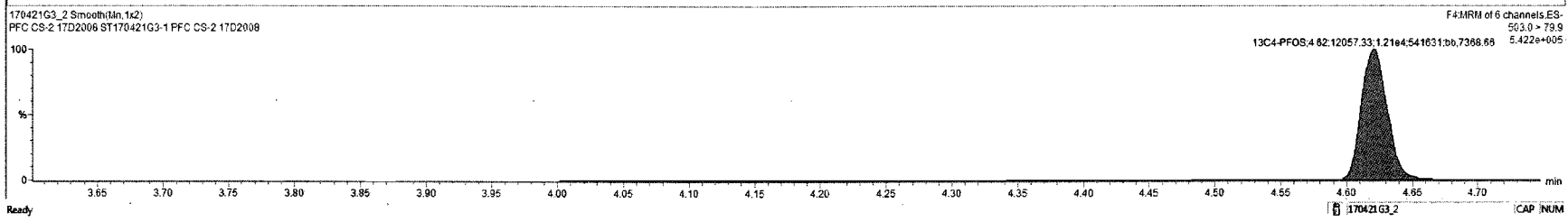
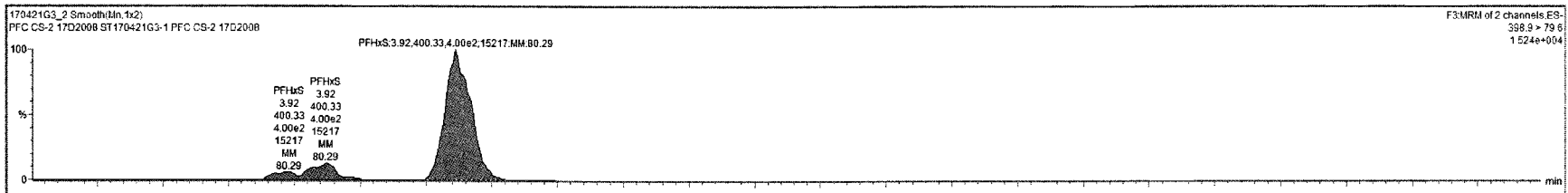
Method: U:\G1.PRO\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

Calibration: U:\G1.PRO\CurveDB\IC18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

Name: 170421G3\_2, Date: 21-Apr-2017, Time: 18:01:05, ID: ST170421G3-1 PFC CS-2 17D2008, Description: PFC CS-2 17D2008



Name	Trace	Area	RRF	MM	MM	RT	Conc	+MDL	%Rec	DC
1 PFBS	299 > 79.7	3.72e2		1.000	2.91	2.91	0.964	NO	108.9	0.0015297
2 PFHpA	303 > 318.9	8.14e2		1.000	3.80	3.80	0.969	NO	96.9	0.0004296
3 PFHxS	390 > 79.6	4.00e2		1.000	3.92	3.92	0.897	NO	96.6	0.0235813
4 PFDA	413 > 368.7	7.69e2		1.000	4.22	4.22	1.05	NO	105.2	0.0148684
5 PFOS	499 > 79.9	2.80e1		1.000	4.61	4.61	0.150	NO	20.5	0.0937619
6 PFNA	462 > 418.8	1.19e3		1.000	4.55	4.56	0.925	NO	92.9	0.0045500
7 13C2-PFHxA	515.0 > 269.8	3.91e3	0.449	1.000	3.28	3.29	9.30	NO	93.0	0.0009460
8 13C2-PFDA	515.1 > 469.9	6.90e3	0.803	1.000	4.85	4.85	9.17	NO	91.7	0.1553211
9 13C2-PFOA	414.9 > 369.7	9.37e3	1.90	1.000	4.22	4.22	10.0	NO	100.0	0.0139482
10 13C4-PFOS	503.0 > 79.9	1.21e4	1.90	1.000	4.62	4.62	28.7	NO	100.0	0.0097372



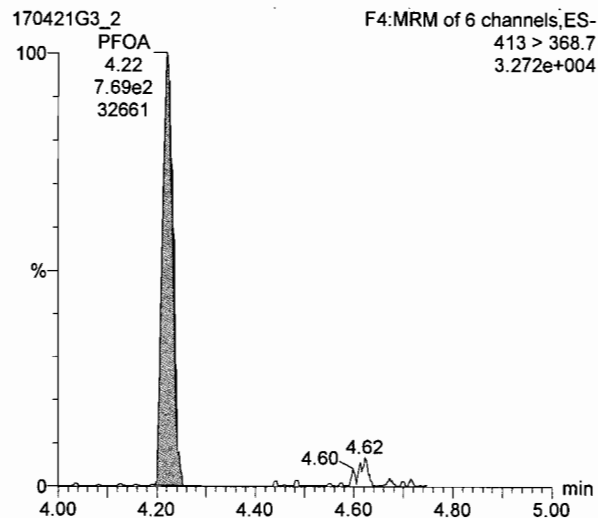
Dataset: Untitled

Last Altered: Monday, April 24, 2017 08:44:46 Pacific Daylight Time

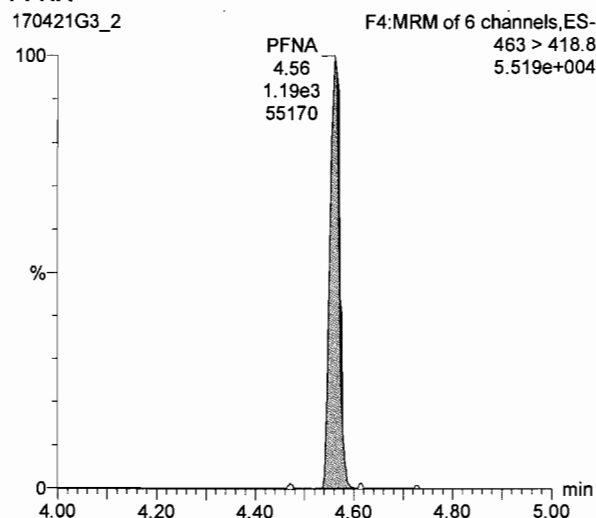
Printed: Monday, April 24, 2017 08:45:10 Pacific Daylight Time

Name: 170421G3\_2, Date: 21-Apr-2017, Time: 18:01:05, ID: ST170421G3-1 PFC CS-2 17D2008, Description: PFC CS-2 17D2008

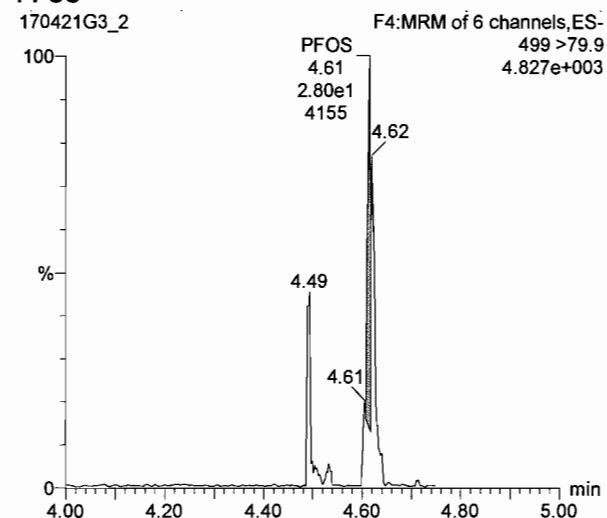
**PFOA**



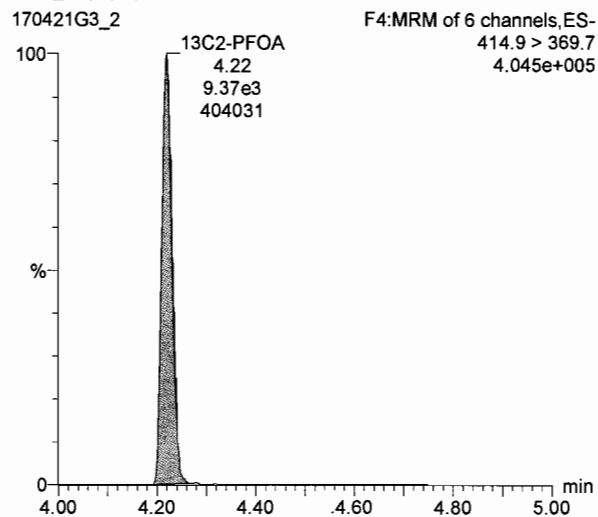
**PFNA**



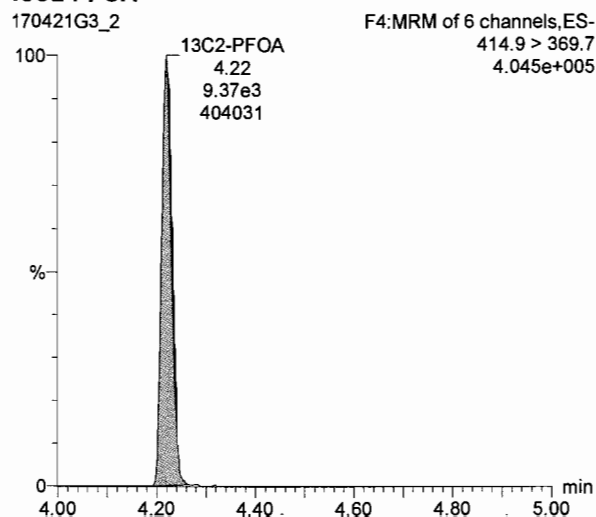
**PFOS**



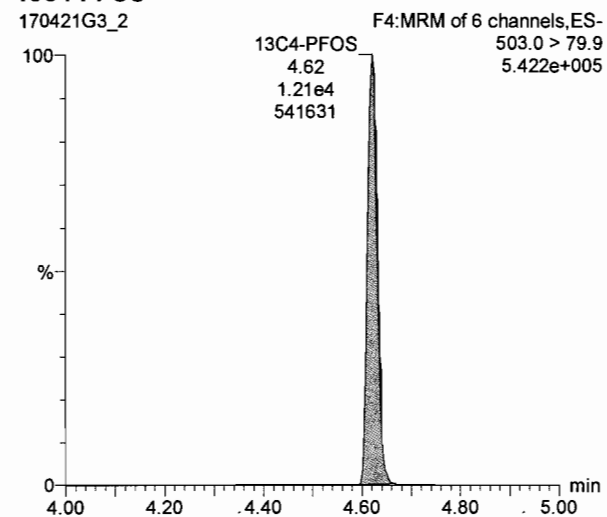
**13C2-PFOA**



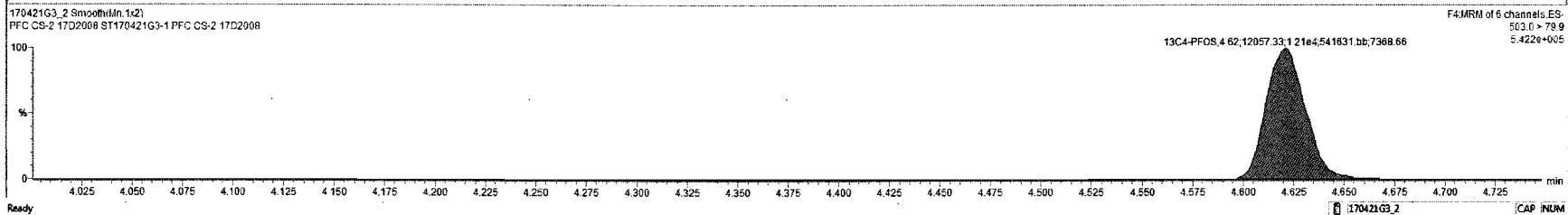
**13C2-PFOA**



**13C4-PFOS**



Peak	Name	Trace	Area	RFI	Wt%Vol	Prod.RT	RT	Conc.	+MDL	%Rec	DL
1	PFBS	299 > 79.7	3.72e2		1.000	2.91	2.91	0.964	NO	108.9	0.0015297
2	PFHpA	363 > 316.9	8.14e2		1.000	3.80	3.80	0.989	NO	96.9	0.0024288
3	PFHpS	368.9 > 79.8	4.00e2		1.000	3.92	3.92	0.897	NO	96.6	0.0226813
4	PFOA	419 > 368.7	7.69e2		1.000	4.22	4.22	1.05	NO	105.2	0.0148634
5	PFOS	469 > 79.9	8.89e2		1.000	4.61	4.61	0.679	NO	73.0	0.0037619
6	PFNA	483 > 418.8	1.19e3		1.000	4.55	4.56	0.929	NO	92.9	0.0045500
7	13C3-PFHxA	315.0 > 268.8	3.91e3	0.449	1.000	3.28	3.28	9.30	NO	93.0	0.0009460
8	13C3-PFOA	515.1 > 469.9	8.90e3	0.803	1.000	4.85	4.85	9.17	NO	91.7	0.1553211
9	13C3-PFOA	414.8 > 368.7	9.37e3	1.00	1.000	4.22	4.22	10.0	NO	100.0	0.0139482
10	13C4-PFOS	503.0 > 79.9	1.21e4	1.00	1.000	4.61	4.62	28.7	NO	100.0	0.0097372



Dataset: Untitled

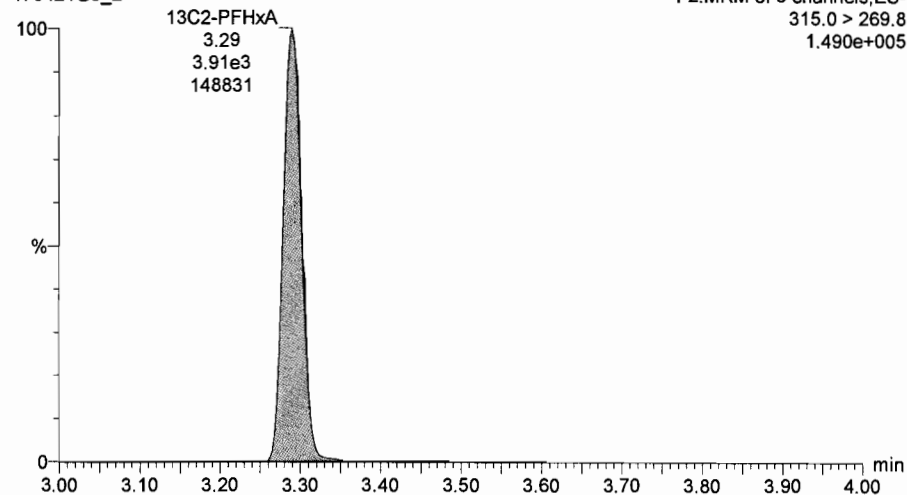
Last Altered: Monday, April 24, 2017 08:44:46 Pacific Daylight Time

Printed: Monday, April 24, 2017 08:45:10 Pacific Daylight Time

Name: 170421G3\_2, Date: 21-Apr-2017, Time: 18:01:05, ID: ST170421G3-1 PFC CS-2 17D2008, Description: PFC CS-2 17D2008

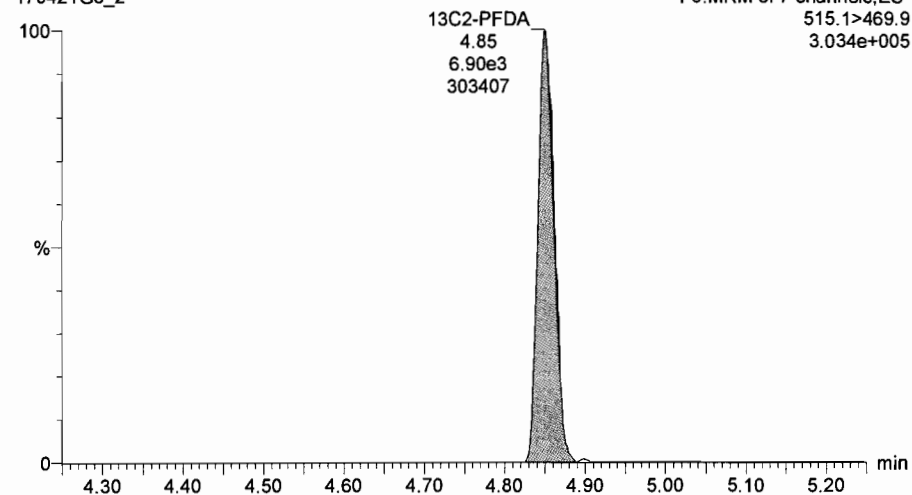
**13C2-PFHxA**

170421G3\_2



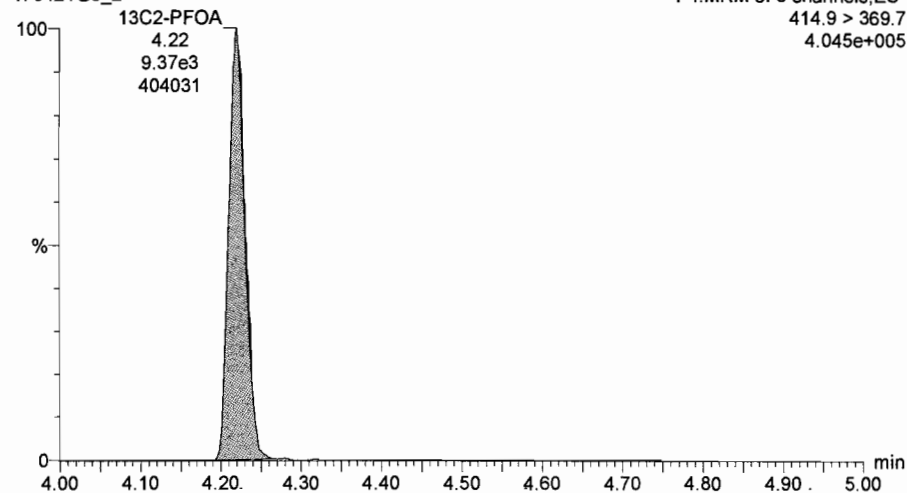
**13C2-PFDA**

170421G3\_2



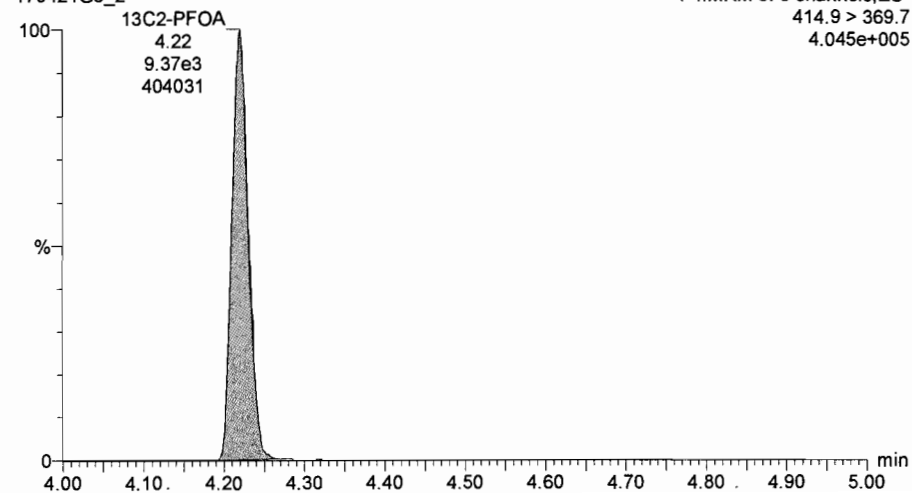
**13C2-PFOA**

170421G3\_2



**13C2-PFOA**

170421G3\_2



Dataset: U:\G1.PRO\Results\2017\170421G3\170421G3-35.qld

Last Altered: Monday, April 24, 2017 08:50:30 Pacific Daylight Time  
Printed: Monday, April 24, 2017 08:51:37 Pacific Daylight Time

Method: U:\G1.PRO\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59  
Calibration: U:\G1.PRO\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

Name: 170421G3\_35, Date: 22-Apr-2017, Time: 00:50:05, ID: ST170421G3-2 PFC CS2 17D2012, Description: PFC CS2 17D2012

#	Name	Trace	Response	IS Resp	RRF	Wt/Vol	RT	Conc.	%Rec
1	1 PFBS	299 > 79.7	7.27e3	1.60e4		1.000	2.93	14.6	82.7
2	2 PFHpA	363 > 318.9	1.83e4	1.37e4		1.000	3.81	15.2	76.0
3	3 PFHxS	398.9 > 79.6	8.82e3	1.60e4		1.000	3.94	15.5	85.4
4	4 PFOA	413 > 368.7	1.53e4	1.37e4		1.000	4.23	14.6	73.0
5	5 PFOS	499 > 79.9	2.54e3	1.60e4		1.000	4.63	13.6	73.0
6	6 PFNA	463 > 418.8	2.44e4	1.37e4		1.000	4.57	13.4	66.8
7	7 13C2-PFHxA	315.0 > 269.8	6.22e3	1.37e4	0.449	1.000	3.30	10.1	101.3
8	8 13C2-PFDA	515.1 > 469.9	9.62e3	1.37e4	0.803	1.000	4.86	8.76	87.6
9	9 13C2-PFOA	414.9 > 369.7	1.37e4	1.37e4	1.000	1.000	4.23	10.0	100.0
10	10 13C4-PFOS	503.0 > 79.9	1.60e4	1.60e4	1.000	1.000	4.63	28.7	100.0

70-130  
↓

Ⓐ outside limits.

DC  
4/24/17

Dataset: Untitled

Last Altered: Monday, April 24, 2017 08:56:50 Pacific Daylight Time

Printed: Monday, April 24, 2017 08:59:26 Pacific Daylight Time

Method: U:\G1.PRO\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59  
Calibration: U:\G1.PRO\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

Compound name: PFBS

	Name	ID	Acq.Date	Acq.Time
1	170421G3_1	IPA	21-Apr-17	17:48:24
2	170421G3_2	ST170421G3-1 PFC CS-2 17D2008	21-Apr-17	18:01:05
3	170421G3_3	IPA	21-Apr-17	18:13:27
4	170421G3_4	B7D0069-BS1 LFB 0.5	21-Apr-17	18:25:52
5	170421G3_5	B7D0099-BS1 LFB 0.25	21-Apr-17	18:38:17
6	170421G3_6	IPA	21-Apr-17	18:50:41
7	170421G3_7	B7D0069-BLK1 LRB 0.5	21-Apr-17	19:03:07
8	170421G3_8	B7D0099-BLK1 LRB 0.25	21-Apr-17	19:15:32
9	170421G3_9	1700483-01 ME-RW01-0417 0.25	21-Apr-17	19:27:53
10	170421G3_10	1700483-02 ME-FB01-0417 0.25	21-Apr-17	19:40:16
11	170421G3_11	1700483-03 ME-RW02-0417 0.25	21-Apr-17	19:52:38
12	170421G3_12	B7D0099-MS1 LFSM 0.25	21-Apr-17	20:05:02
13	170421G3_13	B7D0099-MSD1 LFSMD 0.25	21-Apr-17	20:17:25
14	170421G3_14	1700483-04 ME-FB02-0417 0.25	21-Apr-17	20:29:52
15	170421G3_15	1700387-01 PT# 38292 0.001	21-Apr-17	20:42:16
16	170421G3_16	B7D0096-BS1 LFB 0.25	21-Apr-17	20:54:42
17	170421G3_17	IPA	21-Apr-17	21:07:03
18	170421G3_18	B7D0096-BLK1 LRB 0.25	21-Apr-17	21:19:29
19	170421G3_19	1700466-01 RW05-20170417 0.25	21-Apr-17	21:31:50
20	170421G3_20	1700466-02 FRB-05-20170417 0.25	21-Apr-17	21:44:13
21	170421G3_21	1700466-03 RW10-20170417 0.25	21-Apr-17	21:56:35
22	170421G3_22	1700466-04 FRB-10-20170417 0.25	21-Apr-17	22:08:59
23	170421G3_23	1700466-05 RW18-20170417 0.25	21-Apr-17	22:21:22
24	170421G3_24	1700466-06 FRB-18-20170417 0.25	21-Apr-17	22:33:47
25	170421G3_25	1700466-07 RW07-20170417 0.25	21-Apr-17	22:46:13
26	170421G3_26	B7D0096-DUP1 Duplicate 0.25	21-Apr-17	22:58:35
27	170421G3_27	1700466-08 FRB-07-20170417 0.25	21-Apr-17	23:10:56
28	170421G3_28	1700466-09 RW03-20170417 0.25	21-Apr-17	23:23:19
29	170421G3_29	B7D0096-MS1 LFSM 0.25	21-Apr-17	23:35:41
30	170421G3_30	1700466-10 FRB-03-20170417 0.25	21-Apr-17	23:48:05
31	170421G3_31	1700466-11 RW16-20170417 0.25	22-Apr-17	00:00:29



Dataset: Untitled

Last Altered: Monday, April 24, 2017 08:56:50 Pacific Daylight Time  
Printed: Monday, April 24, 2017 08:59:26 Pacific Daylight Time

Compound name: PFBS

	Name	ID	Acq.Date	Acq.Time
32	170421G3_32	1700466-12 FRB-16-20170417 0.25	22-Apr-17	00:12:53
33	170421G3_33	1700466-13 RW14-20170418 0.25	22-Apr-17	00:25:18
34	170421G3_34	IPA	22-Apr-17	00:37:41
35	170421G3_35	ST170421G3-2 PFC CS2 17D2012	22-Apr-17	00:50:05
36	170421G3_36	IPA	22-Apr-17	01:02:28

Dataset: Untitled

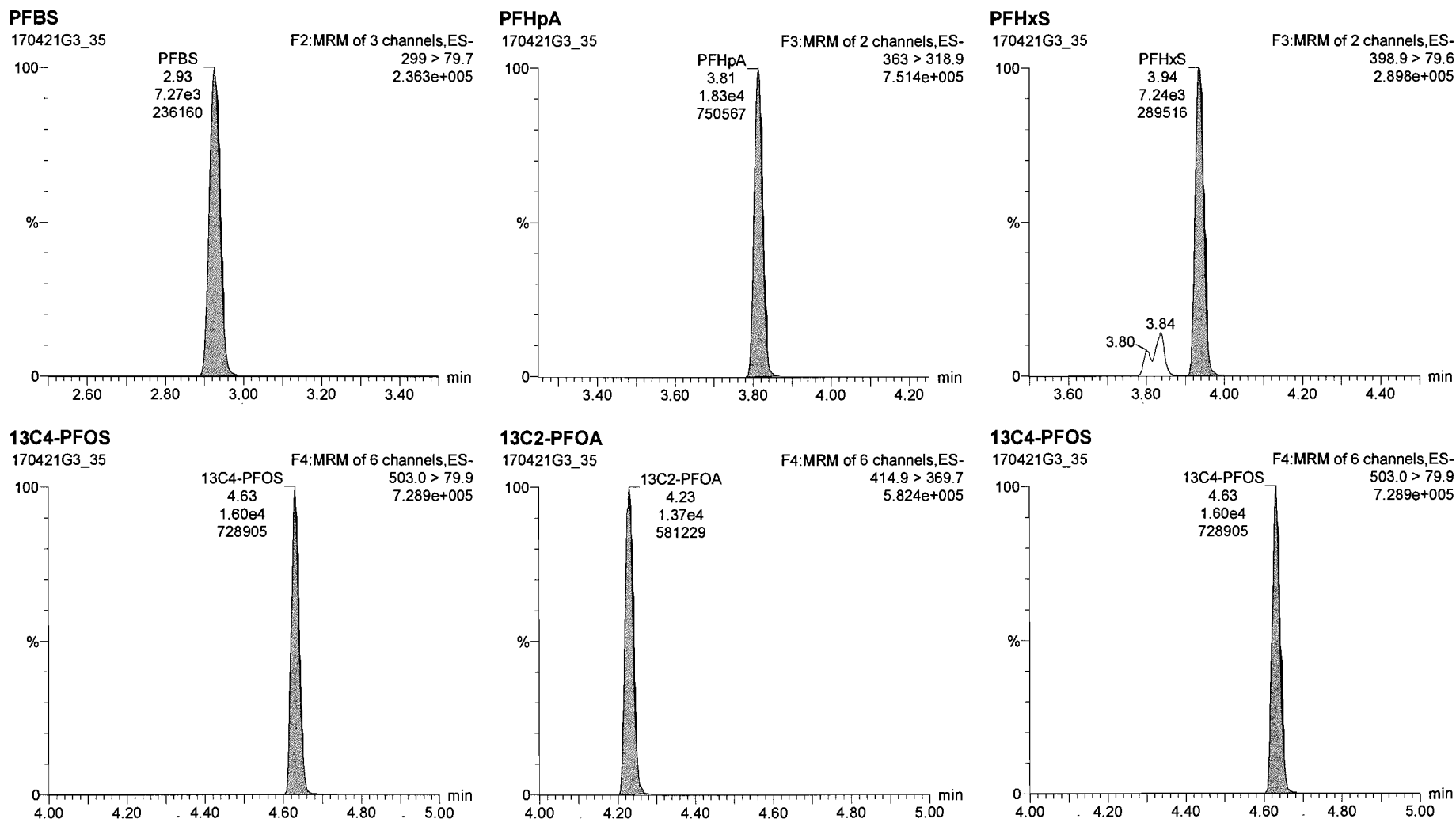
Last Altered: Monday, April 24, 2017 08:45:19 Pacific Daylight Time

Printed: Monday, April 24, 2017 08:45:26 Pacific Daylight Time

Method: U:\G1.PRO\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

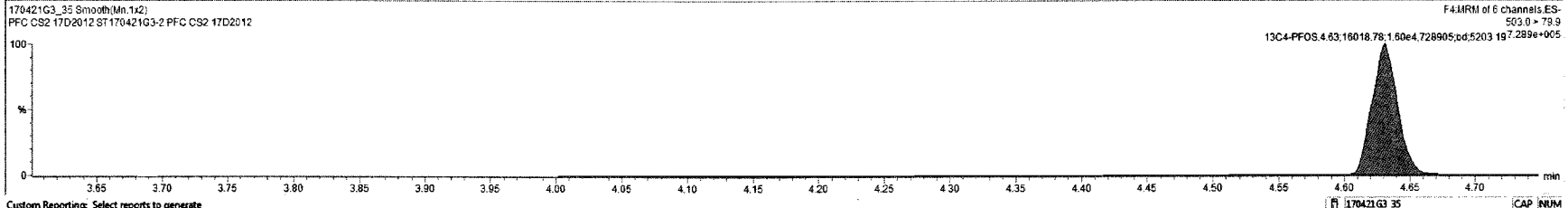
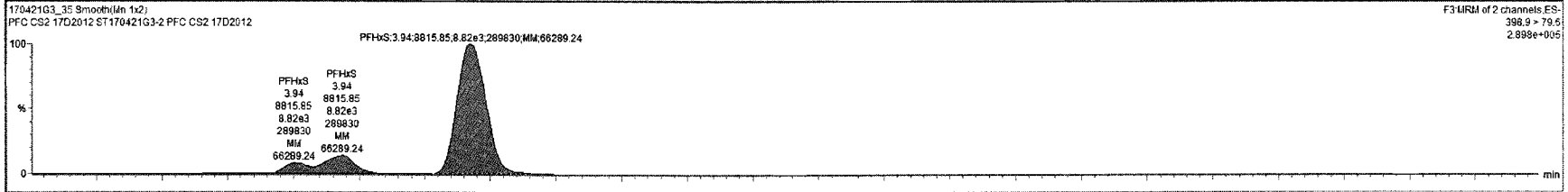
Calibration: U:\G1.PRO\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

Name: 170421G3\_35, Date: 22-Apr-2017, Time: 00:50:05, ID: ST170421G3-2 PFC CS2 17D2012, Description: PFC CS2 17D2012



170421G3\_35 - ST:170421G3-2 PFC CS2 17D2012 - PFC CS2 17D2012

2)	Name	Trace	Area	RRF	VMVol.	Prod.RT	RT	Conc.	>MDL	%Rec	DL
1	PFBS	296 > 78.7	7.27e3		1.000	2.91	2.93	14.6	YES	62.7	0.0090418
2	PFHpA	383 > 318.9	1.83e4		1.000	3.80	3.81	15.2	YES	76.0	0.0045171
3	PFHxS	396.9 > 79.8	8.82e3		1.000	3.94	3.94	15.5	YES	65.4	0.004842
4	PFDA	413 > 368.7	1.53e4		1.000	4.23	4.23	14.6	YES	73.0	0.0096206
5	PFOS	496 > 79.9	1.87e3		1.000	4.81	4.63	9.87	YES	53.1	0.2732312
6	PFNA	463 > 418.8	2.44e4		1.000	4.55	4.57	13.4	YES	66.8	0.0076663
7	13C2-PFHxA	315.0 > 269.8	6.22e3	0.449	1.000	3.28	3.30	10.1	NO	101.3	0.0027619
8	13C2-PFDA	515.1 > 489.9	9.82e3	0.803	1.000	4.85	4.86	8.76	NO	87.6	0.0113688
9	13C2-PFOA	414.9 > 369.7	1.37e4	1.00	1.000	4.72	4.23	10.0	NO	100.0	0.0297085
10	13C4-PFOS	503.0 > 79.9	1.60e4	1.00	1.000	4.81	4.63	28.7	NO	100.0	0.0137696



Custom Reporting: Select reports to generate

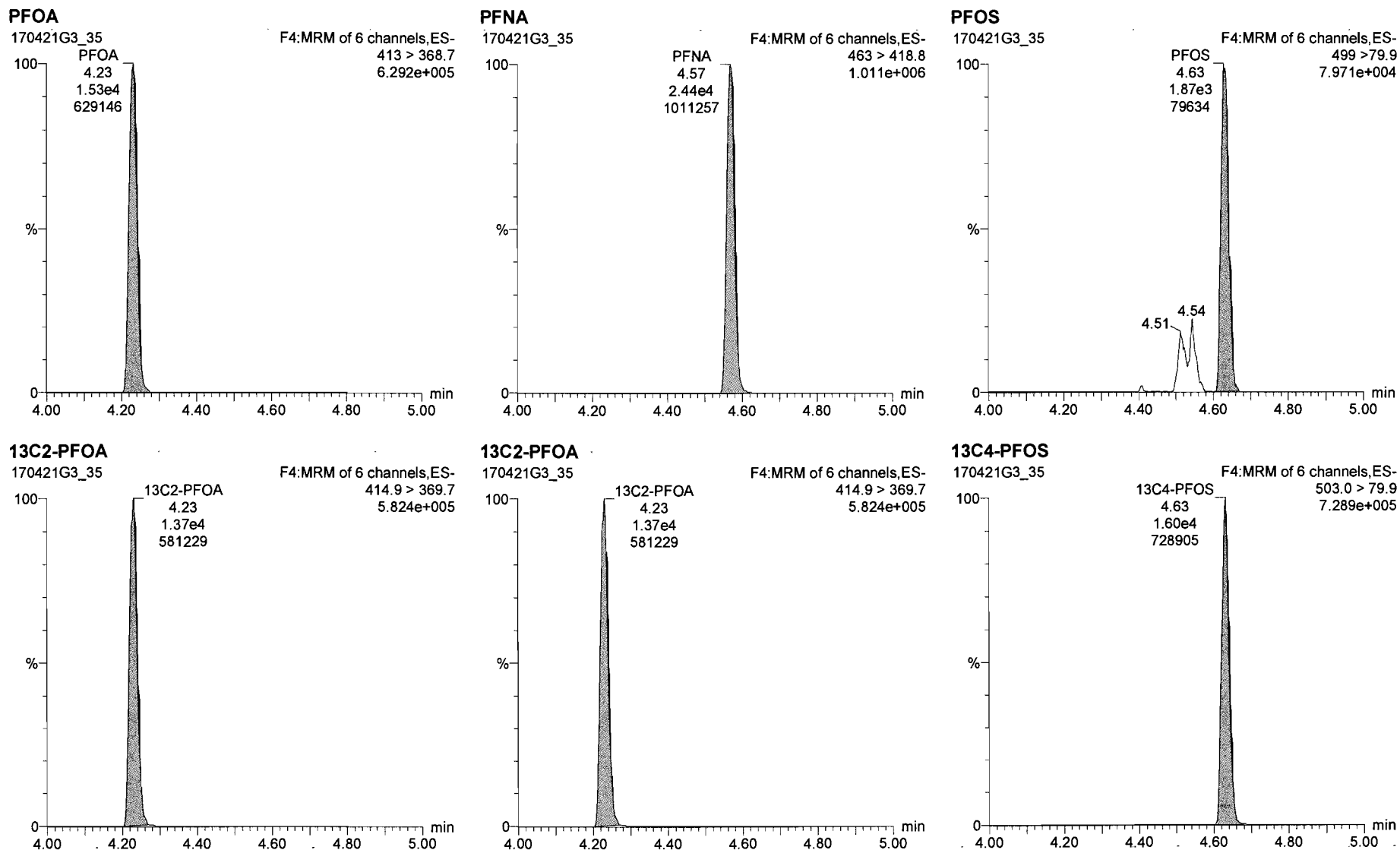
170421G3\_35 CAP NUM

Dataset: Untitled

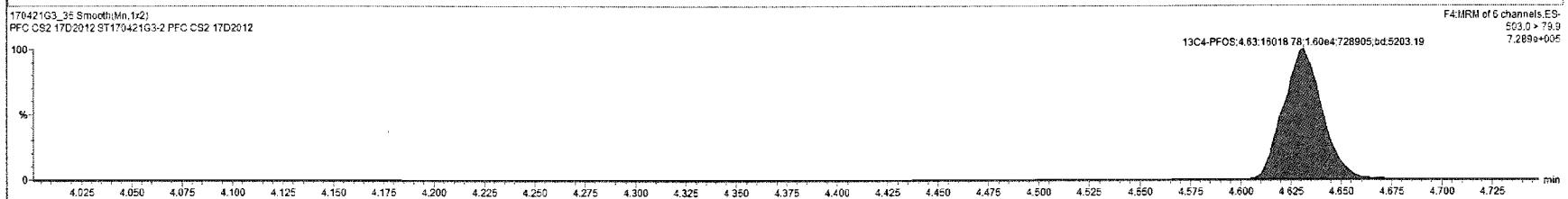
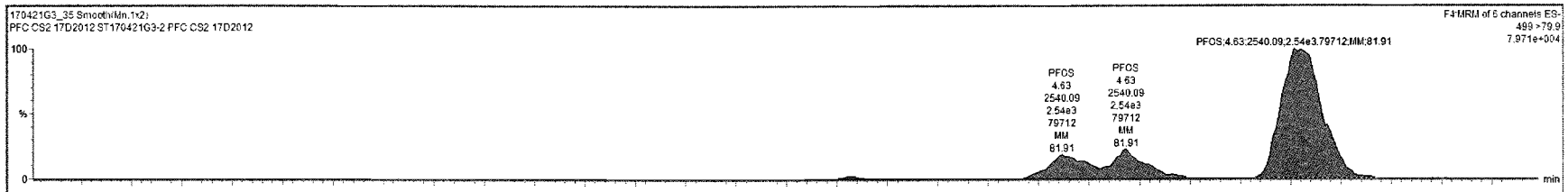
Last Altered: Monday, April 24, 2017 08:45:19 Pacific Daylight Time

Printed: Monday, April 24, 2017 08:45:26 Pacific Daylight Time

Name: 170421G3\_35, Date: 22-Apr-2017, Time: 00:50:05, ID: ST170421G3-2 PFC CS2 17D2012, Description: PFC CS2 17D2012



ID	Name	Trace	Area	RRF	VM/ML	Prod.RT	RT	Conc	>MUL	%Rec	DL
1	PFBS	299 > 79.7	7.27e3		1.000	2.91	2.92	14.6	YES	82.7	0.0090410
2	PFHpA	363 > 316.9	1.83e4		1.000	3.60	3.61	15.2	YES	76.0	0.0045171
3	PFHxS	398.9 > 79.6	8.82e3		1.000	3.92	3.94	15.5	YES	85.4	0.0004042
4	PFDA	413 > 368.7	1.53e4		1.000	4.23	4.23	14.6	YES	73.0	0.0096206
5	PFOS	463 > 416.8	2.54e3		1.000	4.63	4.63	13.4	YES	73.0	0.2732712
6	PFNA	463 > 416.8	2.44e4		1.000	4.55	4.57	13.4	YES	66.8	0.0076663
7	13C2-PFHxA	515.0 > 259.8	6.22e3	0.449	1.000	3.29	3.30	10.1	NO	101.3	0.0027819
8	13C2-PFDA	515.0 > 469.9	9.62e3	0.803	1.000	4.65	4.66	8.76	NO	87.6	0.0113688
9	13C2-PFOA	414.9 > 369.7	1.37e4	1.00	1.000	4.22	4.23	10.0	NO	100.0	0.0287085
10	13C4-PFOS	503.0 > 79.9	1.60e4	1.00	1.000	4.61	4.63	28.7	NO	100.0	0.0137896



Custom Reporting: Select reports to generate [170421G3\_35] CAP NUM

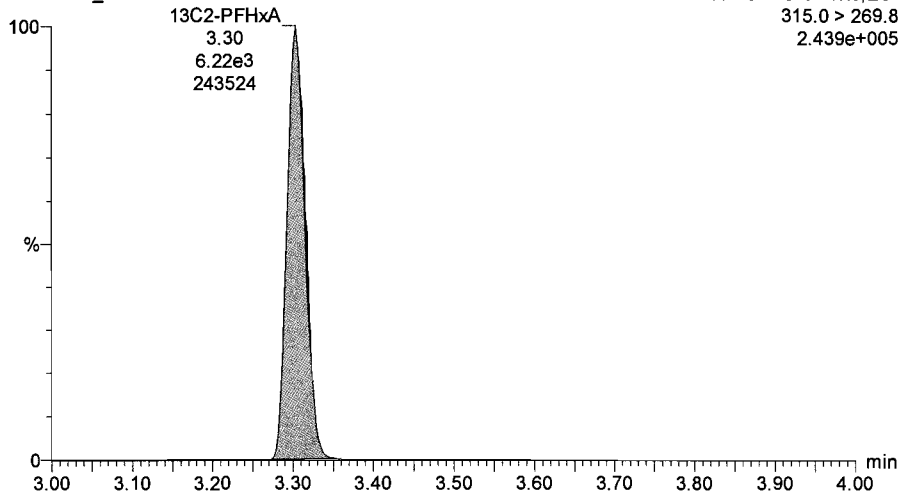
Dataset: Untitled

Last Altered: Monday, April 24, 2017 08:45:19 Pacific Daylight Time

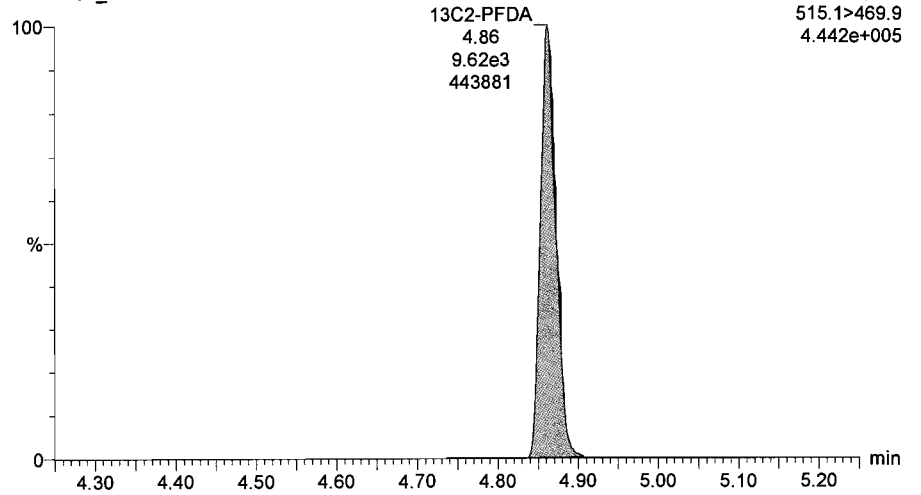
Printed: Monday, April 24, 2017 08:45:26 Pacific Daylight Time

Name: 170421G3\_35, Date: 22-Apr-2017, Time: 00:50:05, ID: ST170421G3-2 PFC CS2 17D2012, Description: PFC CS2 17D2012

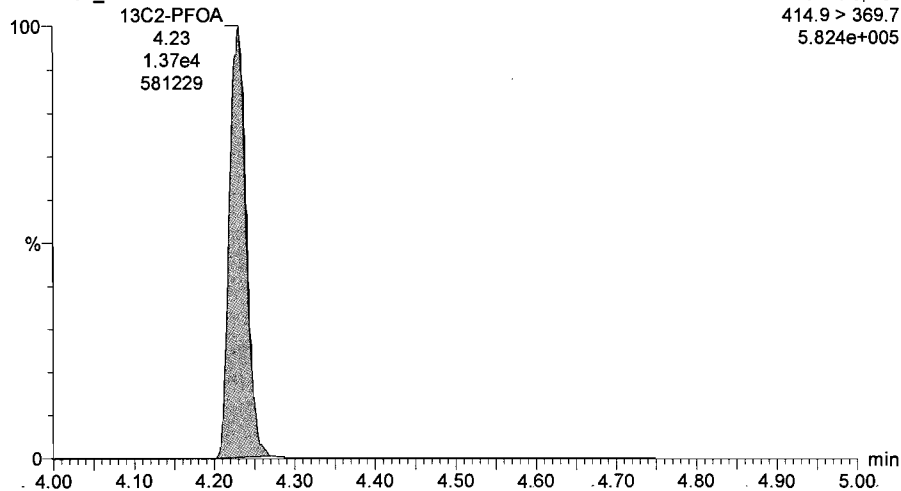
13C2-PFHxA  
170421G3\_35



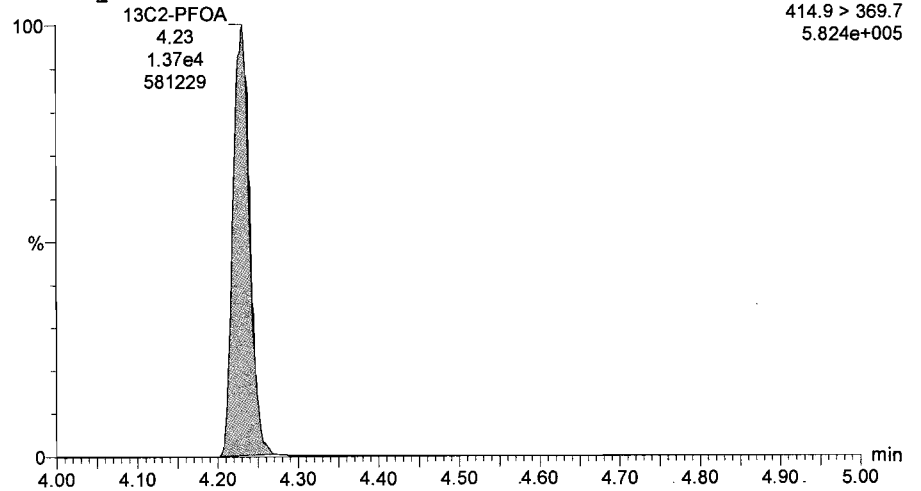
13C2-PFDA  
170421G3\_35



13C2-PFOA  
170421G3\_35



13C2-PFOA  
170421G3\_35



Dataset: U:\G1.PRO\Results\2017\170422G1\170422G1-02.qld

Last Altered: Monday, April 24, 2017 14:13:56 Pacific Daylight Time

Printed: Monday, April 24, 2017 14:15:56 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

Name: 170422G1\_2, Date: 22-Apr-2017, Time: 11:25:46, ID: ST170422G1-1 PFC CS-1 17D2009, Description: PFC CS-1 17D2009

#	Name	Trace	Response	IS Resp	RRF	Wt/Vol	RT	Conc.	%Rec
1	1 PFBS	299 > 79.7	6.36e2	1.08e4		1.000	2.96	1.84	103.7
2	2 PFHpA	363 > 318.9	1.54e3	9.09e3		1.000	3.84	1.90	94.8
3	3 PFHxS	398.9 > 79.6	7.36e2	1.08e4		1.000	3.97	1.84	101.1
4	4 PFOA	413 > 368.7	1.29e3	9.09e3		1.000	4.25	1.82	91.0
5	5 PFOS	499 > 79.9	2.08e2	1.08e4		1.000	4.65	1.58	84.8
6	6 PFNA	463 > 418.8	2.05e3	9.09e3		1.000	4.59	1.66	82.9
7	7 13C2-PFHxA	315.0 > 269.8	3.85e3	9.09e3	0.449	1.000	3.34	9.43	94.3
8	8 13C2-PFDA	515.1 > 469.9	5.55e3	9.09e3	0.803	1.000	4.88	7.60	76.0
9	9 13C2-PFOA	414.9 > 369.7	9.09e3	9.09e3	1.000	1.000	4.25	10.0	100.0
10	10 13C4-PFOS	503.0 > 79.9	1.08e4	1.08e4	1.000	1.000	4.65	28.7	100.0

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DM 4/24/17

✓ AC 4/24/17

Dataset: Untitled

Last Altered: Monday, April 24, 2017 14:33:11 Pacific Daylight Time

Printed: Monday, April 24, 2017 14:33:52 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

Compound name: PFBS

	Name	ID	Acq.Date	Acq.Time
1	170422G1_1	IPA	22-Apr-17	11:13:21
2	170422G1_2	ST170422G1-1 PFC CS-1 17D2009	22-Apr-17	11:25:46
3	170422G1_3	IPA	22-Apr-17	11:38:08
4	170422G1_4	1700466-14 FRB-14-20170418 0.25	22-Apr-17	11:50:33
5	170422G1_5	1700466-15 RW20-20170418 0.25	22-Apr-17	12:02:56
6	170422G1_6	1700466-16 FRB-20-20170418 0.25	22-Apr-17	12:15:20
7	170422G1_7	1700466-17 RW06-20170418 0.25	22-Apr-17	12:28:09
8	170422G1_8	1700466-18 FRB-06-20170418 0.25	22-Apr-17	12:40:50
9	170422G1_9	1700466-19 RW01-20170418 0.25	22-Apr-17	12:53:15
10	170422G1_10	1700466-20 FRB-01-20170418 0.25	22-Apr-17	13:05:41
11	170422G1_11	IPA	22-Apr-17	13:18:03
12	170422G1_12	ST170422G1-2 PFC CS4 17D2014	22-Apr-17	13:30:28
13	170422G1_13	IPA	22-Apr-17	13:42:51



## LC Calibration Standards Review Checklist

Q1

Calibration ID:	ION Ratio	Concentration	C-Cals Name	Sign Date	Correct I-Cal	Manual Integrations	
ST17042261-1 <span style="float: right;">LMH</span>	<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"/>
↓ -2 <span style="float: right;">LMH</span>	<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"/>
_____ <span style="float: right;">LMH</span>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____ <span style="float: right;">LMH</span>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____ <span style="float: right;">LMH</span>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____ <span style="float: right;">LMH</span>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____ <span style="float: right;">LMH</span>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____ <span style="float: right;">LMH</span>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____ <span style="float: right;">LMH</span>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____ <span style="float: right;">LMH</span>	<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: 4/5/17

Run Log Present:

# of Samples per Sequence Checked:

Reviewed By: AC 4/24/17  
Initials/Date

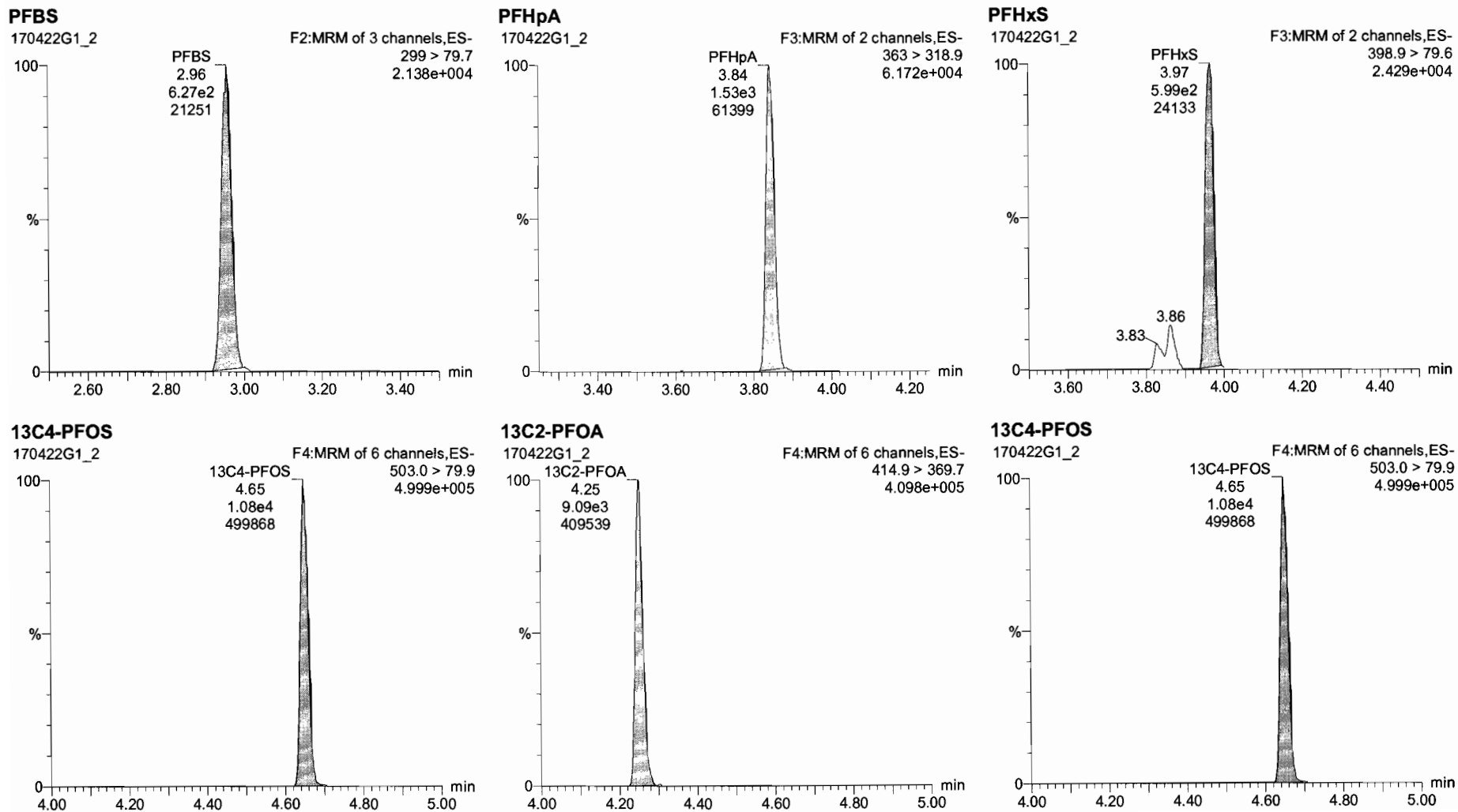
**Comments:**  
 DW-L6

Dataset: Untitled

Last Altered: Monday, April 24, 2017 14:24:52 Pacific Daylight Time  
Printed: Monday, April 24, 2017 14:25:17 Pacific Daylight Time

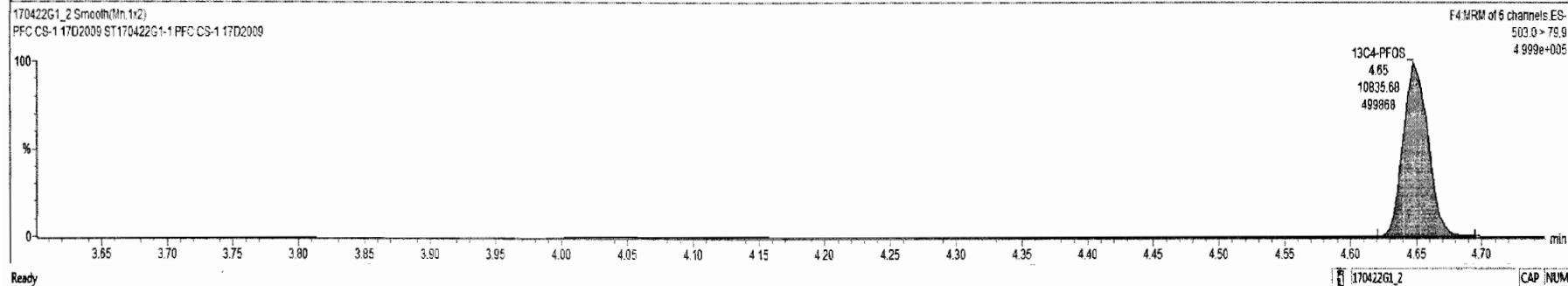
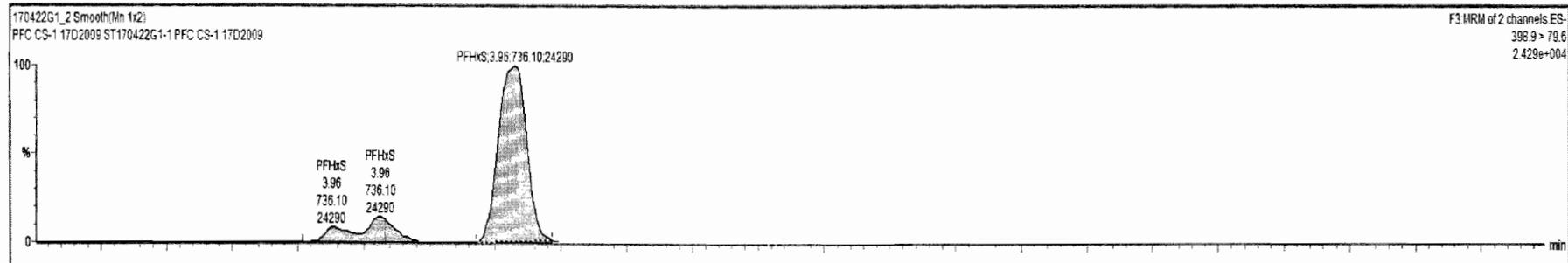
Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59  
Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

Name: 170422G1\_2, Date: 22-Apr-2017, Time: 11:25:46, ID: ST170422G1-1 PFC CS-1 17D2009, Description: PFC CS-1 17D2009



170422G1\_2 - ST170422G1-1 PFC CS-1 17D2009 - PFC CS-1 17D2009

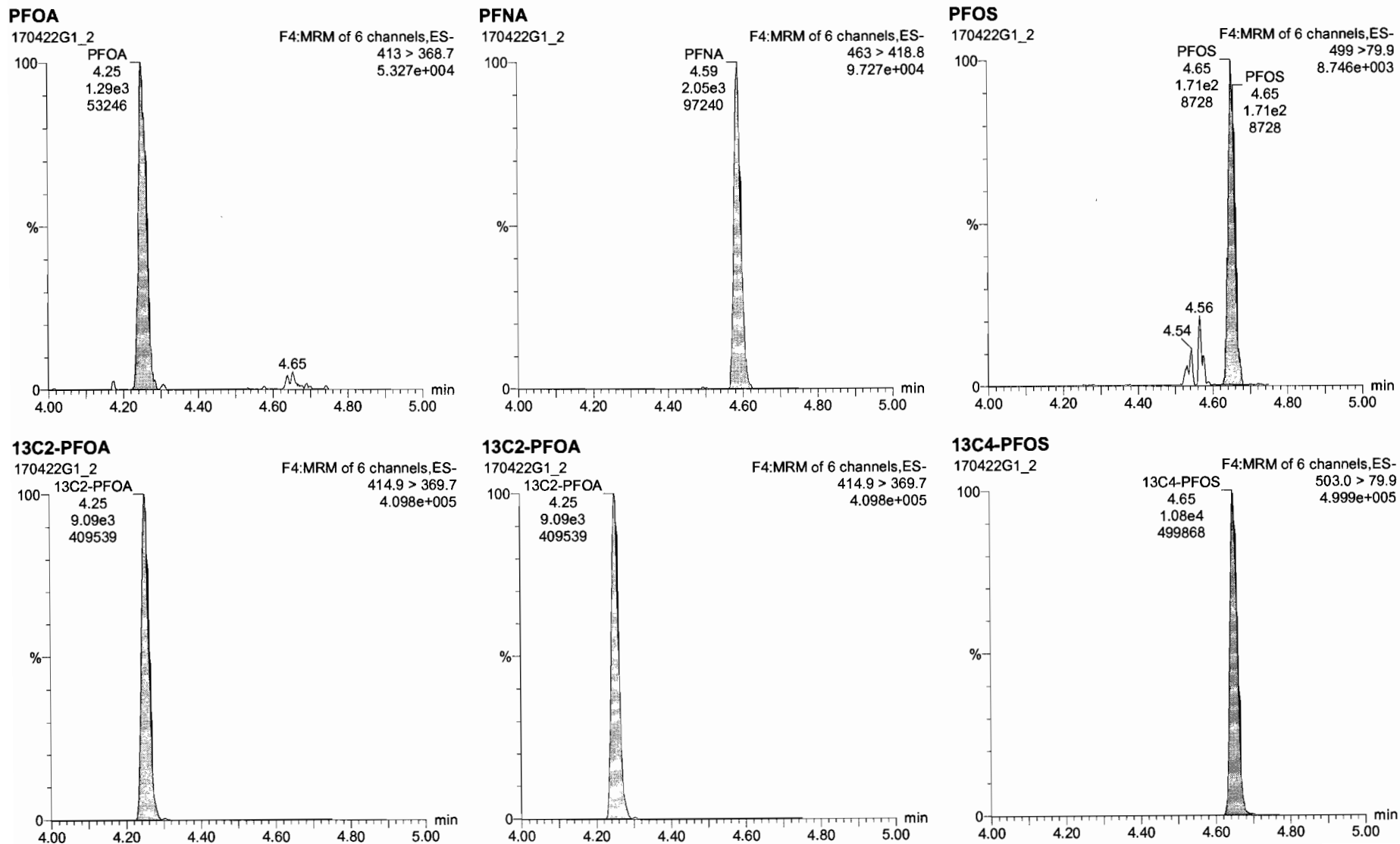
Name	Trace	Area	RRF	WtVol	Pred RT	RT	Conc.	>MDL	%Rec	DL
1	PFBS	299 > 79.7	6.36e2	1.000	2.91	2.96	1.84	NO	103.7	0.0005548
2	PFHxA	363 > 318.9	1.54e3	1.000	3.80	3.84	1.90	NO	94.8	0.0017948
3	PFHxS	398.9 > 79.6	7.36e2	1.000	3.92	3.96	1.84	NO	101.1	0.0026651
4	PFDA	413 > 368.7	1.29e3	1.000	4.25	4.25	1.82	NO	91.0	0.1295224
5	PFOS	499 > 79.9	2.08e2	1.000	4.61	4.65	1.58	NO	84.8	3.1324364
6	PFNA	463 > 418.8	2.05e3	1.000	4.55	4.59	1.66	NO	82.9	0.0257773
7	13C2-PFHxA	315.0 > 269.8	3.85e3	0.449	1.000	3.28	3.34	NO	94.3	0.0030560
8	13C2-PFDA	515.1 > 469.9	5.55e3	0.803	1.000	4.85	4.88	NO	76.0	0.0028893
9	13C2-PFOA	414.9 > 369.7	9.09e3	1.00	1.000	4.22	4.25	NO	100.0	0.0005999
10	13C4-PFOS	503.0 > 79.9	1.08e4	1.00	1.000	4.61	4.65	NO	100.0	0.3255945



Dataset: Untitled

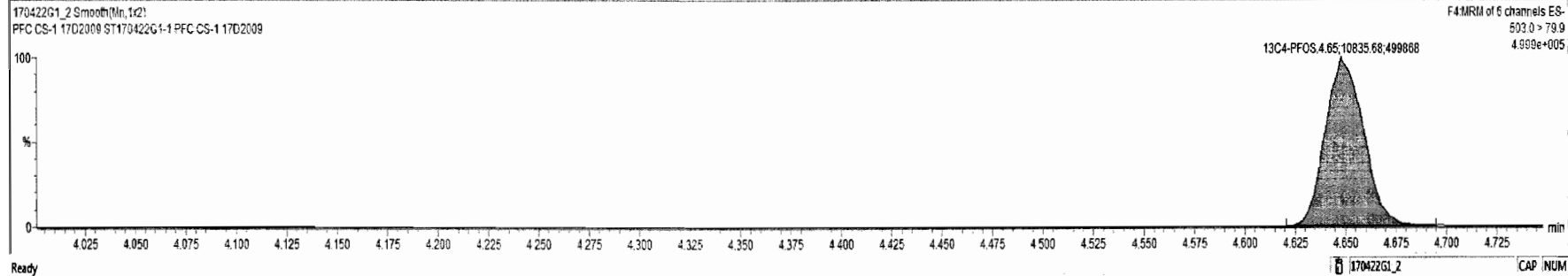
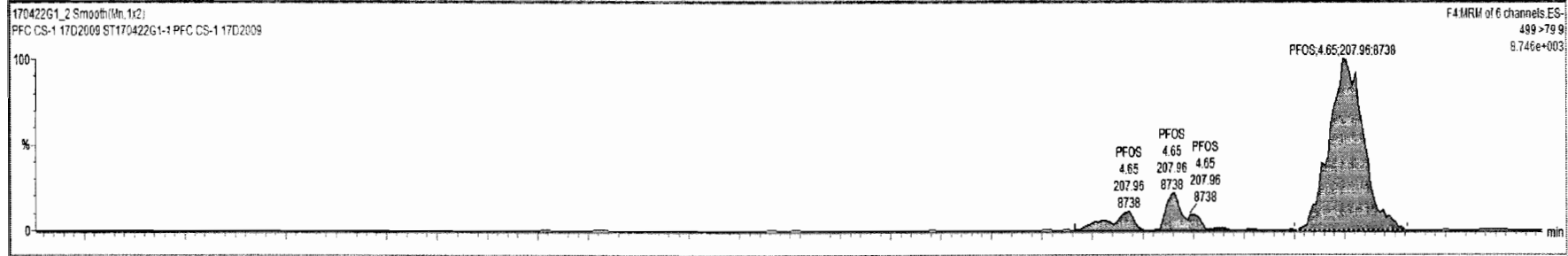
Last Altered: Monday, April 24, 2017 14:24:52 Pacific Daylight Time  
Printed: Monday, April 24, 2017 14:25:17 Pacific Daylight Time

Name: 170422G1\_2, Date: 22-Apr-2017, Time: 11:25:46, ID: ST170422G1-1 PFC CS-1 17D2009, Description: PFC CS-1 17D2009



170422G1\_2 - ST170422G1-1 PFC CS-1 17D2009 - PFC CS-1 17D2009

Name	Trace	Area	RRF	WAVL	Prod.RT	RT	Conc.	->MDL	%Rec	DL	
1	PFBS	299 > 79.7	6.36e2		1.000	2.91	2.96	1.84	NO	103.7	0.0008548
2	PFHpA	363 > 318.9	1.54e3		1.000	3.80	3.84	1.90	NO	94.8	0.0017948
3	PFHxS	388.9 > 79.6	7.36e2		1.000	3.92	3.96	1.84	NO	101.1	0.0026651
4	PFDA	413 > 368.7	1.29e3		1.000	4.25	4.25	1.82	NO	91.0	0.1205224
5	PFOS	499 > 79.9	2.99e2		1.000	4.61	4.65	1.58	NO	84.8	0.1324364
6	PFNA	463 > 418.8	2.05e3		1.000	4.55	4.59	1.66	NO	82.9	0.0257773
7	13C2-PFHxA	315.0 > 288.8	3.85e3	0.449	1.000	3.28	3.34	9.43	NO	94.3	0.0030980
8	13C2-PFDA	515.1 > 469.9	5.55e3	0.803	1.000	4.85	4.88	7.60	NO	76.0	0.0228993
9	13C2-PFOA	414.9 > 369.7	9.69e3	1.00	1.000	4.22	4.25	10.0	NO	100.0	0.0005999
10	13C4-PFOS	503.0 > 79.9	1.08e4	1.00	1.000	4.61	4.65	28.7	NO	100.0	0.3255945



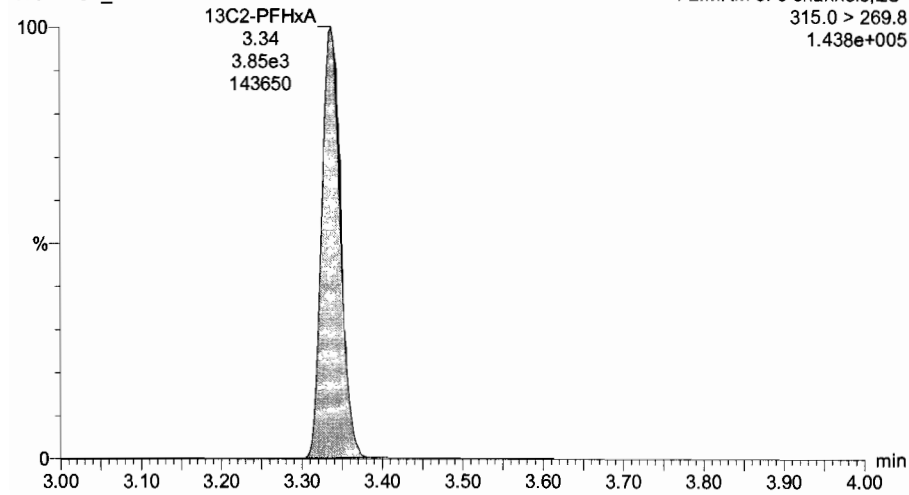
Dataset: Untitled

Last Altered: Monday, April 24, 2017 14:24:52 Pacific Daylight Time  
Printed: Monday, April 24, 2017 14:25:17 Pacific Daylight Time

Name: 170422G1\_2, Date: 22-Apr-2017, Time: 11:25:46, ID: ST170422G1-1 PFC CS-1 17D2009, Description: PFC CS-1 17D2009

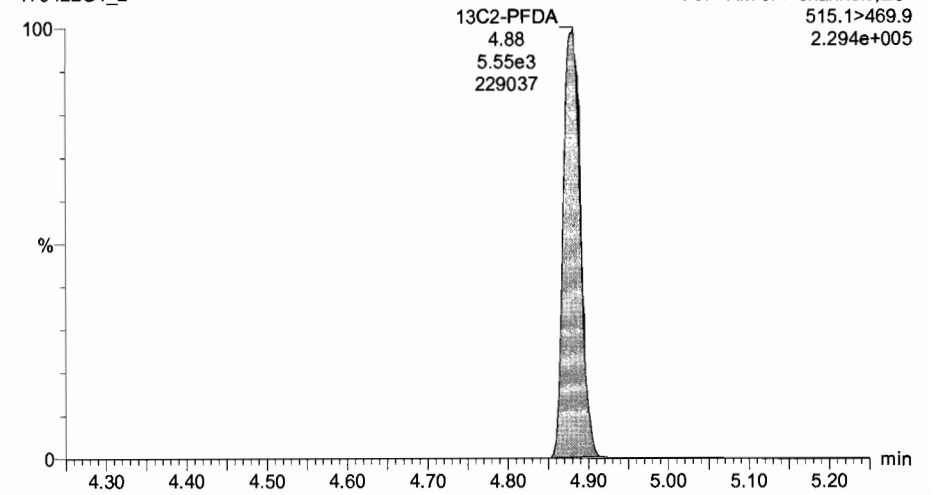
**13C2-PFHxA**

170422G1\_2



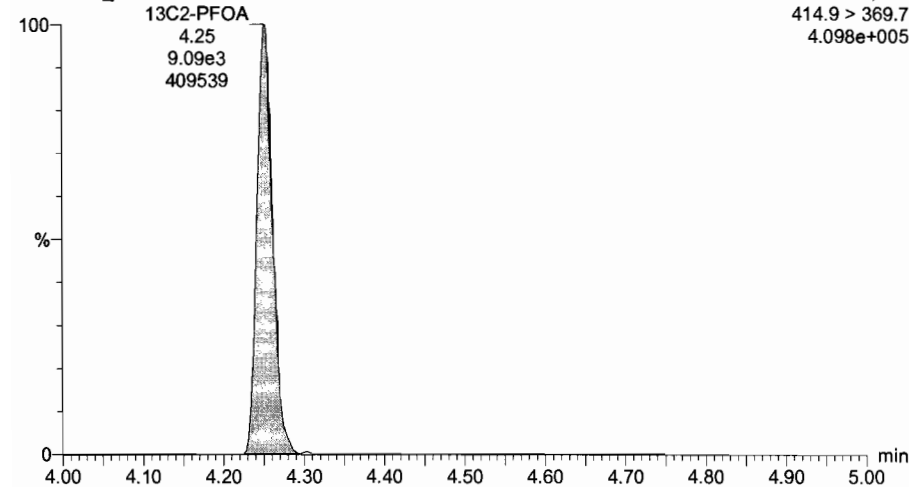
**13C2-PFDA**

170422G1\_2



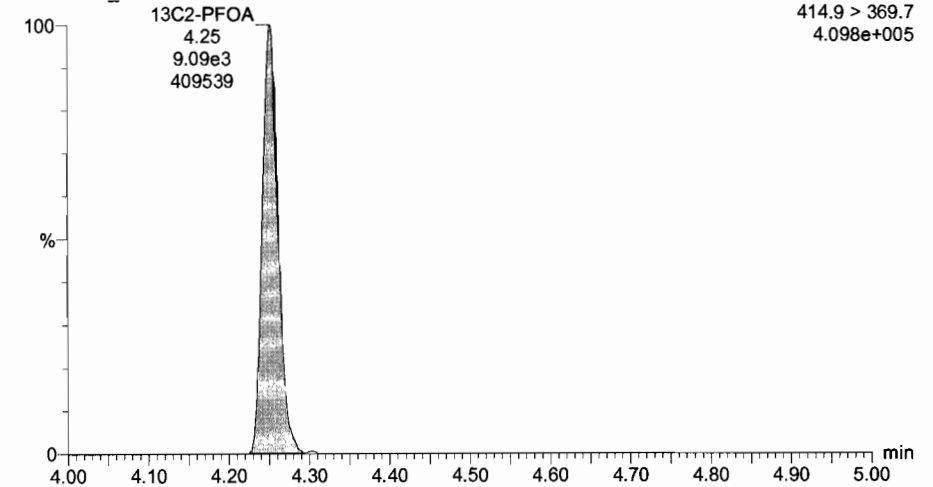
**13C2-PFOA**

170422G1\_2



**13C2-PFOA**

170422G1\_2



Dataset: U:\G1.PRO\Results\2017\170422G1\170422G1-12.qld

Last Altered: Monday, April 24, 2017 14:28:46 Pacific Daylight Time

Printed: Monday, April 24, 2017 14:29:21 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

Name: 170422G1\_12, Date: 22-Apr-2017, Time: 13:30:28, ID: ST170422G1-2 PFC CS4 17D2014, Description: PFC CS4 17D2014

#	Name	Trace	Response	IS Resp	RRF	Wt/Vol	RT	Conc.	%Rec
1	1 PFBS	299 > 79.7	1.09e4	1.60e4		1.000	2.89	22.3	101.0
2	2 PFHpA	363 > 318.9	2.52e4	1.22e4		1.000	3.79	23.8	95.1
3	3 PFHxS	398.9 > 79.6	1.25e4	1.60e4		1.000	3.91	22.5	98.8
4	4 PFOA	413 > 368.7	2.23e4	1.22e4		1.000	4.21	24.2	96.8
5	5 PFOS	499 > 79.9	3.97e3	1.60e4		1.000	4.61	21.9	94.7
6	6 PFNA	463 > 418.8	3.61e4	1.22e4		1.000	4.54	22.5	90.1
7	7 13C2-PFHxA	315.0 > 269.8	5.67e3	1.22e4	0.449	1.000	3.28	10.4	103.7
8	8 13C2-PFDA	515.1 > 469.9	9.06e3	1.22e4	0.803	1.000	4.84	9.25	92.5
9	9 13C2-PFOA	414.9 > 369.7	1.22e4	1.22e4	1.000	1.000	4.20	10.0	100.0
10	10 13C4-PFOS	503.0 > 79.9	1.60e4	1.60e4	1.000	1.000	4.61	28.7	100.0

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Dataset: Untitled

Last Altered: Monday, April 24, 2017 14:33:11 Pacific Daylight Time

Printed: Monday, April 24, 2017 14:33:52 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

Compound name: PFBS

	Name	ID	Acq.Date	Acq.Time
1	170422G1_1	IPA	22-Apr-17	11:13:21
2	170422G1_2	ST170422G1-1 PFC CS-1 17D2009	22-Apr-17	11:25:46
3	170422G1_3	IPA	22-Apr-17	11:38:08
4	170422G1_4	1700466-14 FRB-14-20170418 0.25	22-Apr-17	11:50:33
5	170422G1_5	1700466-15 RW20-20170418 0.25	22-Apr-17	12:02:56
6	170422G1_6	1700466-16 FRB-20-20170418 0.25	22-Apr-17	12:15:20
7	170422G1_7	1700466-17 RW06-20170418 0.25	22-Apr-17	12:28:09
8	170422G1_8	1700466-18 FRB-06-20170418 0.25	22-Apr-17	12:40:50
9	170422G1_9	1700466-19 RW01-20170418 0.25	22-Apr-17	12:53:15
10	170422G1_10	1700466-20 FRB-01-20170418 0.25	22-Apr-17	13:05:41
11	170422G1_11	IPA	22-Apr-17	13:18:03
12	170422G1_12	ST170422G1-2 PFC CS4 17D2014	22-Apr-17	13:30:28
13	170422G1_13	IPA	22-Apr-17	13:42:51

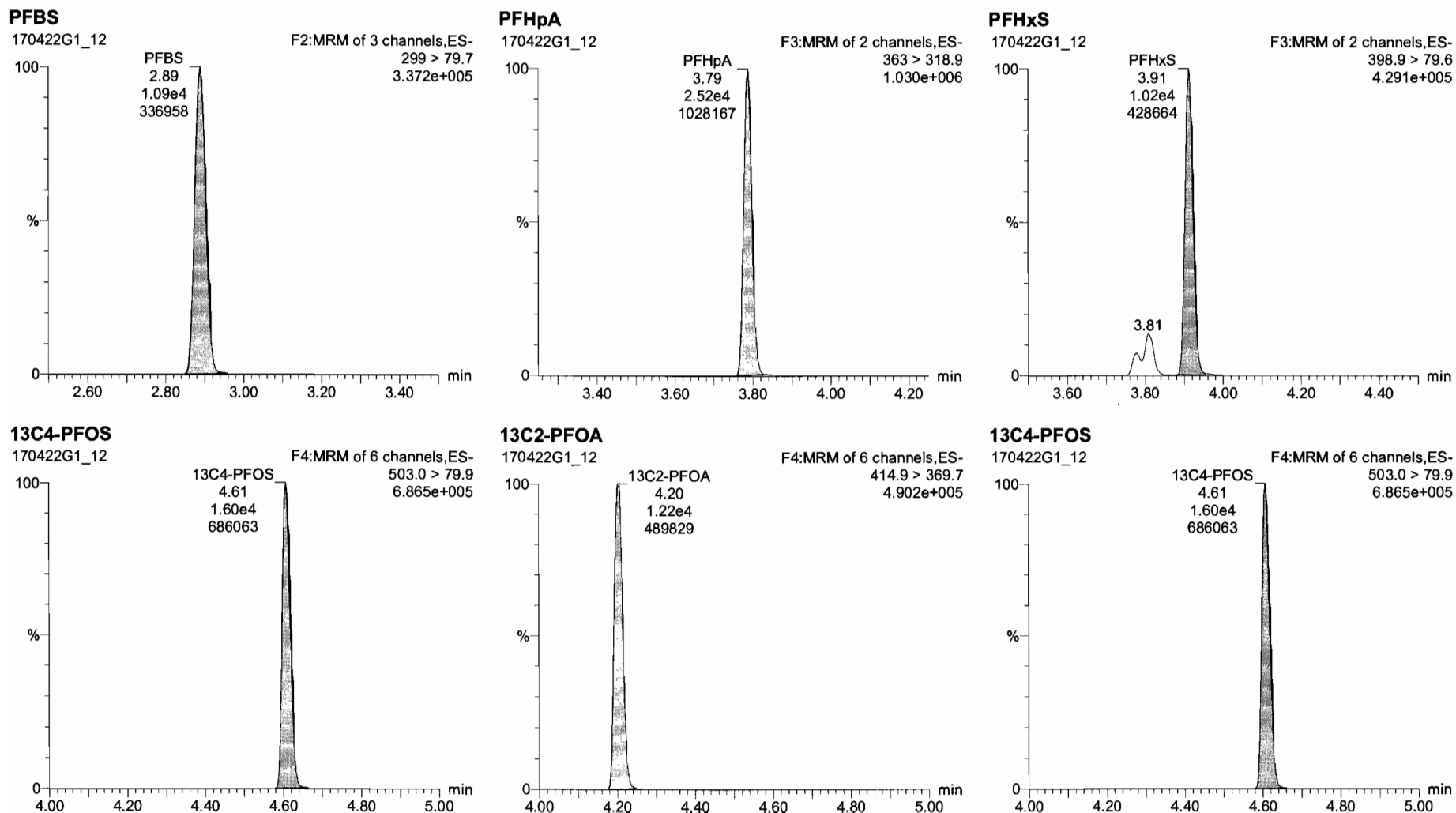


Dataset: Untitled

Last Altered: Monday, April 24, 2017 14:27:47 Pacific Daylight Time  
Printed: Monday, April 24, 2017 14:28:24 Pacific Daylight Time

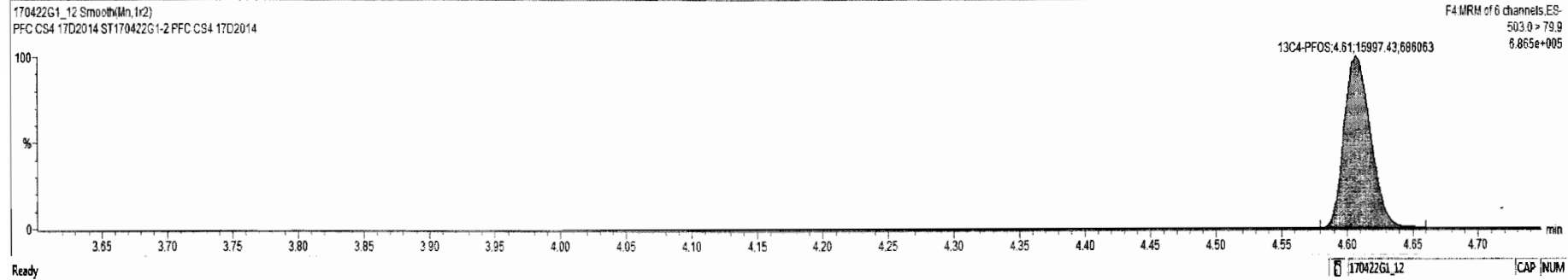
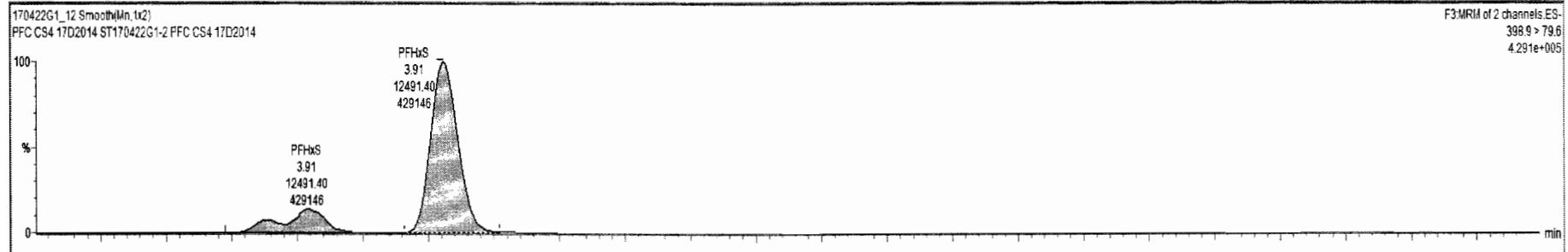
Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59  
Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

Name: 170422G1\_12, Date: 22-Apr-2017, Time: 13:30:28, ID: ST170422G1-2 PFC CS4 17D2014, Description: PFC CS4 17D2014



170422G1\_12 - ST170422G1-2 PFC CS4 17D2014 - PFC CS4 17D2014

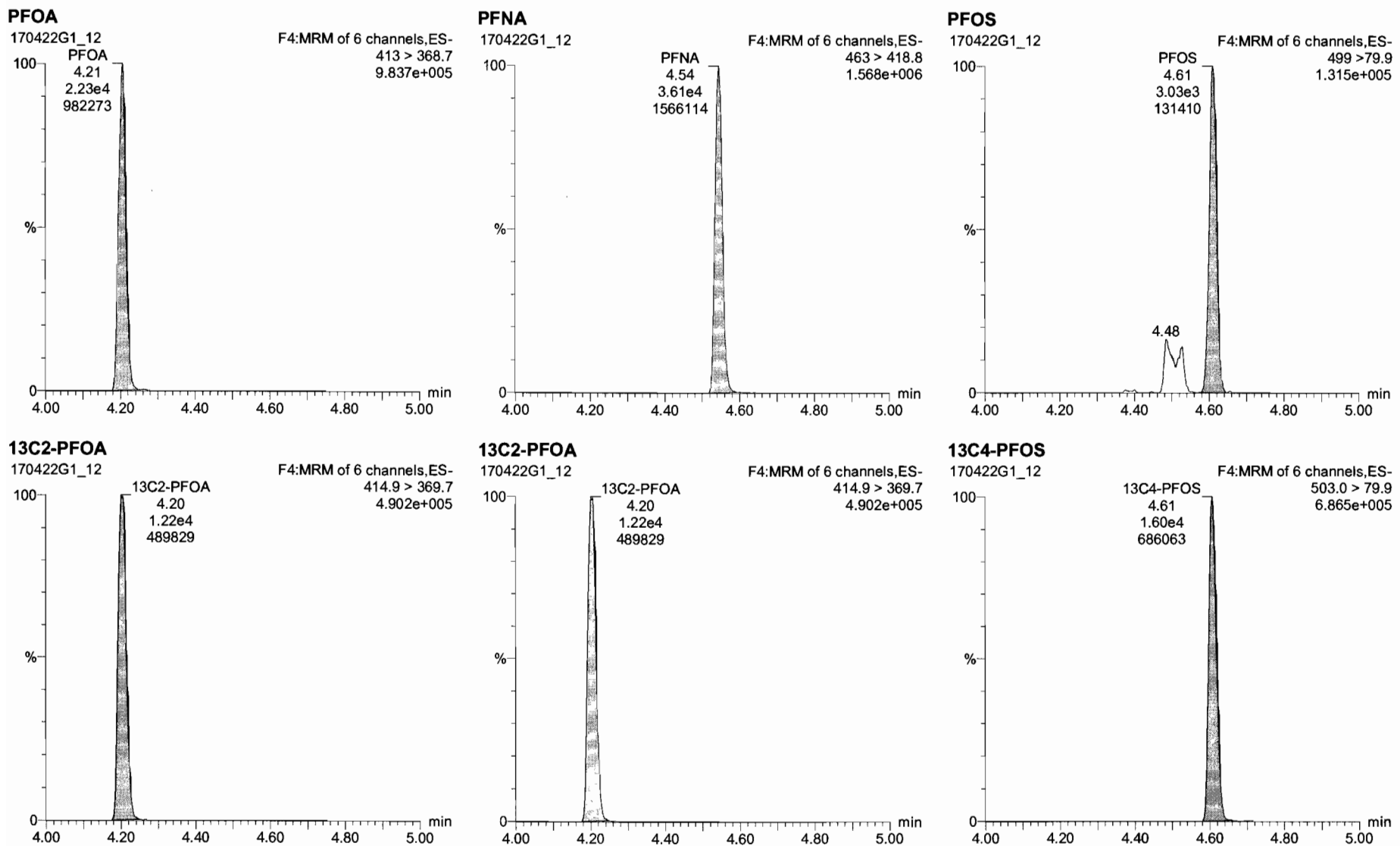
Name	Trace	Area	RRF	WVVol	Pred_RT	RT	Conc.	>MDL	%Rec	DL	
1	PFBS	299 > 79.7	1.09e4		1.000	2.91	2.89	22.3	YES	101.0	0.0007577
2	PFHpA	363 > 318.9	2.52e4		1.000	3.80	3.79	23.8	YES	95.1	0.0144645
3	PFHxS	398.9 > 79.6	1.25e4		1.000	3.92	3.91	22.5	YES	88.8	0.0047914
4	PFOA	413 > 368.7	2.23e4		1.000	4.20	4.21	24.2	YES	96.8	0.0116034
5	PFOS	499 > 79.9	3.97e3		1.000	4.61	4.61	21.9	YES	94.7	0.1074469
6	PFNA	463 > 418.8	3.61e4		1.000	4.55	4.54	22.5	YES	90.1	0.0048322
7	13C2-PFHxA	315.0 > 269.8	5.67e3	0.449	1.000	3.28	3.28	10.4	NO	103.7	0.0012195
8	13C2-PFDA	515.1 > 489.9	9.06e3	0.803	1.000	4.85	4.84	9.25	NO	92.5	0.1804765
9	13C2-PFOA	414.9 > 369.7	1.22e4	1.00	1.000	4.22	4.22	10.0	NO	100.0	0.0096120
10	13C4-PFOS	503.0 > 79.9	1.60e4	1.00	1.000	4.61	4.61	28.7	NO	100.0	0.4011214



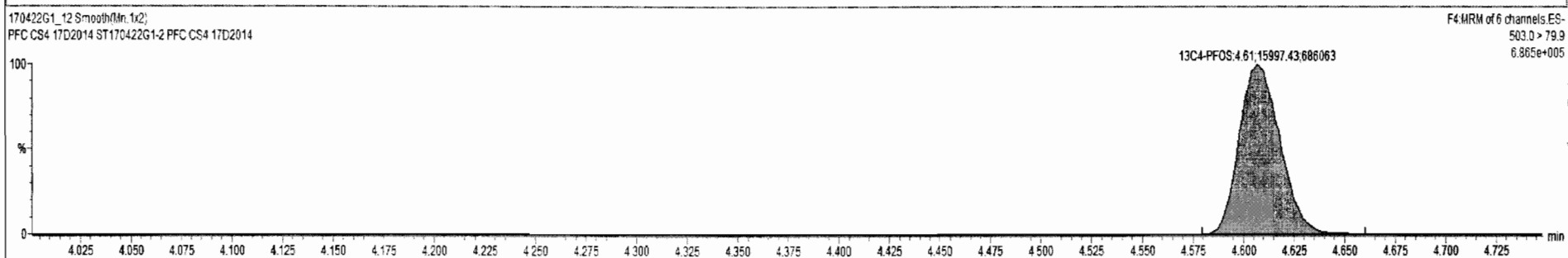
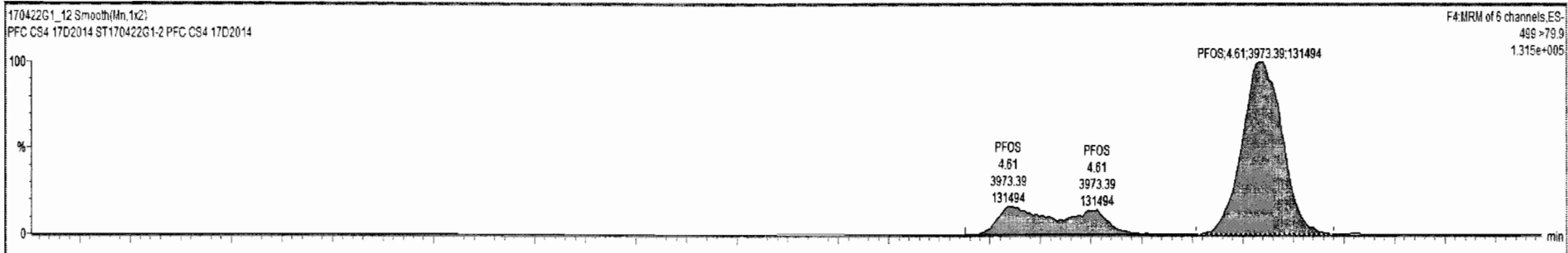
Dataset: Untitled

Last Altered: Monday, April 24, 2017 14:27:47 Pacific Daylight Time  
Printed: Monday, April 24, 2017 14:28:24 Pacific Daylight Time

Name: 170422G1\_12, Date: 22-Apr-2017, Time: 13:30:28, ID: ST170422G1-2 PFC CS4 17D2014, Description: PFC CS4 17D2014



Name	Trace	Area	RRF	WtVol	Prod RT	RT	Conc.	>MDL	%Rec	DG	
1	PFBS	299 > 79.7	1.09e4		1.000	2.91	2.89	22.3	YES	101.0	0.0007577
2	PFHpA	363 > 318.9	2.52e4		1.000	3.80	3.79	23.8	YES	95.1	0.0144645
3	PFhS	396.9 > 79.6	1.25e4		1.000	3.92	3.91	22.5	YES	98.8	0.0047914
4	PFDA	413 > 368.7	2.23e4		1.000	4.20	4.21	24.2	YES	96.8	0.0116034
5	PFOS	499 > 79.9	3.97e3		1.000	4.61	4.61	21.9	YES	94.7	0.1074469
6	PFNA	463 > 418.8	3.61e4		1.000	4.55	4.54	22.5	YES	90.1	0.0048322
7	13C2-PFhxA	315.0 > 269.8	5.67e3	0.449	1.000	3.28	3.28	10.4	NO	103.7	0.0012195
8	13C2-PFDA	515.1 > 469.9	9.06e3	0.803	1.000	4.85	4.84	9.25	NO	92.5	0.1804765
9	13C2-PFDA	414.9 > 369.7	1.22e4	1.00	1.000	4.22	4.20	10.0	NO	100.0	0.0098120
10	13C4-PFOS	503.0 > 79.9	1.60e4	1.00	1.000	4.61	4.61	28.7	NO	100.0	0.4011214



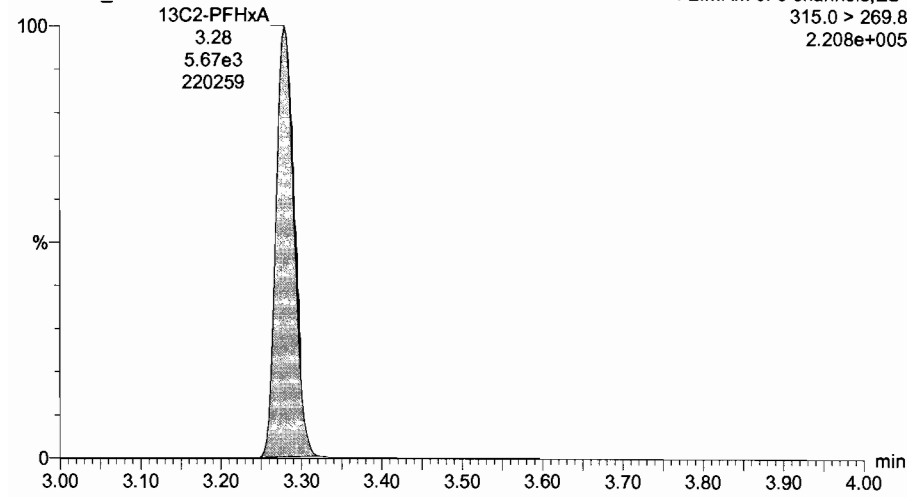
Dataset: Untitled

Last Altered: Monday, April 24, 2017 14:27:47 Pacific Daylight Time  
Printed: Monday, April 24, 2017 14:28:24 Pacific Daylight Time

Name: 170422G1\_12, Date: 22-Apr-2017, Time: 13:30:28, ID: ST170422G1-2 PFC CS4 17D2014, Description: PFC CS4 17D2014

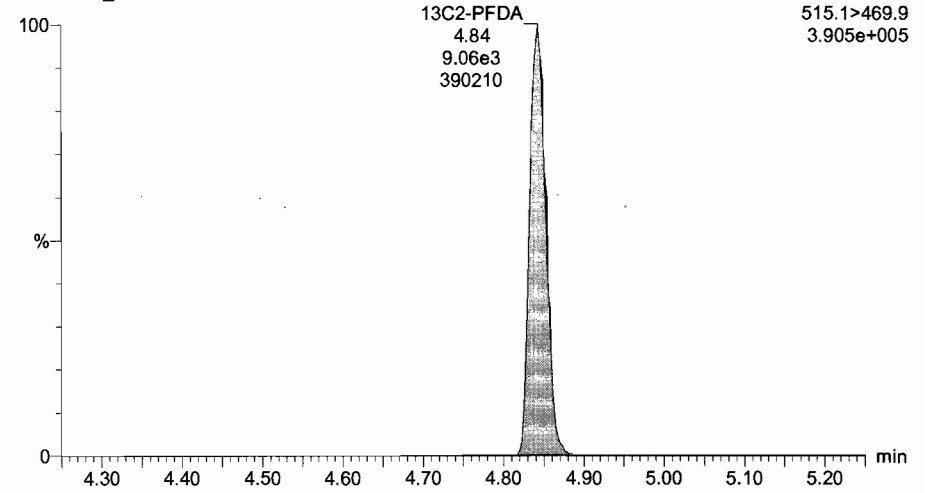
**13C2-PFHxA**

170422G1\_12



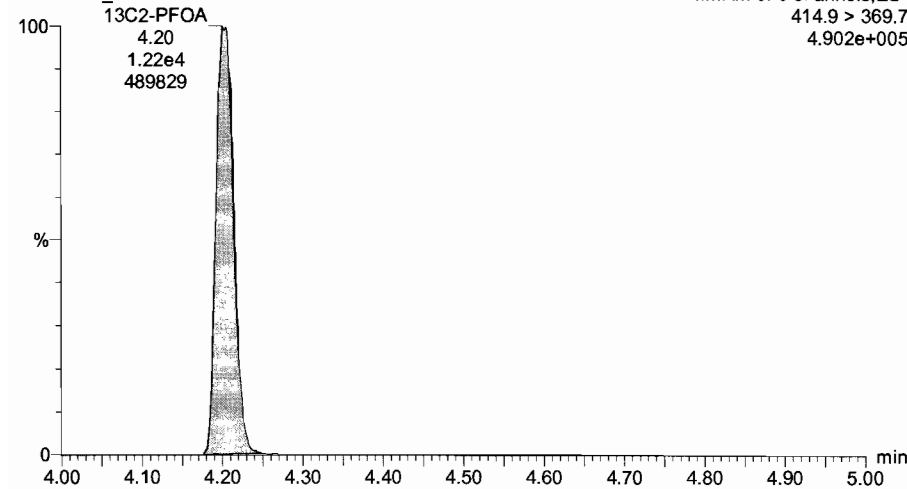
**13C2-PFDA**

170422G1\_12



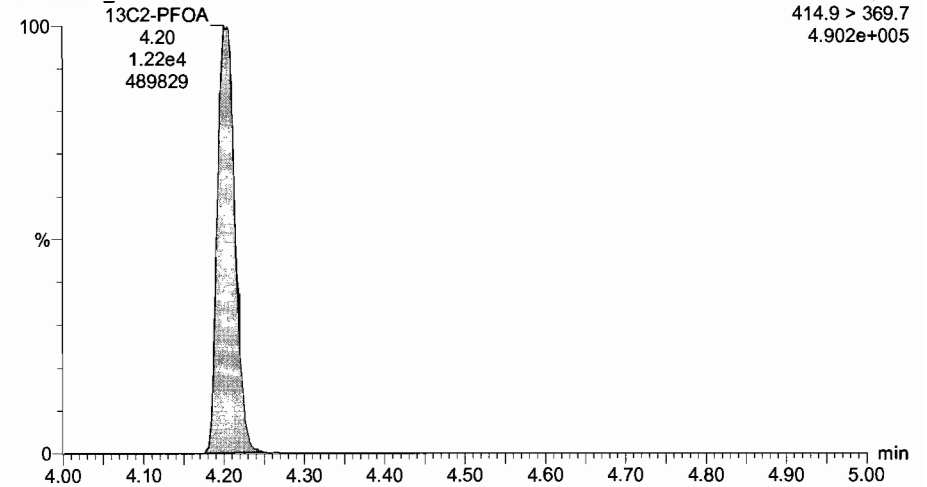
**13C2-PFOA**

170422G1\_12



**13C2-PFOA**

170422G1\_12



## **INITIAL CALIBRATION**

Vista Analytical Laboratory Q2

Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-CRV.qld

Last Altered: Friday, April 21, 2017 10:28:44 Pacific Daylight Time

Printed: Friday, April 21, 2017 10:37:08 Pacific Daylight Time

Method: U:\G1.PRO\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

Calibration: U:\G1.PRO\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

Compound name: PFBS

Coefficient of Determination: R<sup>2</sup> = 0.999454

Calibration curve: -0.00214273 \* x<sup>2</sup> + 0.921483 \* x

Response type: Internal Std ( Ref 10 ), Area \* ( IS Conc. / IS Area )

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

#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 170420G1_3	0.885	2.91	3.00e2	1.07e4	0.877	-0.9	0.912
2	2 170420G1_4	1.77	2.89	5.59e2	1.05e4	1.67	-5.9	0.864
3	3 170420G1_5	4.42	2.89	1.52e3	1.11e4	4.29	-2.9	0.886
4	4 170420G1_6	8.85	2.89	2.99e3	1.03e4	9.26	4.7	0.944
5	5 170420G1_7	13.3	2.88	4.36e3	1.07e4	13.1	-1.4	0.881
6	6 170420G1_8	17.7	2.89	5.52e3	9.94e3	18.0	1.9	0.900
7	7 170420G1_9	22.1	2.89	6.37e3	9.61e3	21.7	-1.6	0.861
8	8 170420G1_10	44.2	2.89	1.32e4	1.03e4	44.2	0.1	0.827
9	9 170420G1_11	97.2	2.89	2.36e4	8.80e3	114	17.0	0.793

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Ⓐ Excluded

Compound name: PFHpA

Coefficient of Determination: R<sup>2</sup> = 0.999320

Calibration curve: -0.0012775 \* x<sup>2</sup> + 0.897966 \* x

Response type: Internal Std ( Ref 9 ), Area \* ( IS Conc. / IS Area )

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

#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 170420G1_3	1.00	3.80	6.69e2	7.58e3	0.985	-1.5	0.883
2	2 170420G1_4	2.00	3.78	1.32e3	7.48e3	1.96	-1.8	0.879
3	3 170420G1_5	5.00	3.78	3.37e3	7.49e3	5.05	1.0	0.901
4	4 170420G1_6	10.0	3.78	6.90e3	7.22e3	10.8	8.1	0.956
5	5 170420G1_7	15.0	3.78	9.65e3	7.42e3	14.8	-1.4	0.867
6	6 170420G1_8	20.0	3.79	1.25e4	7.06e3	20.3	1.5	0.885
7	7 170420G1_9	25.0	3.78	1.47e4	6.80e3	24.9	-0.3	0.864
8	8 170420G1_10	50.0	3.78	2.90e4	7.15e3	48.5	-3.1	0.810
9	9 170420G1_11	110	3.78	5.44e4	6.50e3	111	0.7	0.762

Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-CRV.qld

Last Altered: Friday, April 21, 2017 10:28:44 Pacific Daylight Time  
 Printed: Friday, April 21, 2017 10:37:08 Pacific Daylight Time

**Compound name: PFHxS**

Coefficient of Determination: R<sup>2</sup> = 0.998827

Calibration curve: -0.00311585 \* x<sup>2</sup> + 1.06481 \* x

Response type: Internal Std ( Ref 10 ), Area \* ( IS Conc. / IS Area )

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

Ⓐ Excluded

#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 170420G1_3	0.910	3.92	3.44e2	1.07e4	0.873	-4.1	1.02
2	2 170420G1_4	1.82	3.91	6.67e2	1.05e4	1.72	-5.5	1.00
3	3 170420G1_5	4.56	3.90	1.67e3	1.11e4	4.09	-10.2	0.944
4	4 170420G1_6	9.12	3.90	3.55e3	1.03e4	9.60	5.2	1.09
5	5 170420G1_7	13.7	3.91	5.28e3	1.07e4	13.8	1.2	1.03
6	6 170420G1_8	18.2	3.91	6.48e3	9.94e3	18.6	2.1	1.03
7	7 170420G1_9	22.8	3.91	7.50e3	9.61e3	22.5	-1.3	0.982
8	8 170420G1_10	45.6	3.91	1.51e4	1.03e4	45.5	-0.3	0.921
9	9 170420G1_11	100	3.91	2.83e4	8.80e3		Ⓐ	0.921

**Compound name: PFOA**

Coefficient of Determination: R<sup>2</sup> = 0.999188

Calibration curve: -0.00107552 \* x<sup>2</sup> + 0.780551 \* x

Response type: Internal Std ( Ref 9 ), Area \* ( IS Conc. / IS Area )

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

#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 170420G1_3	1.00	4.21	6.48e2	7.58e3	1.10	9.8	0.856
2	2 170420G1_4	2.00	4.20	1.01e3	7.48e3	1.73	-13.5	0.673
3	3 170420G1_5	5.00	4.20	3.07e3	7.49e3	5.28	5.6	0.818
4	4 170420G1_6	10.0	4.20	5.90e3	7.22e3	10.6	6.3	0.818
5	5 170420G1_7	15.0	4.20	8.49e3	7.42e3	15.0	-0.3	0.762
6	6 170420G1_8	20.0	4.21	1.09e4	7.06e3	20.3	1.5	0.770
7	7 170420G1_9	25.0	4.20	1.24e4	6.80e3	24.3	-2.9	0.732
8	8 170420G1_10	50.0	4.20	2.57e4	7.15e3	49.3	-1.3	0.718
9	9 170420G1_11	110	4.20	4.75e4	6.50e3	110	0.4	0.664



Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-CRV.qld

Last Altered: Friday, April 21, 2017 10:28:44 Pacific Daylight Time  
 Printed: Friday, April 21, 2017 10:37:08 Pacific Daylight Time

**Compound name: PFOS**

Coefficient of Determination:  $R^2 = 0.994127$   
 Calibration curve:  $-0.00117183 * x^2 + 0.3509 * x$   
 Response type: Internal Std ( Ref 10 ), Area \* ( IS Conc. / IS Area )  
 Curve type: 2nd Order, Origin: Force, Weighting: 1/x, Axis trans: None

Ⓐ Excluded.

	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 170420G1_3	0.930	4.62	6.68e1	1.07e4	0.513	-44.8	0.193
2	2 170420G1_4	1.86	4.60	2.40e2	1.05e4	1.88	1.3	0.353
3	3 170420G1_5	4.64	4.60	5.15e2	1.11e4	3.84	-17.2	0.287
4	4 170420G1_6	9.26	4.61	1.15e3	1.03e4	9.50	2.6	0.348
5	5 170420G1_7	13.9	4.61	1.74e3	1.07e4	13.9	-0.0	0.334
6	6 170420G1_8	18.6	4.61	2.15e3	9.94e3	18.9	1.5	0.334
7	7 170420G1_9	23.1	4.61	2.69e3	9.61e3	25.0	7.9	0.347
8	8 170420G1_10	46.3	4.61	4.85e3	1.03e4	45.1	-2.5	0.290
9	9 170420G1_11	102	4.61	9.70e3	8.80e3		Ⓐ	0.310

**Compound name: PFNA**

Coefficient of Determination:  $R^2 = 0.999465$   
 Calibration curve:  $-0.00226354 * x^2 + 1.36399 * x$   
 Response type: Internal Std ( Ref 9 ), Area \* ( IS Conc. / IS Area )  
 Curve type: 2nd Order, Origin: Force, Weighting: 1/x, Axis trans: None

	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 170420G1_3	1.00	4.55	1.02e3	7.58e3	0.986	-1.4	1.34
2	2 170420G1_4	2.00	4.54	2.04e3	7.48e3	2.00	0.1	1.36
3	3 170420G1_5	5.00	4.54	4.84e3	7.49e3	4.78	-4.4	1.29
4	4 170420G1_6	10.0	4.55	1.01e4	7.22e3	10.5	4.5	1.40
5	5 170420G1_7	15.0	4.55	1.48e4	7.42e3	15.0	0.3	1.33
6	6 170420G1_8	20.0	4.55	1.93e4	7.06e3	20.8	4.0	1.37
7	7 170420G1_9	25.0	4.55	2.17e4	6.80e3	24.3	-2.7	1.27
8	8 170420G1_10	50.0	4.55	4.41e4	7.15e3	49.2	-1.6	1.23
9	9 170420G1_11	110	4.55	7.99e4	6.50e3	110	0.4	1.12

Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-CRV.qld

Last Altered: Friday, April 21, 2017 10:28:44 Pacific Daylight Time

Printed: Friday, April 21, 2017 10:37:08 Pacific Daylight Time

**Compound name: 13C2-PFHxA**

Response Factor: 0.448587

RRF SD: 0.0203778, Relative SD: 4.54266

Response type: Internal Std ( Ref 9 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 170420G1_3	10.0	3.28	3.10e3	7.58e3	9.12	-8.8	0.409
2	2 170420G1_4	10.0	3.27	3.17e3	7.48e3	9.45	-5.5	0.424
3	3 170420G1_5	10.0	3.27	3.36e3	7.49e3	10.0	-0.0	0.448
4	4 170420G1_6	10.0	3.27	3.19e3	7.22e3	9.86	-1.4	0.442
5	5 170420G1_7	10.0	3.27	3.47e3	7.42e3	10.4	4.3	0.468
6	6 170420G1_8	10.0	3.27	3.30e3	7.06e3	10.4	4.1	0.467
7	7 170420G1_9	10.0	3.27	3.14e3	6.80e3	10.3	3.0	0.462
8	8 170420G1_10	10.0	3.27	3.29e3	7.15e3	10.3	2.6	0.460
9	9 170420G1_11	10.0	3.27	2.97e3	6.50e3	10.2	1.8	0.457

**Compound name: 13C2-PFDA**

Response Factor: 0.802798

RRF SD: 0.0243912, Relative SD: 3.03828

Response type: Internal Std ( Ref 9 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 170420G1_3	10.0	4.85	6.25e3	7.58e3	10.3	2.7	0.825
2	2 170420G1_4	10.0	4.84	6.09e3	7.48e3	10.1	1.4	0.814
3	3 170420G1_5	10.0	4.85	5.99e3	7.49e3	9.96	-0.4	0.800
4	4 170420G1_6	10.0	4.85	5.61e3	7.22e3	9.67	-3.3	0.777
5	5 170420G1_7	10.0	4.85	6.18e3	7.42e3	10.4	3.7	0.832
6	6 170420G1_8	10.0	4.85	5.81e3	7.06e3	10.3	2.6	0.824
7	7 170420G1_9	10.0	4.85	5.26e3	6.80e3	9.64	-3.6	0.774
8	8 170420G1_10	10.0	4.85	5.49e3	7.15e3	9.57	-4.3	0.768
9	9 170420G1_11	10.0	4.85	5.28e3	6.50e3	10.1	1.2	0.812

Vista Analytical Laboratory Q2

Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-CRV.qld

Last Altered: Friday, April 21, 2017 10:28:44 Pacific Daylight Time

Printed: Friday, April 21, 2017 10:37:08 Pacific Daylight Time

**Compound name: 13C2-PFOA**

Response Factor: 1

RRF SD: 0, Relative SD: 0

Response type: Internal Std ( Ref 9 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

ⓐ Excluded.

	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 170420G1_3	10.0	4.21	7.58e3	7.58e3	10.0	0.0	1.00
2	2 170420G1_4	10.0	4.20	7.48e3	7.48e3	10.0	0.0	1.00
3	3 170420G1_5	10.0	4.20	7.49e3	7.49e3	10.0	0.0	1.00
4	4 170420G1_6	10.0	4.20	7.22e3	7.22e3	10.0	0.0	1.00
5	5 170420G1_7	10.0	4.20	7.42e3	7.42e3	10.0	0.0	1.00
6	6 170420G1_8	10.0	4.21	7.06e3	7.06e3	10.0	0.0	1.00
7	7 170420G1_9	10.0	4.20	6.80e3	6.80e3	10.0	0.0	1.00
8	8 170420G1_10	10.0	4.20	7.15e3	7.15e3	10.0	0.0	1.00
9	9 170420G1_11	10.0	4.20	6.50e3	6.50e3	10.0	0.0	1.00

**Compound name: 13C4-PFOS**

Response Factor: 1

RRF SD: 4.19625e-017, Relative SD: 4.19625e-015

Response type: Internal Std ( Ref 10 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 170420G1_3	28.7	4.62	1.07e4	1.07e4	28.7	0.0	1.00
2	2 170420G1_4	28.7	4.61	1.05e4	1.05e4	28.7	0.0	1.00
3	3 170420G1_5	28.7	4.61	1.11e4	1.11e4	28.7	0.0	1.00
4	4 170420G1_6	28.7	4.61	1.03e4	1.03e4	28.7	0.0	1.00
5	5 170420G1_7	28.7	4.61	1.07e4	1.07e4	28.7	0.0	1.00
6	6 170420G1_8	28.7	4.61	9.94e3	9.94e3	28.7	-0.0	1.00
7	7 170420G1_9	28.7	4.61	9.61e3	9.61e3	28.7	0.0	1.00
8	8 170420G1_10	28.7	4.61	1.03e4	1.03e4	28.7	0.0	1.00
9	9 170420G1_11	28.7	4.61	8.80e3	8.80e3	28.7	0.0	1.00 ⓐ

Dataset: Untitled

Last Altered: Friday, April 21, 2017 10:41:36 Pacific Daylight Time  
Printed: Friday, April 21, 2017 10:41:56 Pacific Daylight Time

Method: U:\G1.PRO\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59  
Calibration: U:\G1.PRO\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

Compound name: PFBS

	Name	ID	Acq.Date	Acq.Time
1	170420G1_1	IPA	20-Apr-17	16:46:55
2	170420G1_2	ST170420G1-1 PFC CS-3 17D2007	20-Apr-17	16:59:38
3	170420G1_3	ST170420G1-2 PFC CS-2 17D2008	20-Apr-17	17:12:23
4	170420G1_4	ST170420G1-3 PFC CS-1 17D2009	20-Apr-17	17:24:44
5	170420G1_5	ST170420G1-4 PFC CS0 17D2010	20-Apr-17	17:37:07
6	170420G1_6	ST170420G1-5 PFC CS1 17D2011	20-Apr-17	17:49:31
7	170420G1_7	ST170420G1-6 PFC CS2 17D2012	20-Apr-17	18:01:56
8	170420G1_8	ST170420G1-7 PFC CS3 17D2013	20-Apr-17	18:14:20
9	170420G1_9	ST170420G1-8 PFC CS4 17D2014	20-Apr-17	18:26:46
10	170420G1_10	ST170420G1-9 PFC CS5 17D2015	20-Apr-17	18:39:14
11	170420G1_11	ST170420G1-10 PFC CS6 17D2016	20-Apr-17	18:51:40
12	170420G1_12	IPA	20-Apr-17	19:04:03
13	170420G1_13	SS170420G1-1 PFC SSS 17D2017	20-Apr-17	19:16:27
14	170420G1_14	IPA	20-Apr-17	19:28:50
15	170420G1_15	B7D0096-BS1 LFB 0.25	20-Apr-17	19:41:16
16	170420G1_16	IPA	20-Apr-17	19:53:38
17	170420G1_17	B7D0096-BLK1 LRB 0.25	20-Apr-17	20:06:03
18	170420G1_18	1700466-01 RW05-20170417 0.25	20-Apr-17	20:18:28
19	170420G1_19	1700466-02 FRB-05-20170417 0.25	20-Apr-17	20:30:54
20	170420G1_20	1700466-03 RW10-20170417 0.25	20-Apr-17	20:43:19
21	170420G1_21	1700466-04 FRB-10-20170417 0.25	20-Apr-17	20:55:45
22	170420G1_22	1700466-05 RW18-20170417 0.25	20-Apr-17	21:08:07
23	170420G1_23	1700466-06 FRB-18-20170417 0.25	20-Apr-17	21:20:28
24	170420G1_24	1700466-07 RW07-20170417 0.25	20-Apr-17	21:32:51
25	170420G1_25	B7D0096-DUP1 Duplicate 0.25	20-Apr-17	21:45:14
26	170420G1_26	1700466-08 FRB-07-20170417 0.25	20-Apr-17	21:57:38
27	170420G1_27	1700466-09 RW03-20170417 0.25	20-Apr-17	22:10:03
28	170420G1_28	B7D0096-MS1 LFSM 0.25	20-Apr-17	22:22:28
29	170420G1_29	1700466-10 FRB-03-20170417 0.25	20-Apr-17	22:34:54
30	170420G1_30	1700466-11 RW16-20170417 0.25	20-Apr-17	22:47:14
31	170420G1_31	1700466-12 FRB-16-20170417 0.25	20-Apr-17	22:59:51

Dataset: Untitled

Last Altered: Friday, April 21, 2017 10:41:36 Pacific Daylight Time

Printed: Friday, April 21, 2017 10:41:56 Pacific Daylight Time

Compound name: PFBS

	Name	ID	Acq.Date	Acq.Time
32	170420G1_32	1700466-13 RW14-20170418 0.25	20-Apr-17	23:12:14
33	170420G1_33	1700466-14 FRB-14-20170418 0.25	20-Apr-17	23:24:37
34	170420G1_34	1700466-15 RW20-20170418 0.25	20-Apr-17	23:37:01
35	170420G1_35	1700466-16 FRB-20-20170418 0.25	20-Apr-17	23:49:24
36	170420G1_36	1700466-17 RW06-20170418 0.25	21-Apr-17	00:01:49
37	170420G1_37	1700466-18 FRB-06-20170418 0.25	21-Apr-17	00:14:14
38	170420G1_38	1700466-19 RW01-20170418 0.25	21-Apr-17	00:26:36
39	170420G1_39	1700466-20 FRB-01-20170418 0.25	21-Apr-17	00:38:59
40	170420G1_40	IPA	21-Apr-17	00:51:22
41	170420G1_41	ST170420G1-11 PFC CS3 17D2013	21-Apr-17	01:03:47
42	170420G1_42	IPA	21-Apr-17	01:16:13

Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-CRV.qld

Last Altered: Friday, April 21, 2017 10:28:44 Pacific Daylight Time

Printed: Friday, April 21, 2017 10:34:42 Pacific Daylight Time

Method: U:\G1.PRO\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

Calibration: U:\G1.PRO\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

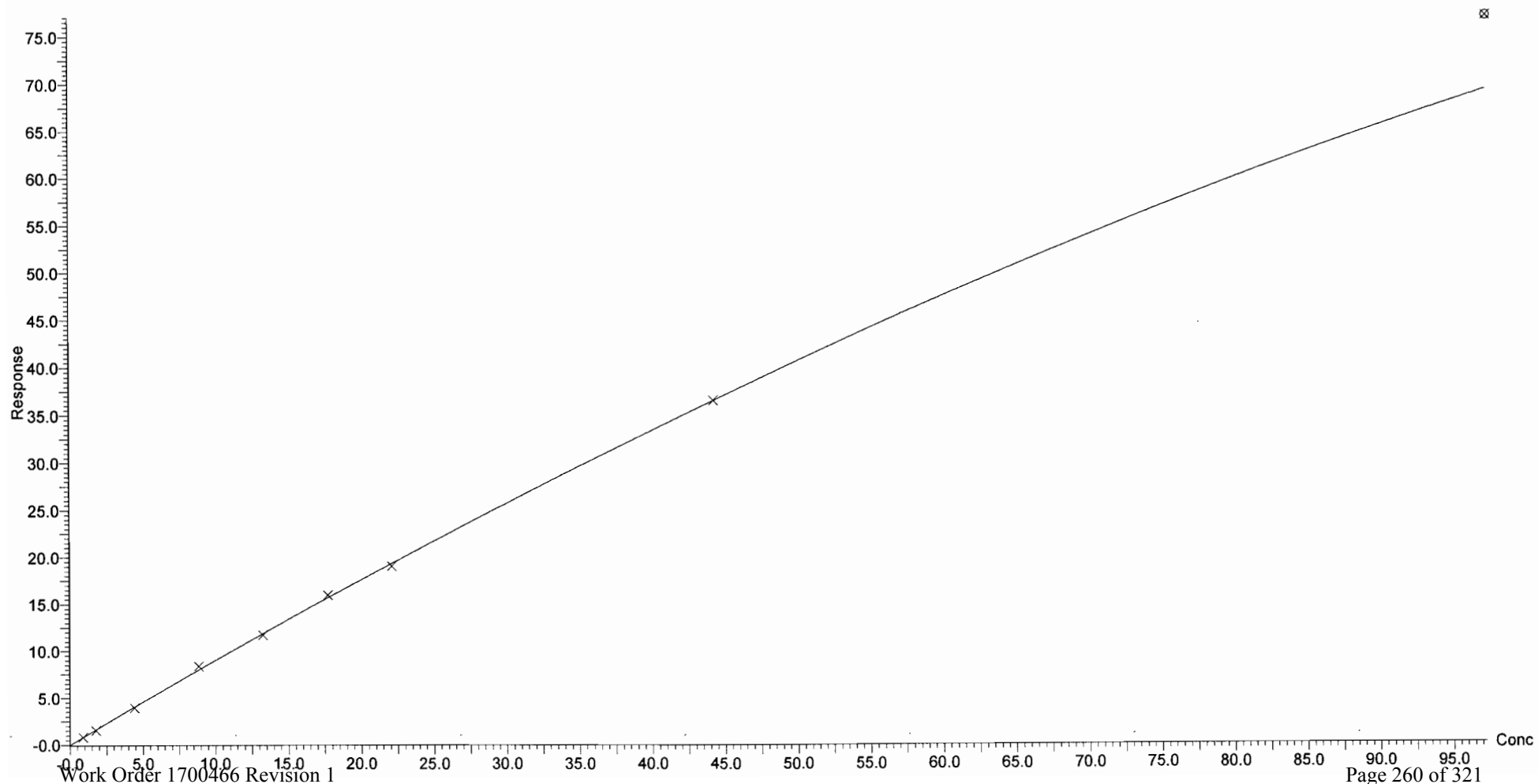
Compound name: PFBS

Coefficient of Determination:  $R^2 = 0.999454$

Calibration curve:  $-0.00214273 * x^2 + 0.921483 * x$

Response type: Internal Std ( Ref 10 ), Area \* ( IS Conc. / IS Area )

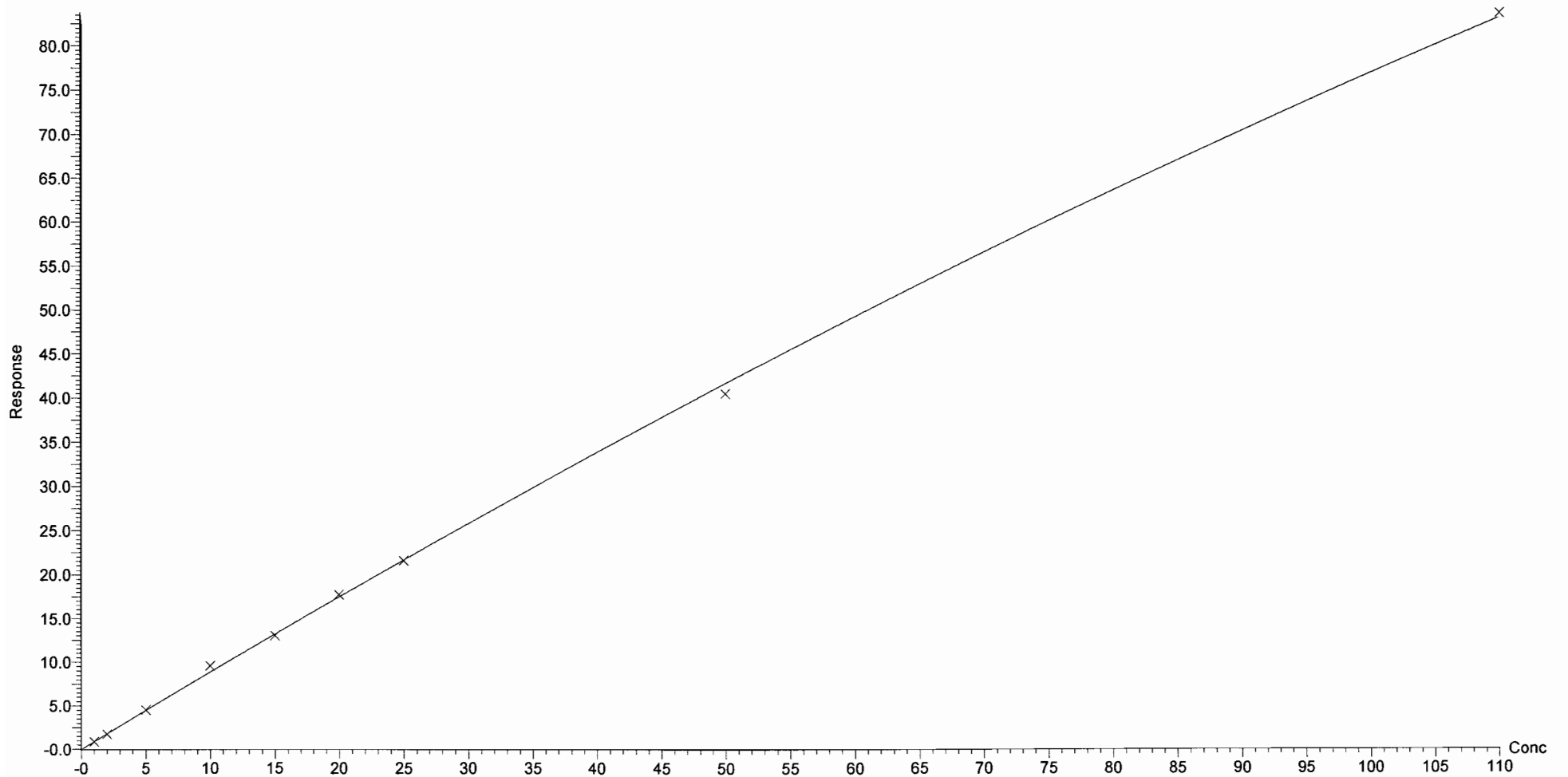
Curve type: 2nd Order, Origin: Force, Weighting: 1/x, Axis trans: None



Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-CRV.qld

Last Altered: Friday, April 21, 2017 10:28:44 Pacific Daylight Time  
Printed: Friday, April 21, 2017 10:34:42 Pacific Daylight Time

Compound name: PFHpA  
Coefficient of Determination:  $R^2 = 0.999320$   
Calibration curve:  $-0.0012775 * x^2 + 0.897966 * x$   
Response type: Internal Std ( Ref 9 ), Area \* ( IS Conc. / IS Area )  
Curve type: 2nd Order, Origin: Force, Weighting: 1/x, Axis trans: None



Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-CRV.qld

Last Altered: Friday, April 21, 2017 10:28:44 Pacific Daylight Time

Printed: Friday, April 21, 2017 10:34:42 Pacific Daylight Time

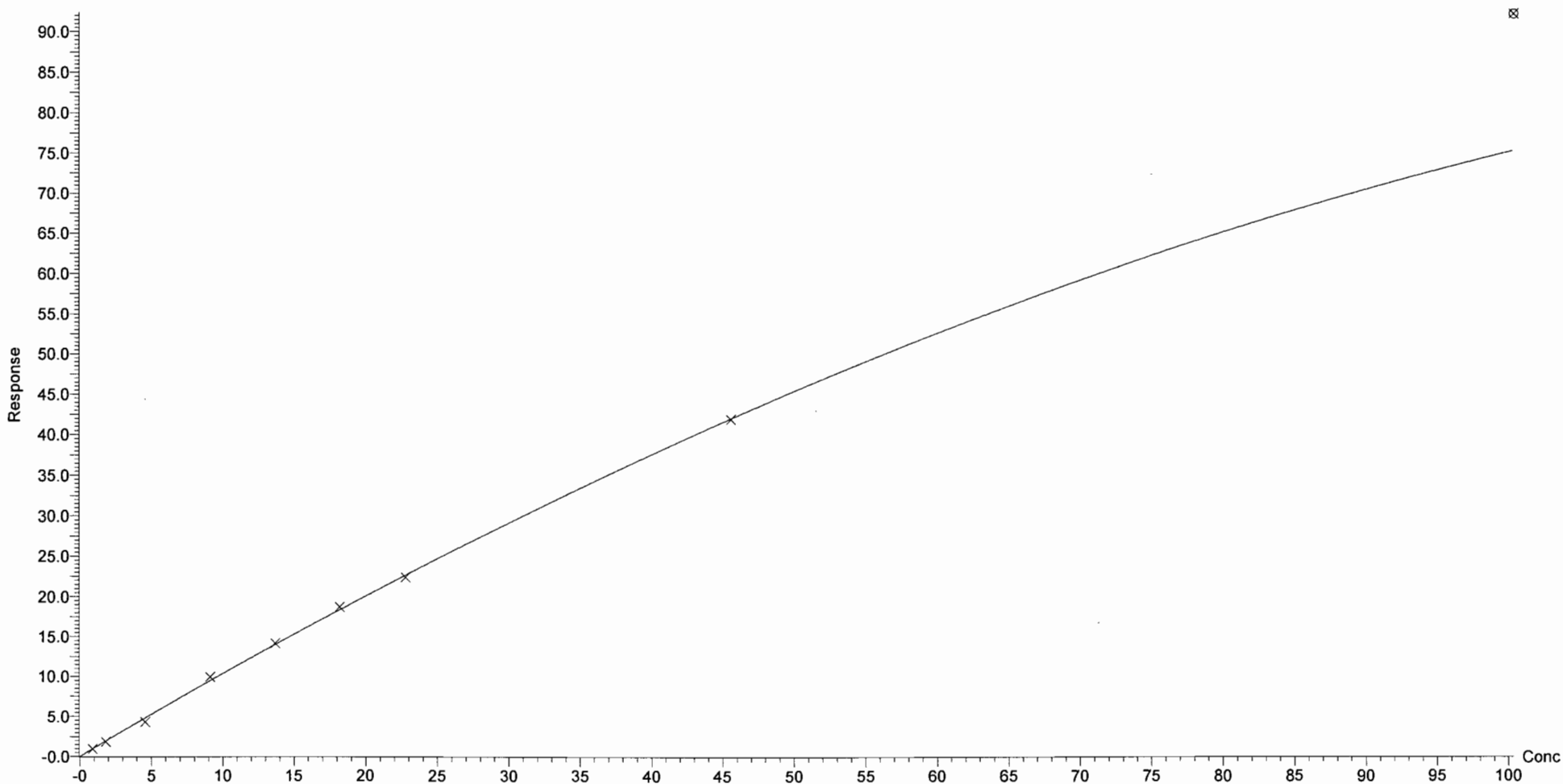
Compound name: PFHxS

Coefficient of Determination:  $R^2 = 0.998827$

Calibration curve:  $-0.00311585 * x^2 + 1.06481 * x$

Response type: Internal Std ( Ref 10 ), Area \* ( IS Conc. / IS Area )

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





Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-CRV.qld

Last Altered: Friday, April 21, 2017 10:28:44 Pacific Daylight Time

Printed: Friday, April 21, 2017 10:34:42 Pacific Daylight Time

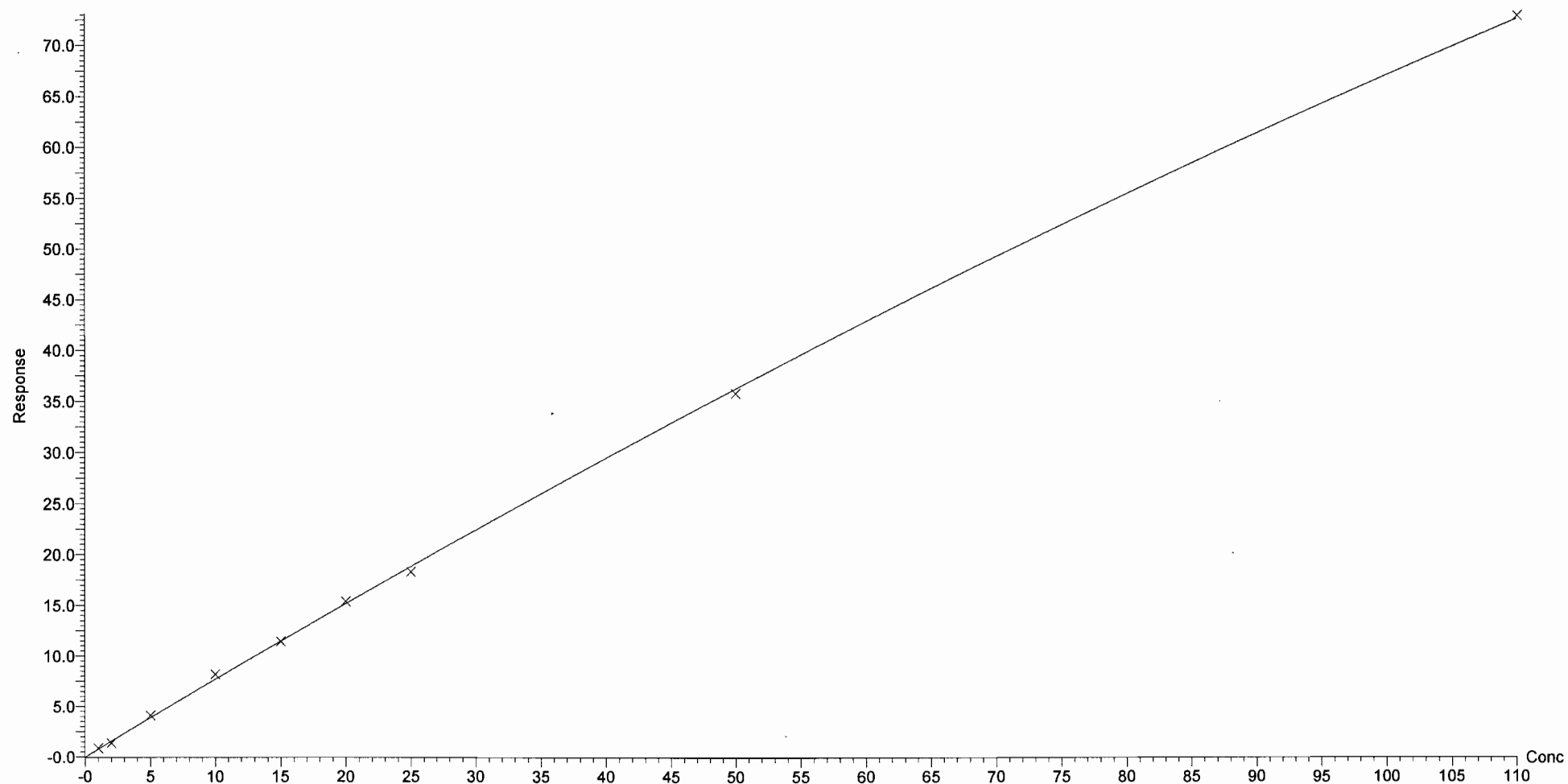
Compound name: PFOA

Coefficient of Determination:  $R^2 = 0.999188$

Calibration curve:  $-0.00107552 * x^2 + 0.780551 * x$

Response type: Internal Std ( Ref 9 ), Area \* ( IS Conc. / IS Area )

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



Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-CRV.qld

Last Altered: Friday, April 21, 2017 10:28:44 Pacific Daylight Time

Printed: Friday, April 21, 2017 10:34:42 Pacific Daylight Time

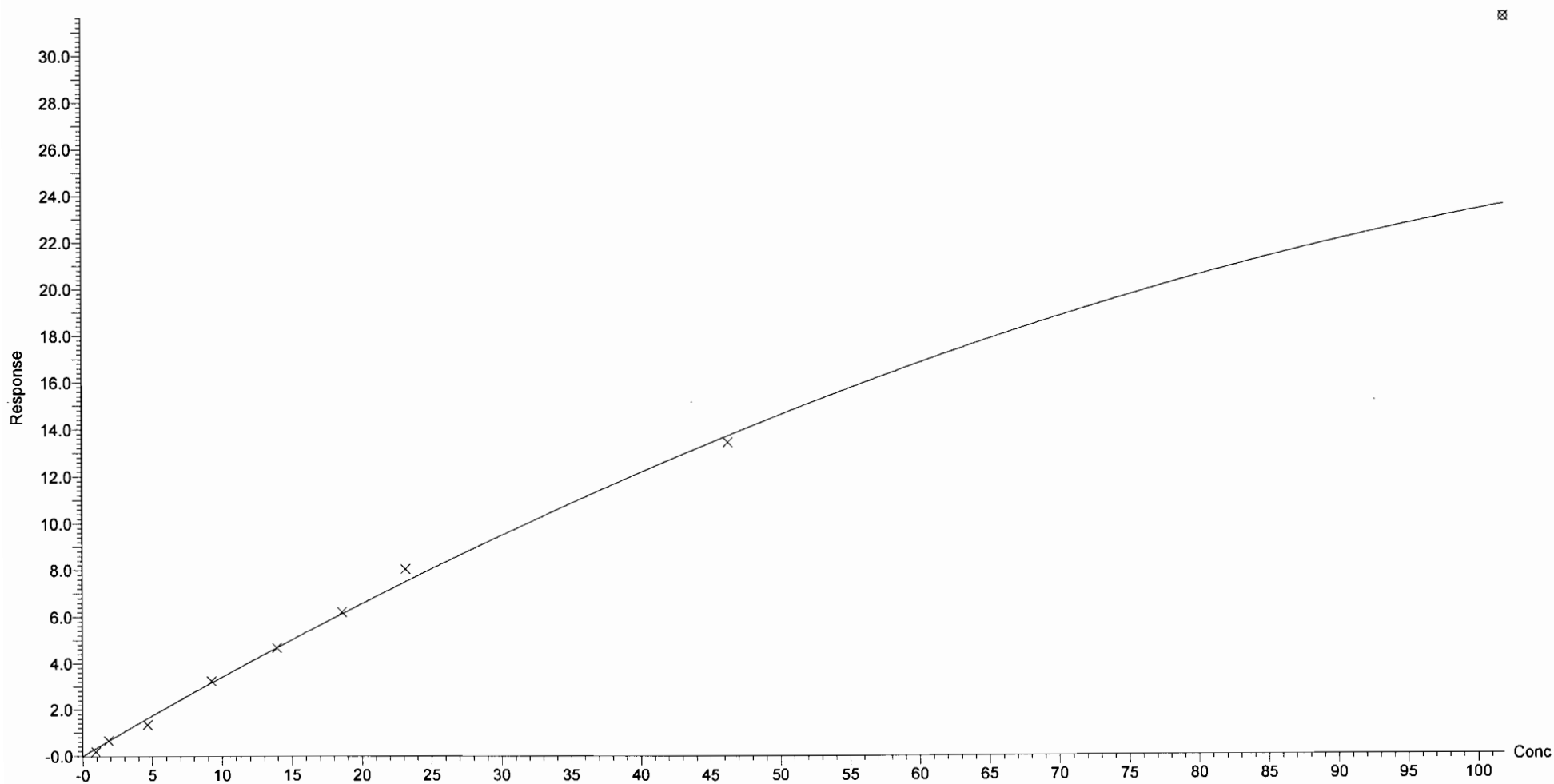
Compound name: PFOS

Coefficient of Determination:  $R^2 = 0.994127$

Calibration curve:  $-0.00117183 * x^2 + 0.3509 * x$

Response type: Internal Std ( Ref 10 ), Area \* ( IS Conc. / IS Area )

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



Quantify Compound Summary Report

Printed Fri Apr 21 09:50:13 2017

Compound 10: 13C4-PFOS

#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Primary Fid	Conc.	%Dev	Acq.Date	Acq.Time	Cal.Date	%Rec	RRF	Divisor1	
1	170420G1_3	Standard	28.7	4.62	10662.84	10662.84	28.7	bd	28.7	0	20-Apr-17	17:12:23	21-Apr-17	100	1	1	
2	170420G1_4	Standard	28.7	4.61	10498.31	10498.31	28.7	bd	28.7	0	20-Apr-17	17:24:44	21-Apr-17	100	1	1	
3	170420G1_5	Standard	28.7	4.61	11113.83	11113.83	28.7	bb	28.7	0	20-Apr-17	17:37:07	21-Apr-17	100	1	1	
4	170420G1_6	Standard	28.7	4.61	10261.95	10261.95	28.7	bb	28.7	0	20-Apr-17	17:49:31	21-Apr-17	100	1	1	
5	170420G1_7	Standard	28.7	4.61	10716.27	10716.27	28.7	bb	28.7	0	20-Apr-17	18:01:56	21-Apr-17	100	1	1	
6	170420G1_8	Standard	28.7	4.61	9943.103	9943.103	28.7	bd	28.7	0	20-Apr-17	18:14:20	21-Apr-17	100	1	1	
7	170420G1_9	Standard	28.7	4.61	9611.602	9611.602	28.7	bd	28.7	0	20-Apr-17	18:26:46	21-Apr-17	100	1	1	
8	170420G1_10	Standard	28.7	4.61	10345.49	10345.49	28.7	bb	28.7	0	20-Apr-17	18:39:14	21-Apr-17	100	1	1	

Compound 10: 13C4-PFOS

RPD	HIGH AREA	11114	
	LOW AREA	9612	
	RPD %	14.5	

INSTRUCTIONS: IN TARGETLNX, VERIFY YOU ARE USING THE LIST14 DW LAYOUT. RIGHT CLICK ON THE SUMMARY BOX AND SELECT "LIST BY COMPOUND". SELECT 13C2-PFOA, 13C4-PFOS OR D3-NMEFOSAA. CLICK ON EDIT. SELECT COPY CURRENT SUMMARY. PASTE IN CELL A1.

Quantify Compound Summary Report

Printed Fri Apr 21 09:47:34 2017

Compound 9: 13C2-PFOA

#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Primary Fla	Conc.	%Dev	Acq.Date	Acq.Time	Cal.Date	%Rec	RRF	Divisor1
1	170420G1_3	Standard	10	4.21	7576.826	7576.826	10	bd	10	0	20-Apr-17	17:12:23	21-Apr-17	100	1	1
2	170420G1_4	Standard	10	4.2	7479.476	7479.476	10	bd	10	0	20-Apr-17	17:24:44	21-Apr-17	100	1	1
3	170420G1_5	Standard	10	4.2	7492.731	7492.731	10	bb	10	0	20-Apr-17	17:37:07	21-Apr-17	100	1	1
4	170420G1_6	Standard	10	4.2	7221.838	7221.838	10	bb	10	0	20-Apr-17	17:49:31	21-Apr-17	100	1	1
5	170420G1_7	Standard	10	4.2	7421.516	7421.516	10	bb	10	0	20-Apr-17	18:01:56	21-Apr-17	100	1	1
6	170420G1_8	Standard	10	4.21	7055.997	7055.997	10	bb	10	0	20-Apr-17	18:14:20	21-Apr-17	100	1	1
7	170420G1_9	Standard	10	4.21	6797.896	6797.896	10	bb	10	0	20-Apr-17	18:26:46	21-Apr-17	100	1	1
8	170420G1_10	Standard	10	4.2	7149.535	7149.535	10	bb	10	0	20-Apr-17	18:39:14	21-Apr-17	100	1	1
9	170420G1_11	Standard	10	4.21	6496.95	6496.95	10	bd	10	0	20-Apr-17	18:51:40	21-Apr-17	100	1	1

Compound 9: 13C2-PFOA

RPD	HIGH AREA	7577
	LOW AREA	6497
	RPD %	15.3

INSTRUCTIONS: IN TARGETLYNX, VERIFY YOU ARE USING THE LIST14 DW LAYOUT. RIGHT CLICK ON THE SUMMARY BOX AND SELECT "LIST BY COMPOUND". SELECT 13C2-PFOA, 13C4-PFOS OR D3-NMEFOSAA. CLICK ON EDIT. SELECT COPY CURRENT SUMMARY. PASTE IN CELL A1.

Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-CRV.qld

Last Altered: Friday, April 21, 2017 10:28:44 Pacific Daylight Time

Printed: Friday, April 21, 2017 10:34:42 Pacific Daylight Time

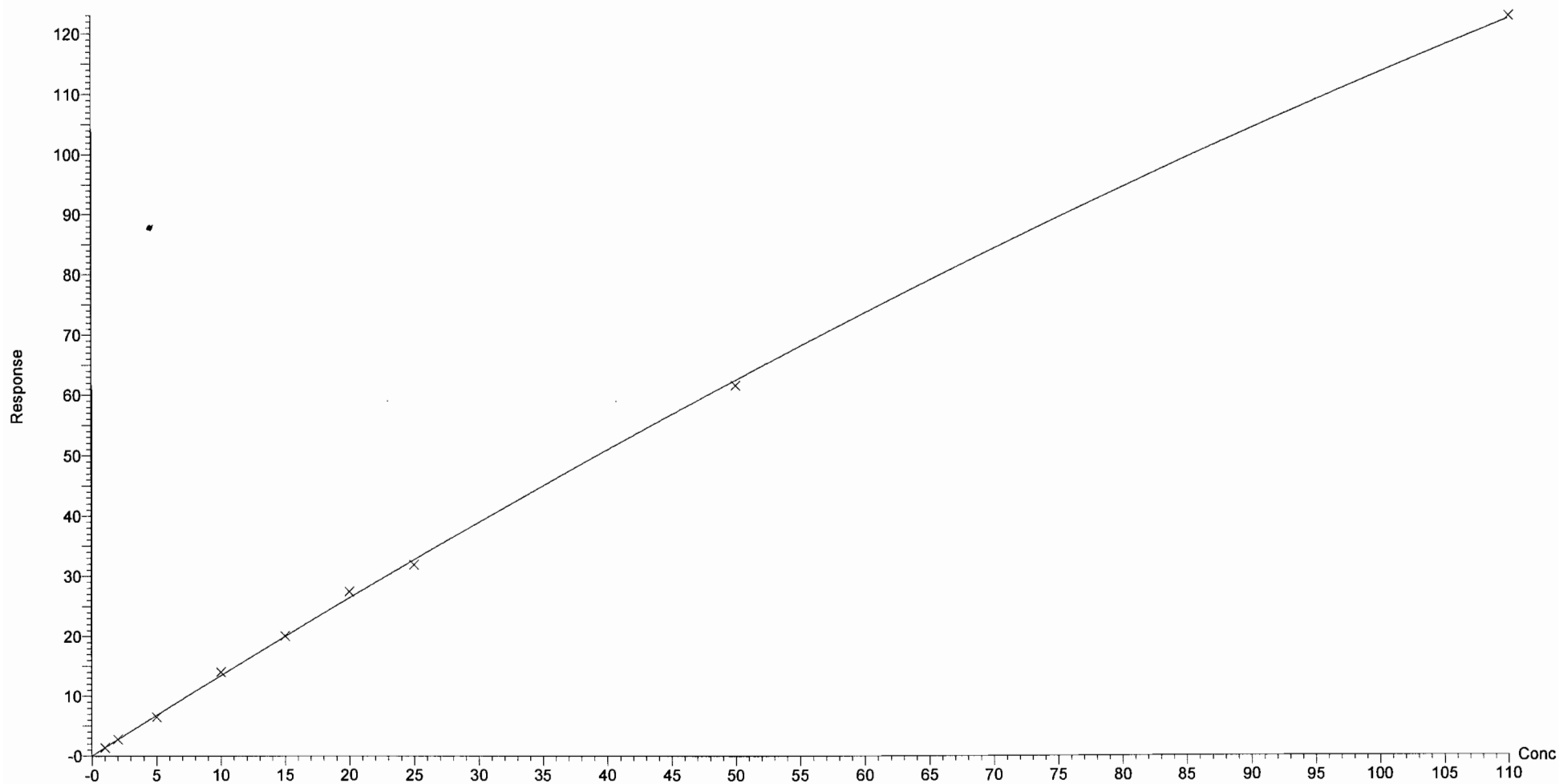
Compound name: PFNA

Coefficient of Determination:  $R^2 = 0.999465$

Calibration curve:  $-0.00226354 * x^2 + 1.36399 * x$

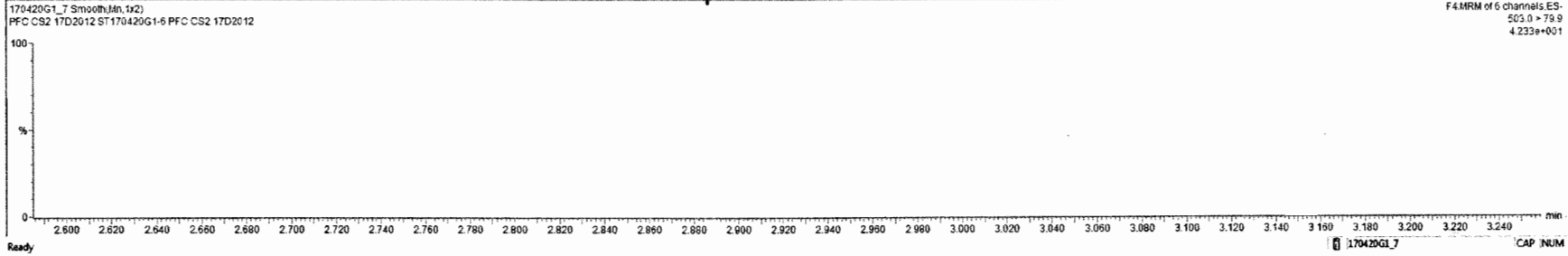
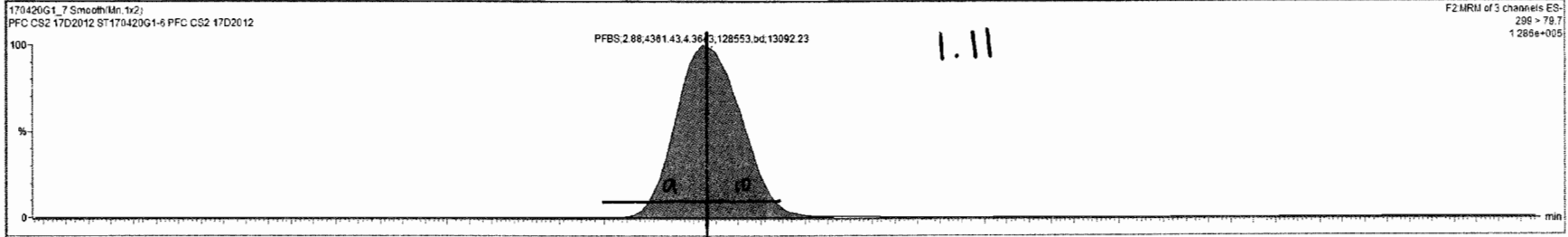
Response type: Internal Std ( Ref 9 ), Area \* ( IS Conc. / IS Area )

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



170420G1\_7 - ST170420G1-6 PFC CS2 17D2012 - PFC CS2 17D2012

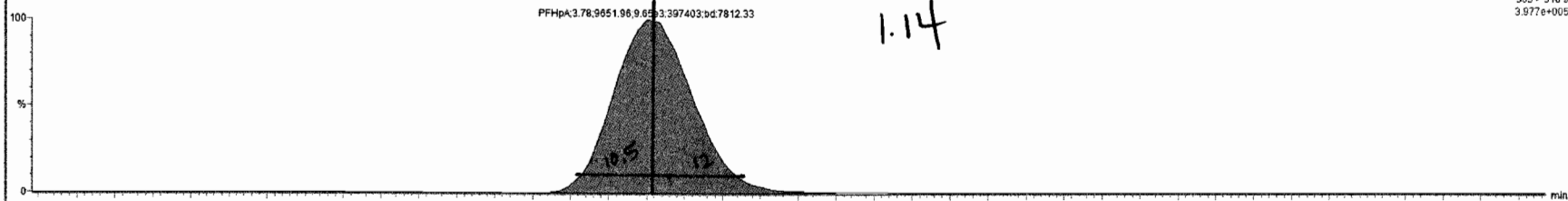
#	Name	Resp	RRF	wtVol	RT	RA	n/y	Conc.	%Rec	DL	EMPC
1	PFBS	4.36e3		1.000	2.88			43.1	98.6	0.00170	
2	PFHpA	9.65e3		1.000	3.78			14.6	98.6	0.00448	
3	PFHxS	5.28e3		1.000	3.91			13.6	101	0.0238	
4	PFOA	8.48e3		1.000	4.20			15.0	99.7	0.0304	
5	PFOS	1.74e3		1.000	4.61			13.9	100	0.136	
6	PFNA	1.48e4		1.000	4.55			16.0	100	0.08900	
7	13C2-PFHxA	3.47e3	0.45	1.000	3.27			10.4	104	0.00215	
8	13C2-PFDA	6.18e3	0.80	1.000	4.85			10.4	104	0.00647	
9	13C2-PFOA	7.42e3	1.00	1.000	4.20			10.0	100	0.0103	
10	13C4-PFOS	1.07e4	1.00	1.000	4.61			28.7	100	0.0478	



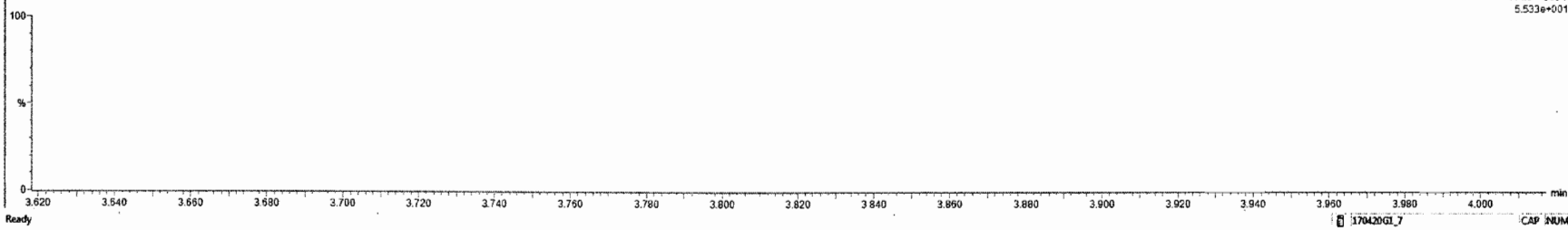
170420G1\_7 - ST170420G1-6 PFC CS2 17D2012 - PFC CS2 17D2012

#	Name	Disp	RRF	width	RT	RA	Qty	Conc	NRec	DL	EMPC
1	PFDS	4.36e3	1.00	2.68				13.1	99.9	0.00170	
2	PFHpA	9.65e3	1.00	3.78				14.8	98.8	0.00449	
3	PFHxS	5.28e3	1.00	3.91				13.8	101	0.0238	
4	PFDA	8.49e3	1.00	4.20				15.0	99.7	0.0204	
5	PFOS	1.74e3	1.00	4.61				13.9	100	0.138	
6	PFNA	1.48e4	1.00	4.55				15.0	100	0.06800	
7	13C2-PFHxA	3.47e3	0.45	1.00	3.27			10.4	104	0.00215	
8	13C2-PFDA	6.15e3	0.60	1.00	4.85			10.4	104	0.00847	
9	13C2-PFOA	7.42e3	1.00	1.00	4.20			10.0	100	0.0103	
10	13C4-PFOS	1.07e4	1.00	1.00	4.61			26.7	100	0.0478	

170420G1\_7 Smooth(Mn.t1x2)  
 PFC CS2 17D2012 ST170420G1-6 PFC CS2 17D2012  
 F3.MRM1 of 2 channels ES-  
 363 + 316.0  
 3.977e+005



170420G1\_7 Smooth(Mn.t1x2)  
 PFC CS2 17D2012 ST170420G1-6 PFC CS2 17D2012  
 F4.MRM1 of 6 channels ES-  
 414.9 + 360.7  
 5.533e+001



Dataset: Untitled

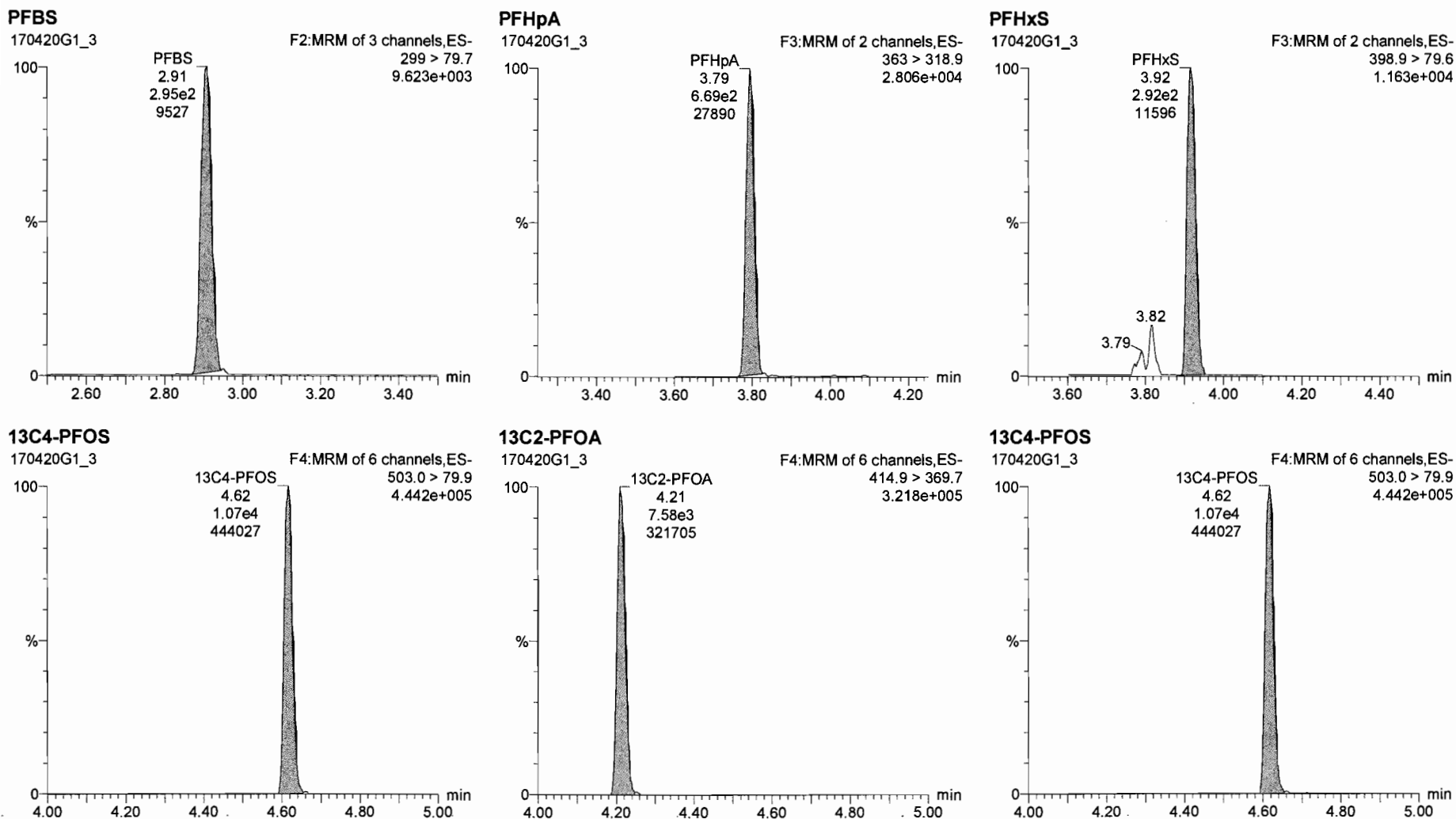
Last Altered: Friday, April 21, 2017 10:17:30 Pacific Daylight Time

Printed: Friday, April 21, 2017 10:20:56 Pacific Daylight Time

Method: U:\G1.PRO\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

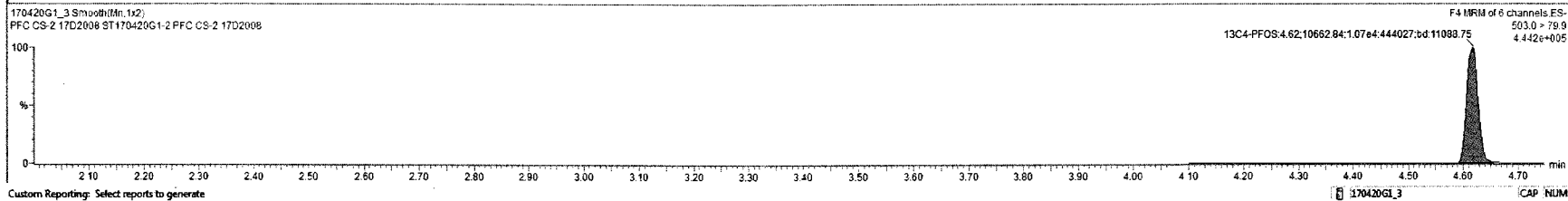
Calibration: 21 Apr 2017 10:17:30

Name: 170420G1\_3, Date: 20-Apr-2017, Time: 17:12:23, ID: ST170420G1-2 PFC CS-2 17D2008, Description: PFC CS-2 17D2008

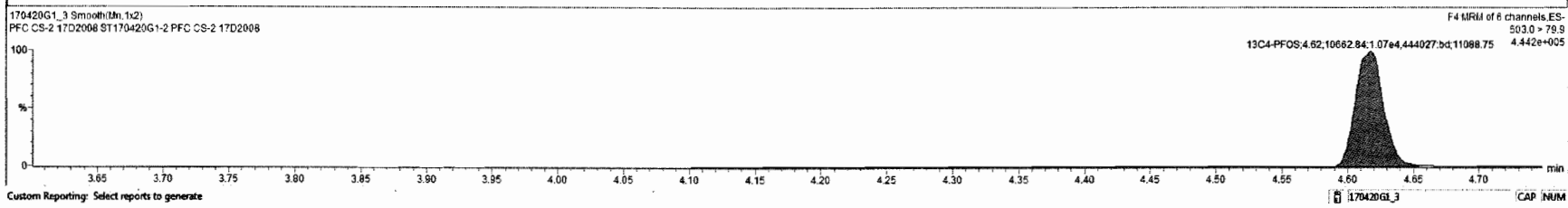
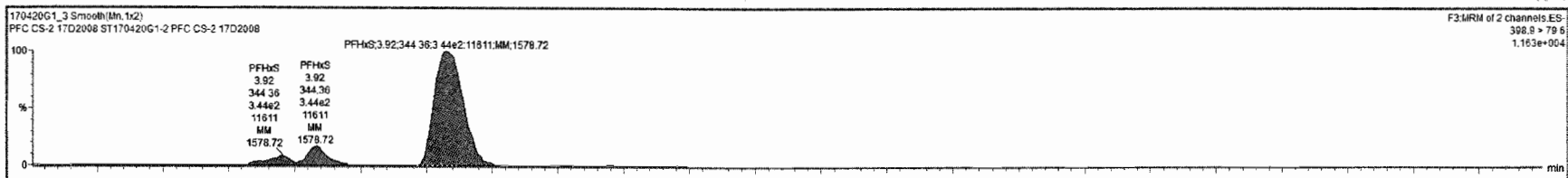




#	Name	Resp	RRF	wfYol	RT	RA	NV	Conc	%Rec	OL	EMPC
1	PFBS	3.00e2		1.000	2.91			0.877	99.1	0.00125	
2	PFHpA	6.69e2		1.000	3.80			0.985	98.5	0.00147	
3	PFHxS	3.44e2		1.000	3.92			0.873	95.9	0.00112	
4	PFOA	6.48e2		1.000	4.21			1.10	110	0.0441	
5	PFOS	6.68e1		1.000	4.62			0.513	55.2	0.0260	
6	PFNA	1.02e3		1.000	4.55			0.986	98.6	0.0378	
7	13C3-PFHxA	3.10e3	0.45	1.000	3.28			9.12	91.2	0.00382	
8	13C3-PFDA	6.25e3	0.80	1.000	4.85			10.3	103	0.285	
9	13C3-PFOA	7.58e3	1.00	1.000	4.21			10.0	100	0.278	
10	13C4-PFOS	1.07e4	1.00	1.000	4.62			28.7	100	0.09647	



ID	Name	Resp	RRF	wt/wt	RT	RA	WY	Conc	%Rec	DL	EMPC
1	PFBS	2.95e2	1.000	2.91				0.006	100	0.00120	
2	PFHPA	6.69e2	1.000	3.80				0.985	98.5	0.00147	
3	PFHxS	3.44e2	1.000	3.92				1.12	123	0.00142	
4	PFOA	6.48e2	1.000	4.21				1.10	110	0.0441	
5	PFOS	6.68e1	1.000	4.62				0.696	74.9	0.0354	
6	PFNA	1.62e3	1.000	4.55				0.996	98.6	0.0376	
7	13C2-PFHxA	3.10e3	0.45	1.000	3.28			9.12	91.2	0.00392	
8	13C2-PFDA	6.25e3	0.80	1.000	4.85			10.3	103	0.285	
9	13C2-PFOA	7.58e3	1.00	1.000	4.21			10.0	100	0.278	
10	13C4-PFOS	1.07e4	1.00	1.000	4.62			28.7	100	0.00647	

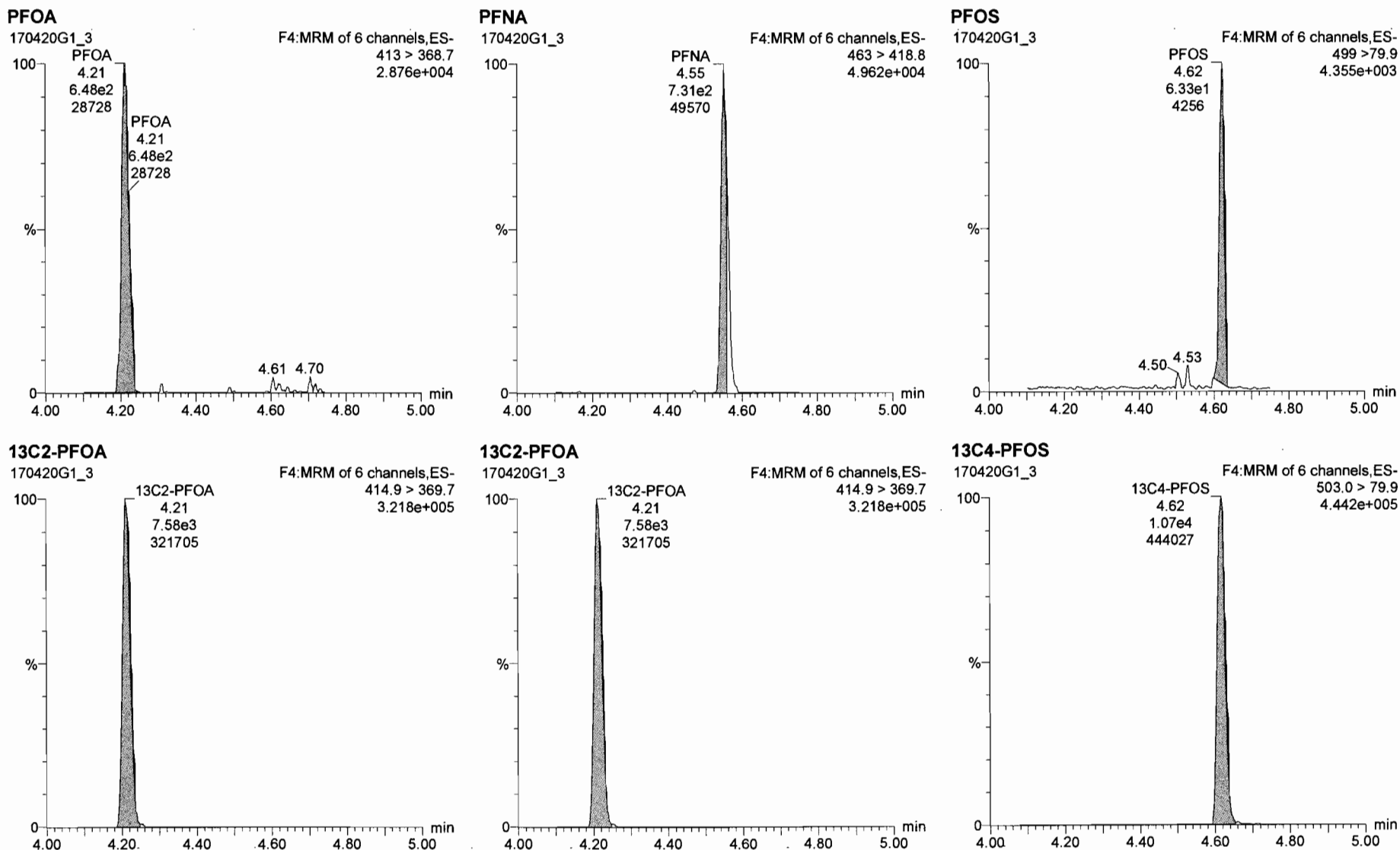


Dataset: Untitled

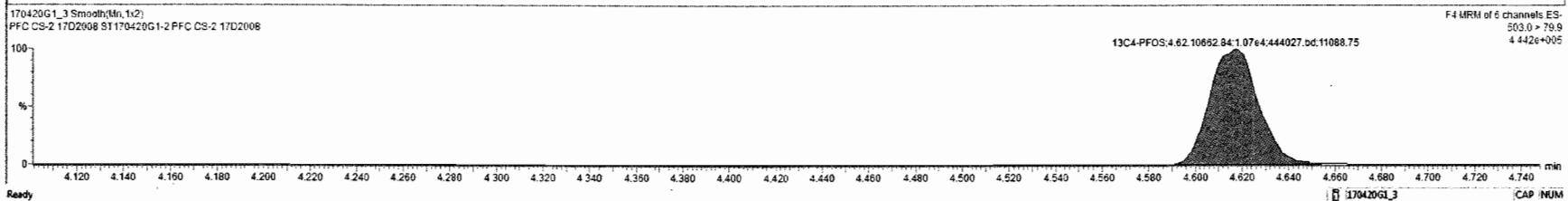
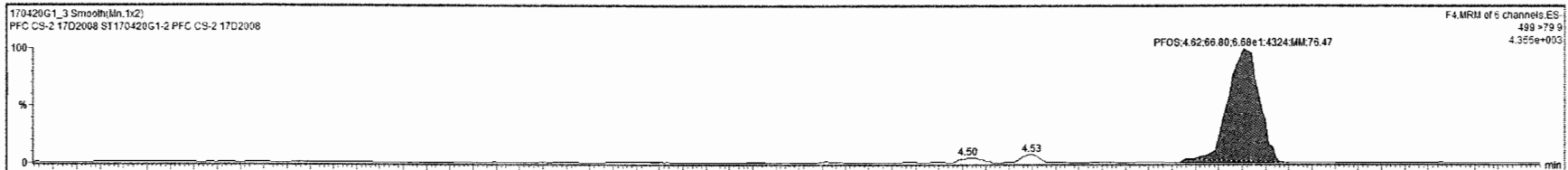
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Printed: Friday, April 21, 2017 10:20:56 Pacific Daylight Time

Name: 170420G1\_3, Date: 20-Apr-2017, Time: 17:12:23, ID: ST170420G1-2 PFC CS-2 17D2008, Description: PFC CS-2 17D2008



Name	Resp	RRF	wtVol	RT	RA	ny	Coac	%Rec	DL	EMPC
1	PFBS	2.95e2	1.000	2.91			0.886	100	0.00126	
2	PFHpA	6.69e2	1.000	3.00			0.985	98.5	0.00147	
3	PFHxS	3.44e2	1.000	3.92			0.916	101	0.00117	
4	PFDA	6.48e2	1.000	4.21			1.10	110	0.0441	
5	PFOS	9.89e1	1.000	4.62			0.896	74.9	0.0354	
6	PFNA	1.02e3	1.000	4.55			0.906	98.6	0.0378	
7	13C2-PFHxA	3.10e3	0.45	1.000	3.28		9.12	91.2	0.00392	
8	13C2-PFDA	6.25e3	0.80	1.000	4.85		10.3	103	0.285	
9	13C2-PFOA	7.58e3	1.00	1.000	4.21		10.9	100	0.278	
10	13C4-PFOS	1.07e4	1.00	1.000	4.62		28.7	100	0.00647	



Dataset: Untitled

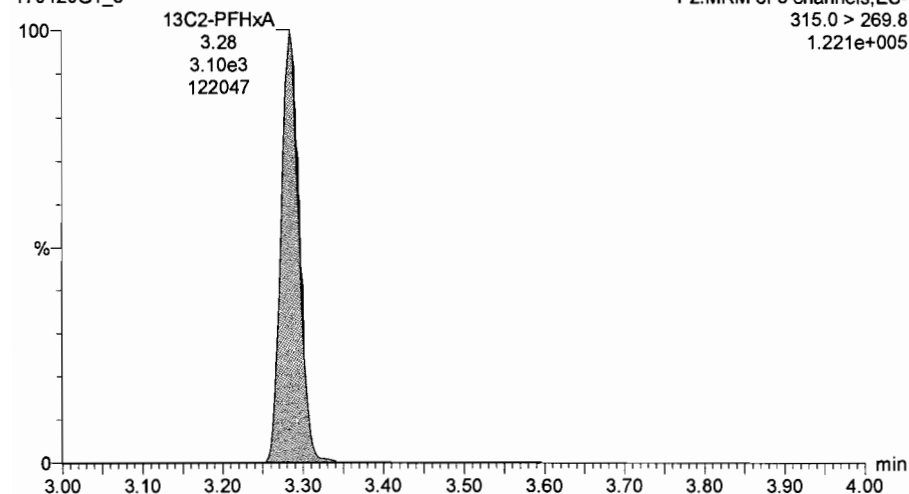
Last Altered: Friday, April 21, 2017 10:17:30 Pacific Daylight Time

Printed: Friday, April 21, 2017 10:20:56 Pacific Daylight Time

Name: 170420G1\_3, Date: 20-Apr-2017, Time: 17:12:23, ID: ST170420G1-2 PFC CS-2 17D2008, Description: PFC CS-2 17D2008

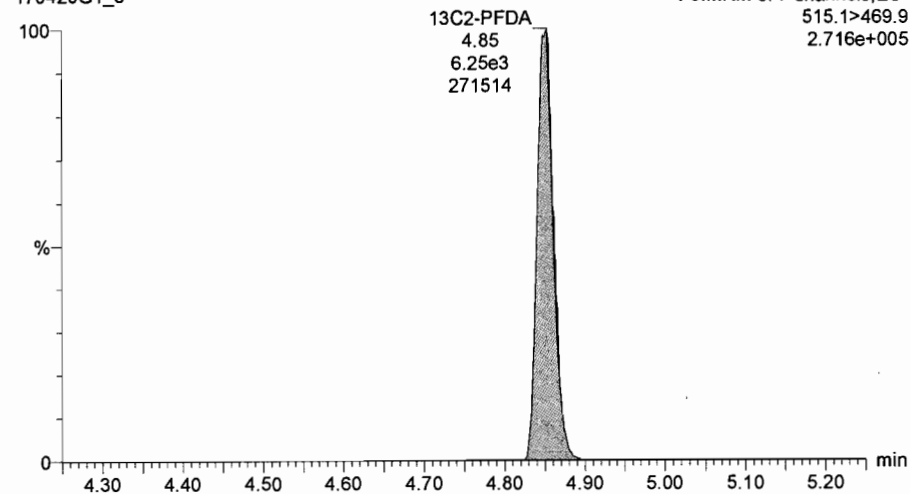
**13C2-PFHxA**

170420G1\_3



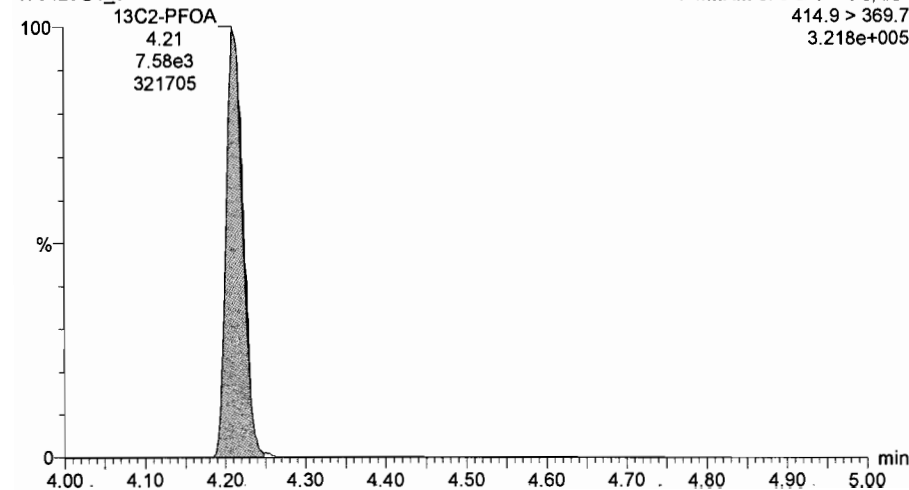
**13C2-PFDA**

170420G1\_3



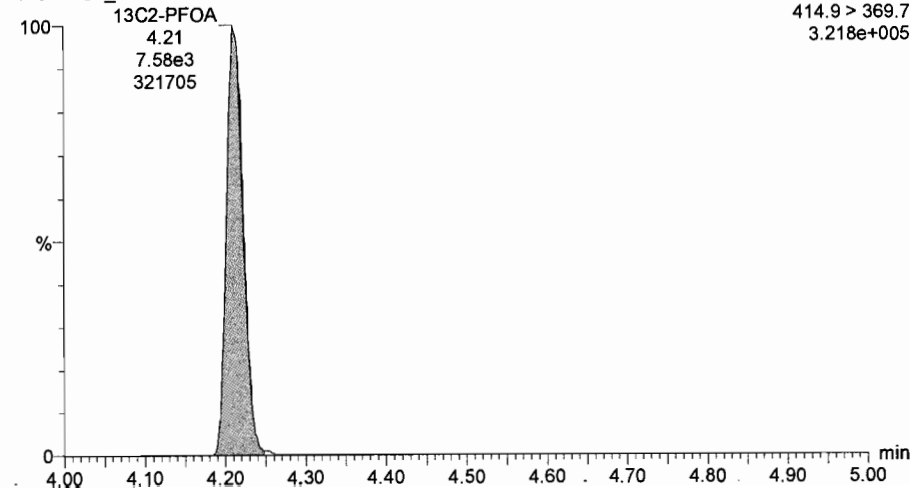
**13C2-PFOA**

170420G1\_3



**13C2-PFOA**

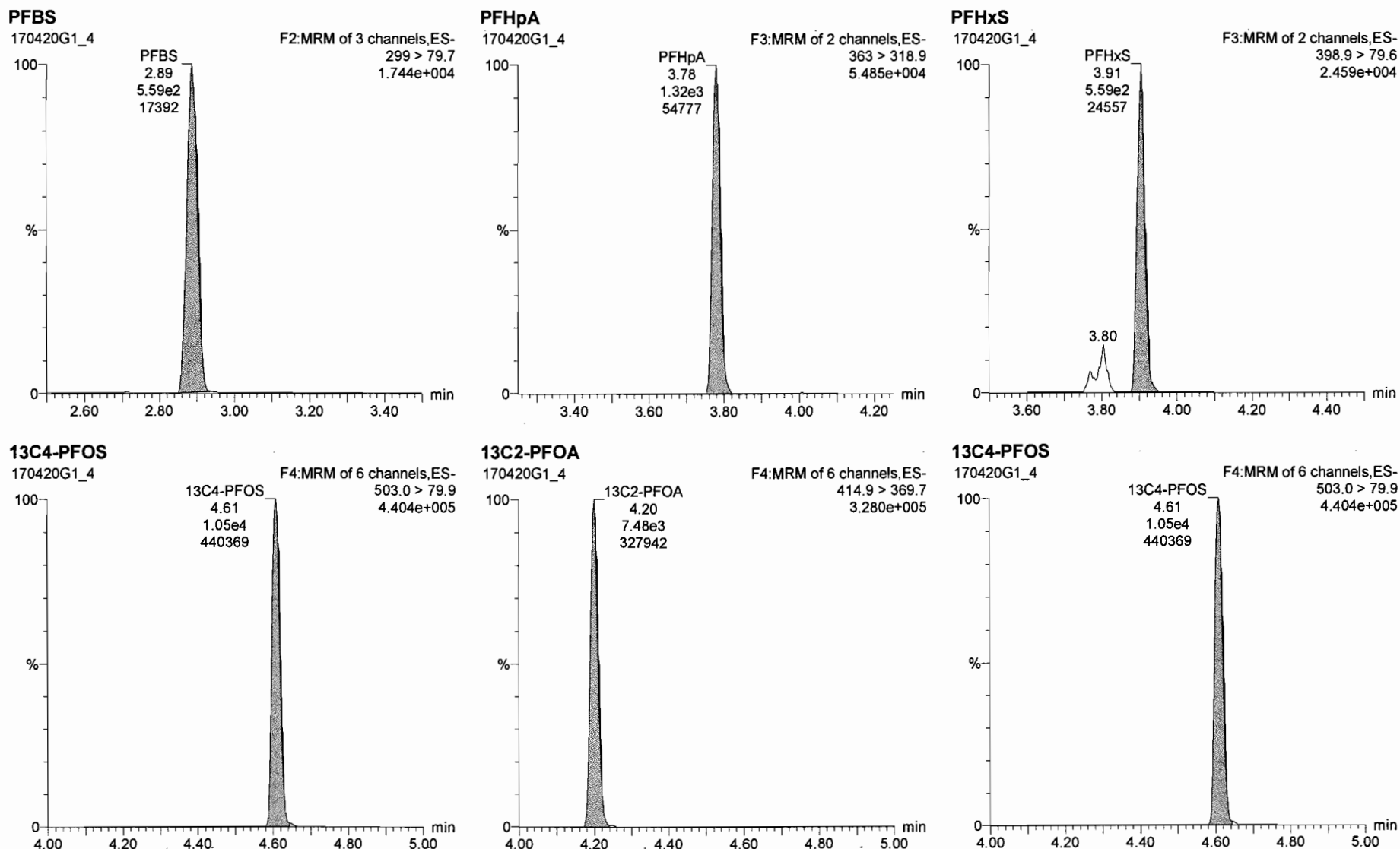
170420G1\_3



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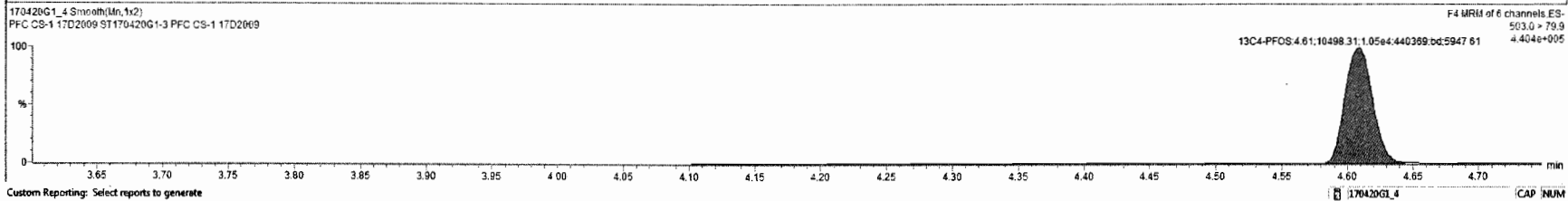
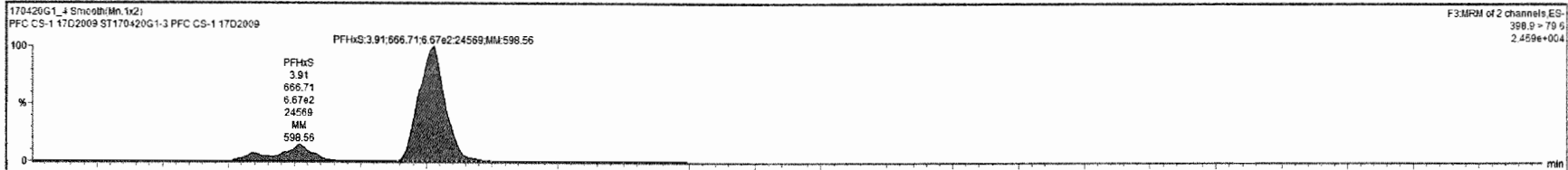
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Name: 170420G1\_4, Date: 20-Apr-2017, Time: 17:24:44, ID: ST170420G1-3 PFC CS-1 17D2009, Description: PFC CS-1 17D2009



170420G1\_4 - ST170420G1-3 PFC CS-1 17D2009 - PFC CS-1 17D2009

ID	Name	Base	RRF	wt/vol	RT	RA	my	Conc.	%Rec	DL	EMPC
1	PFBS	5.59e2		1.000	2.89			1.71	96.6	0.00361	
2	PFNA	1.32e3		1.000	3.78			1.99	96.2	0.00208	
3	PFHxS	6.67e2		1.000	3.91			2.19	120	0.00990	
4	PFDA	1.01e3		1.000	4.20			1.73	86.5	0.0203	
5	PFOS	2.49e2		1.000	4.60			2.64	142	0.342	
6	PFNA	2.94e3		1.000	4.54			2.00	190	0.0149	
7	13C2-PFHxA	3.17e3	0.45	1.000	3.27			9.45	84.5	0.00174	
8	13C2-PFDA	8.09e3	8.80	1.000	4.84			10.1	181	6.136	
9	13C2-PFOA	7.48e3	1.00	1.000	4.20			10.0	180	0.0168	
10	13C4-PFOS	1.05e4	1.00	1.000	4.61			28.7	190	0.0121	



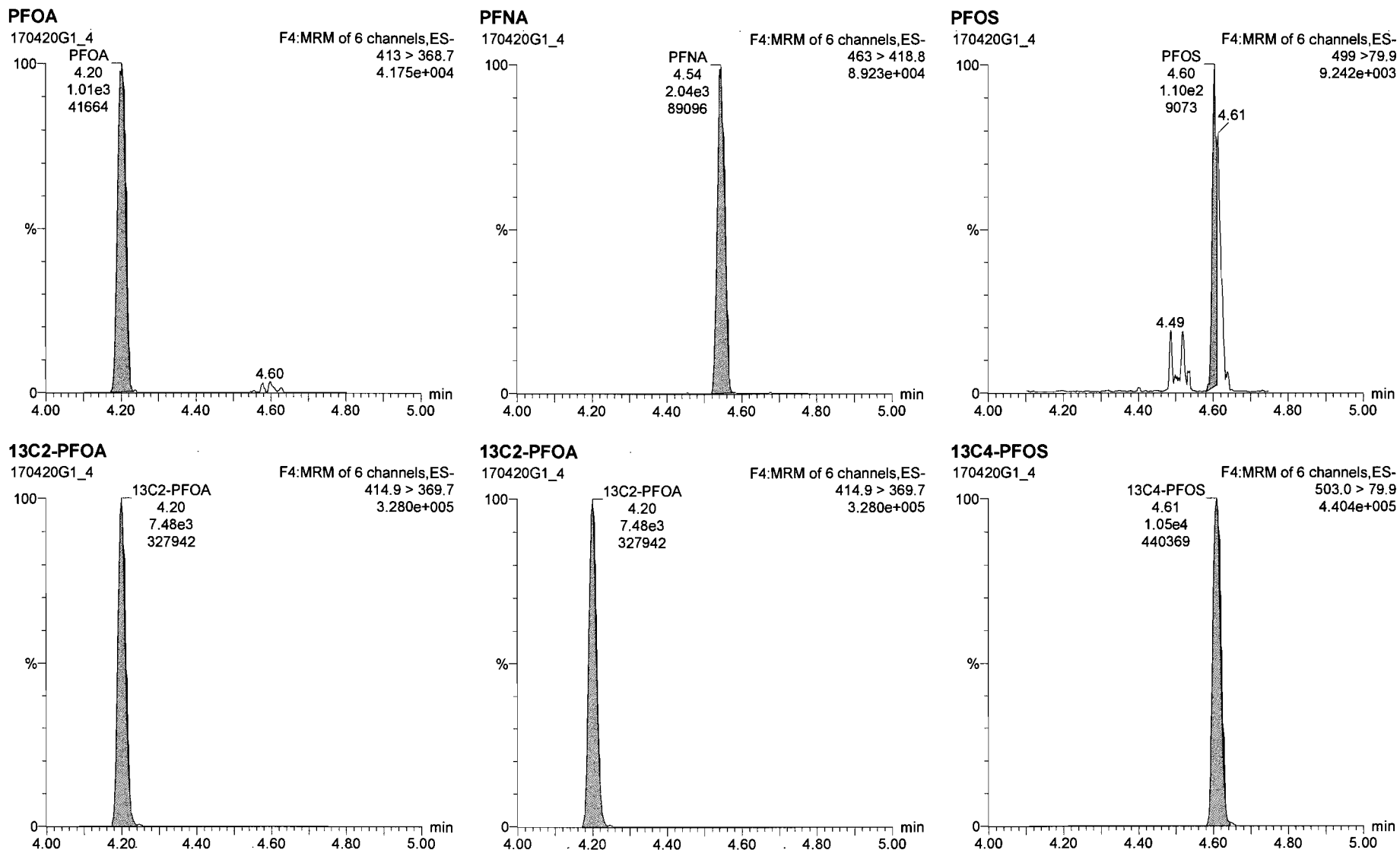
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Dataset: Untitled

Last Altered: Friday, April 21, 2017 10:17:30 Pacific Daylight Time

Printed: Friday, April 21, 2017 10:20:56 Pacific Daylight Time

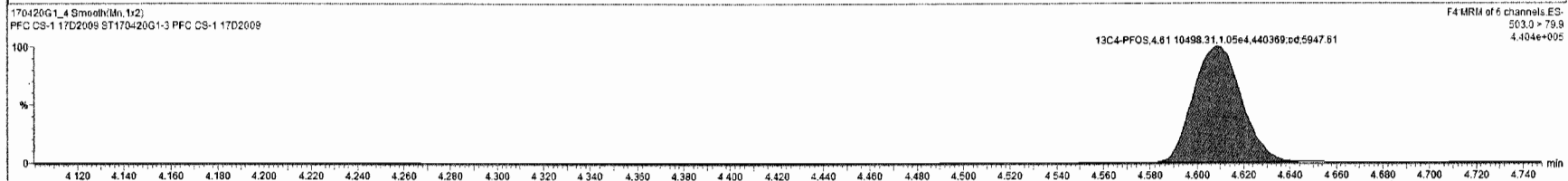
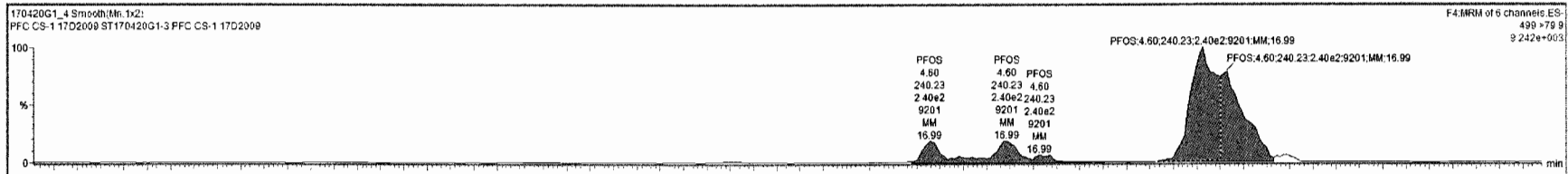
Name: 170420G1\_4, Date: 20-Apr-2017, Time: 17:24:44, ID: ST170420G1-3 PFC CS-1 17D2009, Description: PFC CS-1 17D2009





170420G1\_4 - ST170420G1-3 PFC CS-1 17D2009 - PFC CS-1 17D2009

Name	Resp	RFV	width	RT	RA	rel	Conc.	%Rec.	DL	EMPC
1 PFBS	5.59e2		1.000	2.89			1.71	96.9	0.00351	
2 PFHxA	1.32e3		1.000	3.78			1.96	98.2	0.00208	
3 PFHxS	8.67e2		1.000	3.91			1.80	99.0	0.00660	
4 PFDA	1.01e3		1.000	4.20			1.73	86.5	0.0203	
5 PFOS	2.40e2		1.000	4.60			2.45	137	0.342	
6 PFNA	2.84e3		1.000	4.54			2.00	100	0.0149	
7 13C2-PFHxA	3.17e2	0.45	1.000	3.27			9.45	94.5	0.00174	
8 13C2-PFDA	6.09e3	0.80	1.000	4.64			10.1	101	0.136	
9 13C2-PFOA	7.48e3	1.00	1.000	4.20			10.0	100	0.0168	
10 13C4-PFOS	1.05e4	1.00	1.000	4.61			28.7	100	0.0121	



Dataset: Untitled

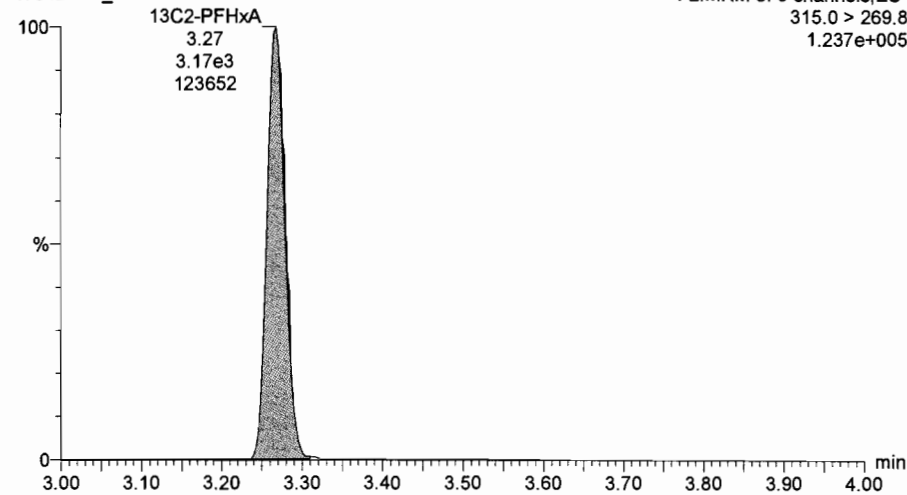
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Printed: Friday, April 21, 2017 10:20:56 Pacific Daylight Time

Name: 170420G1\_4, Date: 20-Apr-2017, Time: 17:24:44, ID: ST170420G1-3 PFC CS-1 17D2009, Description: PFC CS-1 17D2009

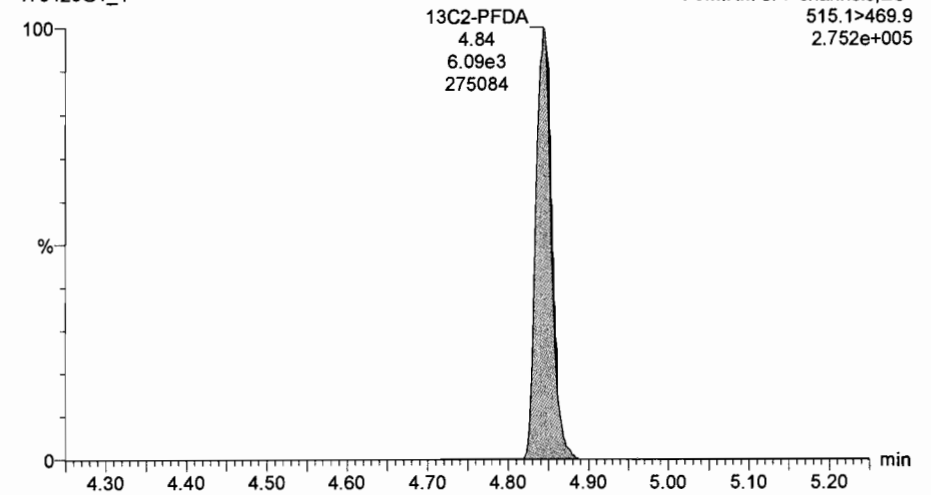
**13C2-PFHxA**

170420G1\_4



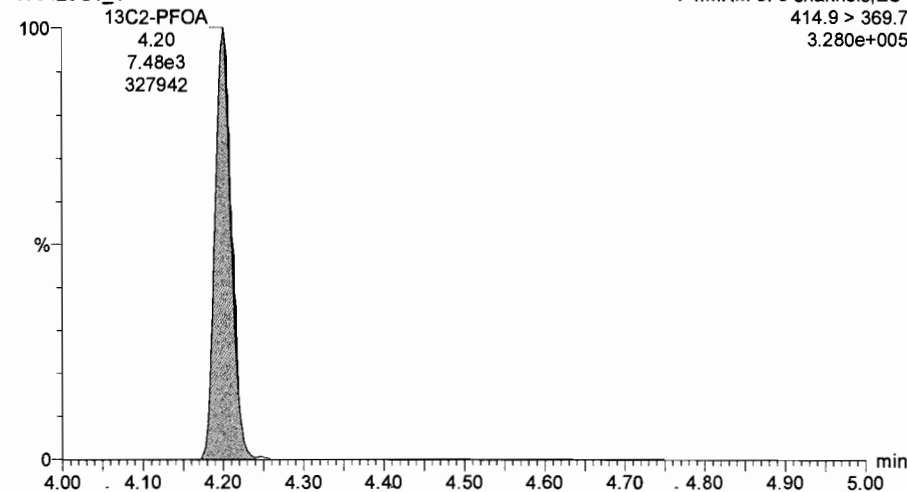
**13C2-PFDA**

170420G1\_4



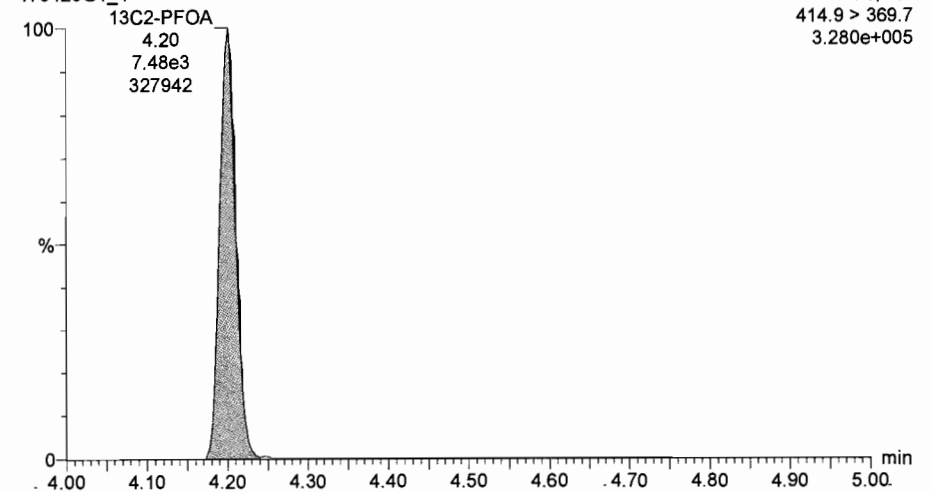
**13C2-PFOA**

170420G1\_4



**13C2-PFOA**

170420G1\_4

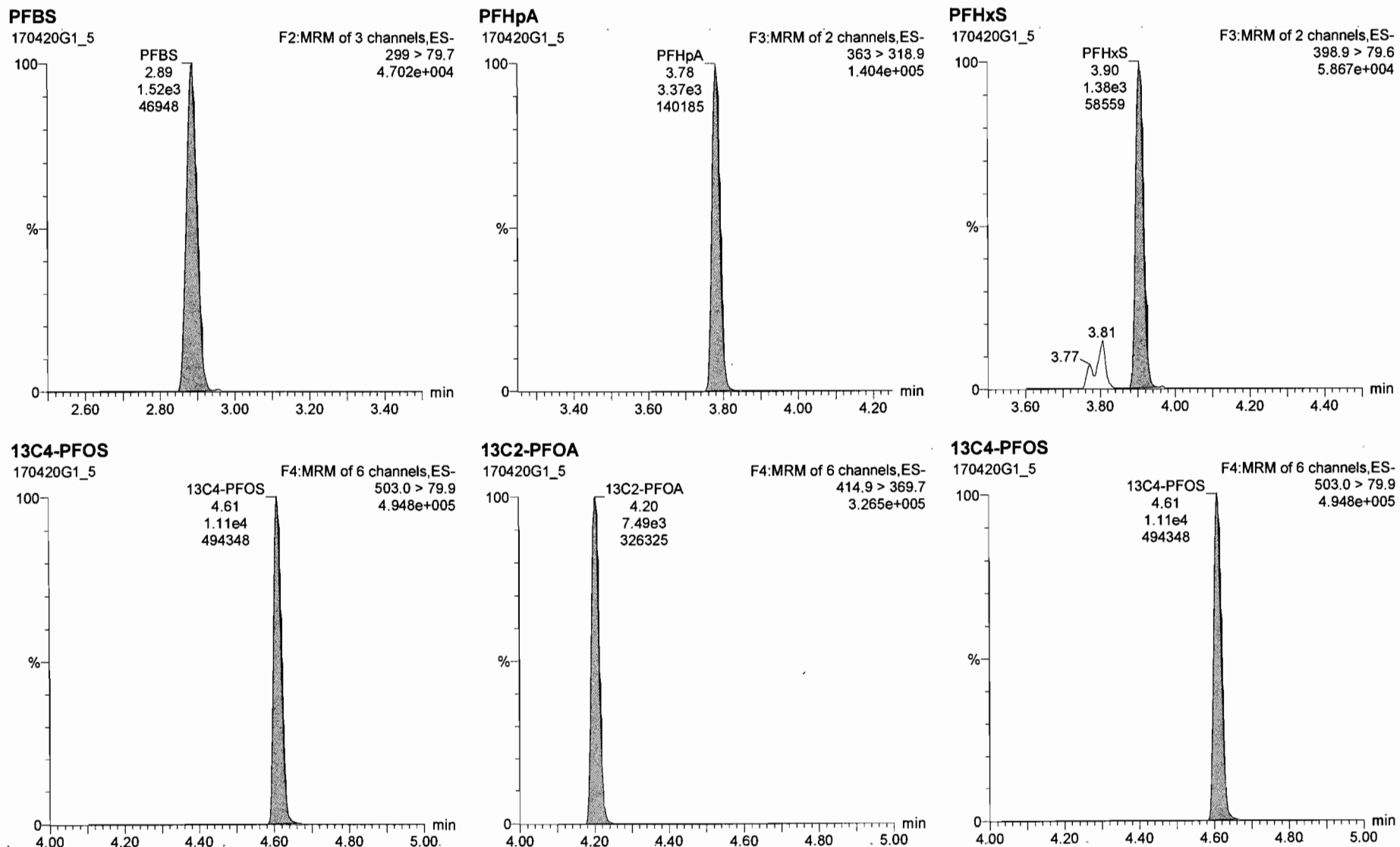


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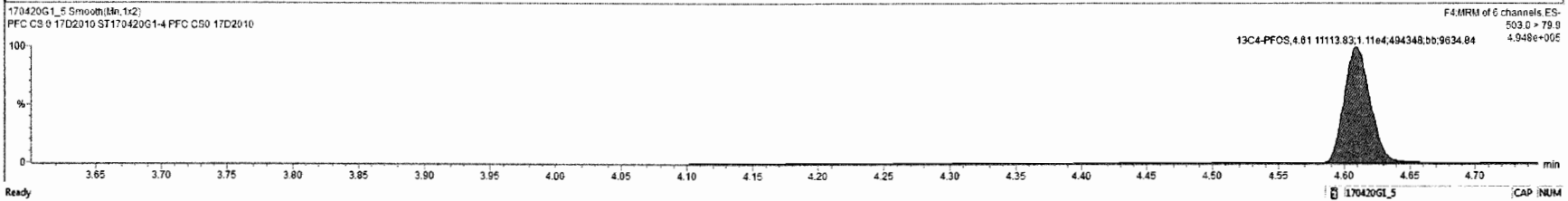
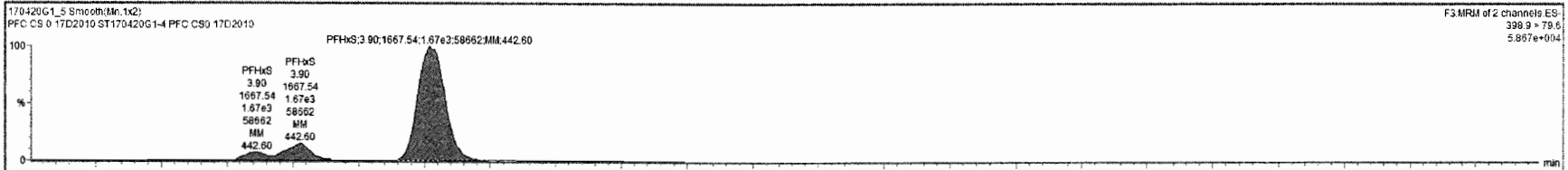
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Printed: Friday, April 21, 2017 10:20:56 Pacific Daylight Time

Name: 170420G1\_5, Date: 20-Apr-2017, Time: 17:37:07, ID: ST170420G1-4 PFC CS0 17D2010, Description: PFC CS 0 17D2010



Name	Resp	RRF	wb%vol	RT	RA	by	Conc.	%Rec	DL	EMPC
1 PFOS	1.52e3		1.000	2.88			4.39	99.3	0.00113	
2 PFHpA	3.37e3		1.000	3.78			5.05	101	0.00372	
3 PFHxS	1.67e3		1.000	3.90			5.11	112	0.0227	
4 PFDA	3.67e3		1.000	4.20			5.29	106	0.0229	
5 PFOS	5.15e2		1.000	4.98			5.18	112	0.0900	
6 PFNA	4.84e3		1.000	4.54			4.78	95.8	0.02259	
7 13C2-PFHxA	3.35e3	0.45	1.000	3.27			10.0	100	0.00418	
8 13C2-PFDA	5.99e3	0.88	1.000	4.85			9.96	99.6	0.00788	
9 13C2-PFOA	7.49e3	1.00	1.000	4.20			10.0	100	0.0177	
10 13C4-PFOS	1.11e4	1.00	1.000	4.61			26.7	100	0.00745	



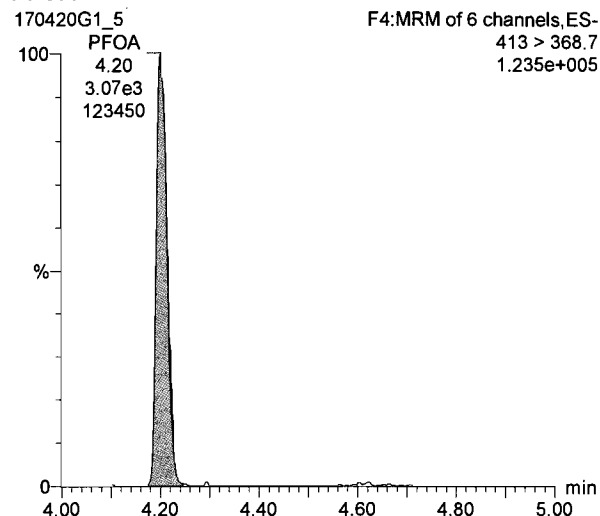
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Last Altered: Friday, April 21, 2017 10:17:30 Pacific Daylight Time

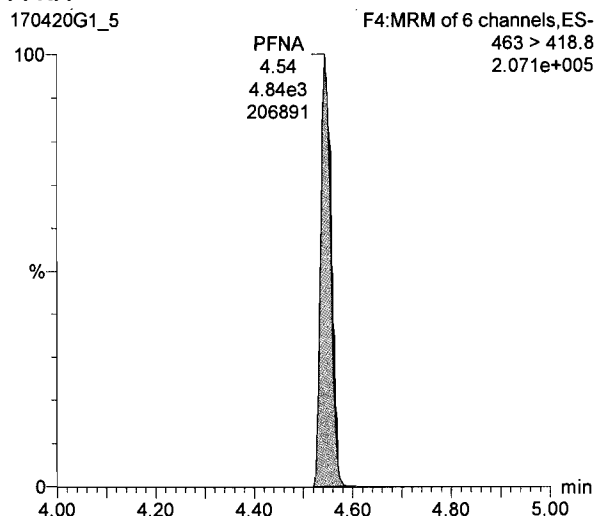
Printed: Friday, April 21, 2017 10:20:56 Pacific Daylight Time

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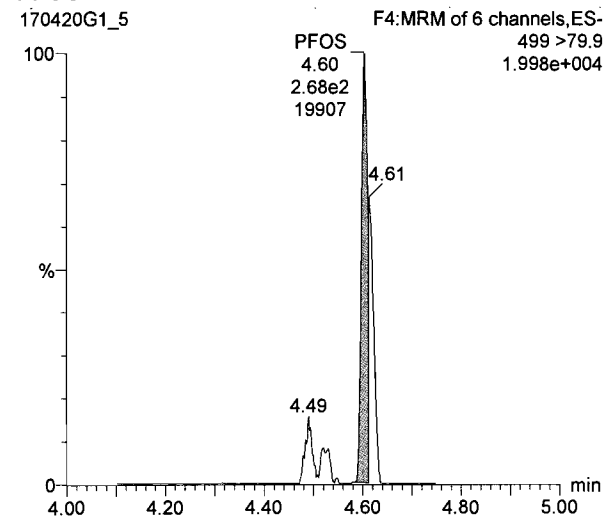
**PFOA**



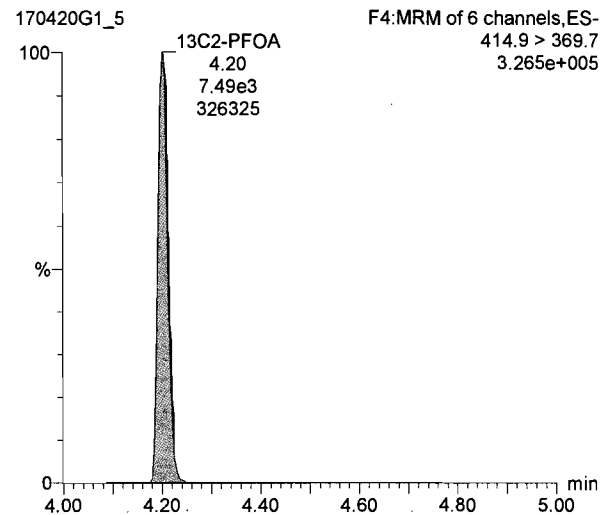
**PFNA**



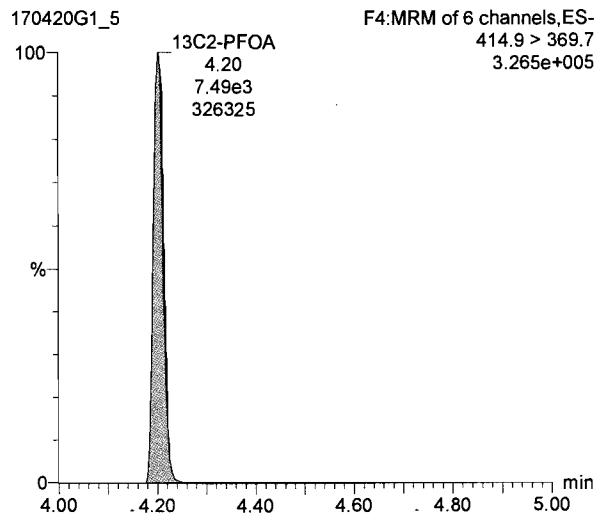
**PFOS**



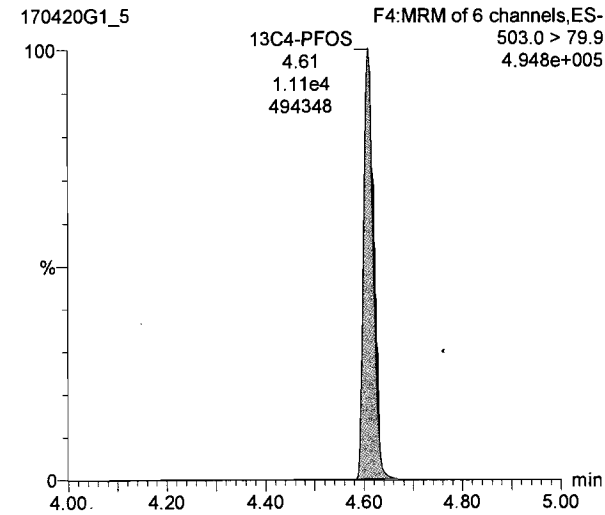
**13C2-PFOA**



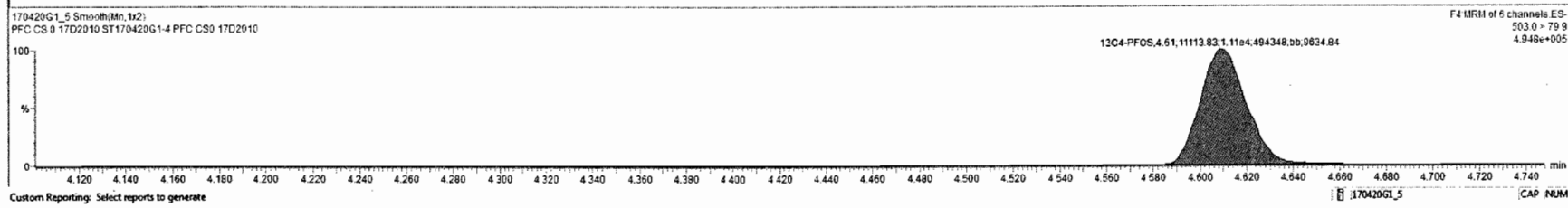
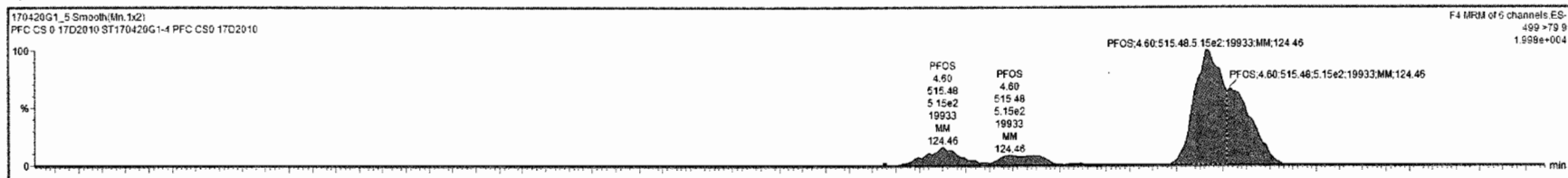
**13C2-PFOA**



**13C4-PFOS**



Name	Resp	RRF	retVol	RT	RA	Qty	Conc.	%Rec	DL	EMPC
1 PFBS	1.52e3	1.000	2.89				4.39	99.3	0.00113	
2 PFHpA	3.37e3	1.000	3.78				5.05	101	0.00372	
3 PFHxS	1.67e3	1.000	3.90				4.27	93.6	0.0190	
4 PFDA	3.07e3	1.000	4.20				5.28	106	0.0329	
5 PFOS	5.15e2	1.000	4.68				5.19	112	1.0901	
6 PFNA	4.84e3	1.000	4.54				4.78	95.6	0.00259	
7 13C2-PFHxA	3.35e3	0.45	1.000	3.27			10.0	100	0.00418	
8 13C2-PFDA	5.99e3	0.80	1.000	4.85			9.96	98.6	0.00768	
9 13C2-PFOA	7.48e3	1.00	1.000	4.20			10.0	100	0.0177	
10 13C4-PFOS	1.11e4	1.00	1.000	4.61			26.7	100	0.00745	



Custom Reporting: Select reports to generate

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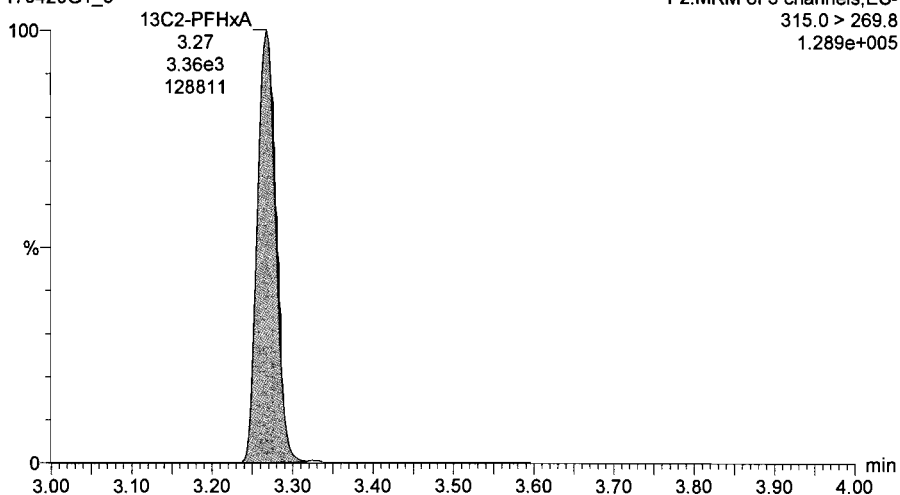
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Printed: Friday, April 21, 2017 10:20:56 Pacific Daylight Time

Name: 170420G1\_5, Date: 20-Apr-2017, Time: 17:37:07, ID: ST170420G1-4 PFC CS0 17D2010, Description: PFC CS 0 17D2010

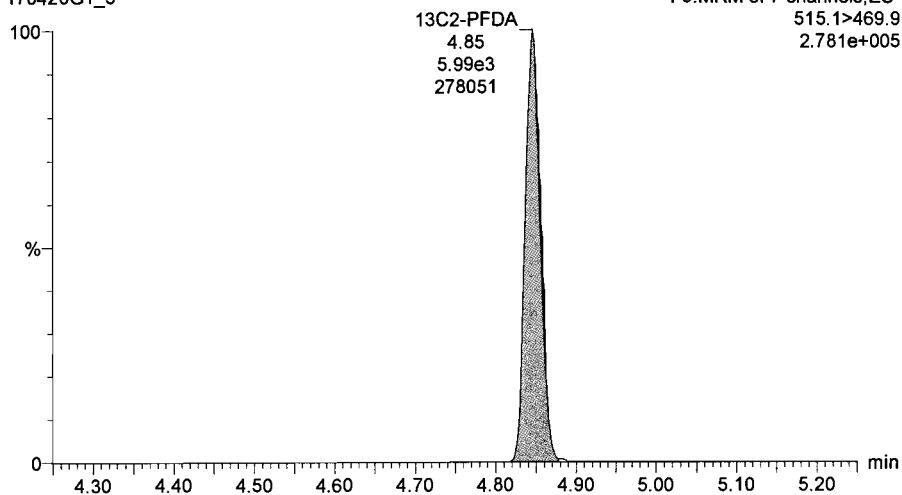
**13C2-PFHxA**

170420G1\_5



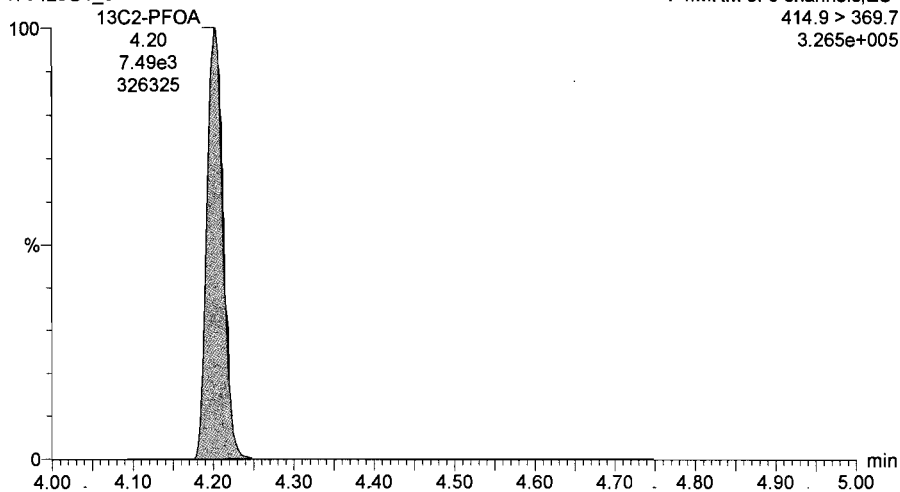
**13C2-PFDA**

170420G1\_5



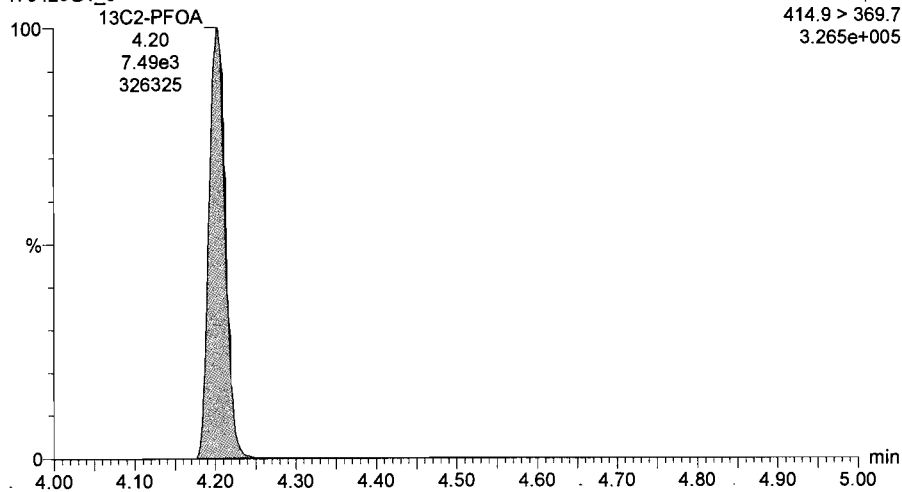
**13C2-PFOA**

170420G1\_5



**13C2-PFOA**

170420G1\_5

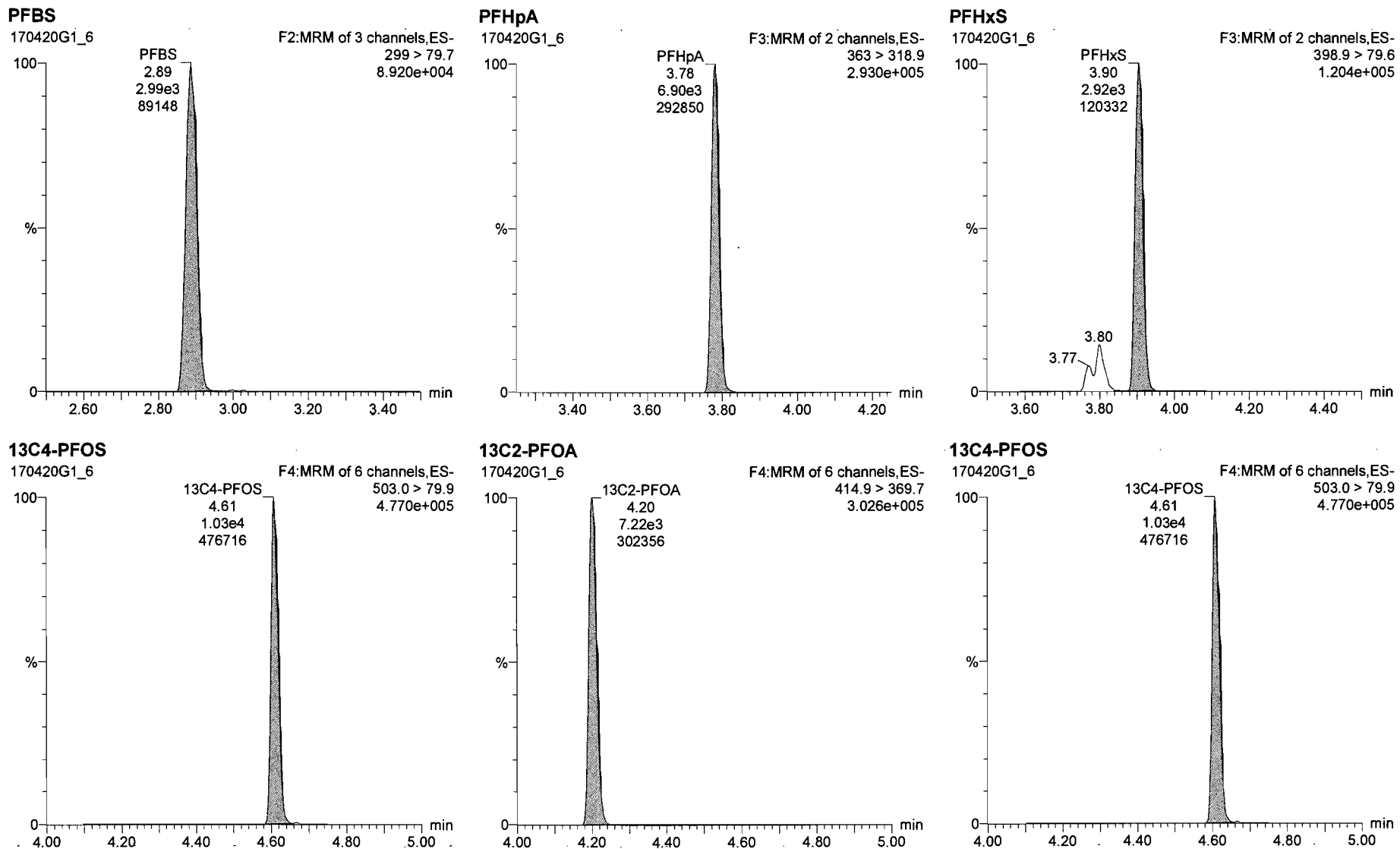


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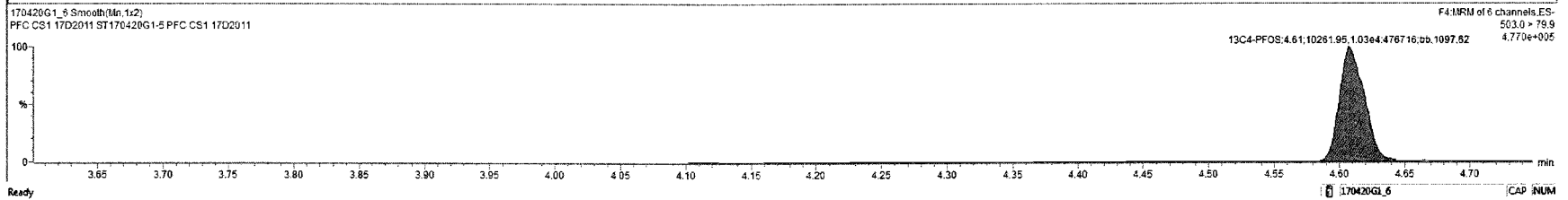
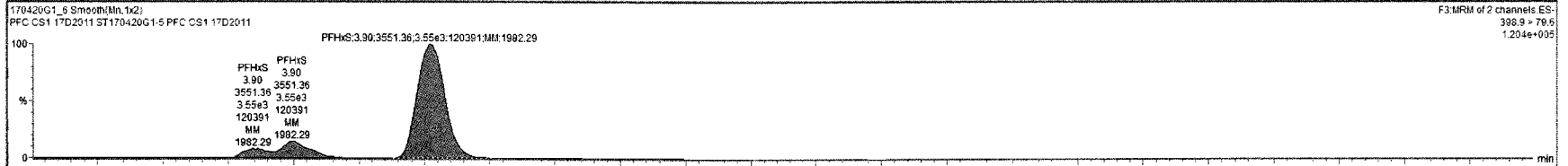
Name: 170420G1\_6, Date: 20-Apr-2017, Time: 17:49:31, ID: ST170420G1-5 PFC CS1 17D2011, Description: PFC CS1 17D2011





170420G1\_6\_ST170420G1-5-PFC CS1 17D2011\_PFC CS1 17D2011

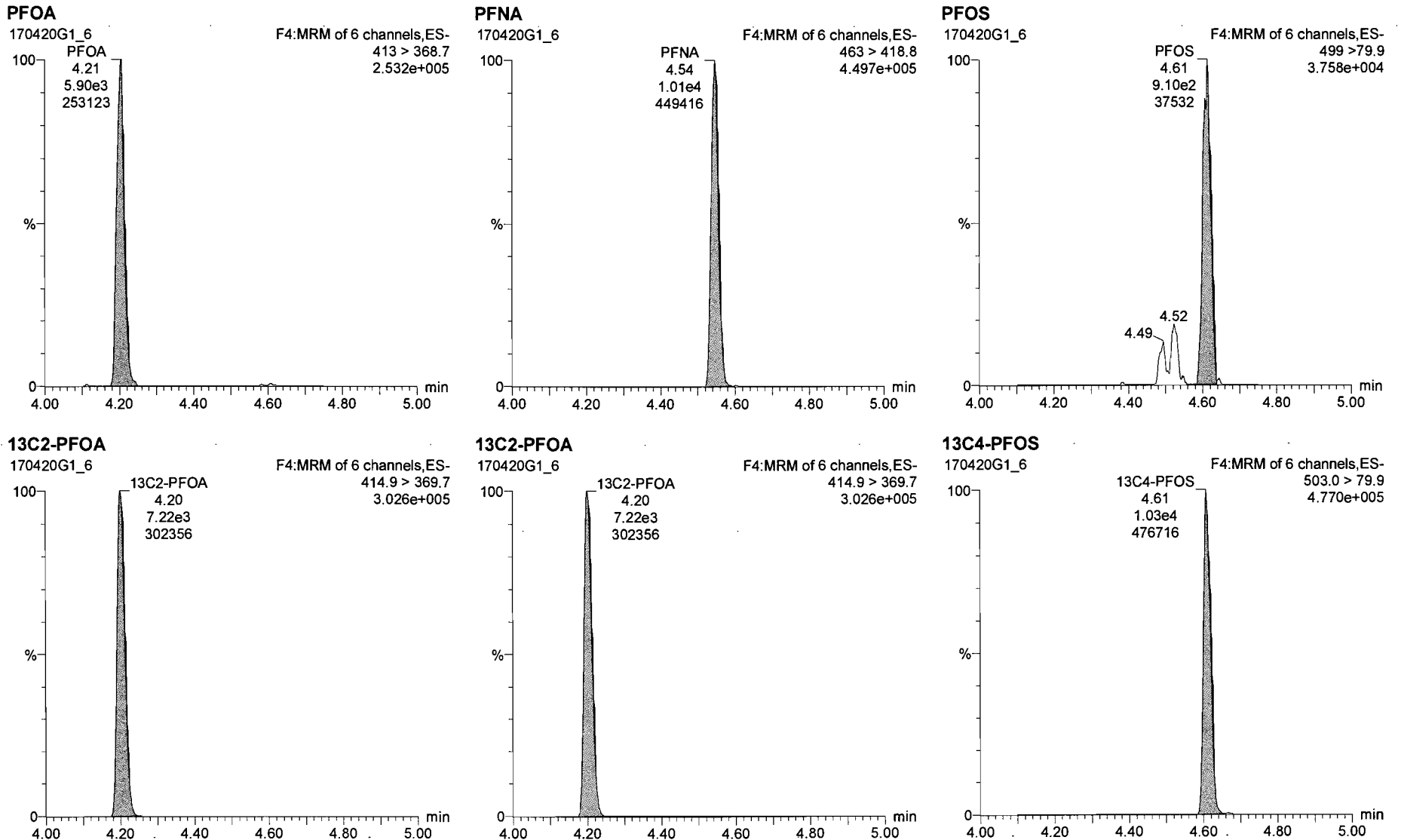
#	Name	Resp	RRF	wt/vol	RT	RA	Int	Conc.	%Rec	DL	EMPC
1	PFBS	2.99e3		1.000	2.89			9.42	106	0.0192	
2	PFHpA	6.90e3		1.000	3.78			10.8	106	0.0201	
3	PFHxS	3.55e3		1.000	3.90			11.6	127	0.0105	
4	PFOA	5.90e3		1.000	4.20			10.8	106	0.0690	
5	PFOS	9.10e2		1.000	4.61			9.95	107	0.151	
6	PFNA	1.01e4		1.000	4.55			10.5	105	0.00474	
7	13C2-PFHxA	3.19e3	0.45	1.000	3.27			9.06	96.6	0.00262	
8	13C2-PFOA	5.61e3	0.80	1.000	4.65			9.67	96.7	0.00749	
9	13C2-PFOA	7.22e3	1.00	1.000	4.20			10.0	100	0.0714	
10	13C4-PFOS	1.83e4	1.00	1.000	4.61			28.7	100	0.0654	



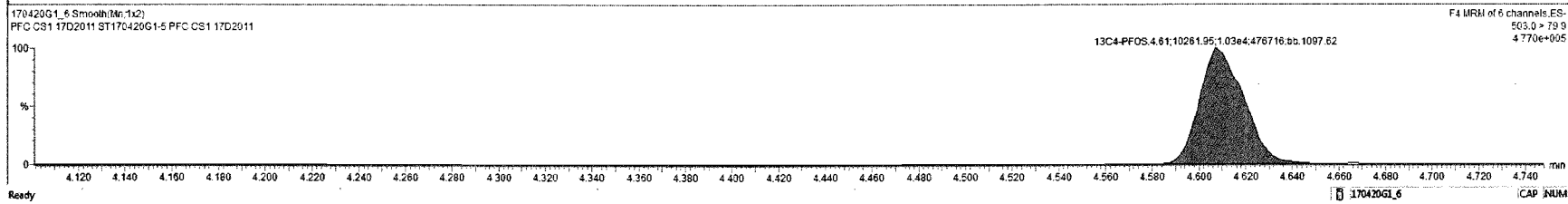
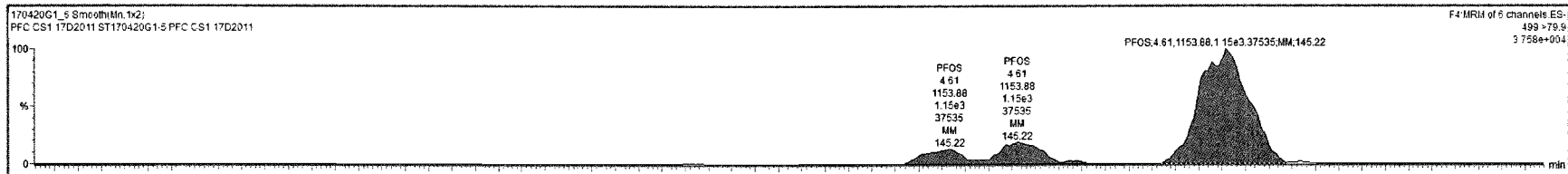
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Name: 170420G1\_6, Date: 20-Apr-2017, Time: 17:49:31, ID: ST170420G1-5 PFC CS1 17D2011, Description: PFC CS1 17D2011



Name	Resp	RRR	wt/wal	RT	RA	n/y	Conc.	%Rec	DL	EMPC
1. PFBS	2.89e3		1.000	2.89			9.42	105	0.0192	
2. PFHxA	6.59e3		1.000	3.78			10.8	105	0.0201	
3. PFHxS	3.55e3		1.000	3.90			9.90	109	0.00902	
4. PFDA	5.90e3		1.000	4.20			10.6	105	0.00990	
5. PFOS	1.15e3		1.000	4.61			12.3	132	0.1195	
6. PFNA	1.01e4		1.000	4.55			10.5	105	0.00474	
7. 13C2-PFHxA	3.19e3	0.45	1.000	3.27			9.86	98.6	0.00262	
8. 13C2-PFDA	5.61e3	0.80	1.000	4.85			9.67	96.7	0.00140	
9. 13C2-PFOA	7.22e3	1.00	1.000	4.30			10.0	100	0.0714	
10. 13C4-PFOS	1.03e4	1.00	1.000	4.61			26.7	100	0.0654	



Dataset: Untitled

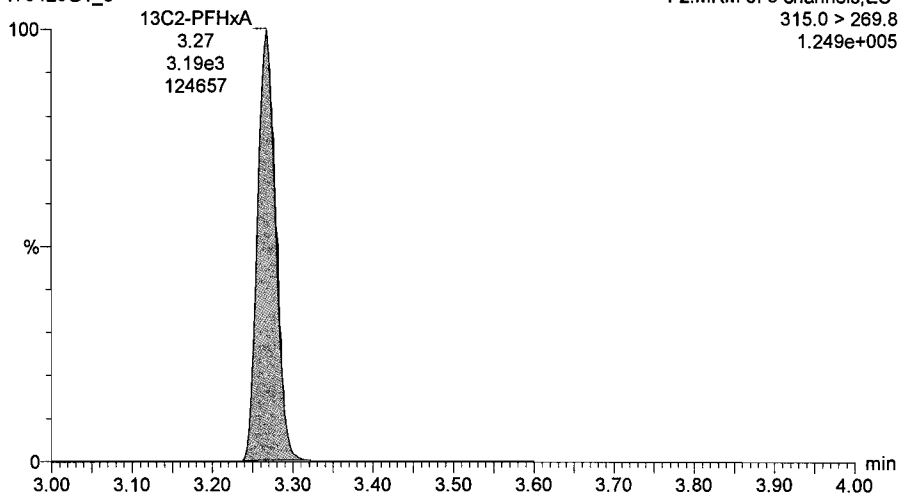
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Name: 170420G1\_6, Date: 20-Apr-2017, Time: 17:49:31, ID: ST170420G1-5 PFC CS1 17D2011, Description: PFC CS1 17D2011

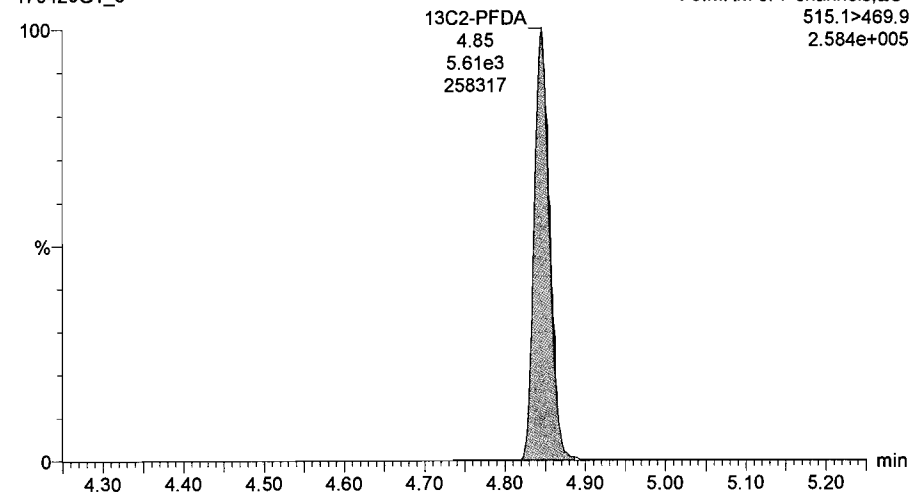
**13C2-PFHxA**

170420G1\_6



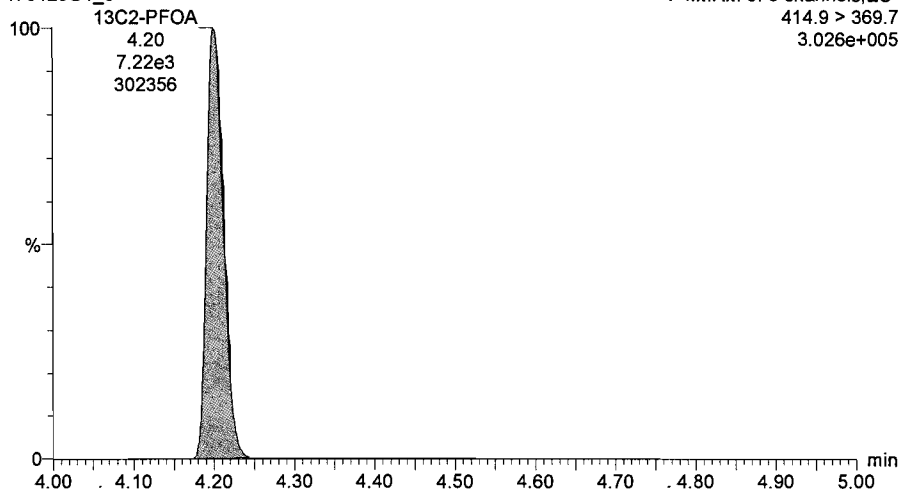
**13C2-PFDA**

170420G1\_6



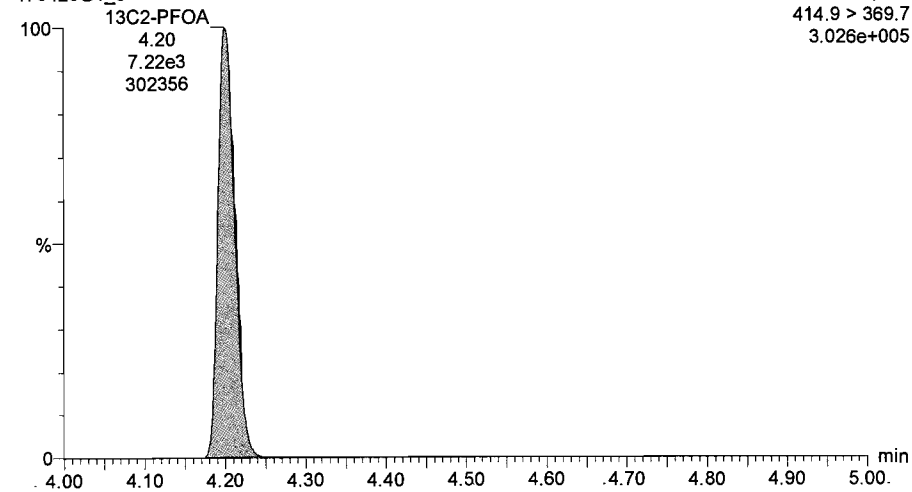
**13C2-PFOA**

170420G1\_6



**13C2-PFOA**

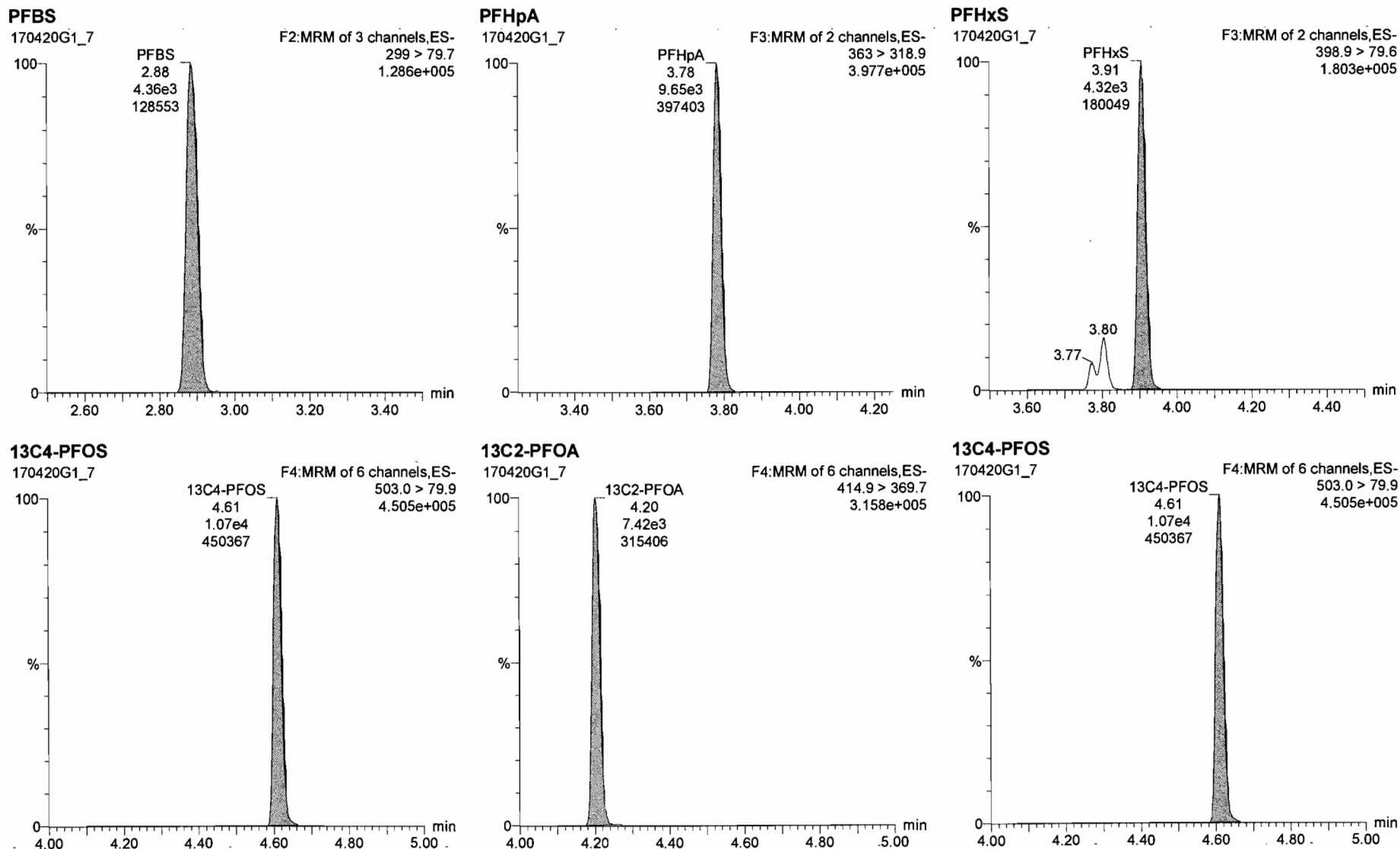
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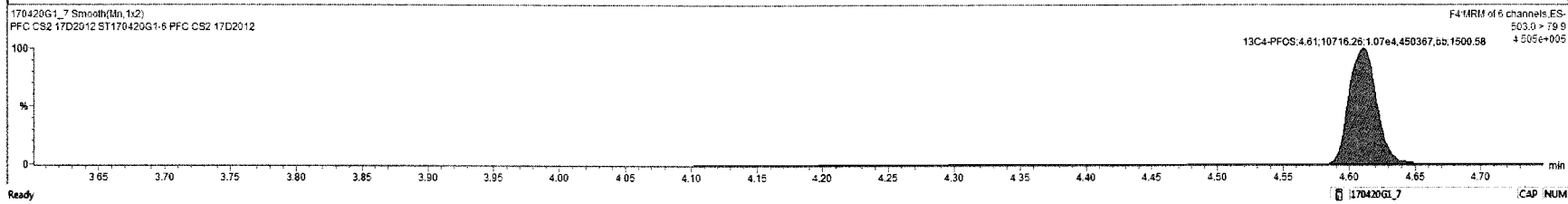
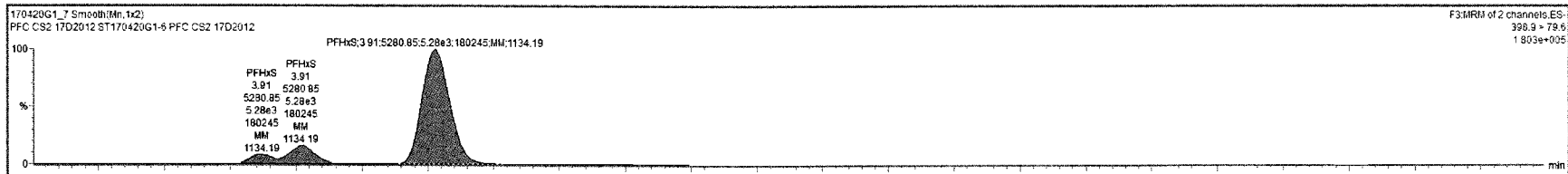
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Printed: Friday, April 21, 2017 10:20:56 Pacific Daylight Time

Name: 170420G1\_7, Date: 20-Apr-2017, Time: 18:01:56, ID: ST170420G1-6 PFC CS2 17D2012, Description: PFC CS2 17D2012



#	Name	Retap	RRF	wb/wt	RT	RA	AW	Conc.	%Rec	DL	EMPC
1	PFB	4.36e3		1.000	2.88			12.2	99.9	0.00174	
2	PFHxA	9.05e3		1.000	3.78			14.8	98.5	0.00449	
3	PFHs	5.28e3		1.000	3.91			16.7	117	0.0278	
4	PFOA	8.49e3		1.000	4.20			15.0	99.7	0.0304	
5	PFOS	1.34e3		1.000	4.61			14.1	101	9.185	
6	PFNA	1.48e4		1.000	4.55			15.0	100	0.00500	
7	13C2-PFHxA	3.47e3	0.45	1.000	3.27			10.4	104	0.00215	
8	13C2-PFOA	6.18e3	0.80	1.000	4.85			10.4	104	0.00647	
9	13C2-PFOA	7.42e3	1.00	1.000	4.20			10.0	100	0.0103	
10	13C4-PFOS	1.07e4	1.00	1.000	4.61			26.7	100	0.0478	

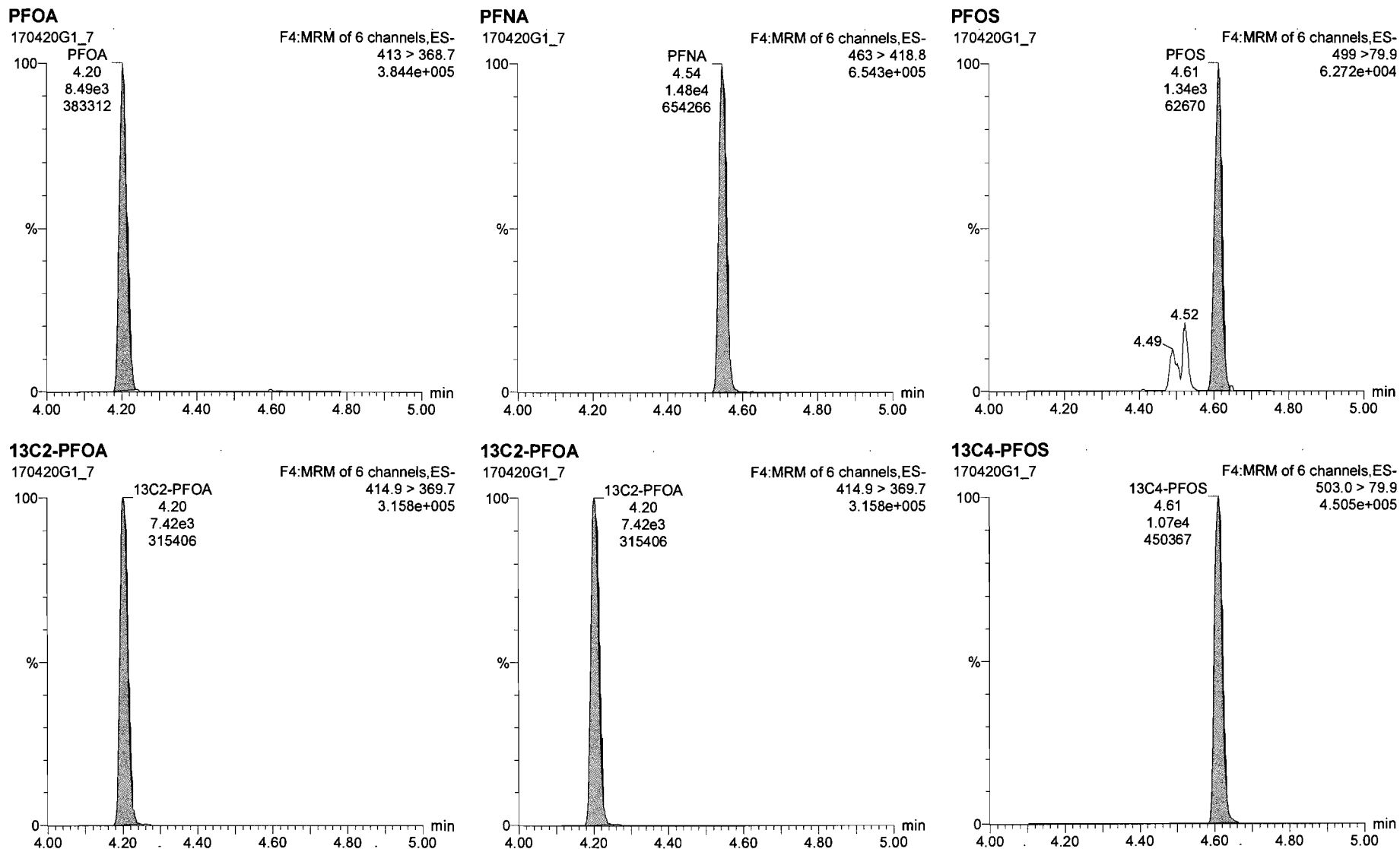


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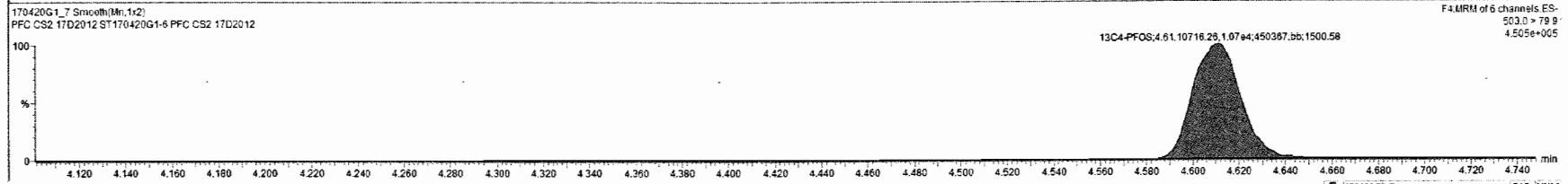
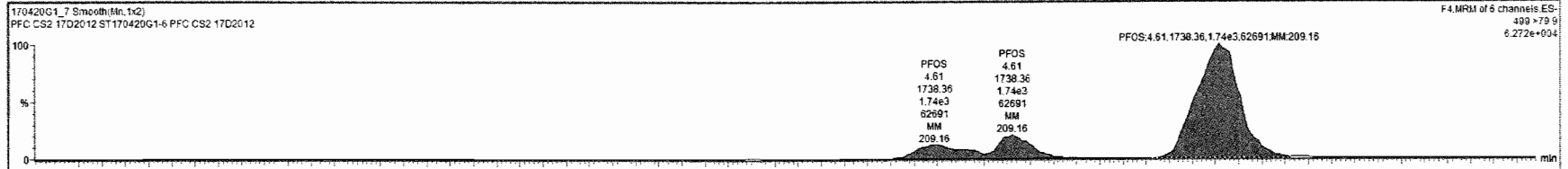
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Name: 170420G1\_7, Date: 20-Apr-2017, Time: 18:01:56, ID: ST170420G1-6 PFC CS2 17D2012, Description: PFC CS2 17D2012



170420G1\_7 - ST170420G1-6 PFC CS2 17D2012 - PFC CS2 17D2012

Name	Resp	RRF	wt%vol	RT	RA	ny	Conc.	%Rec	DL	EMPC
1 PFBS	4.35e3		1.000	2.88			13.2	99.9	0.00174	
2 PFHpA	9.65e3		1.000	3.78			14.8	98.8	0.00449	
3 PFHxS	5.28e3		1.000	3.91			14.2	104	0.0250	
4 PFDA	8.49e3		1.000	4.20			15.0	99.7	0.0304	
5 PFOS	1.74e3		1.000	4.61			17.6	122	0.1469	
6 PFNA	1.48e4		1.000	4.55			15.0	100	0.02800	
7 13C2-PFHxA	3.47e3	0.45	1.000	3.27			10.4	104	0.00215	
8 13C2-PFBA	6.15e3	0.80	1.000	4.85			10.4	104	0.02647	
9 13C2-PFOA	7.42e3	1.00	1.000	4.20			10.0	100	0.0163	
10 13C4-PFOS	1.07e4	1.00	1.000	4.61			28.7	100	0.0478	



Custom Reporting: Select reports to generate

170420G1\_7 CAP NUM



Dataset: Untitled

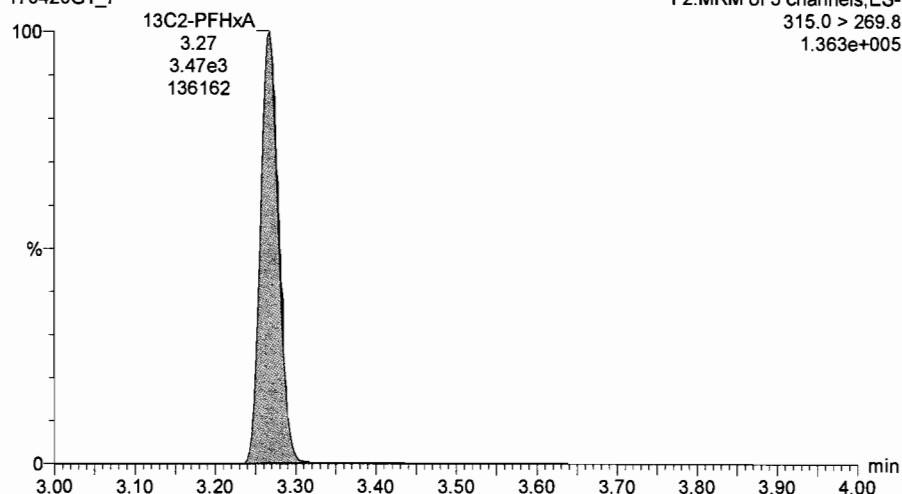
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Name: 170420G1\_7, Date: 20-Apr-2017, Time: 18:01:56, ID: ST170420G1-6 PFC CS2 17D2012, Description: PFC CS2 17D2012

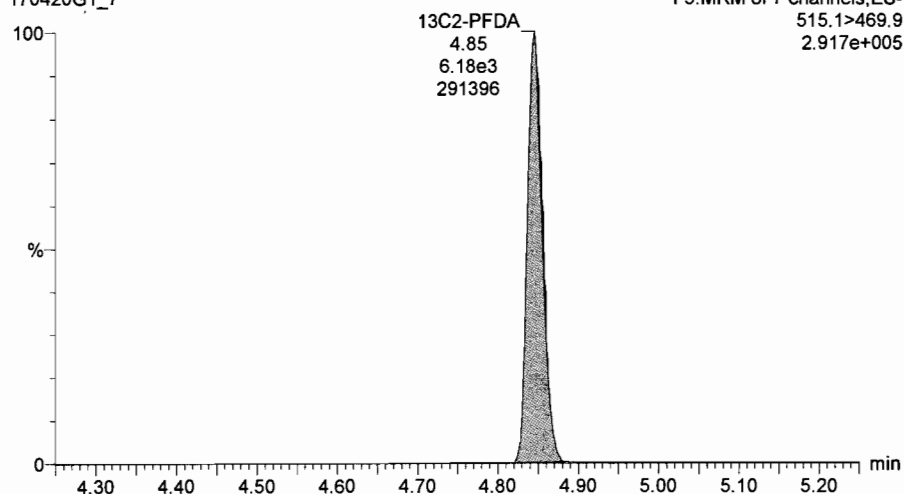
**13C2-PFHxA**

170420G1\_7



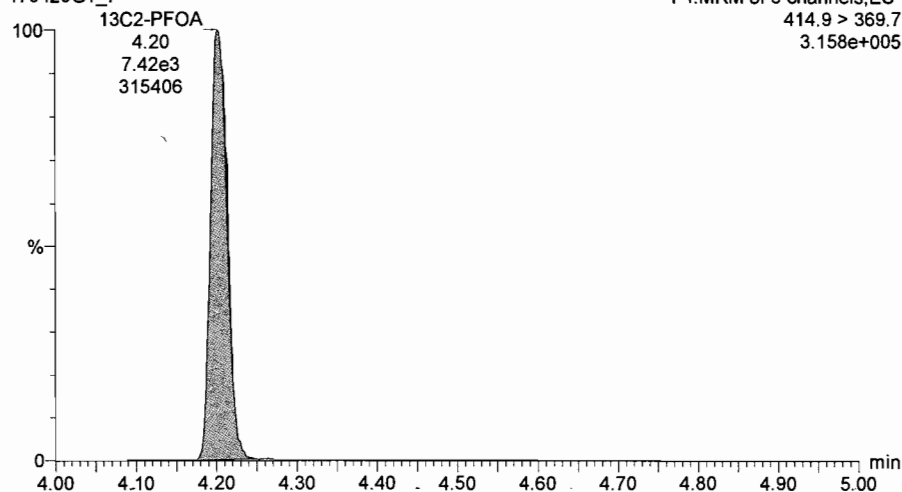
**13C2-PFDA**

170420G1\_7



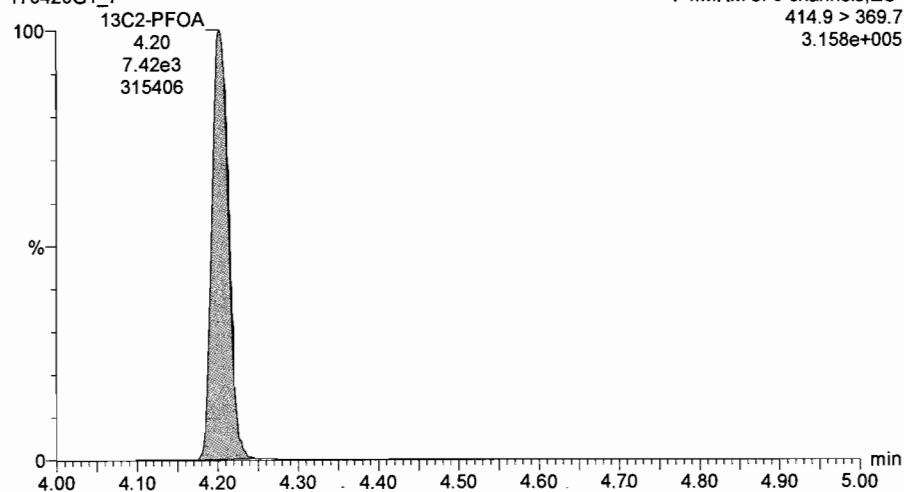
**13C2-PFOA**

170420G1\_7



**13C2-PFOA**

170420G1\_7

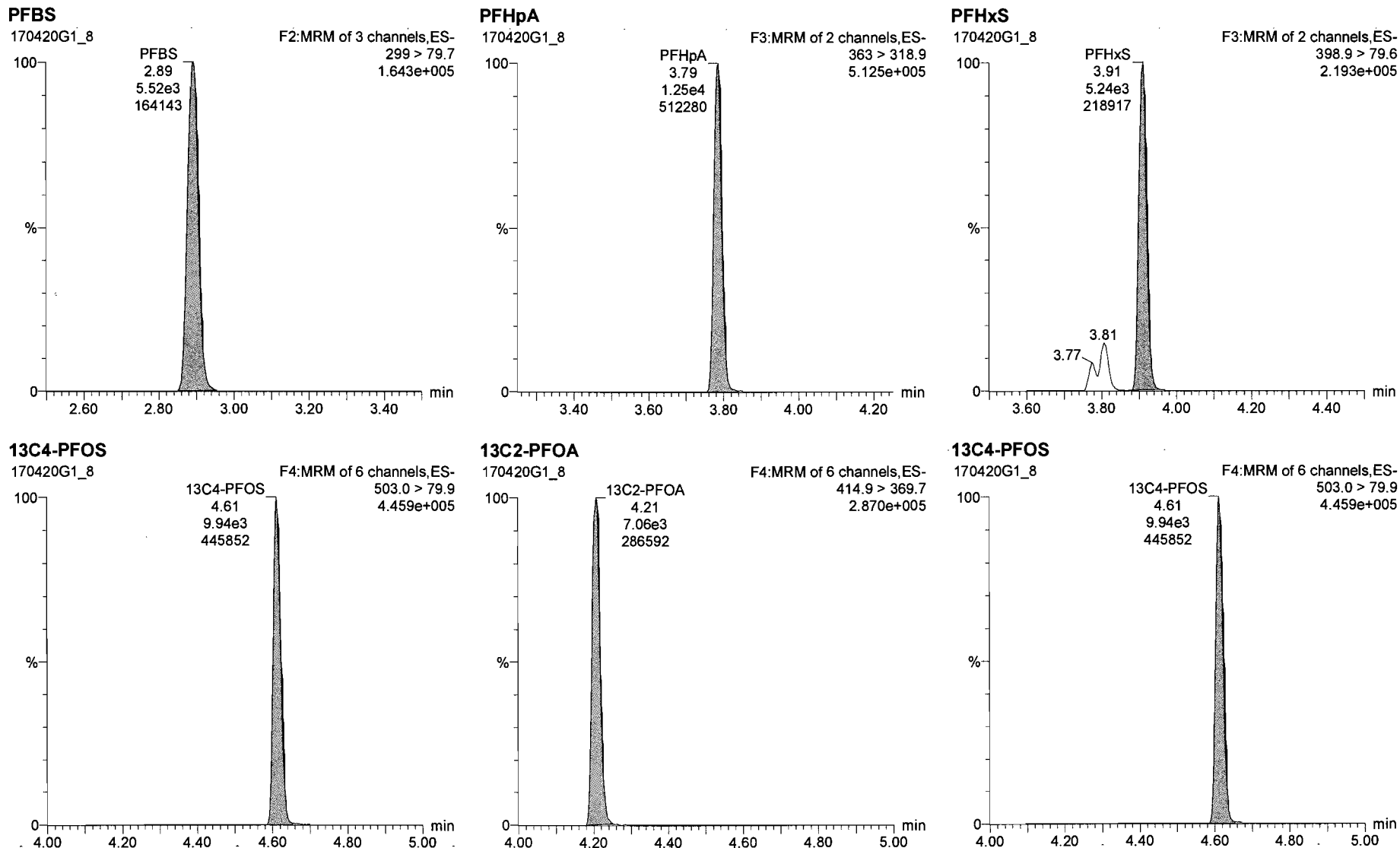


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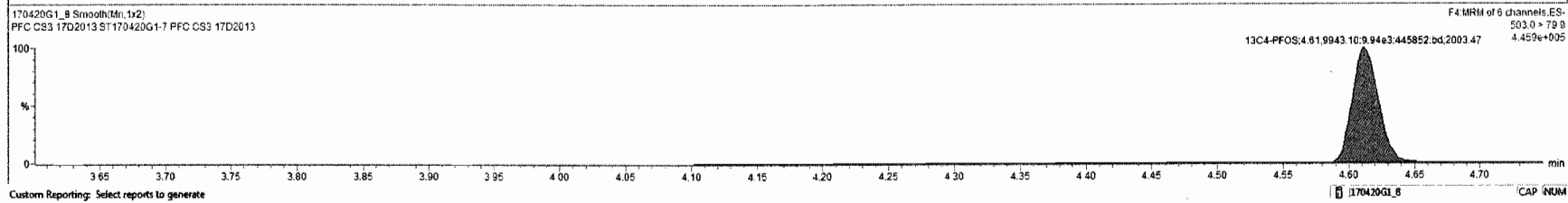
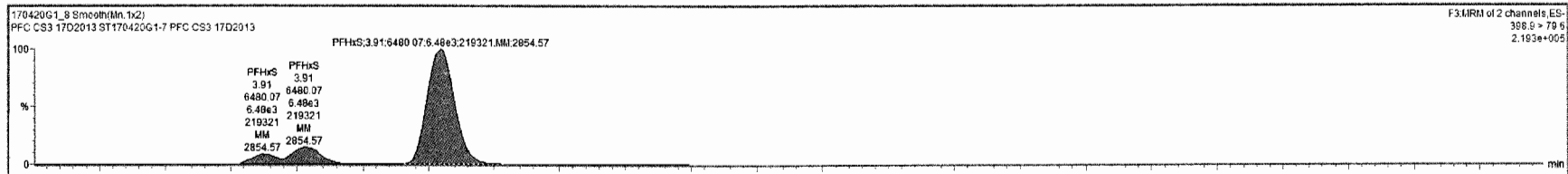
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Name: 170420G1\_8, Date: 20-Apr-2017, Time: 18:14:20, ID: ST170420G1-7 PFC CS3 17D2013, Description: PFC CS3 17D2013



Name	Resp	RRF	WtVol	RF	RA	Wt	Conc	WRec	DL	EMPC
PFBS	5.52e3		1.000	2.88			18.2	103	0.00810	
PFHpA	1.25e4		1.000	3.79			20.3	101	0.0201	
PFHxS	5.48e3		1.000	3.91			20.8	103	0.0129	
PFOA	1.09e4		1.000	4.21			20.3	101	0.0405	
PFOS	1.84e3		1.000	4.61			18.7	101	0.412	
PFNA	1.93e4		1.000	4.55			20.8	104	0.0167	
13C2-PFHxA	3.30e3	0.45	1.000	3.27			10.4	104	0.0145	
13C2-PFDA	5.81e3	0.80	1.000	4.85			10.3	103	0.326	
13C2-PFOA	7.06e3	1.00	1.000	4.21			10.0	100	0.0451	
13C4-PFOS	9.94e3	1.00	1.000	4.61			28.7	100	0.0358	



Custom Reporting: Select reports to generate

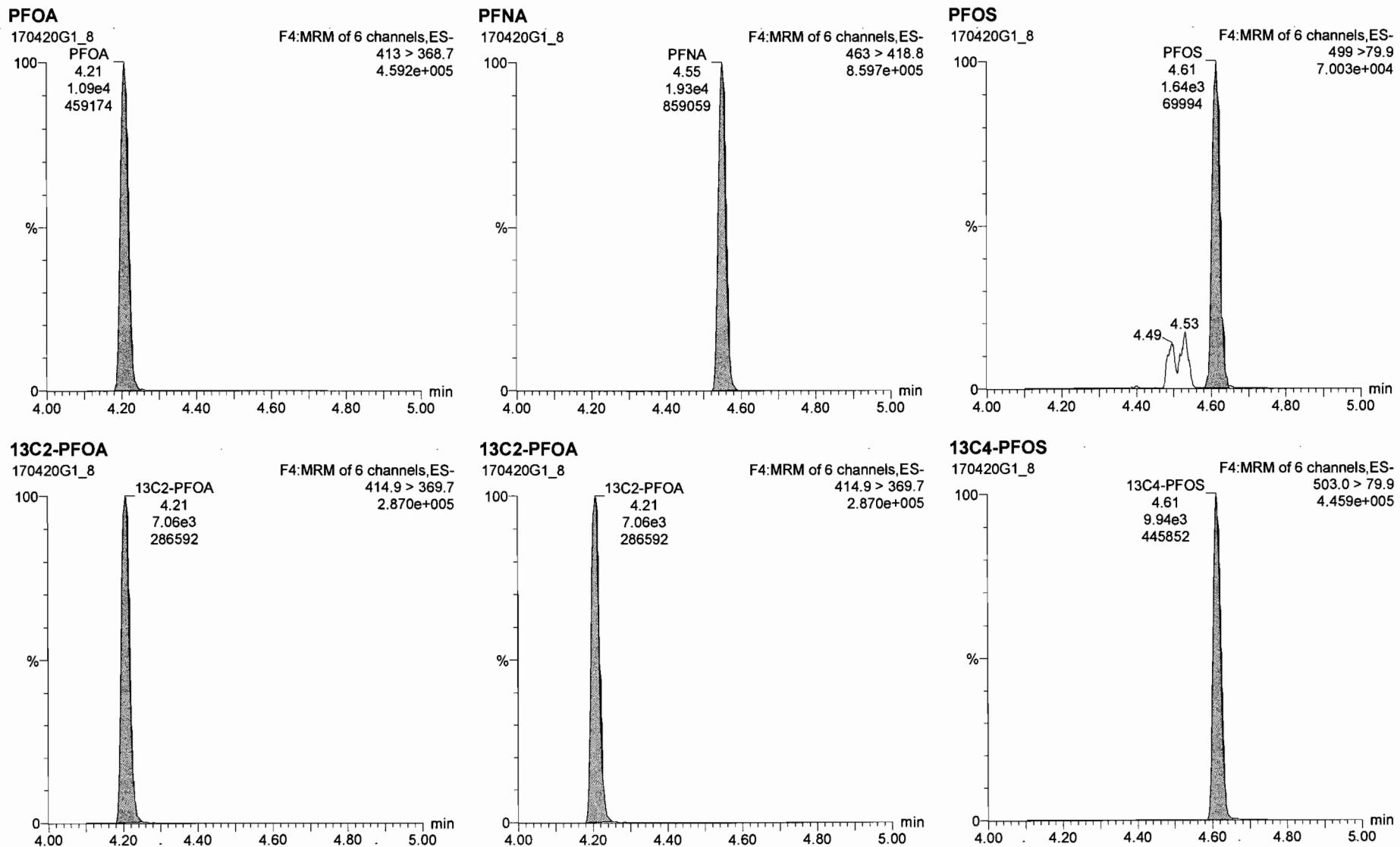
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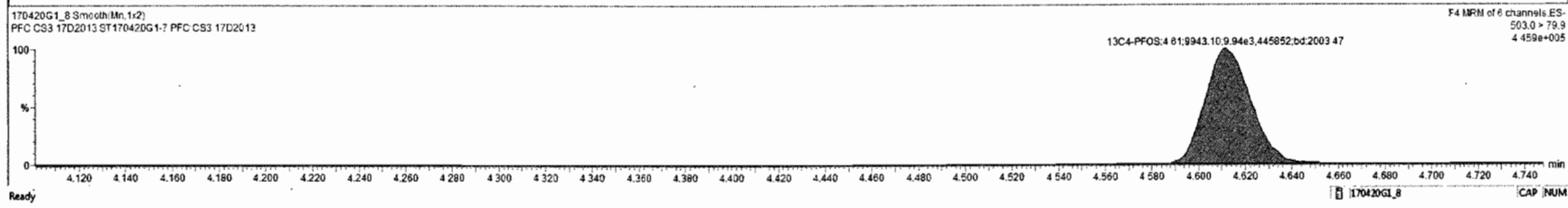
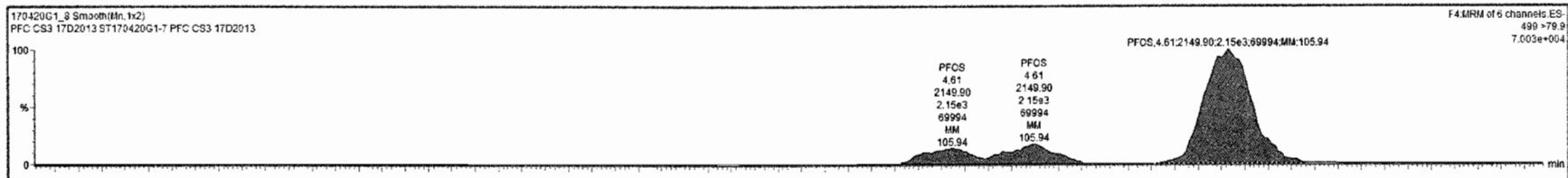
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Name: 170420G1\_8, Date: 20-Apr-2017, Time: 18:14:20, ID: ST170420G1-7 PFC CS3 17D2013, Description: PFC CS3 17D2013



170420G1\_8 - ST170420G1-7 PFC CS3 17D2013 - PFC CS3 17D2013

#	Name	Resp	RF	WtVal	RT	RA	nV	Conc	%Rec	DL	EMPC
1	PFBS	5.52e3		1.000	2.89			18.2	103		0.00010
2	PFHpA	1.25e4		1.000	3.79			20.3	101		0.0201
3	PFHxS	6.48e3		1.000	3.91			18.8	103		0.0122
4	PFDA	1.09e4		1.000	4.21			20.3	101		0.0406
5	PFOS	2.15e3		1.000	4.61			21.7	117		0.353
6	PFNA	1.93e4		1.000	4.55			20.8	104		0.0167
7	13C2-PFHxA	3.38e3	0.45	1.000	3.27			10.4	104		0.0145
8	13C2-PFDA	5.81e3	0.80	1.000	4.85			10.3	103		0.326
9	13C2-PFOA	7.06e3	1.00	1.000	4.21			10.0	100		0.0451
10	13C4-PFOS	9.94e3	1.00	1.000	4.61			28.7	100		0.0358



Dataset: Untitled

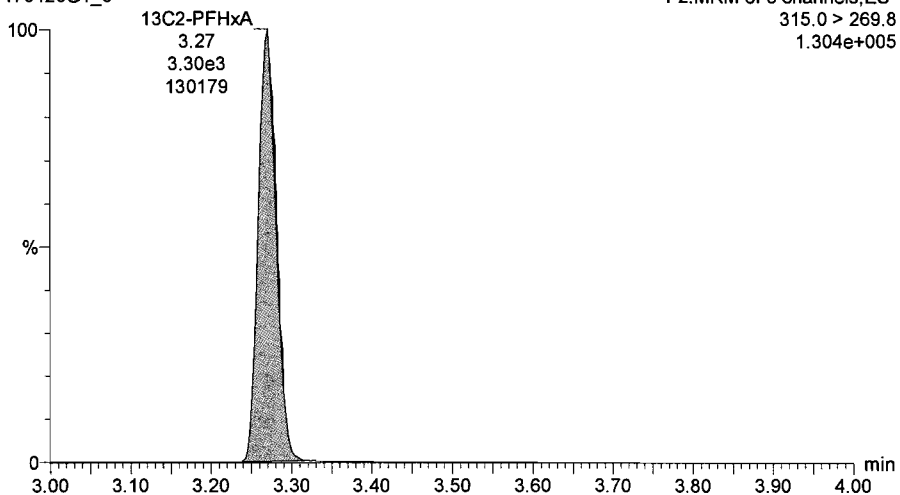
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Name: 170420G1\_8, Date: 20-Apr-2017, Time: 18:14:20, ID: ST170420G1-7 PFC CS3 17D2013, Description: PFC CS3 17D2013

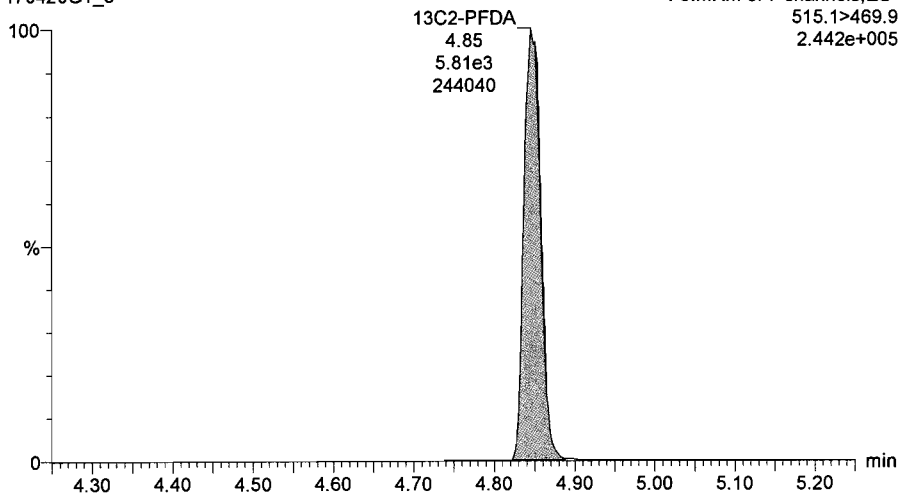
**13C2-PFHxA**

170420G1\_8



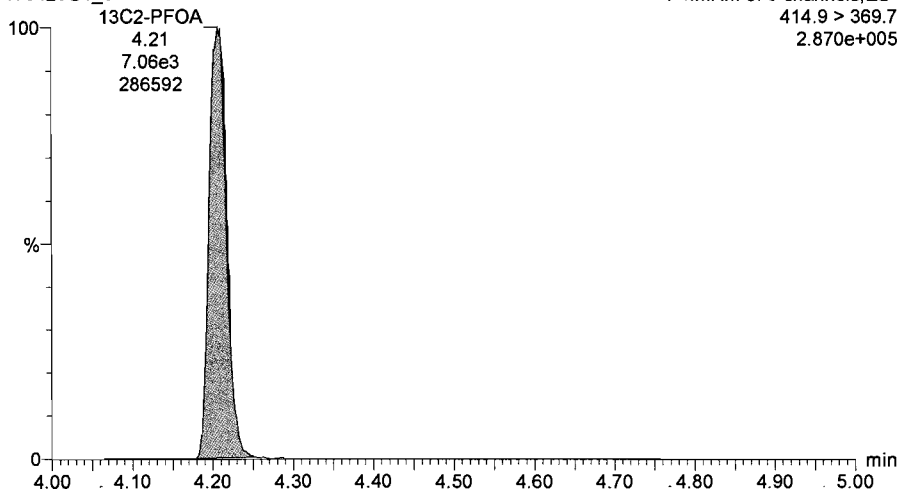
**13C2-PFDA**

170420G1\_8



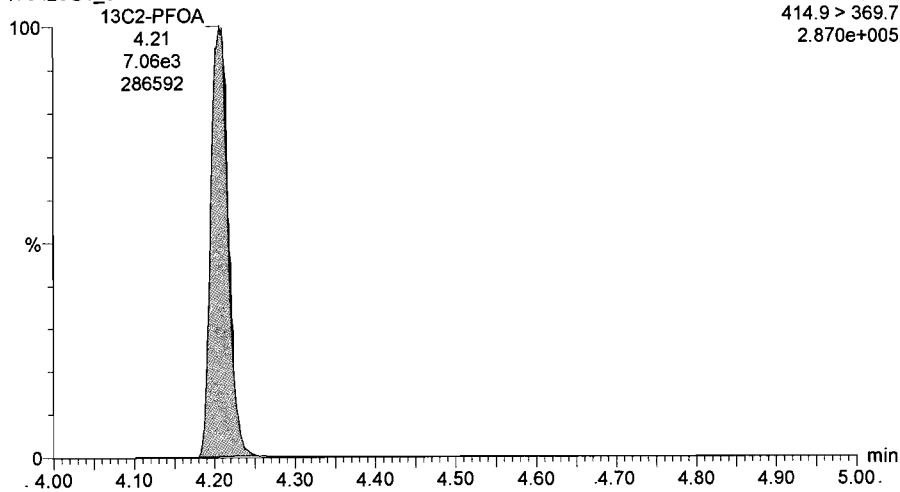
**13C2-PFOA**

170420G1\_8



**13C2-PFOA**

170420G1\_8



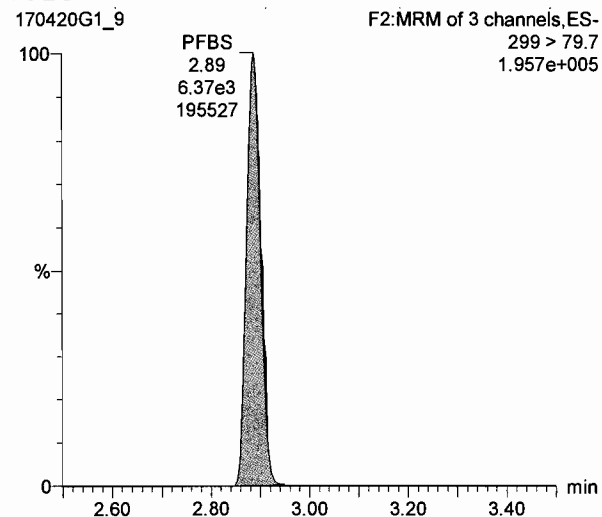
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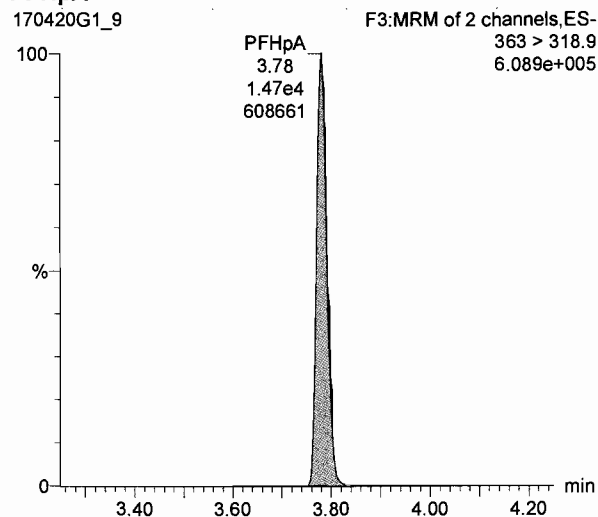
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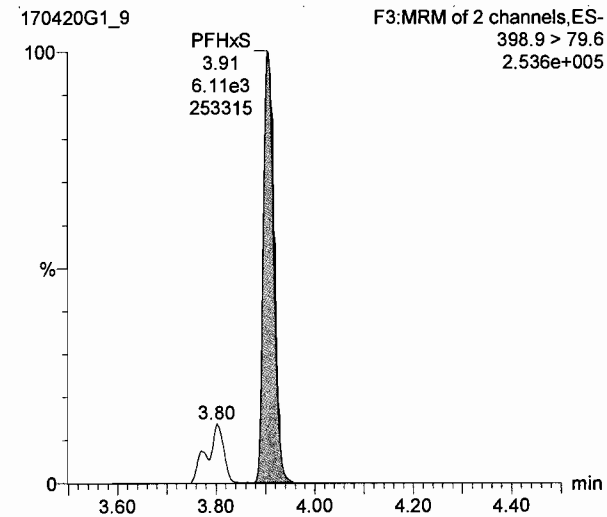
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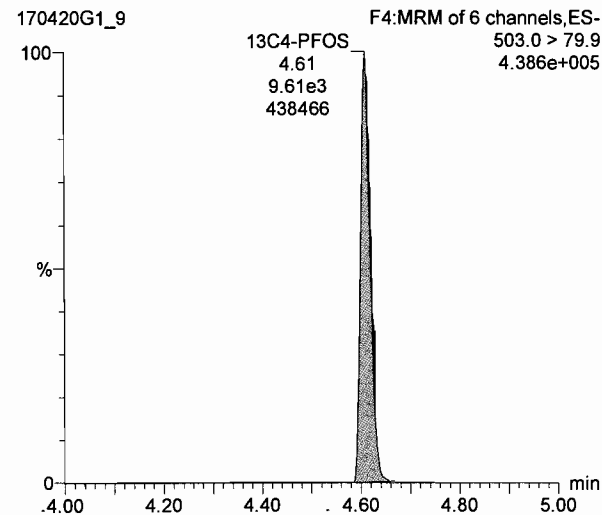
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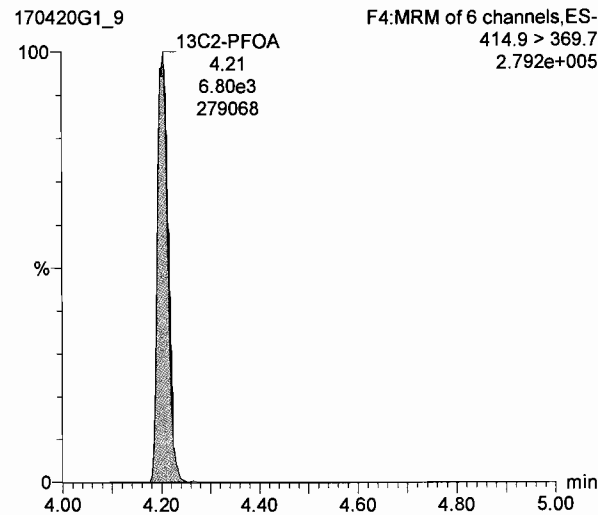
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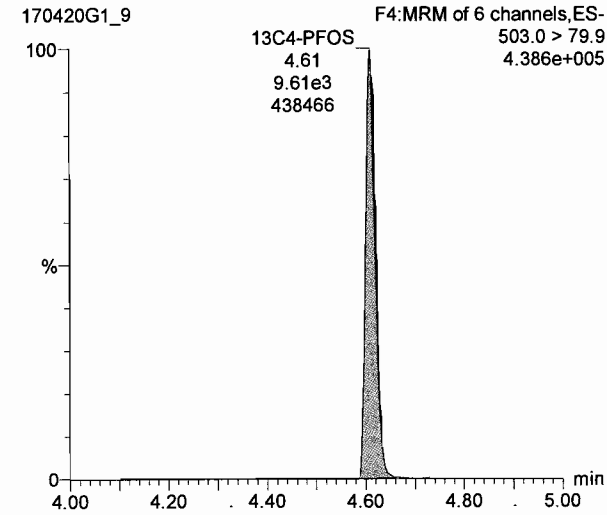
**13C4-PFOS**



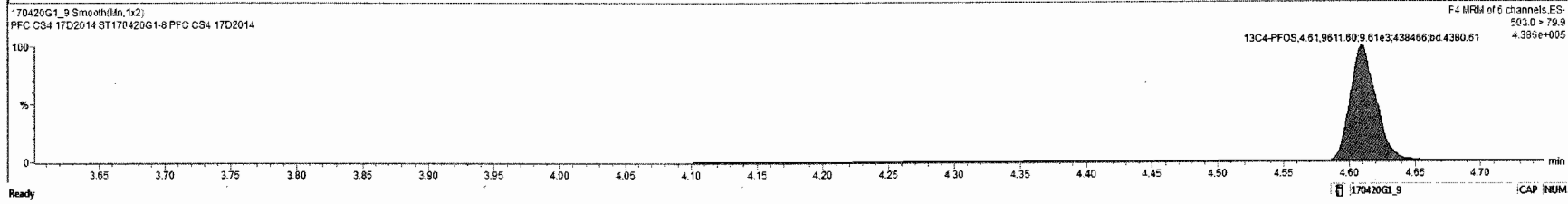
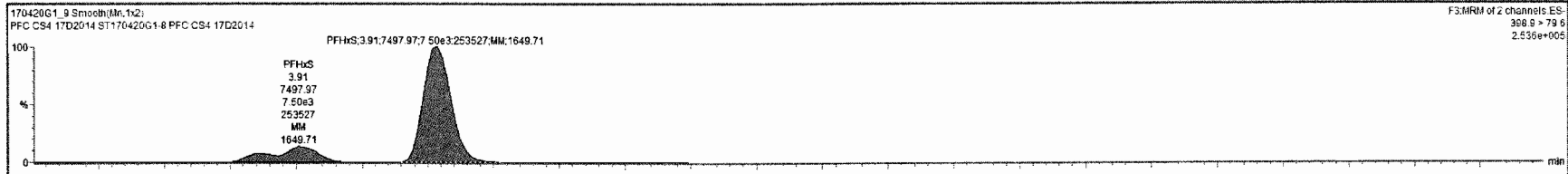
**13C2-PFOA**



**13C4-PFOS**



Name	Resp	RRF	WtFac	RT	RA	WY	Conc	Minip	CL	EMPC
1 PFBS	6.37e3		1.000	2.89			21.8	98.6	0.00448	
2 PFHpA	1.47e4		1.000	3.78			24.9	99.7	0.0180	
3 PFHxS	7.50e3		1.000	3.91			23.8	100	0.0290	
4 PFDA	1.24e4		1.000	4.20			24.3	97.1	0.0290	
5 PFOS	2.03e3		1.000	4.61			24.1	104	0.179	
6 PFNA	2.17e4		1.000	4.55			24.3	97.3	0.0509	
7 13C2-PFHxA	3.14e3	0.45	1.000	3.27			10.3	193	0.00746	
8 13C2-PFDA	5.26e3	0.89	1.000	4.85			9.64	96.4	0.0155	
9 13C2-PFOA	6.80e3	1.00	1.000	4.20			10.0	100	0.0274	
10 13C4-PFOS	9.81e3	1.00	1.000	4.61			28.7	100	0.0164	



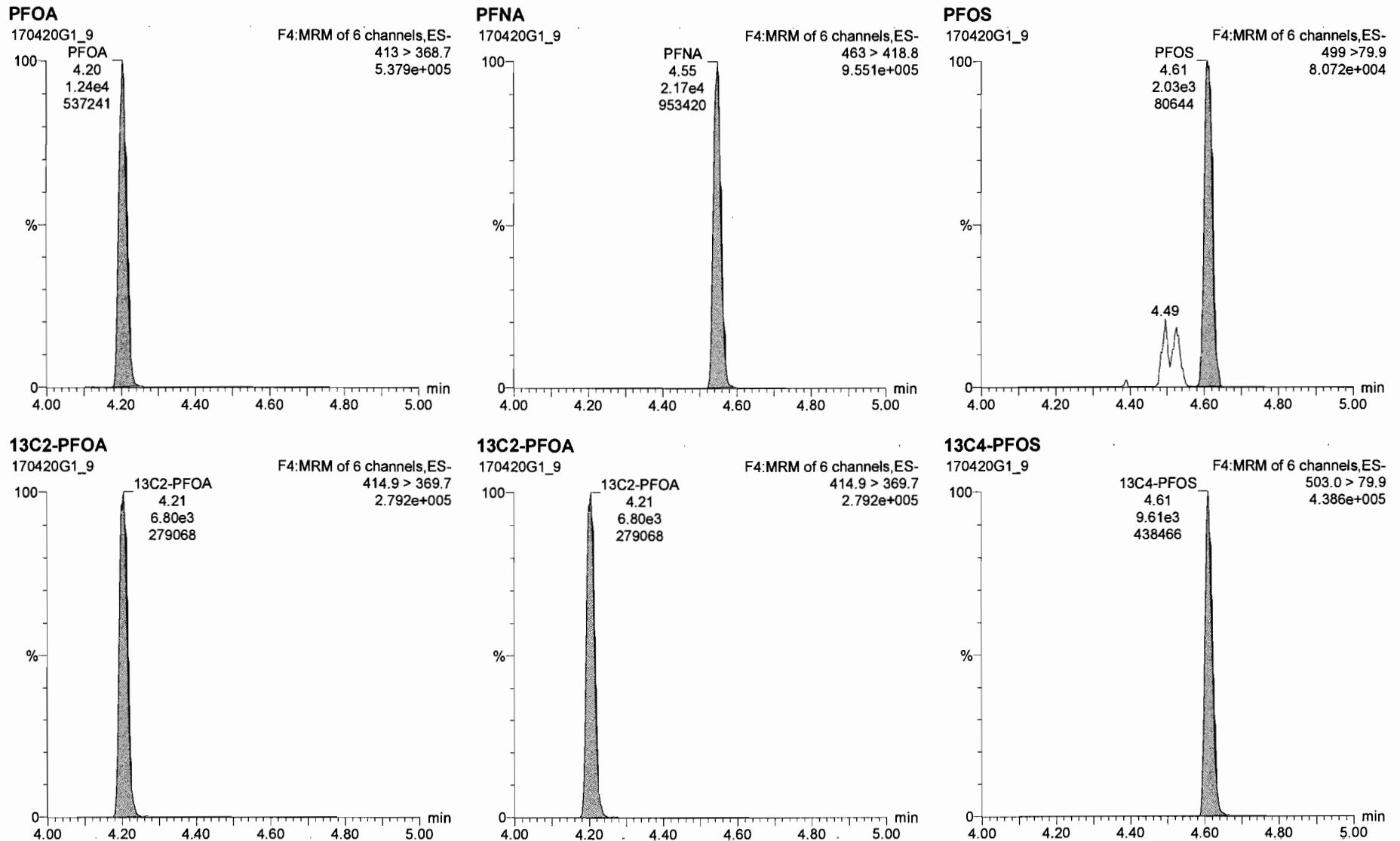


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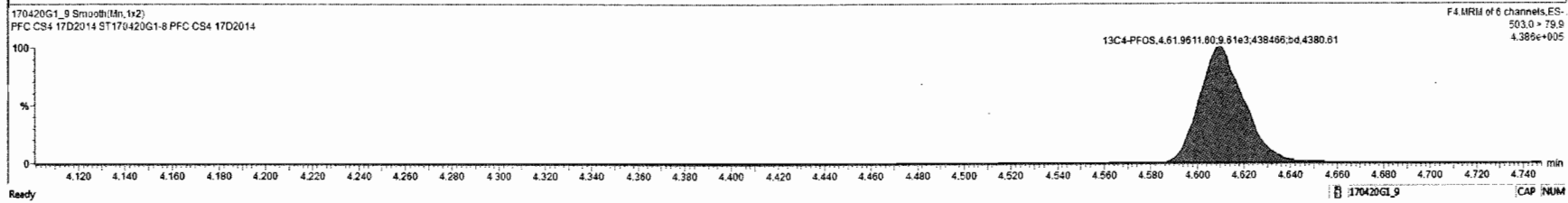
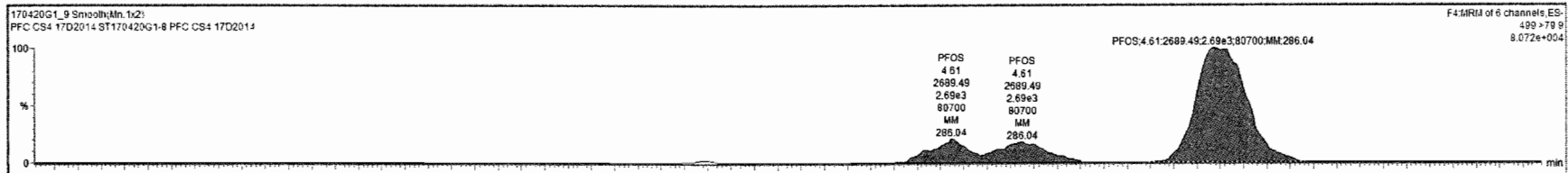
Last Altered: Friday, April 21, 2017 10:17:30 Pacific Daylight Time

Printed: Friday, April 21, 2017 10:20:56 Pacific Daylight Time

Name: 170420G1\_9, Date: 20-Apr-2017, Time: 18:26:46, ID: ST170420G1-8 PFC CS4 17D2014, Description: PFC CS4 17D2014



#	Name	Resp	RFU	IntVols	RT	RA	Qty	Calc.	%Rec	DL	EMPC
1	PFBS	6.37e3		1,000	2.05			21.8	98.6	0.03448	
2	PFHpA	1.47e4		1,000	3.78			24.9	99.7	0.0180	
3	PFHxS	7.50e3		1,000	3.91			22.6	99.1	0.0248	
4	PFOA	1.24e4		1,000	4.20			24.3	97.1	0.0290	
5	PFOS	2.89e3		1,000	4.61			26.8	116	0.142	
6	PFNA	2.17e4		1,000	4.55			24.3	97.3	0.0509	
7	13C2-PFHxA	3.14e3	0.45	1,000	3.27			10.3	103	0.00746	
8	13C2-PFOA	5.26e3	0.80	1,000	4.85			9.64	96.4	0.0155	
9	13C2-PFOA	6.86e3	1.00	1,000	4.20			10.8	100	0.0274	
10	13C4-PFOS	9.61e1	1.00	1,000	4.61			28.7	100	0.0164	



Dataset: Untitled

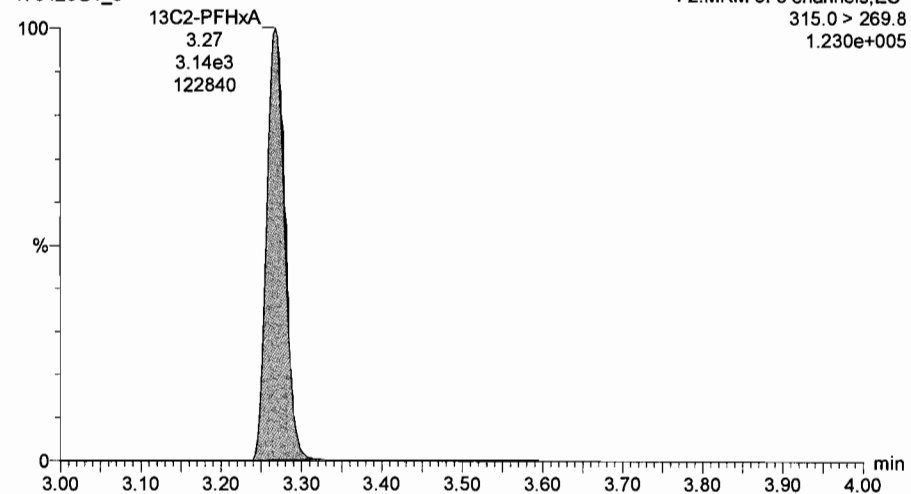
Last Altered: Friday, April 21, 2017 10:17:30 Pacific Daylight Time

Printed: Friday, April 21, 2017 10:20:56 Pacific Daylight Time

Name: 170420G1\_9, Date: 20-Apr-2017, Time: 18:26:46, ID: ST170420G1-8 PFC CS4 17D2014, Description: PFC CS4 17D2014

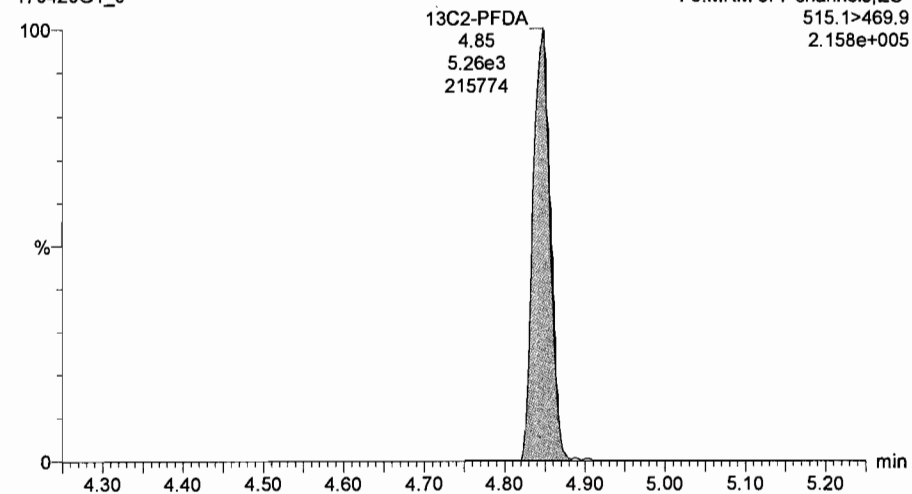
**13C2-PFHxA**

170420G1\_9



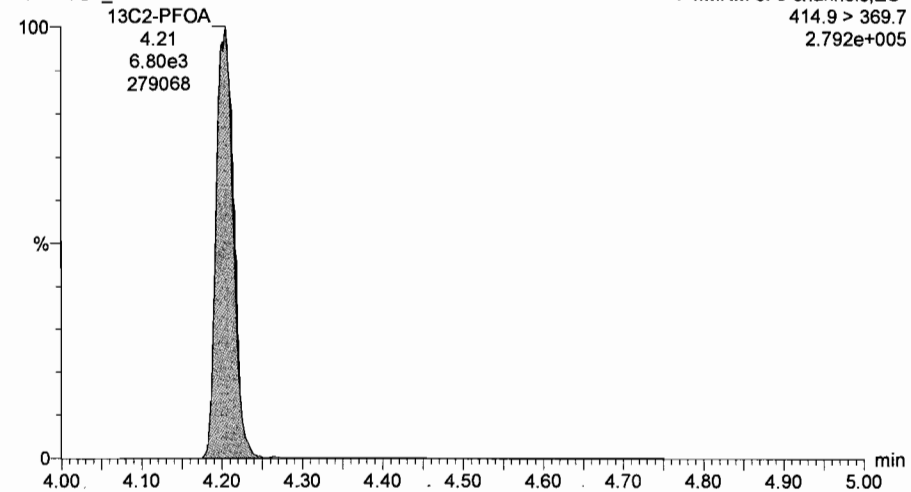
**13C2-PFDA**

170420G1\_9



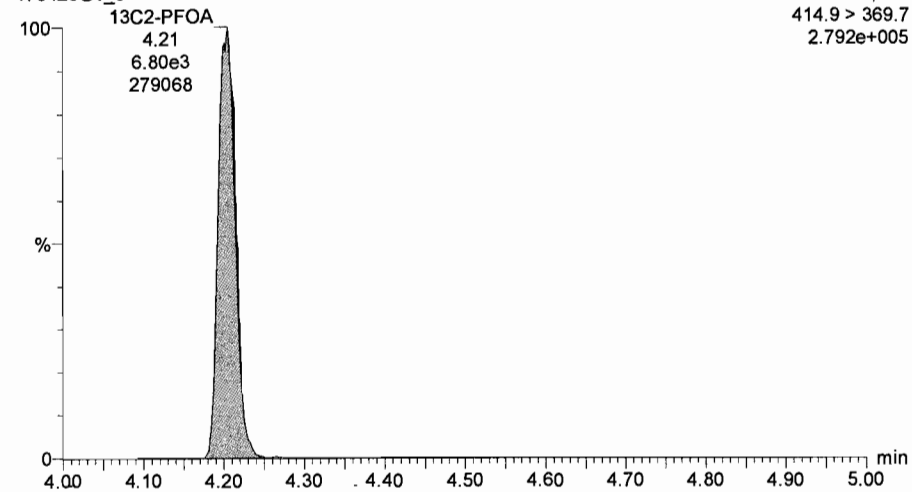
**13C2-PFOA**

170420G1\_9



**13C2-PFOA**

170420G1\_9



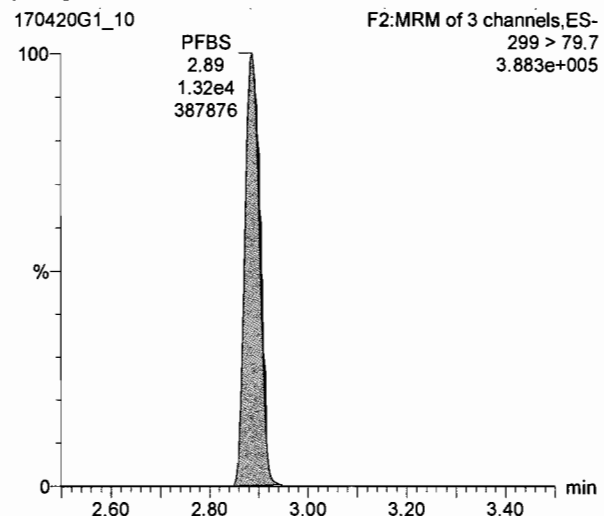
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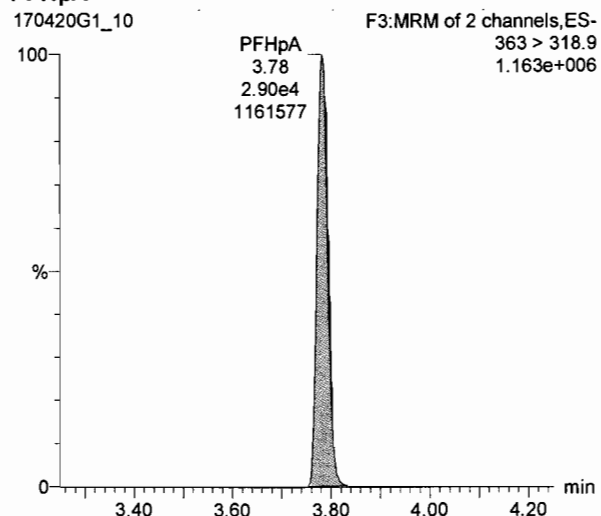
Printed: Friday, April 21, 2017 10:20:56 Pacific Daylight Time

Name: 170420G1\_10, Date: 20-Apr-2017, Time: 18:39:14, ID: ST170420G1-9 PFC CS5 17D2015, Description: PFC CS5 17D2015

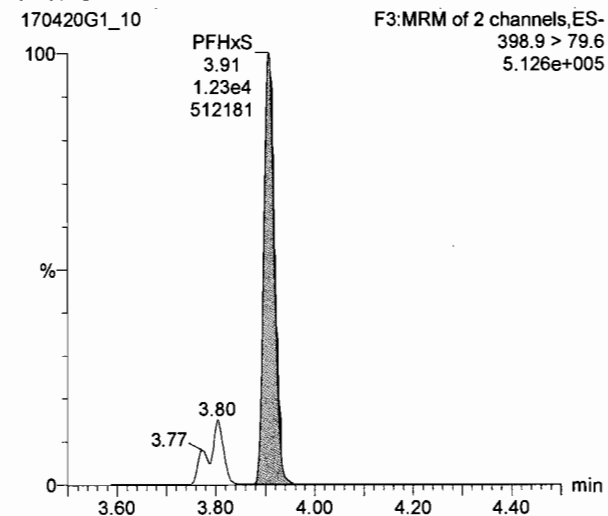
**PFBS**



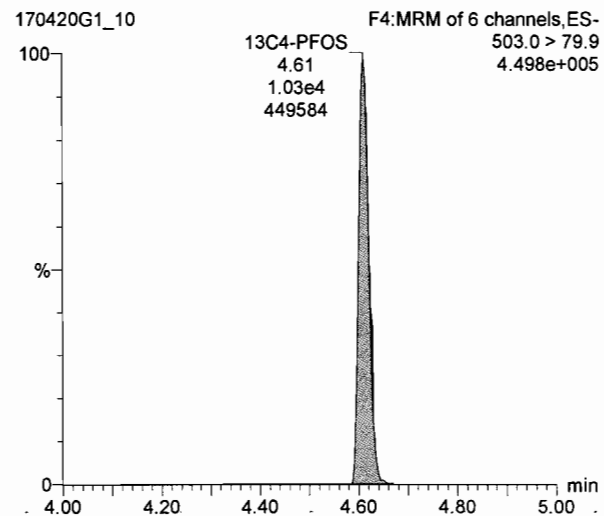
**PFHpA**



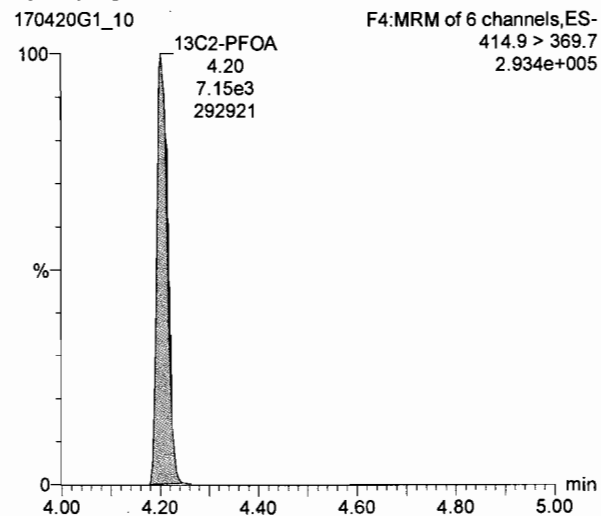
**PFHxS**



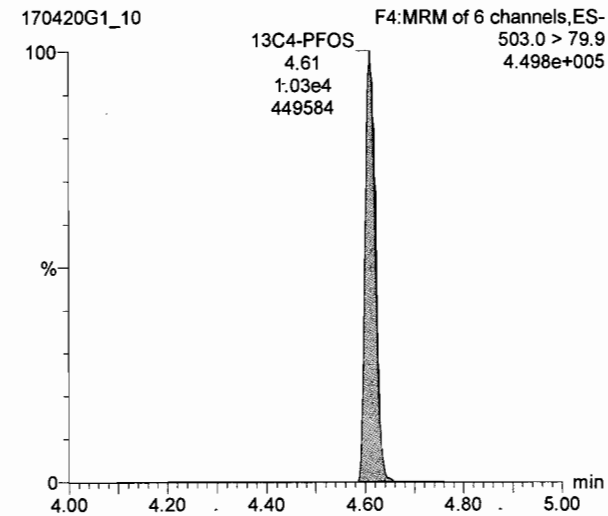
**13C4-PFOS**



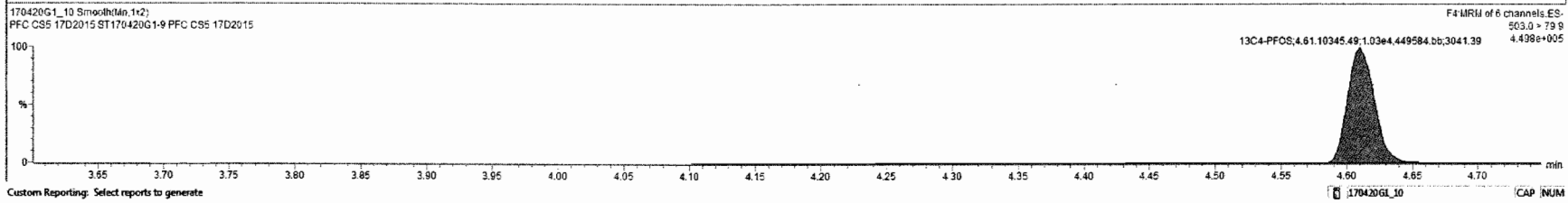
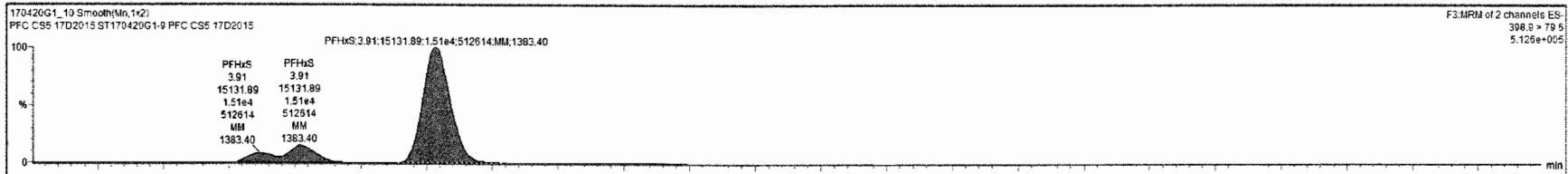
**13C2-PFOA**



**13C4-PFOS**



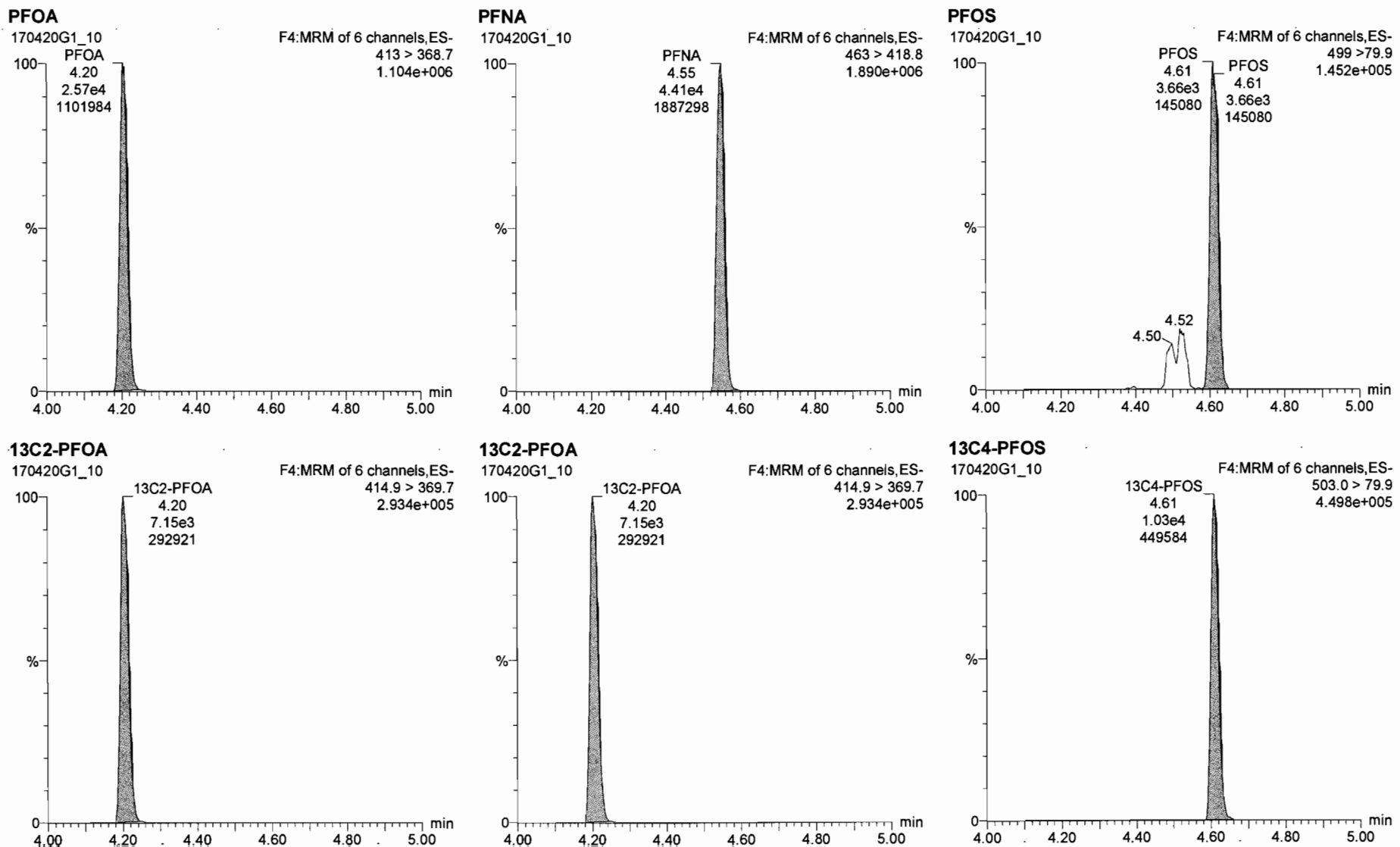
#	Name	Resp.	RRR	wt% <sub>std</sub>	RT	RA	wy	Conc.	%Rec	DL	EMPC
1	PFBS	1.32e4		1.000	2.89			43.1	87.4	0.00557	
2	PFHxA	2.90e4		1.000	3.70			48.5	96.9	0.0133	
3	PFHxS	1.51e4		1.000	3.91			48.6	100	0.0054	
4	PFOA	2.57e4		1.000	4.20			49.3	98.7	0.000	
5	PFOS	3.66e3		1.000	4.61			41.1	88.7	0.305	
6	PFNA	4.41e4		1.000	4.55			49.2	98.4	0.0409	
7	13C2-PFHxA	3.29e3	0.45	1.000	3.27			10.3	103	0.00264	
8	13C2-PFOA	5.49e3	0.80	1.000	4.85			9.57	95.7	0.00283	
9	13C2-PFOA	7.15e3	1.00	1.000	4.20			10.0	100	0.00454	
10	13C4-PFOS	1.03e4	1.00	1.000	4.61			28.7	100	0.0236	



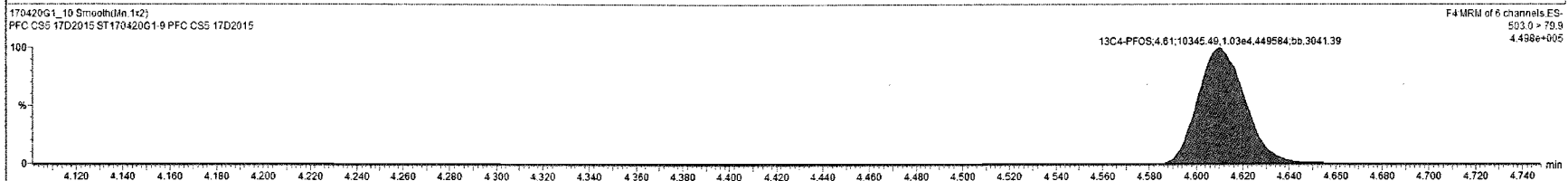
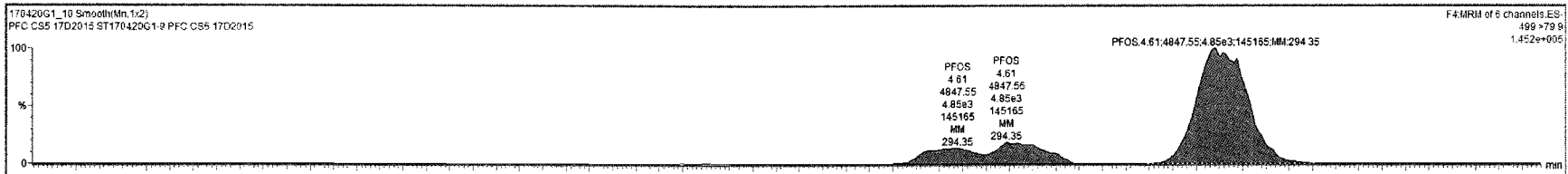
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Last Altered: Friday, April 21, 2017 10:17:30 Pacific Daylight Time  
Printed: Friday, April 21, 2017 10:20:56 Pacific Daylight Time

Name: 170420G1\_10, Date: 20-Apr-2017, Time: 18:39:14, ID: ST170420G1-9 PFC CS5 17D2015, Description: PFC CS5 17D2015



#	Name	Class	RRF	Method	RT	RA	Qty	Conc.	%Rec.	DU	EMPC
1	PFBS	1.32e4	1.000	2.89				43.1	97.4	0.00557	
2	PFHpA	2.90e4	1.000	3.78				48.5	98.9	0.0133	
3	PFHxS	1.51e4	1.000	3.91				43.3	94.9	0.0264	
4	PFDA	2.57e4	1.000	4.20				49.3	98.7	0.080	
5	PFOS	4.85e3	1.000	4.61				45.0	87.7	0.0229	
6	PFNA	4.41e4	1.000	4.55				49.2	98.4	0.0409	
7	13C2-PFHxA	3.29e3	0.45	1.000	3.27			10.3	103	0.00264	
8	13C2-PFDA	5.49e3	0.80	1.000	4.45			9.57	95.7	0.00283	
9	13C2-PFOA	7.15e3	1.00	1.000	4.20			10.0	100	0.00454	
10	13C4-PFOS	1.03e4	1.00	1.000	4.61			26.7	100	0.0236	



Custom Reporting: Select reports to generate

Dataset: Untitled

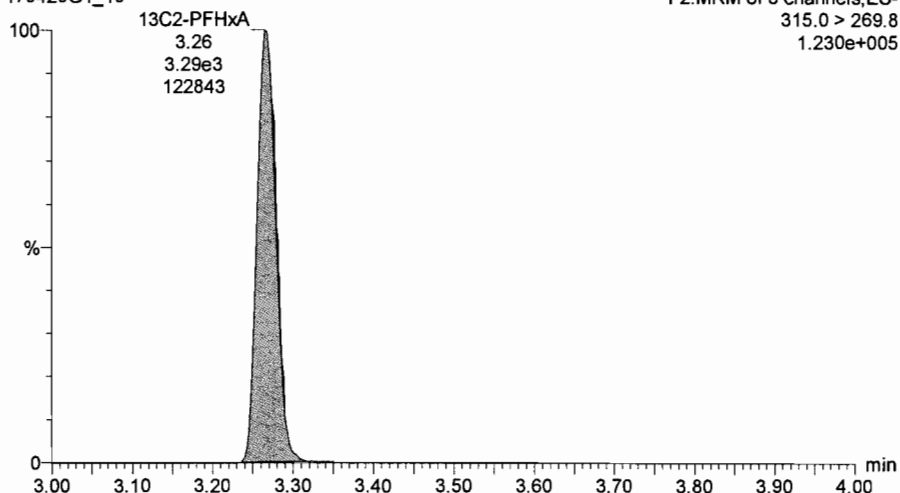
Last Altered: Friday, April 21, 2017 10:17:30 Pacific Daylight Time

Printed: Friday, April 21, 2017 10:20:56 Pacific Daylight Time

Name: 170420G1\_10, Date: 20-Apr-2017, Time: 18:39:14, ID: ST170420G1-9 PFC CS5 17D2015, Description: PFC CS5 17D2015

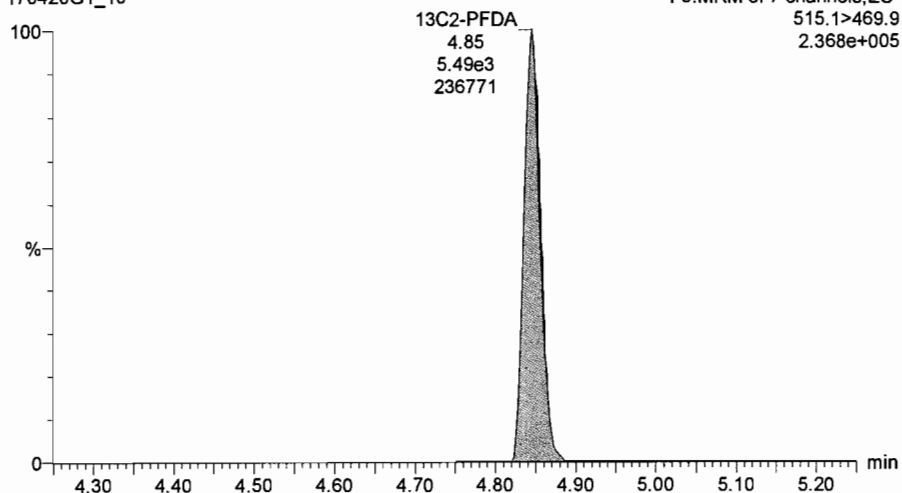
**13C2-PFHxA**

170420G1\_10



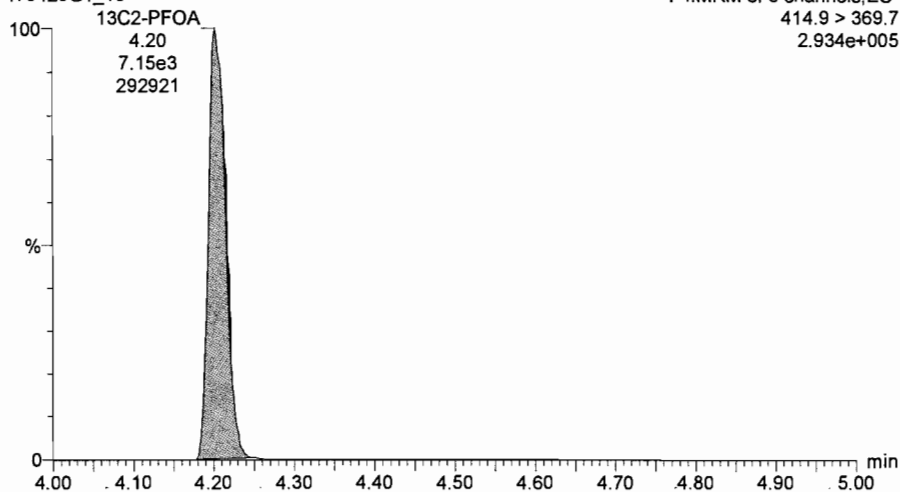
**13C2-PFDA**

170420G1\_10



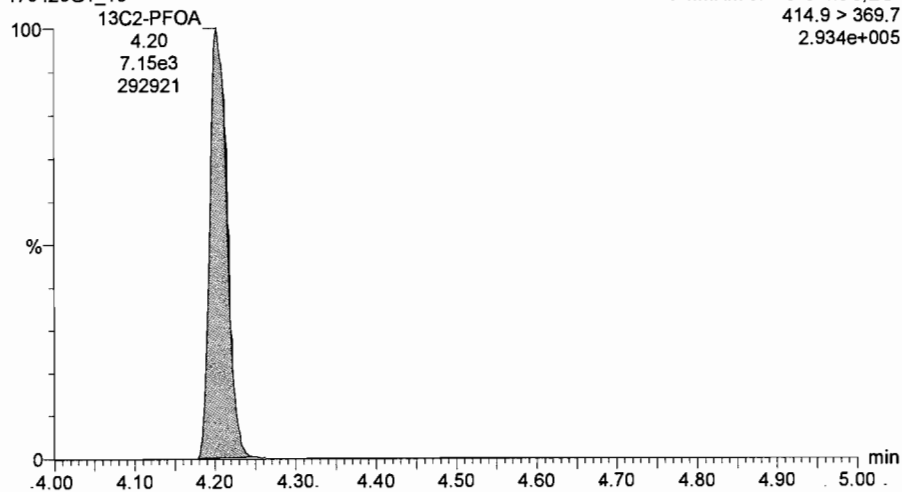
**13C2-PFOA**

170420G1\_10



**13C2-PFOA**

170420G1\_10

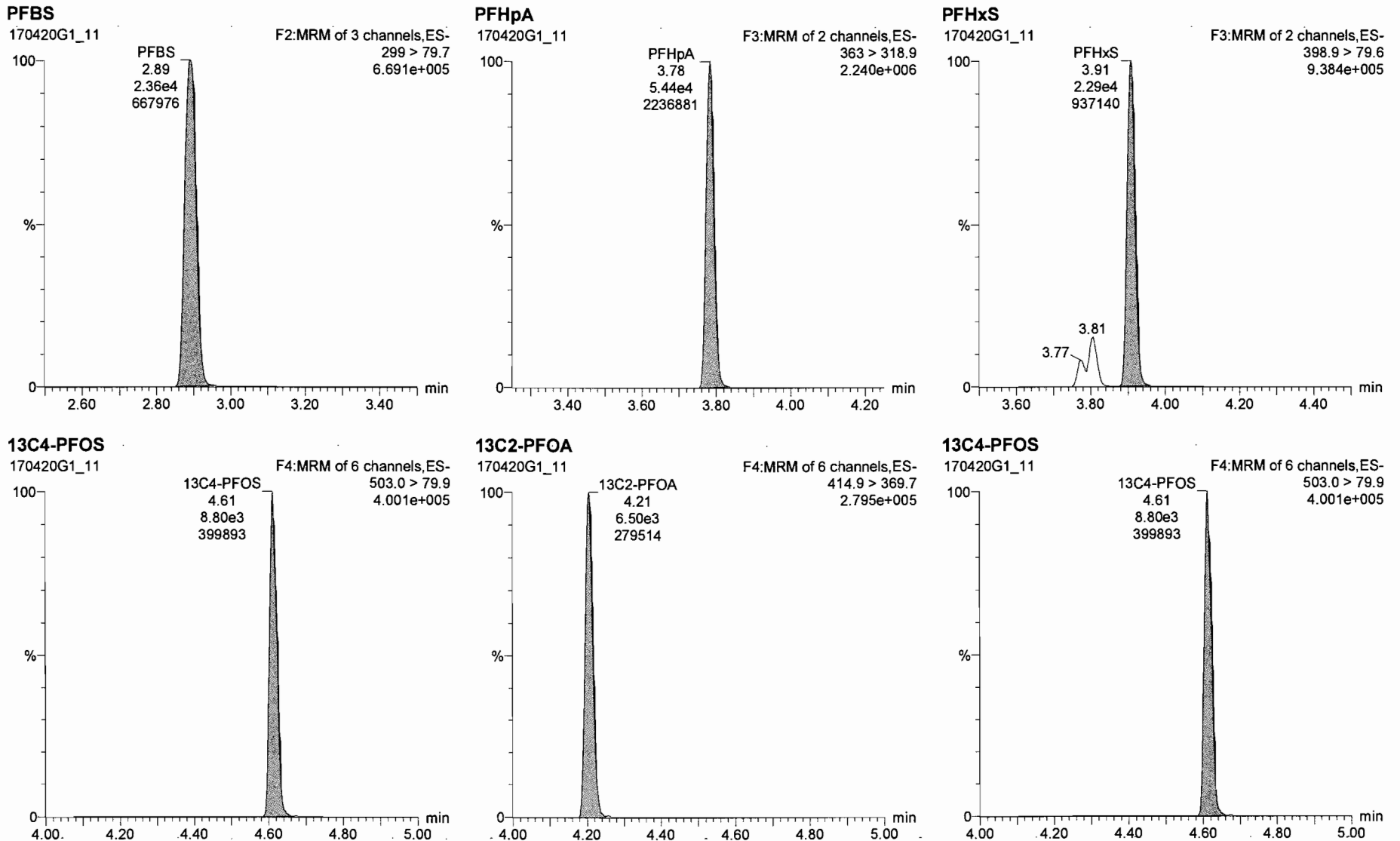




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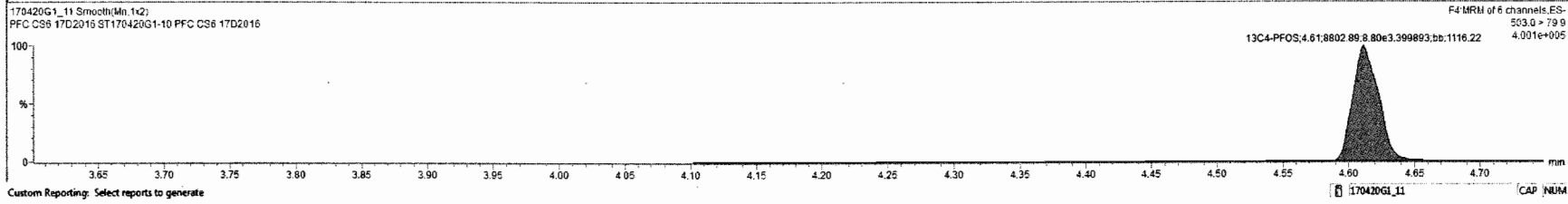
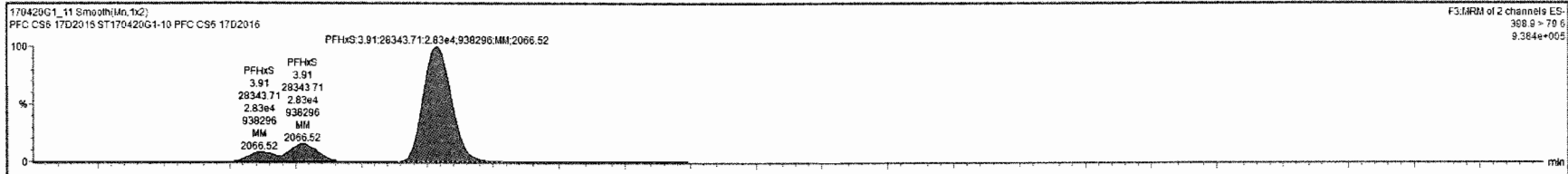
Last Altered: Friday, April 21, 2017 10:17:30 Pacific Daylight Time  
Printed: Friday, April 21, 2017 10:20:56 Pacific Daylight Time

Name: 170420G1\_11, Date: 20-Apr-2017, Time: 18:51:40, ID: ST170420G1-10 PFC CS6 17D2016, Description: PFC CS6 17D2016



170420G1\_11 - ST170420G1-10 PFC CS6 17D2016 - PFC CS6 17D2016

#	Name	Resp	RRF	WtPct	RT	RA	dy	Conc.	%Rec	CI	EMPC
1	PFBS	2.36e4		1.000	2.89			97.8	101	0.0144	
2	PFHpA	5.44e4		1.000	3.78			111	101	0.0177	
3	PFHxS	2.83e4		1.000	3.91			101	101	0.0204	
4	PFDA	4.75e4		1.000	4.20			110	100	0.0334	
5	PFOS	7.34e3		1.000	4.61			104	102	0.0550	
6	PFNA	7.99e4		1.000	4.55			110	100	0.0608	
7	13C2-PFHxA	2.97e3	0.45	1.000	3.27			16.2	102	0.00567	
8	13C2-PFDA	5.28e3	0.80	1.000	4.85			10.1	101	0.0248	
9	13C2-PFOA	6.50e3	1.00	1.000	4.20			10.8	100	0.0132	
10	13C4-PFOS	8.80e1	1.00	1.000	4.61			26.7	100	0.0643	



Custom Reporting: Select reports to generate

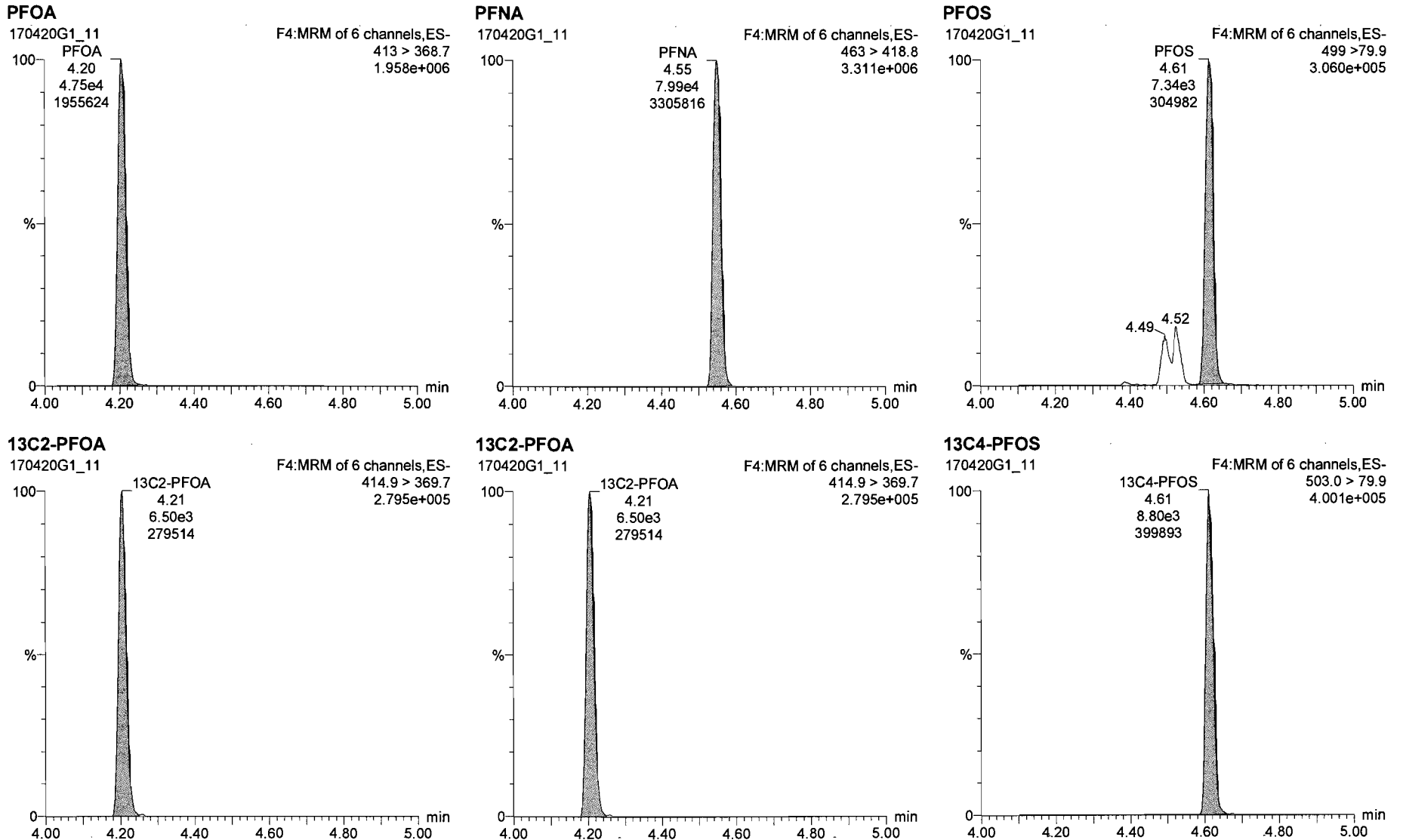
170420G1\_11 CAP NUM

Dataset: Untitled

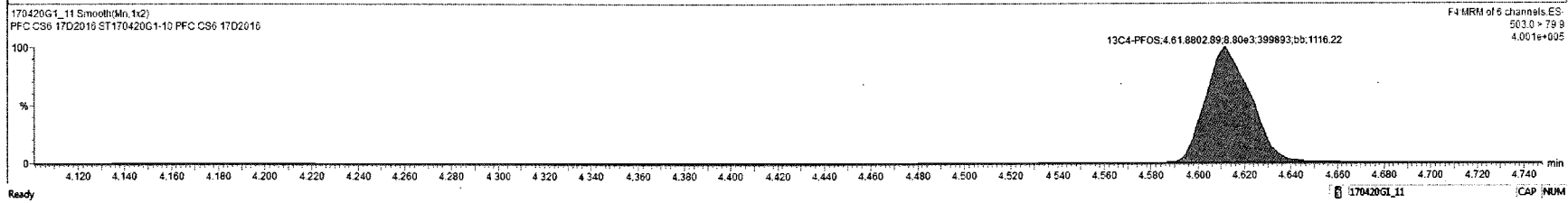
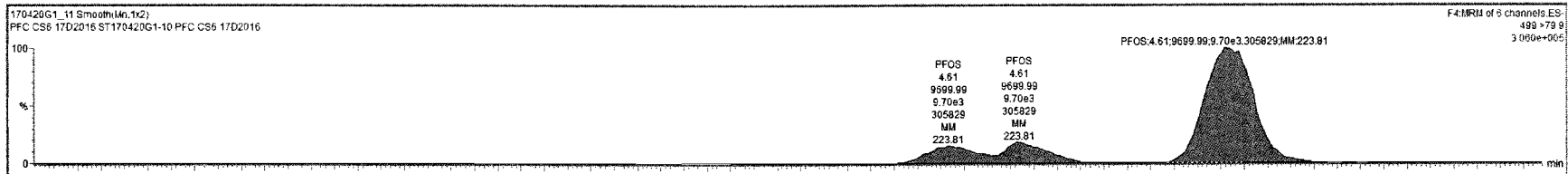
Last Altered: Friday, April 21, 2017 10:17:30 Pacific Daylight Time

Printed: Friday, April 21, 2017 10:20:56 Pacific Daylight Time

Name: 170420G1\_11, Date: 20-Apr-2017, Time: 18:51:40, ID: ST170420G1-10 PFC CS6 17D2016, Description: PFC CS6 17D2016



Name	Area	Area%	RT	RA	WV	Conc.	%Rec	DL	EMPC
1 PFBS	2.36e4	1.000	2.89			97.8	101	0.0144	
2 PFHpA	5.44e4	1.000	3.78			111	101	0.0177	
3 PFHzS	2.83e4	1.000	3.91			101	101	0.0064	
4 PFDA	4.75e4	1.000	4.20			110	100	0.032	
5 PFOS	9.20e3	0.45	4.61			109	101	0.275	
6 PFNA	7.99e4	1.000	4.55			110	100	0.0600	
7 13C2-PFHzA	2.97e3	0.01	3.27			10.2	102	0.00567	
8 13C2-PFDA	5.28e3	0.02	4.85			10.1	101	0.0248	
9 13C2-PFOA	6.59e3	0.03	4.20			10.0	100	0.0132	
10 13C4-PFOS	8.80e3	0.04	4.61			28.7	100	0.0643	



Dataset: Untitled

Last Altered: Friday, April 21, 2017 10:17:30 Pacific Daylight Time

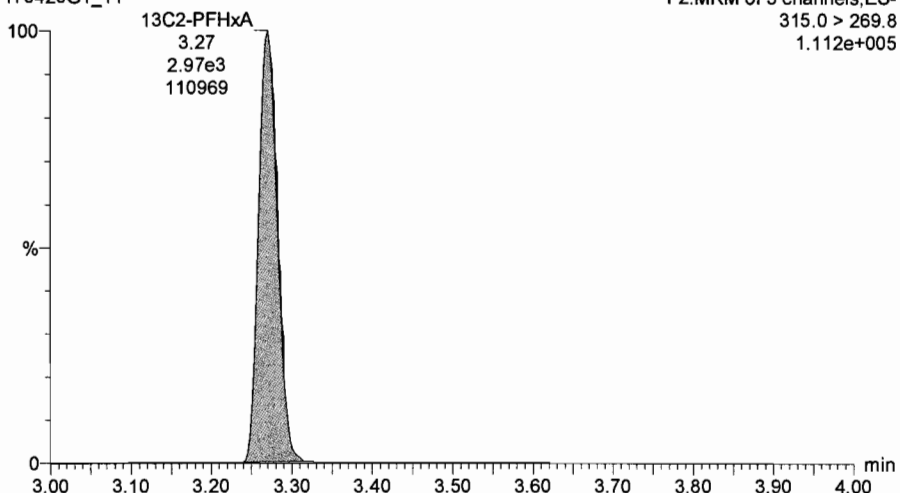
Printed: Friday, April 21, 2017 10:20:56 Pacific Daylight Time

Name: 170420G1\_11, Date: 20-Apr-2017, Time: 18:51:40, ID: ST170420G1-10 PFC CS6 17D2016, Description: PFC CS6 17D2016

**13C2-PFHxA**

170420G1\_11

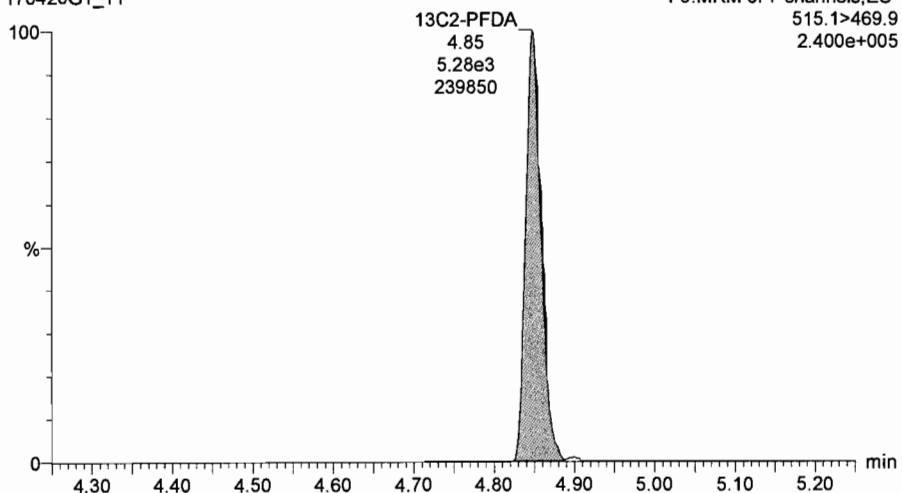
F2:MRM of 3 channels,ES-  
315.0 > 269.8  
1.112e+005



**13C2-PFDA**

170420G1\_11

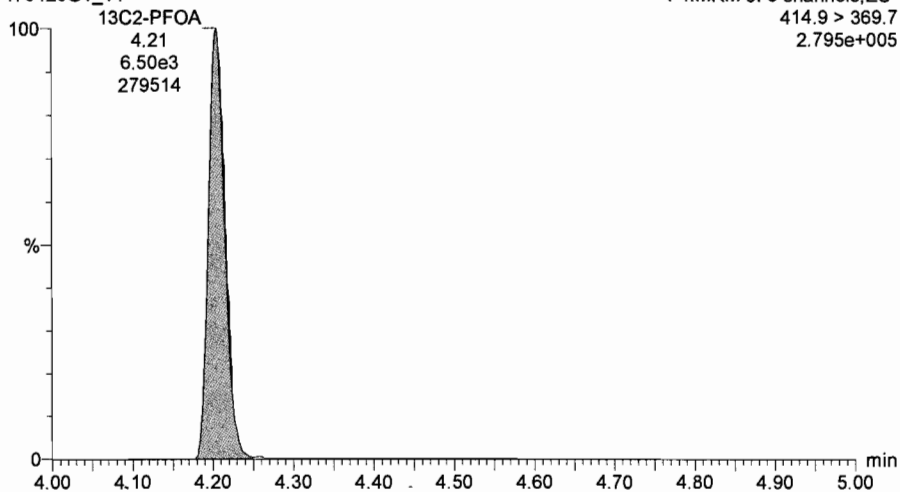
F5:MRM of 7 channels,ES-  
515.1>469.9  
2.400e+005



**13C2-PFOA**

170420G1\_11

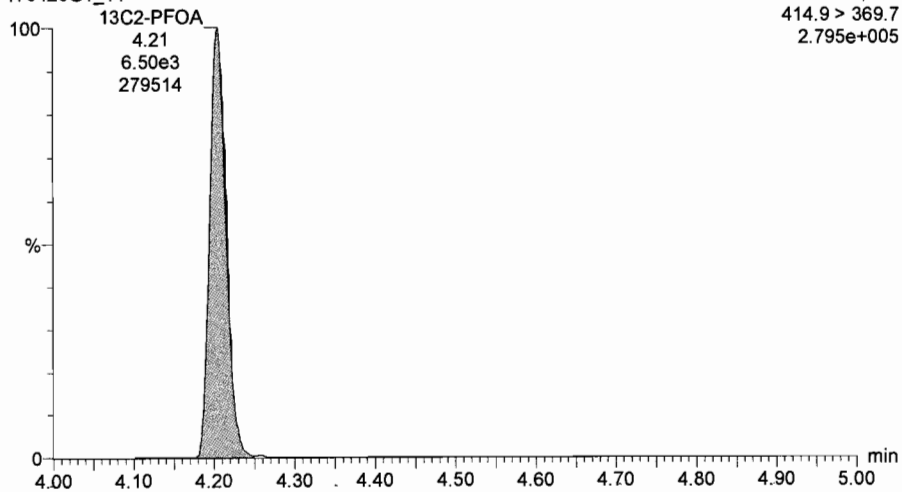
F4:MRM of 6 channels,ES-  
414.9 > 369.7  
2.795e+005



**13C2-PFOA**

170420G1\_11

F4:MRM of 6 channels,ES-  
414.9 > 369.7  
2.795e+005



Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-13.qld

Last Altered: Friday, April 21, 2017 10:44:42 Pacific Daylight Time  
Printed: Friday, April 21, 2017 10:45:28 Pacific Daylight Time

Method: U:\G1.PRO\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59  
Calibration: U:\G1.PRO\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

Name: 170420G1\_13, Date: 20-Apr-2017, Time: 19:16:27, ID: SS170420G1-1 PFC SSS 17D2017, Description: PFC SSS 17D2017

#	Name	Trace	Response	IS Resp	RRF	Wt/Vol	RT	Conc.	%Rec
1	1 PFBS	299 > 79.7	3.57e3	1.04e4		1.000	2.89	11.0	109.9
2	2 PFHpA	363 > 318.9	6.95e3	7.86e3		1.000	3.78	9.99	99.9
3	3 PFHxS	398.9 > 79.6	3.93e3	1.04e4		1.000	3.91	10.5	105.2
4	4 PFOA	413 > 368.7	6.20e3	7.86e3		1.000	4.21	10.3	102.5
5	5 PFOS	499 > 79.9	1.25e3	1.04e4		1.000	4.61	10.2	101.7
6	6 PFNA	463 > 418.8	1.05e4	7.86e3		1.000	4.55	9.96	99.6
7	7 13C2-PFHxA	315.0 > 269.8	3.34e3	7.86e3	0.449	1.000	3.27	9.48	94.8
8	8 13C2-PFDA	515.1 > 469.9	5.87e3	7.86e3	0.803	1.000	4.85	9.30	93.0
9	9 13C2-PFOA	414.9 > 369.7	7.86e3	7.86e3	1.000	1.000	4.20	10.0	100.0
10	10 13C4-PFOS	503.0 > 79.9	1.04e4	1.04e4	1.000	1.000	4.61	28.7	100.0

70-130  
↓  
AC  
4/21/17

Dataset: Untitled

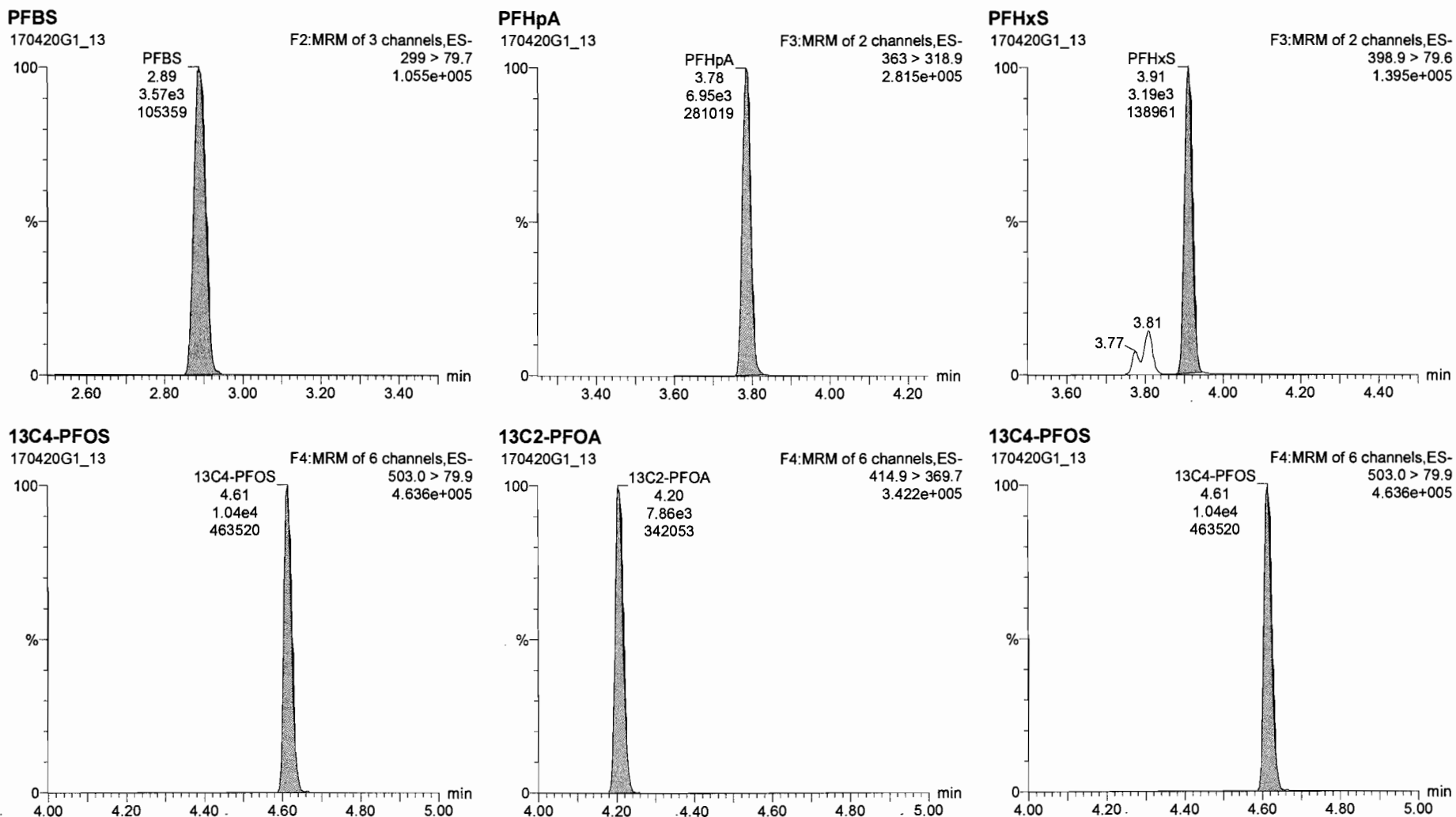
Last Altered: Friday, April 21, 2017 10:43:09 Pacific Daylight Time

Printed: Friday, April 21, 2017 10:43:23 Pacific Daylight Time

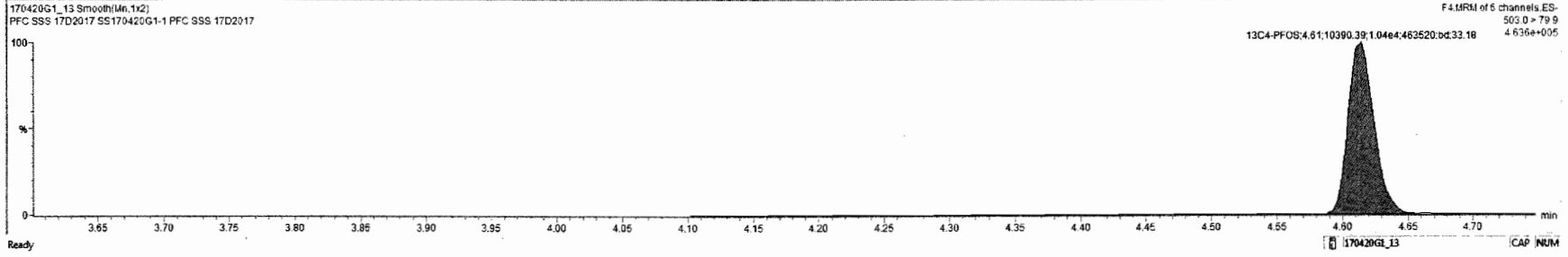
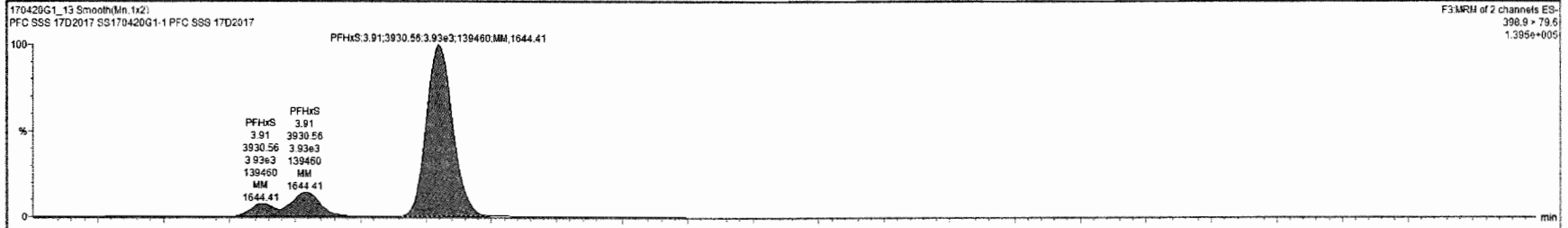
Method: U:\G1.PRO\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

Calibration: U:\G1.PRO\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

Name: 170420G1\_13, Date: 20-Apr-2017, Time: 19:16:27, ID: SS170420G1-1 PFC SSS 17D2017, Description: PFC SSS 17D2017



#	Name	Resp	RRF	wtVol	RT	RA	nly	Conc	%Rec	DL	EMPC
1	PFBS	3.57e3		1.000	2.89			11.0	110	0.0825	
2	PFHpA	6.95e3		1.000	3.78			9.99	99.9	0.00714	
3	PFHxS	3.93e3		1.000	3.91			10.5	105	0.0123	
4	PFDA	6.20e3		1.000	4.21			10.3	103	0.00981	
5	PFOS	1.25e3		1.000	4.61			10.2	102	0.380	
6	PFNA	1.05e4		1.000	4.55			9.96	99.8	0.00256	
7	13C2-PFHxA	3.34e3	0.45	1.000	3.27			9.48	94.8	0.00207	
8	13C2-PFDA	5.87e3	0.80	1.000	4.85			9.30	93.0	0.00524	
9	13C2-PFOA	7.86e3	1.00	1.000	4.20			10.0	100	0.00424	
10	13C4-PFOS	1.04e4	1.00	1.000	4.61			28.7	100	2.16	



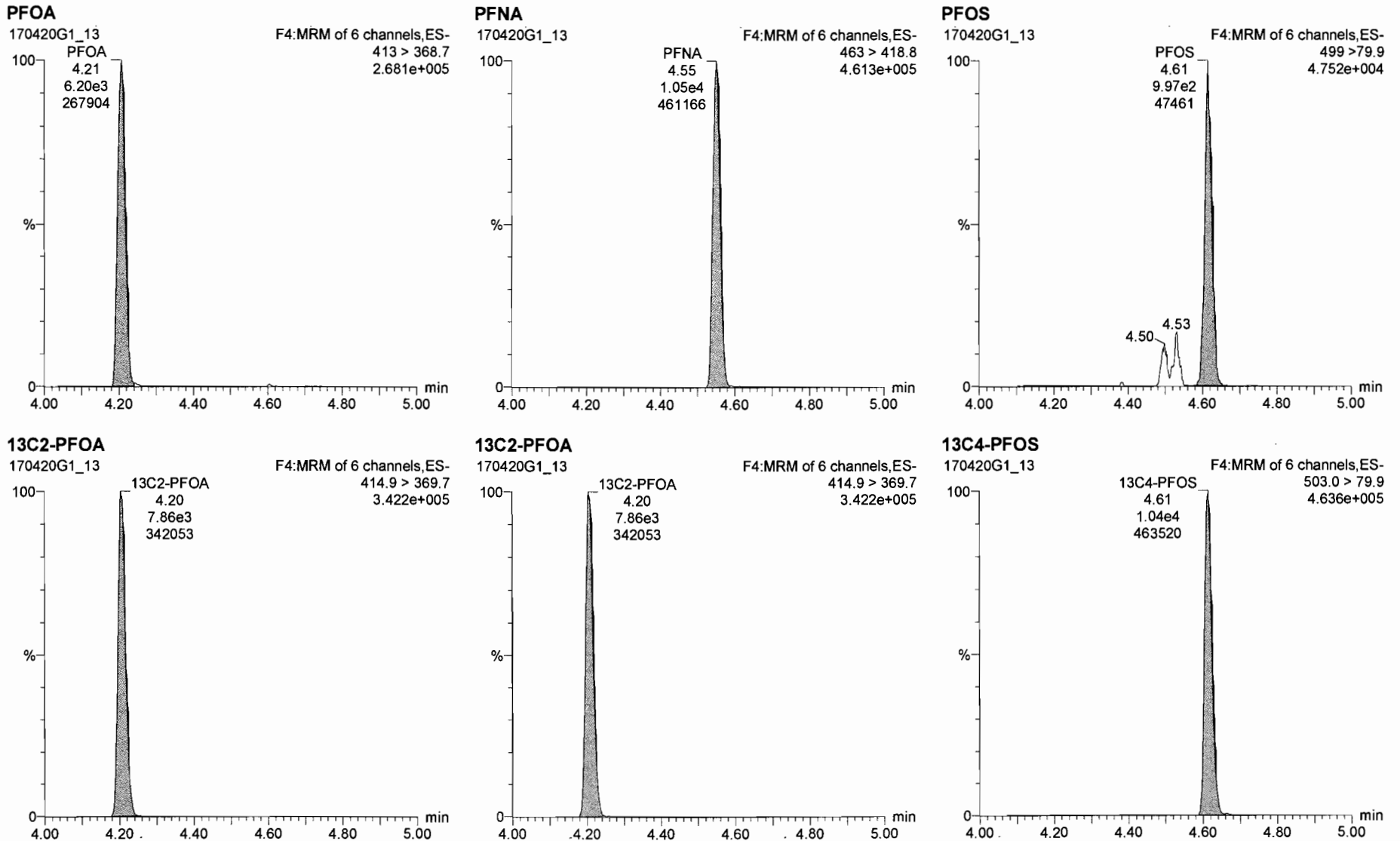


Dataset: Untitled

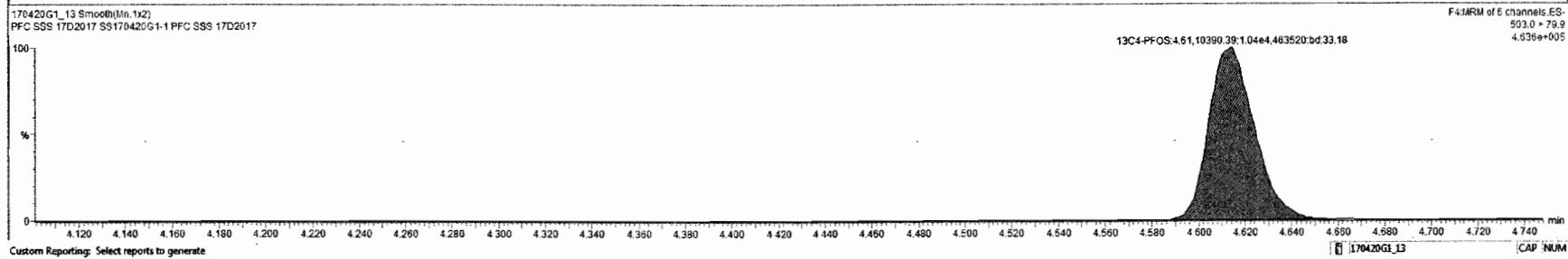
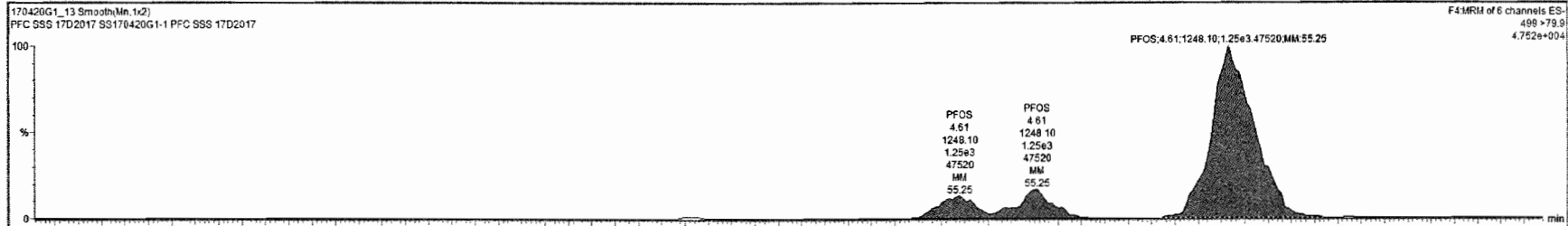
Last Altered: Friday, April 21, 2017 10:43:09 Pacific Daylight Time

Printed: Friday, April 21, 2017 10:43:23 Pacific Daylight Time

Name: 170420G1\_13, Date: 20-Apr-2017, Time: 19:16:27, ID: SS170420G1-1 PFC SSS 17D2017, Description: PFC SSS 17D2017



#	Name	Resp	RRF	Wt/Wal	RT	RA	Qty	Conc.	%Rec	DL	EMPC
1	PFBS	3.57e3		1.000	2.89			11.0	118	0.0025	
2	PFHpA	9.95e3		1.000	3.78			9.99	99.9	0.00714	
3	PFHxS	3.93e3		1.000	3.91			10.5	105	0.0123	
4	PFOA	6.20e3		1.000	4.21			10.3	103	0.00961	
5	PFOS	1.25e3		1.000	4.61			10.2	102	0.00961	
6	PFNA	1.05e4		1.000	4.55			9.96	99.6	0.00256	
7	13C2-PFhxA	3.34e3	0.45	1.000	3.27			9.48	94.8	0.00207	
8	13C2-PFOA	5.87e3	0.80	1.000	4.85			9.30	93.0	0.00524	
9	13C2-PFOA	7.86e3	1.00	1.000	4.20			10.0	100	0.00421	
10	13C4-PFOS	1.04e4	1.00	1.000	4.61			28.7	100	2.16	



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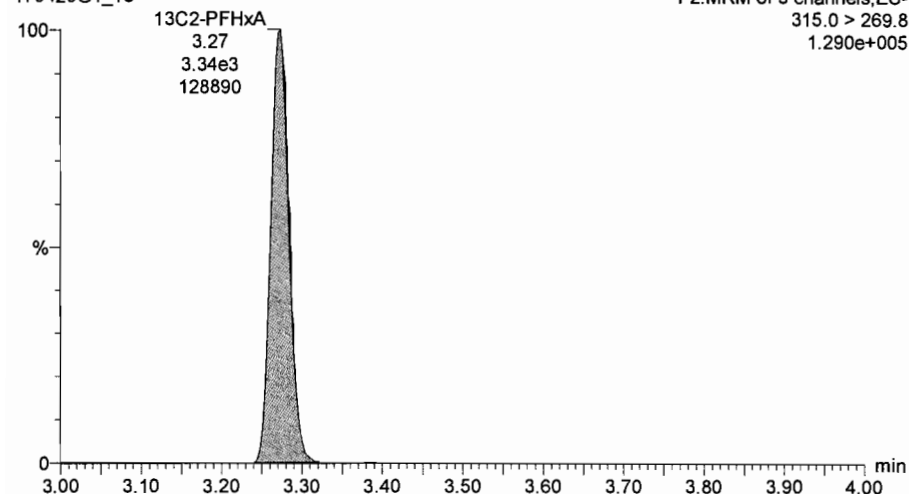
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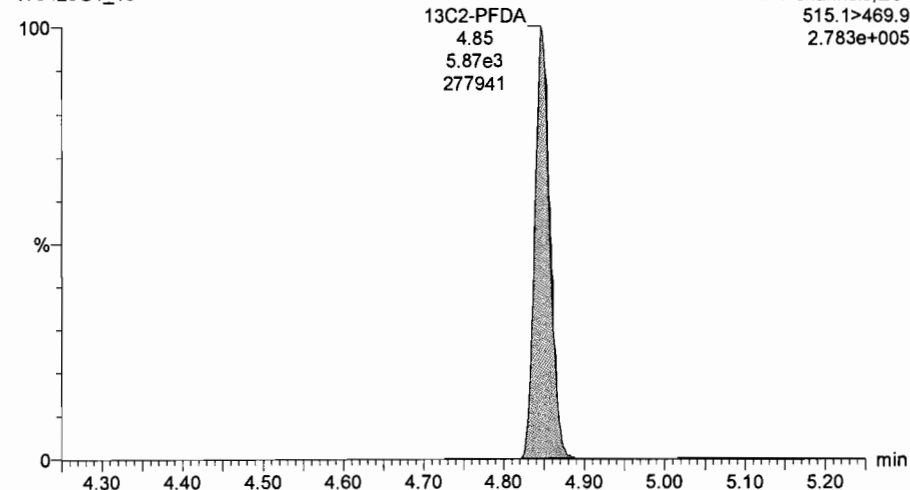
**13C2-PFHxA**

170420G1\_13



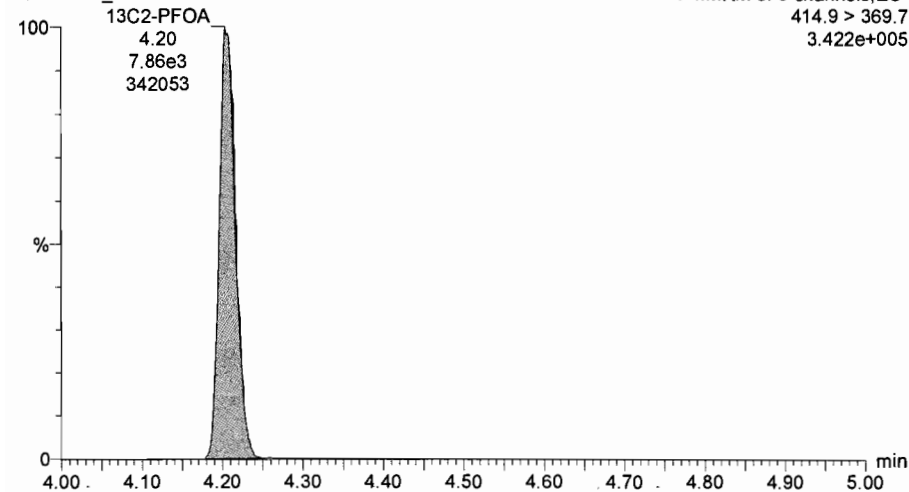
**13C2-PFDA**

170420G1\_13



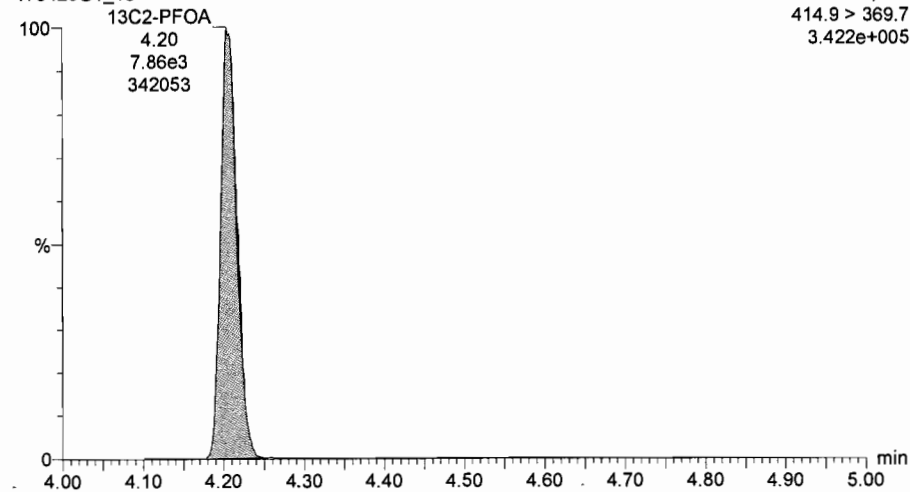
**13C2-PFOA**

170420G1\_13



**13C2-PFOA**

170420G1\_13



"RW05-20170417","EPA Method 537","Initial","1700466-01","Vista","375-73-5","PFBS","9.10","ng/L","U","3.18","LOD","","TRG","","","18.2","LOQ","YES",-99,"","0.275","0.001","9.10",""  
"RW05-20170417","EPA Method 537","Initial","1700466-01","Vista","375-85-9","PFHpA","9.10","ng/L","U","3.37","LOD","","TRG","","","18.2","LOQ","YES",-99,"","0.275","0.001","9.10",""  
"RW05-20170417","EPA Method 537","Initial","1700466-01","Vista","355-46-4","PFHxS","9.10","ng/L","U","3.15","LOD","","TRG","","","18.2","LOQ","YES",-99,"","0.275","0.001","9.10",""  
"RW05-20170417","EPA Method 537","Initial","1700466-01","Vista","335-67-1","PFOA","9.10","ng/L","U","4.13","LOD","","TRG","","","18.2","LOQ","YES",-99,"","0.275","0.001","9.10",""  
"RW05-20170417","EPA Method 537","Initial","1700466-01","Vista","375-95-1","PFNA","9.10","ng/L","U","5.77","LOD","","TRG","","","18.2","LOQ","YES",-99,"","0.275","0.001","9.10",""  
"RW05-20170417","EPA Method 537","Initial","1700466-01","Vista","1763-23-1","PFOS","9.10","ng/L","U","2.78","LOD","","TRG","","","18.2","LOQ","YES",-99,"","0.275","0.001","9.10",""  
"RW05-20170417","EPA Method 537","Initial","1700466-01","Vista","13C2-PFHxA","13C2-PFHxA","90.0","%R","","-99","NA","","SURR","90.0","","-99","NA","YES","100","","0.275","0.001",-99,""  
"RW05-20170417","EPA Method 537","Initial","1700466-01","Vista","13C2-PFDA","13C2-PFDA","86.3","%R","","-99","NA","","SURR","86.3","","-99","NA","YES","100","","0.275","0.001",-99,""  
"FRB-05-20170417","EPA Method 537","Initial","1700466-02","Vista","375-73-5","PFBS","8.68","ng/L","U","3.03","LOD","","TRG","","","17.4","LOQ","YES",-99,"","0.288","0.001","8.68",""  
"FRB-05-20170417","EPA Method 537","Initial","1700466-02","Vista","375-85-9","PFHpA","8.68","ng/L","U","3.21","LOD","","TRG","","","17.4","LOQ","YES",-99,"","0.288","0.001","8.68",""  
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"FRB-05-20170417","EPA Method 537","Initial","1700466-02","Vista","335-67-1","PFOA","8.68","ng/L","U","3.94","LOD","","TRG","","","17.4","LOQ","YES",-99,"","0.288","0.001","8.68",""  
"FRB-05-20170417","EPA Method 537","Initial","1700466-02","Vista","375-95-1","PFNA","8.68","ng/L","U","5.50","LOD","","TRG","","","17.4","LOQ","YES",-99,"","0.288","0.001","8.68",""  
"FRB-05-20170417","EPA Method 537","Initial","1700466-02","Vista","1763-23-1","PFOS","8.68","ng/L","U","2.65","LOD","","TRG","","","17.4","LOQ","YES",-99,"","0.288","0.001","8.68",""  
"FRB-05-20170417","EPA Method 537","Initial","1700466-02","Vista","13C2-PFHxA","13C2-PFHxA","93.0","%R","","-99","NA","","SURR","93.0","","-99","NA","YES","100","","0.288","0.001",-99,""  
"FRB-05-20170417","EPA Method 537","Initial","1700466-02","Vista","13C2-PFDA","13C2-PFDA","88.0","%R","","-99","NA","","SURR","88.0","","-99","NA","YES","100","","0.288","0.001",-99,""  
"RW10-20170417","EPA Method 537","Initial","1700466-03","Vista","375-73-5","PFBS","9.06","ng/L","U","3.16","LOD","","TRG","","","18.1","LOQ","YES",-99,"","0.276","0.001","9.06",""  
"RW10-20170417","EPA Method 537","Initial","1700466-03","Vista","375-85-9","PFHpA","9.06","ng/L","U","3.35","LOD","","TRG","","","18.1","LOQ","YES",-99,"","0.276","0.001","9.06",""  
"RW10-20170417","EPA Method 537","Initial","1700466-03","Vista","355-46-4","PFHxS","9.06","ng/L","U","3.14","LOD","","TRG","","","18.1","LOQ","YES",-99,"","0.276","0.001","9.06",""  
"RW10-20170417","EPA Method 537","Initial","1700466-03","Vista","335-67-1","PFOA","7.88","ng/L","J","4.11","LOD","","TRG","","","18.1","LOQ","YES",-99,"","0.276","0.001","9.06",""  
"RW10-20170417","EPA Method 537","Initial","1700466-03","Vista","375-95-1","PFNA","9.06","ng/L","U","5.75","LOD","","TRG","","","18.1","LOQ","YES",-99,"","0.276","0.001","9.06",""  
"RW10-20170417","EPA Method 537","Initial","1700466-03","Vista","1763-23-1","PFOS","6.46","ng/L","J","2.76","LOD","","TRG","","","18.1","LOQ","YES",-99,"","0.276","0.001","9.06",""  
"RW10-20170417","EPA Method 537","Initial","1700466-03","Vista","13C2-PFHxA","13C2-PFHxA","90.9","%R","","-99","NA","","SURR","90.9","","-99","NA","YES","100","","0.276","0.001",-99,""  
"RW10-20170417","EPA Method 537","Initial","1700466-03","Vista","13C2-PFDA","13C2-PFDA","88.6","%R","","-99","NA","","SURR","88.6","","-99","NA","YES","100","","0.276","0.001",-99,""  
"FRB-10-20170417","EPA Method 537","Initial","1700466-04","Vista","375-73-5","PFBS","9.02","ng/L","U","3.15","LOD","","TRG","","","18.0","LOQ","YES",-99,"","0.277","0.001","9.02",""  
"FRB-10-20170417","EPA Method 537","Initial","1700466-04","Vista","375-85-9","PFHpA","9.02","ng/L","U","3.34","LOD","","TRG","","","18.0","LOQ","YES",-99,"","0.277","0.001","9.02",""  
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1","PFOS","9.02","ng/L","U","2.75","LOD","","TRG","","","18.0","LOQ","YES",-99","","0.277","0.001","9.02",""  
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"FRB-10-20170417","EPA Method 537","Initial","1700466-04","Vista","13C2-PFDA","13C2-  
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"RW18-20170417","EPA Method 537","Initial","1700466-05","Vista","375-73-  
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"RW18-20170417","EPA Method 537","Initial","1700466-05","Vista","355-46-  
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4","PFHxS","9.13","ng/L","U","3.16","LOD","","TRG","","","18.3","LOQ","YES",-99","","0.274","0.001","9.13",""  
"FRB-18-20170417","EPA Method 537","Initial","1700466-06","Vista","335-67-  
1","PFOA","9.13","ng/L","U","4.14","LOD","","TRG","","","18.3","LOQ","YES",-99","","0.274","0.001","9.13",""  
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"FRB-07-20170417","EPA Method 537","Initial","1700466-08","Vista","355-46-  
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"FRB-07-20170417","EPA Method 537","Initial","1700466-08","Vista","335-67-  
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"FRB-07-20170417","EPA Method 537","Initial","1700466-08","Vista","375-95-  
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"FRB-07-20170417","EPA Method 537","Initial","1700466-08","Vista","13C2-PFDA","13C2-  
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"RW03-20170417","EPA Method 537","Initial","1700466-09","Vista","355-46-  
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"RW03-20170417","EPA Method 537","Initial","1700466-09","Vista","335-67-  
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"RW03-20170417","EPA Method 537","Initial","1700466-09","Vista","375-95-  
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5","PFBS","8.65","ng/L","U","3.02","LOD","","TRG","","","17.3","LOQ","YES",-99","","0.289","0.001","8.65",""  
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"RW16-20170417","EPA Method 537","Initial","1700466-11","Vista","335-67-  
1","PFOA","10.3","ng/L","J","3.93","LOD","","TRG","","","17.3","LOQ","YES",-99","","0.289","0.001","8.65",""  
"RW16-20170417","EPA Method 537","Initial","1700466-11","Vista","375-95-  
1","PFNA","8.65","ng/L","U","5.48","LOD","","TRG","","","17.3","LOQ","YES",-99","","0.289","0.001","8.65",""  
"RW16-20170417","EPA Method 537","Initial","1700466-11","Vista","1763-23-  
1","PFOS","8.65","ng/L","U","2.64","LOD","","TRG","","","17.3","LOQ","YES",-99","","0.289","0.001","8.65",""  
"RW16-20170417","EPA Method 537","Initial","1700466-11","Vista","13C2-PFHxA","13C2-  
PFHxA","91.3","%R","","-99","NA","","SURR","91.3","","-99","NA","YES","100","","0.289","0.001","-99",""  
"RW16-20170417","EPA Method 537","Initial","1700466-11","Vista","13C2-PFDA","13C2-  
PFDA","82.4","%R","","-99","NA","","SURR","82.4","","-99","NA","YES","100","","0.289","0.001","-99",""  
"FRB-16-20170417","EPA Method 537","Initial","1700466-12","Vista","375-73-  
5","PFBS","8.91","ng/L","U","3.11","LOD","","TRG","","","17.8","LOQ","YES",-99","","0.281","0.001","8.91",""  
"FRB-16-20170417","EPA Method 537","Initial","1700466-12","Vista","375-85-  
9","PFHpA","8.91","ng/L","U","3.30","LOD","","TRG","","","17.8","LOQ","YES",-99","","0.281","0.001","8.91",""  
"FRB-16-20170417","EPA Method 537","Initial","1700466-12","Vista","355-46-  
4","PFHxS","8.91","ng/L","U","3.08","LOD","","TRG","","","17.8","LOQ","YES",-99","","0.281","0.001","8.91",""  
"FRB-16-20170417","EPA Method 537","Initial","1700466-12","Vista","335-67-  
1","PFOA","8.91","ng/L","U","4.05","LOD","","TRG","","","17.8","LOQ","YES",-99","","0.281","0.001","8.91",""  
"FRB-16-20170417","EPA Method 537","Initial","1700466-12","Vista","375-95-  
1","PFNA","8.91","ng/L","U","5.65","LOD","","TRG","","","17.8","LOQ","YES",-99","","0.281","0.001","8.91",""  
"FRB-16-20170417","EPA Method 537","Initial","1700466-12","Vista","1763-23-  
1","PFOS","8.91","ng/L","U","2.72","LOD","","TRG","","","17.8","LOQ","YES",-99","","0.281","0.001","8.91",""  
"FRB-16-20170417","EPA Method 537","Initial","1700466-12","Vista","13C2-PFHxA","13C2-  
PFHxA","94.0","%R","","-99","NA","","SURR","94.0","","-99","NA","YES","100","","0.281","0.001","-99",""  
"FRB-16-20170417","EPA Method 537","Initial","1700466-12","Vista","13C2-PFDA","13C2-  
PFDA","82.7","%R","","-99","NA","","SURR","82.7","","-99","NA","YES","100","","0.281","0.001","-99",""  
"RW14-20170418","EPA Method 537","Initial","1700466-13","Vista","375-73-  
5","PFBS","48.1","ng/L","","3.07","LOD","","TRG","","","17.6","LOQ","YES",-99","","0.284","0.001","8.80",""  
"RW14-20170418","EPA Method 537","Initial","1700466-13","Vista","375-85-  
9","PFHpA","3.70","ng/L","J","3.26","LOD","","TRG","","","17.6","LOQ","YES",-99","","0.284","0.001","8.80",""  
"RW14-20170418","EPA Method 537","Initial","1700466-13","Vista","355-46-  
4","PFHxS","3.54","ng/L","J","3.05","LOD","","TRG","","","17.6","LOQ","YES",-99","","0.284","0.001","8.80",""  
"RW14-20170418","EPA Method 537","Initial","1700466-13","Vista","335-67-  
1","PFOA","13.5","ng/L","J","4.00","LOD","","TRG","","","17.6","LOQ","YES",-99","","0.284","0.001","8.80",""  
"RW14-20170418","EPA Method 537","Initial","1700466-13","Vista","375-95-  
1","PFNA","8.80","ng/L","U","5.58","LOD","","TRG","","","17.6","LOQ","YES",-99","","0.284","0.001","8.80",""  
"RW14-20170418","EPA Method 537","Initial","1700466-13","Vista","1763-23-  
1","PFOS","12.5","ng/L","J","2.69","LOD","","TRG","","","17.6","LOQ","YES",-99","","0.284","0.001","8.80",""  
"RW14-20170418","EPA Method 537","Initial","1700466-13","Vista","13C2-PFHxA","13C2-  
PFHxA","93.8","%R","","-99","NA","","SURR","93.8","","-99","NA","YES","100","","0.284","0.001","-99",""  
"RW14-20170418","EPA Method 537","Initial","1700466-13","Vista","13C2-PFDA","13C2-  
PFDA","83.4","%R","","-99","NA","","SURR","83.4","","-99","NA","YES","100","","0.284","0.001","-99",""  
"FRB-14-20170418","EPA Method 537","Initial","1700466-14","Vista","375-73-  
5","PFBS","8.95","ng/L","U","3.12","LOD","","TRG","","","17.9","LOQ","YES",-99","","0.279","0.001","8.95",""  
"FRB-14-20170418","EPA Method 537","Initial","1700466-14","Vista","375-85-  
9","PFHpA","8.95","ng/L","U","3.31","LOD","","TRG","","","17.9","LOQ","YES",-99","","0.279","0.001","8.95",""  
"FRB-14-20170418","EPA Method 537","Initial","1700466-14","Vista","355-46-  
4","PFHxS","8.95","ng/L","U","3.10","LOD","","TRG","","","17.9","LOQ","YES",-99","","0.279","0.001","8.95",""  
"FRB-14-20170418","EPA Method 537","Initial","1700466-14","Vista","335-67-

1", "PFOA", "8.95", "ng/L", "U", "4.06", "LOD", "", "TRG", "", "", "17.9", "LOQ", "YES", "-99", "", "0.279", "0.001", "8.95", ""  
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"FRB-14-20170418", "EPA Method 537", "Initial", "1700466-14", "Vista", "13C2-PFDA", "13C2-  
PFDA", "82.7", "%R", "", "-99", "NA", "", "SURR", "82.7", "", "-99", "NA", "YES", "100", "", "0.279", "0.001", "-99", ""  
"RW20-20170418", "EPA Method 537", "Initial", "1700466-15", "Vista", "375-73-  
5", "PFBS", "6.45", "ng/L", "J", "3.03", "LOD", "", "TRG", "", "", "17.4", "LOQ", "YES", "-99", "", "0.288", "0.001", "8.68", ""  
"RW20-20170418", "EPA Method 537", "Initial", "1700466-15", "Vista", "375-85-  
9", "PFHpA", "8.68", "ng/L", "U", "3.21", "LOD", "", "TRG", "", "", "17.4", "LOQ", "YES", "-99", "", "0.288", "0.001", "8.68", ""  
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1", "PFNA", "8.68", "ng/L", "U", "5.51", "LOD", "", "TRG", "", "", "17.4", "LOQ", "YES", "-99", "", "0.288", "0.001", "8.68", ""  
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5", "PFBS", "8.86", "ng/L", "U", "3.09", "LOD", "", "TRG", "", "", "17.7", "LOQ", "YES", "-99", "", "0.282", "0.001", "8.86", ""  
"FRB-20-20170418", "EPA Method 537", "Initial", "1700466-16", "Vista", "375-85-  
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"RW06-20170418", "EPA Method 537", "Initial", "1700466-17", "Vista", "375-73-  
5", "PFBS", "8.92", "ng/L", "U", "3.11", "LOD", "", "TRG", "", "", "17.8", "LOQ", "YES", "-99", "", "0.280", "0.001", "8.92", ""  
"RW06-20170418", "EPA Method 537", "Initial", "1700466-17", "Vista", "375-85-  
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"RW06-20170418", "EPA Method 537", "Initial", "1700466-17", "Vista", "355-46-  
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"RW06-20170418", "EPA Method 537", "Initial", "1700466-17", "Vista", "335-67-  
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"RW06-20170418", "EPA Method 537", "Initial", "1700466-17", "Vista", "375-95-  
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5", "PFBS", "8.83", "ng/L", "U", "3.08", "LOD", "", "TRG", "", "", "17.7", "LOQ", "YES", "-99", "", "0.283", "0.001", "8.83", ""  
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9", "PFHpA", "8.83", "ng/L", "U", "3.27", "LOD", "", "TRG", "", "", "17.7", "LOQ", "YES", "-99", "", "0.283", "0.001", "8.83", ""  
"FRB-06-20170418", "EPA Method 537", "Initial", "1700466-18", "Vista", "355-46-  
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"B7D0096-BLK1", "EPA Method 537", "Initial", "B7D0096-BLK1", "Vista", "375-73-  
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"B7D0096-BLK1", "EPA Method 537", "Initial", "B7D0096-BLK1", "Vista", "375-85-

9","PFHpA","10.0","ng/L","U","3.70","LOD","","TRG","","","20.0","LOQ","YES","-99","","0.250","0.001","10.0",""  
"B7D0096-BLK1","EPA Method 537","Initial","B7D0096-BLK1","Vista","355-46-  
4","PFHxS","10.0","ng/L","U","3.46","LOD","","TRG","","","20.0","LOQ","YES","-99","","0.250","0.001","10.0",""  
"B7D0096-BLK1","EPA Method 537","Initial","B7D0096-BLK1","Vista","335-67-  
1","PFOA","10.0","ng/L","U","4.54","LOD","","TRG","","","20.0","LOQ","YES","-99","","0.250","0.001","10.0",""  
"B7D0096-BLK1","EPA Method 537","Initial","B7D0096-BLK1","Vista","375-95-  
1","PFNA","10.0","ng/L","U","6.34","LOD","","TRG","","","20.0","LOQ","YES","-99","","0.250","0.001","10.0",""  
"B7D0096-BLK1","EPA Method 537","Initial","B7D0096-BLK1","Vista","1763-23-  
1","PFOS","10.0","ng/L","U","3.05","LOD","","TRG","","","20.0","LOQ","YES","-99","","0.250","0.001","10.0",""  
"B7D0096-BLK1","EPA Method 537","Initial","B7D0096-BLK1","Vista","13C2-PFHxA","13C2-  
PFHxA","89.0","%R","","-99","NA","","SUR","89.0","","-99","NA","YES","100","","0.250","0.001","-99",""  
"B7D0096-BLK1","EPA Method 537","Initial","B7D0096-BLK1","Vista","13C2-PFDA","13C2-  
PFDA","82.4","%R","","-99","NA","","SUR","82.4","","-99","NA","YES","100","","0.250","0.001","-99",""  
"B7D0096-BS1","EPA Method 537","Initial","B7D0096-BS1","Vista","375-73-  
5","PFBS","67.0","ng/L","","3.49","LOD","","TRG","94.6","","20.0","LOQ","YES","70.8","","0.250","0.001","10.0",""  
"  
"B7D0096-BS1","EPA Method 537","Initial","B7D0096-BS1","Vista","375-85-  
9","PFHpA","78.9","ng/L","","3.70","LOD","","TRG","98.6","","20.0","LOQ","YES","80.0","","0.250","0.001","10.0",""  
"  
"B7D0096-BS1","EPA Method 537","Initial","B7D0096-BS1","Vista","355-46-  
4","PFHxS","67.4","ng/L","","3.46","LOD","","TRG","92.6","","20.0","LOQ","YES","72.8","","0.250","0.001","10.0",""  
"  
"B7D0096-BS1","EPA Method 537","Initial","B7D0096-BS1","Vista","335-67-  
1","PFOA","79.3","ng/L","","4.54","LOD","","TRG","99.1","","20.0","LOQ","YES","80.0","","0.250","0.001","10.0",""  
"  
"B7D0096-BS1","EPA Method 537","Initial","B7D0096-BS1","Vista","375-95-  
1","PFNA","79.7","ng/L","","6.34","LOD","","TRG","99.7","","20.0","LOQ","YES","80.0","","0.250","0.001","10.0",""  
"  
"B7D0096-BS1","EPA Method 537","Initial","B7D0096-BS1","Vista","1763-23-  
1","PFOS","71.3","ng/L","","3.05","LOD","","TRG","96.4","","20.0","LOQ","YES","74.0","","0.250","0.001","10.0",""  
"  
"B7D0096-BS1","EPA Method 537","Initial","B7D0096-BS1","Vista","13C2-PFHxA","13C2-  
PFHxA","93.5","%R","","-99","NA","","SUR","93.5","","-99","NA","YES","100","","0.250","0.001","-99",""  
"B7D0096-BS1","EPA Method 537","Initial","B7D0096-BS1","Vista","13C2-PFDA","13C2-  
PFDA","89.6","%R","","-99","NA","","SUR","89.6","","-99","NA","YES","100","","0.250","0.001","-99",""  
"B7D0096-DUP1","EPA Method 537","Initial","B7D0096-DUP1","Vista","375-73-  
5","PFBS","9.00","ng/L","U","3.14","LOD","","TRG","","","18.0","LOQ","YES","-99","RW07-  
20170417","0.278","0.001","9.00",""  
"B7D0096-DUP1","EPA Method 537","Initial","B7D0096-DUP1","Vista","375-85-  
9","PFHpA","9.00","ng/L","U","3.33","LOD","","TRG","","","18.0","LOQ","YES","-99","RW07-  
20170417","0.278","0.001","9.00",""  
"B7D0096-DUP1","EPA Method 537","Initial","B7D0096-DUP1","Vista","355-46-  
4","PFHxS","9.00","ng/L","U","3.11","LOD","","TRG","","","18.0","LOQ","YES","-99","RW07-  
20170417","0.278","0.001","9.00",""  
"B7D0096-DUP1","EPA Method 537","Initial","B7D0096-DUP1","Vista","335-67-  
1","PFOA","8.51","ng/L","J","4.09","LOD","","TRG","","9.16","18.0","LOQ","YES","-99","RW07-  
20170417","0.278","0.001","9.00",""  
"B7D0096-DUP1","EPA Method 537","Initial","B7D0096-DUP1","Vista","375-95-  
1","PFNA","9.00","ng/L","U","5.71","LOD","","TRG","","","18.0","LOQ","YES","-99","RW07-  
20170417","0.278","0.001","9.00",""  
"B7D0096-DUP1","EPA Method 537","Initial","B7D0096-DUP1","Vista","1763-23-  
1","PFOS","4.02","ng/L","J","2.74","LOD","","TRG","","0.722","18.0","LOQ","YES","-99","RW07-  
20170417","0.278","0.001","9.00",""  
"B7D0096-DUP1","EPA Method 537","Initial","B7D0096-DUP1","Vista","13C2-PFHxA","13C2-

PFHxA","88.0","%R","",-99","NA","","SUR","88.0","",-99","NA","YES","100","RW07-20170417","0.278","0.001","-99",""

"B7D0096-DUP1","EPA Method 537","Initial","B7D0096-DUP1","Vista","13C2-PFDA","13C2-PFDA","82.9","%R","",-99","NA","","SUR","82.9","",-99","NA","YES","100","RW07-20170417","0.278","0.001","-99",""

"B7D0096-MS1","EPA Method 537","Initial","B7D0096-MS1","Vista","375-73-5","PFBS","74.6","ng/L","","3.13","LOD","","TRG","111","","18.0","LOQ","YES","63.6","RW03-20170417","0.278","0.001","8.98",""

"B7D0096-MS1","EPA Method 537","Initial","B7D0096-MS1","Vista","375-85-9","PFHpA","66.3","ng/L","","3.32","LOD","","TRG","89.5","","18.0","LOQ","YES","71.8","RW03-20170417","0.278","0.001","8.98",""

"B7D0096-MS1","EPA Method 537","Initial","B7D0096-MS1","Vista","355-46-4","PFHxS","74.1","ng/L","","3.11","LOD","","TRG","110","","18.0","LOQ","YES","65.4","RW03-20170417","0.278","0.001","8.98",""

"B7D0096-MS1","EPA Method 537","Initial","B7D0096-MS1","Vista","335-67-1","PFOA","78.0","ng/L","","4.08","LOD","","TRG","99.2","","18.0","LOQ","YES","71.8","RW03-20170417","0.278","0.001","8.98",""

"B7D0096-MS1","EPA Method 537","Initial","B7D0096-MS1","Vista","375-95-1","PFNA","64.3","ng/L","","5.69","LOD","","TRG","88.5","","18.0","LOQ","YES","71.8","RW03-20170417","0.278","0.001","8.98",""

"B7D0096-MS1","EPA Method 537","Initial","B7D0096-MS1","Vista","1763-23-1","PFOS","75.7","ng/L","","2.74","LOD","","TRG","105","","18.0","LOQ","YES","66.5","RW03-20170417","0.278","0.001","8.98",""

"B7D0096-MS1","EPA Method 537","Initial","B7D0096-MS1","Vista","13C2-PFHxA","13C2-PFHxA","86.1","%R","",-99","NA","","SUR","86.1","",-99","NA","YES","100","RW03-20170417","0.278","0.001","-99",""

"B7D0096-MS1","EPA Method 537","Initial","B7D0096-MS1","Vista","13C2-PFDA","13C2-PFDA","79.7","%R","",-99","NA","","SUR","79.7","",-99","NA","YES","100","RW03-20170417","0.278","0.001","-99",""

"NAWC Trenton, NJ","NAWC Trenton, NJ","RW05-20170417","04/17/2017 11:25","DW","1700466-01","NM","","0.30","EPA Method 537","METHOD","Initial","04/20/2017 09:29","04/20/2017 20:18","Vista","COA","WET","NA","1","NA","NA","01/01/1900 00:00","100","B7D0096","B7D0096","NA","S7D0040","1700466","04/19/2017 09:04","01/01/1900 00:00",""

"NAWC Trenton, NJ","NAWC Trenton, NJ","RW05-20170417","04/17/2017 11:25","DW","1700466-01","NM","","0.30","EPA Method 537","METHOD","Initial","04/20/2017 09:29","04/21/2017 21:31","Vista","COA","WET","NA","1","NA","NA","01/01/1900 00:00","100","B7D0096","B7D0096","NA","S7D0040","1700466","04/19/2017 09:04","01/01/1900 00:00",""

"NAWC Trenton, NJ","NAWC Trenton, NJ","FRB-05-20170417","04/17/2017 11:20","DW","1700466-02","NM","","0.30","EPA Method 537","METHOD","Initial","04/20/2017 09:29","04/20/2017 20:30","Vista","COA","WET","NA","1","NA","NA","01/01/1900 00:00","100","B7D0096","B7D0096","NA","S7D0040","1700466","04/19/2017 09:04","01/01/1900 00:00",""

"NAWC Trenton, NJ","NAWC Trenton, NJ","FRB-05-20170417","04/17/2017 11:20","DW","1700466-02","NM","","0.30","EPA Method 537","METHOD","Initial","04/20/2017 09:29","04/21/2017 21:44","Vista","COA","WET","NA","1","NA","NA","01/01/1900 00:00","100","B7D0096","B7D0096","NA","S7D0040","1700466","04/19/2017 09:04","01/01/1900 00:00",""

"NAWC Trenton, NJ","NAWC Trenton, NJ","RW10-20170417","04/17/2017 12:35","DW","1700466-03","NM","","0.30","EPA Method 537","METHOD","Initial","04/20/2017 09:29","04/21/2017 21:56","Vista","COA","WET","NA","1","NA","NA","01/01/1900 00:00","100","B7D0096","B7D0096","NA","S7D0040","1700466","04/19/2017 09:04","01/01/1900 00:00",""

"NAWC Trenton, NJ","NAWC Trenton, NJ","RW10-20170417","04/17/2017 12:35","DW","1700466-03","NM","","0.30","EPA Method 537","METHOD","Initial","04/20/2017 09:29","04/20/2017 20:43","Vista","COA","WET","NA","1","NA","NA","01/01/1900 00:00","100","B7D0096","B7D0096","NA","S7D0040","1700466","04/19/2017 09:04","01/01/1900 00:00",""

"NAWC Trenton, NJ","NAWC Trenton, NJ","FRB-10-20170417","04/17/2017 12:30","DW","1700466-

04","NM","","0.30","EPA Method 537","METHOD","Initial","04/20/2017 09:29","04/20/2017  
20:55","Vista","COA","WET","NA","1","NA","NA","01/01/1900  
00:00","100","B7D0096","B7D0096","NA","S7D0040","1700466","04/19/2017 09:04","01/01/1900 00:00",""  
"NAWC Trenton, NJ","NAWC Trenton, NJ","FRB-10-20170417","04/17/2017 12:30","DW","1700466-  
04","NM","","0.30","EPA Method 537","METHOD","Initial","04/20/2017 09:29","04/21/2017  
22:08","Vista","COA","WET","NA","1","NA","NA","01/01/1900  
00:00","100","B7D0096","B7D0096","NA","S7D0040","1700466","04/19/2017 09:04","01/01/1900 00:00",""  
"NAWC Trenton, NJ","NAWC Trenton, NJ","RW18-20170417","04/17/2017 13:35","DW","1700466-  
05","NM","","0.30","EPA Method 537","METHOD","Initial","04/20/2017 09:29","04/21/2017  
22:21","Vista","COA","WET","NA","1","NA","NA","01/01/1900  
00:00","100","B7D0096","B7D0096","NA","S7D0040","1700466","04/19/2017 09:04","01/01/1900 00:00",""  
"NAWC Trenton, NJ","NAWC Trenton, NJ","RW18-20170417","04/17/2017 13:35","DW","1700466-  
05","NM","","0.30","EPA Method 537","METHOD","Initial","04/20/2017 09:29","04/20/2017  
21:08","Vista","COA","WET","NA","1","NA","NA","01/01/1900  
00:00","100","B7D0096","B7D0096","NA","S7D0040","1700466","04/19/2017 09:04","01/01/1900 00:00",""  
"NAWC Trenton, NJ","NAWC Trenton, NJ","FRB-18-20170417","04/17/2017 13:30","DW","1700466-  
06","NM","","0.30","EPA Method 537","METHOD","Initial","04/20/2017 09:29","04/21/2017  
22:33","Vista","COA","WET","NA","1","NA","NA","01/01/1900  
00:00","100","B7D0096","B7D0096","NA","S7D0040","1700466","04/19/2017 09:04","01/01/1900 00:00",""  
"NAWC Trenton, NJ","NAWC Trenton, NJ","FRB-18-20170417","04/17/2017 13:30","DW","1700466-  
06","NM","","0.30","EPA Method 537","METHOD","Initial","04/20/2017 09:29","04/20/2017  
21:20","Vista","COA","WET","NA","1","NA","NA","01/01/1900  
00:00","100","B7D0096","B7D0096","NA","S7D0040","1700466","04/19/2017 09:04","01/01/1900 00:00",""  
"NAWC Trenton, NJ","NAWC Trenton, NJ","RW07-20170417","04/17/2017 14:10","DW","1700466-  
07","NM","","0.30","EPA Method 537","METHOD","Initial","04/20/2017 09:29","04/20/2017  
21:32","Vista","COA","WET","NA","1","NA","NA","01/01/1900  
00:00","100","B7D0096","B7D0096","NA","S7D0040","1700466","04/19/2017 09:04","01/01/1900 00:00",""  
"NAWC Trenton, NJ","NAWC Trenton, NJ","RW07-20170417","04/17/2017 14:10","DW","1700466-  
07","NM","","0.30","EPA Method 537","METHOD","Initial","04/20/2017 09:29","04/21/2017  
22:46","Vista","COA","WET","NA","1","NA","NA","01/01/1900  
00:00","100","B7D0096","B7D0096","NA","S7D0040","1700466","04/19/2017 09:04","01/01/1900 00:00",""  
"NAWC Trenton, NJ","NAWC Trenton, NJ","FRB-07-20170417","04/17/2017 14:05","DW","1700466-  
08","NM","","0.30","EPA Method 537","METHOD","Initial","04/20/2017 09:29","04/21/2017  
23:10","Vista","COA","WET","NA","1","NA","NA","01/01/1900  
00:00","100","B7D0096","B7D0096","NA","S7D0040","1700466","04/19/2017 09:04","01/01/1900 00:00",""  
"NAWC Trenton, NJ","NAWC Trenton, NJ","FRB-07-20170417","04/17/2017 14:05","DW","1700466-  
08","NM","","0.30","EPA Method 537","METHOD","Initial","04/20/2017 09:29","04/20/2017  
21:57","Vista","COA","WET","NA","1","NA","NA","01/01/1900  
00:00","100","B7D0096","B7D0096","NA","S7D0040","1700466","04/19/2017 09:04","01/01/1900 00:00",""  
"NAWC Trenton, NJ","NAWC Trenton, NJ","RW03-20170417","04/17/2017 17:45","DW","1700466-  
09","NM","","0.30","EPA Method 537","METHOD","Initial","04/20/2017 09:29","04/21/2017  
23:23","Vista","COA","WET","NA","1","NA","NA","01/01/1900  
00:00","100","B7D0096","B7D0096","NA","S7D0040","1700466","04/19/2017 09:04","01/01/1900 00:00",""  
"NAWC Trenton, NJ","NAWC Trenton, NJ","RW03-20170417","04/17/2017 17:45","DW","1700466-  
09","NM","","0.30","EPA Method 537","METHOD","Initial","04/20/2017 09:29","04/20/2017  
22:10","Vista","COA","WET","NA","1","NA","NA","01/01/1900  
00:00","100","B7D0096","B7D0096","NA","S7D0040","1700466","04/19/2017 09:04","01/01/1900 00:00",""  
"NAWC Trenton, NJ","NAWC Trenton, NJ","FRB-03-20170417","04/17/2017 17:40","DW","1700466-  
10","NM","","0.30","EPA Method 537","METHOD","Initial","04/20/2017 09:29","04/20/2017  
22:34","Vista","COA","WET","NA","1","NA","NA","01/01/1900  
00:00","100","B7D0096","B7D0096","NA","S7D0040","1700466","04/19/2017 09:04","01/01/1900 00:00",""  
"NAWC Trenton, NJ","NAWC Trenton, NJ","FRB-03-20170417","04/17/2017 17:40","DW","1700466-  
10","NM","","0.30","EPA Method 537","METHOD","Initial","04/20/2017 09:29","04/21/2017  
23:48","Vista","COA","WET","NA","1","NA","NA","01/01/1900

00:00","100","B7D0096","B7D0096","NA","S7D0040","1700466","04/19/2017 09:04","01/01/1900 00:00",""  
"NAWC Trenton, NJ","NAWC Trenton, NJ","RW16-20170417","04/17/2017 18:25","DW","1700466-  
11","NM","","0.30","EPA Method 537","METHOD","Initial","04/20/2017 09:29","04/22/2017  
00:00","Vista","COA","WET","NA","1","NA","NA","01/01/1900  
00:00","100","B7D0096","B7D0096","NA","S7D0040","1700466","04/19/2017 09:04","01/01/1900 00:00",""  
"NAWC Trenton, NJ","NAWC Trenton, NJ","RW16-20170417","04/17/2017 18:25","DW","1700466-  
11","NM","","0.30","EPA Method 537","METHOD","Initial","04/20/2017 09:29","04/20/2017  
22:47","Vista","COA","WET","NA","1","NA","NA","01/01/1900  
00:00","100","B7D0096","B7D0096","NA","S7D0040","1700466","04/19/2017 09:04","01/01/1900 00:00",""  
"NAWC Trenton, NJ","NAWC Trenton, NJ","FRB-16-20170417","04/17/2017 18:20","DW","1700466-  
12","NM","","0.30","EPA Method 537","METHOD","Initial","04/20/2017 09:29","04/20/2017  
22:59","Vista","COA","WET","NA","1","NA","NA","01/01/1900  
00:00","100","B7D0096","B7D0096","NA","S7D0040","1700466","04/19/2017 09:04","01/01/1900 00:00",""  
"NAWC Trenton, NJ","NAWC Trenton, NJ","FRB-16-20170417","04/17/2017 18:20","DW","1700466-  
12","NM","","0.30","EPA Method 537","METHOD","Initial","04/20/2017 09:29","04/22/2017  
00:12","Vista","COA","WET","NA","1","NA","NA","01/01/1900  
00:00","100","B7D0096","B7D0096","NA","S7D0040","1700466","04/19/2017 09:04","01/01/1900 00:00",""  
"NAWC Trenton, NJ","NAWC Trenton, NJ","RW14-20170418","04/18/2017 09:20","DW","1700466-  
13","NM","","0.30","EPA Method 537","METHOD","Initial","04/20/2017 09:29","04/20/2017  
23:12","Vista","COA","WET","NA","1","NA","NA","01/01/1900  
00:00","100","B7D0096","B7D0096","NA","S7D0040","1700466","04/19/2017 09:04","01/01/1900 00:00",""  
"NAWC Trenton, NJ","NAWC Trenton, NJ","RW14-20170418","04/18/2017 09:20","DW","1700466-  
13","NM","","0.30","EPA Method 537","METHOD","Initial","04/20/2017 09:29","04/22/2017  
00:25","Vista","COA","WET","NA","1","NA","NA","01/01/1900  
00:00","100","B7D0096","B7D0096","NA","S7D0040","1700466","04/19/2017 09:04","01/01/1900 00:00",""  
"NAWC Trenton, NJ","NAWC Trenton, NJ","FRB-14-20170418","04/18/2017 09:10","DW","1700466-  
14","NM","","0.30","EPA Method 537","METHOD","Initial","04/20/2017 09:29","04/22/2017  
11:50","Vista","COA","WET","NA","1","NA","NA","01/01/1900  
00:00","100","B7D0096","B7D0096","NA","S7D0040","1700466","04/19/2017 09:04","01/01/1900 00:00",""  
"NAWC Trenton, NJ","NAWC Trenton, NJ","FRB-14-20170418","04/18/2017 09:10","DW","1700466-  
14","NM","","0.30","EPA Method 537","METHOD","Initial","04/20/2017 09:29","04/20/2017  
23:24","Vista","COA","WET","NA","1","NA","NA","01/01/1900  
00:00","100","B7D0096","B7D0096","NA","S7D0040","1700466","04/19/2017 09:04","01/01/1900 00:00",""  
"NAWC Trenton, NJ","NAWC Trenton, NJ","RW20-20170418","04/18/2017 10:25","DW","1700466-  
15","NM","","0.30","EPA Method 537","METHOD","Initial","04/20/2017 09:29","04/20/2017  
23:37","Vista","COA","WET","NA","1","NA","NA","01/01/1900  
00:00","100","B7D0096","B7D0096","NA","S7D0040","1700466","04/19/2017 09:04","01/01/1900 00:00",""  
"NAWC Trenton, NJ","NAWC Trenton, NJ","RW20-20170418","04/18/2017 10:25","DW","1700466-  
15","NM","","0.30","EPA Method 537","METHOD","Initial","04/20/2017 09:29","04/22/2017  
12:02","Vista","COA","WET","NA","1","NA","NA","01/01/1900  
00:00","100","B7D0096","B7D0096","NA","S7D0040","1700466","04/19/2017 09:04","01/01/1900 00:00",""  
"NAWC Trenton, NJ","NAWC Trenton, NJ","FRB-20-20170418","04/18/2017 10:20","DW","1700466-  
16","NM","","0.30","EPA Method 537","METHOD","Initial","04/20/2017 09:29","04/20/2017  
23:49","Vista","COA","WET","NA","1","NA","NA","01/01/1900  
00:00","100","B7D0096","B7D0096","NA","S7D0040","1700466","04/19/2017 09:04","01/01/1900 00:00",""  
"NAWC Trenton, NJ","NAWC Trenton, NJ","FRB-20-20170418","04/18/2017 10:20","DW","1700466-  
16","NM","","0.30","EPA Method 537","METHOD","Initial","04/20/2017 09:29","04/22/2017  
12:15","Vista","COA","WET","NA","1","NA","NA","01/01/1900  
00:00","100","B7D0096","B7D0096","NA","S7D0040","1700466","04/19/2017 09:04","01/01/1900 00:00",""  
"NAWC Trenton, NJ","NAWC Trenton, NJ","RW06-20170418","04/18/2017 11:05","DW","1700466-  
17","NM","","0.30","EPA Method 537","METHOD","Initial","04/20/2017 09:29","04/21/2017  
00:01","Vista","COA","WET","NA","1","NA","NA","01/01/1900  
00:00","100","B7D0096","B7D0096","NA","S7D0040","1700466","04/19/2017 09:04","01/01/1900 00:00",""  
"NAWC Trenton, NJ","NAWC Trenton, NJ","RW06-20170418","04/18/2017 11:05","DW","1700466-

17","NM","","0.30","EPA Method 537","METHOD","Initial","04/20/2017 09:29","04/22/2017  
12:28","Vista","COA","WET","NA","1","NA","NA","01/01/1900  
00:00","100","B7D0096","B7D0096","NA","S7D0040","1700466","04/19/2017 09:04","01/01/1900 00:00",""  
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00:14","Vista","COA","WET","NA","1","NA","NA","01/01/1900  
00:00","100","B7D0096","B7D0096","NA","S7D0040","1700466","04/19/2017 09:04","01/01/1900 00:00",""  
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18","NM","","0.30","EPA Method 537","METHOD","Initial","04/20/2017 09:29","04/22/2017  
12:40","Vista","COA","WET","NA","1","NA","NA","01/01/1900  
00:00","100","B7D0096","B7D0096","NA","S7D0040","1700466","04/19/2017 09:04","01/01/1900 00:00",""  
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19","NM","","0.30","EPA Method 537","METHOD","Initial","04/20/2017 09:29","04/22/2017  
12:53","Vista","COA","WET","NA","1","NA","NA","01/01/1900  
00:00","100","B7D0096","B7D0096","NA","S7D0040","1700466","04/19/2017 09:04","01/01/1900 00:00",""  
"NAWC Trenton, NJ","NAWC Trenton, NJ","RW01-20170418","04/18/2017 13:05","DW","1700466-  
19","NM","","0.30","EPA Method 537","METHOD","Initial","04/20/2017 09:29","04/21/2017  
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00:00","100","B7D0096","B7D0096","NA","S7D0040","1700466","04/19/2017 09:04","01/01/1900 00:00",""  
"NAWC Trenton, NJ","NAWC Trenton, NJ","FRB-01-20170418","04/18/2017 13:00","DW","1700466-  
20","NM","","0.30","EPA Method 537","METHOD","Initial","04/20/2017 09:29","04/22/2017  
13:05","Vista","COA","WET","NA","1","NA","NA","01/01/1900  
00:00","100","B7D0096","B7D0096","NA","S7D0040","1700466","04/19/2017 09:04","01/01/1900 00:00",""  
"NAWC Trenton, NJ","NAWC Trenton, NJ","FRB-01-20170418","04/18/2017 13:00","DW","1700466-  
20","NM","","0.30","EPA Method 537","METHOD","Initial","04/20/2017 09:29","04/21/2017  
00:38","Vista","COA","WET","NA","1","NA","NA","01/01/1900  
00:00","100","B7D0096","B7D0096","NA","S7D0040","1700466","04/19/2017 09:04","01/01/1900 00:00",""  
"NAWC Trenton, NJ","NAWC Trenton, NJ","B7D0096-BLK1","01/01/1900 00:00","DW","B7D0096-  
BLK1","MB","","-99","EPA Method 537","METHOD","Initial","04/20/2017 09:29","04/20/2017  
20:06","Vista","COA","WET","NA","1","NA","NA","01/01/1900  
00:00","100","B7D0096","B7D0096","NA","S7D0040","1700466","01/01/1900 00:00","01/01/1900 00:00",""  
"NAWC Trenton, NJ","NAWC Trenton, NJ","B7D0096-BS1","01/01/1900 00:00","DW","B7D0096-  
BS1","LCS","","-99","EPA Method 537","METHOD","Initial","04/20/2017 09:29","04/20/2017  
19:41","Vista","COA","WET","NA","1","NA","NA","01/01/1900  
00:00","100","B7D0096","B7D0096","NA","S7D0040","1700466","01/01/1900 00:00","01/01/1900 00:00",""  
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DUP1","DUP","","-99","EPA Method 537","METHOD","Initial","04/20/2017 09:29","04/21/2017  
22:58","Vista","COA","WET","NA","1","NA","NA","01/01/1900  
00:00","100","B7D0096","B7D0096","NA","S7D0040","1700466","01/01/1900 00:00","01/01/1900 00:00",""  
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DUP1","DUP","","-99","EPA Method 537","METHOD","Initial","04/20/2017 09:29","04/20/2017  
21:45","Vista","COA","WET","NA","1","NA","NA","01/01/1900  
00:00","100","B7D0096","B7D0096","NA","S7D0040","1700466","01/01/1900 00:00","01/01/1900 00:00",""  
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MS1","MS","","-99","EPA Method 537","METHOD","Initial","04/20/2017 09:29","04/21/2017  
23:35","Vista","COA","WET","NA","1","NA","NA","01/01/1900  
00:00","100","B7D0096","B7D0096","NA","S7D0040","1700466","01/01/1900 00:00","01/01/1900 00:00",""  
"NAWC Trenton, NJ","NAWC Trenton, NJ","B7D0096-MS1","01/01/1900 00:00","DW","B7D0096-  
MS1","MS","","-99","EPA Method 537","METHOD","Initial","04/20/2017 09:29","04/20/2017  
22:22","Vista","COA","WET","NA","1","NA","NA","01/01/1900  
00:00","100","B7D0096","B7D0096","NA","S7D0040","1700466","01/01/1900 00:00","01/01/1900 00:00",""



TO: M. MANG  
SDG: 1700466

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Non-detected results were reported to the Limit of Detection (LOD).

**Executive Summary**

**Laboratory Performance:** None.

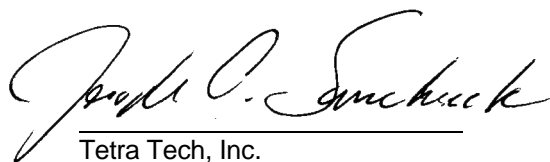
**Other Factors Affecting Data Quality:** Positive results below the LOQ were qualified as estimated.

The data for these analyses were reviewed with reference to the "National Functional Guidelines for Superfund Organic Methods Data Review" (January 2017). The text of this report has been formulated to address only those areas affecting data quality.



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Tetra Tech, Inc.  
Megan Ritchie  
Chemist/Data Validator



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Tetra Tech, Inc.  
Joseph A. Samchuck  
Data Validation Manager

**Attachments:**

Appendix A – Qualified Analytical Results  
Appendix B – Results as Reported by the Laboratory  
Appendix C – Support Documentation



**Appendix A**

Qualified Analytical Results

<b>PROJ_NO: 08005-WE08</b> <b>SDG: 1700466</b> <b>FRACTION: OS</b> <b>MEDIA: WATER</b>	NSAMPLE	FRB-01-20170418			FRB-03-20170417			FRB-05-20170417			FRB-06-20170418		
	LAB_ID	1700466-20			1700466-10			1700466-02			1700466-18		
	SAMP_DATE	4/18/2017			4/17/2017			4/17/2017			4/18/2017		
	QC_TYPE	FB			FB			FB			FB		
	UNITS	NG/L			NG/L			NG/L			NG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	
PENTADECAFLUOROOCTANOIC ACID	9.19	J	P	8.98	U		8.68	U		8.83	U		
PERFLUOROBUTANE SULFONATE	3.96	J	P	8.98	U		8.68	U		8.83	U		
PERFLUROHEPTANOIC ACID	9.02	U		8.98	U		8.68	U		8.83	U		
PERFLUROHEXANESULFONIC ACID	7.18	J	P	8.98	U		8.68	U		8.83	U		
PERFLURONONANOIC ACID	9.02	U		8.98	U		8.68	U		8.83	U		
PERFLUROOCTANE SULFONIC ACID	10.4	J	P	8.98	U		8.68	U		8.83	U		

<b>PROJ_NO: 08005-WE08</b> <b>SDG: 1700466</b> <b>FRACTION: OS</b> <b>MEDIA: WATER</b>	NSAMPLE	FRB-07-20170417			FRB-10-20170417			FRB-14-20170418			FRB-16-20170417		
	LAB_ID	1700466-08			1700466-04			1700466-14			1700466-12		
	SAMP_DATE	4/17/2017			4/17/2017			4/18/2017			4/17/2017		
	QC_TYPE	FB			FB			FB			FB		
	UNITS	NG/L			NG/L			NG/L			NG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	
PENTADECAFLUOROOCTANOIC ACID	8.72	U		9.02	U		8.95	U		8.91	U		
PERFLUOROBUTANE SULFONATE	8.72	U		9.02	U		8.95	U		8.91	U		
PERFLUROHEPTANOIC ACID	8.72	U		9.02	U		8.95	U		8.91	U		
PERFLUROHEXANESULFONIC ACID	8.72	U		9.02	U		8.95	U		8.91	U		
PERFLURONONANOIC ACID	8.72	U		9.02	U		8.95	U		8.91	U		
PERFLUROOCTANE SULFONIC ACID	8.72	U		9.02	U		8.95	U		8.91	U		

<b>PROJ_NO: 08005-WE08</b> <b>SDG: 1700466</b> <b>FRACTION: OS</b> <b>MEDIA: WATER</b>	NSAMPLE	FRB-18-20170417			FRB-20-20170418			RW01-20170418			RW03-20170417		
	LAB_ID	1700466-06			1700466-16			1700466-19			1700466-09		
	SAMP_DATE	4/17/2017			4/18/2017			4/18/2017			4/17/2017		
	QC_TYPE	FB			FB			NM			NM		
	UNITS	NG/L			NG/L			NG/L			NG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	
PENTADECAFLUOROOCTANOIC ACID	9.13	U		8.86	U		9.09	U		6.73	J	P	
PERFLUOROBUTANE SULFONATE	9.13	U		8.86	U		9.09	U		4.17	J	P	
PERFLUOROHEPTANOIC ACID	9.13	U		8.86	U		9.09	U		8.9	U		
PERFLUOROHXANESULFONIC ACID	9.13	U		8.86	U		9.09	U		8.9	U		
PERFLUORONONANOIC ACID	9.13	U		8.86	U		9.09	U		8.9	U		
PERFLUOROOCTANE SULFONIC ACID	9.13	U		8.86	U		9.09	U		5.58	J	P	

<b>PROJ_NO: 08005-WE08</b> <b>SDG: 1700466</b> <b>FRACTION: OS</b> <b>MEDIA: WATER</b>	NSAMPLE	RW05-20170417			RW06-20170418			RW07-20170417			RW10-20170417		
	LAB_ID	1700466-01			1700466-17			1700466-07			1700466-03		
	SAMP_DATE	4/17/2017			4/18/2017			4/17/2017			4/17/2017		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	NG/L			NG/L			NG/L			NG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	
PENTADECAFLUOROOCTANOIC ACID	9.1	U		6.91	J	P	7.77	J	P	7.88	J	P	
PERFLUOROBUTANE SULFONATE	9.1	U		8.92	U		9.35	U		9.06	U		
PERFLUROHEPTANOIC ACID	9.1	U		8.92	U		9.35	U		9.06	U		
PERFLUROHEXANESULFONIC ACID	9.1	U		8.92	U		9.35	U		9.06	U		
PERFLURONONANOIC ACID	9.1	U		8.92	U		9.35	U		9.06	U		
PERFLUROOCTANE SULFONIC ACID	9.1	U		8.92	U		3.99	J	P	6.46	J	P	

<b>PROJ_NO: 08005-WE08</b> <b>SDG: 1700466</b> <b>FRACTION: OS</b> <b>MEDIA: WATER</b>	NSAMPLE	RW14-20170418			RW16-20170417			RW18-20170417			RW20-20170418		
	LAB_ID	1700466-13			1700466-11			1700466-05			1700466-15		
	SAMP_DATE	4/18/2017			4/17/2017			4/17/2017			4/18/2017		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	NG/L			NG/L			NG/L			NG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	
PENTADECAFLUOROOCTANOIC ACID	13.5	J	P	10.3	J	P	8.07	J	P	11.9	J	P	
PERFLUOROBUTANE SULFONATE	48.1			8.65	U		9	U		6.45	J	P	
PERFLUROHEPTANOIC ACID	3.7	J	P	8.65	U		9	U		8.68	U		
PERFLUROHEXANESULFONIC ACID	3.54	J	P	8.65	U		9	U		3.93	J	P	
PERFLURONONANOIC ACID	8.8	U		8.65	U		9	U		8.68	U		
PERFLUROOCTANE SULFONIC ACID	12.5	J	P	8.65	U		4.1	J	P	6.01	J	P	

### Data Qualifier Definitions

The following definitions provide brief explanations of the validation qualifiers assigned to results in the data review process.

<b>U</b>	The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted method detection limit for sample and method.
<b>J</b>	The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the reporting limit).
<b>J+</b>	The result is an estimated quantity, but the result may be biased high.
<b>J-</b>	The result is an estimated quantity, but the result may be biased low.
<b>UJ</b>	The analyte was analyzed for, but was not detected. The reported detection limit is approximate and may be inaccurate or imprecise.
<b>R</b>	The sample result (detected) is unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
<b>UR</b>	The sample result (nondetected) is unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.

**Qualifier Codes:**

- A = Lab Blank Contamination
- B = Field Blank Contamination
- C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
- C01 = GC/MS Tuning Noncompliance
- D = MS/MSD Recovery Noncompliance
- E = LCS/LCSD Recovery Noncompliance
- F = Lab Duplicate Imprecision
- G = Field Duplicate Imprecision
- H = Holding Time Exceedance
- I = ICP Serial Dilution Noncompliance
- J = ICP PDS Recovery Noncompliance; MSA's  $r < 0.995$
- K = ICP Interference - includes ICS % R Noncompliance
- L = Instrument Calibration Range Exceedance
- M = Sample Preservation Noncompliance
- N = Internal Standard Noncompliance
- N01 = Internal Standard Recovery Noncompliance Dioxins
- N02 = Recovery Standard Noncompliance Dioxins
- N03 = Clean-up Standard Noncompliance Dioxins
- O = Poor Instrument Performance (i.e., base-time drifting)
- P = Uncertainty near detection limit ( $< 2 \times$  IDL for inorganics and  $<$ CRQL for organics)
- Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
- R = Surrogates Recovery Noncompliance
- S = Pesticide/PCB Resolution
- T = % Breakdown Noncompliance for DDT and Endrin
- U = RPD between columns/detectors  $>40\%$  for positive results determined via GC/HPLC
- V = Non-linear calibrations; correlation coefficient  $r < 0.995$
- W = EMPC result
- X = Signal to noise response drop
- Y = Percent solids  $<30\%$
- Z = Uncertainty at 2 standard deviations is greater than sample activity
- Z1 = Tentatively Identified Compound considered presumptively present
- Z2 = Tentatively Identified Compound column bleed
- Z3 = Tentatively Identified Compound aldol condensate
- Z4 = Sample activity is less than the at uncertainty at 3 standard deviations and greater than the MDC
- Z5 = Sample activity is less than the at uncertainty at 3 standard deviations and less than the MDC



**Appendix B**

Results as Reported by the Laboratory

**Sample ID: RW05-20170417** **EPA Method 537**

<b>Client Data</b>		<b>Sample Data</b>		<b>Laboratory Data</b>			
Name:	Tetra Tech	Matrix:	Drinking Water	Lab Sample:	1700466-01	Date Received:	19-Apr-2017 9:04
Project:	NAWC Trenton, NJ	Sample Size:	0.275 L	QC Batch:	B7D0096	Date Extracted:	20-Apr-2017 9:29
Date Collected:	17-Apr-2017 11:25			Date Analyzed:	20-Apr-17 20:18	Column:	BEH C18
Location:					21-Apr-17 21:31	Column:	BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	3.18	9.10	18.2		SUR 13C2-PFHxA	90.0	70 - 130	
PFHpA	ND	3.37	9.10	18.2		SUR 13C2-PFDA	86.3	70 - 130	
PFHxS	ND	3.15	9.10	18.2					
PFOA	ND	4.13	9.10	18.2					
PFNA	ND	5.77	9.10	18.2					
PFOS	ND	2.78	9.10	18.2					

DL - Detection limit  
 RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit  
 Results reported to DL.  
 When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.  
 Only the linear isomer is reported for all other analytes.

**Sample ID: FRB-05-20170417** **EPA Method 537**

Client Data		Sample Data		Laboratory Data			
Name:	Tetra Tech	Matrix:	Blank Water	Lab Sample:	1700466-02	Date Received:	19-Apr-2017 9:04
Project:	NAWC Trenton, NJ	Sample Size:	0.288 L	QC Batch:	B7D0096	Date Extracted:	20-Apr-2017 9:29
Date Collected:	17-Apr-2017 11:20			Date Analyzed:	20-Apr-17 20:30	Column:	BEH C18
Location:					21-Apr-17 21:44	Column:	BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	3.03	8.68	17.4		SUR 13C2-PFHxA	93.0	70 - 130	
PFHpA	ND	3.21	8.68	17.4		SUR 13C2-PFDA	88.0	70 - 130	
PFHxS	ND	3.00	8.68	17.4					
PFOA	ND	3.94	8.68	17.4					
PFNA	ND	5.50	8.68	17.4					
PFOS	ND	2.65	8.68	17.4					

DL - Detection limit  
 RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit  
 Results reported to DL.  
 When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.  
 Only the linear isomer is reported for all other analytes.

**Sample ID: RW10-20170417** **EPA Method 537**

<b>Client Data</b> Name: Tetra Tech Project: NAWC Trenton, NJ Date Collected: 17-Apr-2017 12:35 Location:	<b>Sample Data</b> Matrix: Drinking Water Sample Size: 0.276 L	<b>Laboratory Data</b> Lab Sample: 1700466-03      Date Received: 19-Apr-2017 9:04 QC Batch: B7D0096      Date Extracted: 20-Apr-2017 9:29 Date Analyzed: 20-Apr-17 20:43 Column: BEH C18 21-Apr-17 21:56 Column: BEH C18
---	--	---

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	3.16	9.06	18.1		SUR 13C2-PFHxA	90.9	70 - 130	
PFHpA	ND	3.35	9.06	18.1		SUR 13C2-PFDA	88.6	70 - 130	
PFHxS	ND	3.14	9.06	18.1					
PFOA	7.88	4.11	9.06	18.1	J				
PFNA	ND	5.75	9.06	18.1					
PFOS	6.46	2.76	9.06	18.1	J				

DL - Detection limit  
RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit  
Results reported to DL.  
When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.  
Only the linear isomer is reported for all other analytes.

**Sample ID: FRB-10-20170417**

**EPA Method 537**

Client Data		Sample Data			Laboratory Data				
Name:	Tetra Tech	Matrix:	Blank Water		Lab Sample:	1700466-04	Date Received:	19-Apr-2017 9:04	
Project:	NAWC Trenton, NJ	Sample Size:	0.277 L		QC Batch:	B7D0096	Date Extracted:	20-Apr-2017 9:29	
Date Collected:	17-Apr-2017 12:30				Date Analyzed:	20-Apr-17 20:55	Column:	BEH C18	
Location:						21-Apr-17 22:08	Column:	BEH C18	

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	3.15	9.02	18.0		SUR 13C2-PFHxA	95.1	70 - 130	
PFHpA	ND	3.34	9.02	18.0		SUR 13C2-PFDA	91.8	70 - 130	
PFHxS	ND	3.12	9.02	18.0					
PFOA	ND	4.10	9.02	18.0					
PFNA	ND	5.72	9.02	18.0					
PFOS	ND	2.75	9.02	18.0					

DL - Detection limit  
 RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit  
 Results reported to DL.  
 When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.  
 Only the linear isomer is reported for all other analytes.

**Sample ID: RW18-20170417** **EPA Method 537**

<b>Client Data</b> Name: Tetra Tech Project: NAWC Trenton, NJ Date Collected: 17-Apr-2017 13:35 Location:	<b>Sample Data</b> Matrix: Drinking Water Sample Size: 0.278 L	<b>Laboratory Data</b> Lab Sample: 1700466-05      Date Received: 19-Apr-2017 9:04 QC Batch: B7D0096      Date Extracted: 20-Apr-2017 9:29 Date Analyzed: 20-Apr-17 21:08 Column: BEH C18 21-Apr-17 22:21 Column: BEH C18
---	--	---

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	3.14	9.00	18.0		SUR 13C2-PFHxA	86.5	70 - 130	
PFHpA	ND	3.33	9.00	18.0		SUR 13C2-PFDA	82.0	70 - 130	
PFHxS	ND	3.11	9.00	18.0					
PFOA	8.07	4.09	9.00	18.0	J				
PFNA	ND	5.71	9.00	18.0					
PFOS	4.10	2.75	9.00	18.0	J				

DL - Detection limit  
RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit  
Results reported to DL.  
When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.  
Only the linear isomer is reported for all other analytes.

**Sample ID: FRB-18-20170417**

**EPA Method 537**

Client Data		Sample Data			Laboratory Data					
Name:	Tetra Tech	Matrix:	Blank Water		Lab Sample:	1700466-06	Date Received:	19-Apr-2017 9:04		
Project:	NAWC Trenton, NJ	Sample Size:	0.274 L		QC Batch:	B7D0096	Date Extracted:	20-Apr-2017 9:29		
Date Collected:	17-Apr-2017 13:30				Date Analyzed:	20-Apr-17 21:20	Column:	BEH C18		
Location:						21-Apr-17 22:33	Column:	BEH C18		
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers	
PFBS	ND	3.19	9.13	18.3		SUR 13C2-PFHxA	90.5	70 - 130		
PFHpA	ND	3.38	9.13	18.3		SUR 13C2-PFDA	84.4	70 - 130		
PFHxS	ND	3.16	9.13	18.3						
PFOA	ND	4.14	9.13	18.3						
PFNA	ND	5.79	9.13	18.3						
PFOS	ND	2.78	9.13	18.3						

DL - Detection limit

RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit

Results reported to DL.

When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.

Only the linear isomer is reported for all other analytes.

**Sample ID: FRB-07-20170417**

**EPA Method 537**

Client Data		Sample Data			Laboratory Data					
Name:	Tetra Tech	Matrix:	Blank Water		Lab Sample:	1700466-08	Date Received:	19-Apr-2017 9:04		
Project:	NAWC Trenton, NJ	Sample Size:	0.287 L		QC Batch:	B7D0096	Date Extracted:	20-Apr-2017 9:29		
Date Collected:	17-Apr-2017 14:05				Date Analyzed:	20-Apr-17 21:57	Column:	BEH C18		
Location:						21-Apr-17 23:10	Column:	BEH C18		
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers	
PFBS	ND	3.04	8.72	17.4		SUR 13C2-PFHxA	93.0	70 - 130		
PFHpA	ND	3.23	8.72	17.4		SUR 13C2-PFDA	84.9	70 - 130		
PFHxS	ND	3.02	8.72	17.4						
PFOA	ND	3.96	8.72	17.4						
PFNA	ND	5.53	8.72	17.4						
PFOS	ND	2.66	8.72	17.4						

DL - Detection limit  
 RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit  
 Results reported to DL.  
 When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.  
 Only the linear isomer is reported for all other analytes.



**Sample ID: RW03-20170417** **EPA Method 537**

<b>Client Data</b> Name: Tetra Tech Project: NAWC Trenton, NJ Date Collected: 17-Apr-2017 17:45 Location:	<b>Sample Data</b> Matrix: Drinking Water Sample Size: 0.281 L	<b>Laboratory Data</b> Lab Sample: 1700466-09      Date Received: 19-Apr-2017 9:04 QC Batch: B7D0096      Date Extracted: 20-Apr-2017 9:29 Date Analyzed: 20-Apr-17 22:10 Column: BEH C18 21-Apr-17 23:23 Column: BEH C18
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Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	4.17	3.11	8.90	17.8	J	SUR 13C2-PFHxA	100	70 - 130	
PFHpA	ND	3.29	8.90	17.8		SUR 13C2-PFDA	94.7	70 - 130	
PFHxS	ND	3.08	8.90	17.8					
PFOA	6.73	4.04	8.90	17.8	J				
PFNA	ND	5.64	8.90	17.8					
PFOS	5.58	2.71	8.90	17.8	J				

DL - Detection limit  
RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit  
Results reported to DL.  
When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.  
Only the linear isomer is reported for all other analytes.

**Sample ID: FRB-03-20170417** **EPA Method 537**

<b>Client Data</b> Name: Tetra Tech Project: NAWC Trenton, NJ Date Collected: 17-Apr-2017 17:40 Location:	<b>Sample Data</b> Matrix: Blank Water Sample Size: 0.278 L	<b>Laboratory Data</b> Lab Sample: 1700466-10      Date Received: 19-Apr-2017 9:04 QC Batch: B7D0096      Date Extracted: 20-Apr-2017 9:29 Date Analyzed: 20-Apr-17 22:34 Column: BEH C18 21-Apr-17 23:48 Column: BEH C18
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Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	3.13	8.98	18.0		SUR 13C2-PFHxA	94.1	70 - 130	
PFHpA	ND	3.32	8.98	18.0		SUR 13C2-PFDA	81.9	70 - 130	
PFHxS	ND	3.11	8.98	18.0					
PFOA	ND	4.08	8.98	18.0					
PFNA	ND	5.69	8.98	18.0					
PFOS	ND	2.74	8.98	18.0					

DL - Detection limit  
RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit  
Results reported to DL.  
When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.  
Only the linear isomer is reported for all other analytes.

**Sample ID: RW16-20170417** **EPA Method 537**

<b>Client Data</b> Name: Tetra Tech Project: NAWC Trenton, NJ Date Collected: 17-Apr-2017 18:25 Location:	<b>Sample Data</b> Matrix: Drinking Water Sample Size: 0.289 L	<b>Laboratory Data</b> Lab Sample: 1700466-11      Date Received: 19-Apr-2017 9:04 QC Batch: B7D0096      Date Extracted: 20-Apr-2017 9:29 Date Analyzed: 20-Apr-17 22:47 Column: BEH C18 22-Apr-17 00:00 Column: BEH C18
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Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	3.02	8.65	17.3		SUR 13C2-PFHxA	91.3	70 - 130	
PFHpA	ND	3.20	8.65	17.3		SUR 13C2-PFDA	82.4	70 - 130	
PFHxS	ND	2.99	8.65	17.3					
PFOA	10.3	3.93	8.65	17.3	J				
PFNA	ND	5.48	8.65	17.3					
PFOS	ND	2.64	8.65	17.3					

DL - Detection limit  
RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit  
Results reported to DL.  
When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.  
Only the linear isomer is reported for all other analytes.

**Sample ID: FRB-16-20170417**

**EPA Method 537**

Client Data		Sample Data		Laboratory Data			
Name:	Tetra Tech	Matrix:	Blank Water	Lab Sample:	1700466-12	Date Received:	19-Apr-2017 9:04
Project:	NAWC Trenton, NJ	Sample Size:	0.281 L	QC Batch:	B7D0096	Date Extracted:	20-Apr-2017 9:29
Date Collected:	17-Apr-2017 18:20			Date Analyzed:	20-Apr-17 22:59	Column:	BEH C18
Location:					22-Apr-17 00:12	Column:	BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	3.11	8.91	17.8		SUR 13C2-PFHxA	94.0	70 - 130	
PFHpA	ND	3.30	8.91	17.8		SUR 13C2-PFDA	82.7	70 - 130	
PFHxS	ND	3.08	8.91	17.8					
PFOA	ND	4.05	8.91	17.8					
PFNA	ND	5.65	8.91	17.8					
PFOS	ND	2.72	8.91	17.8					

DL - Detection limit  
 RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit  
 Results reported to DL.  
 When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.  
 Only the linear isomer is reported for all other analytes.

**Sample ID: RW14-20170418** **EPA Method 537**

<b>Client Data</b>		<b>Sample Data</b>		<b>Laboratory Data</b>			
Name:	Tetra Tech	Matrix:	Drinking Water	Lab Sample:	1700466-13	Date Received:	19-Apr-2017 9:04
Project:	NAWC Trenton, NJ	Sample Size:	0.284 L	QC Batch:	B7D0096	Date Extracted:	20-Apr-2017 9:29
Date Collected:	18-Apr-2017 9:20			Date Analyzed:	20-Apr-17 23:12	Column:	BEH C18
Location:					22-Apr-17 00:25	Column:	BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	48.1	3.07	8.80	17.6		SUR 13C2-PFHxA	93.8	70 - 130	
PFHpA	3.70	3.26	8.80	17.6	J	SUR 13C2-PFDA	83.4	70 - 130	
PFHxS	3.54	3.05	8.80	17.6	J				
PFOA	13.5	4.00	8.80	17.6	J				
PFNA	ND	5.58	8.80	17.6					
PFOS	12.5	2.69	8.80	17.6	J				

DL - Detection limit  
 RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit  
 Results reported to DL.  
 When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.  
 Only the linear isomer is reported for all other analytes.

**Sample ID: FRB-14-20170418**

**EPA Method 537**

Client Data		Sample Data			Laboratory Data				
Name:	Tetra Tech	Matrix:	Blank Water		Lab Sample:	1700466-14	Date Received:	19-Apr-2017 9:04	
Project:	NAWC Trenton, NJ	Sample Size:	0.279 L		QC Batch:	B7D0096	Date Extracted:	20-Apr-2017 9:29	
Date Collected:	18-Apr-2017 9:10				Date Analyzed:	20-Apr-17 23:24	Column:	BEH C18	
Location:						22-Apr-17 11:50	Column:	BEH C18	

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	3.12	8.95	17.9		SUR 13C2-PFHxA	95.8	70 - 130	
PFHpA	ND	3.31	8.95	17.9		SUR 13C2-PFDA	82.7	70 - 130	
PFHxS	ND	3.10	8.95	17.9					
PFOA	ND	4.06	8.95	17.9					
PFNA	ND	5.67	8.95	17.9					
PFOS	ND	2.73	8.95	17.9					

DL - Detection limit  
 RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit  
 Results reported to DL.  
 When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.  
 Only the linear isomer is reported for all other analytes.

**Sample ID: RW20-20170418** **EPA Method 537**

<b>Client Data</b>	<b>Sample Data</b>	<b>Laboratory Data</b>
Name: Tetra Tech	Matrix: Drinking Water	Lab Sample: 1700466-15      Date Received: 19-Apr-2017 9:04
Project: NAWC Trenton, NJ	Sample Size: 0.288 L	QC Batch: B7D0096      Date Extracted: 20-Apr-2017 9:29
Date Collected: 18-Apr-2017 10:25		Date Analyzed: 20-Apr-17 23:37 Column: BEH C18
Location:		22-Apr-17 12:02 Column: BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	6.45	3.03	8.68	17.4	J	SUR 13C2-PFHxA	81.5	70 - 130	
PFHpA	ND	3.21	8.68	17.4		SUR 13C2-PFDA	77.4	70 - 130	
PFHxS	3.93	3.00	8.68	17.4	J				
PFOA	11.9	3.94	8.68	17.4	J				
PFNA	ND	5.51	8.68	17.4					
PFOS	6.01	2.65	8.68	17.4	J				

DL - Detection limit  
 RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit  
 Results reported to DL.  
 When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.  
 Only the linear isomer is reported for all other analytes.

**Sample ID: FRB-20-20170418** **EPA Method 537**

<b>Client Data</b> Name: Tetra Tech Project: NAWC Trenton, NJ Date Collected: 18-Apr-2017 10:20 Location:	<b>Sample Data</b> Matrix: Blank Water Sample Size: 0.282 L	<b>Laboratory Data</b> Lab Sample: 1700466-16      Date Received: 19-Apr-2017 9:04 QC Batch: B7D0096      Date Extracted: 20-Apr-2017 9:29 Date Analyzed: 20-Apr-17 23:49 Column: BEH C18 22-Apr-17 12:15 Column: BEH C18
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Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	3.09	8.86	17.7		SUR 13C2-PFHxA	86.6	70 - 130	
PFHpA	ND	3.28	8.86	17.7		SUR 13C2-PFDA	74.7	70 - 130	
PFHxS	ND	3.06	8.86	17.7					
PFOA	ND	4.02	8.86	17.7					
PFNA	ND	5.61	8.86	17.7					
PFOS	ND	2.70	8.86	17.7					

DL - Detection limit  
RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit  
Results reported to DL.  
When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.  
Only the linear isomer is reported for all other analytes.



**Sample ID: RW06-20170418** **EPA Method 537**

<b>Client Data</b> Name: Tetra Tech Project: NAWC Trenton, NJ Date Collected: 18-Apr-2017 11:05 Location:	<b>Sample Data</b> Matrix: Drinking Water Sample Size: 0.280 L	<b>Laboratory Data</b> Lab Sample: 1700466-17      Date Received: 19-Apr-2017 9:04 QC Batch: B7D0096      Date Extracted: 20-Apr-2017 9:29 Date Analyzed: 21-Apr-17 00:01 Column: BEH C18 22-Apr-17 12:28 Column: BEH C18
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Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	3.11	8.92	17.8		SUR 13C2-PFHxA	91.6	70 - 130	
PFHpA	ND	3.30	8.92	17.8		SUR 13C2-PFDA	80.4	70 - 130	
PFHxS	ND	3.09	8.92	17.8					
PFOA	6.91	4.05	8.92	17.8	J				
PFNA	ND	5.66	8.92	17.8					
PFOS	ND	2.72	8.92	17.8					

DL - Detection limit  
RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit  
Results reported to DL.  
When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.  
Only the linear isomer is reported for all other analytes.

**Sample ID: FRB-06-20170418**

**EPA Method 537**

Client Data		Sample Data		Laboratory Data					
Name:	Tetra Tech	Matrix:	Blank Water	Lab Sample:	1700466-18	Date Received:	19-Apr-2017 9:04		
Project:	NAWC Trenton, NJ	Sample Size:	0.283 L	QC Batch:	B7D0096	Date Extracted:	20-Apr-2017 9:29		
Date Collected:	18-Apr-2017 10:55			Date Analyzed:	21-Apr-17 00:14	Column:	BEH C18		
Location:					22-Apr-17 12:40	Column:	BEH C18		
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	3.08	8.83	17.7		SUR 13C2-PFHxA	91.1	70 - 130	
PFHpA	ND	3.27	8.83	17.7		SUR 13C2-PFDA	81.0	70 - 130	
PFHxS	ND	3.06	8.83	17.7					
PFOA	ND	4.01	8.83	17.7					
PFNA	ND	5.60	8.83	17.7					
PFOS	ND	2.69	8.83	17.7					

DL - Detection limit

RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit

Results reported to DL.

When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.

Only the linear isomer is reported for all other analytes.

**Sample ID: RW01-20170418** **EPA Method 537**

<b>Client Data</b> Name: Tetra Tech Project: NAWC Trenton, NJ Date Collected: 18-Apr-2017 13:05 Location:	<b>Sample Data</b> Matrix: Drinking Water Sample Size: 0.275 L	<b>Laboratory Data</b> Lab Sample: 1700466-19      Date Received: 19-Apr-2017 9:04 QC Batch: B7D0096      Date Extracted: 20-Apr-2017 9:29 Date Analyzed: 21-Apr-17 00:26 Column: BEH C18 22-Apr-17 12:53 Column: BEH C18
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Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	3.17	9.09	18.2		SUR 13C2-PFHxA	89.1	70 - 130	
PFHpA	ND	3.36	9.09	18.2		SUR 13C2-PFDA	85.1	70 - 130	
PFHxS	ND	3.15	9.09	18.2					
PFOA	ND	4.13	9.09	18.2					
PFNA	ND	5.76	9.09	18.2					
PFOS	ND	2.77	9.09	18.2					

DL - Detection limit  
RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit  
Results reported to DL.  
When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.  
Only the linear isomer is reported for all other analytes.

**Sample ID: FRB-01-20170418**

**EPA Method 537**

Client Data		Sample Data		Laboratory Data					
Name:	Tetra Tech	Matrix:	Blank Water	Lab Sample:	1700466-20	Date Received:	19-Apr-2017 9:04		
Project:	NAWC Trenton, NJ	Sample Size:	0.277 L	QC Batch:	B7D0096	Date Extracted:	20-Apr-2017 9:29		
Date Collected:	18-Apr-2017 13:00			Date Analyzed:	21-Apr-17 00:38	Column:	BEH C18		
Location:					22-Apr-17 13:05	Column:	BEH C18		
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	3.96	3.15	9.02	18.0	J	SUR 13C2-PFHxA	96.9	70 - 130	
PFHpA	ND	3.34	9.02	18.0		SUR 13C2-PFDA	80.8	70 - 130	
PFHxS	7.18	3.12	9.02	18.0	J				
PFOA	9.19	4.09	9.02	18.0	J				
PFNA	ND	5.72	9.02	18.0					
PFOS	10.4	2.75	9.02	18.0	J				

DL - Detection limit

RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit

Results reported to DL.

When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.

Only the linear isomer is reported for all other analytes.

**Sample ID: RW07-20170417**

**EPA Method 537**

Client Data		Sample Data		Laboratory Data			
Name:	Tetra Tech	Matrix:	Drinking Water	Lab Sample:	1700466-07	Date Received:	19-Apr-2017 9:04
Project:	NAWC Trenton, NJ	Sample Size:	0.268 L	QC Batch:	B7D0096	Date Extracted:	20-Apr-2017 9:29
Date Collected:	17-Apr-2017 14:10			Date Analyzed:	20-Apr-17 21:32	Column:	BEH C18
Location:					21-Apr-17 22:46	Column:	BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	3.26	9.35	18.7		SUR 13C2-PFHxA	97.6	70 - 130	
PFHpA	ND	3.46	9.35	18.7		SUR 13C2-PFDA	83.0	70 - 130	
PFHxS	ND	3.23	9.35	18.7					
PFOA	7.77	4.24	9.35	18.7	J				
PFNA	ND	5.93	9.35	18.7					
PFOS	3.99	2.85	9.35	18.7	J				

DL - Detection limit  
 RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit  
 Results reported to DL.  
 When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.  
 Only the linear isomer is reported for all other analytes.

**Appendix C**

Support Documentation





# CHAIN OF CUSTODY

**For Laboratory Use Only**  
 Laboratory Project ID: 1700466 Temp: \_\_\_\_\_ °C  
 Storage ID: \_\_\_\_\_ Storage Secured: Yes  No

Project ID: NAWC Trenton P.O.#: 1135710 Sampler: Charles Meyer  
 (name)

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

Invoice to: Name Accounts Payable Company Tetra Tech Address 661 Andersen Drive City Foster Plaza 7 State Pittsburgh Ph# \_\_\_\_\_ Fax# PA 15226

Relinquished by (printed name and signature) Charles Meyer Date 4/18/17 Time 13:00 Received by (printed name and signature) Bettina Benedict Date 04/19/17 Time 0907

Relinquished by (printed name and signature) \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_ Received by (printed name and signature) \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_

SHIP TO: Vista Analytical Laboratory  
 1104 Windfield Way  
 El Dorado Hills, CA 95762  
 (916) 673-1520 \* Fax (916) 673-0106  
 Method of Shipment: Fed Ex  
 Tracking No.: 8109 8153 9152  
 ATTN: Sample Custodian

Add Analysis(es) Requested			Container(s)		EPA 1613		EPA 8290		EPA 8280		EPA 1668		EPA 1614		CARB-129		UCMR 3 LIST	
Quantity	Type	Matrix	2378-TcDD	2378-TcDD/TCDF	PCDD/PCDF	2378-TcDD	2378-TcDD/TCDF	PCDD/PCDF	2378-TcDD	2378-TcDD/TCDF	TOTALS	COPLANAR PCB's	209 CONGENERS	PBDE	PAH	WHO-29	MMA	EPA 537

Sample ID	Date	Time	Location/Sample Description	Quantity	Type	Matrix	2378-TcDD	2378-TcDD/TCDF	PCDD/PCDF	2378-TcDD	2378-TcDD/TCDF	PCDD/PCDF	2378-TcDD	2378-TcDD/TCDF	TOTALS	COPLANAR PCB's	209 CONGENERS	PBDE	PAH	WHO-29	MMA	EPA 537	Comments		
RW16-20170417	4/17/17	18:25	Pressure Tank	2	P	DW																			
FRB-16-20170417	4/17/17	18:20	Pump Room	2	P	Bik																			
RW14-20170418	4/18/17	09:20	Pressure Tank	2	P	DW																			
FRB-14-20170418	4/18/17	09:10	Pump Room	2	P	Bik																			
RW20-20170418	4/18/17	10:25	Pressure Tank	2	P	DW																			
FRB-20-20170418	4/18/17	10:20	Pump Room	2	P	Bik																			
RW06-20170418	4/18/17	11:05	Pressure Tank	2	P	DW																			
FRB-06-20170418	4/18/17	10:55	Pump Room	2	P	Bik																			
RW01-20170418	4/18/17	13:05	Pressure Tank	2	P	DW																			
FRB-01-20170418	4/18/17	13:00	Pump Room	2	P	Bik																			

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

SEND DOCUMENTATION AND RESULTS TO:

Name: Mary Mang  
 Company: Tetra Tech  
 Address: 234 Mall Boulevard Suite 260  
 City: King of Prussia State: PA Zip: 19406  
 Phone: 610 392 1124 Fax: 610 491 9645  
 Email: mary.mang@tetra.tech.com

Container Types: A = 1 Liter Amber, G = Glass Jar  
 P = HDPE, O = Other: \_\_\_\_\_

Bottle Preservation Type: T = Thiosulfate,  
 TZ = Trizma: 20 bottles

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: \_\_\_\_\_



**SDG Number WE08**

**Vista Work Order No. 1700466**

**Case Narrative**

**Sample Condition on Receipt:**

Ten drinking water samples and ten blank 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 drinking water samples were extracted and analyzed for the UCMR list of six 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.

A Laboratory Fortified Blank (LFB) and Laboratory Reagent Blank (LRB) were extracted and analyzed with the preparation batch. No analytes were detected in the LRB 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.

A Laboratory Duplicate was prepared and analyzed using sample "RW07-20170417". A Laboratory Fortified Sample Matrix (LFSM) was prepared and analyzed using sample "RW03-20170417".

Dataset: U:\G1.PRO\Results\2017\170421G3\170421G3-33.qld

Last Altered: Monday, April 24, 2017 13:55:38 Pacific Daylight Time

Printed: Monday, April 24, 2017 13:56:18 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

ID: 1700466-13 RW14-20170418 0.25, Description: RW14-20170418, Name: 170421G3\_33, Date: 22-Apr-2017, Time: 00:25:18

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	4 PFOA	413 > 368.7	2.107e3	7.084e3		0.283	4.23	13.5	
2	7 13C2-PFHxA	315.0 > 269.8	2.902e3	7.084e3	0.449	0.283	3.30	32.2	91.3
3	8 13C2-PFDA	515.1 > 469.9	4.487e3	7.084e3	0.803	0.283	4.86	27.8	78.9
4	9 13C2-PFOA	414.9 > 369.7	7.084e3	7.084e3	1.000	0.283	4.22	35.3	100

Example Calculation for PFOA for Sample RW14-20170418

$$(2107 / 7084) * (35.3 / 0.78) = 13.5$$

**Sample ID: LRB****EPA Method 537**Matrix: Drinking Water  
Sample Size: 0.250 LQC Batch: B7D0096  
Date Extracted: 20-Apr-2017 9:29Lab Sample: B7D0096-BLK1  
Date Analyzed: 20-Apr-17 20:06 Column: BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	3.49	10.0	20.0		SUR 13C2-PFHxA	89.0	70 - 130	
PFHpA	ND	3.70	10.0	20.0		SUR 13C2-PFDA	82.4	70 - 130	
PFHxS	ND	3.46	10.0	20.0					
PFOA	ND	4.54	10.0	20.0					
PFNA	ND	6.34	10.0	20.0					
PFOS	ND	3.05	10.0	20.0					

DL - Detection limit

RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit

Results reported to DL.

When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.

Only the linear isomer is reported for all other analytes.

**Sample ID: LFB****EPA Method 537**

Matrix: Drinking Water Sample Size: 0.250 L	QC Batch: B7D0096 Date Extracted: 20-Apr-2017 9:29	Lab Sample: B7D0096-BS1 Date Analyzed: 20-Apr-17 19:41 Column: BEH C18					
Analyte	Amt Found (ng/L)	Spike Amt	%R	Limits	Labeled Standard	%R	LCL-UCL
PFBS	67.0	70.8	94.6	70 - 130	SUR 13C2-PFHxA	93.5	70 - 130
PFHpA	78.9	80.0	98.6	70 - 130	SUR 13C2-PFDA	89.6	70 - 130
PFHxS	67.4	72.8	92.6	70 - 130			
PFOA	79.3	80.0	99.1	70 - 130			
PFNA	79.7	80.0	99.7	70 - 130			
PFOS	71.3	74.0	96.4	70 - 130			

LCL-UCL - Lower control limit - upper control limit

Sample ID: Duplicate						EPA Method 537			
Source Client ID: RW07-20170417			QC Batch: B7D0096			Lab Sample: B7D0096-DUP1			
Source LabNumber: 1700466-07			Date Extracted: 20-Apr-2017 9:29			Date Analyzed: 20-Apr-17 21:45 Column: BEH C18			
Matrix: Drinking Water						21-Apr-17 22:58 Column: BEH C18			
Sample Size: 0.278 L									
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	3.14	9.00	18.0		SUR 13C2-PFHxA	88.0	70-130	
PFHpA	ND	3.33	9.00	18.0		SUR 13C2-PFDA	82.9	70-130	
PFHxS	ND	3.11	9.00	18.0					
PFOA	8.51	4.09	9.00	18.0	J				
PFNA	ND	5.71	9.00	18.0					
PFOS	4.02	2.74	9.00	18.0	J				

DL - Detection limit  
 RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit  
 Results reported to the DL when reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

<b>Sample ID: Duplicate</b>					<b>EPA Method 537</b>			
Source Client ID: RW07-20170417					Duplicate Lab Sample: B7D0096-DUP1			
Source LabNumber: 1700466-07								
Matrix: Drinking Water								
<b>Analyte</b>	<b>Dup Conc. (ng/L)</b>	<b>Source Conc.</b>	<b>RPD</b>	<b>RPD Limit</b>	<b>Labeled Standard</b>	<b>Dup %R</b>	<b>Source %R</b>	<b>LCL-UCL</b>
PFBS	ND	ND	NA	30	SUI13C2-PFHxA	88.0	97.6	70 - 130
PFHpA	ND	ND	NA	30	SUI13C2-PFDA	82.9	83.0	70 - 130
PFHxS	ND	ND	NA	30				
PFOA	8.51	7.77	9.16	30				
PFNA	ND	ND	NA	30				
PFOS	4.02	3.99	0.722	30				

LCL-UCL - Lower control limit - upper control limit.

# - Result could not be calculated due to one or more non-detected analytes.

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

Batch: B7D0096

Matrix: Drinking Water

LabNumber	WetWeight (Initial)	% Solids (Extraction Solids)	DryWeight	Final	Extracted	Ext By	Spike	SpikeAmount	ClientMatrix	Analysis
1700466-01	0.27464	NA	NA	1000	20-Apr-17 09:29	BAP			Drinking Water	537 PFAS DW DoD Unm
1700466-02	0.28813	/	/	1000	20-Apr-17 09:29	BAP			Drinking Water	537 PFAS DW DoD Unm
1700466-03	0.27586	/	/	1000	20-Apr-17 09:29	BAP			Drinking Water	537 PFAS DW DoD Unm
1700466-04	0.27706	/	/	1000	20-Apr-17 09:29	BAP			Drinking Water	537 PFAS DW DoD Unm
1700466-05	0.2777	/	/	1000	20-Apr-17 09:29	BAP			Drinking Water	537 PFAS DW DoD Unm
1700466-06	0.27394	/	/	1000	20-Apr-17 09:29	BAP			Drinking Water	537 PFAS DW DoD Unm
1700466-07	0.26751	/	/	1000	20-Apr-17 09:29	BAP			Drinking Water	537 PFAS DW DoD Unm
1700466-08	0.28678	/	/	1000	20-Apr-17 09:29	BAP			Drinking Water	537 PFAS DW DoD Unm
1700466-09	0.28093	/	/	1000	20-Apr-17 09:29	BAP			Drinking Water	537 PFAS DW DoD Unm
1700466-10	0.27835	/	/	1000	20-Apr-17 09:29	BAP			Drinking Water	537 PFAS DW DoD Unm
1700466-11	0.28913	/	/	1000	20-Apr-17 09:29	BAP			Drinking Water	537 PFAS DW DoD Unm
1700466-12	0.28055	/	/	1000	20-Apr-17 09:29	BAP			Drinking Water	537 PFAS DW DoD Unm
1700466-13	0.28397	/	/	1000	20-Apr-17 09:29	BAP			Drinking Water	537 PFAS DW DoD Unm
1700466-14	0.27946	/	/	1000	20-Apr-17 09:29	BAP			Drinking Water	537 PFAS DW DoD Unm
1700466-15	0.28787	/	/	1000	20-Apr-17 09:29	BAP			Drinking Water	537 PFAS DW DoD Unm
1700466-16	0.28231	/	/	1000	20-Apr-17 09:29	BAP			Drinking Water	537 PFAS DW DoD Unm
1700466-17	0.28012	/	/	1000	20-Apr-17 09:29	BAP			Drinking Water	537 PFAS DW DoD Unm
1700466-18	0.28301	/	/	1000	20-Apr-17 09:29	BAP			Drinking Water	537 PFAS DW DoD Unm
1700466-19	0.27495	/	/	1000	20-Apr-17 09:29	BAP			Drinking Water	537 PFAS DW DoD Unm
1700466-20	0.27731	/	/	1000	20-Apr-17 09:29	BAP			Drinking Water	537 PFAS DW DoD Unm
B7D0096-BLK1	0.25	/	/	1000	20-Apr-17 09:29	BAP				QC
B7D0096-BS1	0.25	/	/	1000	20-Apr-17 09:29	BAP	17D1705/	20 /		QC
B7D0096-DUP1	0.2778	/	/	1000	20-Apr-17 09:29	BAP				QC
B7D0096-MS1	0.27836	/	/	1000	20-Apr-17 09:29	BAP	17D1705/	20 /		QC

BP 4.21.17

PREPARATION BENCH SHEET

Matrix: Drinking Water

Method: 537 PFAS DW DoD Unmodified

B7D0096

Chemist: BP

Prep Date/Time: 20-Apr-17 09:29

Prepared using: LCMS - SPE Extraction-LCMS

C	VISTA Sample ID	Bottle + Sample (g)	Bottle Only (g)	Sample Amt. (L)	NS/NIS CHEM/WIT DATE	SPE	RS CHEM/WIT DATE
<input type="checkbox"/>	B7D0096-BLK1 <sup>Ⓟ</sup>	N/A	N/A	(0.250)	BP HC 4.20.17	BP HC 4.20.17	BP HC 4.20.17
<input type="checkbox"/>	B7D0096-BS1 <sup>Ⓟ</sup>	↓	↓	↓			
<input type="checkbox"/>	B7D0096-DUP1 1700466-07	304.98	27.18	0.2779 //			
<input type="checkbox"/>	B7D0096-MS1 1700466-09	305.21	26.85	0.27836 //			
<input type="checkbox"/>	1700466-01	301.16	26.52	0.27464 //			
<input type="checkbox"/>	1700466-02	315.51	27.38	0.28813 //			
<input type="checkbox"/>	1700466-03	303.04	27.18	0.27586 //			
<input type="checkbox"/>	1700466-04	313.73	26.87	0.27706 //			
<input type="checkbox"/>	1700466-05	304.53	26.83	0.2777 //			
<input type="checkbox"/>	1700466-06	301.66	27.72	0.27394 //			
<input type="checkbox"/>	1700466-07	295.14	27.89 <sup>HC 4/20/17</sup>	0.26751 //			
<input type="checkbox"/>	1700466-08	304.98 <sup>BP 4/20/17</sup> 314.65	27.87	0.28678 //			
<input type="checkbox"/>	1700466-09	307.96	27.03	0.28093 //			
<input type="checkbox"/>	1700466-10	305.44	27.09	0.27835 //			
<input type="checkbox"/>	1700466-11	315.84	26.71	0.28913 //			
<input type="checkbox"/>	1700466-12	306.93	26.38	0.28055 //			

NS Name <u>1701704, SOL</u> <sup>Ⓟ</sup>	NS Name <u>1701705, 20ul</u> <sup>Ⓟ</sup>	RS Name <u>1701706, SOL</u> <sup>Ⓟ</sup>	SPE Chem: <u>Strata X 33um 500mg/6ul</u>	Check Out: <u>HC 4/20/17</u> Chemist/Date:
			Ele SOLV: <u>MeOH</u>	Check In: <u>NA</u> Chemist/Date:
			Final Volume(s) <u>1ml</u>	Balance ID: <u>HPMSR</u>

Comments: Assume 1 g = 1 mL

Ⓟ Triina added to OE's 0.625g HC 4/20/17



PREPARATION BENCH SHEET

Matrix: Drinking Water

Method: 537 PFAS DW DoD Unmodified

B7D0096

Chemist: BP

Prep Date/Time: 20-Apr-17 09:29

Prepared using: LCMS - SPE Extraction-LCMS

C	VISTA Sample ID	Bottle + Sample (g)	Bottle Only (g)	Sample Amt. (L)	IS/NS CHEM/WIT DATE	SPE	RS CHEM/WIT DATE
<input type="checkbox"/>	1700466-13	310.90	27.43	0.28397 //	BP HC 4-20-17	BP HC 4-20-17	BP 4-20-17
<input type="checkbox"/>	1700466-14	305.89	26.43	0.27946 //			
<input type="checkbox"/>	1700466-15 (A)	<del>309.34</del> 315.15	27.28	0.28787 //			
<input type="checkbox"/>	1700466-16	309.39	27.08	0.28231 //			
<input type="checkbox"/>	1700466-17	306.88	26.76	0.28012 //			
<input type="checkbox"/>	1700466-18	311.03	28.02	0.28301 /			
<input type="checkbox"/>	1700466-19	302.04	27.09	0.27495 //			
<input type="checkbox"/>	1700466-20	304.95	27.64	0.27731 /			

(A) Centrifuged sample to remove particulate BP 4-20-17

IS Name 1701704, SOL	NS Name 1701705, SOL	RS Name 1701706, SOL	SPE Chem: strata x33um scany/6ml	Check Out: HC 4/20/17
(S)	(V3)	(S)	Ele SOLV: MeOH	Check In: MA
			Final Volume(s): 1ml	Balance ID: HRMS-8

Comments: Assume 1 g = 1 mL

Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-CRV.qld

Last Altered: Friday, April 21, 2017 10:28:44 Pacific Daylight Time  
 Printed: Friday, April 21, 2017 10:37:08 Pacific Daylight Time

Method: U:\G1.PRO\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59  
 Calibration: U:\G1.PRO\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

Compound name: PFBS  
 Coefficient of Determination:  $R^2 = 0.999454$   
 Calibration curve:  $-0.00214273 * x^2 + 0.921483 * x$   
 Response type: Internal Std ( Ref 10 ), Area \* ( IS Conc. / IS Area )  
 Curve type: 2nd Order, Origin: Force, Weighting: 1/x, Axis trans: None

*DM*  
*4/21/17*

#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 170420G1_3	0.885	2.91	3.00e2	1.07e4	0.877	-0.9	0.912
2	2 170420G1_4	1.77	2.89	5.59e2	1.05e4	1.67	-5.9	0.864
3	3 170420G1_5	4.42	2.89	1.52e3	1.11e4	4.29	-2.9	0.886
4	4 170420G1_6	8.85	2.89	2.99e3	1.03e4	9.26	4.7	0.944
5	5 170420G1_7	13.3	2.88	4.36e3	1.07e4	13.1	-1.4	0.881
6	6 170420G1_8	17.7	2.89	5.52e3	9.94e3	18.0	1.9	0.900
7	7 170420G1_9	22.1	2.89	6.37e3	9.61e3	21.7	-1.6	0.861
8	8 170420G1_10	44.2	2.89	1.32e4	1.03e4	44.2	0.1	0.827
9	9 170420G1_11	97.2	2.89	2.36e4	8.80e3	114	17.0	0.793

*AC*  
*4/21/17*

*(A) Excluded*

Compound name: PFHpA  
 Coefficient of Determination:  $R^2 = 0.999320$   
 Calibration curve:  $-0.0012775 * x^2 + 0.897966 * x$   
 Response type: Internal Std ( Ref 9 ), Area \* ( IS Conc. / IS Area )  
 Curve type: 2nd Order, Origin: Force, Weighting: 1/x, Axis trans: None

#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 170420G1_3	1.00	3.80	6.69e2	7.58e3	0.985	-1.5	0.883
2	2 170420G1_4	2.00	3.78	1.32e3	7.48e3	1.96	-1.8	0.879
3	3 170420G1_5	5.00	3.78	3.37e3	7.49e3	5.05	1.0	0.901
4	4 170420G1_6	10.0	3.78	6.90e3	7.22e3	10.8	8.1	0.956
5	5 170420G1_7	15.0	3.78	9.65e3	7.42e3	14.8	-1.4	0.867
6	6 170420G1_8	20.0	3.79	1.25e4	7.06e3	20.3	1.5	0.885
7	7 170420G1_9	25.0	3.78	1.47e4	6.80e3	24.9	-0.3	0.864
8	8 170420G1_10	50.0	3.78	2.90e4	7.15e3	48.5	-3.1	0.810
9	9 170420G1_11	110	3.78	5.44e4	6.50e3	111	0.7	0.762

Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-CRV.qld

Last Altered: Friday, April 21, 2017 10:28:44 Pacific Daylight Time  
 Printed: Friday, April 21, 2017 10:37:08 Pacific Daylight Time

**Compound name: PFHxS**

Coefficient of Determination: R<sup>2</sup> = 0.998827

Calibration curve: -0.00311585 \* x<sup>2</sup> + 1.06481 \* x

Response type: Internal Std ( Ref 10 ), Area \* ( IS Conc. / IS Area )

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

Ⓐ Excluded

#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 170420G1_3	0.910	3.92	3.44e2	1.07e4	0.873	-4.1	1.02
2	2 170420G1_4	1.82	3.91	6.67e2	1.05e4	1.72	-5.5	1.00
3	3 170420G1_5	4.56	3.90	1.67e3	1.11e4	4.09	-10.2	0.944
4	4 170420G1_6	9.12	3.90	3.55e3	1.03e4	9.60	5.2	1.09
5	5 170420G1_7	13.7	3.91	5.28e3	1.07e4	13.8	1.2	1.03
6	6 170420G1_8	18.2	3.91	6.48e3	9.94e3	18.6	2.1	1.03
7	7 170420G1_9	22.8	3.91	7.50e3	9.61e3	22.5	-1.3	0.982
8	8 170420G1_10	45.6	3.91	1.51e4	1.03e4	45.5	-0.3	0.921
9	9 170420G1_11	100	3.91	2.83e4	8.80e3		Ⓐ	0.921

**Compound name: PFOA**

Coefficient of Determination: R<sup>2</sup> = 0.999188

Calibration curve: -0.00107552 \* x<sup>2</sup> + 0.780551 \* x

Response type: Internal Std ( Ref 9 ), Area \* ( IS Conc. / IS Area )

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

#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 170420G1_3	1.00	4.21	6.48e2	7.58e3	1.10	9.8	0.856
2	2 170420G1_4	2.00	4.20	1.01e3	7.48e3	1.73	-13.5	0.673
3	3 170420G1_5	5.00	4.20	3.07e3	7.49e3	5.28	5.6	0.818
4	4 170420G1_6	10.0	4.20	5.90e3	7.22e3	10.6	6.3	0.818
5	5 170420G1_7	15.0	4.20	8.49e3	7.42e3	15.0	-0.3	0.762
6	6 170420G1_8	20.0	4.21	1.09e4	7.06e3	20.3	1.5	0.770
7	7 170420G1_9	25.0	4.20	1.24e4	6.80e3	24.3	-2.9	0.732
8	8 170420G1_10	50.0	4.20	2.57e4	7.15e3	49.3	-1.3	0.718
9	9 170420G1_11	110	4.20	4.75e4	6.50e3	110	0.4	0.664

Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-CRV.qld

Last Altered: Friday, April 21, 2017 10:28:44 Pacific Daylight Time  
 Printed: Friday, April 21, 2017 10:37:08 Pacific Daylight Time

**Compound name: PFOS**

Coefficient of Determination:  $R^2 = 0.994127$

Calibration curve:  $-0.00117183 * x^2 + 0.3509 * x$

Response type: Internal Std ( Ref 10 ), Area \* ( IS Conc. / IS Area )

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

Ⓐ Excluded.

#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 170420G1_3	0.930	4.62	6.68e1	1.07e4	0.513	-44.8	0.193
2	2 170420G1_4	1.86	4.60	2.40e2	1.05e4	1.88	1.3	0.353
3	3 170420G1_5	4.64	4.60	5.15e2	1.11e4	3.84	-17.2	0.287
4	4 170420G1_6	9.26	4.61	1.15e3	1.03e4	9.50	2.6	0.348
5	5 170420G1_7	13.9	4.61	1.74e3	1.07e4	13.9	-0.0	0.334
6	6 170420G1_8	18.6	4.61	2.15e3	9.94e3	18.9	1.5	0.334
7	7 170420G1_9	23.1	4.61	2.69e3	9.61e3	25.0	7.9	0.347
8	8 170420G1_10	46.3	4.61	4.85e3	1.03e4	45.1	-2.5	0.290
9	9 170420G1_11	102	4.61	9.70e3	8.80e3		Ⓐ	0.310

**Compound name: PFNA**

Coefficient of Determination:  $R^2 = 0.999465$

Calibration curve:  $-0.00226354 * x^2 + 1.36399 * x$

Response type: Internal Std ( Ref 9 ), Area \* ( IS Conc. / IS Area )

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

#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 170420G1_3	1.00	4.55	1.02e3	7.58e3	0.986	-1.4	1.34
2	2 170420G1_4	2.00	4.54	2.04e3	7.48e3	2.00	0.1	1.36
3	3 170420G1_5	5.00	4.54	4.84e3	7.49e3	4.78	-4.4	1.29
4	4 170420G1_6	10.0	4.55	1.01e4	7.22e3	10.5	4.5	1.40
5	5 170420G1_7	15.0	4.55	1.48e4	7.42e3	15.0	0.3	1.33
6	6 170420G1_8	20.0	4.55	1.93e4	7.06e3	20.8	4.0	1.37
7	7 170420G1_9	25.0	4.55	2.17e4	6.80e3	24.3	-2.7	1.27
8	8 170420G1_10	50.0	4.55	4.41e4	7.15e3	49.2	-1.6	1.23
9	9 170420G1_11	110	4.55	7.99e4	6.50e3	110	0.4	1.12

Vista Analytical Laboratory Q2

Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-CRV.qld

Last Altered: Friday, April 21, 2017 10:28:44 Pacific Daylight Time

Printed: Friday, April 21, 2017 10:37:08 Pacific Daylight Time

**Compound name: 13C2-PFHxA**

Response Factor: 0.448587

RRF SD: 0.0203778, Relative SD: 4.54266

Response type: Internal Std ( Ref 9 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 170420G1_3	10.0	3.28	3.10e3	7.58e3	9.12	-8.8	0.409
2	2 170420G1_4	10.0	3.27	3.17e3	7.48e3	9.45	-5.5	0.424
3	3 170420G1_5	10.0	3.27	3.36e3	7.49e3	10.0	-0.0	0.448
4	4 170420G1_6	10.0	3.27	3.19e3	7.22e3	9.86	-1.4	0.442
5	5 170420G1_7	10.0	3.27	3.47e3	7.42e3	10.4	4.3	0.468
6	6 170420G1_8	10.0	3.27	3.30e3	7.06e3	10.4	4.1	0.467
7	7 170420G1_9	10.0	3.27	3.14e3	6.80e3	10.3	3.0	0.462
8	8 170420G1_10	10.0	3.27	3.29e3	7.15e3	10.3	2.6	0.460
9	9 170420G1_11	10.0	3.27	2.97e3	6.50e3	10.2	1.8	0.457

**Compound name: 13C2-PFDA**

Response Factor: 0.802798

RRF SD: 0.0243912, Relative SD: 3.03828

Response type: Internal Std ( Ref 9 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 170420G1_3	10.0	4.85	6.25e3	7.58e3	10.3	2.7	0.825
2	2 170420G1_4	10.0	4.84	6.09e3	7.48e3	10.1	1.4	0.814
3	3 170420G1_5	10.0	4.85	5.99e3	7.49e3	9.96	-0.4	0.800
4	4 170420G1_6	10.0	4.85	5.61e3	7.22e3	9.67	-3.3	0.777
5	5 170420G1_7	10.0	4.85	6.18e3	7.42e3	10.4	3.7	0.832
6	6 170420G1_8	10.0	4.85	5.81e3	7.06e3	10.3	2.6	0.824
7	7 170420G1_9	10.0	4.85	5.26e3	6.80e3	9.64	-3.6	0.774
8	8 170420G1_10	10.0	4.85	5.49e3	7.15e3	9.57	-4.3	0.768
9	9 170420G1_11	10.0	4.85	5.28e3	6.50e3	10.1	1.2	0.812

Vista Analytical Laboratory Q2

Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-CRV.qld

Last Altered: Friday, April 21, 2017 10:28:44 Pacific Daylight Time

Printed: Friday, April 21, 2017 10:37:08 Pacific Daylight Time

**Compound name: 13C2-PFOA**

Response Factor: 1

RRF SD: 0, Relative SD: 0

Response type: Internal Std ( Ref 9 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

ⓐ Excluded.

#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 170420G1_3	10.0	4.21	7.58e3	7.58e3	10.0	0.0	1.00
2	2 170420G1_4	10.0	4.20	7.48e3	7.48e3	10.0	0.0	1.00
3	3 170420G1_5	10.0	4.20	7.49e3	7.49e3	10.0	0.0	1.00
4	4 170420G1_6	10.0	4.20	7.22e3	7.22e3	10.0	0.0	1.00
5	5 170420G1_7	10.0	4.20	7.42e3	7.42e3	10.0	0.0	1.00
6	6 170420G1_8	10.0	4.21	7.06e3	7.06e3	10.0	0.0	1.00
7	7 170420G1_9	10.0	4.20	6.80e3	6.80e3	10.0	0.0	1.00
8	8 170420G1_10	10.0	4.20	7.15e3	7.15e3	10.0	0.0	1.00
9	9 170420G1_11	10.0	4.20	6.50e3	6.50e3	10.0	0.0	1.00

**Compound name: 13C4-PFOS**

Response Factor: 1

RRF SD: 4.19625e-017, Relative SD: 4.19625e-015

Response type: Internal Std ( Ref 10 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 170420G1_3	28.7	4.62	1.07e4	1.07e4	28.7	0.0	1.00
2	2 170420G1_4	28.7	4.61	1.05e4	1.05e4	28.7	0.0	1.00
3	3 170420G1_5	28.7	4.61	1.11e4	1.11e4	28.7	0.0	1.00
4	4 170420G1_6	28.7	4.61	1.03e4	1.03e4	28.7	0.0	1.00
5	5 170420G1_7	28.7	4.61	1.07e4	1.07e4	28.7	0.0	1.00
6	6 170420G1_8	28.7	4.61	9.94e3	9.94e3	28.7	-0.0	1.00
7	7 170420G1_9	28.7	4.61	9.61e3	9.61e3	28.7	0.0	1.00
8	8 170420G1_10	28.7	4.61	1.03e4	1.03e4	28.7	0.0	1.00
9	9 170420G1_11	28.7	4.61	8.80e3	8.80e3	28.7	0.0	1.00

ⓐ

Dataset: Untitled

Last Altered: Friday, April 21, 2017 10:41:36 Pacific Daylight Time  
Printed: Friday, April 21, 2017 10:41:56 Pacific Daylight Time

Method: U:\G1.PRO\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59  
Calibration: U:\G1.PRO\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

Compound name: PFBS

	Name	ID	Acq.Date	Acq.Time
1	170420G1_1	IPA	20-Apr-17	16:46:55
2	170420G1_2	ST170420G1-1 PFC CS-3 17D2007	20-Apr-17	16:59:38
3	170420G1_3	ST170420G1-2 PFC CS-2 17D2008	20-Apr-17	17:12:23
4	170420G1_4	ST170420G1-3 PFC CS-1 17D2009	20-Apr-17	17:24:44
5	170420G1_5	ST170420G1-4 PFC CS0 17D2010	20-Apr-17	17:37:07
6	170420G1_6	ST170420G1-5 PFC CS1 17D2011	20-Apr-17	17:49:31
7	170420G1_7	ST170420G1-6 PFC CS2 17D2012	20-Apr-17	18:01:56
8	170420G1_8	ST170420G1-7 PFC CS3 17D2013	20-Apr-17	18:14:20
9	170420G1_9	ST170420G1-8 PFC CS4 17D2014	20-Apr-17	18:26:46
10	170420G1_10	ST170420G1-9 PFC CS5 17D2015	20-Apr-17	18:39:14
11	170420G1_11	ST170420G1-10 PFC CS6 17D2016	20-Apr-17	18:51:40
12	170420G1_12	IPA	20-Apr-17	19:04:03
13	170420G1_13	SS170420G1-1 PFC SSS 17D2017	20-Apr-17	19:16:27
14	170420G1_14	IPA	20-Apr-17	19:28:50
15	170420G1_15	B7D0096-BS1 LFB 0.25	20-Apr-17	19:41:16
16	170420G1_16	IPA	20-Apr-17	19:53:38
17	170420G1_17	B7D0096-BLK1 LRB 0.25	20-Apr-17	20:06:03
18	170420G1_18	1700466-01 RW05-20170417 0.25	20-Apr-17	20:18:28
19	170420G1_19	1700466-02 FRB-05-20170417 0.25	20-Apr-17	20:30:54
20	170420G1_20	1700466-03 RW10-20170417 0.25	20-Apr-17	20:43:19
21	170420G1_21	1700466-04 FRB-10-20170417 0.25	20-Apr-17	20:55:45
22	170420G1_22	1700466-05 RW18-20170417 0.25	20-Apr-17	21:08:07
23	170420G1_23	1700466-06 FRB-18-20170417 0.25	20-Apr-17	21:20:28
24	170420G1_24	1700466-07 RW07-20170417 0.25	20-Apr-17	21:32:51
25	170420G1_25	B7D0096-DUP1 Duplicate 0.25	20-Apr-17	21:45:14
26	170420G1_26	1700466-08 FRB-07-20170417 0.25	20-Apr-17	21:57:38
27	170420G1_27	1700466-09 RW03-20170417 0.25	20-Apr-17	22:10:03
28	170420G1_28	B7D0096-MS1 LFSM 0.25	20-Apr-17	22:22:28
29	170420G1_29	1700466-10 FRB-03-20170417 0.25	20-Apr-17	22:34:54
30	170420G1_30	1700466-11 RW16-20170417 0.25	20-Apr-17	22:47:14
31	170420G1_31	1700466-12 FRB-16-20170417 0.25	20-Apr-17	22:59:51

Dataset: Untitled

Last Altered: Friday, April 21, 2017 10:41:36 Pacific Daylight Time

Printed: Friday, April 21, 2017 10:41:56 Pacific Daylight Time

Compound name: PFBS

	Name	ID	Acq.Date	Acq.Time
32	170420G1_32	1700466-13 RW14-20170418 0.25	20-Apr-17	23:12:14
33	170420G1_33	1700466-14 FRB-14-20170418 0.25	20-Apr-17	23:24:37
34	170420G1_34	1700466-15 RW20-20170418 0.25	20-Apr-17	23:37:01
35	170420G1_35	1700466-16 FRB-20-20170418 0.25	20-Apr-17	23:49:24
36	170420G1_36	1700466-17 RW06-20170418 0.25	21-Apr-17	00:01:49
37	170420G1_37	1700466-18 FRB-06-20170418 0.25	21-Apr-17	00:14:14
38	170420G1_38	1700466-19 RW01-20170418 0.25	21-Apr-17	00:26:36
39	170420G1_39	1700466-20 FRB-01-20170418 0.25	21-Apr-17	00:38:59
40	170420G1_40	IPA	21-Apr-17	00:51:22
41	170420G1_41	ST170420G1-11 PFC CS3 17D2013	21-Apr-17	01:03:47
42	170420G1_42	IPA	21-Apr-17	01:16:13

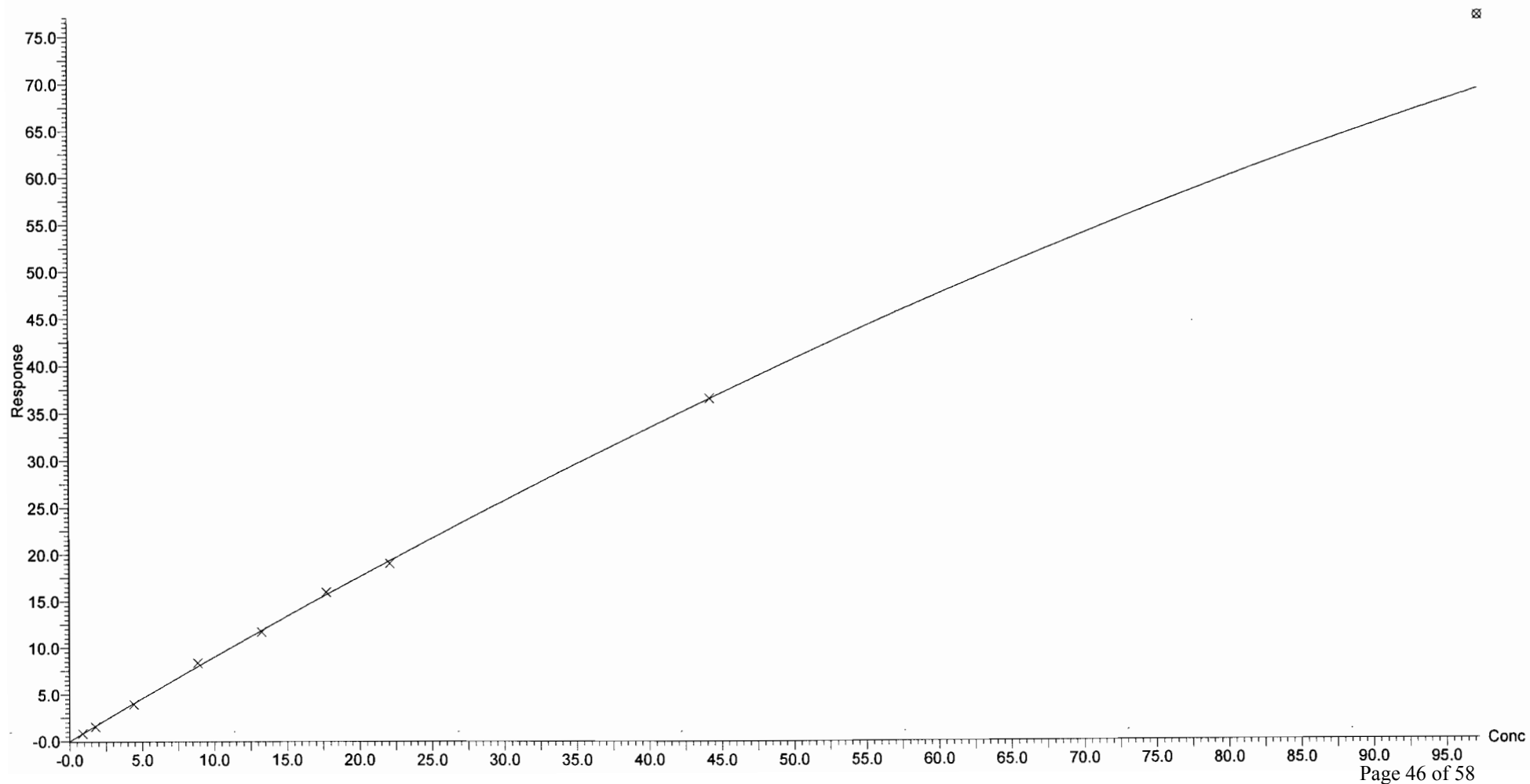


Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-CRV.qld

Last Altered: Friday, April 21, 2017 10:28:44 Pacific Daylight Time  
Printed: Friday, April 21, 2017 10:34:42 Pacific Daylight Time

Method: U:\G1.PRO\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59  
Calibration: U:\G1.PRO\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

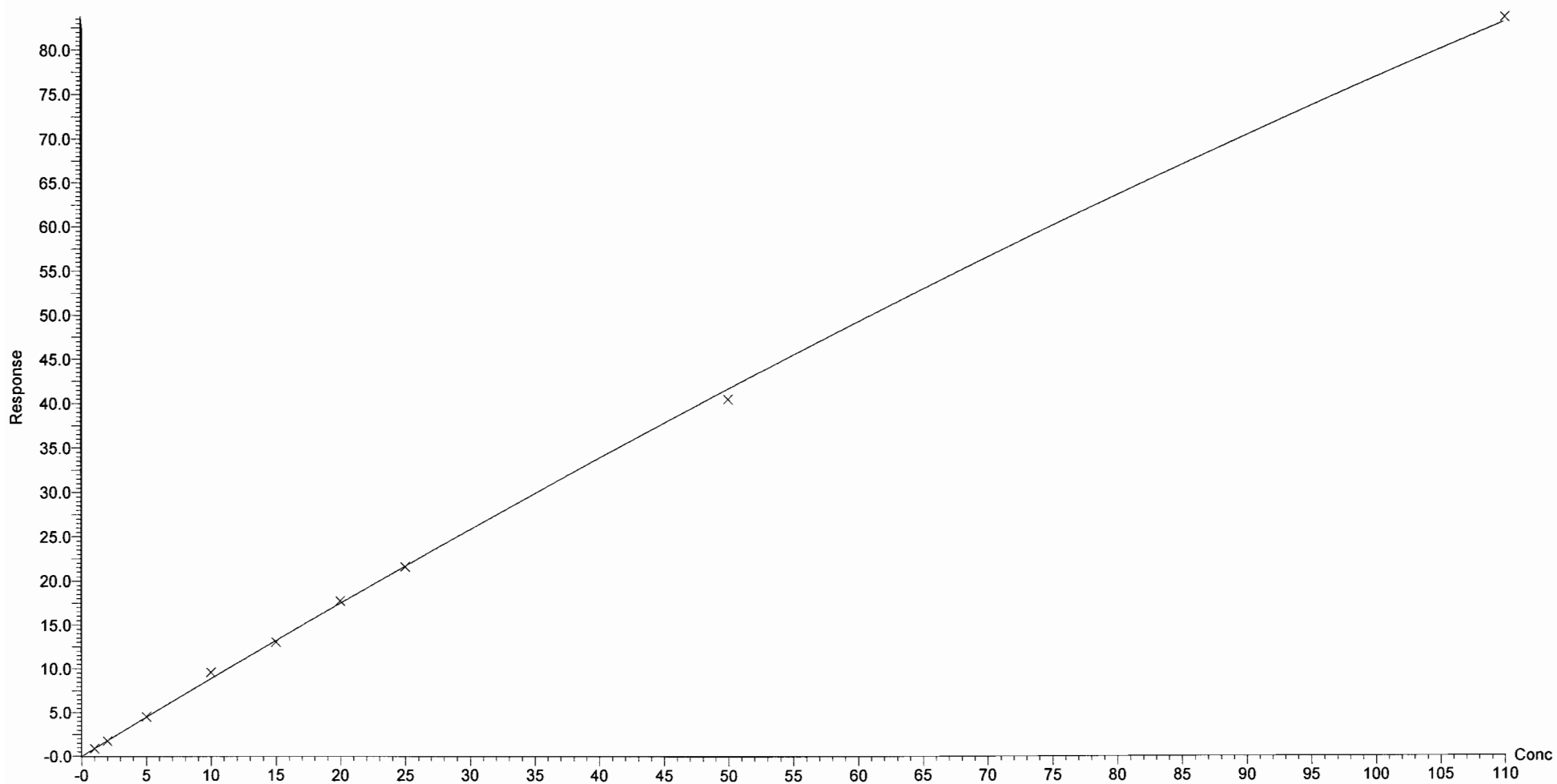
Compound name: PFBS  
Coefficient of Determination:  $R^2 = 0.999454$   
Calibration curve:  $-0.00214273 * x^2 + 0.921483 * x$   
Response type: Internal Std ( Ref 10 ), Area \* ( IS Conc. / IS Area )  
Curve type: 2nd Order, Origin: Force, Weighting: 1/x, Axis trans: None



Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-CRV.qld

Last Altered: Friday, April 21, 2017 10:28:44 Pacific Daylight Time  
Printed: Friday, April 21, 2017 10:34:42 Pacific Daylight Time

Compound name: PFHpA  
Coefficient of Determination:  $R^2 = 0.999320$   
Calibration curve:  $-0.0012775 * x^2 + 0.897966 * x$   
Response type: Internal Std ( Ref 9 ), Area \* ( IS Conc. / IS Area )  
Curve type: 2nd Order, Origin: Force, Weighting: 1/x, Axis trans: None



Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-CRV.qld

Last Altered: Friday, April 21, 2017 10:28:44 Pacific Daylight Time

Printed: Friday, April 21, 2017 10:34:42 Pacific Daylight Time

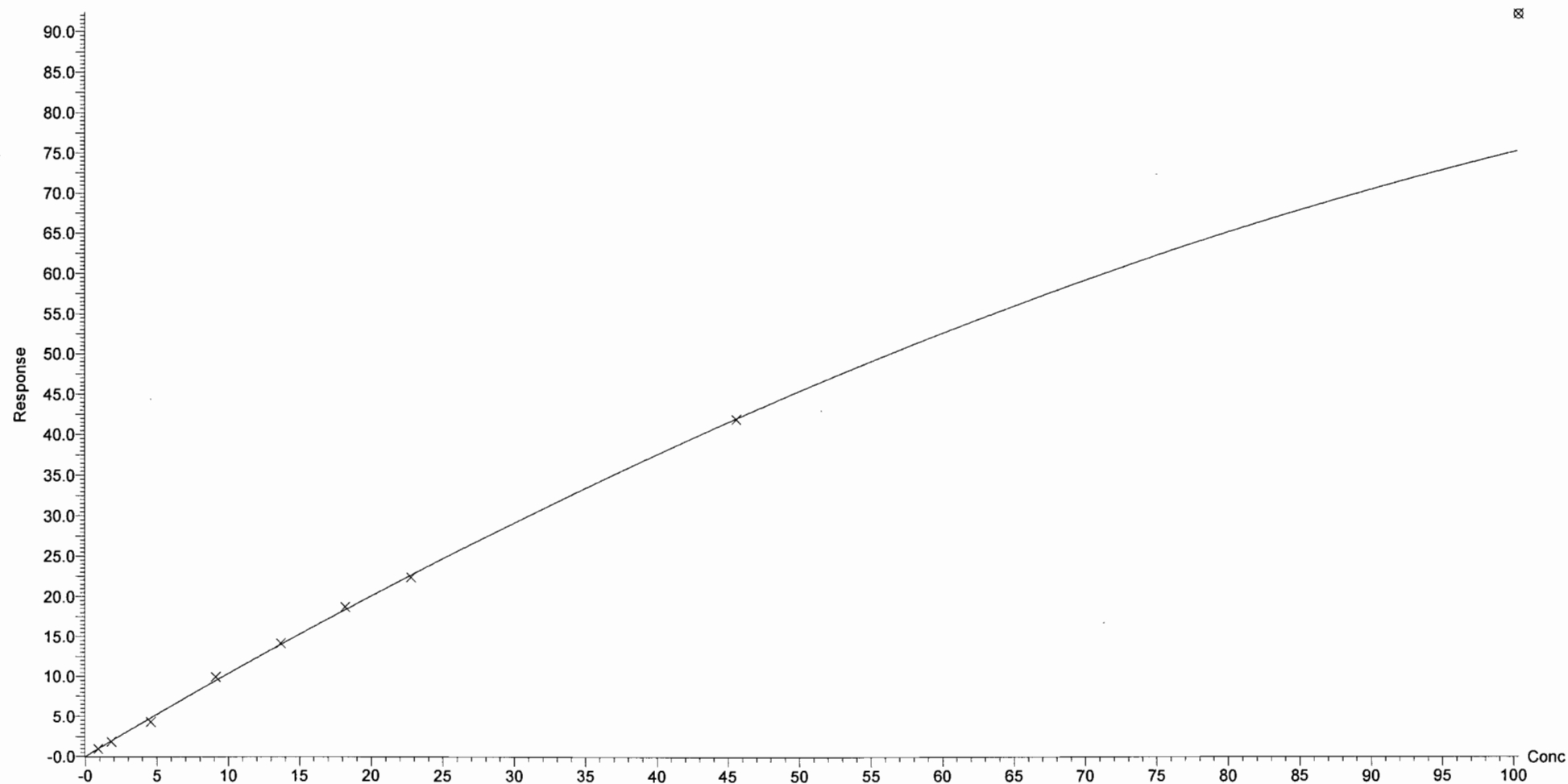
Compound name: PFHxS

Coefficient of Determination:  $R^2 = 0.998827$

Calibration curve:  $-0.00311585 * x^2 + 1.06481 * x$

Response type: Internal Std ( Ref 10 ), Area \* ( IS Conc. / IS Area )

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



Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-CRV.qld

Last Altered: Friday, April 21, 2017 10:28:44 Pacific Daylight Time

Printed: Friday, April 21, 2017 10:34:42 Pacific Daylight Time

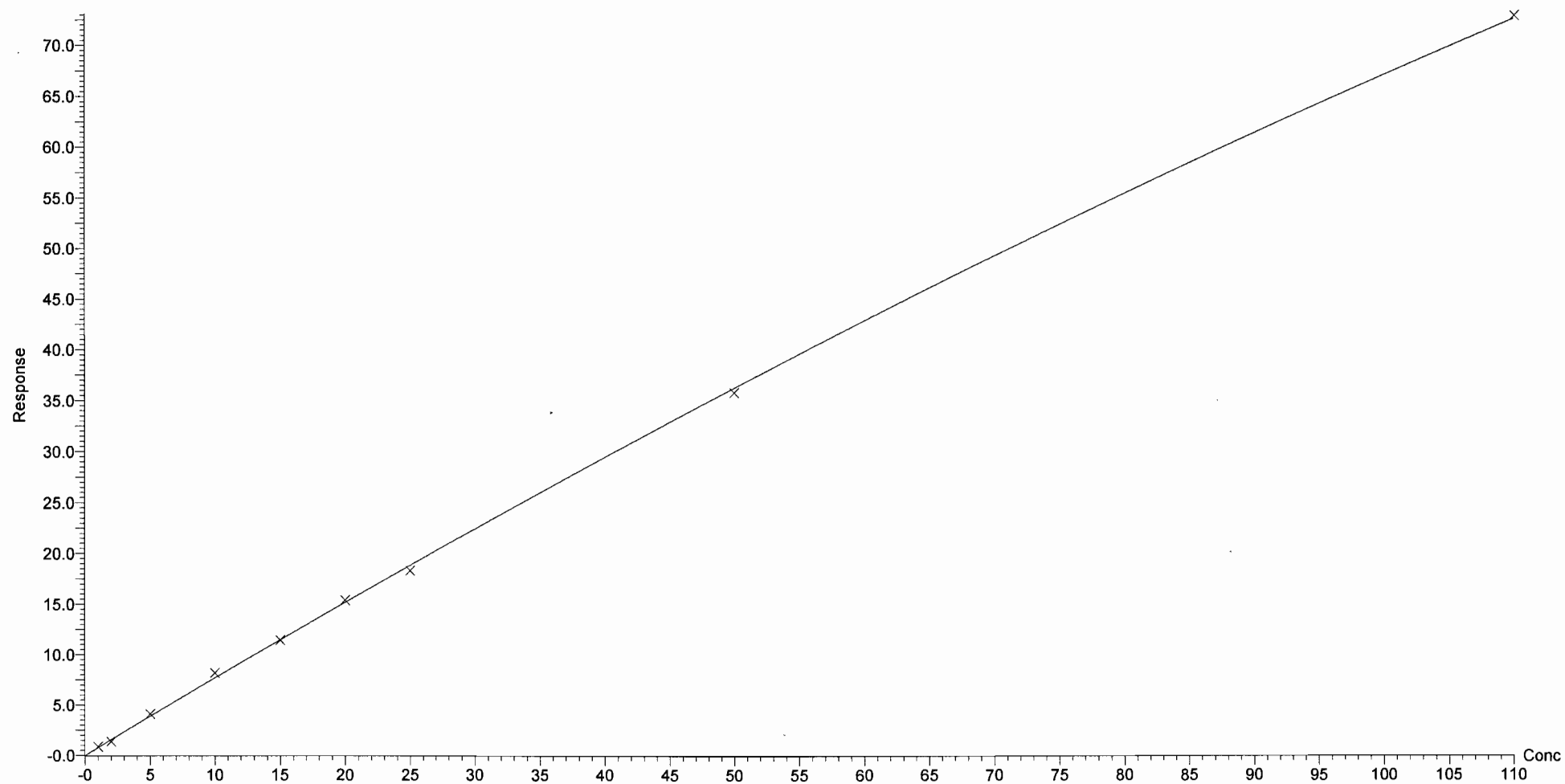
Compound name: PFOA

Coefficient of Determination:  $R^2 = 0.999188$

Calibration curve:  $-0.00107552 * x^2 + 0.780551 * x$

Response type: Internal Std ( Ref 9 ), Area \* ( IS Conc. / IS Area )

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



Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-CRV.qld

Last Altered: Friday, April 21, 2017 10:28:44 Pacific Daylight Time

Printed: Friday, April 21, 2017 10:34:42 Pacific Daylight Time

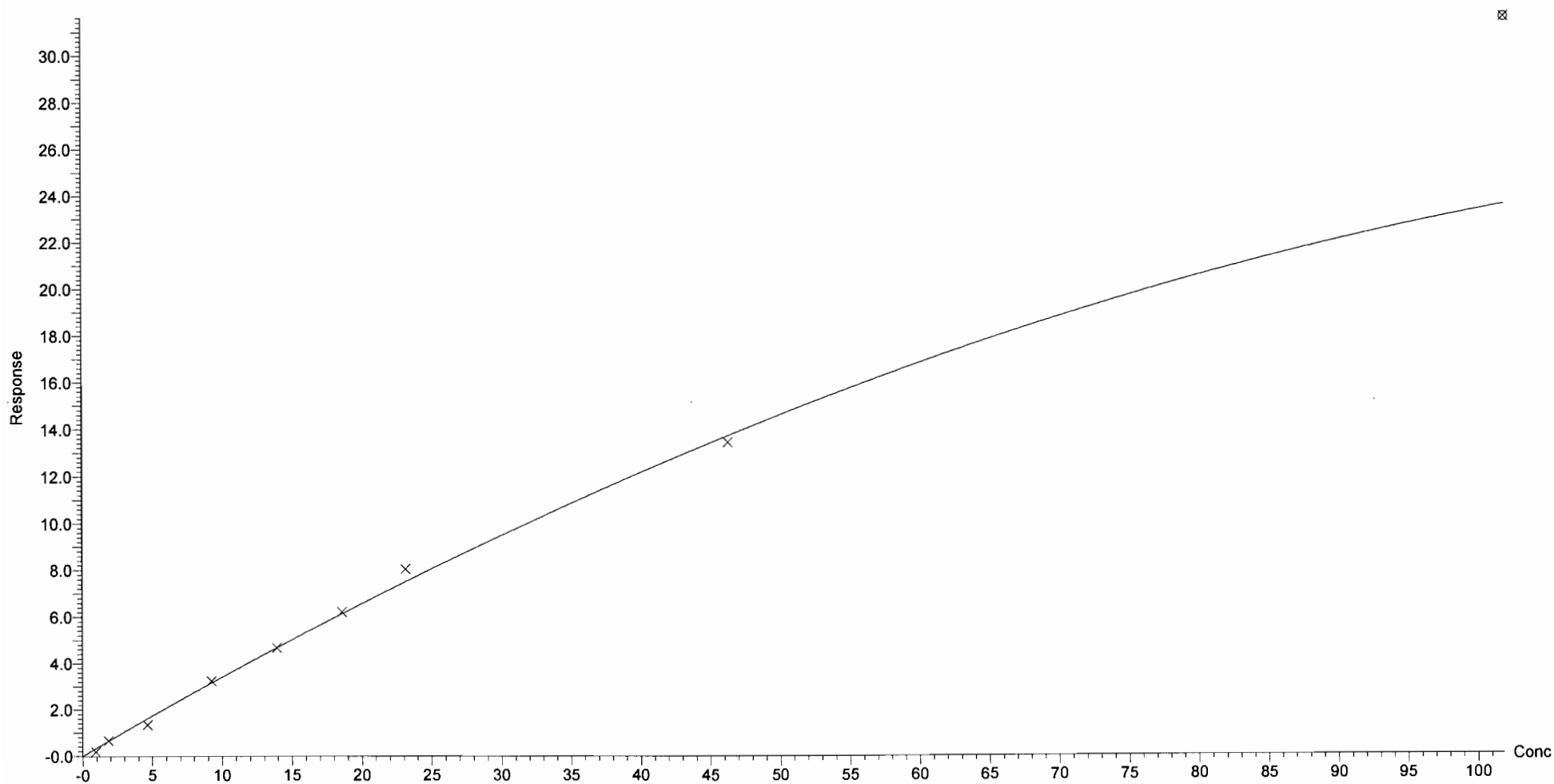
Compound name: PFOS

Coefficient of Determination:  $R^2 = 0.994127$

Calibration curve:  $-0.00117183 * x^2 + 0.3509 * x$

Response type: Internal Std ( Ref 10 ), Area \* ( IS Conc. / IS Area )

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



Quantify Compound Summary Report

Printed Fri Apr 21 09:50:13 2017

Compound 10: 13C4-PFOS

#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Primary Fid	Conc.	%Dev	Acq.Date	Acq.Time	Cal.Date	%Rec	RRF	Divisor1	
1	170420G1_3	Standard	28.7	4.62	10662.84	10662.84	28.7	bd	28.7	0	20-Apr-17	17:12:23	21-Apr-17	100	1	1	
2	170420G1_4	Standard	28.7	4.61	10498.31	10498.31	28.7	bd	28.7	0	20-Apr-17	17:24:44	21-Apr-17	100	1	1	
3	170420G1_5	Standard	28.7	4.61	11113.83	11113.83	28.7	bb	28.7	0	20-Apr-17	17:37:07	21-Apr-17	100	1	1	
4	170420G1_6	Standard	28.7	4.61	10261.95	10261.95	28.7	bb	28.7	0	20-Apr-17	17:49:31	21-Apr-17	100	1	1	
5	170420G1_7	Standard	28.7	4.61	10716.27	10716.27	28.7	bb	28.7	0	20-Apr-17	18:01:56	21-Apr-17	100	1	1	
6	170420G1_8	Standard	28.7	4.61	9943.103	9943.103	28.7	bd	28.7	0	20-Apr-17	18:14:20	21-Apr-17	100	1	1	
7	170420G1_9	Standard	28.7	4.61	9611.602	9611.602	28.7	bd	28.7	0	20-Apr-17	18:26:46	21-Apr-17	100	1	1	
8	170420G1_10	Standard	28.7	4.61	10345.49	10345.49	28.7	bb	28.7	0	20-Apr-17	18:39:14	21-Apr-17	100	1	1	

Compound 10: 13C4-PFOS

RPD	HIGH AREA	11114	
	LOW AREA	9612	
	RPD %	14.5	

INSTRUCTIONS: IN TARGETLNX, VERIFY YOU ARE USING THE LIST14 DW LAYOUT. RIGHT CLICK ON THE SUMMARY BOX AND SELECT "LIST BY COMPOUND". SELECT 13C2-PFOA, 13C4-PFOS OR D3-NMEFOSAA. CLICK ON EDIT. SELECT COPY CURRENT SUMMARY. PASTE IN CELL A1.

Quantify Compound Summary Report

Printed Fri Apr 21 09:47:34 2017

Compound 9: 13C2-PFOA

#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Primary Fla	Conc.	%Dev	Acq.Date	Acq.Time	Cal.Date	%Rec	RRF	Divisor1
1	170420G1_3	Standard	10	4.21	7576.826	7576.826	10	bd	10	0	20-Apr-17	17:12:23	21-Apr-17	100	1	1
2	170420G1_4	Standard	10	4.2	7479.476	7479.476	10	bd	10	0	20-Apr-17	17:24:44	21-Apr-17	100	1	1
3	170420G1_5	Standard	10	4.2	7492.731	7492.731	10	bb	10	0	20-Apr-17	17:37:07	21-Apr-17	100	1	1
4	170420G1_6	Standard	10	4.2	7221.838	7221.838	10	bb	10	0	20-Apr-17	17:49:31	21-Apr-17	100	1	1
5	170420G1_7	Standard	10	4.2	7421.516	7421.516	10	bb	10	0	20-Apr-17	18:01:56	21-Apr-17	100	1	1
6	170420G1_8	Standard	10	4.21	7055.997	7055.997	10	bb	10	0	20-Apr-17	18:14:20	21-Apr-17	100	1	1
7	170420G1_9	Standard	10	4.21	6797.896	6797.896	10	bb	10	0	20-Apr-17	18:26:46	21-Apr-17	100	1	1
8	170420G1_10	Standard	10	4.2	7149.535	7149.535	10	bb	10	0	20-Apr-17	18:39:14	21-Apr-17	100	1	1
9	170420G1_11	Standard	10	4.21	6496.95	6496.95	10	bd	10	0	20-Apr-17	18:51:40	21-Apr-17	100	1	1

Compound 9: 13C2-PFOA

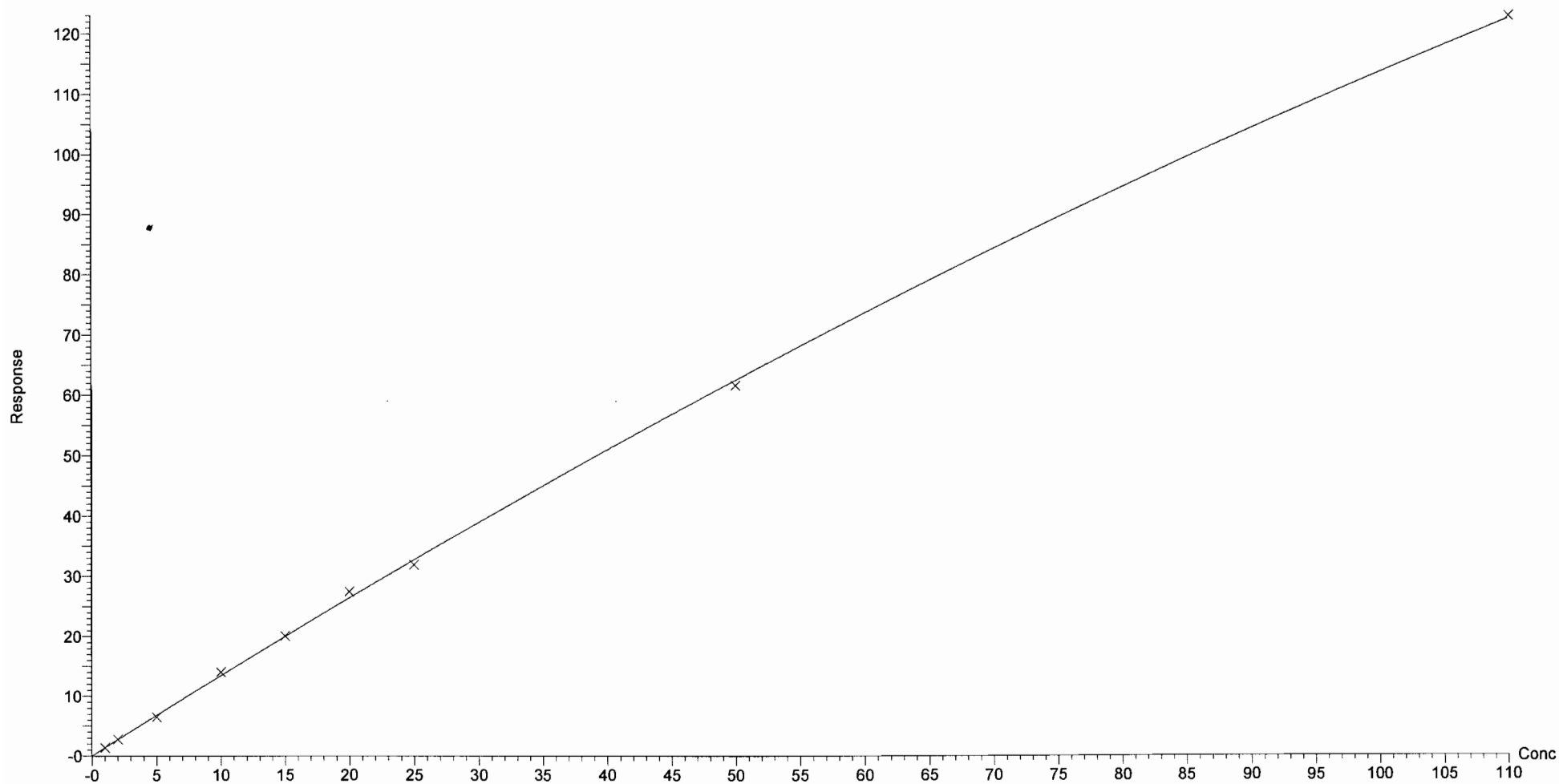
RPD	HIGH AREA	7577
	LOW AREA	6497
	RPD %	15.3

INSTRUCTIONS: IN TARGETLYNX, VERIFY YOU ARE USING THE LIST14 DW LAYOUT. RIGHT CLICK ON THE SUMMARY BOX AND SELECT "LIST BY COMPOUND". SELECT 13C2-PFOA, 13C4-PFOS OR D3-NMEFOSAA. CLICK ON EDIT. SELECT COPY CURRENT SUMMARY. PASTE IN CELL A1.

Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-CRV.qld

Last Altered: Friday, April 21, 2017 10:28:44 Pacific Daylight Time  
Printed: Friday, April 21, 2017 10:34:42 Pacific Daylight Time

Compound name: PFNA  
Coefficient of Determination:  $R^2 = 0.999465$   
Calibration curve:  $-0.00226354 * x^2 + 1.36399 * x$   
Response type: Internal Std ( Ref 9 ), Area \* ( IS Conc. / IS Area )  
Curve type: 2nd Order, Origin: Force, Weighting: 1/x, Axis trans: None





Dataset: U:\G1.PRO\Results\2017\170420G1\170420G1-41.qld

Last Altered: Friday, April 21, 2017 12:45:08 Pacific Daylight Time  
Printed: Tuesday, April 25, 2017 13:52:15 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59  
Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

Name: 170420G1\_41, Date: 21-Apr-2017, Time: 01:03:47, ID: ST170420G1-11 PFC CS3 17D2013, Description: PFC CS3 17D2013

	# Name	Trace	Response	IS Resp	RRF	Wt/Vol	RT	Conc.	%Rec
1	1 PFBS	299 > 79.7	6.75e3	1.24e4		1.000	2.90	17.7	100.0
2	2 PFHpA	363 > 318.9	1.57e4	1.02e4		1.000	3.79	17.6	88.0
3	3 PFHxS	398.9 > 79.6	8.25e3	1.24e4		1.000	3.91	19.0	104.5
4	4 PFOA	413 > 368.7	1.39e4	1.02e4		1.000	4.21	18.0	89.9
5	5 PFOS	499 > 79.9	2.59e3	1.24e4		1.000	4.61	18.2	97.9
6	6 PFNA	463 > 418.8	2.28e4	1.02e4		1.000	4.55	16.9	84.5
7	7 13C2-PFHxA	315.0 > 269.8	4.57e3	1.02e4	0.449	1.000	3.27	10.0	100.2
8	8 13C2-PFDA	515.1 > 469.9	6.63e3	1.02e4	0.803	1.000	4.85	8.13	81.3
9	9 13C2-PFOA	414.9 > 369.7	1.02e4	1.02e4	1.000	1.000	4.21	10.0	100.0
10	10 13C4-PFOS	503.0 > 79.9	1.24e4	1.24e4	1.000	1.000	4.62	28.7	100.0

70-130  
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4/25/17

Dataset: U:\G1.PRO\Results\2017\170421G3\170421G3-2.qld

Last Altered: Monday, April 24, 2017 08:46:35 Pacific Daylight Time  
Printed: Monday, April 24, 2017 08:48:11 Pacific Daylight Time

Method: U:\G1.PRO\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59  
Calibration: U:\G1.PRO\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

Name: 170421G3\_2, Date: 21-Apr-2017, Time: 18:01:05, ID: ST170421G3-1 PFC CS-2 17D2008, Description: PFC CS-2 17D2008

#	Name	Trace	Response	IS Resp	RRF	Wt/Vol	RT	Conc.	%Rec
1	1 PFBS	299 > 79.7	3.72e2	1.21e4		1.000	2.91	0.964	108.9
2	2 PFHpA	363 > 318.9	8.14e2	9.37e3		1.000	3.80	0.969	96.9
3	3 PFHxS	398.9 > 79.6	4.00e2	1.21e4		1.000	3.92	0.897	98.6
4	4 PFOA	413 > 368.7	7.69e2	9.37e3		1.000	4.22	1.05	105.2
5	5 PFOS	499 > 79.9	9.99e1	1.21e4		1.000	4.61	0.679	73.0
6	6 PFNA	463 > 418.8	1.19e3	9.37e3		1.000	4.56	0.929	92.9
7	7 13C2-PFHxA	315.0 > 269.8	3.91e3	9.37e3	0.449	1.000	3.29	9.30	93.0
8	8 13C2-PFDA	515.1 > 469.9	6.90e3	9.37e3	0.803	1.000	4.85	9.17	91.7
9	9 13C2-PFOA	414.9 > 369.7	9.37e3	9.37e3	1.000	1.000	4.22	10.0	100.0
10	10 13C4-PFOS	503.0 > 79.9	1.21e4	1.21e4	1.000	1.000	4.62	28.7	100.0

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AC  
4/24/17

Dataset: U:\G1.PRO\Results\2017\170421G3\170421G3-35.qld

Last Altered: Monday, April 24, 2017 08:50:30 Pacific Daylight Time  
Printed: Monday, April 24, 2017 08:51:37 Pacific Daylight Time

Method: U:\G1.PRO\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59  
Calibration: U:\G1.PRO\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

Name: 170421G3\_35, Date: 22-Apr-2017, Time: 00:50:05, ID: ST170421G3-2 PFC CS2 17D2012, Description: PFC CS2 17D2012

#	Name	Trace	Response	IS Resp	RRF	Wt/Vol	RT	Conc.	%Rec
1	1 PFBS	299 > 79.7	7.27e3	1.60e4		1.000	2.93	14.6	82.7
2	2 PFHpA	363 > 318.9	1.83e4	1.37e4		1.000	3.81	15.2	76.0
3	3 PFHxS	398.9 > 79.6	8.82e3	1.60e4		1.000	3.94	15.5	85.4
4	4 PFOA	413 > 368.7	1.53e4	1.37e4		1.000	4.23	14.6	73.0
5	5 PFOS	499 > 79.9	2.54e3	1.60e4		1.000	4.63	13.6	73.0
6	6 PFNA	463 > 418.8	2.44e4	1.37e4		1.000	4.57	13.4	66.8
7	7 13C2-PFHxA	315.0 > 269.8	6.22e3	1.37e4	0.449	1.000	3.30	10.1	101.3
8	8 13C2-PFDA	515.1 > 469.9	9.62e3	1.37e4	0.803	1.000	4.86	8.76	87.6
9	9 13C2-PFOA	414.9 > 369.7	1.37e4	1.37e4	1.000	1.000	4.23	10.0	100.0
10	10 13C4-PFOS	503.0 > 79.9	1.60e4	1.60e4	1.000	1.000	4.63	28.7	100.0

70-130  
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Ⓐ outside limits.

DC  
4/24/17

Dataset: U:\G1.PRO\Results\2017\170422G1\170422G1-02.qld

Last Altered: Monday, April 24, 2017 14:13:56 Pacific Daylight Time

Printed: Monday, April 24, 2017 14:15:56 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

Name: 170422G1\_2, Date: 22-Apr-2017, Time: 11:25:46, ID: ST170422G1-1 PFC CS-1 17D2009, Description: PFC CS-1 17D2009

#	Name	Trace	Response	IS Resp	RRF	Wt/Vol	RT	Conc.	%Rec
1	1 PFBS	299 > 79.7	6.36e2	1.08e4		1.000	2.96	1.84	103.7
2	2 PFHpA	363 > 318.9	1.54e3	9.09e3		1.000	3.84	1.90	94.8
3	3 PFHxS	398.9 > 79.6	7.36e2	1.08e4		1.000	3.97	1.84	101.1
4	4 PFOA	413 > 368.7	1.29e3	9.09e3		1.000	4.25	1.82	91.0
5	5 PFOS	499 > 79.9	2.08e2	1.08e4		1.000	4.65	1.58	84.8
6	6 PFNA	463 > 418.8	2.05e3	9.09e3		1.000	4.59	1.66	82.9
7	7 13C2-PFHxA	315.0 > 269.8	3.85e3	9.09e3	0.449	1.000	3.34	9.43	94.3
8	8 13C2-PFDA	515.1 > 469.9	5.55e3	9.09e3	0.803	1.000	4.88	7.60	76.0
9	9 13C2-PFOA	414.9 > 369.7	9.09e3	9.09e3	1.000	1.000	4.25	10.0	100.0
10	10 13C4-PFOS	503.0 > 79.9	1.08e4	1.08e4	1.000	1.000	4.65	28.7	100.0

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DM 4/24/17

✓ AC 4/24/17

Dataset: U:\G1.PRO\Results\2017\170422G1\170422G1-12.qld

Last Altered: Monday, April 24, 2017 14:28:46 Pacific Daylight Time

Printed: Monday, April 24, 2017 14:29:21 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS\_537\_DW.mdb 21 Apr 2017 09:43:59

Calibration: U:\G1.pro\CurveDB\C18\_537\_Q1\_04-20-17\_L6.cdb 21 Apr 2017 10:28:44

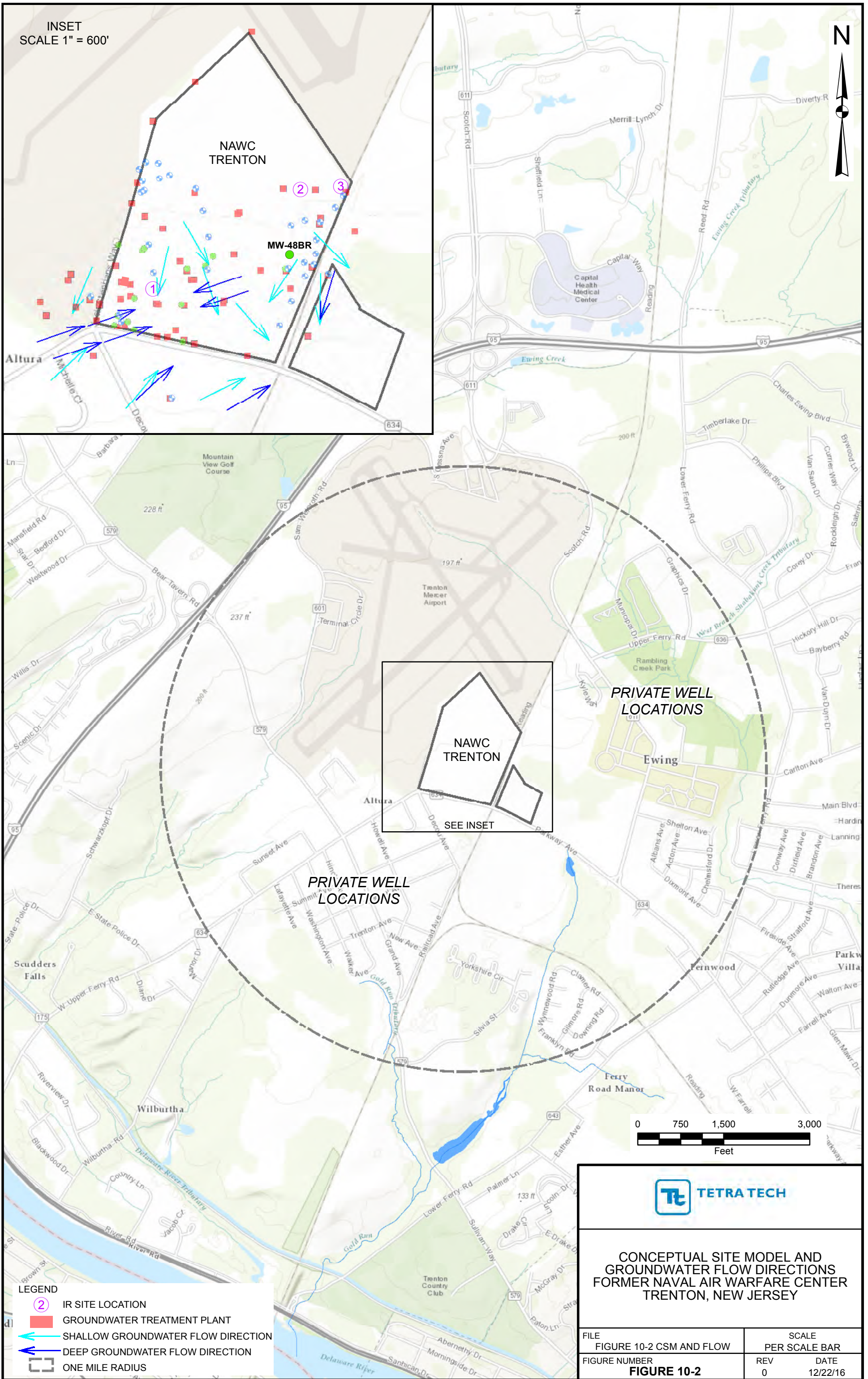
Name: 170422G1\_12, Date: 22-Apr-2017, Time: 13:30:28, ID: ST170422G1-2 PFC CS4 17D2014, Description: PFC CS4 17D2014

#	Name	Trace	Response	IS Resp	RRF	Wt/Vol	RT	Conc.	%Rec
1	1 PFBS	299 > 79.7	1.09e4	1.60e4		1.000	2.89	22.3	101.0
2	2 PFHpA	363 > 318.9	2.52e4	1.22e4		1.000	3.79	23.8	95.1
3	3 PFHxS	398.9 > 79.6	1.25e4	1.60e4		1.000	3.91	22.5	98.8
4	4 PFOA	413 > 368.7	2.23e4	1.22e4		1.000	4.21	24.2	96.8
5	5 PFOS	499 > 79.9	3.97e3	1.60e4		1.000	4.61	21.9	94.7
6	6 PFNA	463 > 418.8	3.61e4	1.22e4		1.000	4.54	22.5	90.1
7	7 13C2-PFHxA	315.0 > 269.8	5.67e3	1.22e4	0.449	1.000	3.28	10.4	103.7
8	8 13C2-PFDA	515.1 > 469.9	9.06e3	1.22e4	0.803	1.000	4.84	9.25	92.5
9	9 13C2-PFOA	414.9 > 369.7	1.22e4	1.22e4	1.000	1.000	4.20	10.0	100.0
10	10 13C4-PFOS	503.0 > 79.9	1.60e4	1.60e4	1.000	1.000	4.61	28.7	100.0

70-130  
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am  
4/24/17

✓ AC  
4/24/17



INSET  
SCALE 1" = 600'

NAWC  
TRENTON

MW-48BR

Altura

NAWC  
TRENTON

SEE INSET

PRIVATE WELL  
LOCATIONS

Ewing

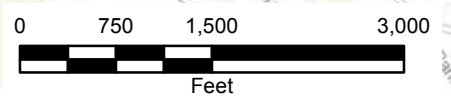
PRIVATE WELL  
LOCATIONS

Wilburtha

Fernwood

LEGEND

- ② IR SITE LOCATION
- GROUNDWATER TREATMENT PLANT
- SHALLOW GROUNDWATER FLOW DIRECTION
- DEEP GROUNDWATER FLOW DIRECTION
- ONE MILE RADIUS



CONCEPTUAL SITE MODEL AND  
GROUNDWATER FLOW DIRECTIONS  
FORMER NAVAL AIR WARFARE CENTER  
TRENTON, NEW JERSEY

FILE FIGURE 10-2 CSM AND FLOW	SCALE PER SCALE BAR
FIGURE NUMBER <b>FIGURE 10-2</b>	REV DATE 0 12/22/16