



**Off-base Drinking Water Sample Results,  
Level 2 Laboratory Report, Level 4 Laboratory Report,  
Electronic Data Deliverable, Data Validation Report,  
and the Sample Location Figure, SDG 1701813**

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

February 2019

December 11, 2017

**Vista Work Order No. 1701813**

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

Dear Ms. Hill,

Enclosed are the results for the sample set received at Vista Analytical Laboratory on December 01, 2017. This sample set was analyzed on a rush turn-around time, under your Project Name 'CTO-08/MCOLF ATLANTIC PFAS INV.'.

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

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

Sincerely,



Martha Maier  
Laboratory Director



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

## **Vista Work Order No. 1701813**

### **Case Narrative**

#### **Sample Condition on Receipt:**

Twenty drinking water samples were received in good condition and within the method temperature requirements. The samples were received and stored securely in accordance with Vista standard operating procedures and EPA methodology.

#### **Analytical Notes:**

##### **EPA Method 537**

Samples "CH-AT-2RW26-1117" and ""CH-AT-2RW27-1117"" contained particulate and were centrifuged prior to extraction.

The samples were extracted and analyzed for PFBS, PFOA and PFOS using EPA Method 537.

##### **Holding Times**

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

##### **Quality Control**

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

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

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

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# Sample Inventory Report

Vista Sample ID	Client Sample ID	Sampled	Received	Components/Containers
1701813-01	CH-AT-2RW20-1117	29-Nov-17 09:15	01-Dec-17 09:40	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1701813-02	CH-AT-2FB20-1117	29-Nov-17 09:15	01-Dec-17 09:40	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1701813-03	CH-AT-2RW21-1117	29-Nov-17 09:27	01-Dec-17 09:40	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1701813-04	CH-AT-2FB21-1117	29-Nov-17 09:27	01-Dec-17 09:40	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1701813-05	CH-AT-2RW22-1117	29-Nov-17 10:07	01-Dec-17 09:40	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1701813-06	CH-AT-2FB22-1117	29-Nov-17 10:07	01-Dec-17 09:40	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1701813-07	CH-AT-2RW23-1117	29-Nov-17 10:46	01-Dec-17 09:40	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1701813-08	CH-AT-2FB23-1117	29-Nov-17 10:46	01-Dec-17 09:40	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1701813-09	CH-AT-2RW24-1117	29-Nov-17 13:12	01-Dec-17 09:40	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1701813-10	CH-AT-2FB24-1117	29-Nov-17 13:12	01-Dec-17 09:40	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1701813-11	CH-AT-2RW25-1117	29-Nov-17 13:41	01-Dec-17 09:40	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1701813-12	CH-AT-2FB25-1117	29-Nov-17 13:41	01-Dec-17 09:40	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1701813-13	CH-AT-2RW26-1117	29-Nov-17 14:01	01-Dec-17 09:40	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1701813-14	CH-AT-2FB26-1117	29-Nov-17 14:01	01-Dec-17 09:40	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1701813-15	CH-AT-2RW27-1117	29-Nov-17 14:53	01-Dec-17 09:40	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1701813-16	CH-AT-2FB27-1117	29-Nov-17 14:53	01-Dec-17 09:40	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1701813-17	CH-AT-2RW28-1117	29-Nov-17 16:24	01-Dec-17 09:40	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1701813-18	CH-AT-2FB28-1117	29-Nov-17 16:24	01-Dec-17 09:40	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1701813-19	CH-AT-2RW29-1117	29-Nov-17 16:45	01-Dec-17 09:40	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1701813-20	CH-AT-2FB29-1117	29-Nov-17 16:45	01-Dec-17 09:40	HDPE Bottle, 250 mL

Vista Project: 1701813

Client Project: CTO-08/MCOLF ATLANTIC PFAS INV.

# Sample Inventory Report

<b>Vista Sample ID</b>	<b>Client Sample ID</b>	<b>Sampled</b>	<b>Received</b>	<b>Components/Containers</b>
1701813-20	CH-AT-2FB29-1117	29-Nov-17 16:45	01-Dec-17 09:40	HDPE Bottle, 250 mL

## **ANALYTICAL RESULTS**

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

<b>Client Data</b>					<b>Laboratory Data</b>						
Name:	CH2M Hill	Matrix:	Drinking Water		Lab Sample:	B7L0016-BLK1	Column:	BEH C18			
Project:	CTO-08/MCOLF ATLANTIC PFAS INV.										

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.443	5.00	10.0		B7L0016	05-Dec-17	0.250 L	08-Dec-17 00:09	1
PFOA	ND	1.08	5.00	10.0		B7L0016	05-Dec-17	0.250 L	08-Dec-17 00:09	1
PFOS	ND	1.04	5.00	10.0		B7L0016	05-Dec-17	0.250 L	08-Dec-17 00:09	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	95.1	70 - 130			B7L0016	05-Dec-17	0.250 L	08-Dec-17 00:09	1

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



**Sample ID: LFBD**

**EPA Method 537**

Name:	CH2M Hill	Lab Sample:	B7L0016-BS1/B7L0016-BSD1	Date Extracted:	05-Dec-17
Project:	CTO-08/MCOLF ATLANTIC PFAS INV.	QC Batch:	B7L0016	Column:	BEH C18
Matrix:	Drinking Water	Samp Size:	0.250/0.250 L		

Analyte	LCS (ng/L)	LCS Spike Amt	LCS % Rec	LCS Quals	LCSD (ng/L)	LCSD Spike Amt	LCSD % Rec	RPD	LCSD Quals	%Rec Limits	RPD Limits	LCS Analyzed	LCS Dil	LCSD Analyzed	LCSD Dil
PFBS	37.2	35.4	105		33.4	35.4	94.4	10.6		70-130	30	07-Dec-17 23:56	1	08-Dec-17 00:21	1
PFOA	44.9	40.0	112		46.4	40.0	116	3.28		70-130	30	07-Dec-17 23:56	1	08-Dec-17 00:21	1
PFOS	37.0	37.0	99.9		36.7	37.0	99.2	0.770		70-130	30	07-Dec-17 23:56	1	08-Dec-17 00:21	1
Labeled Standards	Type		LCS % Rec	LCS Quals			LCSD % Rec		LCSD Quals	Limits		LCS Analyzed	LCS Dil	LCSD Analyzed	LCSD Dil
13C2-PFHxA	SURR		99.5				109			70-130		07-Dec-17 23:56	1	08-Dec-17 00:21	1

**Sample ID: CH-AT-2RW20-1117** **EPA Method 537**

Client Data				Laboratory Data			
Name:	CH2M Hill	Matrix:	Drinking Water	Lab Sample:	1701813-01	Column:	BEH C18
Project:	CTO-08/MCOLF ATLANTIC PFAS INV.	Date Collected:	29-Nov-17 09:15	Date Received:	01-Dec-17 09:40		

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.429	4.84	9.68		B7L0016	05-Dec-17	0.258 L	08-Dec-17 00:33	1
PFOA	ND	1.05	4.84	9.68		B7L0016	05-Dec-17	0.258 L	08-Dec-17 00:33	1
PFOS	ND	1.01	4.84	9.68		B7L0016	05-Dec-17	0.258 L	08-Dec-17 00:33	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	106	70 - 130		B7L0016	05-Dec-17	0.258 L	08-Dec-17 00:33	1

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

**Sample ID: CH-AT-2FB20-1117** **EPA Method 537**

Client Data				Laboratory Data			
Name:	C2 HM 2 ill	Matrix:	Drinking Water	Lab Sample:	1701813-0H	Column:	BE2 C18
Project:	CTO-08/MCOLF ATLANTIC PFAS INV.	Date Collected:	10-Nov-17 09:15	Date Received:	01-Dec-17 09:40		

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.4HH	4.76	9.5H		B7L0016	05-Dec-17	0.H3 L	08-Dec-17 00:46	1
PFOA	ND	1.03	4.76	9.5H		B7L0016	05-Dec-17	0.H3 L	08-Dec-17 00:46	1
PFOS	ND	0.990	4.76	9.5H		B7L0016	05-Dec-17	0.H3 L	08-Dec-17 00:46	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13CH-PF2 xA	SURR	105	70 - 130			B7L0016	05-Dec-17	0.H3 L	08-Dec-17 00:46	1

DL - Detection Limit

LOD - Limit of Detection  
LOQ - Limit of quantitation

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

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

**Sample ID: CH-AT-2RW21-1117** **EPA Method 537**

Client Data				Laboratory Data			
Name:	CH2M Hill	Matrix:	Drinking Water	Lab Sample:	1701813-03	Column:	BEH C18
Project:	CTO-08/MCOLF ATLANTIC PFAS INV.	Date Collected:	29-Nov-17 09:27	Date received:	01-Dec-17 09:R0		

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.030	0.84	9.71		B7L0014	06-Dec-17	0.267 L	08-Dec-17 00:68	1
PFOA	ND	1.06	0.84	9.71		B7L0014	06-Dec-17	0.267 L	08-Dec-17 00:68	1
PFOS	ND	1.01	0.84	9.71		B7L0014	06-Dec-17	0.267 L	08-Dec-17 00:68	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SU5 5	100	70 - 130			B7L0014	06-Dec-17	0.267 L	08-Dec-17 00:68	1

DL - Detection Limit	LOD - Limit of Detection	LCL-UCL- Lower control limit - upper control limit	When reported, PFHxS, PFOA and PFOS include both linear and branched isomers.
	LOQ - Limit of quantitation	5 results reported to the DL.	Only the linear isomer is reported for all other analytes.

**Sample ID: CH-AT-2FB21-1117** **EPA Method 537**

Client Data				Laboratory Data			
Name:	C2 uM 2 ill	Matrix:	DriBgiBW9 ater	Lab Sample:	1701813-0H	ColnmB:	Ek2 C18
Project:	CTO-08/MCOLF ATLANTIC PFAS INV.	Date Collected:	uv-No5-17 0v:u7	Date Recei5ed:	01-Dec-17 0v:HD		

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFES	ND	0.1B4	Hvu	v.86		E7L0014	06-Dec-17	0.u6HL	08-Dec-17 01:11	1
PFOA	ND	1.04	Hvu	v.86		E7L0014	06-Dec-17	0.u6HL	08-Dec-17 01:11	1
PFOS	ND	1.0u	Hvu	v.86		E7L0014	06-Dec-17	0.u6HL	08-Dec-17 01:11	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13Cu-PF2 xA	SURR	v4.0	70 - 130			E7L0014	06-Dec-17	0.u6HL	08-Dec-17 01:11	1

DL - DetectioBLimit	LOD - Limit of DetectioB	LCL-UCL- Lower coBtrol limit - npper coBtrol limit	9 heBreported, PF2 xS, PFOA aBl PFOS iBclnde both liBear aBl braBched isomers.
	LOQ - Limit of qnaBitatioB	Results reported to the DL.	OBly the liBear isomer is reported for all other aBalytes.

**Sample ID: CH-AT-2RW22-1117** **EPA Method 537**

Client Data				Laboratory Data			
Name:	C2 uM 2 ill	Matrix:	DriBgiBW9 ater	Lab Sample:	1701813-0H	ColnmB:	Ek2 C18
Project:	CTO-08/MCOLF ATLANTIC PFAS INV.	Date Collected:	uv-No5-17 10:07	Date Recei5ed:	01-Dec-17 0v:40		

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFES	ND	0.434	4.8v	v.7v		E7L0016	0HDec-17	0.uHHL	08-Dec-17 01:u3	1
PFOA	ND	1.06	4.8v	v.7v		E7L0016	0HDec-17	0.uHHL	08-Dec-17 01:u3	1
PFOS	ND	1.0u	4.8v	v.7v		E7L0016	0HDec-17	0.uHHL	08-Dec-17 01:u3	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13Cu-PF2 xA	SURR	108	70 - 130			E7L0016	0HDec-17	0.uHHL	08-Dec-17 01:u3	1

DL - DetectioBLimit	LOD - Limit of DetectioB	LCL-UCL- Lower coBtrol limit - npper coBtrol limit		9 heBreported, PF2 xS, PFOA aBl PFOS iBclnde both liBear aBl braBched isomers.
	LOQ - Limit of qnaBitatioB	Results reported to the DL.		OBly the liBear isomer is reported for all other aBalytes.

**Sample ID: CH-AT-2FB22-1117** **EPA Method 537**

Client Data				Laboratory Data			
Name:	C2 uM 2 ill	Matrix:	DriBgiBW9 ater	Lab Sample:	1701813-0H	ColnmB:	Ek2 C18
Project:	CTO-08/MCOLF ATLANTIC PFAS INV.	Date Collected:	uv-No5-17 10:07	Date Recei5ed:	01-Dec-17 0v:40		

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFES	ND	0.43v	4.vH	v.v1		E7L001H	06-Dec-17	0.u6u L	08-Dec-17 01:3H	1
PFOA	ND	1.07	4.vH	v.v1		E7L001H	06-Dec-17	0.u6u L	08-Dec-17 01:3H	1
PFOS	ND	1.03	4.vH	v.v1		E7L001H	06-Dec-17	0.u6u L	08-Dec-17 01:3H	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
<sup>13</sup> Cu-PF2 xA	SURR	10H	70 - 130			E7L001H	06-Dec-17	0.u6u L	08-Dec-17 01:3H	1

DL - DetectioBLimit	LOD - Limit of DetectioB	LCL-UCL- Lower coBtrol limit - npper coBtrol limit	9 heBreported, PF2 xS, PFOA aBl PFOS iBclnde both liBear aBl braBched isomers.
	LOQ - Limit of qnaBitatioB	Results reported to the DL.	OBly the liBear isomer is reported for all other aBalytes.

**Sample ID: CH-AT-2RW21-777L** **PMA h etdr5 31L**

<b>Client Data</b>				<b>baoryatryEData</b>			
Name:	CH2M Hill	Matrix:	Drinking Water	Lab Sample:	1701813-07	Column:	BEH C18
Project:	CTO-08/MCOLF ATLANTIC PFAS INV.	Date Collected:	29-Nov-17 10:5R	Date received:	01-Dec-17 09:50		

AnalEte	Crnc. (ng/b)	Db	bOD	bOQ	Qualifieys	Batcd	Pxyacte5	Samp Size	AnalEze5	Dilutirn
PFBS	ND	0.529	5.85	9.R8		B7L001R	06-Dec-17	0.268 L	08-Dec-17 01:58	1
PFOA	ND	1.06	5.85	9.R8		B7L001R	06-Dec-17	0.268 L	08-Dec-17 01:58	1
PFOS	ND	1.01	5.85	9.R8		B7L001R	06-Dec-17	0.268 L	08-Dec-17 01:58	1
b aoele5 Stan5ay5s	TEpe	% RecrveyE	bimits	Qualifieys	Batcd	Pxyacte5	Samp Size	AnalEze5	Dilutirn	
13C2-PFHxA	SU44	100	70 - 130		B7L001R	06-Dec-17	0.268 L	08-Dec-17 01:58	1	

DL - Detection Limit

LOD - Limit of Detection  
LOQ - Limit of quantitation

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

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



**Sample ID: CH-AT-2FB21-777L** **PM h etdr5 31L**

<b>Client Data</b>				<b>baoryatryEData</b>			
Name:	CH2M Hill	Matrix:	Drinking Water	Lab Sample:	1701813-08	Column:	BEH C18
Project:	CTO-08/MCOLF ATLANTIC PFAS INV.	Date Collected:	29-Nov-17 10:5R	Date received:	01-Dec-17 09:50		

AnalEte	Crnc. (ng/b)	Db	bOD	bOQ	Qualifieys	Batcd	Pxyacte5	Samp Size	AnalEze5	Dilutirn
PFBS	ND	0.555	6.01	10.0		B7L001R	06-Dec-17	0.259 L	08-Dec-17 02:01	1
PFOA	ND	1.08	6.01	10.0		B7L001R	06-Dec-17	0.259 L	08-Dec-17 02:01	1
PFOS	ND	1.05	6.01	10.0		B7L001R	06-Dec-17	0.259 L	08-Dec-17 02:01	1
b aoele5 Stan5ay5s	TEpe	% RecrveyE	bimits	Qualifieys	Batcd	Pxyacte5	Samp Size	AnalEze5	Dilutirn	
13C2-PFHxA	SU44	106	70 - 130		B7L001R	06-Dec-17	0.259 L	08-Dec-17 02:01	1	

DL - Detection Limit

LOD - Limit of Detection  
LOQ - Limit of quantitation

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

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

**Sample ID: CH-AT-2RW24-1117** **EPA Method 537**

Client Data				Laboratory Data			
Name:	C2 uM 2 ill	Matrix:	DriBgiBW9 ater	Lab Sample:	1701813-0H	ColnmB:	Ek2 C18
Project:	CTO-08/MCOLF ATLANTIC PFAS INV.	Date Collected:	uHNov-17 13:1u	Date 5 eceived:	01-Dec-17 0HR0		

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFES	ND	0.R3R	RHD	H81		E7L0014	06-Dec-17	0.u66 L	08-Dec-17 1u:R4	1
PFOA	ND	1.04	RHD	H81		E7L0014	06-Dec-17	0.u66 L	08-Dec-17 1u:R4	1
PFOS	ND	1.0u	RHD	H81		E7L0014	06-Dec-17	0.u66 L	08-Dec-17 1u:R4	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13Cu-PF2 xA	SU5 5	H.3	70 - 130			E7L0014	06-Dec-17	0.u66 L	08-Dec-17 1u:R4	1

DL - DetectioBLimit

LOD - Limit of DetectioB  
LOQ - Limit of qnaBitatioB

LCL-UCL- Lower coBrol limit - npper coBrol limit  
5 esnlts reported to the DL.

9 heBreported, PF2 xS, PFOA aBl PFOS iBclnde both liBear aBl braBched isomers.  
OBly the liBear isomer is reported for all other aBalytes.

**Sample ID: CH-AT-2FB24-1117** **EPA Method 537**

Client Data				Laboratory Data			
Name:	CH2M Hill	Matrix:	Drinking Water	Lab Sample:	1701813-10	Column:	BEH C18
Project:	CTO-08/MCOLF ATLANTIC PFAS INV.	Date Collected:	29-Nov-17 13:12	Date received:	01-Dec-17 09:R0		

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.R22	R74	9.62		B7L0014	06-Dec-17	0.243 L	11-Dec-17 12:16	1
PFOA	ND	1.03	R74	9.62		B7L0014	06-Dec-17	0.243 L	11-Dec-17 12:16	1
PFOS	ND	0.990	R74	9.62		B7L0014	06-Dec-17	0.243 L	11-Dec-17 12:16	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SU5 5	97.R	70 - 130			B7L0014	06-Dec-17	0.243 L	11-Dec-17 12:16	1

DL - Detection Limit	LOD - Limit of Detection	LCL-UCL- Lower control limit - upper control limit	When reported, PFHxS, PFOA and PFOS include both linear and branched isomers.
	LOQ - Limit of quantitation	5 results reported to the DL.	Only the linear isomer is reported for all other analytes.

**Sample ID: CH-AT-2RW21-777L** **PMA h etdr5 13L**

<b>Client Data</b>				<b>baoryatryEData</b>			
Name:	CH2M Hill	Matrix:	Drinking Water	Lab Sample:	1701813-11	Column:	BEH C18
Project:	CTO-08/MCOLF ATLANTIC PFAS INV.	Date Collected:	29-Nov-17 13:51	Date Received:	01-Dec-17 09:50		

AnalEte	Crnc. (ng/b)	Db	bOD	bOQ	Qualifieys	Batcd	Pxyacte5	Samp Size	AnalEze5	Dilutirn
PFBS	ND	0.530	5.84	9.71		B7L0016	04-Dec-17	0.248 L	08-Dec-17 13:11	1
PFOA	ND	1.04	5.84	9.71		B7L0016	04-Dec-17	0.248 L	08-Dec-17 13:11	1
PFOS	ND	1.01	5.84	9.71		B7L0016	04-Dec-17	0.248 L	08-Dec-17 13:11	1
b aoele5 Stan5ay5s	TEpe	% RecrveyE	bimits	Qualifieys	Batcd	Pxyacte5	Samp Size	AnalEze5	Dilutirn	
13C2-PFHxA	SURR	104	70 - 130		B7L0016	04-Dec-17	0.248 L	08-Dec-17 13:11	1	

DL - Detection Limit

LOD - Limit of Detection  
LOQ - Limit of quantitation

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

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

**Sample ID: CH-AT-2FB21-777L** **PM h etdr5 13L**

<b>Client Data</b>				<b>baoryatryEData</b>			
Name:	C2 HM 2 ill	Matrix:	Drinking Water	Lab Sample:	1701813-1H	Column:	BE2 C18
Project:	CTO-08/MCOLF ATLANTIC PFAS INV.	Date Collected:	10-Nov-17 13:51	Date Received:	01-Dec-17 09:50		

AnalEte	Crnc. (ng/b)	Db	bOD	bOQ	Qualifieys	Batcd	Pxyacte5	Samp Size	AnalEze5	Dilutirn
PFBS	ND	0.5H7	5.8H	9.43		B7L0014	06-Dec-17	0.H40 L	08-Dec-17 13:15	1
PFOA	ND	1.05	5.8H	9.43		B7L0014	06-Dec-17	0.H40 L	08-Dec-17 13:15	1
PFOS	ND	1.00	5.8H	9.43		B7L0014	06-Dec-17	0.H40 L	08-Dec-17 13:15	1
b aoele5 Stan5ay5s	TEpe	% RecrveyE	bimits	Qualifieys	Batcd	Pxyacte5	Samp Size	AnalEze5	Dilutirn	
13CHPF2 xA	SURR	100	70 - 130		B7L0014	06-Dec-17	0.H40 L	08-Dec-17 13:15	1	

DL - Detection Limit

LOD - Limit of Detection  
LOQ - Limit of quantitation

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

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

**Sample ID: CH-AT-2RW26-1117** **EPA Method 537**

Client Data				Laboratory Data			
Name:	CH2M Hill	Matrix:	Drinking Water	Lab Sample:	1701813-13	Column:	BEH C18
Project:	CTO-08/MCOLF ATLANTIC PFAS INV.	Date Collected:	29-Nov-17 15:01	Date Received:	01-Dec-17 09:50		

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.530	5.84	9.70		B7L0016	04-Dec-17	0.248 L	08-Dec-17 13:36	1
PFOA	ND	1.04	5.84	9.70		B7L0016	04-Dec-17	0.248 L	08-Dec-17 13:36	1
PFOS	ND	1.01	5.84	9.70		B7L0016	04-Dec-17	0.248 L	08-Dec-17 13:36	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	101	70 - 130			B7L0016	04-Dec-17	0.248 L	08-Dec-17 13:36	1

DL - Detection Limit

LOD - Limit of Detection  
LOQ - Limit of quantitation

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

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

**Sample ID: CH-AT-2FB26-1117** **EPA Method 537**

Client Data				Laboratory Data			
Name:	C2 uM 2 ill	Matrix:	DriBgiBW9 ater	Lab Sample:	1701813-1H	ColnmB:	Ek2 C18
Project:	CTO-08/MCOLF ATLANTIC PFAS INV.	Date Collected:	uv-No5-17 1H01	Date Recei5ed:	01-Dec-17 0v:HD		

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFES	ND	0.Hv	H8H	v.48		E7L0014	06-Dec-17	0.u68 L	08-Dec-17 13:Hv	1
PFOA	ND	1.06	H8H	v.48		E7L0014	06-Dec-17	0.u68 L	08-Dec-17 13:Hv	1
PFOS	ND	1.01	H8H	v.48		E7L0014	06-Dec-17	0.u68 L	08-Dec-17 13:Hv	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13Cu-PF2 xA	SURR	v4.v	70 - 130			E7L0014	06-Dec-17	0.u68 L	08-Dec-17 13:Hv	1

DL - DetectioBLimit	LOD - Limit of DetectioB	LCL-UCL- Lower coBtrol limit - npper coBtrol limit	9 heBreported, PF2 xS, PFOA aBl PFOS iBclnde both liBear aBl braBched isomers.
	LOQ - Limit of qnaBitatioB	Results reported to the DL.	OBly the liBear isomer is reported for all other aBalytes.

**Sample ID: CH-AT-2RW21-7771** **EPA Method 531**

Client Data				Laboratory Data			
Name:	C2 uM 2 ill	Matrix:	DriBgiBW9 ater	Lab Sample:	1701813-1H	ColnmB:	Ek2 C18
Project:	CTO-08/MCOLF ATLANTIC PFAS INV.	Date Collected:	uv-No5-17 1RFB	Date 4 ecei5ed:	01-Dec-17 0v:R0		

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFES	ND	0.R30	R86	v.71		E7L0016	0HDec-17	0.uH7 L	08-Dec-17 1R:01	1
PFOA	ND	1.0H	R86	v.71		E7L0016	0HDec-17	0.uH7 L	08-Dec-17 1R:01	1
PFOS	ND	1.01	R86	v.71		E7L0016	0HDec-17	0.uH7 L	08-Dec-17 1R:01	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13Cu-PF2 xA	SU44	vv.0	70 - 130			E7L0016	0HDec-17	0.uH7 L	08-Dec-17 1R:01	1

DL - DetectioBLimit

LOD - Limit of DetectioB  
LOQ - Limit of qnaBitatioB

LCL-UCL- Lower coBrol limit - npper coBrol limit  
4 esnlts reported to the DL.

9 heBreported, PF2 xS, PFOA aBl PFOS iBclnde both liBear aBl braBched isomers.  
OBly the liBear isomer is reported for all other aBalytes.



**Sample ID: CH-AT-2FB21-7771** **EPA Method 531**

Client Data				Laboratory Data			
Name:	C2 uM 2 ill	Matrix:	DriBgiBW9 ater	Lab Sample:	1701813-1H	ColnmB:	Ek2 C18
Project:	CTO-08/MCOLF ATLANTIC PFAS INV.	Date Collected:	uv-No5-17 1R43	Date 6 ecei5ed:	01-Dec-17 0v:R0		

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFES	ND	0.R34	Rv0	v.81		E7L001H	04-Dec-17	0.u44 L	08-Dec-17 1R:13	1
PFOA	ND	1.0H	Rv0	v.81		E7L001H	04-Dec-17	0.u44 L	08-Dec-17 1R:13	1
PFOS	ND	1.0u	Rv0	v.81		E7L001H	04-Dec-17	0.u44 L	08-Dec-17 1R:13	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
<sup>13</sup> Cu-PF2 xA	SU6 6	10v	70 - 130			E7L001H	04-Dec-17	0.u44 L	08-Dec-17 1R:13	1

DL - DetectioBLimit	LOD - Limit of DetectioB	LCL-UCL- Lower coBtrol limit - npper coBtrol limit		9 heBreported, PF2 xS, PFOA aBl PFOS iBclnde both liBear aBl braBched isomers.
	LOQ - Limit of qnaBitatioB	6 esnlts reported to the DL.		OBly the liBear isomer is reported for all other aBalytes.

**Sample ID: CH-AT-2RW28-1117** **EPA Method 537**

Client Data				Laboratory Data			
Name:	CH2M Hill	Matrix:	Drinking Water	Lab Sample:	1701813-17	Column:	BEH C18
Project:	CTO-08/MCOLF ATLANTIC PFAS INV.	Date Collected:	29-Nov-17 15:2R	Date received:	01-Dec-17 09:R0		

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.R35	R92	9.83		B7L0015	06-Dec-17	0.26RL	08-Dec-17 1R:25	1
PFOA	ND	1.05	R92	9.83		B7L0015	06-Dec-17	0.26RL	08-Dec-17 1R:25	1
PFOS	ND	1.02	R92	9.83		B7L0015	06-Dec-17	0.26RL	08-Dec-17 1R:25	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SU44	97.R	70 - 130			B7L0015	06-Dec-17	0.26RL	08-Dec-17 1R:25	1

DL - Detection Limit	LOD - Limit of Detection	LCL-UCL- Lower control limit - upper control limit	When reported, PFHxS, PFOA and PFOS include both linear and branched isomers.
	LOQ - Limit of quantitation	4 results reported to the DL.	Only the linear isomer is reported for all other analytes.

**Sample ID: CH-AT-2FB28-1117** **EPA Method 537**

Client Data				Laboratory Data			
Name:	CH2M Hill	Matrix:	Drinking Water	Lab Sample:	1701813-18	Column:	BEH C18
Project:	CTO-08/MCOLF ATLANTIC PFAS INV.	Date Collected:	29-Nov-17 15:2R	Date received:	01-Dec-17 09:R0		

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.1R9	R73	9.R5		B7L0015	06-Dec-17	0.25RL	08-Dec-17 1R:38	1
PFOA	ND	1.02	R73	9.R5		B7L0015	06-Dec-17	0.25RL	08-Dec-17 1R:38	1
PFOS	ND	0.98R	R73	9.R5		B7L0015	06-Dec-17	0.25RL	08-Dec-17 1R:38	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SU44	100	70 - 130			B7L0015	06-Dec-17	0.25RL	08-Dec-17 1R:38	1

DL - Detection Limit	LOD - Limit of Detection	LCL-UCL- Lower control limit - upper control limit	When reported, PFHxS, PFOA and PFOS include both linear and branched isomers.
	LOQ - Limit of quantitation	4 results reported to the DL.	Only the linear isomer is reported for all other analytes.

**Sample ID: CH-AT-2RW29-1117** **EPA Method 537**

Client Data				Laboratory Data			
Name:	C2 uM 2 ill	Matrix:	DriBgiBW9 ater	Lab Sample:	1701813-1H	ColnmB:	Ek2 C18
Project:	CTO-08/MCOLF ATLANTIC PFAS INV.	Date Collected:	uHNov-17 15:R4	Date 6 eceived:	01-Dec-17 0HR0		

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFES	ND	0.R57	4.u7	10.4		E7L0015	04-Dec-17	0.u37 L	08-Dec-17 1R:41	1
PFOA	ND	1.1R	4.u7	10.4		E7L0015	04-Dec-17	0.u37 L	08-Dec-17 1R:41	1
PFOS	ND	1.10	4.u7	10.4		E7L0015	04-Dec-17	0.u37 L	08-Dec-17 1R:41	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
<sup>13</sup> Cu-PF2 xA	SU6 6	105	70 - 130			E7L0015	04-Dec-17	0.u37 L	08-Dec-17 1R:41	1

DL - DetectioBLimit	LOD - Limit of DetectioB	LCL-UCL- Lower coBtrol limit - npper coBtrol limit	9 heBreported, PF2 xS, PFOA aBl PFOS iBclnde both liBear aBl braBched isomers.
	LOQ - Limit of qnaBitatioB	6 esnlts reported to the DL.	OBly the liBear isomer is reported for all other aBalytes.

**Sample ID: CH-AT-2FB29-1117** **EPA Method 537**

Client Data				Laboratory Data			
Name:	C2 HM 2 ill	Matrix:	Drinking Water	Lab Sample:	1701813-HD	Column:	BE2 C18
Project:	CTO-08/MCOLF ATLANTIC PFAS INV.	Date Collected:	10-Nov-17 15:R4	Date received:	01-Dec-17 09:R0		

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.18	R7H	9.RR		B7L0015	04-Dec-17	0.154 L	11-Dec-17 11H8	1
PFOA	ND	1.0H	R7H	9.RR		B7L0015	04-Dec-17	0.154 L	11-Dec-17 11H8	1
PFOS	ND	0.98H	R7H	9.RR		B7L0015	04-Dec-17	0.154 L	11-Dec-17 11H8	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13CH-PF2 xA	SU66	103	70 - 130			B7L0015	04-Dec-17	0.154 L	11-Dec-17 11H8	1

DL - Detection Limit

LOD - Limit of Detection  
LOQ - Limit of quantitation

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

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

## **DATA QUALIFIERS & ABBREVIATIONS**

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

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

## CERTIFICATIONS

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

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

## NELAP Accredited Test Methods

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

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

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

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

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



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





Submit by Email\*

11/30/17 COOLER #1

FOR LABORATORY USE ONLY

Laboratory Project ID: 1701813 Temp 0.7 °C
Storage ID: WR-2 Storage Secured: Yes [X] No [ ]

CHAIN OF CUSTODY RECORD

Project I.D.: CTO-08/MCOLF ATLANTIC PFAS INV. P.O. #: 100006-7-106051

Sampler: K. Rebe/A. Seay C. CONOVER / M. CLAY (Name)

TAT: (Check One) Standard [ ] 21 days Rush (surcharge may apply) [ ] 14 days [X] 7 days Specify:

Invoice to: Name Tiffany Hill Company CH2M HILL Address 1100 NE Circle Blvd City Corvallis State OR Zip Ph# 541-768-3109 Fax #
Relinquished by: (Printed Name and Signature) David Lubell Date: 11/30/17 Time: 1500 Received by: (Signature and Printed Name) B. Benedict Date: 12/01/17 Time: 0944

See "Sample Log-in Checklist" for additional sample information

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

Method of Shipment: FEDEX

Add Analysis(es) Requested

ATTN: Martha Maier

Tracking No.: 7886 9190 9055

Container(s)

Table with columns: Sample ID, Date, Time, Location/Sample Description, Quantity, Type, Matrix, 2378-TCDD, 2378-TCDF, PCDD/PCDF, 2378-TCDD, 2378-TCDF, PCDD/PCDF, 2378-TCDD, 2378-TCDF, PCDD/PCDF, TOTALS, COPLANAR PCBs, 209 CONGENERS, PBDE, PAH, WHO-29, PFOA PFOS PFBS. Rows include sample IDs like CH-AT-2RW25-1117 and CH-AT-2FB25-1117.

Special Instructions/Comments: PFOA/PFOS/PFBS DRINKING WATER ANALYSIS

SEND DOCUMENTATION AND RESULTS TO:

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

Container Types: A = 1 Liter Amber, G = Glass Jar P = PUF, T = MM5 Train, O = Other

\*Bottle Preservative Type: [ ] T = Thiosulfate, [X] O = Other Trizma

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

Sample Log-in Checklist

Vista Work Order #: 1701813 TAT 7

Samples Arrival:	Date/Time 12/1/17 0940	Initials: BAB	Location: WR-2 Shelf/Rack: NA
Logged In:	Date/Time 12/1/17 0959	Initials: SR	Location: WR-2 Shelf/Rack: B5
Delivered By:	<input checked="" type="checkbox"/> FedEx	<input type="checkbox"/> UPS	<input type="checkbox"/> On Trac
		<input type="checkbox"/> GSO	<input type="checkbox"/> DHL
		<input type="checkbox"/> Hand Delivered	<input type="checkbox"/> Other
Preservation:	<input checked="" type="checkbox"/> Ice	<input type="checkbox"/> Blue Ice	<input type="checkbox"/> Dry Ice
	<input type="checkbox"/> None		
Temp °C:	0.6 (uncorrected)	Time: 0946	Thermometer ID: IR-1
Temp °C:	0.7 (corrected)	Probe used: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	

	YES	NO	NA
Adequate Sample Volume Received?	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?	✓		
Shipping Documentation Present?	✓		
Airbill	Trk # 7886 91909055	✓	
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="checkbox"/> Trizma	<input type="checkbox"/> None
		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Shipping Container	<input checked="" type="checkbox"/> Vista	<input type="checkbox"/> Client	<input type="checkbox"/> Retain
		<input type="checkbox"/> Return	<input type="checkbox"/> Dispose

Comments:

December 11, 2017

**Vista Work Order No. 1701813**

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

Dear Ms. Hill,

Enclosed are the results for the sample set received at Vista Analytical Laboratory on December 01, 2017. This sample set was analyzed on a rush turn-around time, under your Project Name 'CTO-08/MCOLF ATLANTIC PFAS INV.'.

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

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

Sincerely,



Martha Maier  
Laboratory Director



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

## **Vista Work Order No. 1701813**

### **Case Narrative**

#### **Sample Condition on Receipt:**

Twenty drinking water samples were received in good condition and within the method temperature requirements. The samples were received and stored securely in accordance with Vista standard operating procedures and EPA methodology.

#### **Analytical Notes:**

##### **EPA Method 537**

Samples "CH-AT-2RW26-1117" and ""CH-AT-2RW27-1117"" contained particulate and were centrifuged prior to extraction.

The samples were extracted and analyzed for PFBS, PFOA and PFOS using EPA Method 537.

##### **Holding Times**

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

##### **Quality Control**

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

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

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

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# Sample Inventory Report

Vista Sample ID	Client Sample ID	Sampled	Received	Components/Containers
1701813-01	CH-AT-2RW20-1117	29-Nov-17 09:15	01-Dec-17 09:40	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1701813-02	CH-AT-2FB20-1117	29-Nov-17 09:15	01-Dec-17 09:40	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1701813-03	CH-AT-2RW21-1117	29-Nov-17 09:27	01-Dec-17 09:40	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1701813-04	CH-AT-2FB21-1117	29-Nov-17 09:27	01-Dec-17 09:40	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1701813-05	CH-AT-2RW22-1117	29-Nov-17 10:07	01-Dec-17 09:40	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1701813-06	CH-AT-2FB22-1117	29-Nov-17 10:07	01-Dec-17 09:40	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1701813-07	CH-AT-2RW23-1117	29-Nov-17 10:46	01-Dec-17 09:40	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1701813-08	CH-AT-2FB23-1117	29-Nov-17 10:46	01-Dec-17 09:40	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1701813-09	CH-AT-2RW24-1117	29-Nov-17 13:12	01-Dec-17 09:40	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1701813-10	CH-AT-2FB24-1117	29-Nov-17 13:12	01-Dec-17 09:40	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1701813-11	CH-AT-2RW25-1117	29-Nov-17 13:41	01-Dec-17 09:40	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1701813-12	CH-AT-2FB25-1117	29-Nov-17 13:41	01-Dec-17 09:40	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1701813-13	CH-AT-2RW26-1117	29-Nov-17 14:01	01-Dec-17 09:40	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1701813-14	CH-AT-2FB26-1117	29-Nov-17 14:01	01-Dec-17 09:40	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1701813-15	CH-AT-2RW27-1117	29-Nov-17 14:53	01-Dec-17 09:40	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1701813-16	CH-AT-2FB27-1117	29-Nov-17 14:53	01-Dec-17 09:40	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1701813-17	CH-AT-2RW28-1117	29-Nov-17 16:24	01-Dec-17 09:40	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1701813-18	CH-AT-2FB28-1117	29-Nov-17 16:24	01-Dec-17 09:40	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1701813-19	CH-AT-2RW29-1117	29-Nov-17 16:45	01-Dec-17 09:40	HDPE Bottle, 250 mL HDPE Bottle, 250 mL
1701813-20	CH-AT-2FB29-1117	29-Nov-17 16:45	01-Dec-17 09:40	HDPE Bottle, 250 mL

Vista Project: 1701813

Client Project: CTO-08/MCOLF ATLANTIC PFAS INV.



# Sample Inventory Report

<b>Vista Sample ID</b>	<b>Client Sample ID</b>	<b>Sampled</b>	<b>Received</b>	<b>Components/Containers</b>
1701813-20	CH-AT-2FB29-1117	29-Nov-17 16:45	01-Dec-17 09:40	HDPE Bottle, 250 mL

## **ANALYTICAL RESULTS**

<b>Sample ID: LRB</b>	<b>EPA Method 537</b>
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<b>Client Data</b>	<b>Laboratory Data</b>
Name: CH2M Hill Project: CTO-08/MCOLF ATLANTIC PFAS INV.	Matrix: Drinking Water Lab Sample: B7L0016-BLK1 Column: BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.443	5.00	10.0		B7L0016	05-Dec-17	0.250 L	08-Dec-17 00:09	1
PFOA	ND	1.08	5.00	10.0		B7L0016	05-Dec-17	0.250 L	08-Dec-17 00:09	1
PFOS	ND	1.04	5.00	10.0		B7L0016	05-Dec-17	0.250 L	08-Dec-17 00:09	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	95.1	70 - 130		B7L0016	05-Dec-17	0.250 L	08-Dec-17 00:09	1

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

Sample ID: LFBD											EPA Method 537				
Name: CH2M Hill			Lab Sample: B7L0016-BS1/B7L0016-BSD1								Date Extracted: 05-Dec-17				
Project: CTO-08/MCOLF ATLANTIC PFAS INV.			QC Batch: B7L0016					Column: BEH C18							
Matrix: Drinking Water			Samp Size: 0.250/0.250 L												
Analyte	LCS (ng/L)	LCS Spike Amt	LCS % Rec	LCS Quals	LCSD (ng/L)	LCSD Spike Amt	LCSD % Rec	RPD	LCSD Quals	%Rec Limits	RPD Limits	LCS Analyzed	LCS Dil	LCSD Analyzed	LCSD Dil
PFBS	37.2	35.4	105		33.4	35.4	94.4	10.6		70-130	30	07-Dec-17 23:56	1	08-Dec-17 00:21	1
PFOA	44.9	40.0	112		46.4	40.0	116	3.28		70-130	30	07-Dec-17 23:56	1	08-Dec-17 00:21	1
PFOS	37.0	37.0	99.9		36.7	37.0	99.2	0.770		70-130	30	07-Dec-17 23:56	1	08-Dec-17 00:21	1
Labeled Standards	Type		LCS % Rec	LCS Quals			LCSD % Rec		LCSD Quals	Limits		LCS Analyzed	LCS Dil	LCSD Analyzed	LCSD Dil
13C2-PFHxA	SURR		99.5				109			70-130		07-Dec-17 23:56	1	08-Dec-17 00:21	1

**Sample ID: CH-AT-2RW20-1117** **EPA Method 537**

Client Data				Laboratory Data			
Name:	CH2M Hill	Matrix:	Drinking Water	Lab Sample:	1701813-01	Column:	BEH C18
Project:	CTO-08/MCOLF ATLANTIC PFAS INV.	Date Collected:	29-Nov-17 09:15	Date Received:	01-Dec-17 09:40		

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.429	4.84	9.68		B7L0016	05-Dec-17	0.258 L	08-Dec-17 00:33	1
PFOA	ND	1.05	4.84	9.68		B7L0016	05-Dec-17	0.258 L	08-Dec-17 00:33	1
PFOS	ND	1.01	4.84	9.68		B7L0016	05-Dec-17	0.258 L	08-Dec-17 00:33	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	106	70 - 130		B7L0016	05-Dec-17	0.258 L	08-Dec-17 00:33	1

DL - Detection Limit

LOD - Limit of Detection  
LOQ - Limit of quantitation

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

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

**Sample ID: CH-AT-2FB20-1117** **EPA Method 537**

Client Data				Laboratory Data			
Name:	C2 HM 2 ill	Matrix:	Drinking Water	Lab Sample:	1701813-0H	Column:	BE2 C18
Project:	CTO-08/MCOLF ATLANTIC PFAS INV.	Date Collected:	10-Nov-17 09:15	Date Received:	01-Dec-17 09:40		

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.4HH	4.76	9.5H		B7L0016	05-Dec-17	0.H3 L	08-Dec-17 00:46	1
PFOA	ND	1.03	4.76	9.5H		B7L0016	05-Dec-17	0.H3 L	08-Dec-17 00:46	1
PFOS	ND	0.990	4.76	9.5H		B7L0016	05-Dec-17	0.H3 L	08-Dec-17 00:46	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13CHPF2 xA	SURR	105	70 - 130			B7L0016	05-Dec-17	0.H3 L	08-Dec-17 00:46	1

DL - Detection Limit	LOD - Limit of Detection	LCL-UCL- Lower control limit - upper control limit	When reported, PF2 xS, PFOA and PFOS include both linear and branched isomers.
	LOQ - Limit of quantitation	Results reported to the DL.	Only the linear isomer is reported for all other analytes.

**Sample ID: CH-AT-2RW21-1117** **EPA Method 537**

Client Data				Laboratory Data			
Name:	CH2M Hill	Matrix:	Drinking Water	Lab Sample:	1701813-03	Column:	BEH C18
Project:	CTO-08/MCOLF ATLANTIC PFAS INV.	Date Collected:	29-Nov-17 09:27	Date received:	01-Dec-17 09:R0		

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.030	0.84	9.71		B7L0014	06-Dec-17	0.267 L	08-Dec-17 00:68	1
PFOA	ND	1.06	0.84	9.71		B7L0014	06-Dec-17	0.267 L	08-Dec-17 00:68	1
PFOS	ND	1.01	0.84	9.71		B7L0014	06-Dec-17	0.267 L	08-Dec-17 00:68	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SU5 5	100	70 - 130			B7L0014	06-Dec-17	0.267 L	08-Dec-17 00:68	1

DL - Detection Limit	LOD - Limit of Detection	LCL-UCL- Lower control limit - upper control limit	When reported, PFHxS, PFOA and PFOS include both linear and branched isomers.
	LOQ - Limit of quantitation	5 results reported to the DL.	Only the linear isomer is reported for all other analytes.

**Sample ID: CH-AT-2FB21-1117** **EPA Method 537**

Client Data				Laboratory Data			
Name:	C2 uM 2 ill	Matrix:	DriBgiBW9 ater	Lab Sample:	1701813-0H	ColnmB:	Ek2 C18
Project:	CTO-08/MCOLF ATLANTIC PFAS INV.	Date Collected:	uv-No5-17 0v:u7	Date Recei5ed:	01-Dec-17 0v:HD		

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFES	ND	0.1B4	Hvu	v.86		E7L0014	06-Dec-17	0.u6HL	08-Dec-17 01:11	1
PFOA	ND	1.04	Hvu	v.86		E7L0014	06-Dec-17	0.u6HL	08-Dec-17 01:11	1
PFOS	ND	1.0u	Hvu	v.86		E7L0014	06-Dec-17	0.u6HL	08-Dec-17 01:11	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13Cu-PF2 xA	SURR	v4.0	70 - 130			E7L0014	06-Dec-17	0.u6HL	08-Dec-17 01:11	1

DL - DetectioBLimit      LOD - Limit of DetectioB      LCL-UCL- Lower coBrol limit - npper coBrol limit      9 heBreported, PF2 xS, PFOA aBl PFOS iBclnde both liBear aBl braBhed isomers.  
 LOQ - Limit of qnaBitatioB      Results reported to the DL.      OBly the liBear isomer is reported for all other aBalytes.



**Sample ID: CH-AT-2RW22-1117** **EPA Method 537**

Client Data				Laboratory Data			
Name:	C2 uM 2 ill	Matrix:	DriBgiBW9 ater	Lab Sample:	1701813-0H	ColnmB:	Ek2 C18
Project:	CTO-08/MCOLF ATLANTIC PFAS INV.	Date Collected:	uv-No5-17 10:07	Date Recei5ed:	01-Dec-17 0v:40		

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFES	ND	0.434	4.8v	v.7v		E7L0016	0HDec-17	0.uHHL	08-Dec-17 01:u3	1
PFOA	ND	1.06	4.8v	v.7v		E7L0016	0HDec-17	0.uHHL	08-Dec-17 01:u3	1
PFOS	ND	1.0u	4.8v	v.7v		E7L0016	0HDec-17	0.uHHL	08-Dec-17 01:u3	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13Cu-PF2 xA	SURR	108	70 - 130			E7L0016	0HDec-17	0.uHHL	08-Dec-17 01:u3	1

DL - DetectioBLimit      LOD - Limit of DetectioB      LCL-UCL- Lower coBtrol limit - npper coBtrol limit      9 heBreported, PF2 xS, PFOA aBl PFOS iBclnde both liBear aBl braBched isomers.  
 LOQ - Limit of qnaBitatioB      Results reported to the DL.      OBly the liBear isomer is reported for all other aBalytes.

**Sample ID: CH-AT-2FB22-1117** **EPA Method 537**

Client Data				Laboratory Data			
Name:	C2 uM 2 ill	Matrix:	DriBgiBW9 ater	Lab Sample:	1701813-0H	ColnmB:	Ek2 C18
Project:	CTO-08/MCOLF ATLANTIC PFAS INV.	Date Collected:	uv-No5-17 10:07	Date Recei5ed:	01-Dec-17 0v:40		

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFES	ND	0.43v	4.vH	v.v1		E7L001H	06-Dec-17	0.u6u L	08-Dec-17 01:3H	1
PFOA	ND	1.07	4.vH	v.v1		E7L001H	06-Dec-17	0.u6u L	08-Dec-17 01:3H	1
PFOS	ND	1.03	4.vH	v.v1		E7L001H	06-Dec-17	0.u6u L	08-Dec-17 01:3H	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
<sup>13</sup> Cu-PF2 xA	SURR	10H	70 - 130			E7L001H	06-Dec-17	0.u6u L	08-Dec-17 01:3H	1

DL - DetectioBLimit	LOD - Limit of DetectioB	LCL-UCL- Lower coBtrol limit - npper coBtrol limit	9 heBreported, PF2 xS, PFOA aBil PFOS iBclnde both liBear aBil braBched isomers.
	LOQ - Limit of qnaBtitatioB	Results reported to the DL.	OBly the liBear isomer is reported for all other aBalytes.

**Sample ID: CH-AT-2RW21-777L** **PMA h etdr5 31L**

<b>Client Data</b>				<b>baoryatryEData</b>			
Name:	CH2M Hill	Matrix:	Drinking Water	Lab Sample:	1701813-07	Column:	BEH C18
Project:	CTO-08/MCOLF ATLANTIC PFAS INV.	Date Collected:	29-Nov-17 10:5R	Date received:	01-Dec-17 09:50		

AnalEte	Crnc. (ng/b)	Db	bOD	bOQ	Qualifieys	Batcd	Pxyacte5	Samp Size	AnalEze5	Dilutirn
PFBS	ND	0.529	5.85	9.R8		B7L001R	06-Dec-17	0.268 L	08-Dec-17 01:58	1
PFOA	ND	1.06	5.85	9.R8		B7L001R	06-Dec-17	0.268 L	08-Dec-17 01:58	1
PFOS	ND	1.01	5.85	9.R8		B7L001R	06-Dec-17	0.268 L	08-Dec-17 01:58	1
b aoele5 Stan5ay5s	TEpe	% RecrveyE	bimits	Qualifieys	Batcd	Pxyacte5	Samp Size	AnalEze5	Dilutirn	
13C2-PFHxA	SU44	100	70 - 130		B7L001R	06-Dec-17	0.268 L	08-Dec-17 01:58	1	

DL - Detection Limit

LOD - Limit of Detection  
LOQ - Limit of quantitation

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

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

**Sample ID: CH-AT-2FB21-777L** **PM h etdr5 31L**

<b>Client Data</b>				<b>baoryatryEData</b>			
Name:	CH2M Hill	Matrix:	Drinking Water	Lab Sample:	1701813-08	Column:	BEH C18
Project:	CTO-08/MCOLF ATLANTIC PFAS INV.	Date Collected:	29-Nov-17 10:5R	Date received:	01-Dec-17 09:50		

AnalEte	Crnc. (ng/b)	Db	bOD	bOQ	Qualifieys	Batcd	Pxyacte5	Samp Size	AnalEze5	Dilutirn
PFBS	ND	0.555	6.01	10.0		B7L001R	06-Dec-17	0.259 L	08-Dec-17 02:01	1
PFOA	ND	1.08	6.01	10.0		B7L001R	06-Dec-17	0.259 L	08-Dec-17 02:01	1
PFOS	ND	1.05	6.01	10.0		B7L001R	06-Dec-17	0.259 L	08-Dec-17 02:01	1
b aoele5 Stan5ay5s	TEpe	% RecrveyE	bimits	Qualifieys	Batcd	Pxyacte5	Samp Size	AnalEze5	Dilutirn	
13C2-PFHxA	SU44	106	70 - 130		B7L001R	06-Dec-17	0.259 L	08-Dec-17 02:01	1	

DL - Detection Limit

LOD - Limit of Detection  
LOQ - Limit of quantitation

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

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

**Sample ID: CH-AT-2RW24-1117** **EPA Method 537**

Client Data				Laboratory Data			
Name:	C2 uM 2 ill	Matrix:	DriBgiBW9 ater	Lab Sample:	1701813-OH	ColnmB:	Ek2 C18
Project:	CTO-08/MCOLF ATLANTIC PFAS INV.	Date Collected:	uHNov-17 13:1u	Date 5 eceived:	01-Dec-17 0HR0		

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFES	ND	0.R3R	RHD	H81		E7L0014	06-Dec-17	0.u66 L	08-Dec-17 1u:R4	1
PFOA	ND	1.04	RHD	H81		E7L0014	06-Dec-17	0.u66 L	08-Dec-17 1u:R4	1
PFOS	ND	1.0u	RHD	H81		E7L0014	06-Dec-17	0.u66 L	08-Dec-17 1u:R4	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13Cu-PF2 xA	SU5 5	H.3	70 - 130			E7L0014	06-Dec-17	0.u66 L	08-Dec-17 1u:R4	1

DL - DetectioBLimit	LOD - Limit of DetectioB	LCL-UCL- Lower coBrol limit - npper coBrol limit		9 heBreported, PF2 xS, PFOA aBl PFOS iBlnde both liBear aBl braBhed isomers.
	LOQ - Limit of qnaBtitatioB	5 esnlts reported to the DL.		OBly the liBear isomer is reported for all other aBalytes.

**Sample ID: CH-AT-2FB24-1117** **EPA Method 537**

Client Data				Laboratory Data			
Name:	CH2M Hill	Matrix:	Drinking Water	Lab Sample:	1701813-10	Column:	BEH C18
Project:	CTO-08/MCOLF ATLANTIC PFAS INV.	Date Collected:	29-Nov-17 13:12	Date received:	01-Dec-17 09:R0		

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.R22	R74	9.62		B7L0014	06-Dec-17	0.243 L	11-Dec-17 12:16	1
PFOA	ND	1.03	R74	9.62		B7L0014	06-Dec-17	0.243 L	11-Dec-17 12:16	1
PFOS	ND	0.990	R74	9.62		B7L0014	06-Dec-17	0.243 L	11-Dec-17 12:16	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SU5 5	97.R	70 - 130			B7L0014	06-Dec-17	0.243 L	11-Dec-17 12:16	1

DL - Detection Limit	LOD - Limit of Detection	LCL-UCL- Lower control limit - upper control limit	When reported, PFHxS, PFOA and PFOS include both linear and branched isomers.
	LOQ - Limit of quantitation	5 results reported to the DL.	Only the linear isomer is reported for all other analytes.

**Sample ID: CH-AT-2RW21-777L** **PMA h etdr5 13L**

<b>Client Data</b>				<b>baoryatryEData</b>			
Name:	CH2M Hill	Matrix:	Drinking Water	Lab Sample:	1701813-11	Column:	BEH C18
Project:	CTO-08/MCOLF ATLANTIC PFAS INV.	Date Collected:	29-Nov-17 13:51	Date Received:	01-Dec-17 09:50		

AnalEte	Crnc. (ng/b)	Db	bOD	bOQ	Qualifieys	Batcd	Pxyacte5	Samp Size	AnalEze5	Dilutirn
PFBS	ND	0.530	5.84	9.71		B7L0016	04-Dec-17	0.248 L	08-Dec-17 13:11	1
PFOA	ND	1.04	5.84	9.71		B7L0016	04-Dec-17	0.248 L	08-Dec-17 13:11	1
PFOS	ND	1.01	5.84	9.71		B7L0016	04-Dec-17	0.248 L	08-Dec-17 13:11	1
b aoele5 Stan5ay5s	TEpe	% RecrveyE	bimits	Qualifieys	Batcd	Pxyacte5	Samp Size	AnalEze5	Dilutirn	
13C2-PFHxA	SURR	104	70 - 130		B7L0016	04-Dec-17	0.248 L	08-Dec-17 13:11	1	

DL - Detection Limit

LOD - Limit of Detection  
LOQ - Limit of quantitation

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

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

**Sample ID: CH-AT-2FB21-777L** **PM h etdr5 13L**

<b>Client Data</b>				<b>baoryatryEData</b>			
Name:	C2 HM 2 ill	Matrix:	Drinking Water	Lab Sample:	1701813-1H	Column:	BE2 C18
Project:	CTO-08/MCOLF ATLANTIC PFAS INV.	Date Collected:	10-Nov-17 13:51	Date Received:	01-Dec-17 09:50		

AnalEte	Crnc. (ng/b)	Db	bOD	bOQ	Qualifieys	Batcd	Pxyacte5	Samp Size	AnalEze5	Dilutirn
PFBS	ND	0.5H7	5.8H	9.43		B7L0014	06-Dec-17	0.H40 L	08-Dec-17 13:15	1
PFOA	ND	1.05	5.8H	9.43		B7L0014	06-Dec-17	0.H40 L	08-Dec-17 13:15	1
PFOS	ND	1.00	5.8H	9.43		B7L0014	06-Dec-17	0.H40 L	08-Dec-17 13:15	1
b aoele5 Stan5ay5s	TEpe	% RecrveyE	bimits	Qualifieys	Batcd	Pxyacte5	Samp Size	AnalEze5	Dilutirn	
13CHPF2 xA	SURR	100	70 - 130		B7L0014	06-Dec-17	0.H40 L	08-Dec-17 13:15	1	

DL - Detection Limit      LOD - Limit of Detection      LCL-UCL- Lower control limit - upper control limit      When reported, PF2 xS, PFOA and PFOS include both linear and branched isomers.  
 LOQ - Limit of quantitation      Results reported to the DL.      Only the linear isomer is reported for all other analytes.



**Sample ID: CH-AT-2RW26-1117** **EPA Method 537**

Client Data				Laboratory Data			
Name:	CH2M Hill	Matrix:	Drinking Water	Lab Sample:	1701813-13	Column:	BEH C18
Project:	CTO-08/MCOLF ATLANTIC PFAS INV.	Date Collected:	29-Nov-17 15:01	Date Received:	01-Dec-17 09:50		

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.530	5.84	9.70		B7L0016	04-Dec-17	0.248 L	08-Dec-17 13:36	1
PFOA	ND	1.04	5.84	9.70		B7L0016	04-Dec-17	0.248 L	08-Dec-17 13:36	1
PFOS	ND	1.01	5.84	9.70		B7L0016	04-Dec-17	0.248 L	08-Dec-17 13:36	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	101	70 - 130			B7L0016	04-Dec-17	0.248 L	08-Dec-17 13:36	1

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

**Sample ID: CH-AT-2FB26-1117** **EPA Method 537**

Client Data				Laboratory Data			
Name:	C2 uM 2 ill	Matrix:	DriBgiBW9 ater	Lab Sample:	1701813-1H	ColnmB:	Ek2 C18
Project:	CTO-08/MCOLF ATLANTIC PFAS INV.	Date Collected:	uv-No5-17 1H01	Date Recei5ed:	01-Dec-17 0v:HD		

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFES	ND	0.Hv	H8H	v.48		E7L0014	06-Dec-17	0.u68 L	08-Dec-17 13:Hv	1
PFOA	ND	1.06	H8H	v.48		E7L0014	06-Dec-17	0.u68 L	08-Dec-17 13:Hv	1
PFOS	ND	1.01	H8H	v.48		E7L0014	06-Dec-17	0.u68 L	08-Dec-17 13:Hv	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13Cu-PF2 xA	SURR	v4.v	70 - 130			E7L0014	06-Dec-17	0.u68 L	08-Dec-17 13:Hv	1

DL - DetectioBLimit

LOD - Limit of DetectioB  
LOQ - Limit of qnaBitatioB

LCL-UCL- Lower coBrol limit - npper coBrol limit  
Results reported to the DL.

9 heBreported, PF2 xS, PFOA aBl PFOS iBclnde both liBear aBl braBhed isomers.  
OBly the liBear isomer is reported for all other aBalytes.

**Sample ID: CH-AT-2RW21-7771** **EPA Method 531**

Client Data				Laboratory Data			
Name:	C2 uM 2 ill	Matrix:	DriBgiBW9 ater	Lab Sample:	1701813-1H	ColnmB:	Ek2 C18
Project:	CTO-08/MCOLF ATLANTIC PFAS INV.	Date Collected:	uv-No5-17 1RFB	Date 4 ecei5ed:	01-Dec-17 0v:R0		

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFES	ND	0.R30	R86	v.71		E7L0016	0HDec-17	0.uH7 L	08-Dec-17 1R:01	1
PFOA	ND	1.0H	R86	v.71		E7L0016	0HDec-17	0.uH7 L	08-Dec-17 1R:01	1
PFOS	ND	1.01	R86	v.71		E7L0016	0HDec-17	0.uH7 L	08-Dec-17 1R:01	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13Cu-PF2 xA	SU44	vv.0	70 - 130		E7L0016	0HDec-17	0.uH7 L	08-Dec-17 1R:01	1

DL - DetectioBLimit      LOD - Limit of DetectioB      LCL-UCL- Lower coBtrol limit - npper coBtrol limit      9 heBreported, PF2 xS, PFOA aBl PFOS iBclnde both liBear aBl braBched isomers.  
 LOQ - Limit of qnaBitatioB      4 esnlts reported to the DL.      OBly the liBear isomer is reported for all other aBalytes.

**Sample ID: CH-AT-2FB21-7771** **EPA Method 531**

Client Data				Laboratory Data			
Name:	C2 uM 2 ill	Matrix:	DriBgiBW9 ater	Lab Sample:	1701813-1H	ColnmB:	Ek2 C18
Project:	CTO-08/MCOLF ATLANTIC PFAS INV.	Date Collected:	uv-No5-17 1R43	Date 6 ecei5ed:	01-Dec-17 0v:R0		

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFES	ND	0.R34	Rv0	v.81		E7L001H	04-Dec-17	0.u44 L	08-Dec-17 1R:13	1
PFOA	ND	1.0H	Rv0	v.81		E7L001H	04-Dec-17	0.u44 L	08-Dec-17 1R:13	1
PFOS	ND	1.0u	Rv0	v.81		E7L001H	04-Dec-17	0.u44 L	08-Dec-17 1R:13	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
<sup>13</sup> Cu-PF2 xA	SU6 6	10v	70 - 130		E7L001H	04-Dec-17	0.u44 L	08-Dec-17 1R:13	1

DL - DetectioBLimit	LOD - Limit of DetectioB	LCL-UCL- Lower coBtrol limit - npper coBtrol limit	9 heBreported, PF2 xS, PFOA aBl PFOS iBclnde both liBear aBl braBched isomers.
	LOQ - Limit of qnaBtitatioB	6 esnlts reported to the DL.	OBly the liBear isomer is reported for all other aBalytes.

**Sample ID: CH-AT-2RW28-1117** **EPA Method 537**

Client Data				Laboratory Data			
Name:	CH2M Hill	Matrix:	Drinking Water	Lab Sample:	1701813-17	Column:	BEH C18
Project:	CTO-08/MCOLF ATLANTIC PFAS INV.	Date Collected:	29-Nov-17 15:2R	Date received:	01-Dec-17 09:R0		

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.R35	R92	9.83		B7L0015	06-Dec-17	0.26RL	08-Dec-17 1R:25	1
PFOA	ND	1.05	R92	9.83		B7L0015	06-Dec-17	0.26RL	08-Dec-17 1R:25	1
PFOS	ND	1.02	R92	9.83		B7L0015	06-Dec-17	0.26RL	08-Dec-17 1R:25	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SU44	97.R	70 - 130			B7L0015	06-Dec-17	0.26RL	08-Dec-17 1R:25	1

DL - Detection Limit	LOD - Limit of Detection	LCL-UCL- Lower control limit - upper control limit	When reported, PFHxS, PFOA and PFOS include both linear and branched isomers.
	LOQ - Limit of quantitation	4 results reported to the DL.	Only the linear isomer is reported for all other analytes.

**Sample ID: CH-AT-2FB28-1117** **EPA Method 537**

Client Data				Laboratory Data			
Name:	CH2M Hill	Matrix:	Drinking Water	Lab Sample:	1701813-18	Column:	BEH C18
Project:	CTO-08/MCOLF ATLANTIC PFAS INV.	Date Collected:	29-Nov-17 15:2R	Date received:	01-Dec-17 09:R0		

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.19	R73	9.5		B7L0015	06-Dec-17	0.25RL	08-Dec-17 1R:38	1
PFOA	ND	1.02	R73	9.5		B7L0015	06-Dec-17	0.25RL	08-Dec-17 1R:38	1
PFOS	ND	0.98R	R73	9.5		B7L0015	06-Dec-17	0.25RL	08-Dec-17 1R:38	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SU44	100	70 - 130			B7L0015	06-Dec-17	0.25RL	08-Dec-17 1R:38	1

DL - Detection Limit	LOD - Limit of Detection	LCL-UCL- Lower control limit - upper control limit	When reported, PFHxS, PFOA and PFOS include both linear and branched isomers.
	LOQ - Limit of quantitation	4 results reported to the DL.	Only the linear isomer is reported for all other analytes.

**Sample ID: CH-AT-2RW29-1117** **EPA Method 537**

Client Data				Laboratory Data			
Name:	C2 uM 2 ill	Matrix:	DriBgiBW9 ater	Lab Sample:	1701813-1H	ColnmB:	Ek2 C18
Project:	CTO-08/MCOLF ATLANTIC PFAS INV.	Date Collected:	uHNov-17 15:R4	Date 6 eceived:	01-Dec-17 0HR0		

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFES	ND	0.R57	4.u7	10.4		E7L0015	04-Dec-17	0.u37 L	08-Dec-17 1R:41	1
PFOA	ND	1.1R	4.u7	10.4		E7L0015	04-Dec-17	0.u37 L	08-Dec-17 1R:41	1
PFOS	ND	1.10	4.u7	10.4		E7L0015	04-Dec-17	0.u37 L	08-Dec-17 1R:41	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13Cu-PF2 xA	SU6 6	105	70 - 130			E7L0015	04-Dec-17	0.u37 L	08-Dec-17 1R:41	1

DL - DetectioBLimit

LOD - Limit of DetectioB  
LOQ - Limit of qnaBitatioB

LCL-UCL- Lower coBrol limit - npper coBrol limit  
6 esnlts reported to the DL.

9 heBreported, PF2 xS, PFOA aBl PFOS iBclnde both liBear aBl braBched isomers.  
OBly the liBear isomer is reported for all other aBalytes.

**Sample ID: CH-AT-2FB29-1117** **EPA Method 537**

Client Data				Laboratory Data			
Name:	C2 HM 2 ill	Matrix:	Drinking Water	Lab Sample:	1701813-HD	Column:	BE2 C18
Project:	CTO-08/MCOLF ATLANTIC PFAS INV.	Date Collected:	10-Nov-17 15:R4	Date received:	01-Dec-17 09:R0		

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.18	R7H	9.RR		B7L0015	04-Dec-17	0.154 L	11-Dec-17 11H	1
PFOA	ND	1.0H	R7H	9.RR		B7L0015	04-Dec-17	0.154 L	11-Dec-17 11H	1
PFOS	ND	0.98H	R7H	9.RR		B7L0015	04-Dec-17	0.154 L	11-Dec-17 11H	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13CH-PF2 xA	SU66	103	70 - 130			B7L0015	04-Dec-17	0.154 L	11-Dec-17 11H	1

DL - Detection Limit

LOD - Limit of Detection  
LOQ - Limit of quantitation

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

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



## **DATA QUALIFIERS & ABBREVIATIONS**

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

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

## CERTIFICATIONS

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

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

## NELAP Accredited Test Methods

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

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

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

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

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

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





Submit by Email\*

11/30/17 COOLER #1

FOR LABORATORY USE ONLY

Laboratory Project ID: 1701813 Temp 0.7 °C
Storage ID: WR-2 Storage Secured: Yes [X] No [ ]

CHAIN OF CUSTODY RECORD

Project I.D.: CTO-08/MCOLF ATLANTIC PFAS INV. P.O. #: 100006-7-106051 Samplers: K. Rebe/A. Seay C. CONOVER / M. CLAY

TAT: (Check One) Standard [ ] 21 days Rush (surcharge may apply) [ ] 14 days [X] 7 days Specify:

Invoice to: Name Tiffany Hill Company CH2M HILL Address 1100 NE Circle Blvd City Corvallis State OR Zip Ph# 541-768-3109 Fax #

Relinquished by: (Printed Name and Signature) David Lubell Date: 11/30/17 Time: 1500 Received by: (Signature and Printed Name) B. Benedict Date: 12/01/17 Time: 0944

Relinquished by: (Printed Name and Signature) Date: Time: Received by: (Signature and Printed Name) Date: Time:

See "Sample Log-in Checklist" for additional sample information

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

Method of Shipment: FEDEX

Add Analysis(es) Requested

ATTN: Martha Maier

Tracking No.: 7886 9190 9055

Container(s)

Table with columns: Sample ID, Date, Time, Location/Sample Description, Quantity, Type, Matrix, 2378-TCDD, 2378-TCDF, PCDD/PCDF, 2378-TCDD, 2378-TCDF, PCDD/PCDF, 2378-TCDD, 2378-TCDF, PCDD/PCDF, TOTALS, COPLANAR PCBs, 209 CONGENERS, PBDE, PAH, WHO-29, PFOA PFOS PFBS. Rows include sample IDs like CH-AT-2RW25-1117, CH-AT-2FB25-1117, etc.

Special Instructions/Comments: PFOA/PFOS/PFBS DRINKING WATER ANALYSIS

SEND DOCUMENTATION AND RESULTS TO:

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

Container Types: A = 1 Liter Amber, G = Glass Jar P = PUF, T = MM5 Train, O = Other

\*Bottle Preservative Type: [ ] T = Thiosulfate, [X] O = Other Trizma

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

### Sample Log-in Checklist

Vista Work Order #: 1701813 TAT 7

<b>Samples Arrival:</b>	<b>Date/Time:</b> 12/1/17 0940	<b>Initials:</b> BAB	<b>Location:</b> WR-2 <b>Shelf/Rack:</b> NA				
<b>Logged In:</b>	<b>Date/Time:</b> 12/1/17 0959	<b>Initials:</b> SR	<b>Location:</b> WR-2 <b>Shelf/Rack:</b> B5				
<b>Delivered By:</b>	<input checked="" type="checkbox"/> FedEx	<input type="checkbox"/> UPS	<input type="checkbox"/> On Trac	<input type="checkbox"/> GSO	<input type="checkbox"/> DHL	<input type="checkbox"/> Hand Delivered	<input type="checkbox"/> Other
<b>Preservation:</b>	<input checked="" type="checkbox"/> Ice	<input type="checkbox"/> Blue Ice	<input type="checkbox"/> Dry Ice	<input type="checkbox"/> None			
<b>Temp °C:</b> 0.6 (uncorrected)	<b>Time:</b> 0946		<b>Thermometer ID:</b> IR-1				
<b>Temp °C:</b> 0.7 (corrected)	<b>Probe used:</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>						

		YES	NO	NA
Adequate Sample Volume Received?		✓		
Holding Time Acceptable?		✓		
Shipping Container(s) Intact?		✓		
Shipping Custody Seals Intact?		✓		
Shipping Documentation Present?		✓		
Airbill	Trk # 7886 91909055	✓		
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 type="checkbox"/> <input checked="" type="checkbox"/> Trizma <input type="checkbox"/> None	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA
Shipping Container	<input checked="" type="checkbox"/> Vista <input type="checkbox"/> Client <input type="checkbox"/> Retain <input type="checkbox"/> Return <input type="checkbox"/> Dispose			

Comments:

## **EXTRACTION INFORMATION**





Process Sheet

Workorder: 1701813

Prep Expiration: 2017-Dec-13  
Client: CH2M Hill

Workorder Due: 08-Dec-17 00:00

TAT: 7

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

Prep Batch: B7L0016

Prep Data Entered: KC 12/6/17  
Date and Initials

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

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

LabSampleID	A/B	Prep Rec	Spike Rec	ClientSampleID	Comments	Location	Container
1701813-01	(A)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	CH-AT-2RW20-1117		WR-2 B-5	HDPE Bottle, 250 mL
1701813-02		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	CH-AT-2FB20-1117		WR-2 B-5	HDPE Bottle, 250 mL
1701813-03		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	CH-AT-2RW21-1117		WR-2 B-5	HDPE Bottle, 250 mL
1701813-04		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	CH-AT-2FB21-1117		WR-2 B-5	HDPE Bottle, 250 mL
1701813-05		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	CH-AT-2RW22-1117		WR-2 B-5	HDPE Bottle, 250 mL
1701813-06		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	CH-AT-2FB22-1117		WR-2 B-5	HDPE Bottle, 250 mL
1701813-07		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	CH-AT-2RW23-1117		WR-2 B-5	HDPE Bottle, 250 mL
1701813-08		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	CH-AT-2FB23-1117		WR-2 B-5	HDPE Bottle, 250 mL
1701813-09		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	CH-AT-2RW24-1117		WR-2 B-5	HDPE Bottle, 250 mL
1701813-10		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	CH-AT-2FB24-1117		WR-2 B-5	HDPE Bottle, 250 mL
1701813-11		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	CH-AT-2RW25-1117		WR-2 B-5	HDPE Bottle, 250 mL
1701813-12		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	CH-AT-2FB25-1117		WR-2 B-5	HDPE Bottle, 250 mL
1701813-13		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	CH-AT-2RW26-1117		WR-2 B-5	HDPE Bottle, 250 mL
1701813-14		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	CH-AT-2FB26-1117		WR-2 B-5	HDPE Bottle, 250 mL
1701813-15		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	CH-AT-2RW27-1117		WR-2 B-5	HDPE Bottle, 250 mL
1701813-16		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	CH-AT-2FB27-1117		WR-2 B-5	HDPE Bottle, 250 mL
1701813-17		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	CH-AT-2RW28-1117		WR-2 B-5	HDPE Bottle, 250 mL
1701813-18		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	CH-AT-2FB28-1117		WR-2 B-5	HDPE Bottle, 250 mL
1701813-19		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	CH-AT-2RW29-1117		WR-2 B-5	HDPE Bottle, 250 mL
1701813-20		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	CH-AT-2FB29-1117		WR-2 B-5	HDPE Bottle, 250 mL

WO Comments: LCS/LCSD

Pre-Prep Check Out: 12/5/17 ST

Prep Check Out: GRB 12.5.17

Prep Reconciled Initials/Date: 12/5/17 ST

Pre-Prep Check In: 12.5.17 JL

Prep Check In: NA

Spike Reconciled Initials/Date: 12/5/17 AC

VialBoxID: Cheryl

PREPARATION BENCH SHEET

Matrix: Drinking Water

Method: 537 PFAS DW DoD Unmodified

B7L0016

Chemist: HC  
 Prep Date/Time: 04-Dec-17 18:11  
12-5-17 1415

Prepared using: LCMS - SPE Extraction-LCMS

Balance ID: HRMS-8

Cen	VISTA Sample ID	Bottle + Sample (g)	Bottle Only (g)	Sample Amt. (L)	SS/NS CHEM/WIT DATE	SPE	IS CHEM/WIT DATE
<input type="checkbox"/>	B7L0016-BLK1 (A)	N/A	N/A	(0.250) ✓	HC GRB 12-5-17	HC HN 12-5-16	HC HN 12-6-17
<input type="checkbox"/>	B7L0016-BS1	↓	↓	(0.250) ✓	↓	↓	↓
<input type="checkbox"/>	B7L0016-BSD1	↓	↓	(0.250) ✓			
<input type="checkbox"/>	1701813-01	285.81	27.45	0.25836 ✓			
<input type="checkbox"/>	1701813-02	290.20	27.70	0.26250 ✓			
<input type="checkbox"/>	1701813-03	285.58	28.13	0.25745 ✓			
<input type="checkbox"/>	1701813-04 (B) (C)	281.48	27.55	0.25393 ✓			
<input type="checkbox"/>	1701813-05	283.45	28.02	0.25543 ✓			
<input type="checkbox"/>	1701813-06	279.94	27.68	0.25226 ✓			
<input type="checkbox"/>	1701813-07	286.28	28.07	0.25821 ✓			
<input type="checkbox"/>	1701813-08	276.29	26.93	0.24936 ✓			
<input type="checkbox"/>	1701813-09	282.38	27.46	0.25492 ✓			
<input type="checkbox"/>	1701813-10	290.11	27.55	0.26256 ✓			
<input type="checkbox"/>	1701813-11	285.81	28.26	0.25755 ✓			
<input type="checkbox"/>	1701813-12	287.04	27.45	0.25959 ✓			
<input checked="" type="checkbox"/>	1701813-13	286.00	28.37	0.25763 ✓			

SS/IS: 17L0515, 20µl (V1)  
 NS: 17I2601, 10µl (V2)  
 IS/RS: 17L0516, 20µl (V1)

SPE Chem: Strata X 33µm 500mg/ml  
 Lot#: 517-001561  
 Ele SOLV: MeOH  
 Lot#: DT185  
 Final Volume(s) 1ml

Notes (A) ~ 1.25g of Trizma added 12/5/17 ST  
 (B) sample took longer to SPE HC 12-5-17  
 (C) HC 12-7-17

Comments: Assume 1 g = 1 mL  
 Cen = Centrifuged  
 Work Order 1701813

PREPARATION BENCH SHEET

Matrix: Drinking Water

Method: 537 PFAS DW DoD Unmodified

B7L0016

Chemist: HC

Prep Date/Time: 04/Dec-17 18:11

12-5-17 1415

Prepared using: LCMS - SPE Extraction-LCMS

Balance ID: HRMS-6

Cen	VISTA Sample ID	Bottle + Sample (g)	Bottle Only (g)	Sample Amt. (L)	SS/NS CHEM/WIT DATE	SPE	IS CHEM/WIT DATE
<input type="checkbox"/>	1701813-14	285.88	27.51	0.25837 ✓	HC GEB 12-5-17	HC HN 12-5-17	HC HN 12-6-17
<input checked="" type="checkbox"/>	1701813-15 (B)	285.56	28.10	0.25746 ✓	↓	↓	↓
<input type="checkbox"/>	1701813-16	281.89	27.04	0.25485 ✓			
<input type="checkbox"/>	1701813-17	282.67	28.44	0.25423 ✓			
<input type="checkbox"/>	1701813-18	291.95	27.81	0.26414 ✓			
<input type="checkbox"/>	1701813-19	265.26	28.29	0.23697 ✓			
<input type="checkbox"/>	1701813-20	291.78	26.91	0.26487 ✓			

SS/IS: <u>17L0515, 20 (V1)</u> NS: <u>17I2601, 10 (V2)</u> IS/RS: <u>17L0516, 10 (V1)</u>	SPE Chem: <u>Strata X-33 500mg/6ml</u> Lot#: <u>S17-001561</u> Ele SOLV: <u>MeOH</u> Lot#: <u>DT189</u> Final Volume(s): <u>1ml</u>	Notes: (B) Green, paper particulate found in sample; centrifuged to remove. 12/5/17 ST
---	---	--

Comments: Assume 1 g = 1 mL

Cen = Centrifuged  
Work Order 1701813

Batch: B7L0016

Matrix: Drinking Water

LabNumber	WetWeight (Initial)	% Solids (Extraction Solids)	DryWeight	Final	Extracted	Ext By	Spike	SpikeAmount	ClientMatrix	Analysis
1701813-01	0.25836 ✓	NA	NA	1000	05-Dec-17 14:15	HAC			Drinking Water	537 PFAS DW DoD Unmod
1701813-02	0.2625 ✓	T	T	1000	05-Dec-17 14:15	HAC			Drinking Water	537 PFAS DW DoD Unmod
1701813-03	0.25745 ✓			1000	05-Dec-17 14:15	HAC			Drinking Water	537 PFAS DW DoD Unmod
1701813-04	0.25393 ✓			1000	05-Dec-17 14:15	HAC			Drinking Water	537 PFAS DW DoD Unmod
1701813-05	0.25543 ✓			1000	05-Dec-17 14:15	HAC			Drinking Water	537 PFAS DW DoD Unmod
1701813-06	0.25226 ✓			1000	05-Dec-17 14:15	HAC			Drinking Water	537 PFAS DW DoD Unmod
1701813-07	0.25821 ✓			1000	05-Dec-17 14:15	HAC			Drinking Water	537 PFAS DW DoD Unmod
1701813-08	0.24936 ✓			1000	05-Dec-17 14:15	HAC			Drinking Water	537 PFAS DW DoD Unmod
1701813-09	0.25492 ✓			1000	05-Dec-17 14:15	HAC			Drinking Water	537 PFAS DW DoD Unmod
1701813-10	0.26256 ✓			1000	05-Dec-17 14:15	HAC			Drinking Water	537 PFAS DW DoD Unmod
1701813-11	0.25755 ✓			1000	05-Dec-17 14:15	HAC			Drinking Water	537 PFAS DW DoD Unmod
1701813-12	0.25959 ✓			1000	05-Dec-17 14:15	HAC			Drinking Water	537 PFAS DW DoD Unmod
1701813-13	0.25763 ✓			1000	05-Dec-17 14:15	HAC			Drinking Water	537 PFAS DW DoD Unmod
1701813-14	0.25837 ✓			1000	05-Dec-17 14:15	HAC			Drinking Water	537 PFAS DW DoD Unmod
1701813-15	0.25746 ✓			1000	05-Dec-17 14:15	HAC			Drinking Water	537 PFAS DW DoD Unmod
1701813-16	0.25485 ✓			1000	05-Dec-17 14:15	HAC			Drinking Water	537 PFAS DW DoD Unmod
1701813-17	0.25423 ✓			1000	05-Dec-17 14:15	HAC			Drinking Water	537 PFAS DW DoD Unmod
1701813-18	0.26414 ✓			1000	05-Dec-17 14:15	HAC			Drinking Water	537 PFAS DW DoD Unmod
1701813-19	0.23697 ✓			1000	05-Dec-17 14:15	HAC			Drinking Water	537 PFAS DW DoD Unmod
1701813-20	0.26487 ✓			1000	05-Dec-17 14:15	HAC			Drinking Water	537 PFAS DW DoD Unmod
B7L0016-BLK1	0.25 ✓			1000	05-Dec-17 14:15	HAC				QC
B7L0016-BS1	0.25 ✓			1000	05-Dec-17 14:15	HAC	17I2601 ✓	10 ✓		QC
B7L0016-BSD1	0.25 ✓	↓	↓	1000	05-Dec-17 14:15	HAC	17I2601 ✓	10 ✓		QC

KC 12/6/17

**SAMPLE DATA –EPA METHOD 537**

Dataset: U:\G1.PRO\Results\2017\171207G3\171207G1-49.qld

Last Altered: Monday, December 11, 2017 09:28:44 Pacific Standard Time

Printed: Monday, December 11, 2017 09:29:04 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS\_DW\_L3\_1126.mdb 27 Nov 2017 14:32:15

Calibration: U:\G1.PRO\CurveDB\C18\_537\_Q1\_12-06-17\_L3.cdb 06 Dec 2017 15:37:11

Name: 171207G3\_49, Date: 08-Dec-2017, Time: 00:09:00, ID: B7L0016-BLK1 LRB 0.25, Description: LRB

	# Name	Trace	Area	IS Area	RRF	wt/vol	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	299 > 79.7		9.07e3		0.2500	3.03				
2	2 PFOA	413 > 368.7	7.53e1	9.06e3		0.2500	4.33	4.32	0.0832	0.430	
3	3 PFOS	499 > 79.9		9.07e3		0.2500	4.73				
4	4 13C2-PFHxA	315 > 269.8	3.65e3	9.06e3	0.424	0.2500	3.39	3.38	4.03	38.1	95.1
5	5 13C2-PFDA	515.1 > 469.9	4.36e3	9.06e3	0.478	0.2500	4.96	4.97	4.81	40.2	100.6
6	6 13C2-PFOA	414.9 > 369.7	9.06e3	9.06e3	1.000	0.2500	4.41	4.33	10.0	40.0	100.0
7	7 13C4-PFOS	503.0 > 79.9	9.07e3	9.07e3	1.000	0.2500	4.81	4.73	28.7	115	100.0

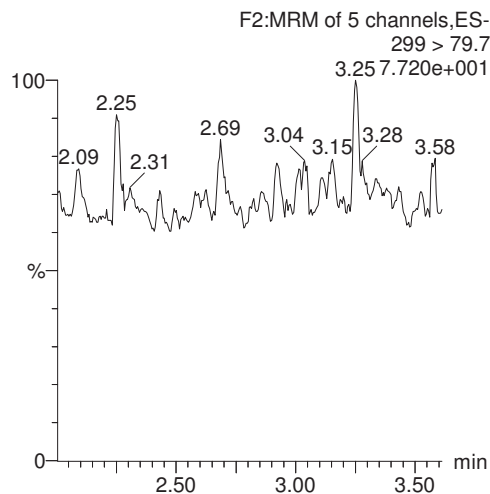
Dataset: U:\G1.PRO\Results\2017\171207G3\171207G1-49.qld

Last Altered: Monday, December 11, 2017 09:28:44 Pacific Standard Time  
Printed: Monday, December 11, 2017 09:29:04 Pacific Standard Time

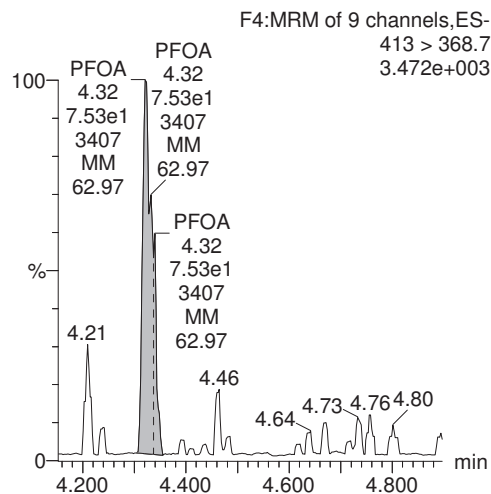
Method: U:\G1.PRO\MethDB\PFAS\_DW\_L3\_1126.mdb 27 Nov 2017 14:32:15  
Calibration: U:\G1.PRO\CurveDB\C18\_537\_Q1\_12-06-17\_L3.cdb 06 Dec 2017 15:37:11

Name: 171207G3\_49, Date: 08-Dec-2017, Time: 00:09:00, ID: B7L0016-BLK1 LRB 0.25, Description: LRB

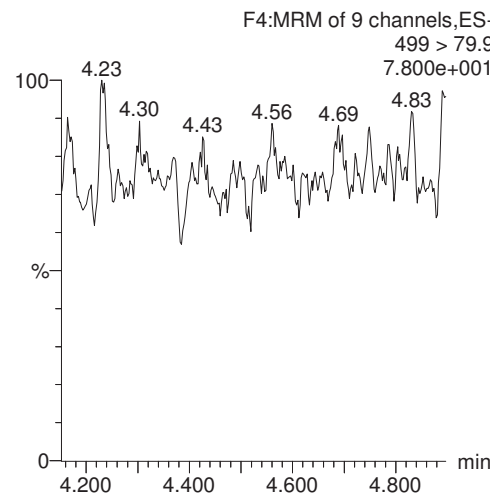
PFBS



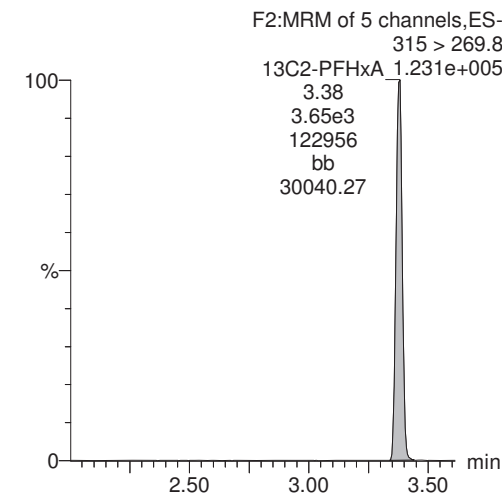
PFOA



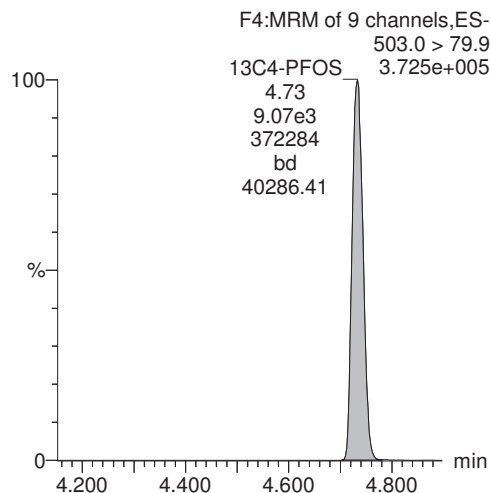
PFOS



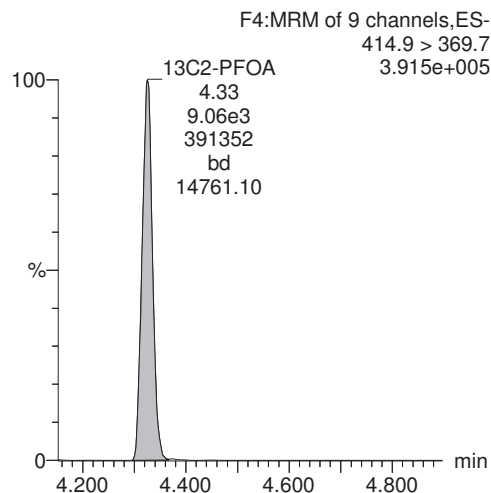
13C2-PFHxA



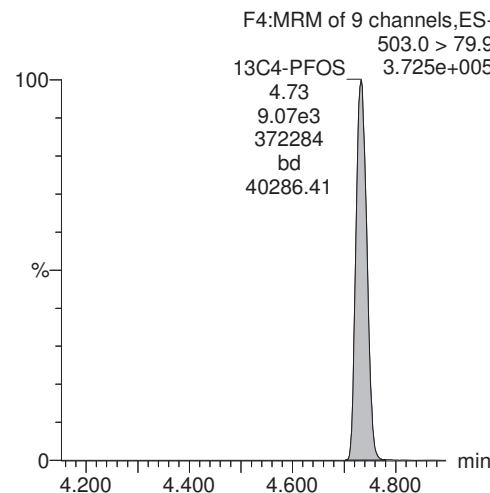
13C4-PFOS



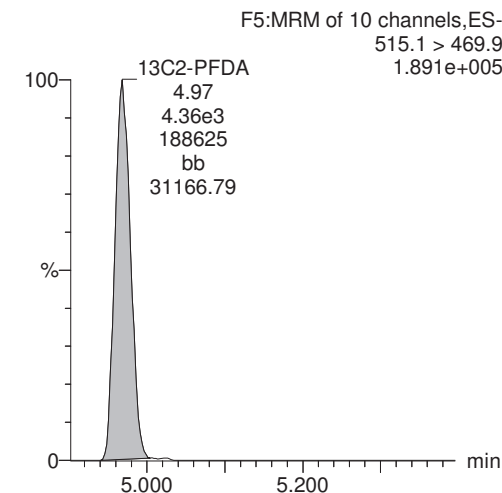
13C2-PFOA



13C4-PFOS



13C2-PFDA



Dataset: U:\G1.PRO\Results\2017\171207G3\171207G1-48.qld

Last Altered: Monday, December 11, 2017 09:14:31 Pacific Standard Time

Printed: Monday, December 11, 2017 09:20:35 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS\_DW\_L3\_1126.mdb 27 Nov 2017 14:32:15

Calibration: U:\G1.PRO\CurveDB\C18\_537\_Q1\_12-06-17\_L3.cdb 06 Dec 2017 15:37:11

Name: 171207G3\_48, Date: 07-Dec-2017, Time: 23:56:35, ID: B7L0016-BS1 LFB 0.25, Description: LFB

	# Name	Trace	Area	IS Area	RRF	wt/vol	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	299 > 79.7	2.85e3	9.31e3		0.2500	3.03	3.02	8.78	37.2	105.1
2	2 PFOA	413 > 368.7	8.42e3	9.70e3		0.2500	4.33	4.33	8.68	44.9	112.2
3	3 PFOS	499 > 79.9	3.93e3	9.31e3		0.2500	4.73	4.73	12.1	37.0	99.9
4	4 13C2-PFHxA	315 > 269.8	4.09e3	9.70e3	0.424	0.2500	3.39	3.38	4.22	39.8	99.5
5	5 13C2-PFDA	515.1 > 469.9	4.44e3	9.70e3	0.478	0.2500	4.96	4.97	4.58	38.3	95.8
6	6 13C2-PFOA	414.9 > 369.7	9.70e3	9.70e3	1.000	0.2500	4.41	4.33	10.0	40.0	100.0
7	7 13C4-PFOS	503.0 > 79.9	9.31e3	9.31e3	1.000	0.2500	4.81	4.73	28.7	115	100.0



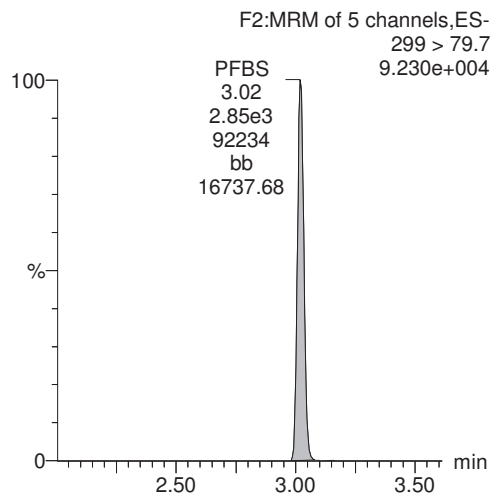
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Last Altered: Monday, December 11, 2017 09:14:31 Pacific Standard Time  
Printed: Monday, December 11, 2017 09:20:35 Pacific Standard Time

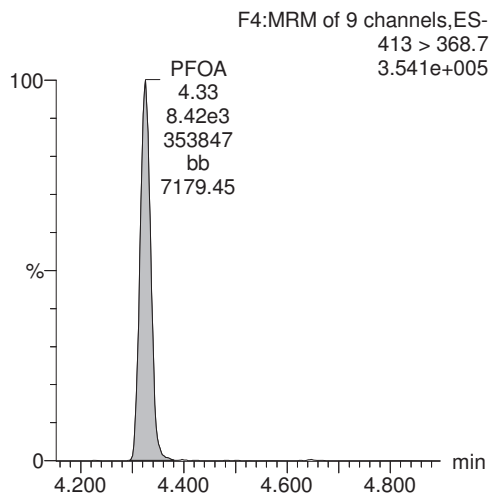
Method: U:\G1.PRO\MethDB\PFAS\_DW\_L3\_1126.mdb 27 Nov 2017 14:32:15  
Calibration: U:\G1.PRO\CurveDB\C18\_537\_Q1\_12-06-17\_L3.cdb 06 Dec 2017 15:37:11

Name: 171207G3\_48, Date: 07-Dec-2017, Time: 23:56:35, ID: B7L0016-BS1 LFB 0.25, Description: LFB

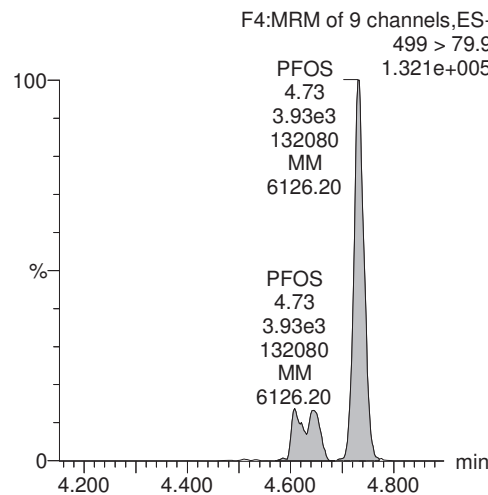
**PFBS**



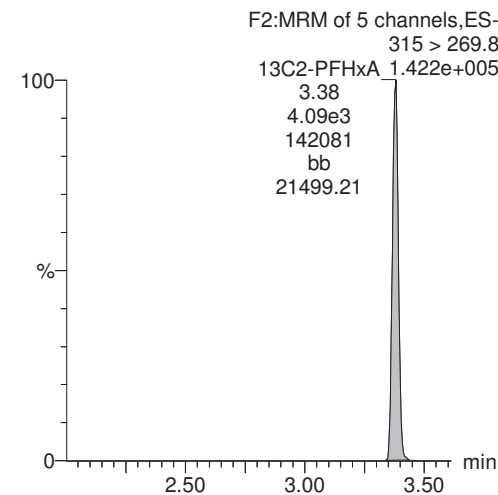
**PFOA**



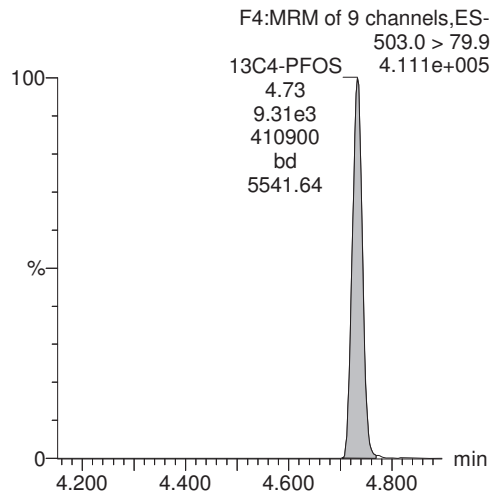
**PFOS**



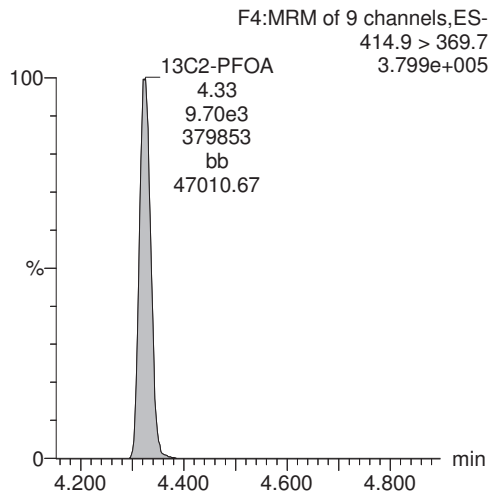
**13C2-PFHxA**



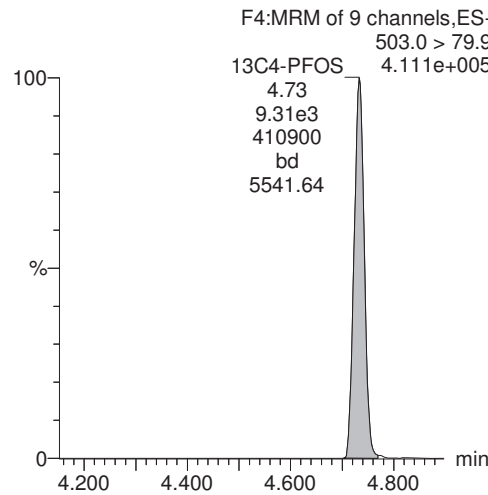
**13C4-PFOS**



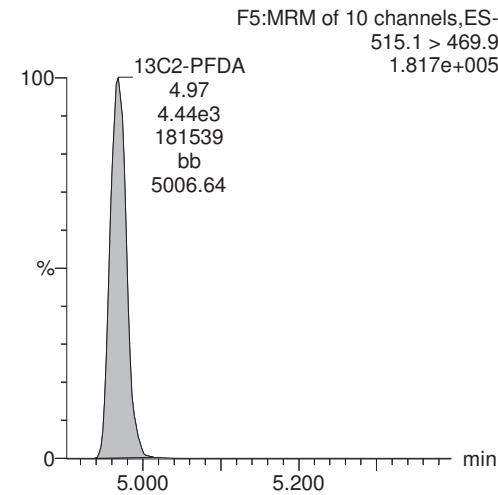
**13C2-PFOA**



**13C4-PFOS**



**13C2-PFDA**



Dataset: U:\G1.PRO\Results\2017\171207G3\171207G1-50.qld

Last Altered: Monday, December 11, 2017 09:34:49 Pacific Standard Time

Printed: Monday, December 11, 2017 09:35:13 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS\_DW\_L3\_1126.mdb 27 Nov 2017 14:32:15

Calibration: U:\G1.PRO\CurveDB\C18\_537\_Q1\_12-06-17\_L3.cdb 06 Dec 2017 15:37:11

Name: 171207G3\_50, Date: 08-Dec-2017, Time: 00:21:26, ID: B7L0016-BSD1 LFBD 0.25, Description: LFBD

	# Name	Trace	Area	IS Area	RRF	wt/vol	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	299 > 79.7	2.71e3	9.81e3		0.2500	3.03	3.02	7.92	33.4	94.5
2	2 PFOA	413 > 368.7	8.21e3	9.16e3		0.2500	4.32	4.32	8.97	46.4	116.0
3	3 PFOS	499 > 79.9	4.11e3	9.81e3		0.2500	4.73	4.73	12.0	36.7	99.2
4	4 13C2-PFHxA	315 > 269.8	4.23e3	9.16e3	0.424	0.2500	3.38	3.38	4.62	43.6	108.9
5	5 13C2-PFDA	515.1 > 469.9	4.68e3	9.16e3	0.478	0.2500	4.95	4.97	5.11	42.7	106.8
6	6 13C2-PFOA	414.9 > 369.7	9.16e3	9.16e3	1.000	0.2500	4.41	4.32	10.0	40.0	100.0
7	7 13C4-PFOS	503.0 > 79.9	9.81e3	9.81e3	1.000	0.2500	4.81	4.73	28.7	115	100.0

Dataset: U:\G1.PRO\Results\2017\171207G3\171207G1-50.qld

Last Altered: Monday, December 11, 2017 09:34:49 Pacific Standard Time

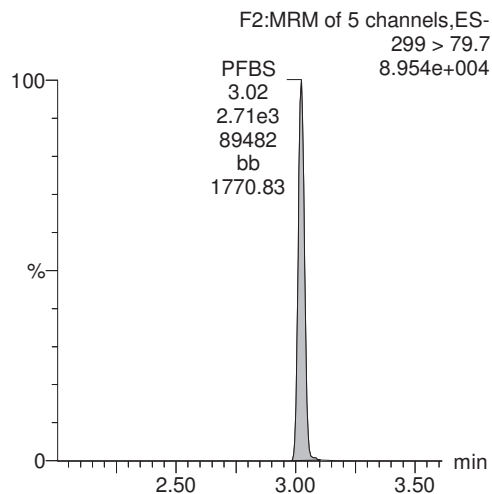
Printed: Monday, December 11, 2017 09:35:13 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS\_DW\_L3\_1126.mdb 27 Nov 2017 14:32:15

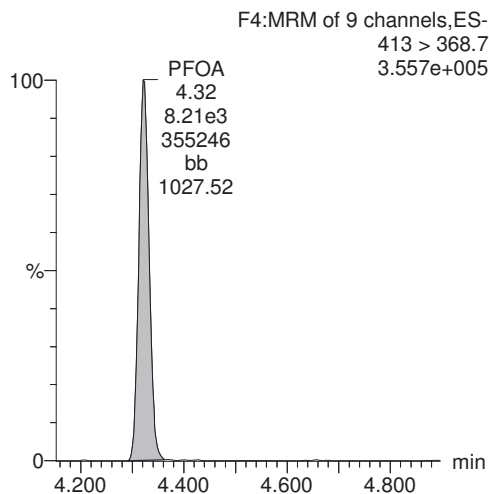
Calibration: U:\G1.PRO\CurveDB\C18\_537\_Q1\_12-06-17\_L3.cdb 06 Dec 2017 15:37:11

Name: 171207G3\_50, Date: 08-Dec-2017, Time: 00:21:26, ID: B7L0016-BSD1 LFBD 0.25, Description: LFBD

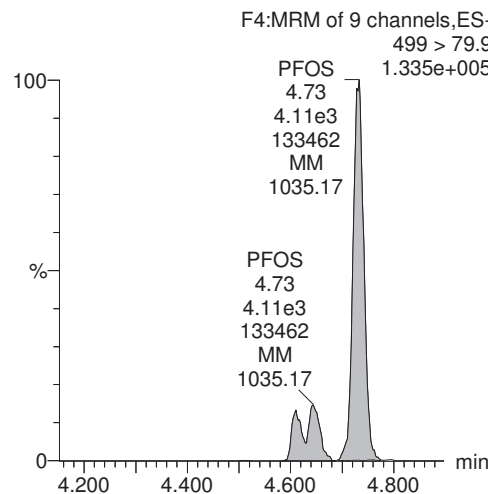
**PFBS**



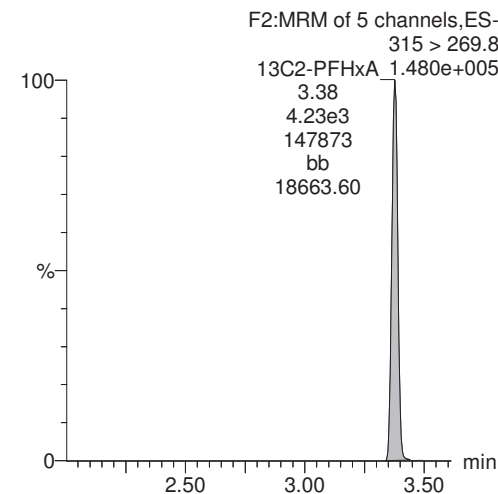
**PFOA**



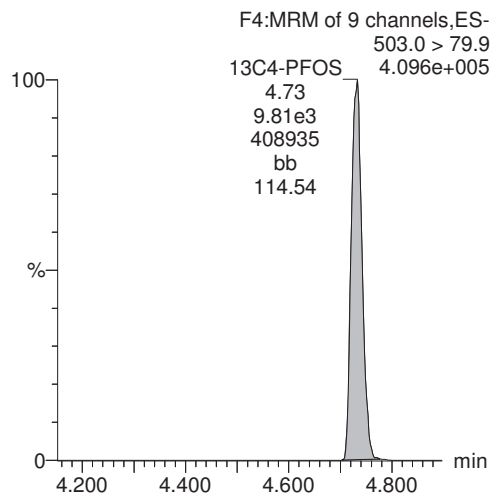
**PFOS**



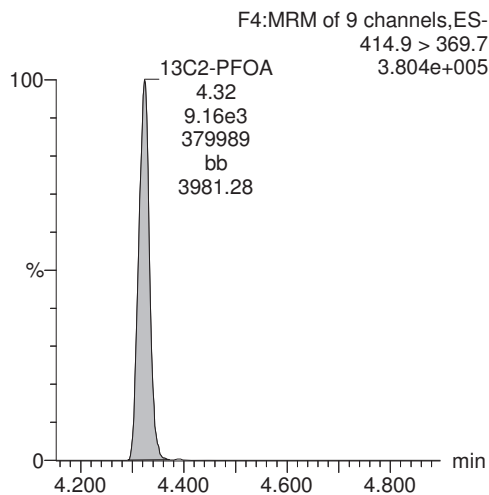
**13C2-PFHxA**



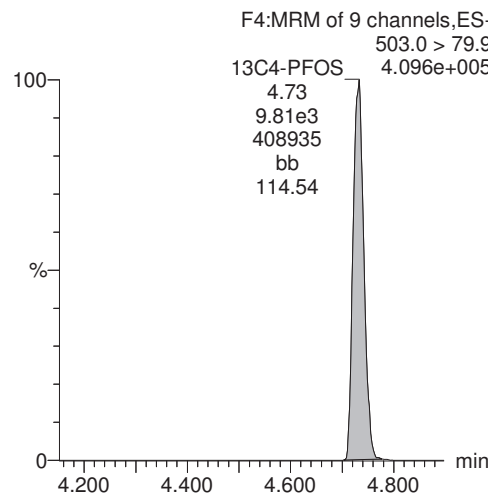
**13C4-PFOS**



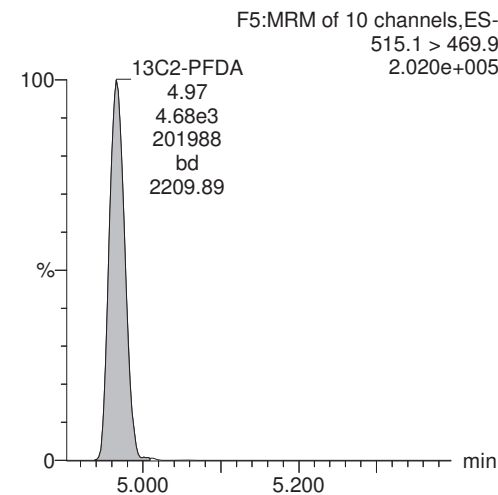
**13C2-PFOA**



**13C4-PFOS**



**13C2-PFDA**



Dataset: U:\G1.PRO\Results\2017\171207G3\171207G1-51.qld

Last Altered: Monday, December 11, 2017 09:35:24 Pacific Standard Time

Printed: Monday, December 11, 2017 09:36:45 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS\_DW\_L3\_1126.mdb 27 Nov 2017 14:32:15

Calibration: U:\G1.PRO\CurveDB\C18\_537\_Q1\_12-06-17\_L3.cdb 06 Dec 2017 15:37:11

Name: 171207G3\_51, Date: 08-Dec-2017, Time: 00:33:52, ID: 1701813-01 CH-AT-2RW20-1117 0.25836, Description: CH-AT-2RW20-1117

	# Name	Trace	Area	IS Area	RRF	wt/vol	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	299 > 79.7		9.40e3		0.2584	3.03				
2	2 PFOA	413 > 368.7	6.52e1	8.64e3		0.2584	4.32	4.32	0.0754	0.377	
3	3 PFOS	499 > 79.9		9.40e3		0.2584	4.73				
4	4 13C2-PFHxA	315 > 269.8	3.88e3	8.64e3	0.424	0.2584	3.38	3.38	4.49	41.0	106.0
5	5 13C2-PFDA	515.1 > 469.9	4.26e3	8.64e3	0.478	0.2584	4.95	4.97	4.93	39.9	103.2
6	6 13C2-PFOA	414.9 > 369.7	8.64e3	8.64e3	1.000	0.2584	4.41	4.32	10.0	38.7	100.0
7	7 13C4-PFOS	503.0 > 79.9	9.40e3	9.40e3	1.000	0.2584	4.81	4.73	28.7	111	100.0

Dataset: U:\G1.PRO\Results\2017\171207G3\171207G1-51.qld

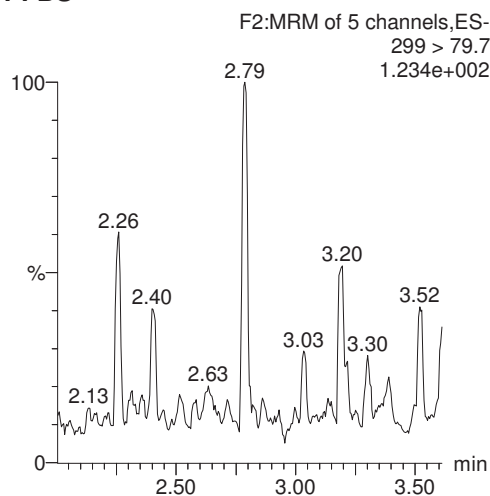
Last Altered: Monday, December 11, 2017 09:35:24 Pacific Standard Time

Printed: Monday, December 11, 2017 09:36:45 Pacific Standard Time

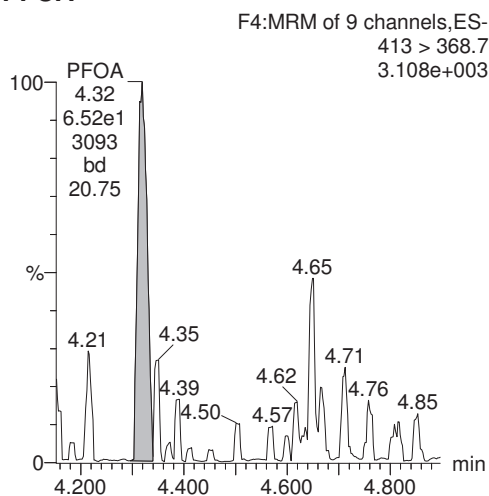
Method: U:\G1.PRO\MethDB\PFAS\_DW\_L3\_1126.mdb 27 Nov 2017 14:32:15  
Calibration: U:\G1.PRO\CurveDB\C18\_537\_Q1\_12-06-17\_L3.cdb 06 Dec 2017 15:37:11

Name: 171207G3\_51, Date: 08-Dec-2017, Time: 00:33:52, ID: 1701813-01 CH-AT-2RW20-1117 0.25836, Description: CH-AT-2RW20-1117

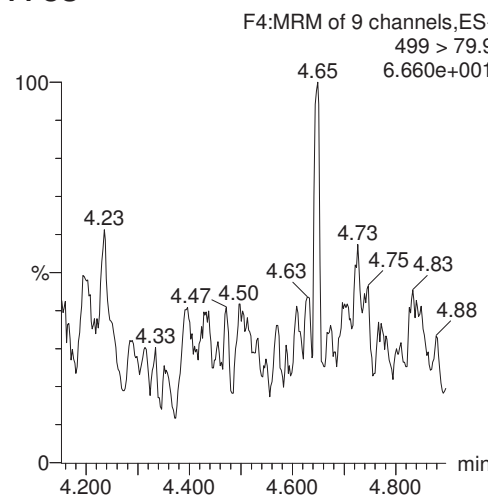
**PFBS**



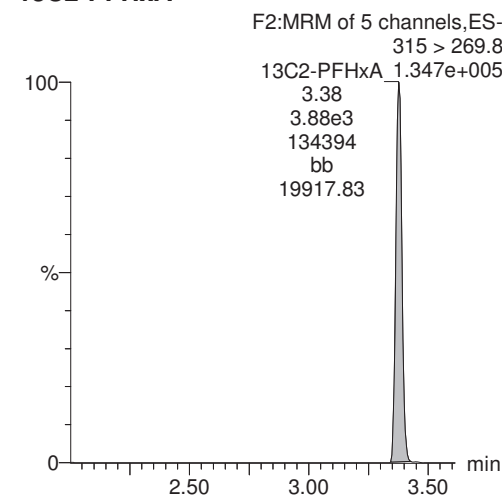
**PFOA**



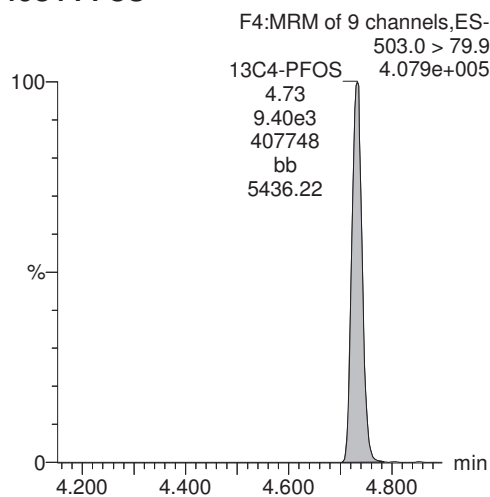
**PFOS**



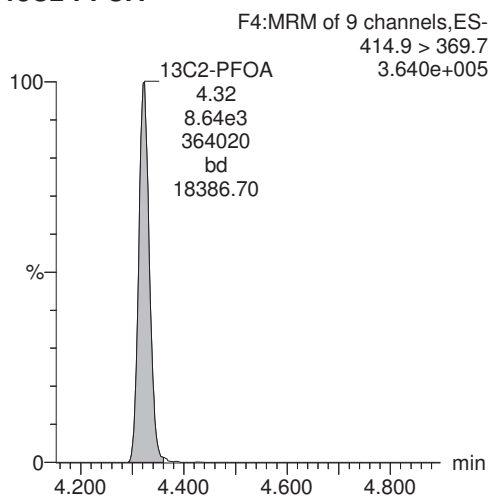
**13C2-PFHxA**



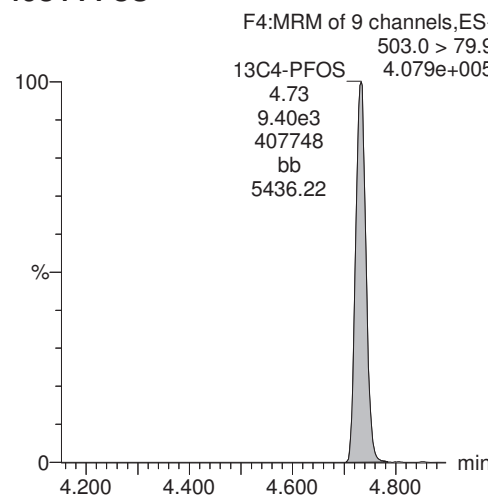
**13C4-PFOS**



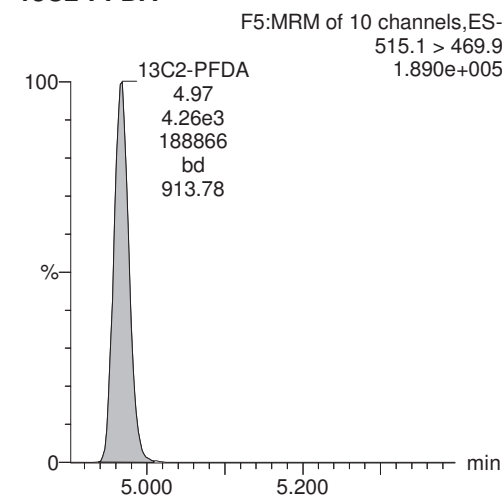
**13C2-PFOA**



**13C4-PFOS**



**13C2-PFDA**



Dataset: U:\G1.PRO\Results\2017\171207G3\171207G1-52.qld

Last Altered: Monday, December 11, 2017 09:37:17 Pacific Standard Time

Printed: Monday, December 11, 2017 09:43:27 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS\_DW\_L3\_1126.mdb 27 Nov 2017 14:32:15

Calibration: U:\G1.PRO\CurveDB\C18\_537\_Q1\_12-06-17\_L3.cdb 06 Dec 2017 15:37:11

Name: 171207G3\_52, Date: 08-Dec-2017, Time: 00:46:19, ID: 1701813-02 CH-AT-2FB20-1117 0.2625, Description: CH-AT-2FB20-1117

	# Name	Trace	Area	IS Area	RRF	wt/vol	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	299 > 79.7		1.01e4		0.2625	3.03				
2	2 PFOA	413 > 368.7	3.44e1	9.32e3		0.2625	4.32	4.32	0.0370	0.182	
3	3 PFOS	499 > 79.9		1.01e4		0.2625	4.73				
4	4 13C2-PFHxA	315 > 269.8	4.14e3	9.32e3	0.424	0.2625	3.38	3.38	4.44	39.9	104.8
5	5 13C2-PFDA	515.1 > 469.9	4.62e3	9.32e3	0.478	0.2625	4.95	4.97	4.96	39.5	103.7
6	6 13C2-PFOA	414.9 > 369.7	9.32e3	9.32e3	1.000	0.2625	4.41	4.32	10.0	38.1	100.0
7	7 13C4-PFOS	503.0 > 79.9	1.01e4	1.01e4	1.000	0.2625	4.81	4.73	28.7	109	100.0

Dataset: U:\G1.PRO\Results\2017\171207G3\171207G1-52.qld

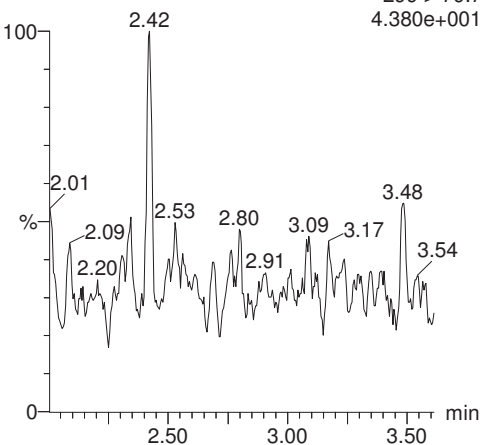
Last Altered: Monday, December 11, 2017 09:37:17 Pacific Standard Time  
Printed: Monday, December 11, 2017 09:43:27 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS\_DW\_L3\_1126.mdb 27 Nov 2017 14:32:15  
Calibration: U:\G1.PRO\CurveDB\C18\_537\_Q1\_12-06-17\_L3.cdb 06 Dec 2017 15:37:11

Name: 171207G3\_52, Date: 08-Dec-2017, Time: 00:46:19, ID: 1701813-02 CH-AT-2FB20-1117 0.2625, Description: CH-AT-2FB20-1117

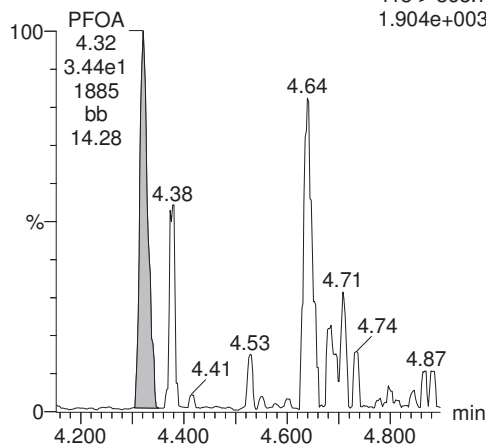
**PFBS**

F2:MRM of 5 channels,ES-  
299 > 79.7  
4.380e+001



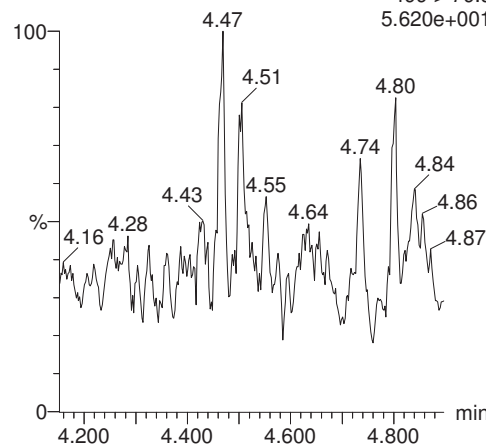
**PFOA**

F4:MRM of 9 channels,ES-  
413 > 368.7  
1.904e+003



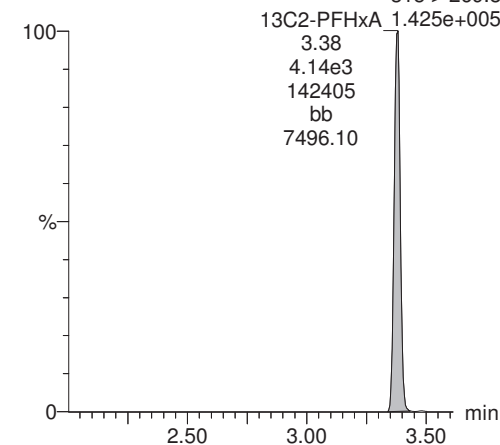
**PFOS**

F4:MRM of 9 channels,ES-  
499 > 79.9  
5.620e+001



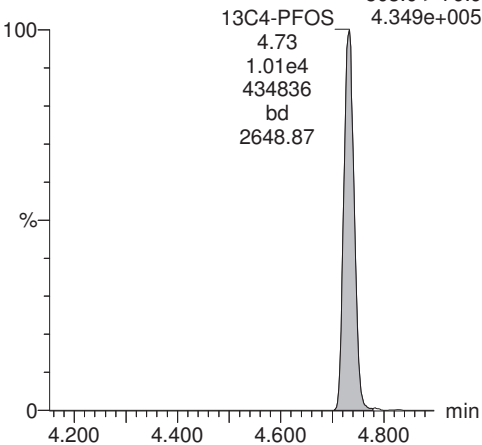
**13C2-PFHxA**

F2:MRM of 5 channels,ES-  
315 > 269.8  
1.425e+005



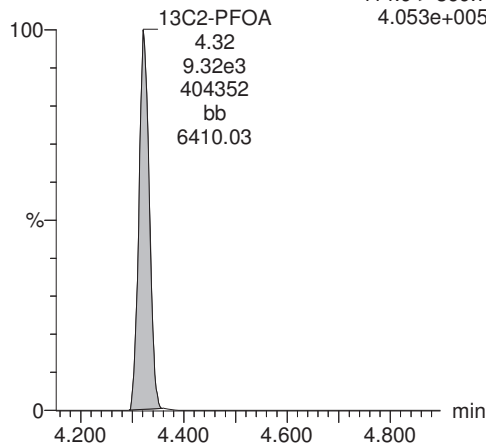
**13C4-PFOS**

F4:MRM of 9 channels,ES-  
503.0 > 79.9  
4.349e+005



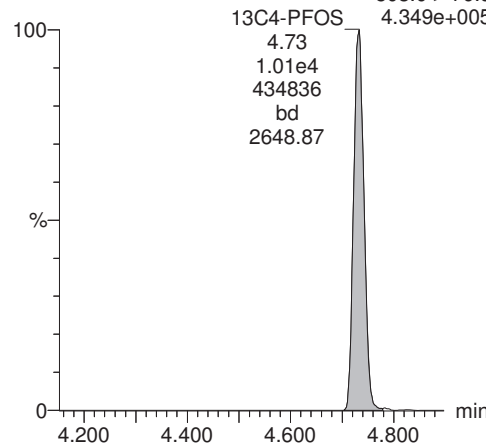
**13C2-PFOA**

F4:MRM of 9 channels,ES-  
414.9 > 369.7  
4.053e+005



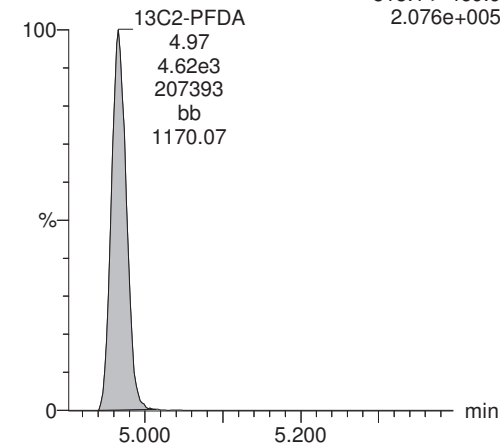
**13C4-PFOS**

F4:MRM of 9 channels,ES-  
503.0 > 79.9  
4.349e+005



**13C2-PFDA**

F5:MRM of 10 channels,ES-  
515.1 > 469.9  
2.076e+005



Dataset: U:\G1.PRO\Results\2017\171207G3\171207G1-53.qld

Last Altered: Monday, December 11, 2017 09:43:38 Pacific Standard Time

Printed: Monday, December 11, 2017 09:44:14 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS\_DW\_L3\_1126.mdb 27 Nov 2017 14:32:15

Calibration: U:\G1.PRO\CurveDB\C18\_537\_Q1\_12-06-17\_L3.cdb 06 Dec 2017 15:37:11

Name: 171207G3\_53, Date: 08-Dec-2017, Time: 00:58:45, ID: 1701813-03 CH-AT-2RW21-1117 0.25745, Description: CH-AT-2RW21-1117

	# Name	Trace	Area	IS Area	RRF	wt/vol	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	299 > 79.7		1.02e4		0.2575	3.03				
2	2 PFOA	413 > 368.7	1.17e2	9.47e3		0.2575	4.32	4.33	0.123	0.618	
3	3 PFOS	499 > 79.9		1.02e4		0.2575	4.73				
4	4 13C2-PFHxA	315 > 269.8	4.03e3	9.47e3	0.424	0.2575	3.38	3.38	4.26	39.0	100.4
5	5 13C2-PFDA	515.1 > 469.9	4.75e3	9.47e3	0.478	0.2575	4.95	4.97	5.02	40.8	104.9
6	6 13C2-PFOA	414.9 > 369.7	9.47e3	9.47e3	1.000	0.2575	4.41	4.32	10.0	38.8	100.0
7	7 13C4-PFOS	503.0 > 79.9	1.02e4	1.02e4	1.000	0.2575	4.81	4.73	28.7	111	100.0



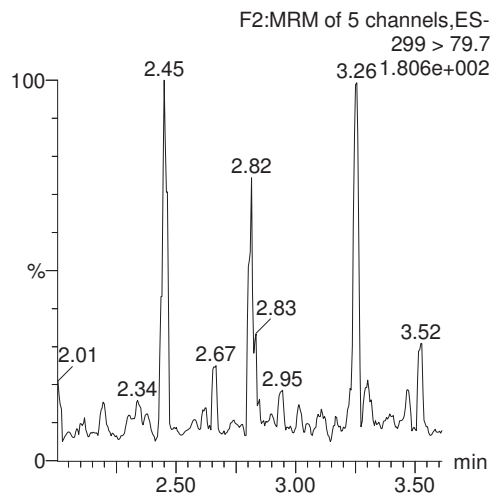
Dataset: U:\G1.PRO\Results\2017\171207G3\171207G1-53.qld

Last Altered: Monday, December 11, 2017 09:43:38 Pacific Standard Time  
Printed: Monday, December 11, 2017 09:44:14 Pacific Standard Time

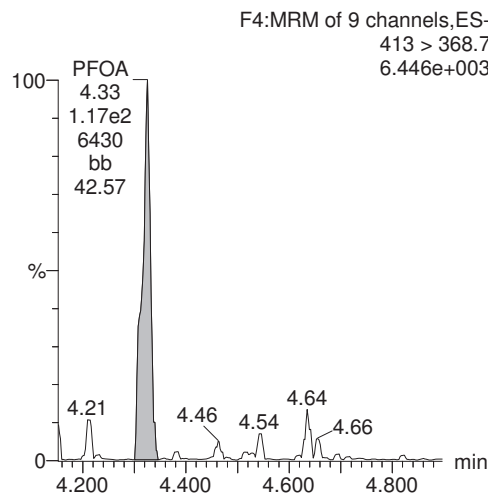
Method: U:\G1.PRO\MethDB\PFAS\_DW\_L3\_1126.mdb 27 Nov 2017 14:32:15  
Calibration: U:\G1.PRO\CurveDB\C18\_537\_Q1\_12-06-17\_L3.cdb 06 Dec 2017 15:37:11

Name: 171207G3\_53, Date: 08-Dec-2017, Time: 00:58:45, ID: 1701813-03 CH-AT-2RW21-1117 0.25745, Description: CH-AT-2RW21-1117

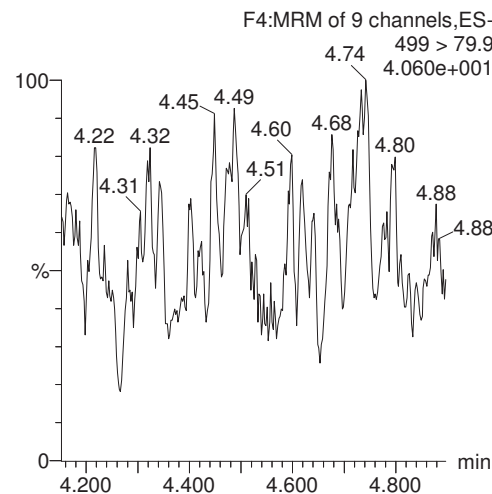
**PFBS**



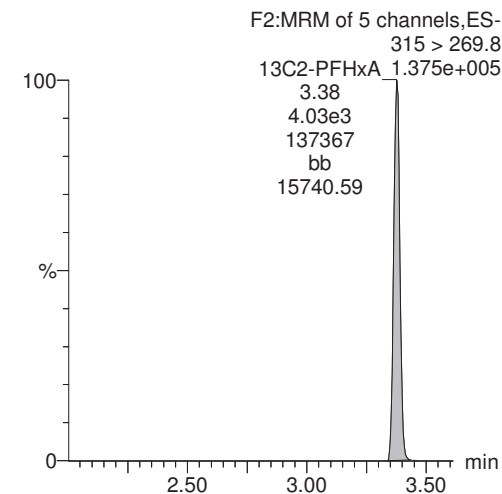
**PFOA**



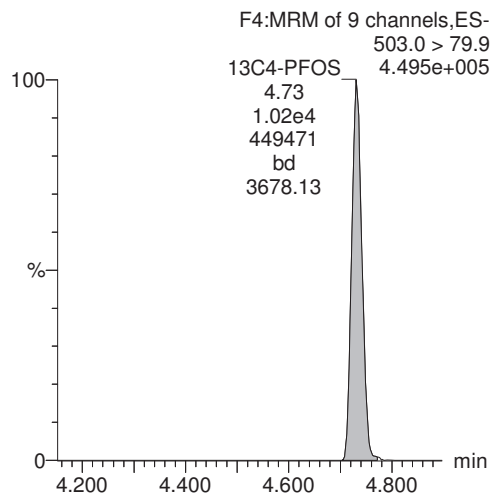
**PFOS**



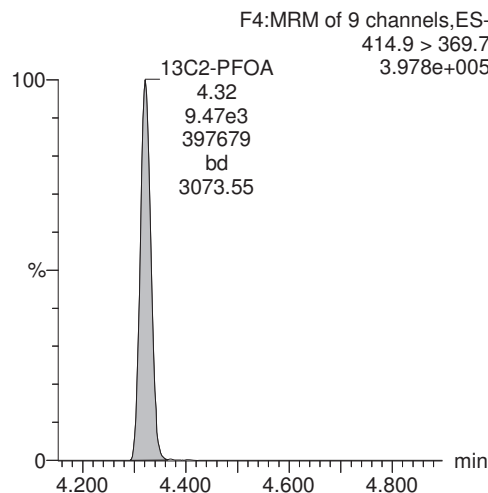
**13C2-PFHxA**



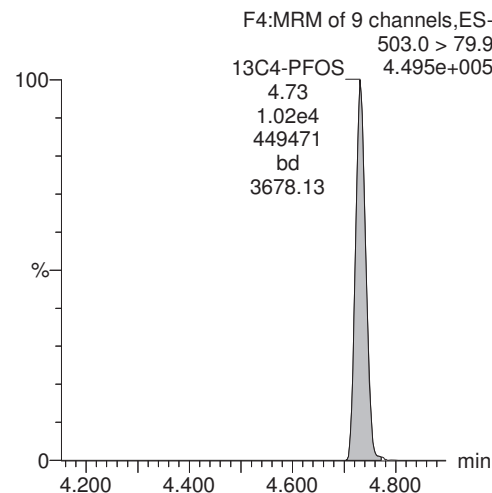
**13C4-PFOS**



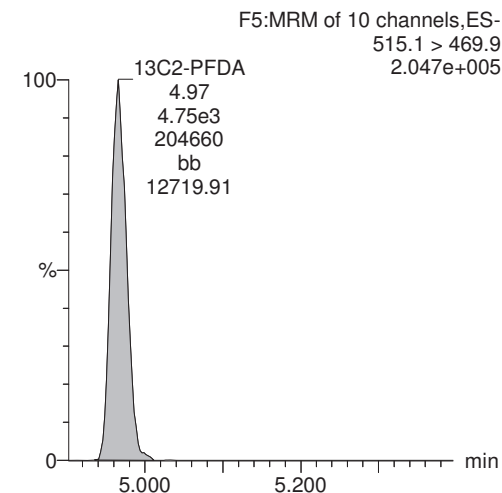
**13C2-PFOA**



**13C4-PFOS**



**13C2-PFDA**



Dataset: U:\G1.PRO\Results\2017\171207G3\171207G1-54.qld

Last Altered: Monday, December 11, 2017 09:44:22 Pacific Standard Time  
Printed: Monday, December 11, 2017 09:45:53 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS\_DW\_L3\_1126.mdb 27 Nov 2017 14:32:15

Calibration: U:\G1.PRO\CurveDB\C18\_537\_Q1\_12-06-17\_L3.cdb 06 Dec 2017 15:37:11

Name: 171207G3\_54, Date: 08-Dec-2017, Time: 01:11:11, ID: 1701813-04 CH-AT-2FB21-1117 0.25393, Description: CH-AT-2FB21-1117

	# Name	Trace	Area	IS Area	RRF	wt/vol	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	299 > 79.7		9.62e3		0.2539	3.03				
2	2 PFOA	413 > 368.7	6.32e1	9.72e3		0.2539	4.32	4.33	0.0650	0.331	
3	3 PFOS	499 > 79.9		9.62e3		0.2539	4.73				
4	4 13C2-PFHxA	315 > 269.8	3.95e3	9.72e3	0.424	0.2539	3.38	3.38	4.07	37.8	96.0
5	5 13C2-PFDA	515.1 > 469.9	4.69e3	9.72e3	0.478	0.2539	4.95	4.97	4.83	39.8	101.0
6	6 13C2-PFOA	414.9 > 369.7	9.72e3	9.72e3	1.000	0.2539	4.41	4.32	10.0	39.4	100.0
7	7 13C4-PFOS	503.0 > 79.9	9.62e3	9.62e3	1.000	0.2539	4.81	4.73	28.7	113	100.0

Dataset: U:\G1.PRO\Results\2017\171207G3\171207G1-54.qld

Last Altered: Monday, December 11, 2017 09:44:22 Pacific Standard Time

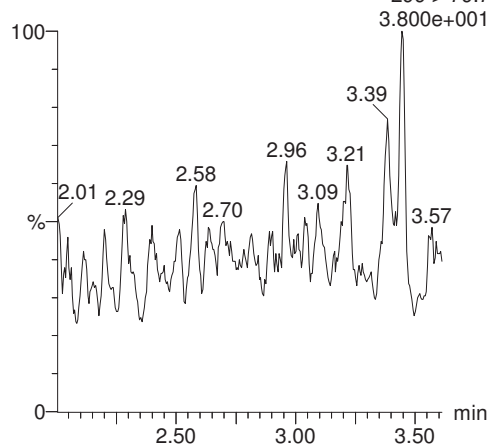
Printed: Monday, December 11, 2017 09:45:53 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS\_DW\_L3\_1126.mdb 27 Nov 2017 14:32:15  
Calibration: U:\G1.PRO\CurveDB\C18\_537\_Q1\_12-06-17\_L3.cdb 06 Dec 2017 15:37:11

Name: 171207G3\_54, Date: 08-Dec-2017, Time: 01:11:11, ID: 1701813-04 CH-AT-2FB21-1117 0.25393, Description: CH-AT-2FB21-1117

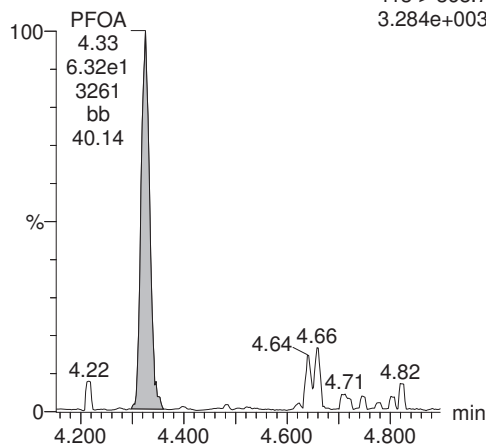
**PFBS**

F2:MRM of 5 channels,ES-  
299 > 79.7



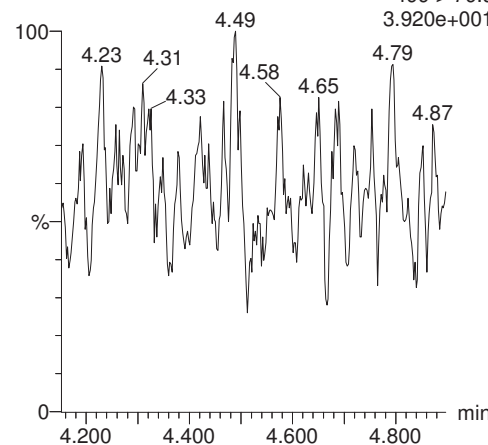
**PFOA**

F4:MRM of 9 channels,ES-  
413 > 368.7  
3.284e+003



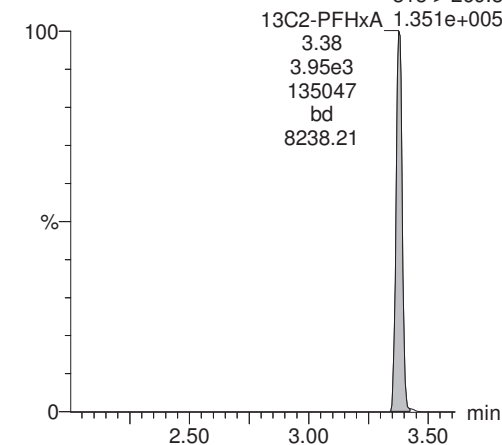
**PFOS**

F4:MRM of 9 channels,ES-  
499 > 79.9  
3.920e+001



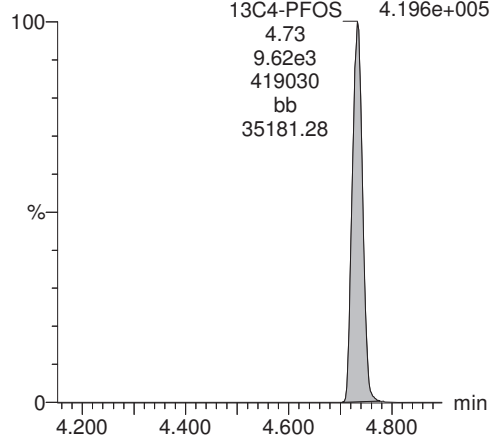
**13C2-PFHxA**

F2:MRM of 5 channels,ES-  
315 > 269.8



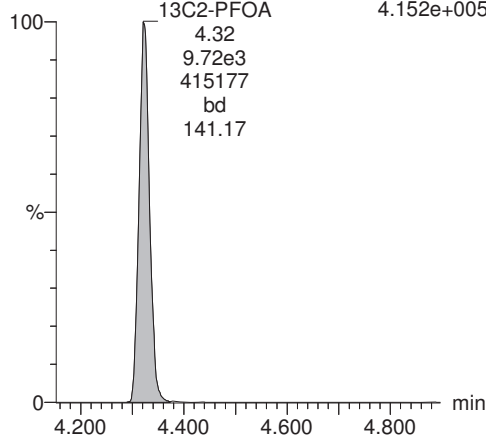
**13C4-PFOS**

F4:MRM of 9 channels,ES-  
503.0 > 79.9  
4.196e+005



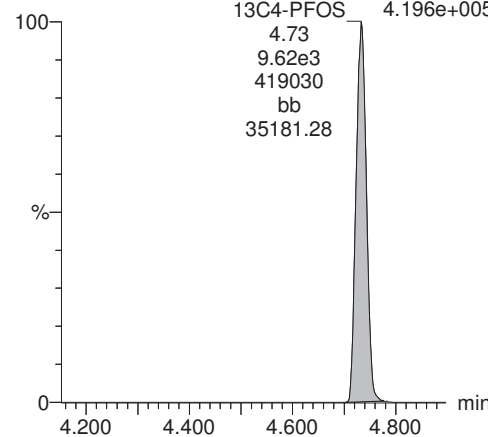
**13C2-PFOA**

F4:MRM of 9 channels,ES-  
414.9 > 369.7  
4.152e+005



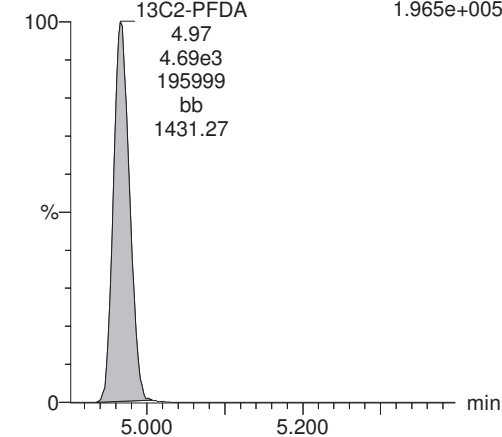
**13C4-PFOS**

F4:MRM of 9 channels,ES-  
503.0 > 79.9  
4.196e+005



**13C2-PFDA**

F5:MRM of 10 channels,ES-  
515.1 > 469.9  
1.965e+005



Dataset: U:\G1.PRO\Results\2017\171207G3\171207G1-5.qld

Last Altered: Monday, December 11, 2017 09:46:22 Pacific Standard Time  
Printed: Monday, December 11, 2017 09:55:37 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS\_DW\_L3\_1126.mdb 27 Nov 2017 14:32:15

Calibration: U:\G1.PRO\CurveDB\C18\_537\_Q1\_12-06-17\_L3.cdb 06 Dec 2017 15:37:11

Name: 171207G3\_55, Date: 08-Dec-2017, Time: 01:23:39, ID: 1701813-05 CH-AT-2RW22-1117 0.25543, Description: CH-AT-2RW22-1117

	# Name	Trace	Area	IS Area	RRF	wt/vol	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	299 > 79.7		9.57e3		0.2554	3.03				
2	2 PFOA	413 > 368.7	5.74e1	1.00e4		0.2554	4.32	4.32	0.0572	0.289	
3	3 PFOS	499 > 79.9		9.57e3		0.2554	4.73				
4	4 13C2-PFHxA	315 > 269.8	4.59e3	1.00e4	0.424	0.2554	3.38	3.38	4.58	42.3	108.0
5	5 13C2-PFDA	515.1 > 469.9	4.92e3	1.00e4	0.478	0.2554	4.95	4.97	4.91	40.2	102.6
6	6 13C2-PFOA	414.9 > 369.7	1.00e4	1.00e4	1.000	0.2554	4.41	4.32	10.0	39.1	100.0
7	7 13C4-PFOS	503.0 > 79.9	9.57e3	9.57e3	1.000	0.2554	4.81	4.73	28.7	112	100.0

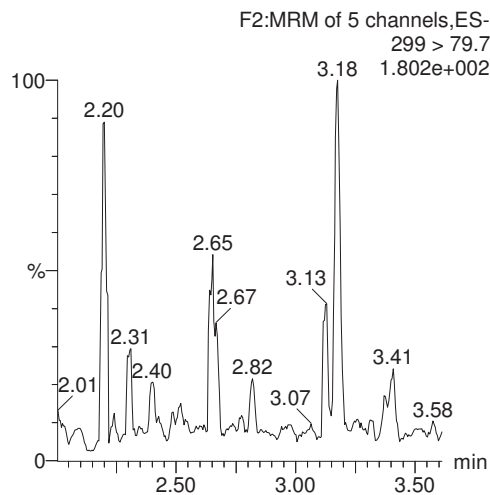
Dataset: U:\G1.PRO\Results\2017\171207G3\171207G1-5.qld

Last Altered: Monday, December 11, 2017 09:46:22 Pacific Standard Time  
Printed: Monday, December 11, 2017 09:55:37 Pacific Standard Time

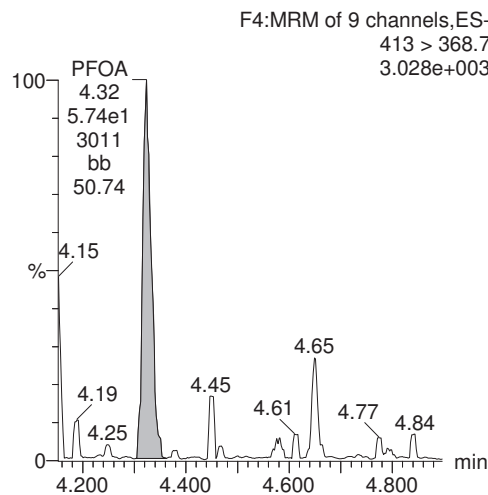
Method: U:\G1.PRO\MethDB\PFAS\_DW\_L3\_1126.mdb 27 Nov 2017 14:32:15  
Calibration: U:\G1.PRO\CurveDB\C18\_537\_Q1\_12-06-17\_L3.cdb 06 Dec 2017 15:37:11

Name: 171207G3\_55, Date: 08-Dec-2017, Time: 01:23:39, ID: 1701813-05 CH-AT-2RW22-1117 0.25543, Description: CH-AT-2RW22-1117

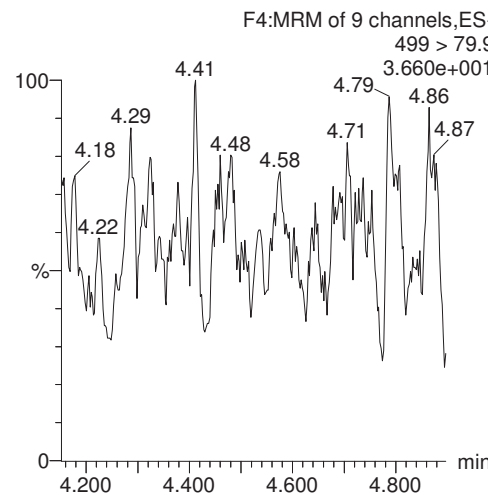
**PFBS**



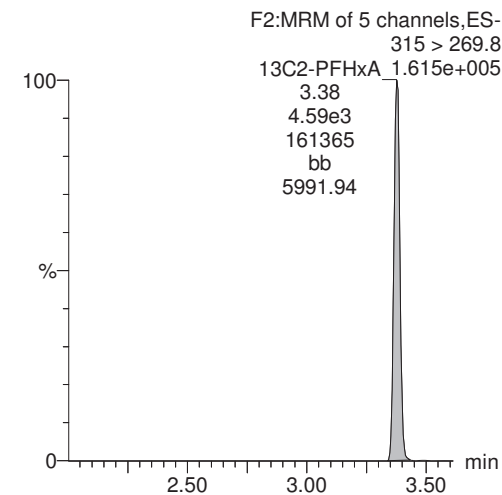
**PFOA**



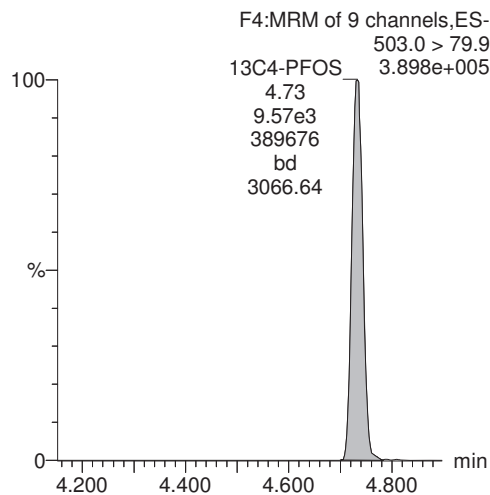
**PFOS**



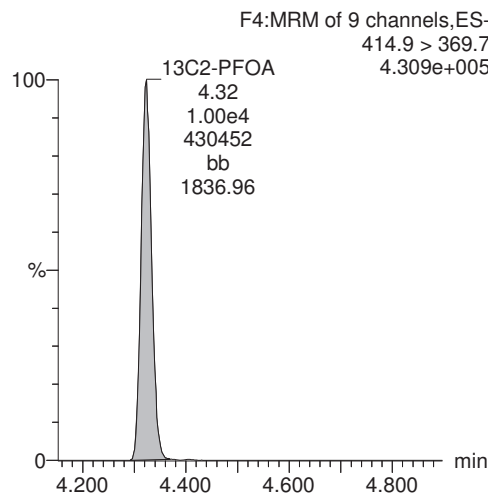
**13C2-PFHxA**



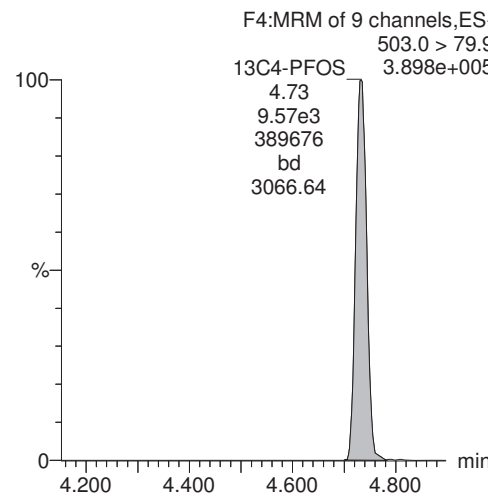
**13C4-PFOS**



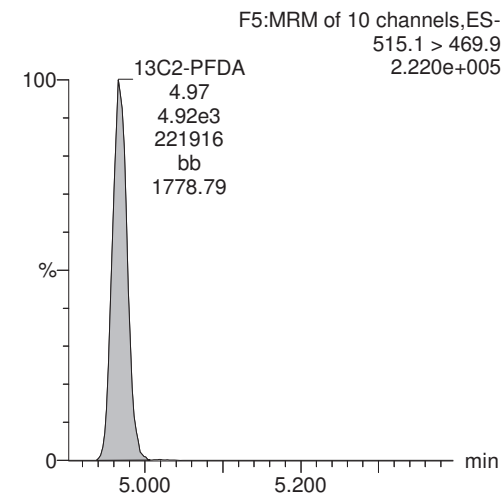
**13C2-PFOA**



**13C4-PFOS**



**13C2-PFDA**



Dataset: U:\G1.PRO\Results\2017\171207G3\171207G1-59.qld

Last Altered: Monday, December 11, 2017 09:57:16 Pacific Standard Time

Printed: Monday, December 11, 2017 09:59:20 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS\_DW\_L3\_1126.mdb 27 Nov 2017 14:32:15

Calibration: U:\G1.PRO\CurveDB\C18\_537\_Q1\_12-06-17\_L3.cdb 06 Dec 2017 15:37:11

Name: 171207G3\_59, Date: 08-Dec-2017, Time: 01:36:08, ID: 1701813-06 CH-AT-2FB22-1117 0.25226, Description: CH-AT-2FB22-1117

	# Name	Trace	Area	IS Area	RRF	wt/vol	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	299 > 79.7		9.71e3		0.2523	3.04				
2	2 PFOA	413 > 368.7	6.57e1	9.37e3		0.2523	4.33	4.32	0.0701	0.359	
3	3 PFOS	499 > 79.9		9.71e3		0.2523	4.74				
4	4 13C2-PFHxA	315 > 269.8	4.21e3	9.37e3	0.424	0.2523	3.39	3.38	4.49	42.0	106.0
5	5 13C2-PFDA	515.1 > 469.9	4.91e3	9.37e3	0.478	0.2523	4.96	4.97	5.24	43.5	109.6
6	6 13C2-PFOA	414.9 > 369.7	9.37e3	9.37e3	1.000	0.2523	4.41	4.33	10.0	39.6	100.0
7	7 13C4-PFOS	503.0 > 79.9	9.71e3	9.71e3	1.000	0.2523	4.81	4.74	28.7	114	100.0

Dataset: U:\G1.PRO\Results\2017\171207G3\171207G1-59.qld

Last Altered: Monday, December 11, 2017 09:57:16 Pacific Standard Time

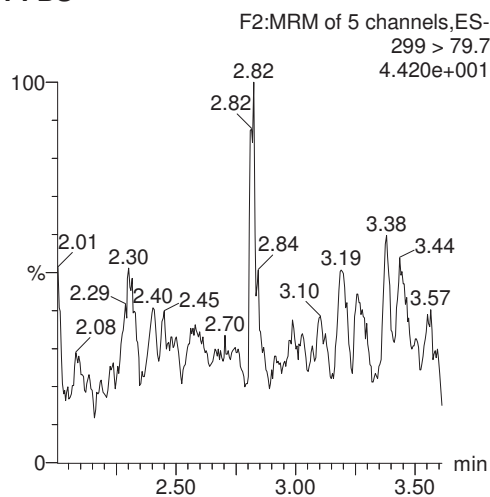
Printed: Monday, December 11, 2017 09:59:20 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS\_DW\_L3\_1126.mdb 27 Nov 2017 14:32:15

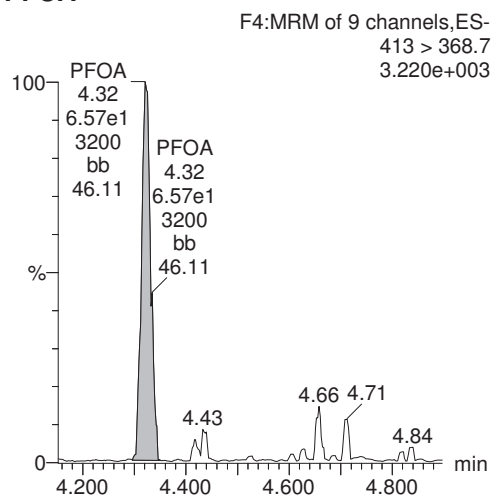
Calibration: U:\G1.PRO\CurveDB\C18\_537\_Q1\_12-06-17\_L3.cdb 06 Dec 2017 15:37:11

Name: 171207G3\_59, Date: 08-Dec-2017, Time: 01:36:08, ID: 1701813-06 CH-AT-2FB22-1117 0.25226, Description: CH-AT-2FB22-1117

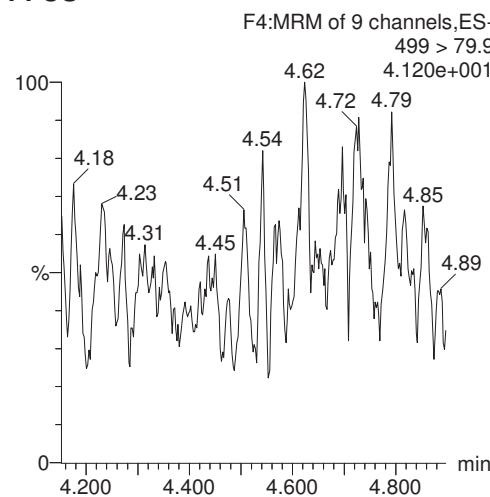
**PFBS**



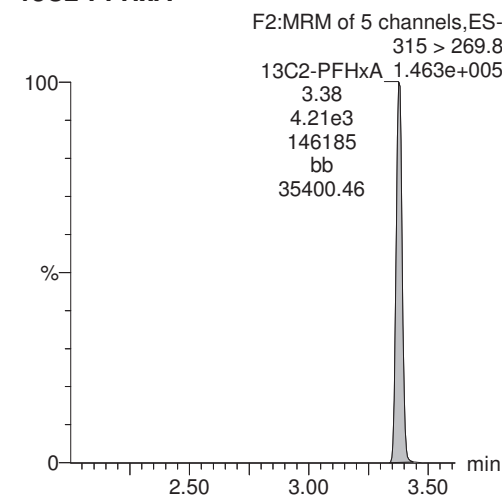
**PFOA**



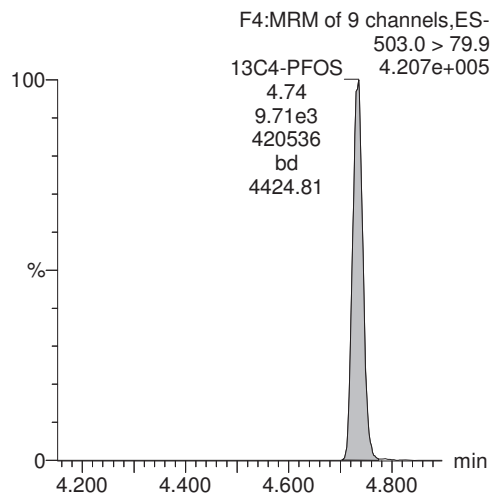
**PFOS**



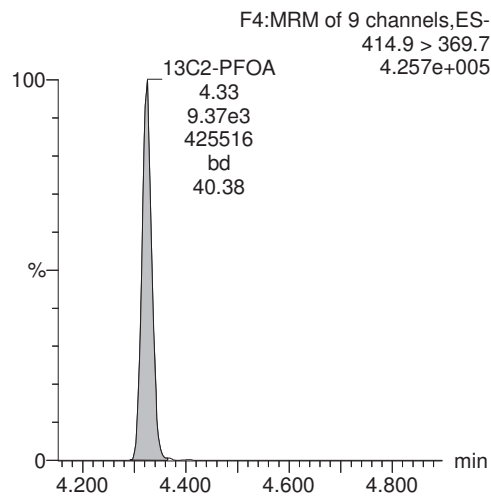
**13C2-PFHxA**



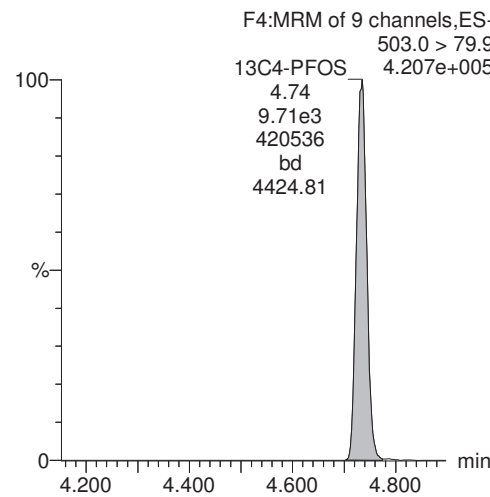
**13C4-PFOS**



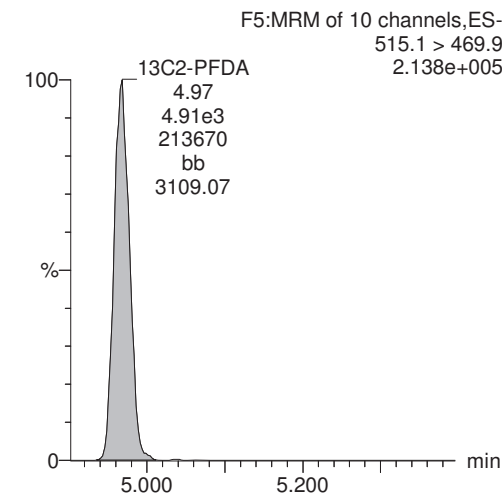
**13C2-PFOA**



**13C4-PFOS**



**13C2-PFDA**



Dataset: U:\G1.PRO\Results\2017\171207G3\171207G1-60.qld

Last Altered: Monday, December 11, 2017 10:00:00 Pacific Standard Time

Printed: Monday, December 11, 2017 10:00:17 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS\_DW\_L3\_1126.mdb 27 Nov 2017 14:32:15

Calibration: U:\G1.PRO\CurveDB\C18\_537\_Q1\_12-06-17\_L3.cdb 06 Dec 2017 15:37:11

Name: 171207G3\_60, Date: 08-Dec-2017, Time: 01:48:36, ID: 1701813-07 CH-AT-2RW23-1117 0.25821, Description: CH-AT-2RW23-1117

	# Name	Trace	Area	IS Area	RRF	wt/vol	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	299 > 79.7		1.01e4		0.2582	3.03				
2	2 PFOA	413 > 368.7	7.95e1	9.52e3		0.2582	4.32	4.32	0.0835	0.418	
3	3 PFOS	499 > 79.9		1.01e4		0.2582	4.73				
4	4 13C2-PFHxA	315 > 269.8	4.05e3	9.52e3	0.424	0.2582	3.38	3.38	4.25	38.8	100.2
5	5 13C2-PFDA	515.1 > 469.9	4.09e3	9.52e3	0.478	0.2582	4.95	4.97	4.30	34.8	89.9
6	6 13C2-PFOA	414.9 > 369.7	9.52e3	9.52e3	1.000	0.2582	4.41	4.32	10.0	38.7	100.0
7	7 13C4-PFOS	503.0 > 79.9	1.01e4	1.01e4	1.000	0.2582	4.81	4.73	28.7	111	100.0



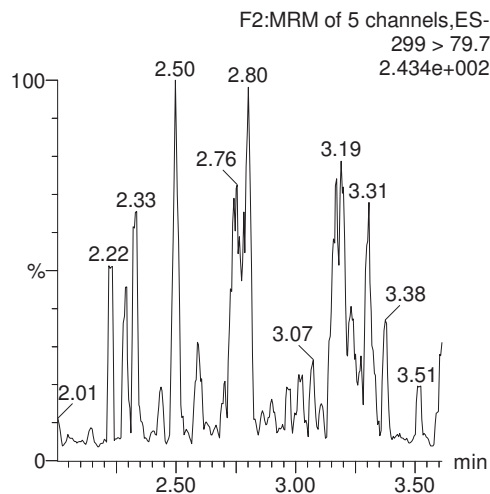
Dataset: U:\G1.PRO\Results\2017\171207G3\171207G1-60.qld

Last Altered: Monday, December 11, 2017 10:00:00 Pacific Standard Time  
Printed: Monday, December 11, 2017 10:00:17 Pacific Standard Time

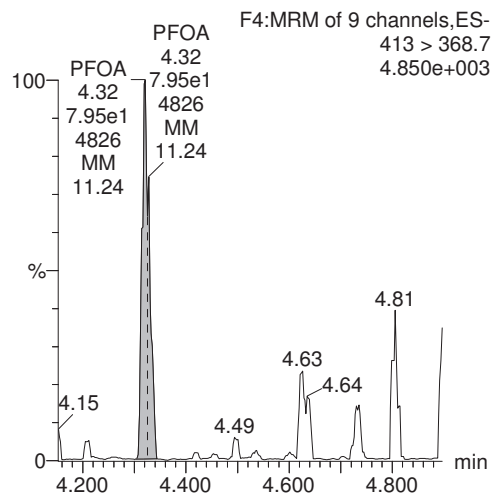
Method: U:\G1.PRO\MethDB\PFAS\_DW\_L3\_1126.mdb 27 Nov 2017 14:32:15  
Calibration: U:\G1.PRO\CurveDB\C18\_537\_Q1\_12-06-17\_L3.cdb 06 Dec 2017 15:37:11

Name: 171207G3\_60, Date: 08-Dec-2017, Time: 01:48:36, ID: 1701813-07 CH-AT-2RW23-1117 0.25821, Description: CH-AT-2RW23-1117

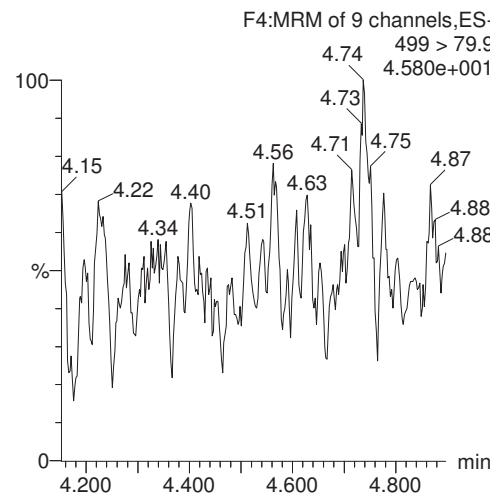
PFBS



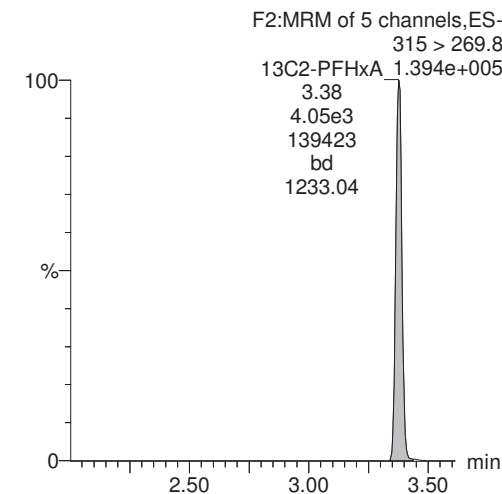
PFOA



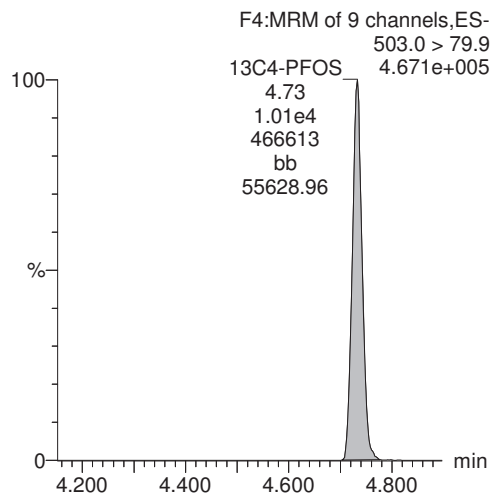
PFOS



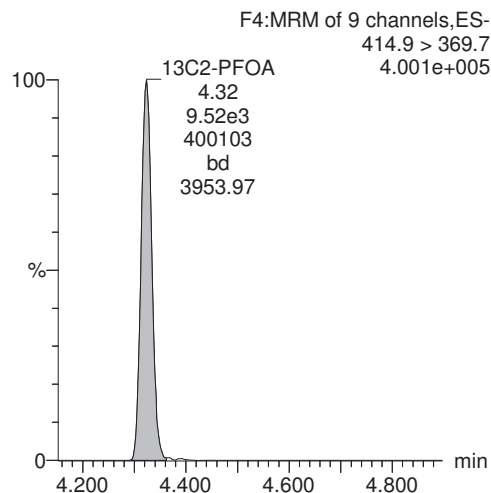
13C2-PFHxA



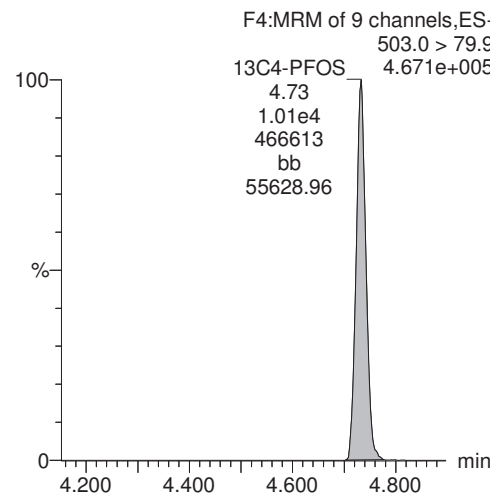
13C4-PFOS



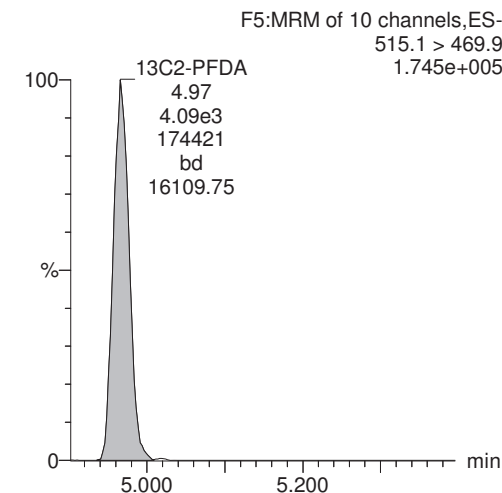
13C2-PFOA



13C4-PFOS



13C2-PFDA



Dataset: U:\G1.PRO\Results\2017\171207G3\171207G1-61.qld

Last Altered: Monday, December 11, 2017 10:00:24 Pacific Standard Time

Printed: Monday, December 11, 2017 10:00:50 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS\_DW\_L3\_1126.mdb 27 Nov 2017 14:32:15

Calibration: U:\G1.PRO\CurveDB\C18\_537\_Q1\_12-06-17\_L3.cdb 06 Dec 2017 15:37:11

Name: 171207G3\_61, Date: 08-Dec-2017, Time: 02:01:00, ID: 1701813-08 CH-AT-2FB23-1117 0.24936, Description: CH-AT-2FB23-1117

	# Name	Trace	Area	IS Area	RRF	wt/vol	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	299 > 79.7		1.04e4		0.2494	3.04				
2	2 PFOA	413 > 368.7	4.17e1	9.22e3		0.2494	4.32	4.32	0.0452	0.234	
3	3 PFOS	499 > 79.9		1.04e4		0.2494	4.74				
4	4 13C2-PFHxA	315 > 269.8	4.11e3	9.22e3	0.424	0.2494	3.38	3.38	4.45	42.1	105.0
5	5 13C2-PFDA	515.1 > 469.9	4.79e3	9.22e3	0.478	0.2494	4.95	4.97	5.19	43.6	108.6
6	6 13C2-PFOA	414.9 > 369.7	9.22e3	9.22e3	1.000	0.2494	4.41	4.32	10.0	40.1	100.0
7	7 13C4-PFOS	503.0 > 79.9	1.04e4	1.04e4	1.000	0.2494	4.81	4.74	28.7	115	100.0

Dataset: U:\G1.PRO\Results\2017\171207G3\171207G1-61.qld

Last Altered: Monday, December 11, 2017 10:00:24 Pacific Standard Time

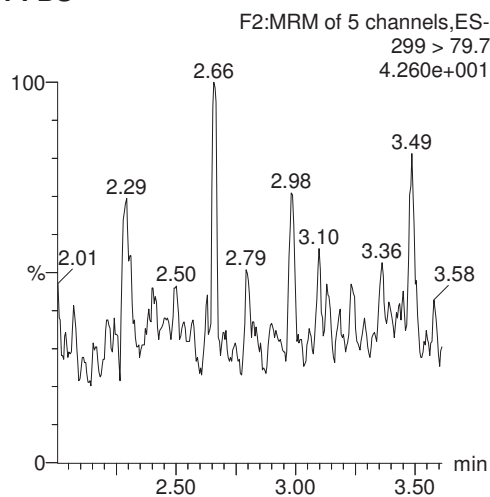
Printed: Monday, December 11, 2017 10:00:50 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS\_DW\_L3\_1126.mdb 27 Nov 2017 14:32:15

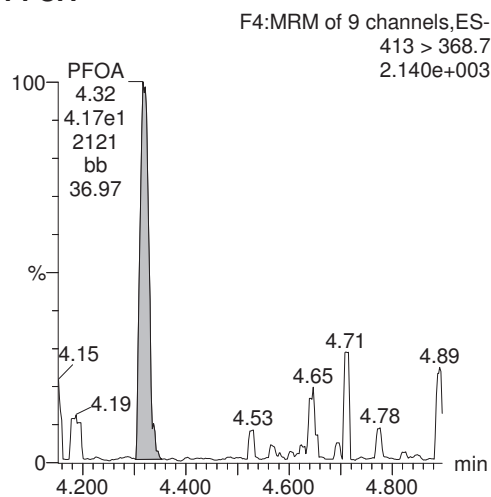
Calibration: U:\G1.PRO\CurveDB\C18\_537\_Q1\_12-06-17\_L3.cdb 06 Dec 2017 15:37:11

Name: 171207G3\_61, Date: 08-Dec-2017, Time: 02:01:00, ID: 1701813-08 CH-AT-2FB23-1117 0.24936, Description: CH-AT-2FB23-1117

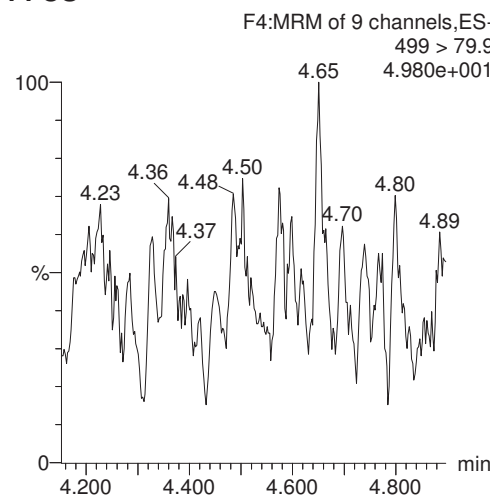
**PFBS**



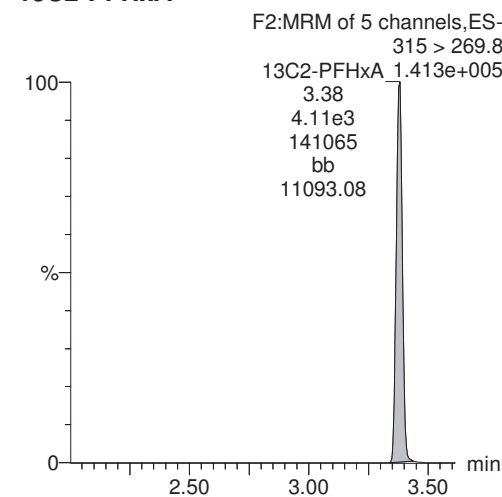
**PFOA**



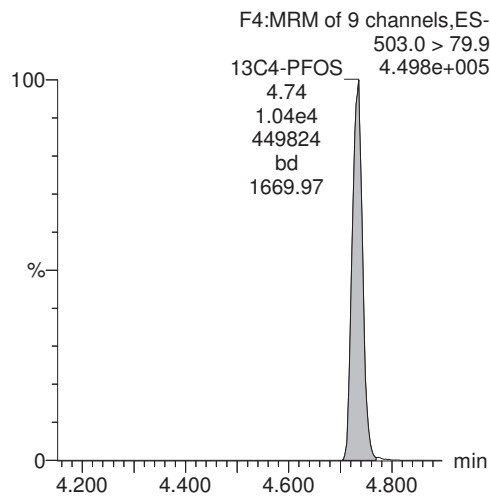
**PFOS**



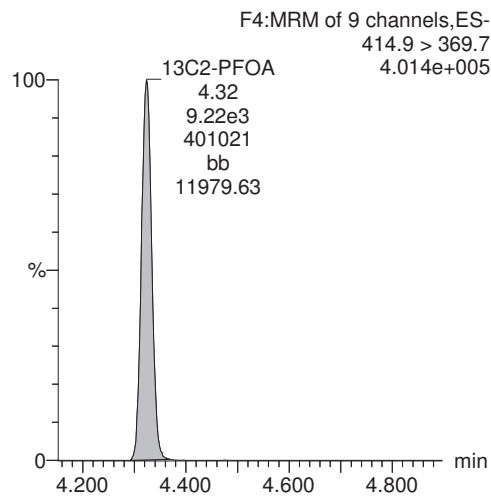
**13C2-PFHxA**



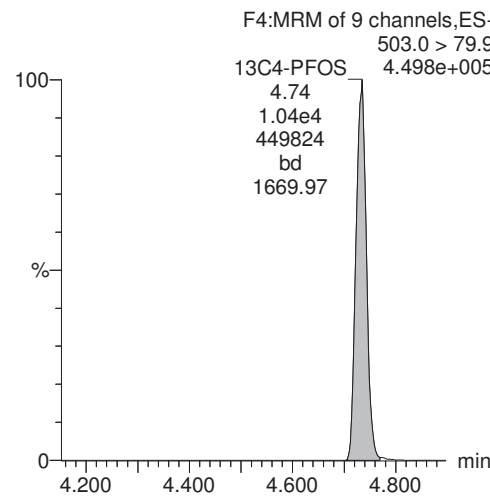
**13C4-PFOS**



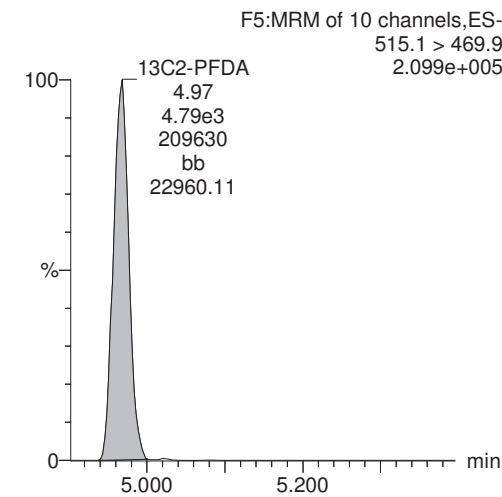
**13C2-PFOA**



**13C4-PFOS**



**13C2-PFDA**



Dataset: U:\G1.PRO\Results\2017\171208G1\171208G1-16.qld

Last Altered: Monday, December 11, 2017 10:02:45 Pacific Standard Time

Printed: Monday, December 11, 2017 10:03:03 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS\_DW\_L3\_1126.mdb 27 Nov 2017 14:32:15

Calibration: U:\G1.PRO\CurveDB\C18\_537\_Q1\_12-06-17\_L3.cdb 06 Dec 2017 15:37:11

Name: 171208G1\_16, Date: 08-Dec-2017, Time: 12:46:57, ID: 1701813-09 CH-AT-2RW24-1117 0.25492, Description: CH-AT-2RW24-1117

	# Name	Trace	Area	IS Area	RRF	wt/vol	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	299 > 79.7		1.02e4		0.2549	3.03				
2	2 PFOA	413 > 368.7		9.07e3		0.2549	4.33				
3	3 PFOS	499 > 79.9		1.02e4		0.2549	4.73				
4	4 13C2-PFHxA	315 > 269.8	3.66e3	9.07e3	0.424	0.2549	3.39	3.37	4.04	37.4	95.3
5	5 13C2-PFDA	515.1 > 469.9	4.72e3	9.07e3	0.478	0.2549	4.96	4.97	5.21	42.7	108.9
6	6 13C2-PFOA	414.9 > 369.7	9.07e3	9.07e3	1.000	0.2549	4.41	4.33	10.0	39.2	100.0
7	7 13C4-PFOS	503.0 > 79.9	1.02e4	1.02e4	1.000	0.2549	4.81	4.73	28.7	113	100.0

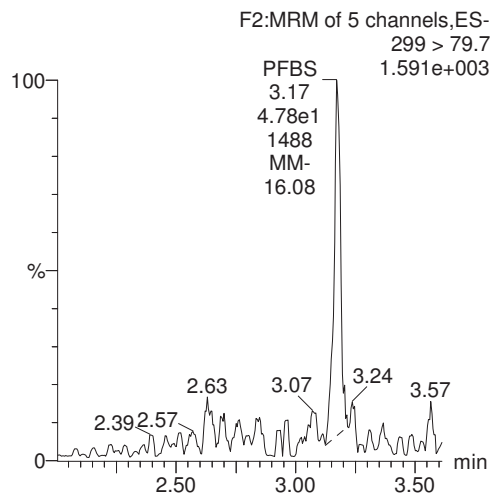
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Last Altered: Monday, December 11, 2017 10:02:45 Pacific Standard Time  
Printed: Monday, December 11, 2017 10:03:03 Pacific Standard Time

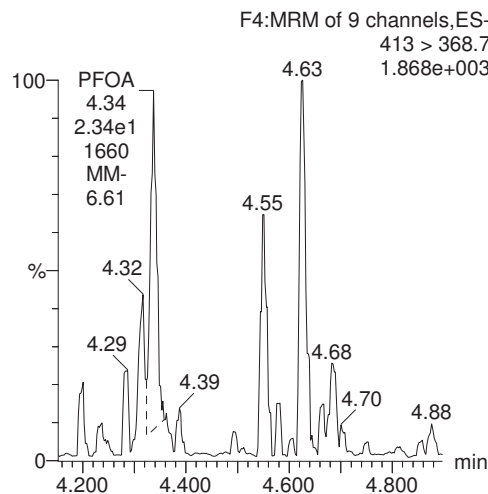
Method: U:\G1.PRO\MethDB\PFAS\_DW\_L3\_1126.mdb 27 Nov 2017 14:32:15  
Calibration: U:\G1.PRO\CurveDB\C18\_537\_Q1\_12-06-17\_L3.cdb 06 Dec 2017 15:37:11

Name: 171208G1\_16, Date: 08-Dec-2017, Time: 12:46:57, ID: 1701813-09 CH-AT-2RW24-1117 0.25492, Description: CH-AT-2RW24-1117

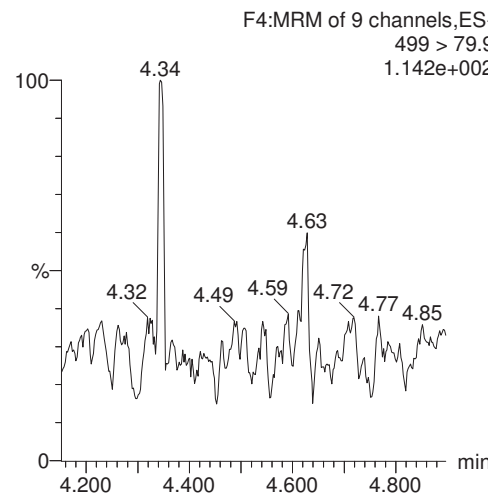
**PFBS**



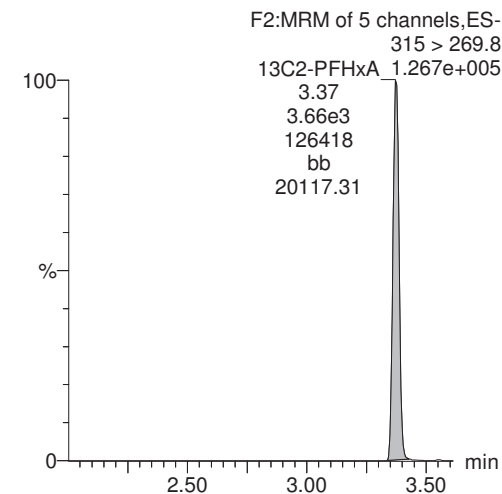
**PFOA**



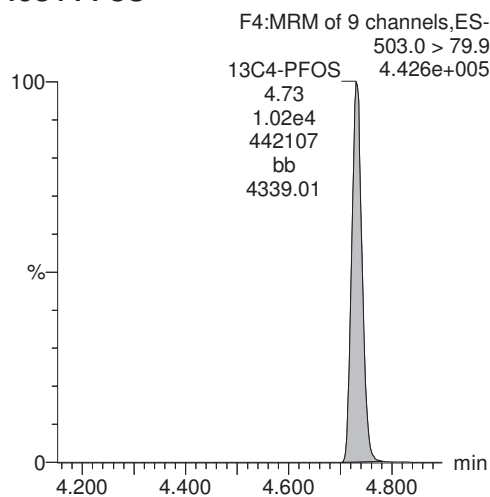
**PFOS**



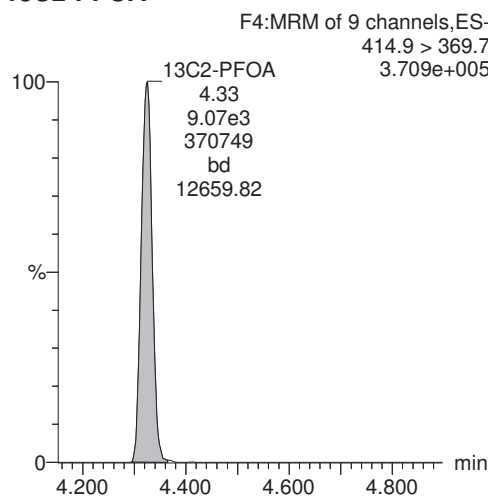
**13C2-PFHxA**



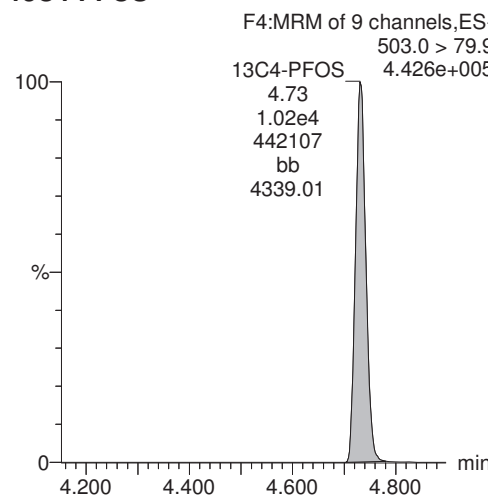
**13C4-PFOS**



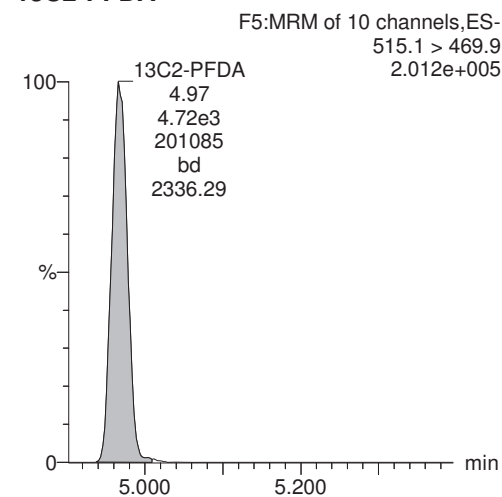
**13C2-PFOA**



**13C4-PFOS**



**13C2-PFDA**



Dataset: U:\G1.PRO\Results\2017\171211G1\171211G1-4.qld

Last Altered: Monday, December 11, 2017 16:07:48 Pacific Standard Time

Printed: Monday, December 11, 2017 16:08:43 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS\_DW\_L3\_1126.mdb 27 Nov 2017 14:32:15

Calibration: U:\G1.PRO\CurveDB\C18\_537\_Q1\_12-08-17\_L3.cdb 10 Dec 2017 22:49:55

Name: 171211G1\_4, Date: 11-Dec-2017, Time: 12:15:55, ID: 1701813-10 CH-AT-2FB24-1117 0.26256, Description: CH-AT-2FB24-1117

	# Name	Trace	Area	IS Area	RRF	wt/vol	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	299 > 79.7		9.37e3		0.2626	3.03				
2	2 PFOA	413 > 368.7	4.82e1	8.31e3		0.2626	4.31	4.31	0.0580	0.272	
3	3 PFOS	499 > 79.9		9.37e3		0.2626	4.73				
4	4 13C2-PFHxA	315 > 269.8	3.59e3	8.31e3	0.443	0.2626	3.37	3.38	4.31	37.1	97.4
5	5 13C2-PFDA	515.1 > 469.9	4.40e3	8.31e3	0.509	0.2626	4.94	4.96	5.29	39.6	103.9
6	6 13C2-PFOA	414.9 > 369.7	8.31e3	8.31e3	1.000	0.2626	4.41	4.31	10.0	38.1	100.0
7	7 13C4-PFOS	503.0 > 79.9	9.37e3	9.37e3	1.000	0.2626	4.81	4.73	28.7	109	100.0

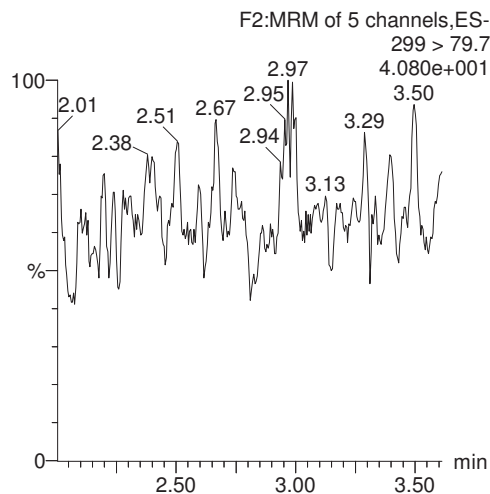
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Last Altered: Monday, December 11, 2017 16:07:48 Pacific Standard Time  
Printed: Monday, December 11, 2017 16:08:43 Pacific Standard Time

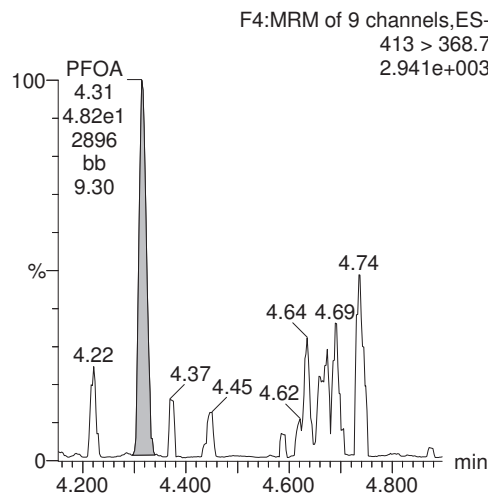
Method: U:\G1.PRO\MethDB\PFAS\_DW\_L3\_1126.mdb 27 Nov 2017 14:32:15  
Calibration: U:\G1.PRO\CurveDB\C18\_537\_Q1\_12-08-17\_L3.cdb 10 Dec 2017 22:49:55

Name: 171211G1\_4, Date: 11-Dec-2017, Time: 12:15:55, ID: 1701813-10 CH-AT-2FB24-1117 0.26256, Description: CH-AT-2FB24-1117

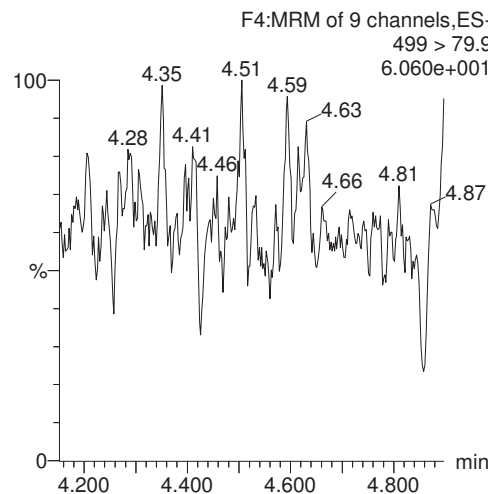
PFBS



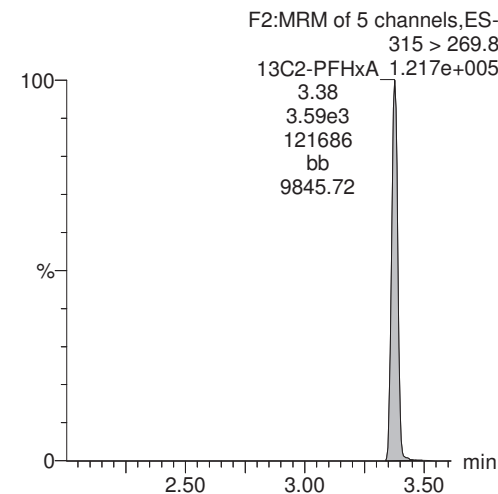
PFOA



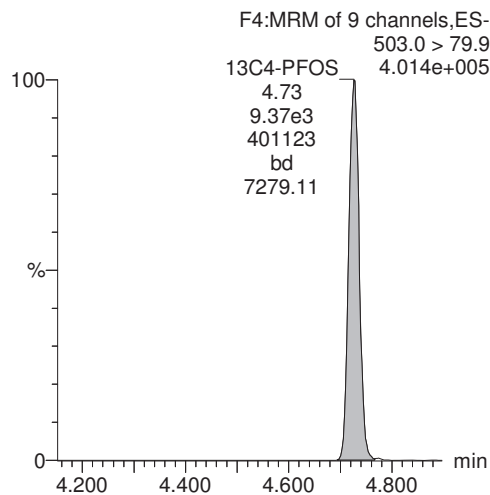
PFOS



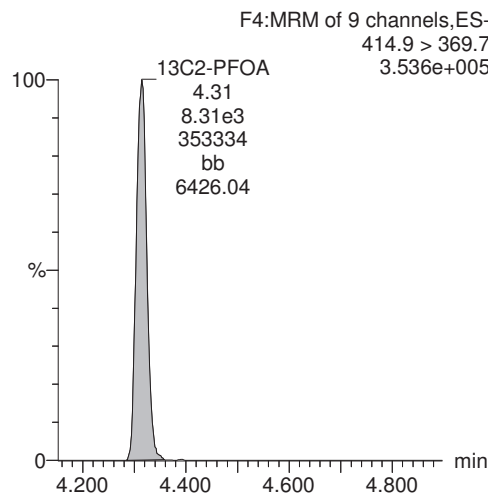
13C2-PFHxA



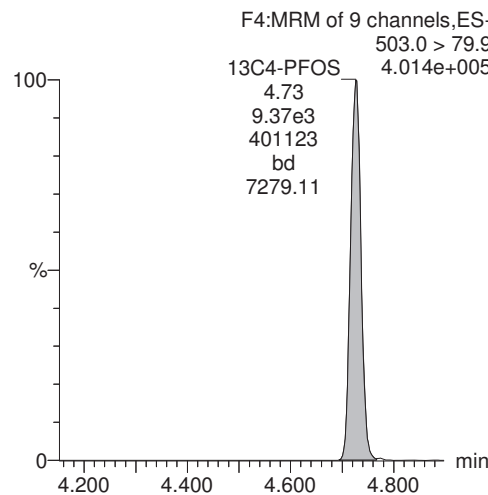
13C4-PFOS



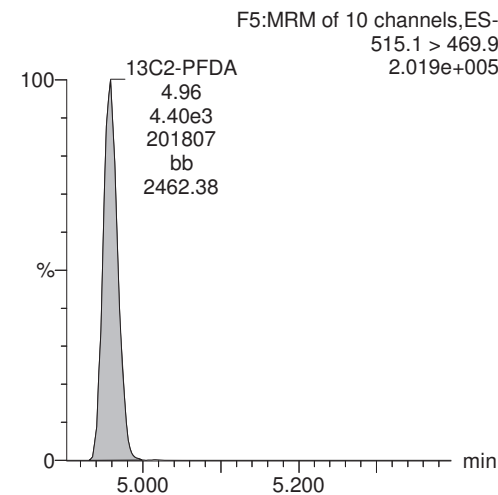
13C2-PFOA



13C4-PFOS



13C2-PFDA



Dataset: U:\G1.PRO\Results\2017\171208G1\171208G1-18.qld

Last Altered: Monday, December 11, 2017 10:01:54 Pacific Standard Time

Printed: Monday, December 11, 2017 10:02:05 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS\_DW\_L3\_1126.mdb 27 Nov 2017 14:32:15

Calibration: U:\G1.PRO\CurveDB\C18\_537\_Q1\_12-06-17\_L3.cdb 06 Dec 2017 15:37:11

Name: 171208G1\_18, Date: 08-Dec-2017, Time: 13:11:49, ID: 1701813-11 CH-AT-2RW25-1117 0.25755, Description: CH-AT-2RW25-1117

	# Name	Trace	Area	IS Area	RRF	wt/vol	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	299 > 79.7		1.04e4		0.2576	3.03				
2	2 PFOA	413 > 368.7	1.18e1	9.40e3		0.2576	4.32	4.32	0.0125	0.0628	
3	3 PFOS	499 > 79.9		1.04e4		0.2576	4.73				
4	4 13C2-PFHxA	315 > 269.8	4.17e3	9.40e3	0.424	0.2576	3.38	3.38	4.43	40.6	104.6
5	5 13C2-PFDA	515.1 > 469.9	4.32e3	9.40e3	0.478	0.2576	4.95	4.97	4.59	37.3	96.0
6	6 13C2-PFOA	414.9 > 369.7	9.40e3	9.40e3	1.000	0.2576	4.41	4.32	10.0	38.8	100.0
7	7 13C4-PFOS	503.0 > 79.9	1.04e4	1.04e4	1.000	0.2576	4.81	4.73	28.7	111	100.0



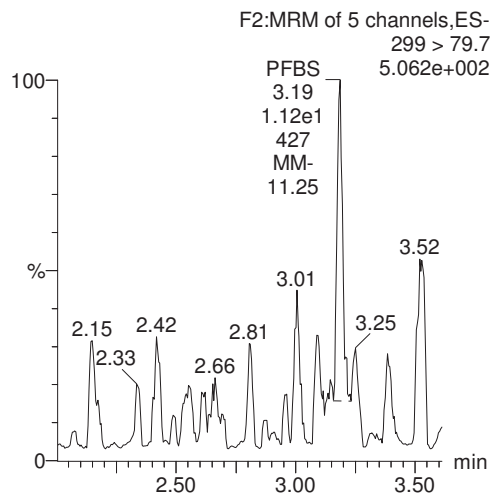
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Printed: Monday, December 11, 2017 10:02:05 Pacific Standard Time

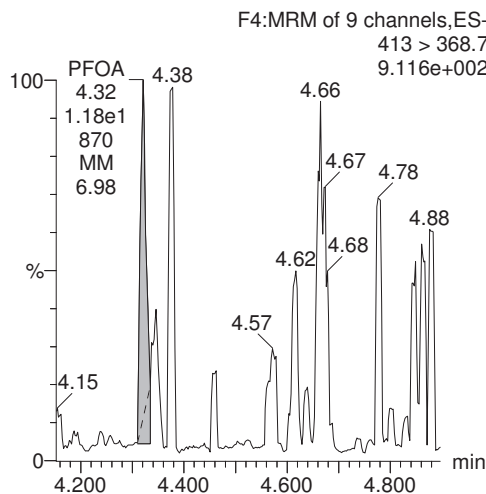
Method: U:\G1.PRO\MethDB\PFAS\_DW\_L3\_1126.mdb 27 Nov 2017 14:32:15  
Calibration: U:\G1.PRO\CurveDB\C18\_537\_Q1\_12-06-17\_L3.cdb 06 Dec 2017 15:37:11

Name: 171208G1\_18, Date: 08-Dec-2017, Time: 13:11:49, ID: 1701813-11 CH-AT-2RW25-1117 0.25755, Description: CH-AT-2RW25-1117

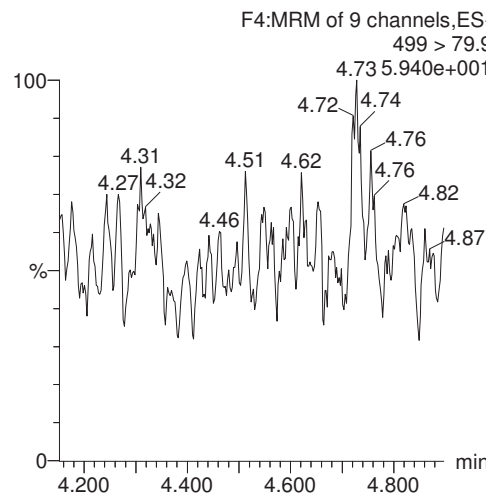
PFBS



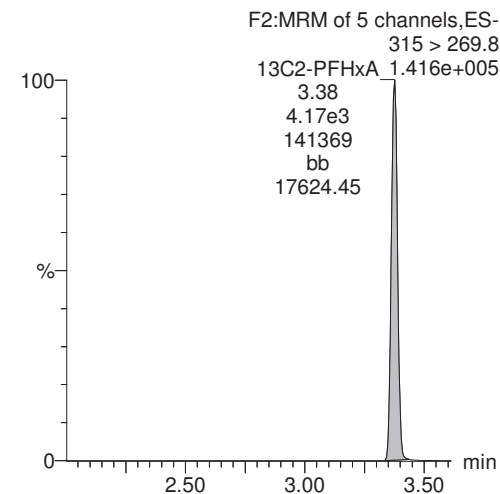
PFOA



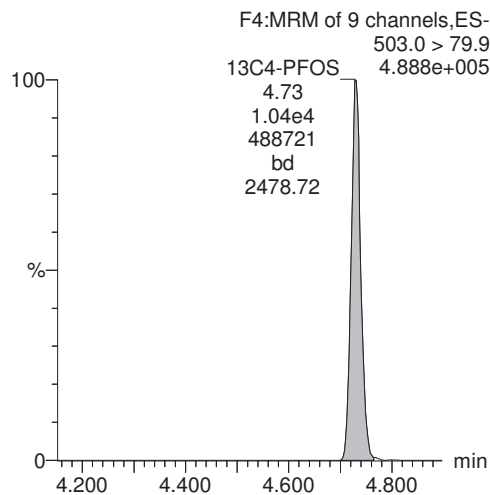
PFOS



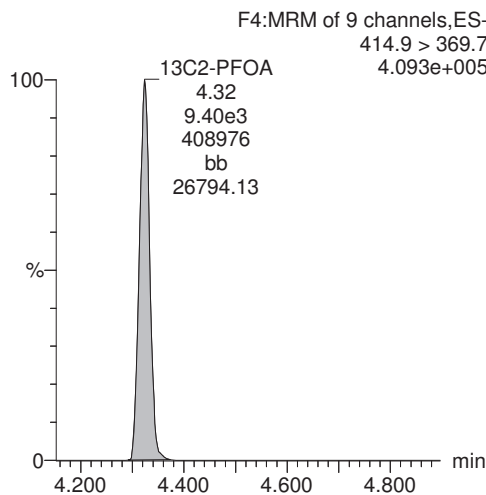
13C2-PFHxA



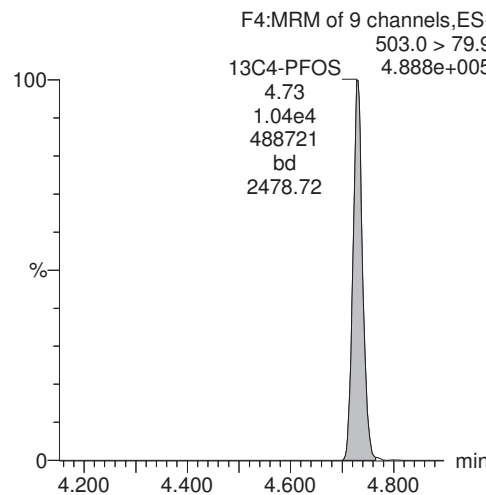
13C4-PFOS



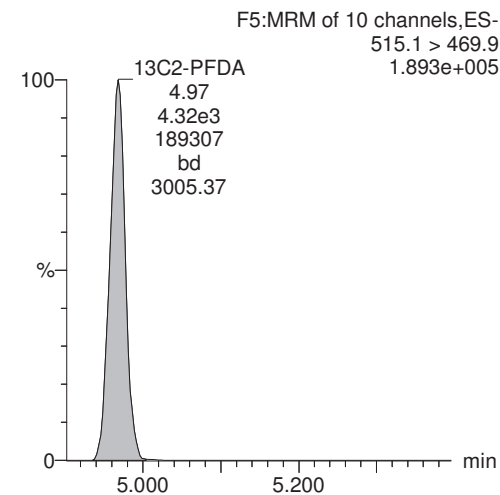
13C2-PFOA



13C4-PFOS



13C2-PFDA



Dataset: U:\G1.PRO\Results\2017\171208G1\171208G1-19.qld

Last Altered: Monday, December 11, 2017 10:13:58 Pacific Standard Time

Printed: Monday, December 11, 2017 10:14:43 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS\_DW\_L3\_1126.mdb 27 Nov 2017 14:32:15

Calibration: U:\G1.PRO\CurveDB\C18\_537\_Q1\_12-06-17\_L3.cdb 06 Dec 2017 15:37:11

Name: 171208G1\_19, Date: 08-Dec-2017, Time: 13:24:14, ID: 1701813-12 CH-AT-2FB25-1117 0.25959, Description: CH-AT-2FB25-1117

	# Name	Trace	Area	IS Area	RRF	wt/vol	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	299 > 79.7		9.13e3		0.2596	3.03				
2	2 PFOA	413 > 368.7	3.69e1	9.42e3		0.2596	4.32	4.32	0.0392	0.195	
3	3 PFOS	499 > 79.9	2.14e0	9.13e3		0.2596	4.73	4.74	0.00674	0.0193	
4	4 13C2-PFHxA	315 > 269.8	4.00e3	9.42e3	0.424	0.2596	3.38	3.38	4.24	38.6	100.1
5	5 13C2-PFDA	515.1 > 469.9	4.58e3	9.42e3	0.478	0.2596	4.95	4.97	4.86	39.1	101.6
6	6 13C2-PFOA	414.9 > 369.7	9.42e3	9.42e3	1.000	0.2596	4.41	4.32	10.0	38.5	100.0
7	7 13C4-PFOS	503.0 > 79.9	9.13e3	9.13e3	1.000	0.2596	4.81	4.73	28.7	111	100.0

Dataset: U:\G1.PRO\Results\2017\171208G1\171208G1-19.qld

Last Altered: Monday, December 11, 2017 10:13:58 Pacific Standard Time

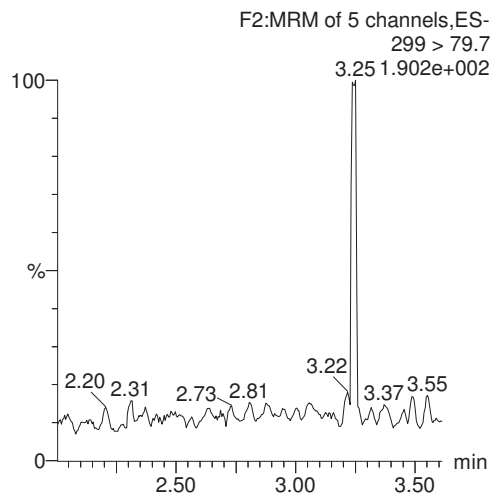
Printed: Monday, December 11, 2017 10:14:43 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS\_DW\_L3\_1126.mdb 27 Nov 2017 14:32:15

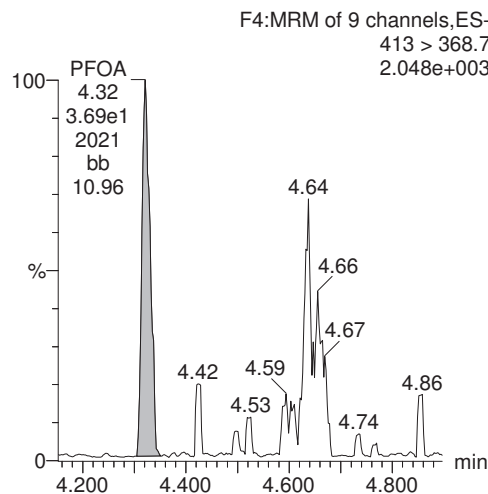
Calibration: U:\G1.PRO\CurveDB\C18\_537\_Q1\_12-06-17\_L3.cdb 06 Dec 2017 15:37:11

Name: 171208G1\_19, Date: 08-Dec-2017, Time: 13:24:14, ID: 1701813-12 CH-AT-2FB25-1117 0.25959, Description: CH-AT-2FB25-1117

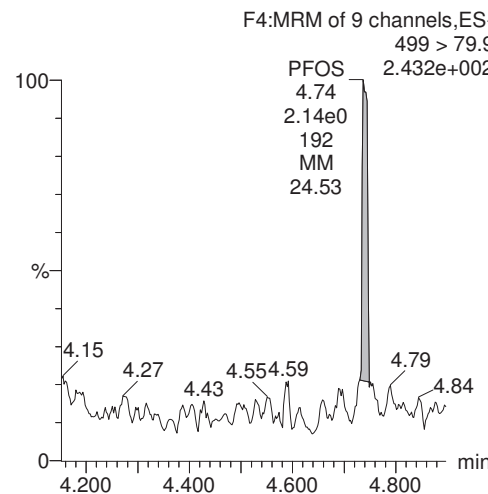
PFBS



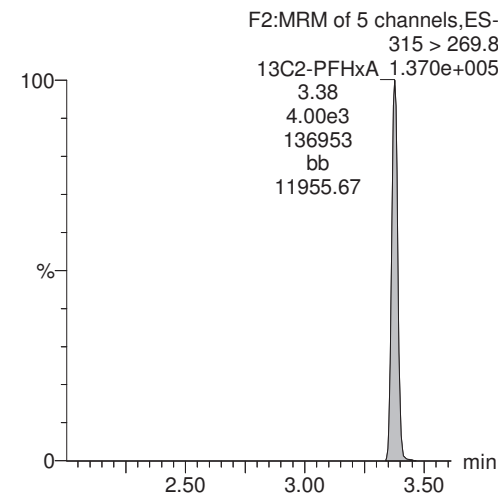
PFOA



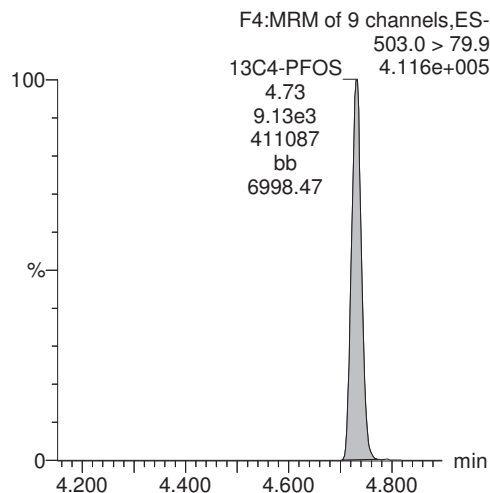
PFOS



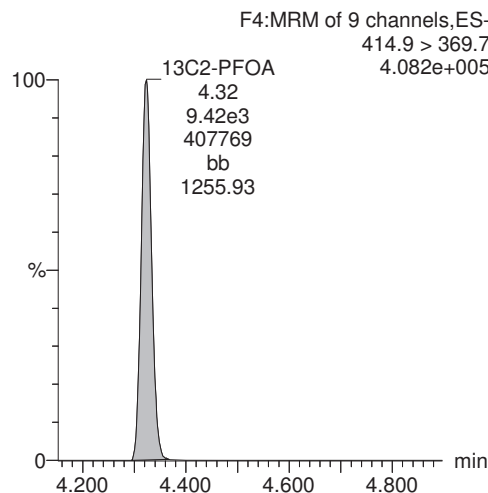
13C2-PFHxA



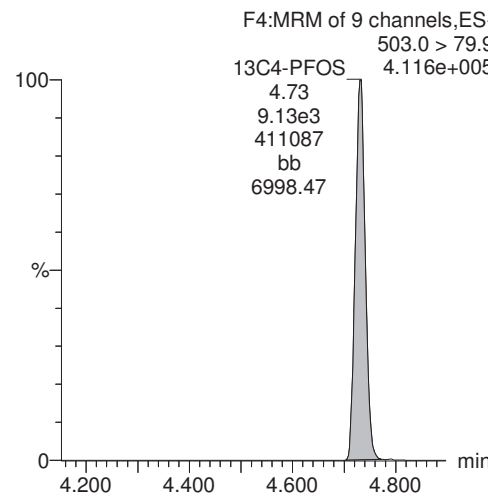
13C4-PFOS



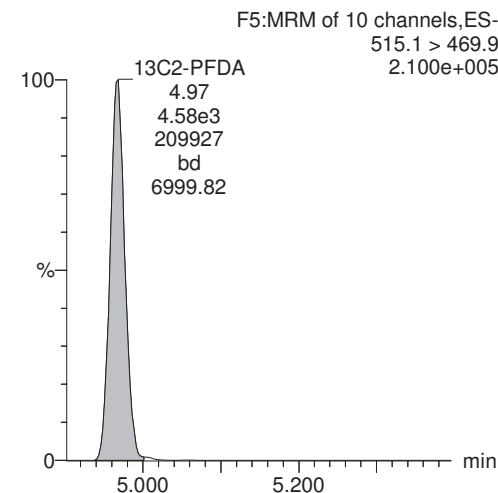
13C2-PFOA



13C4-PFOS



13C2-PFDA



Dataset: U:\G1.PRO\Results\2017\171208G1\171208G1-20.qld

Last Altered: Monday, December 11, 2017 10:15:32 Pacific Standard Time

Printed: Monday, December 11, 2017 10:16:02 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS\_DW\_L3\_1126.mdb 27 Nov 2017 14:32:15

Calibration: U:\G1.PRO\CurveDB\C18\_537\_Q1\_12-06-17\_L3.cdb 06 Dec 2017 15:37:11

Name: 171208G1\_20, Date: 08-Dec-2017, Time: 13:36:38, ID: 1701813-13 CH-AT-2RW26-1117 0.25763, Description: CH-AT-2RW26-1117

	# Name	Trace	Area	IS Area	RRF	wt/vol	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	299 > 79.7		1.03e4		0.2576	3.03				
2	2 PFOA	413 > 368.7		9.27e3		0.2576	4.32				
3	3 PFOS	499 > 79.9		1.03e4		0.2576	4.73				
4	4 13C2-PFHxA	315 > 269.8	3.98e3	9.27e3	0.424	0.2576	3.38	3.38	4.29	39.3	101.2
5	5 13C2-PFDA	515.1 > 469.9	4.08e3	9.27e3	0.478	0.2576	4.95	4.97	4.40	35.7	92.0
6	6 13C2-PFOA	414.9 > 369.7	9.27e3	9.27e3	1.000	0.2576	4.41	4.32	10.0	38.8	100.0
7	7 13C4-PFOS	503.0 > 79.9	1.03e4	1.03e4	1.000	0.2576	4.81	4.73	28.7	111	100.0

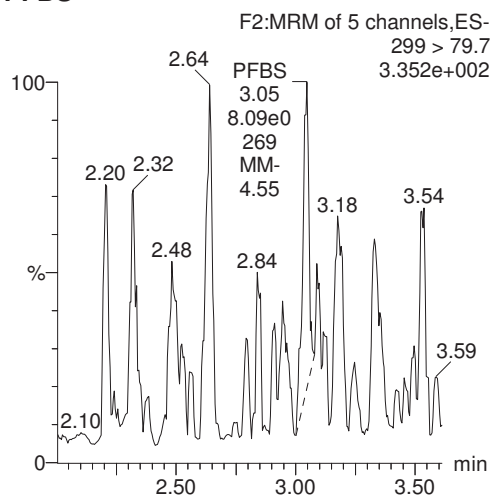
Dataset: U:\G1.PRO\Results\2017\171208G1\171208G1-20.qld

Last Altered: Monday, December 11, 2017 10:15:32 Pacific Standard Time  
Printed: Monday, December 11, 2017 10:16:02 Pacific Standard Time

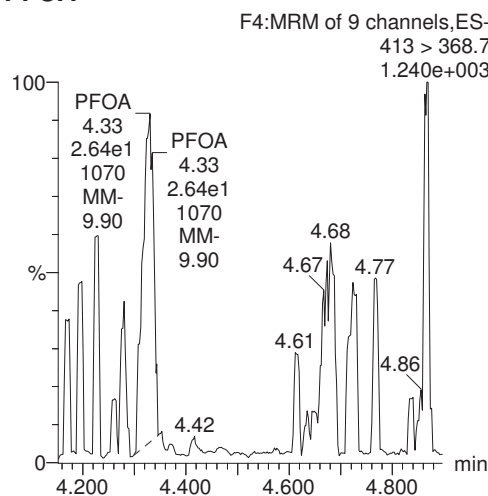
Method: U:\G1.PRO\MethDB\PFAS\_DW\_L3\_1126.mdb 27 Nov 2017 14:32:15  
Calibration: U:\G1.PRO\CurveDB\C18\_537\_Q1\_12-06-17\_L3.cdb 06 Dec 2017 15:37:11

Name: 171208G1\_20, Date: 08-Dec-2017, Time: 13:36:38, ID: 1701813-13 CH-AT-2RW26-1117 0.25763, Description: CH-AT-2RW26-1117

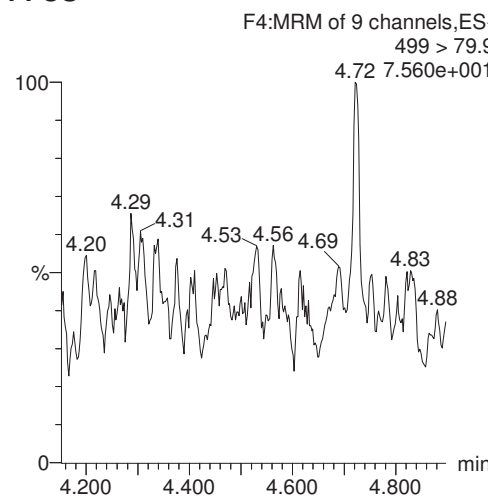
**PFBS**



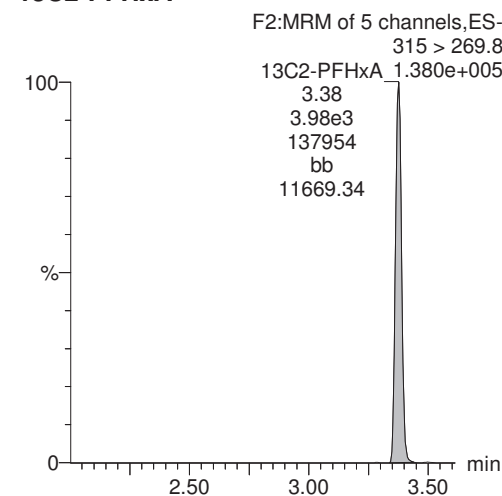
**PFOA**



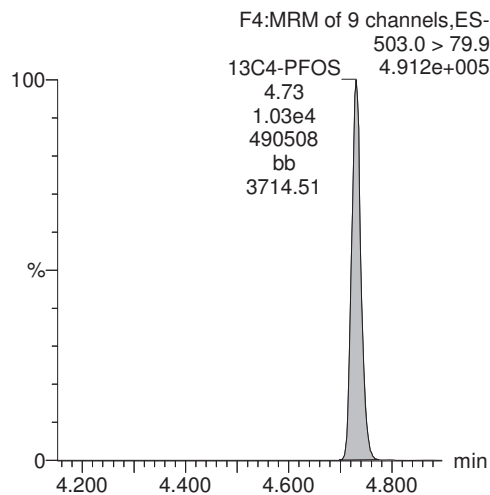
**PFOS**



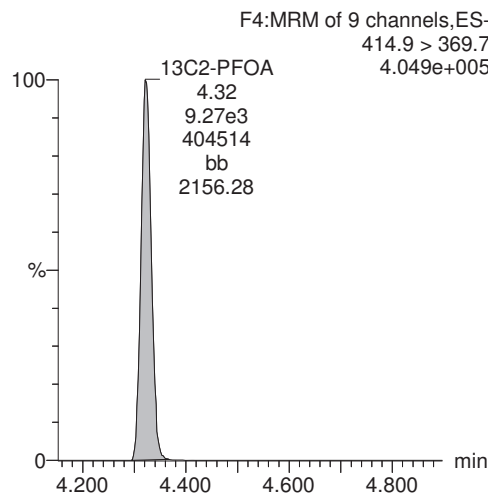
**13C2-PFHxA**



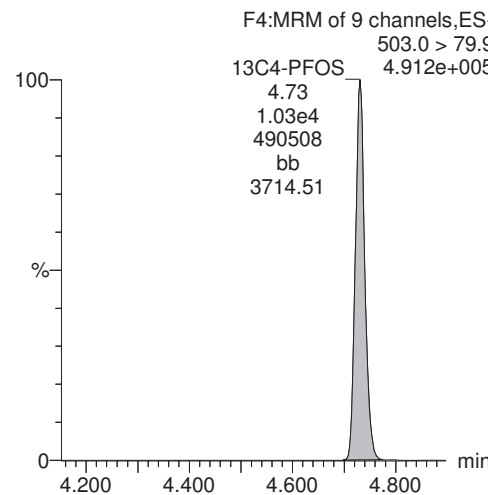
**13C4-PFOS**



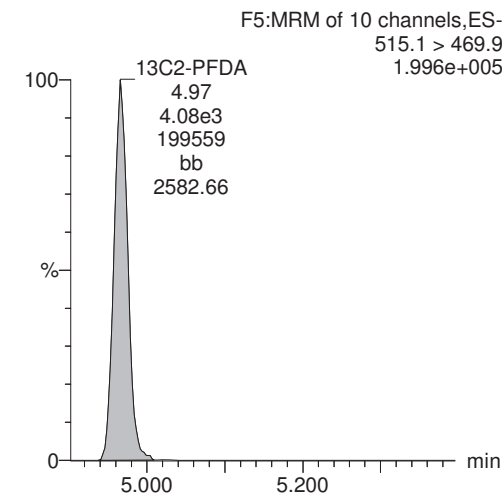
**13C2-PFOA**



**13C4-PFOS**



**13C2-PFDA**



Dataset: U:\G1.PRO\Results\2017\171208G1\171208G1-21.qld

Last Altered: Monday, December 11, 2017 10:17:10 Pacific Standard Time

Printed: Monday, December 11, 2017 10:17:31 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS\_DW\_L3\_1126.mdb 27 Nov 2017 14:32:15

Calibration: U:\G1.PRO\CurveDB\C18\_537\_Q1\_12-06-17\_L3.cdb 06 Dec 2017 15:37:11

Name: 171208G1\_21, Date: 08-Dec-2017, Time: 13:49:03, ID: 1701813-14 CH-AT-2FB26-1117 0.25837, Description: CH-AT-2FB26-1117

	# Name	Trace	Area	IS Area	RRF	wt/vol	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	299 > 79.7		9.37e3		0.2584	3.03				
2	2 PFOA	413 > 368.7	3.84e1	9.63e3		0.2584	4.32	4.33	0.0398	0.199	
3	3 PFOS	499 > 79.9	3.54e0	9.37e3		0.2584	4.73	4.72	0.0109	0.0313	
4	4 13C2-PFHxA	315 > 269.8	3.96e3	9.63e3	0.424	0.2584	3.38	3.38	4.11	37.5	96.9
5	5 13C2-PFDA	515.1 > 469.9	4.61e3	9.63e3	0.478	0.2584	4.95	4.97	4.78	38.7	100.0
6	6 13C2-PFOA	414.9 > 369.7	9.63e3	9.63e3	1.000	0.2584	4.41	4.32	10.0	38.7	100.0
7	7 13C4-PFOS	503.0 > 79.9	9.37e3	9.37e3	1.000	0.2584	4.81	4.73	28.7	111	100.0

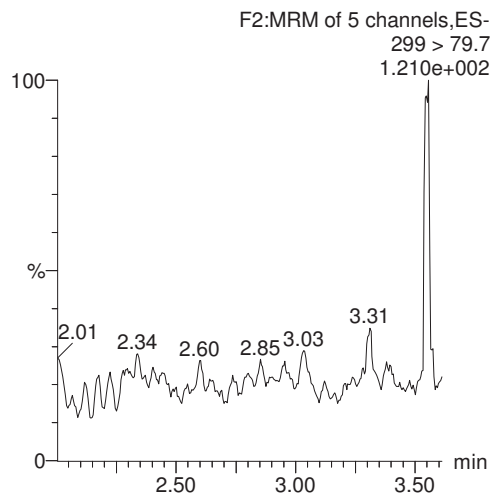
Dataset: U:\G1.PRO\Results\2017\171208G1\171208G1-21.qld

Last Altered: Monday, December 11, 2017 10:17:10 Pacific Standard Time  
Printed: Monday, December 11, 2017 10:17:31 Pacific Standard Time

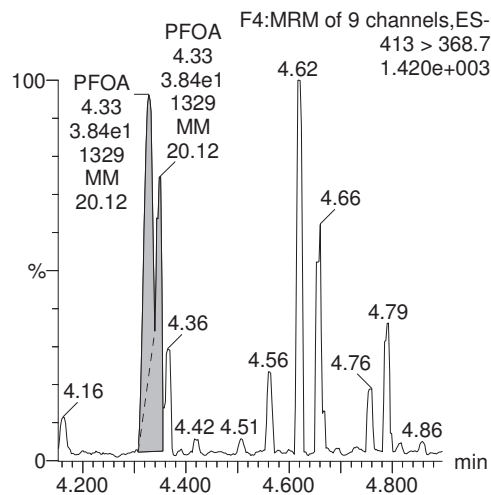
Method: U:\G1.PRO\MethDB\PFAS\_DW\_L3\_1126.mdb 27 Nov 2017 14:32:15  
Calibration: U:\G1.PRO\CurveDB\C18\_537\_Q1\_12-06-17\_L3.cdb 06 Dec 2017 15:37:11

Name: 171208G1\_21, Date: 08-Dec-2017, Time: 13:49:03, ID: 1701813-14 CH-AT-2FB26-1117 0.25837, Description: CH-AT-2FB26-1117

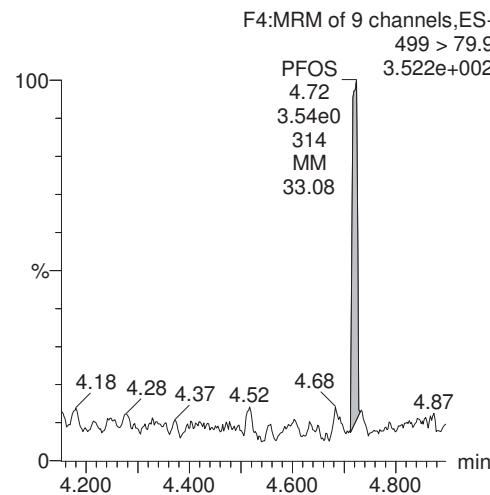
PFBS



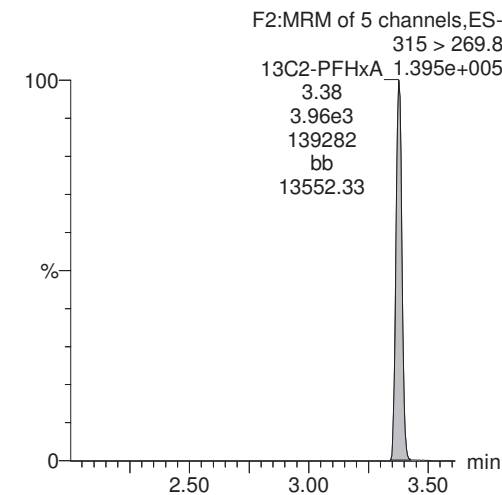
PFOA



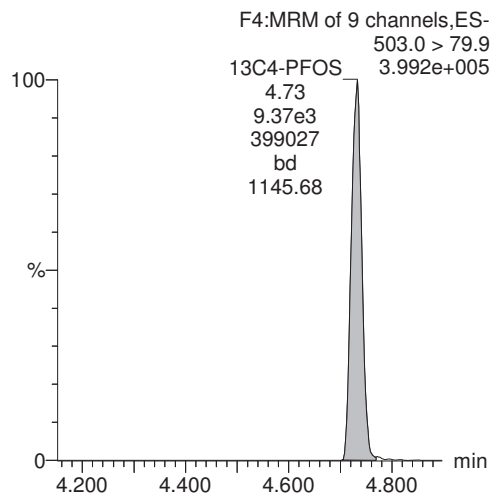
PFOS



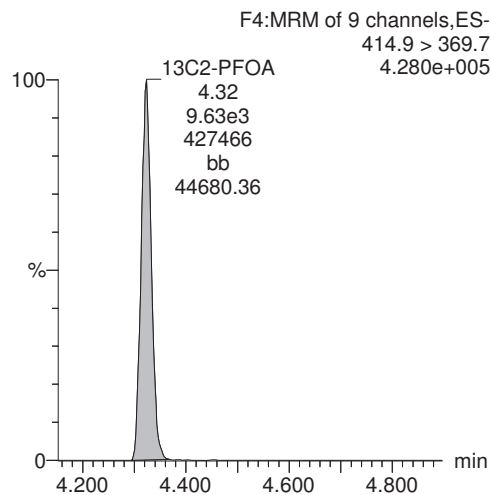
13C2-PFHxA



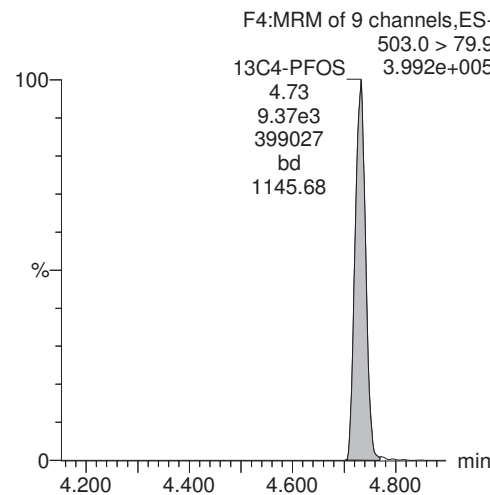
13C4-PFOS



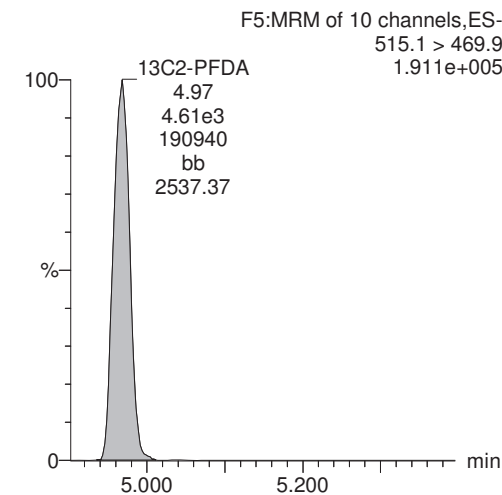
13C2-PFOA



13C4-PFOS



13C2-PFDA



Dataset: U:\G1.PRO\Results\2017\171208G1\171208G1-22.qld

Last Altered: Monday, December 11, 2017 10:18:17 Pacific Standard Time  
Printed: Monday, December 11, 2017 10:18:50 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS\_DW\_L3\_1126.mdb 27 Nov 2017 14:32:15

Calibration: U:\G1.PRO\CurveDB\C18\_537\_Q1\_12-06-17\_L3.cdb 06 Dec 2017 15:37:11

Name: 171208G1\_22, Date: 08-Dec-2017, Time: 14:01:29, ID: 1701813-15 CH-AT-2RW27-1117 0.25746, Description: CH-AT-2RW27-1117

	# Name	Trace	Area	IS Area	RRF	wt/vol	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	299 > 79.7		1.03e4		0.2575	3.03				
2	2 PFOA	413 > 368.7	8.44e1	9.51e3		0.2575	4.32	4.32	0.0887	0.445	
3	3 PFOS	499 > 79.9		1.03e4		0.2575	4.73				
4	4 13C2-PFHxA	315 > 269.8	3.99e3	9.51e3	0.424	0.2575	3.38	3.38	4.20	38.5	99.0
5	5 13C2-PFDA	515.1 > 469.9	4.93e3	9.51e3	0.478	0.2575	4.95	4.97	5.19	42.1	108.5
6	6 13C2-PFOA	414.9 > 369.7	9.51e3	9.51e3	1.000	0.2575	4.41	4.32	10.0	38.8	100.0
7	7 13C4-PFOS	503.0 > 79.9	1.03e4	1.03e4	1.000	0.2575	4.81	4.73	28.7	111	100.0



Dataset: U:\G1.PRO\Results\2017\171208G1\171208G1-22.qld

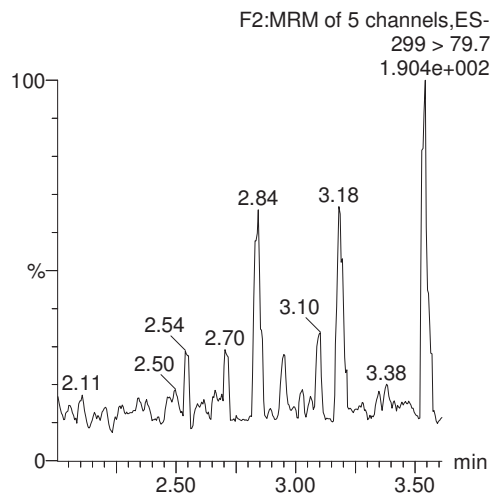
Last Altered: Monday, December 11, 2017 10:18:17 Pacific Standard Time

Printed: Monday, December 11, 2017 10:18:50 Pacific Standard Time

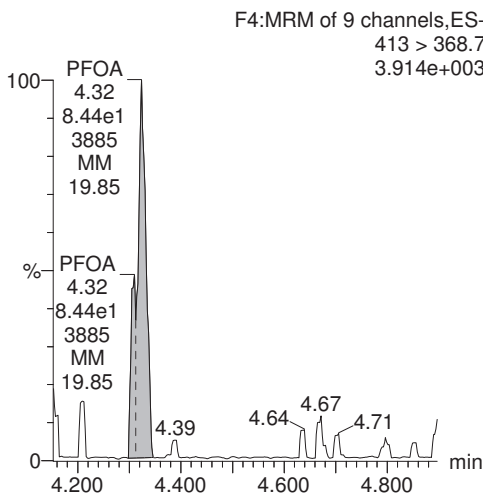
Method: U:\G1.PRO\MethDB\PFAS\_DW\_L3\_1126.mdb 27 Nov 2017 14:32:15  
Calibration: U:\G1.PRO\CurveDB\C18\_537\_Q1\_12-06-17\_L3.cdb 06 Dec 2017 15:37:11

Name: 171208G1\_22, Date: 08-Dec-2017, Time: 14:01:29, ID: 1701813-15 CH-AT-2RW27-1117 0.25746, Description: CH-AT-2RW27-1117

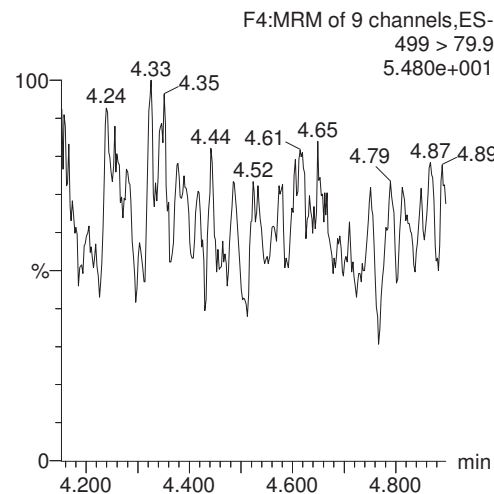
**PFBS**



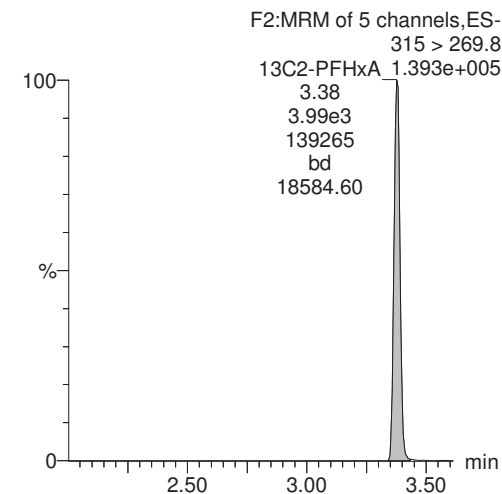
**PFOA**



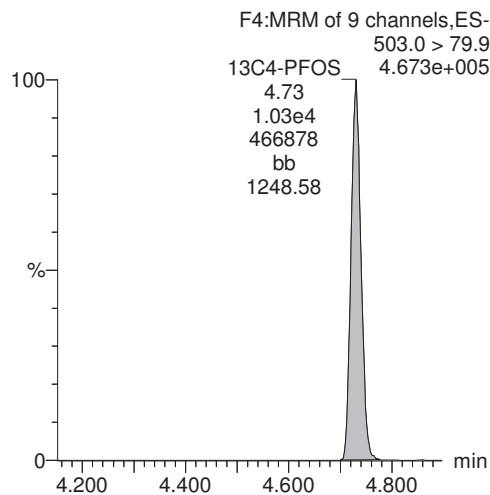
**PFOS**



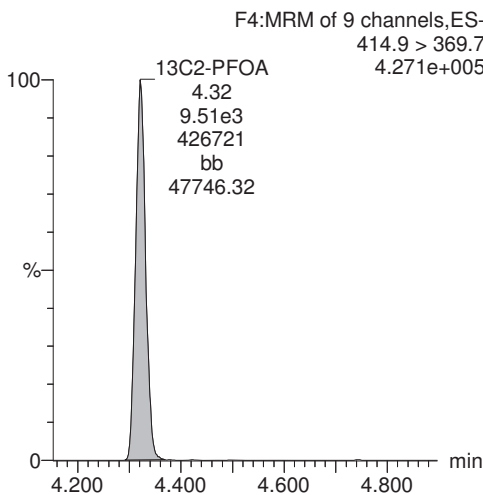
**13C2-PFHxA**



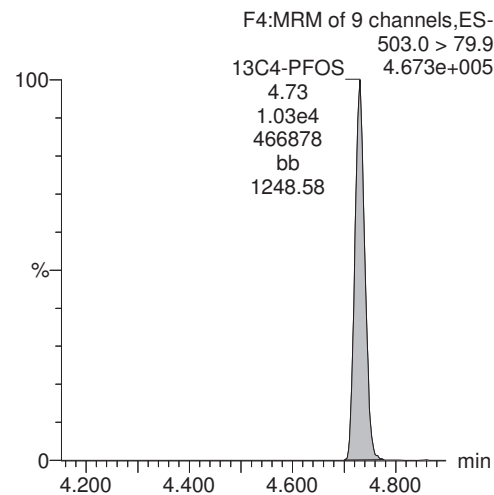
**13C4-PFOS**



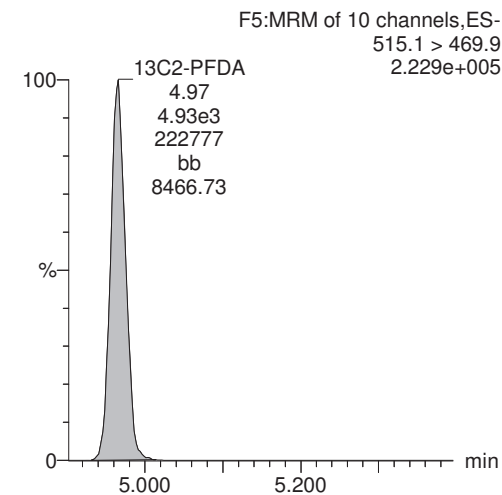
**13C2-PFOA**



**13C4-PFOS**



**13C2-PFDA**



Dataset: U:\G1.PRO\Results\2017\171208G1\171208G1-23.qld

Last Altered: Monday, December 11, 2017 10:20:17 Pacific Standard Time

Printed: Monday, December 11, 2017 10:20:35 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS\_DW\_L3\_1126.mdb 27 Nov 2017 14:32:15

Calibration: U:\G1.PRO\CurveDB\C18\_537\_Q1\_12-06-17\_L3.cdb 06 Dec 2017 15:37:11

Name: 171208G1\_23, Date: 08-Dec-2017, Time: 14:13:55, ID: 1701813-16 CH-AT-2FB27-1117 0.25485, Description: CH-AT-2FB27-1117

	# Name	Trace	Area	IS Area	RRF	wt/vol	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	299 > 79.7		9.28e3		0.2549	3.03				
2	2 PFOA	413 > 368.7	3.64e1	8.83e3		0.2549	4.32	4.33	0.0412	0.209	
3	3 PFOS	499 > 79.9		9.28e3		0.2549	4.73				
4	4 13C2-PFHxA	315 > 269.8	4.06e3	8.83e3	0.424	0.2549	3.38	3.38	4.60	42.6	108.6
5	5 13C2-PFDA	515.1 > 469.9	4.31e3	8.83e3	0.478	0.2549	4.95	4.97	4.88	40.1	102.1
6	6 13C2-PFOA	414.9 > 369.7	8.83e3	8.83e3	1.000	0.2549	4.41	4.32	10.0	39.2	100.0
7	7 13C4-PFOS	503.0 > 79.9	9.28e3	9.28e3	1.000	0.2549	4.81	4.73	28.7	113	100.0

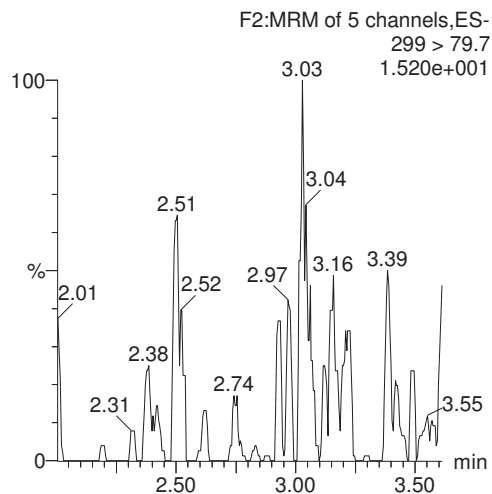
Dataset: U:\G1.PRO\Results\2017\171208G1\171208G1-23.qld

Last Altered: Monday, December 11, 2017 10:20:17 Pacific Standard Time  
Printed: Monday, December 11, 2017 10:20:35 Pacific Standard Time

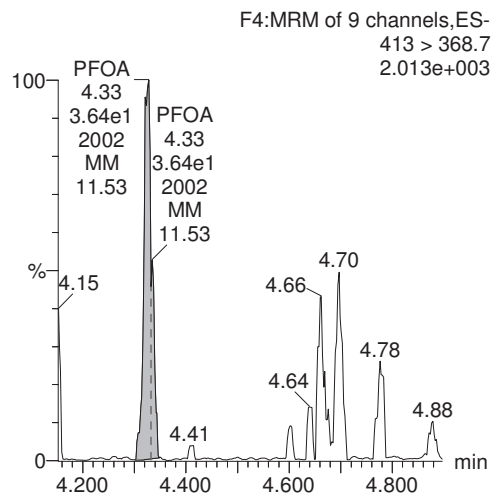
Method: U:\G1.PRO\MethDB\PFAS\_DW\_L3\_1126.mdb 27 Nov 2017 14:32:15  
Calibration: U:\G1.PRO\CurveDB\C18\_537\_Q1\_12-06-17\_L3.cdb 06 Dec 2017 15:37:11

Name: 171208G1\_23, Date: 08-Dec-2017, Time: 14:13:55, ID: 1701813-16 CH-AT-2FB27-1117 0.25485, Description: CH-AT-2FB27-1117

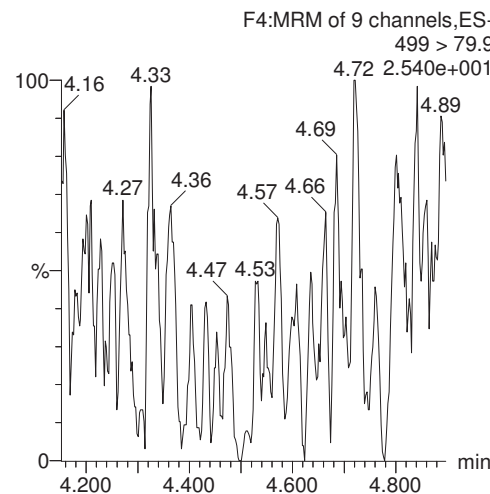
PFBS



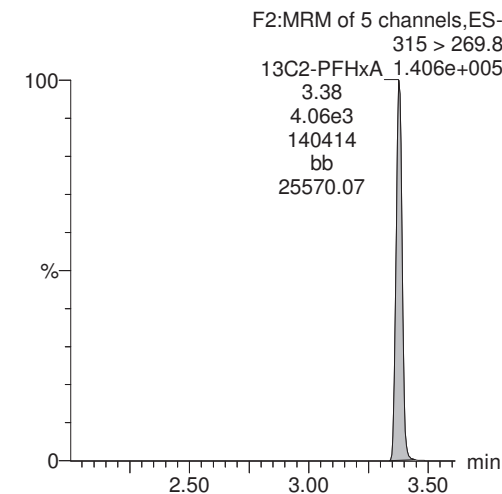
PFOA



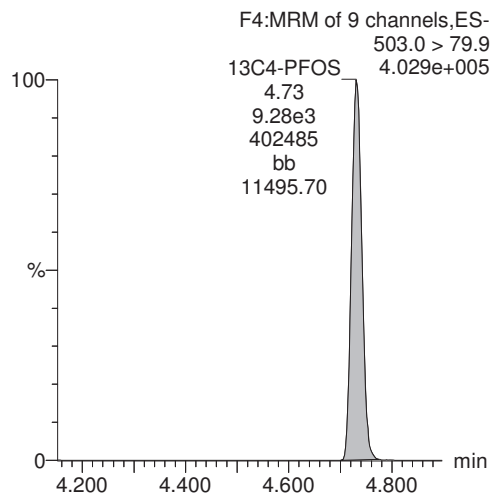
PFOS



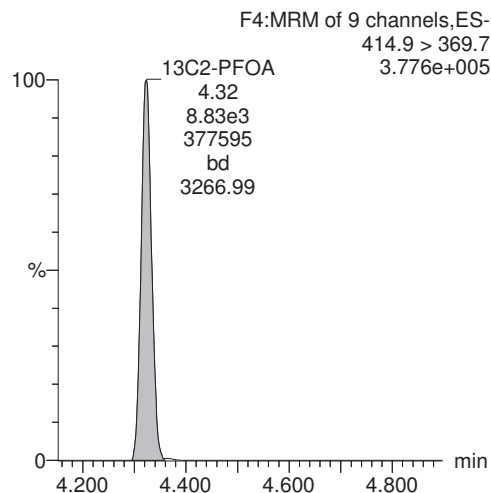
13C2-PFHxA



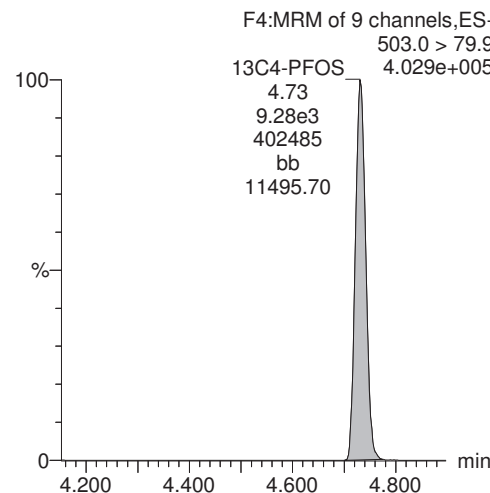
13C4-PFOS



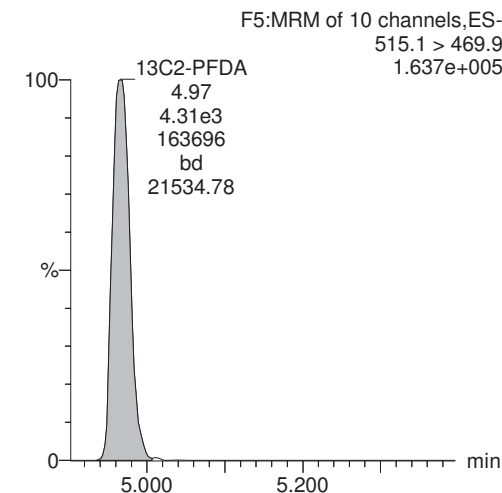
13C2-PFOA



13C4-PFOS



13C2-PFDA



Dataset: U:\G1.PRO\Results\2017\171208G1\171208G1-24.qld

Last Altered: Monday, December 11, 2017 10:23:52 Pacific Standard Time

Printed: Monday, December 11, 2017 10:24:44 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS\_DW\_L3\_1126.mdb 27 Nov 2017 14:32:15

Calibration: U:\G1.PRO\CurveDB\C18\_537\_Q1\_12-06-17\_L3.cdb 06 Dec 2017 15:37:11

Name: 171208G1\_24, Date: 08-Dec-2017, Time: 14:26:23, ID: 1701813-17 CH-AT-2RW28-1117 0.25423, Description: CH-AT-2RW28-1117

	# Name	Trace	Area	IS Area	RRF	wt/vol	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	299 > 79.7		1.03e4		0.2542	3.03				
2	2 PFOA	413 > 368.7	6.04e1	9.34e3		0.2542	4.32	4.32	0.0647	0.329	
3	3 PFOS	499 > 79.9		1.03e4		0.2542	4.73				
4	4 13C2-PFHxA	315 > 269.8	3.86e3	9.34e3	0.424	0.2542	3.38	3.38	4.13	38.3	97.4
5	5 13C2-PFDA	515.1 > 469.9	4.62e3	9.34e3	0.478	0.2542	4.95	4.97	4.95	40.7	103.5
6	6 13C2-PFOA	414.9 > 369.7	9.34e3	9.34e3	1.000	0.2542	4.41	4.32	10.0	39.3	100.0
7	7 13C4-PFOS	503.0 > 79.9	1.03e4	1.03e4	1.000	0.2542	4.81	4.73	28.7	113	100.0

Dataset: U:\G1.PRO\Results\2017\171208G1\171208G1-24.qld

Last Altered: Monday, December 11, 2017 10:23:52 Pacific Standard Time

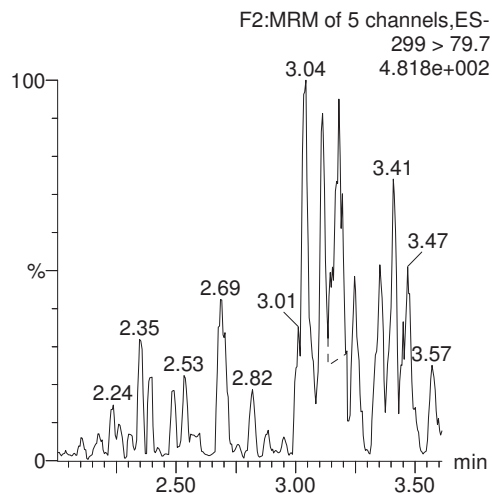
Printed: Monday, December 11, 2017 10:24:44 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS\_DW\_L3\_1126.mdb 27 Nov 2017 14:32:15

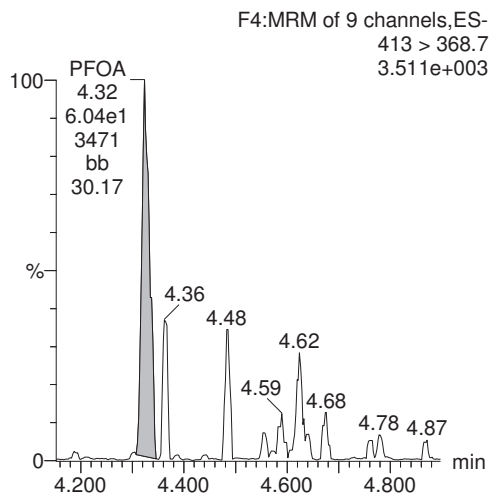
Calibration: U:\G1.PRO\CurveDB\C18\_537\_Q1\_12-06-17\_L3.cdb 06 Dec 2017 15:37:11

Name: 171208G1\_24, Date: 08-Dec-2017, Time: 14:26:23, ID: 1701813-17 CH-AT-2RW28-1117 0.25423, Description: CH-AT-2RW28-1117

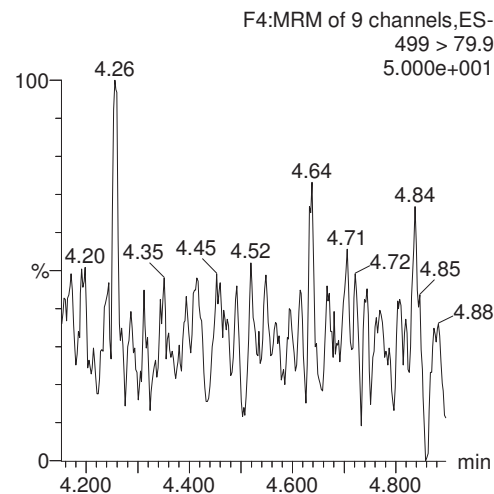
**PFBS**



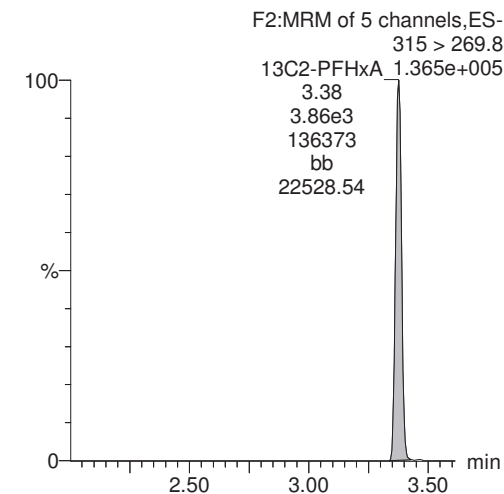
**PFOA**



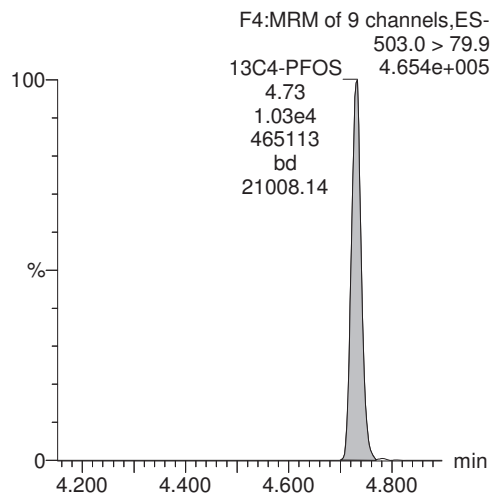
**PFOS**



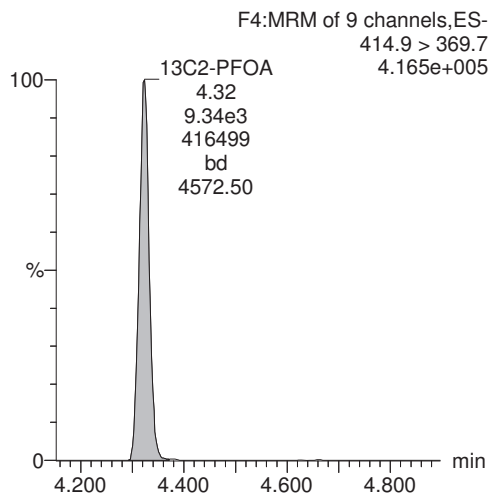
**13C2-PFHxA**



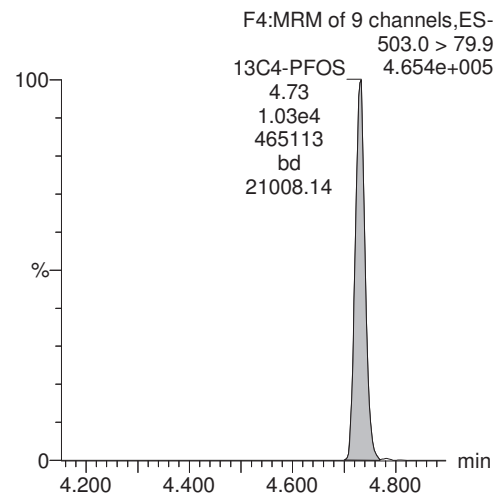
**13C4-PFOS**



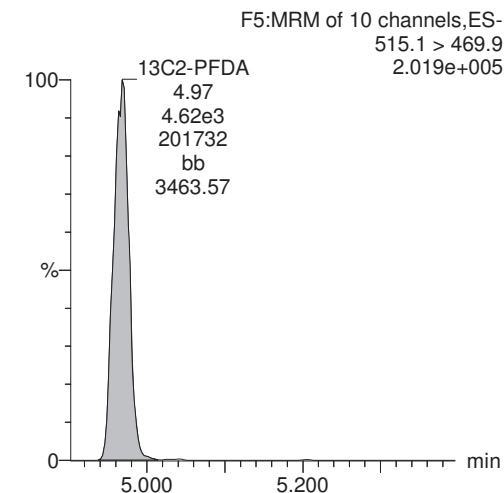
**13C2-PFOA**



**13C4-PFOS**



**13C2-PFDA**



Dataset: U:\G1.PRO\Results\2017\171208G1\171208G1-25.qld

Last Altered: Monday, December 11, 2017 10:25:07 Pacific Standard Time

Printed: Monday, December 11, 2017 10:30:35 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS\_DW\_L3\_1126.mdb 27 Nov 2017 14:32:15

Calibration: U:\G1.PRO\CurveDB\C18\_537\_Q1\_12-06-17\_L3.cdb 06 Dec 2017 15:37:11

Name: 171208G1\_25, Date: 08-Dec-2017, Time: 14:38:52, ID: 1701813-18 CH-AT-2FB28-1117 0.26414, Description: CH-AT-2FB28-1117

	# Name	Trace	Area	IS Area	RRF	wt/vol	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	299 > 79.7		9.77e3		0.2641	3.03				
2	2 PFOA	413 > 368.7	5.71e1	9.17e3		0.2641	4.32	4.32	0.0623	0.305	
3	3 PFOS	499 > 79.9		9.77e3		0.2641	4.73				
4	4 13C2-PFHxA	315 > 269.8	3.89e3	9.17e3	0.424	0.2641	3.38	3.38	4.24	37.9	100.1
5	5 13C2-PFDA	515.1 > 469.9	4.80e3	9.17e3	0.478	0.2641	4.95	4.97	5.23	41.4	109.5
6	6 13C2-PFOA	414.9 > 369.7	9.17e3	9.17e3	1.000	0.2641	4.41	4.32	10.0	37.9	100.0
7	7 13C4-PFOS	503.0 > 79.9	9.77e3	9.77e3	1.000	0.2641	4.81	4.73	28.7	109	100.0

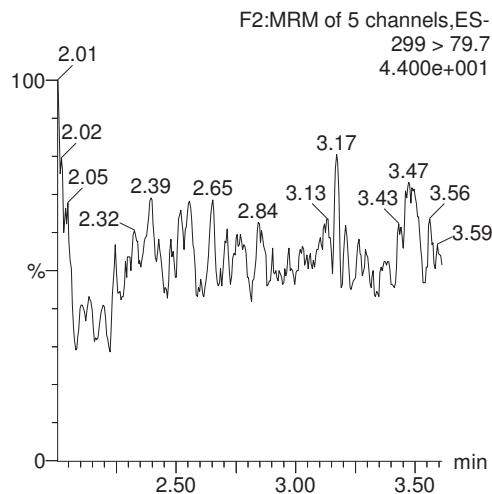
Dataset: U:\G1.PRO\Results\2017\171208G1\171208G1-25.qld

Last Altered: Monday, December 11, 2017 10:25:07 Pacific Standard Time  
Printed: Monday, December 11, 2017 10:30:35 Pacific Standard Time

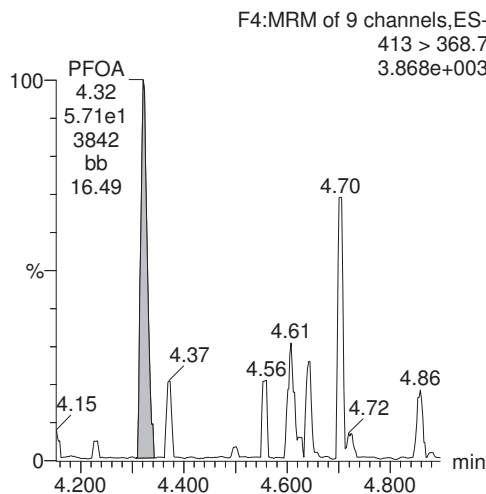
Method: U:\G1.PRO\MethDB\PFAS\_DW\_L3\_1126.mdb 27 Nov 2017 14:32:15  
Calibration: U:\G1.PRO\CurveDB\C18\_537\_Q1\_12-06-17\_L3.cdb 06 Dec 2017 15:37:11

Name: 171208G1\_25, Date: 08-Dec-2017, Time: 14:38:52, ID: 1701813-18 CH-AT-2FB28-1117 0.26414, Description: CH-AT-2FB28-1117

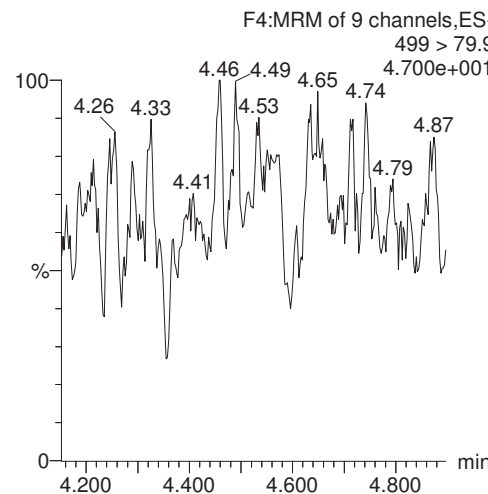
**PFBS**



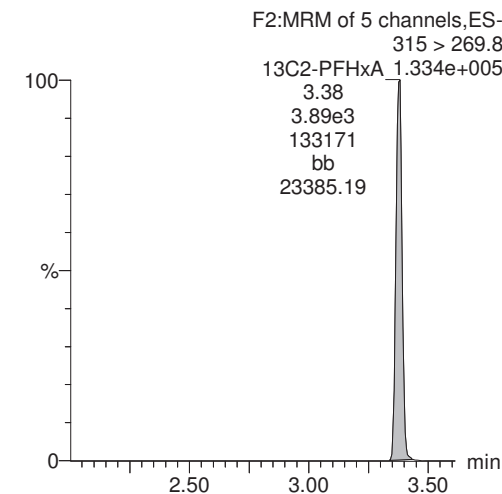
**PFOA**



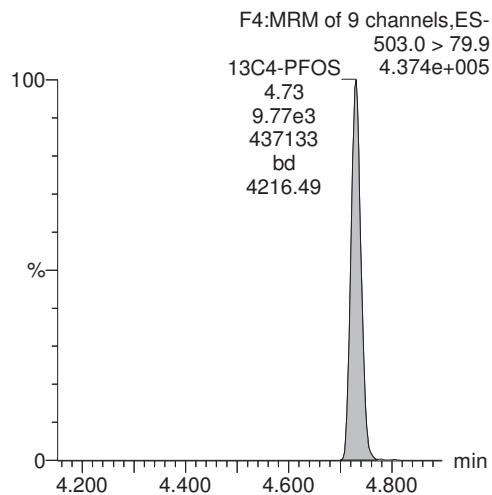
**PFOS**



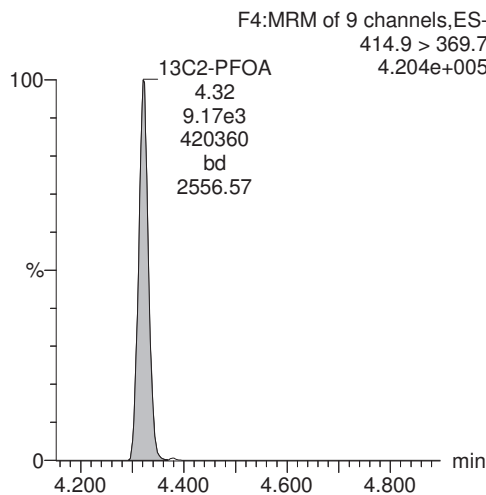
**13C2-PFHxA**



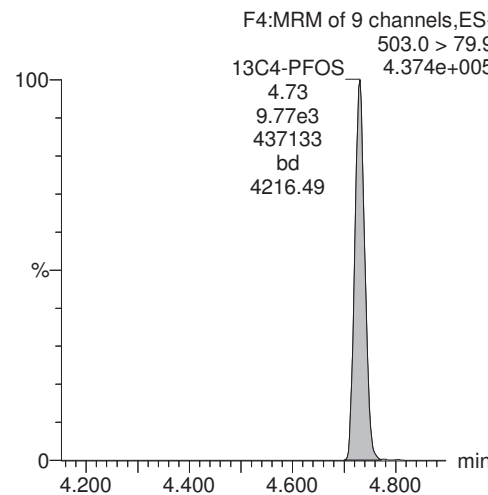
**13C4-PFOS**



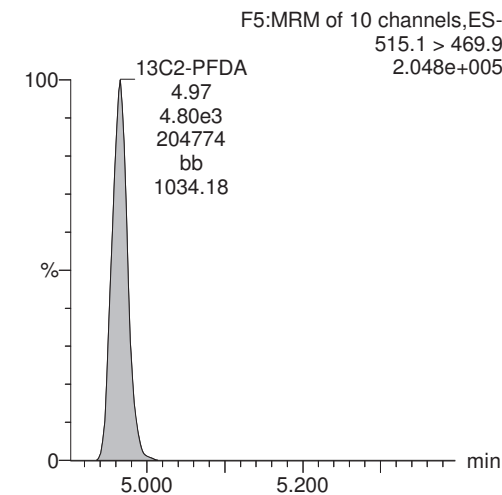
**13C2-PFOA**



**13C4-PFOS**



**13C2-PFDA**



Dataset: U:\G1.PRO\Results\2017\171208G1\171208G1-26.qld

Last Altered: Monday, December 11, 2017 10:32:29 Pacific Standard Time

Printed: Monday, December 11, 2017 10:32:54 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS\_DW\_L3\_1126.mdb 27 Nov 2017 14:32:15

Calibration: U:\G1.PRO\CurveDB\C18\_537\_Q1\_12-06-17\_L3.cdb 06 Dec 2017 15:37:11

Name: 171208G1\_26, Date: 08-Dec-2017, Time: 14:51:15, ID: 1701813-19 CH-AT-2RW29-1117 0.23697, Description: CH-AT-2RW29-1117

	# Name	Trace	Area	IS Area	RRF	wt/vol	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	299 > 79.7		9.69e3		0.2370	3.03				
2	2 PFOA	413 > 368.7	2.21e1	9.08e3		0.2370	4.32	4.33	0.0244	0.133	
3	3 PFOS	499 > 79.9		9.69e3		0.2370	4.73				
4	4 13C2-PFHxA	315 > 269.8	4.07e3	9.08e3	0.424	0.2370	3.38	3.38	4.49	44.7	105.9
5	5 13C2-PFDA	515.1 > 469.9	4.77e3	9.08e3	0.478	0.2370	4.95	4.97	5.26	46.4	110.0
6	6 13C2-PFOA	414.9 > 369.7	9.08e3	9.08e3	1.000	0.2370	4.41	4.32	10.0	42.2	100.0
7	7 13C4-PFOS	503.0 > 79.9	9.69e3	9.69e3	1.000	0.2370	4.81	4.73	28.7	121	100.0



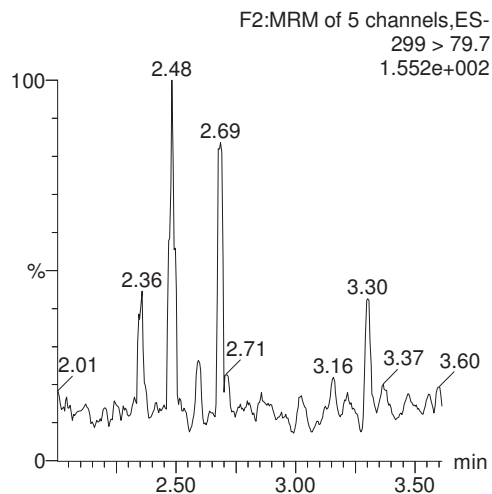
Dataset: U:\G1.PRO\Results\2017\171208G1\171208G1-26.qld

Last Altered: Monday, December 11, 2017 10:32:29 Pacific Standard Time  
Printed: Monday, December 11, 2017 10:32:54 Pacific Standard Time

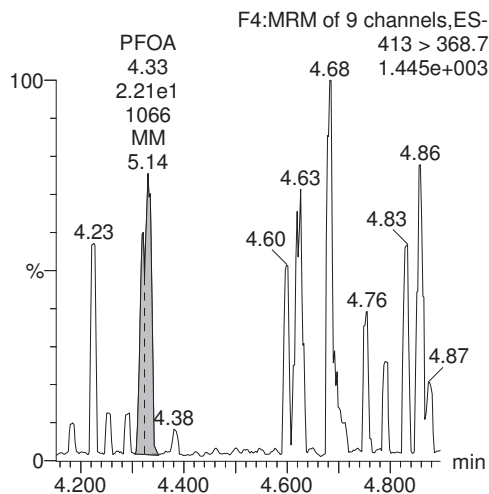
Method: U:\G1.PRO\MethDB\PFAS\_DW\_L3\_1126.mdb 27 Nov 2017 14:32:15  
Calibration: U:\G1.PRO\CurveDB\C18\_537\_Q1\_12-06-17\_L3.cdb 06 Dec 2017 15:37:11

Name: 171208G1\_26, Date: 08-Dec-2017, Time: 14:51:15, ID: 1701813-19 CH-AT-2RW29-1117 0.23697, Description: CH-AT-2RW29-1117

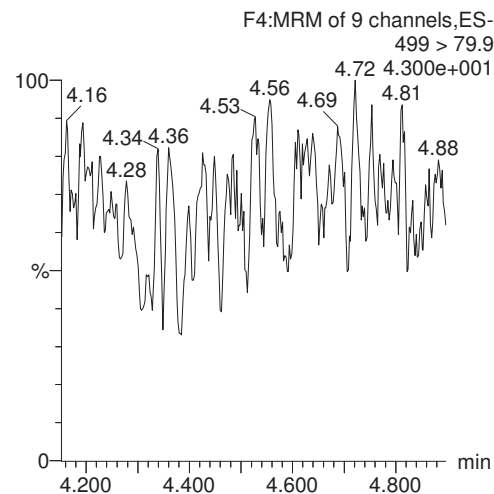
**PFBS**



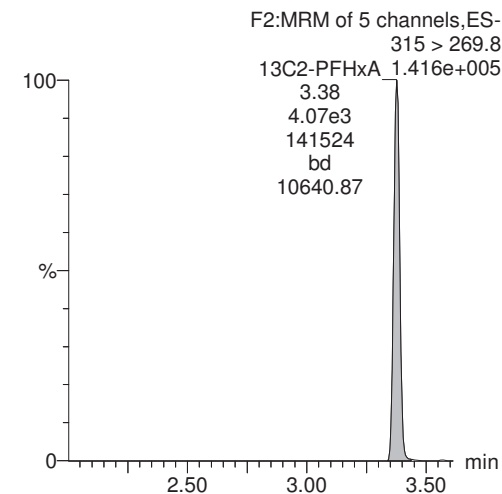
**PFOA**



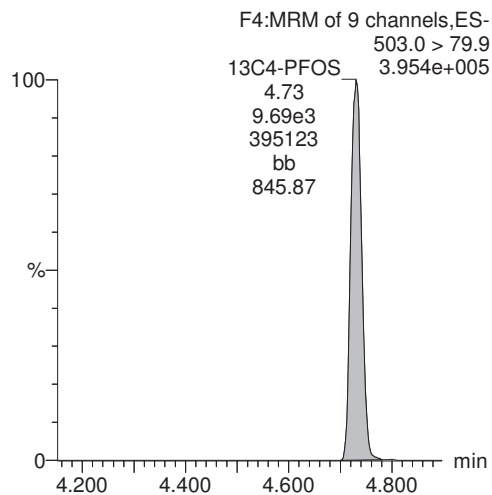
**PFOS**



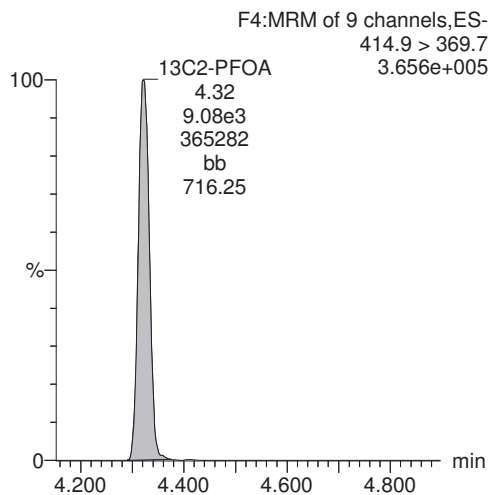
**13C2-PFHxA**



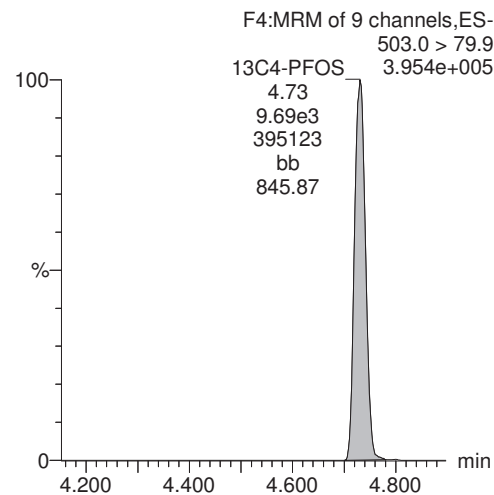
**13C4-PFOS**



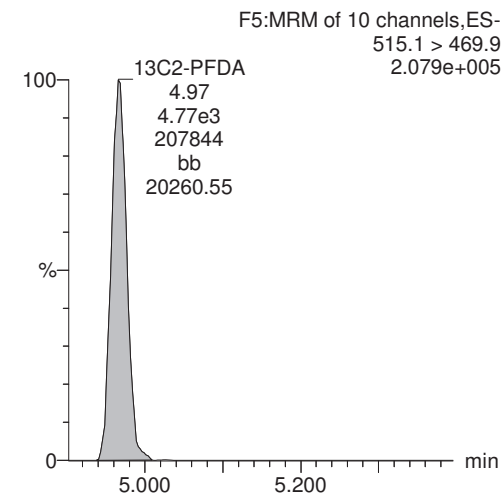
**13C2-PFOA**



**13C4-PFOS**



**13C2-PFDA**



Dataset: U:\G1.PRO\Results\2017\171211G1\171211G1-5.qld

Last Altered: Monday, December 11, 2017 16:09:40 Pacific Standard Time

Printed: Monday, December 11, 2017 16:09:58 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS\_DW\_L3\_1126.mdb 27 Nov 2017 14:32:15

Calibration: U:\G1.PRO\CurveDB\C18\_537\_Q1\_12-08-17\_L3.cdb 10 Dec 2017 22:49:55

Name: 171211G1\_5, Date: 11-Dec-2017, Time: 12:28:21, ID: 1701813-20 CH-AT-2FB29-1117 0.26487, Description: CH-AT-2FB29-1117

	# Name	Trace	Area	IS Area	RRF	wt/vol	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	299 > 79.7		9.40e3		0.2649	3.03				
2	2 PFOA	413 > 368.7		7.96e3		0.2649	4.31				
3	3 PFOS	499 > 79.9		9.40e3		0.2649	4.73				
4	4 13C2-PFHxA	315 > 269.8	3.61e3	7.96e3	0.443	0.2649	3.37	3.38	4.54	38.7	102.5
5	5 13C2-PFDA	515.1 > 469.9	4.17e3	7.96e3	0.509	0.2649	4.94	4.96	5.25	38.9	103.0
6	6 13C2-PFOA	414.9 > 369.7	7.96e3	7.96e3	1.000	0.2649	4.41	4.31	10.0	37.8	100.0
7	7 13C4-PFOS	503.0 > 79.9	9.40e3	9.40e3	1.000	0.2649	4.81	4.73	28.7	108	100.0

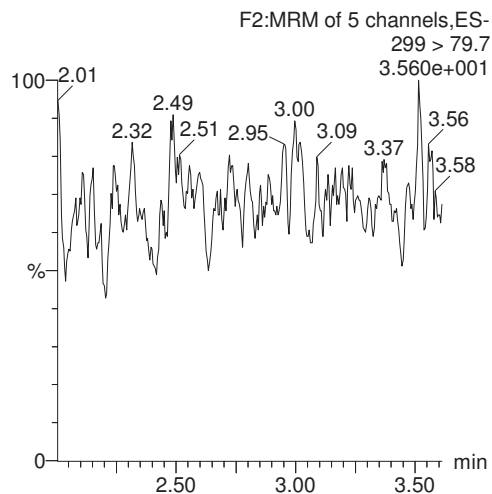
Dataset: U:\G1.PRO\Results\2017\171211G1\171211G1-5.qld

Last Altered: Monday, December 11, 2017 16:09:40 Pacific Standard Time  
Printed: Monday, December 11, 2017 16:09:58 Pacific Standard Time

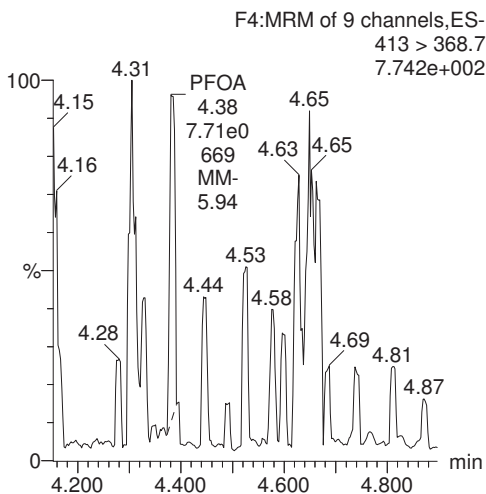
Method: U:\G1.PRO\MethDB\PFAS\_DW\_L3\_1126.mdb 27 Nov 2017 14:32:15  
Calibration: U:\G1.PRO\CurveDB\C18\_537\_Q1\_12-08-17\_L3.cdb 10 Dec 2017 22:49:55

Name: 171211G1\_5, Date: 11-Dec-2017, Time: 12:28:21, ID: 1701813-20 CH-AT-2FB29-1117 0.26487, Description: CH-AT-2FB29-1117

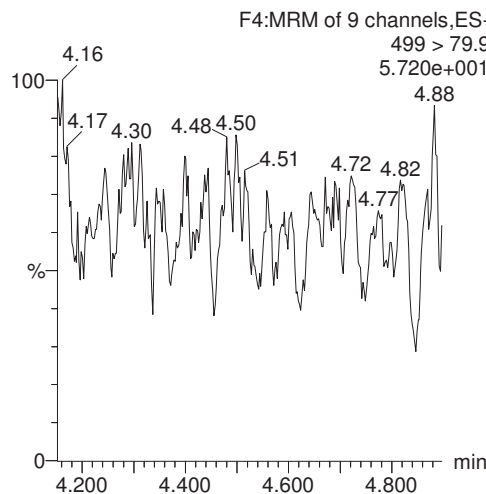
**PFBS**



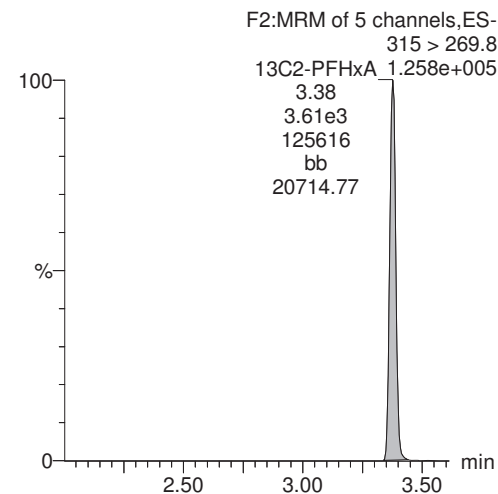
**PFOA**



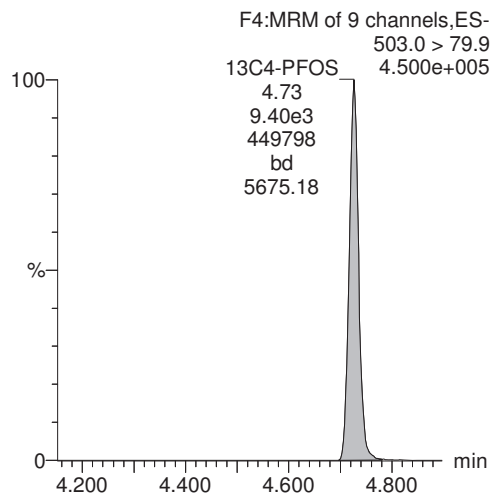
**PFOS**



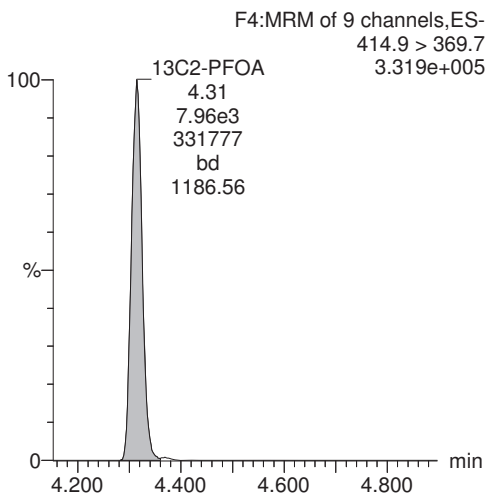
**13C2-PFHxA**



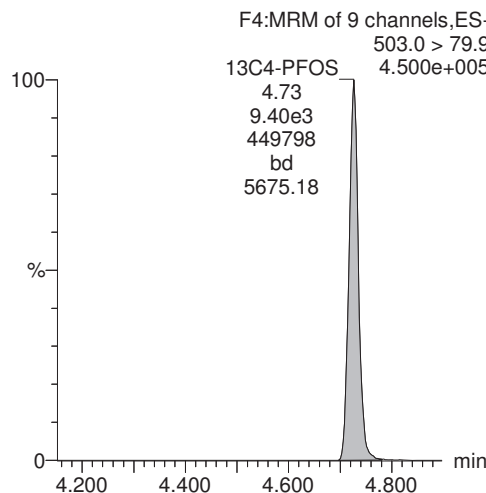
**13C4-PFOS**



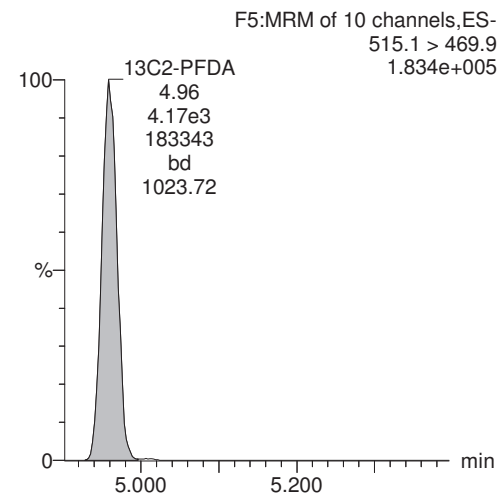
**13C2-PFOA**



**13C4-PFOS**



**13C2-PFDA**



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

IS Area

Ical

Compound 6: 13C2-PFOA

ID	Name	Type	Std. Conc	RT	Area	IS Area	Ical Area	Area%
1	ST171207G3-1 PFC CS-1 537 17K3024	171207G3_Analyte	10	4.33	12885.36	12885.36	11328.26	113.75
2	IPA	171207G3_Analyte	10				11328.26	0.00
3	B7L0015-BS1 LFB 0.25	171207G3_Analyte	10	4.33	9583.238	9583.238	11328.26	84.60
4	B7L0015-BLK1 LRB 0.25	171207G3_Analyte	10	4.33	9197.732	9197.732	11328.26	81.19
5	B7L0015-MS1 LFSM 0.24696	171207G3_Analyte	10	4.32	9622.813	9622.813	11328.26	84.95
6	B7L0015-MSD1 LFSMD 0.25064	171207G3_Analyte	10	4.33	9265.601	9265.601	11328.26	81.79
7	1701807-01 CH-AT-1RW94-1117 0.24509	171207G3_Analyte	10	4.33	9776.346	9776.346	11328.26	86.30
8	1701807-02 CH-AT-1FB94-1117 0.24508	171207G3_Analyte	10	4.32	8725.691	8725.691	11328.26	77.03
9	1701807-03 CH-AT-1RW95-1117 0.25193	171207G3_Analyte	10	4.32	9033.678	9033.678	11328.26	79.74
10	1701807-04 CH-AT-1FB95-1117 0.25155	171207G3_Analyte	10	4.32	8827.292	8827.292	11328.26	77.92
11	1701807-05 CH-AT-1RW96-1117 0.24236	171207G3_Analyte	10	4.33	8980.292	8980.292	11328.26	79.27
12	1701807-06 CH-AT-1FB96-1117 0.24957	171207G3_Analyte	10	4.32	10279.1	10279.1	11328.26	90.74
13	1701807-07 CH-AT-1RW97-1117 0.24262	171207G3_Analyte	10	4.32	9227.577	9227.577	11328.26	81.46
14	1701807-08 CH-AT-1FB97-1117 0.24757	171207G3_Analyte	10	4.33	9119.604	9119.604	11328.26	80.50
15	1701826-01 CH-AT-2RW40-1217 0.24324	171207G3_Analyte	10	4.32	9289.931	9289.931	11328.26	82.01
16	1701826-02 CH-AT-2FB40-1217 0.24836	171207G3_Analyte	10	4.32	8111.358	8111.358	11328.26	71.60
17	1701826-03 CH-AT-1RW115-1217 0.23578	171207G3_Analyte	10	4.32	8629.051	8629.051	11328.26	76.17
18	1701826-04 CH-AT-1FB115-1217 0.25059	171207G3_Analyte	10	4.32	9285.475	9285.475	11328.26	81.97
19	1701826-05 CH-AT-2RW41-1217 0.2433	171207G3_Analyte	10	4.32	9547.839	9547.839	11328.26	84.28
20	1701826-06 CH-AT-2FB41-1217 0.23928	171207G3_Analyte	10	4.32	9623.723	9623.723	11328.26	84.95
21	1701826-07 CH-AT-2RW39-1217 0.2471	171207G3_Analyte	10	4.32	9798.919	9798.919	11328.26	86.50
22	1701826-08 CH-AT-2FB39-1217 0.25321	171207G3_Analyte	10	4.32	9135.841	9135.841	11328.26	80.65
23	1701826-09 CH-AT-1RW114-1217 0.23828	171207G3_Analyte	10	4.33	9384.96	9384.96	11328.26	82.85
24	1701826-10 CH-AT-1FB114-1217 0.25812	171207G3_Analyte	10	4.33	8627.353	8627.353	11328.26	76.16
25	1701826-11 CH-AT-1RW113-1217 0.25187	171207G3_Analyte	10	4.32	10013.83	10013.83	11328.26	88.40
26	1701826-12 CH-AT-1FB113-1217 0.252	171207G3_Analyte	10	4.33	9343.38	9343.38	11328.26	82.48
27	IPA	171207G3_Analyte	10				11328.26	0.00

28	ST171207G3-2 PFC CS3 17K3027	171207G3_ Analyte	10	4.33	10795.81	10795.81	11328.26	95.30
29	IPA	171207G3_ Analyte	10				11328.26	0.00
30	B7L0025-BS1 LFB 0.25	171207G3_ Analyte	10	4.33	9831.949	9831.949	11328.26	86.79
31	B7L0025-BLK1 LRB 0.25	171207G3_ Analyte	10	4.33	8941.108	8941.108	11328.26	78.93
32	B7L0025-MS1 LFSM 0.24324	171207G3_ Analyte	10	4.33	8630.11	8630.11	11328.26	76.18
33	B7L0025-MSD1 LFSMD 0.25571	171207G3_ Analyte	10	4.33	9645.423	9645.423	11328.26	85.14
34	1701814-01 CH-AT-1RW109-1117 0.24963	171207G3_ Analyte	10	4.33	9574.236	9574.236	11328.26	84.52
35	1701814-02 CH-AT-1FB109-1117 0.25812	171207G3_ Analyte	10	4.33	10808.15	10808.15	11328.26	95.41
36	1701814-03 CH-AT-1RW110-1117 0.24886	171207G3_ Analyte	10	4.33	9586.044	9586.044	11328.26	84.62
37	1701814-04 CH-AT-1FB110-1117 0.24932	171207G3_ Analyte	10	4.33	9955.102	9955.102	11328.26	87.88
38	1701814-05 CH-AT-1RW111-1117 0.24827	171207G3_ Analyte	10	4.33	9818.604	9818.604	11328.26	86.67
39	1701814-06 CH-AT-1FB111-1117 0.2532	171207G3_ Analyte	10	4.33	9058.298	9058.298	11328.26	79.96
40	1701814-07 CH-AT-1RW112-1117 0.25353	171207G3_ Analyte	10	4.33	9091.133	9091.133	11328.26	80.25
41	1701814-08 CH-AT-1FB112-1117 0.262	171207G3_ Analyte	10	4.33	9752.02	9752.02	11328.26	86.09
42	1701814-09 CH-AT-1RW107-1117 0.26323	171207G3_ Analyte	10	4.33	9503.17	9503.17	11328.26	83.89
43	1701814-10 CH-AT-1FB107-1117 0.26258	171207G3_ Analyte	10	4.33	9725.189	9725.189	11328.26	85.85
44	1701814-11 CH-AT-1RW108-1117 0.25898	171207G3_ Analyte	10	4.32	9870.169	9870.169	11328.26	87.13
45	1701814-12 CH-AT-1FB108-1117 0.25727	171207G3_ Analyte	10	4.33	8884.244	8884.244	11328.26	78.43
46	IPA	171207G3_ Analyte	10	4.32	6.233	6.233	11328.26	0.06
47	B7L0016-BS1 LFB 0.25	171207G3_ Analyte	10	4.33	9704.101	9704.101	11328.26	85.66
48	B7L0016-BSD1 LFBD 0.25	171207G3_ Analyte	10	4.33	9055.565	9055.565	11328.26	79.94
49	B7L0016-BLK1 LRB 0.25	171207G3_ Analyte	10	4.32	9162.609	9162.609	11328.26	80.88
50	1701813-01 CH-AT-2RW20-1117 0.25836	171207G3_ Analyte	10	4.32	8643.122	8643.122	11328.26	76.30
51	1701813-02 CH-AT-2FB20-1117 0.2625	171207G3_ Analyte	10	4.32	9319.82	9319.82	11328.26	82.27
52	1701813-03 CH-AT-2RW21-1117 0.25745	171207G3_ Analyte	10	4.32	9469.031	9469.031	11328.26	83.59
53	1701813-04 CH-AT-2FB21-1117 0.25393	171207G3_ Analyte	10	4.32	9719.193	9719.193	11328.26	85.80
54	1701813-05 CH-AT-2RW22-1117 0.25543	171207G3_ Analyte	10	4.32	10031.35	10031.35	11328.26	88.55
55	1701813-06 CH-AT-2FB22-1117 0.25226	171207G3_ Analyte	10	4.33	9373.374	9373.374	11328.26	82.74
56	1701813-07 CH-AT-2RW23-1117 0.25821	171207G3_ Analyte	10	4.32	9521.089	9521.089	11328.26	84.05
57	1701813-08 CH-AT-2FB23-1117 0.24936	171207G3_ Analyte	10	4.32	9222.847	9222.847	11328.26	81.41
58	IPA	171207G3_ Analyte	10				11328.26	0.00
59	ST171207G3-3 PFC CS5 537 17K3029	171207G3_ Analyte	10	4.32	11546.32	11546.32	11328.26	101.92
60	IPA	171207G3_ Analyte	10				11328.26	0.00

## Compound 7: 13C4-PFOS

ID	Name	Type	Std. Conc	RT	Area	IS Area	Ical Area	Area %
1	ST171207G3-1 PFC CS-1 537 17K3024	171207G3_Analyte	28.7	4.73	14224.38	14224.38	11379.03	125.01
2	IPA	171207G3_Analyte	28.7				11379.03	0.00
3	B7L0015-BS1 LFB 0.25	171207G3_Analyte	28.7	4.73	10082.32	10082.32	11379.03	88.60
4	B7L0015-BLK1 LRB 0.25	171207G3_Analyte	28.7	4.73	9285.92	9285.92	11379.03	81.61
5	B7L0015-MS1 LFSM 0.24696	171207G3_Analyte	28.7	4.73	10850.02	10850.02	11379.03	95.35
6	B7L0015-MSD1 LFSMD 0.25064	171207G3_Analyte	28.7	4.73	9616.275	9616.275	11379.03	84.51
7	1701807-01 CH-AT-1RW94-1117 0.24509	171207G3_Analyte	28.7	4.74	10308.69	10308.69	11379.03	90.59
8	1701807-02 CH-AT-1FB94-1117 0.24508	171207G3_Analyte	28.7	4.74	9347.48	9347.48	11379.03	82.15
9	1701807-03 CH-AT-1RW95-1117 0.25193	171207G3_Analyte	28.7	4.73	10137.02	10137.02	11379.03	89.09
10	1701807-04 CH-AT-1FB95-1117 0.25155	171207G3_Analyte	28.7	4.73	10377.24	10377.24	11379.03	91.20
11	1701807-05 CH-AT-1RW96-1117 0.24236	171207G3_Analyte	28.7	4.73	9394.615	9394.615	11379.03	82.56
12	1701807-06 CH-AT-1FB96-1117 0.24957	171207G3_Analyte	28.7	4.73	10136.2	10136.2	11379.03	89.08
13	1701807-07 CH-AT-1RW97-1117 0.24262	171207G3_Analyte	28.7	4.73	10734.53	10734.53	11379.03	94.34
14	1701807-08 CH-AT-1FB97-1117 0.24757	171207G3_Analyte	28.7	4.73	9549.839	9549.839	11379.03	83.92
15	1701826-01 CH-AT-2RW40-1217 0.24324	171207G3_Analyte	28.7	4.73	10068.19	10068.19	11379.03	88.48
16	1701826-02 CH-AT-2FB40-1217 0.24836	171207G3_Analyte	28.7	4.73	9359.739	9359.739	11379.03	82.25
17	1701826-03 CH-AT-1RW115-1217 0.23578	171207G3_Analyte	28.7	4.73	9438.006	9438.006	11379.03	82.94
18	1701826-04 CH-AT-1FB115-1217 0.25059	171207G3_Analyte	28.7	4.73	10093.32	10093.32	11379.03	88.70
19	1701826-05 CH-AT-2RW41-1217 0.2433	171207G3_Analyte	28.7	4.73	10126.32	10126.32	11379.03	88.99
20	1701826-06 CH-AT-2FB41-1217 0.23928	171207G3_Analyte	28.7	4.73	9822.364	9822.364	11379.03	86.32
21	1701826-07 CH-AT-2RW39-1217 0.2471	171207G3_Analyte	28.7	4.73	10131.71	10131.71	11379.03	89.04
22	1701826-08 CH-AT-2FB39-1217 0.25321	171207G3_Analyte	28.7	4.73	10091.7	10091.7	11379.03	88.69
23	1701826-09 CH-AT-1RW114-1217 0.23828	171207G3_Analyte	28.7	4.74	9812.958	9812.958	11379.03	86.24
24	1701826-10 CH-AT-1FB114-1217 0.25812	171207G3_Analyte	28.7	4.73	9066.185	9066.185	11379.03	79.67
25	1701826-11 CH-AT-1RW113-1217 0.25187	171207G3_Analyte	28.7	4.73	10034.41	10034.41	11379.03	88.18
26	1701826-12 CH-AT-1FB113-1217 0.252	171207G3_Analyte	28.7	4.73	9830.374	9830.374	11379.03	86.39
27	IPA	171207G3_Analyte	28.7				11379.03	0.00
28	ST171207G3-2 PFC CS3 17K3027	171207G3_Analyte	28.7	4.73	10876.77	10876.77	11379.03	95.59
29	IPA	171207G3_Analyte	28.7				11379.03	0.00
30	B7L0025-BS1 LFB 0.25	171207G3_Analyte	28.7	4.73	9881.715	9881.715	11379.03	86.84

31	B7L0025-BLK1 LRB 0.25	171207G3_!Analyte	28.7	4.73	9023.005	9023.005	11379.03	79.30
32	B7L0025-MS1 LFSM 0.24324	171207G3_!Analyte	28.7	4.73	8871.453	8871.453	11379.03	77.96
33	B7L0025-MSD1 LFSMD 0.25571	171207G3_!Analyte	28.7	4.73	10228.98	10228.98	11379.03	89.89
34	1701814-01 CH-AT-1RW109-1117 0.24963	171207G3_!Analyte	28.7	4.73	10051.86	10051.86	11379.03	88.34
35	1701814-02 CH-AT-1FB109-1117 0.25812	171207G3_!Analyte	28.7	4.73	9997.502	9997.502	11379.03	87.86
36	1701814-03 CH-AT-1RW110-1117 0.24886	171207G3_!Analyte	28.7	4.73	9624.115	9624.115	11379.03	84.58
37	1701814-04 CH-AT-1FB110-1117 0.24932	171207G3_!Analyte	28.7	4.74	9882.266	9882.266	11379.03	86.85
38	1701814-05 CH-AT-1RW111-1117 0.24827	171207G3_!Analyte	28.7	4.73	10704.49	10704.49	11379.03	94.07
39	1701814-06 CH-AT-1FB111-1117 0.2532	171207G3_!Analyte	28.7	4.73	9627.133	9627.133	11379.03	84.60
40	1701814-07 CH-AT-1RW112-1117 0.25353	171207G3_!Analyte	28.7	4.73	10692.3	10692.3	11379.03	93.96
41	1701814-08 CH-AT-1FB112-1117 0.262	171207G3_!Analyte	28.7	4.74	9348.494	9348.494	11379.03	82.16
42	1701814-09 CH-AT-1RW107-1117 0.26323	171207G3_!Analyte	28.7	4.74	10485.2	10485.2	11379.03	92.14
43	1701814-10 CH-AT-1FB107-1117 0.26258	171207G3_!Analyte	28.7	4.73	9883.447	9883.447	11379.03	86.86
44	1701814-11 CH-AT-1RW108-1117 0.25898	171207G3_!Analyte	28.7	4.73	9600.3	9600.3	11379.03	84.37
45	1701814-12 CH-AT-1FB108-1117 0.25727	171207G3_!Analyte	28.7	4.73	10877.11	10877.11	11379.03	95.59
46	IPA	171207G3_!Analyte	28.7				11379.03	0.00
47	B7L0016-BS1 LFB 0.25	171207G3_!Analyte	28.7	4.73	9312.42	9312.42	11379.03	81.84
48	B7L0016-BSD1 LFBD 0.25	171207G3_!Analyte	28.7	4.73	9072.752	9072.752	11379.03	79.73
49	B7L0016-BLK1 LRB 0.25	171207G3_!Analyte	28.7	4.73	9805.952	9805.952	11379.03	86.18
50	1701813-01 CH-AT-2RW20-1117 0.25836	171207G3_!Analyte	28.7	4.73	9398.167	9398.167	11379.03	82.59
51	1701813-02 CH-AT-2FB20-1117 0.2625	171207G3_!Analyte	28.7	4.73	10054.08	10054.08	11379.03	88.36
52	1701813-03 CH-AT-2RW21-1117 0.25745	171207G3_!Analyte	28.7	4.73	10212.46	10212.46	11379.03	89.75
53	1701813-04 CH-AT-2FB21-1117 0.25393	171207G3_!Analyte	28.7	4.73	9620.399	9620.399	11379.03	84.54
54	1701813-05 CH-AT-2RW22-1117 0.25543	171207G3_!Analyte	28.7	4.73	9572.242	9572.242	11379.03	84.12
55	1701813-06 CH-AT-2FB22-1117 0.25226	171207G3_!Analyte	28.7	4.74	9707.207	9707.207	11379.03	85.31
56	1701813-07 CH-AT-2RW23-1117 0.25821	171207G3_!Analyte	28.7	4.73	10145.85	10145.85	11379.03	89.16
57	1701813-08 CH-AT-2FB23-1117 0.24936	171207G3_!Analyte	28.7	4.74	10387.99	10387.99	11379.03	91.29
58	IPA	171207G3_!Analyte	28.7				11379.03	0.00
59	ST171207G3-3 PFC CS5 537 17K3029	171207G3_!Analyte	28.7	4.73	10464.51	10464.51	11379.03	91.96
60	IPA	171207G3_!Analyte	28.7				11379.03	0.00

Ccal

Compound 6: 13C2-PFOA

ST171207G3-1 PFC CS-1 537 17K3024

GM 12/8/17



ID	Name	Type	Std. Conc	RT	Area	IS Area	Ccal Area	Area%
1	ST171207G3-1 PFC CS-1 537 17K3024	171207G3_Analyte	10	4.33	12885.36	12885.36	12885.36	100.00
2	IPA	171207G3_Analyte	10				12885.36	0.00
3	B7L0015-BS1 LFB 0.25	171207G3_Analyte	10	4.33	9583.238	9583.238	12885.36	74.37
4	B7L0015-BLK1 LRB 0.25	171207G3_Analyte	10	4.33	9197.732	9197.732	12885.36	71.38
5	B7L0015-MS1 LFSM 0.24696	171207G3_Analyte	10	4.32	9622.813	9622.813	12885.36	74.68
6	B7L0015-MSD1 LFSMD 0.25064	171207G3_Analyte	10	4.33	9265.601	9265.601	12885.36	71.91
7	1701807-01 CH-AT-1RW94-1117 0.24509	171207G3_Analyte	10	4.33	9776.346	9776.346	12885.36	75.87
8	1701807-02 CH-AT-1FB94-1117 0.24508	171207G3_Analyte	10	4.32	8725.691	8725.691	12885.36	67.72
9	1701807-03 CH-AT-1RW95-1117 0.25193	171207G3_Analyte	10	4.32	9033.678	9033.678	12885.36	70.11
10	1701807-04 CH-AT-1FB95-1117 0.25155	171207G3_Analyte	10	4.32	8827.292	8827.292	12885.36	68.51
11	1701807-05 CH-AT-1RW96-1117 0.24236	171207G3_Analyte	10	4.33	8980.292	8980.292	12885.36	69.69
12	1701807-06 CH-AT-1FB96-1117 0.24957	171207G3_Analyte	10	4.32	10279.1	10279.1	12885.36	79.77
13	1701807-07 CH-AT-1RW97-1117 0.24262	171207G3_Analyte	10	4.32	9227.577	9227.577	12885.36	71.61
14	1701807-08 CH-AT-1FB97-1117 0.24757	171207G3_Analyte	10	4.33	9119.604	9119.604	12885.36	70.77
15	1701826-01 CH-AT-2RW40-1217 0.24324	171207G3_Analyte	10	4.32	9289.931	9289.931	12885.36	72.10
16	1701826-02 CH-AT-2FB40-1217 0.24836	171207G3_Analyte	10	4.32	8111.358	8111.358	12885.36	62.95
17	1701826-03 CH-AT-1RW115-1217 0.23578	171207G3_Analyte	10	4.32	8629.051	8629.051	12885.36	66.97
18	1701826-04 CH-AT-1FB115-1217 0.25059	171207G3_Analyte	10	4.32	9285.475	9285.475	12885.36	72.06
19	1701826-05 CH-AT-2RW41-1217 0.2433	171207G3_Analyte	10	4.32	9547.839	9547.839	12885.36	74.10
20	1701826-06 CH-AT-2FB41-1217 0.23928	171207G3_Analyte	10	4.32	9623.723	9623.723	12885.36	74.69
21	1701826-07 CH-AT-2RW39-1217 0.2471	171207G3_Analyte	10	4.32	9798.919	9798.919	12885.36	76.05
22	1701826-08 CH-AT-2FB39-1217 0.25321	171207G3_Analyte	10	4.32	9135.841	9135.841	12885.36	70.90
23	1701826-09 CH-AT-1RW114-1217 0.23828	171207G3_Analyte	10	4.33	9384.96	9384.96	12885.36	72.83
24	1701826-10 CH-AT-1FB114-1217 0.25812	171207G3_Analyte	10	4.33	8627.353	8627.353	12885.36	66.95
25	1701826-11 CH-AT-1RW113-1217 0.25187	171207G3_Analyte	10	4.32	10013.83	10013.83	12885.36	77.71
26	1701826-12 CH-AT-1FB113-1217 0.252	171207G3_Analyte	10	4.33	9343.38	9343.38	12885.36	72.51
27	IPA	171207G3_Analyte	10				12885.36	0.00
28	ST171207G3-2 PFC CS3 17K3027	171207G3_Analyte	10	4.33	10795.81	10795.81	12885.36	83.78

ST171207G3-2 PFC CS3 17K3027

ID	Name	Type	Std. Conc	RT	Area	IS Area	Ccal Area	Area%
28	ST171207G3-2 PFC CS3 17K3027	171207G3_Analyte	10	4.33	10795.81	10795.81	10795.81	100.00

29	IPA	171207G3_	Analyte	10				10795.81	0.00
30	B7L0025-BS1 LFB 0.25	171207G3_	Analyte	10	4.33	9831.949	9831.949	10795.81	91.07
31	B7L0025-BLK1 LRB 0.25	171207G3_	Analyte	10	4.33	8969.35	8969.35	10795.81	83.08
32	B7L0025-MS1 LFSM 0.24324	171207G3_	Analyte	10	4.33	8630.11	8630.11	10795.81	79.94
33	B7L0025-MSD1 LFSMD 0.25571	171207G3_	Analyte	10	4.33	9645.423	9645.423	10795.81	89.34
34	1701814-01 CH-AT-1RW109-1117 0.24963	171207G3_	Analyte	10	4.33	9574.236	9574.236	10795.81	88.68
35	1701814-02 CH-AT-1FB109-1117 0.25812	171207G3_	Analyte	10	4.33	10808.15	10808.15	10795.81	100.11
36	1701814-03 CH-AT-1RW110-1117 0.24886	171207G3_	Analyte	10	4.33	9586.044	9586.044	10795.81	88.79
37	1701814-04 CH-AT-1FB110-1117 0.24932	171207G3_	Analyte	10	4.33	9955.102	9955.102	10795.81	92.21
38	1701814-05 CH-AT-1RW111-1117 0.24827	171207G3_	Analyte	10	4.33	9818.604	9818.604	10795.81	90.95
39	1701814-06 CH-AT-1FB111-1117 0.2532	171207G3_	Analyte	10	4.33	9058.298	9058.298	10795.81	83.91
40	1701814-07 CH-AT-1RW112-1117 0.25353	171207G3_	Analyte	10	4.33	9091.133	9091.133	10795.81	84.21
41	1701814-08 CH-AT-1FB112-1117 0.262	171207G3_	Analyte	10	4.33	9752.02	9752.02	10795.81	90.33
42	1701814-09 CH-AT-1RW107-1117 0.26323	171207G3_	Analyte	10	4.33	9503.17	9503.17	10795.81	88.03
43	1701814-10 CH-AT-1FB107-1117 0.26258	171207G3_	Analyte	10	4.33	9725.189	9725.189	10795.81	90.08
44	1701814-11 CH-AT-1RW108-1117 0.25898	171207G3_	Analyte	10	4.32	9870.169	9870.169	10795.81	91.43
45	1701814-12 CH-AT-1FB108-1117 0.25727	171207G3_	Analyte	10	4.33	8884.244	8884.244	10795.81	82.29
46	IPA	171207G3_	Analyte	10	4.32	6.233	6.233	10795.81	0.06
47	B7L0016-BS1 LFB 0.25	171207G3_	Analyte	10	4.33	9704.101	9704.101	10795.81	89.89
48	B7L0016-BSD1 LFBD 0.25	171207G3_	Analyte	10	4.33	9055.565	9055.565	10795.81	83.88
49	B7L0016-BLK1 LRB 0.25	171207G3_	Analyte	10	4.32	9162.609	9162.609	10795.81	84.87
50	1701813-01 CH-AT-2RW20-1117 0.25836	171207G3_	Analyte	10	4.32	8643.122	8643.122	10795.81	80.06
51	1701813-02 CH-AT-2FB20-1117 0.2625	171207G3_	Analyte	10	4.32	9319.82	9319.82	10795.81	86.33
52	1701813-03 CH-AT-2RW21-1117 0.25745	171207G3_	Analyte	10	4.32	9469.031	9469.031	10795.81	87.71
53	1701813-04 CH-AT-2FB21-1117 0.25393	171207G3_	Analyte	10	4.32	9719.193	9719.193	10795.81	90.03
54	1701813-05 CH-AT-2RW22-1117 0.25543	171207G3_	Analyte	10	4.32	10031.35	10031.35	10795.81	92.92
55	1701813-06 CH-AT-2FB22-1117 0.25226	171207G3_	Analyte	10	4.33	9373.374	9373.374	10795.81	86.82
56	1701813-07 CH-AT-2RW23-1117 0.25821	171207G3_	Analyte	10	4.32	9521.089	9521.089	10795.81	88.19
57	1701813-08 CH-AT-2FB23-1117 0.24936	171207G3_	Analyte	10	4.32	9222.847	9222.847	10795.81	85.43
58	IPA	171207G3_	Analyte	10				10795.81	0.00
59	ST171207G3-3 PFC CS5 537 17K3029	171207G3_	Analyte	10	4.32	11546.32	11546.32	10795.81	106.95
60	IPA	171207G3_	Analyte	10				10795.81	0.00

Compound 7: 13C4-PFOS

ST171207G3-1 PFC CS-1 537 17K3024

ID	Name	Type	Std. Conc	RT	Area	IS Area	Ccal Area	Area %
1	ST171207G3-1 PFC CS-1 537 17K3024	171207G3_Analyte	28.7	4.73	14224.38	14224.38	14224.38	100.00
2	IPA	171207G3_Analyte	28.7				14224.38	0.00
3	B7L0015-BS1 LFB 0.25	171207G3_Analyte	28.7	4.73	10082.32	10082.32	14224.38	70.88
4	B7L0015-BLK1 LRB 0.25	171207G3_Analyte	28.7	4.73	9285.92	9285.92	14224.38	65.28
5	B7L0015-MS1 LFSM 0.24696	171207G3_Analyte	28.7	4.73	10850.02	10850.02	14224.38	76.28
6	B7L0015-MSD1 LFSMD 0.25064	171207G3_Analyte	28.7	4.73	9616.275	9616.275	14224.38	67.60
7	1701807-01 CH-AT-1RW94-1117 0.24509	171207G3_Analyte	28.7	4.74	10308.69	10308.69	14224.38	72.47
8	1701807-02 CH-AT-1FB94-1117 0.24508	171207G3_Analyte	28.7	4.74	9347.48	9347.48	14224.38	65.71
9	1701807-03 CH-AT-1RW95-1117 0.25193	171207G3_Analyte	28.7	4.73	10137.02	10137.02	14224.38	71.27
10	1701807-04 CH-AT-1FB95-1117 0.25155	171207G3_Analyte	28.7	4.73	10377.24	10377.24	14224.38	72.95
11	1701807-05 CH-AT-1RW96-1117 0.24236	171207G3_Analyte	28.7	4.73	9394.615	9394.615	14224.38	66.05
12	1701807-06 CH-AT-1FB96-1117 0.24957	171207G3_Analyte	28.7	4.73	10136.2	10136.2	14224.38	71.26
13	1701807-07 CH-AT-1RW97-1117 0.24262	171207G3_Analyte	28.7	4.73	10734.53	10734.53	14224.38	75.47
14	1701807-08 CH-AT-1FB97-1117 0.24757	171207G3_Analyte	28.7	4.73	9549.839	9549.839	14224.38	67.14
15	1701826-01 CH-AT-2RW40-1217 0.24324	171207G3_Analyte	28.7	4.73	10068.19	10068.19	14224.38	70.78
16	1701826-02 CH-AT-2FB40-1217 0.24836	171207G3_Analyte	28.7	4.73	9359.739	9359.739	14224.38	65.80
17	1701826-03 CH-AT-1RW115-1217 0.23578	171207G3_Analyte	28.7	4.73	9438.006	9438.006	14224.38	66.35
18	1701826-04 CH-AT-1FB115-1217 0.25059	171207G3_Analyte	28.7	4.73	10093.32	10093.32	14224.38	70.96
19	1701826-05 CH-AT-2RW41-1217 0.2433	171207G3_Analyte	28.7	4.73	10126.32	10126.32	14224.38	71.19
20	1701826-06 CH-AT-2FB41-1217 0.23928	171207G3_Analyte	28.7	4.73	9822.364	9822.364	14224.38	69.05
21	1701826-07 CH-AT-2RW39-1217 0.2471	171207G3_Analyte	28.7	4.73	10131.71	10131.71	14224.38	71.23
22	1701826-08 CH-AT-2FB39-1217 0.25321	171207G3_Analyte	28.7	4.73	10091.7	10091.7	14224.38	70.95
23	1701826-09 CH-AT-1RW114-1217 0.23828	171207G3_Analyte	28.7	4.74	9812.958	9812.958	14224.38	68.99
24	1701826-10 CH-AT-1FB114-1217 0.25812	171207G3_Analyte	28.7	4.73	9066.185	9066.185	14224.38	63.74
25	1701826-11 CH-AT-1RW113-1217 0.25187	171207G3_Analyte	28.7	4.73	10034.41	10034.41	14224.38	70.54
26	1701826-12 CH-AT-1FB113-1217 0.252	171207G3_Analyte	28.7	4.73	9830.374	9830.374	14224.38	69.11
27	IPA	171207G3_Analyte	28.7				14224.38	0.00
28	ST171207G3-2 PFC CS3 17K3027	171207G3_Analyte	28.7	4.73	10876.77	10876.77	14224.38	76.47

ST171207G3-2 PFC CS3 17K3027

ID	Name	Type	Std. Conc	RT	Area	IS Area	Ccal Area	Area %
28	ST171207G3-2 PFC CS3 17K3027	171207G3_Analyte	28.7	4.73	10876.77	10876.77	10876.77	100.00

29	IPA	171207G3_	Analyte	28.7				10876.77	0.00
30	B7L0025-BS1 LFB 0.25	171207G3_	Analyte	28.7	4.73	9881.715	9881.715	10876.77	90.85
31	B7L0025-BLK1 LRB 0.25	171207G3_	Analyte	28.7	4.73	9023.005	9023.005	10876.77	82.96
32	B7L0025-MS1 LFSM 0.24324	171207G3_	Analyte	28.7	4.73	8871.453	8871.453	10876.77	81.56
33	B7L0025-MSD1 LFSMD 0.25571	171207G3_	Analyte	28.7	4.73	10228.98	10228.98	10876.77	94.04
34	1701814-01 CH-AT-1RW109-1117 0.24963	171207G3_	Analyte	28.7	4.73	10051.86	10051.86	10876.77	92.42
35	1701814-02 CH-AT-1FB109-1117 0.25812	171207G3_	Analyte	28.7	4.73	9997.502	9997.502	10876.77	91.92
36	1701814-03 CH-AT-1RW110-1117 0.24886	171207G3_	Analyte	28.7	4.73	9624.115	9624.115	10876.77	88.48
37	1701814-04 CH-AT-1FB110-1117 0.24932	171207G3_	Analyte	28.7	4.74	9882.266	9882.266	10876.77	90.86
38	1701814-05 CH-AT-1RW111-1117 0.24827	171207G3_	Analyte	28.7	4.73	10704.49	10704.49	10876.77	98.42
39	1701814-06 CH-AT-1FB111-1117 0.2532	171207G3_	Analyte	28.7	4.73	9627.133	9627.133	10876.77	88.51
40	1701814-07 CH-AT-1RW112-1117 0.25353	171207G3_	Analyte	28.7	4.73	10692.3	10692.3	10876.77	98.30
41	1701814-08 CH-AT-1FB112-1117 0.262	171207G3_	Analyte	28.7	4.74	9348.494	9348.494	10876.77	85.95
42	1701814-09 CH-AT-1RW107-1117 0.26323	171207G3_	Analyte	28.7	4.74	10485.2	10485.2	10876.77	96.40
43	1701814-10 CH-AT-1FB107-1117 0.26258	171207G3_	Analyte	28.7	4.73	9883.447	9883.447	10876.77	90.87
44	1701814-11 CH-AT-1RW108-1117 0.25898	171207G3_	Analyte	28.7	4.73	9600.3	9600.3	10876.77	88.26
45	1701814-12 CH-AT-1FB108-1117 0.25727	171207G3_	Analyte	28.7	4.73	10877.11	10877.11	10876.77	100.00
46	IPA	171207G3_	Analyte	28.7				10876.77	0.00
47	B7L0016-BS1 LFB 0.25	171207G3_	Analyte	28.7	4.73	9312.42	9312.42	10876.77	85.62
48	B7L0016-BSD1 LFBD 0.25	171207G3_	Analyte	28.7	4.73	9072.752	9072.752	10876.77	83.41
49	B7L0016-BLK1 LRB 0.25	171207G3_	Analyte	28.7	4.73	9805.952	9805.952	10876.77	90.16
50	1701813-01 CH-AT-2RW20-1117 0.25836	171207G3_	Analyte	28.7	4.73	9398.167	9398.167	10876.77	86.41
51	1701813-02 CH-AT-2FB20-1117 0.2625	171207G3_	Analyte	28.7	4.73	10054.08	10054.08	10876.77	92.44
52	1701813-03 CH-AT-2RW21-1117 0.25745	171207G3_	Analyte	28.7	4.73	10212.46	10212.46	10876.77	93.89
53	1701813-04 CH-AT-2FB21-1117 0.25393	171207G3_	Analyte	28.7	4.73	9620.399	9620.399	10876.77	88.45
54	1701813-05 CH-AT-2RW22-1117 0.25543	171207G3_	Analyte	28.7	4.73	9572.242	9572.242	10876.77	88.01
55	1701813-06 CH-AT-2FB22-1117 0.25226	171207G3_	Analyte	28.7	4.74	9707.207	9707.207	10876.77	89.25
56	1701813-07 CH-AT-2RW23-1117 0.25821	171207G3_	Analyte	28.7	4.73	10145.85	10145.85	10876.77	93.28
57	1701813-08 CH-AT-2FB23-1117 0.24936	171207G3_	Analyte	28.7	4.74	10387.99	10387.99	10876.77	95.51
58	IPA	171207G3_	Analyte	28.7				10876.77	0.00
59	ST171207G3-3 PFC CS5 537 17K3029	171207G3_	Analyte	28.7	4.73	10464.51	10464.51	10876.77	96.21
60	IPA	171207G3_	Analyte	28.7				10876.77	0.00

Dataset: U:\G1.PRO\Results\2017\171207G3\171207G1-2.qld

Last Altered: Friday, December 08, 2017 09:53:27 Pacific Standard Time

Printed: Friday, December 08, 2017 09:57:55 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS\_DW\_L3\_1126.mdb 27 Nov 2017 14:32:15

Calibration: U:\G1.PRO\CurveDB\C18\_537\_Q1\_12-06-17\_L3.cdb 06 Dec 2017 15:37:11

Name: 171207G3\_2, Date: 07-Dec-2017, Time: 14:24:26, ID: ST171207G3-1 PFC CS-1 537 17K3024, Description: PFC CS-1 537 17K3024

#	Name	Trace	Area	IS Area	RRF	wt/vol	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	299 > 79.7	6.87e2	1.44e4		1.0000	3.03	3.02	1.37	1.42	80.1
2	2 PFOA	413 > 368.7	2.14e3	1.30e4		1.0000	4.33	4.33	1.65	2.13	106.6
3	3 PFOS	499 > 79.9	1.02e3	1.44e4		1.0000	4.73	4.74	2.04	1.53	82.4
4	4 13C2-PFHxA	315 > 269.8	5.69e3	1.30e4	0.424	1.0000	3.39	3.38	4.38	10.3	103.4
5	5 13C2-PFDA	515.1 > 469.9	6.66e3	1.30e4	0.478	1.0000	4.96	4.97	5.13	10.7	107.2
6	6 13C2-PFOA	414.9 > 369.7	1.30e4	1.30e4	1.000	1.0000	4.41	4.33	10.0	10.0	100.0
7	7 13C4-PFOS	503.0 > 79.9	1.44e4	1.44e4	1.000	1.0000	4.81	4.73	28.7	28.7	100.0

70-130  
↓

elm  
12/8/17

✓JA  
12/08/2017

**LC Calibration Standards Review Checklist**

Q1

Calibration ID:	ION Ratio	Concentration	C-Cals Name	Sign Date	Correct I-Cal	Manual Integrations	?????
<sup>dm</sup> 12/1/17 ST171207G3-31 <b>L M H</b>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
-2 <b>L M H</b>	<input 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"/>
-3 <b>L M H</b>	<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"/>
<b>L M H</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>L M H</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>L M H</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>L M H</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>L M H</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>L M H</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>L M H</b>	<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: JA - 12/08/2017  
Initials/Date

Comments: DW L3  
(A) PFBS, PFOA >130%.

Dataset: Untitled

Last Altered: Friday, December 08, 2017 10:12:58 Pacific Standard Time

Printed: Friday, December 08, 2017 10:14:59 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS\_DW\_L3\_1126.mdb 27 Nov 2017 14:32:15

Calibration: U:\G1.PRO\CurveDB\C18\_537\_Q1\_12-06-17\_L3.cdb 06 Dec 2017 15:37:11

Compound name: PFBS

	Name	ID	Acq.Date	Acq.Time
1	171207G3_1	IPA	07-Dec-17	14:11:58
2	171207G3_2	ST171207G3-1 PFC CS-1 537 17K3024	07-Dec-17	14:24:26
3	171207G3_3	IPA	07-Dec-17	14:36:50
4	171207G3_4	B7L0015-BS1 LFB 0.25	07-Dec-17	14:49:20
5	171207G3_5	B7L0015-BLK1 LRB 0.25	07-Dec-17	15:01:46
6	171207G3_6	B7L0015-MS1 LFSM 0.24696	07-Dec-17	15:14:14
7	171207G3_7	B7L0015-MSD1 LFSMD 0.25064	07-Dec-17	15:26:41
8	171207G3_8	1701807-01 CH-AT-1RW94-1117 0.24509	07-Dec-17	15:39:08
9	171207G3_9	1701807-02 CH-AT-1FB94-1117 0.24508	07-Dec-17	15:51:37
10	171207G3_10	1701807-03 CH-AT-1RW95-1117 0.25193	07-Dec-17	16:04:02
11	171207G3_11	1701807-04 CH-AT-1FB95-1117 0.25155	07-Dec-17	16:16:26
12	171207G3_12	1701807-05 CH-AT-1RW96-1117 0.24236	07-Dec-17	16:29:04
13	171207G3_13	1701807-06 CH-AT-1FB96-1117 0.24957	07-Dec-17	16:41:30
14	171207G3_14	1701807-07 CH-AT-1RW97-1117 0.24262	07-Dec-17	16:53:56
15	171207G3_15	1701807-08 CH-AT-1FB97-1117 0.24757	07-Dec-17	17:06:26
16	171207G3_16	1701826-01 CH-AT-2RW40-1217 0.24324	07-Dec-17	17:18:54
17	171207G3_17	1701826-02 CH-AT-2FB40-1217 0.24836	07-Dec-17	17:31:22
18	171207G3_18	1701826-03 CH-AT-1RW115-1217 0.23578	07-Dec-17	17:43:46
19	171207G3_19	1701826-04 CH-AT-1FB115-1217 0.25059	07-Dec-17	17:56:10
20	171207G3_20	1701826-05 CH-AT-2RW41-1217 0.2433	07-Dec-17	18:08:35
21	171207G3_21	1701826-06 CH-AT-2FB41-1217 0.23928	07-Dec-17	18:21:01
22	171207G3_22	1701826-07 CH-AT-2RW39-1217 0.2471	07-Dec-17	18:33:26
23	171207G3_23	1701826-08 CH-AT-2FB39-1217 0.25321	07-Dec-17	18:45:53
24	171207G3_24	1701826-09 CH-AT-1RW114-1217 0.23828	07-Dec-17	18:58:20
25	171207G3_25	1701826-10 CH-AT-1FB114-1217 0.25812	07-Dec-17	19:10:48
26	171207G3_26	1701826-11 CH-AT-1RW113-1217 0.25187	07-Dec-17	19:23:11
27	171207G3_27	1701826-12 CH-AT-1FB113-1217 0.252	07-Dec-17	19:35:34
28	171207G3_28	IPA	07-Dec-17	19:47:59
29	171207G3_29	ST171207G3-2 PFC CS3 17K3027	07-Dec-17	20:00:25
30	171207G3_30	IPA	07-Dec-17	20:12:51
31	171207G3_31	B7L0025-BS1 LFB 0.25	07-Dec-17	20:25:20

Dataset: Untitled

Last Altered: Friday, December 08, 2017 10:12:58 Pacific Standard Time

Printed: Friday, December 08, 2017 10:14:59 Pacific Standard Time

Compound name: PFBS

	Name	ID	Acq.Date	Acq.Time
32	171207G3_32	B7L0025-BLK1 LRB 0.25	07-Dec-17	20:37:45
33	171207G3_33	B7L0025-MS1 LFSM 0.24324	07-Dec-17	20:50:11
34	171207G3_34	B7L0025-MSD1 LFSMD 0.25571	07-Dec-17	21:02:37
35	171207G3_35	1701814-01 CH-AT-1RW109-1117 0.24963	07-Dec-17	21:15:04
36	171207G3_36	1701814-02 CH-AT-1FB109-1117 0.25812	07-Dec-17	21:27:30
37	171207G3_37	1701814-03 CH-AT-1RW110-1117 0.24886	07-Dec-17	21:39:54
38	171207G3_38	1701814-04 CH-AT-1FB110-1117 0.24932	07-Dec-17	21:52:18
39	171207G3_39	1701814-05 CH-AT-1RW111-1117 0.24827	07-Dec-17	22:04:43
40	171207G3_40	1701814-06 CH-AT-1FB111-1117 0.2532	07-Dec-17	22:17:09
41	171207G3_41	1701814-07 CH-AT-1RW112-1117 0.25353	07-Dec-17	22:29:34
42	171207G3_42	1701814-08 CH-AT-1FB112-1117 0.262	07-Dec-17	22:41:59
43	171207G3_43	1701814-09 CH-AT-1RW107-1117 0.26323	07-Dec-17	22:54:26
44	171207G3_44	1701814-10 CH-AT-1FB107-1117 0.26258	07-Dec-17	23:06:54
45	171207G3_45	1701814-11 CH-AT-1RW108-1117 0.25898	07-Dec-17	23:19:18
46	171207G3_46	1701814-12 CH-AT-1FB108-1117 0.25727	07-Dec-17	23:31:42
47	171207G3_47	IPA	07-Dec-17	23:44:07
48	171207G3_48	B7L0016-BS1 LFB 0.25	07-Dec-17	23:56:35
49	171207G3_49	B7L0016-BSD1 LFB 0.25	08-Dec-17	00:09:00
50	171207G3_50	B7L0016-BLK1 LRB 0.25	08-Dec-17	00:21:26
51	171207G3_51	1701813-01 CH-AT-2RW20-1117 0.25836	08-Dec-17	00:33:52
52	171207G3_52	1701813-02 CH-AT-2FB20-1117 0.2625	08-Dec-17	00:46:19
53	171207G3_53	1701813-03 CH-AT-2RW21-1117 0.25745	08-Dec-17	00:58:45
54	171207G3_54	1701813-04 CH-AT-2FB21-1117 0.25393	08-Dec-17	01:11:11
55	171207G3_55	1701813-05 CH-AT-2RW22-1117 0.25543	08-Dec-17	01:23:39
56	171207G3_59	1701813-06 CH-AT-2FB22-1117 0.25226	08-Dec-17	01:36:08
57	171207G3_60	1701813-07 CH-AT-2RW23-1117 0.25821	08-Dec-17	01:48:36
58	171207G3_61	1701813-08 CH-AT-2FB23-1117 0.24936	08-Dec-17	02:01:00
59	171207G3_56	IPA	08-Dec-17	02:13:25
60	171207G3_57	ST171207G3-3 PFC CS5 537 17K3029	08-Dec-17	02:26:08
61	171207G3_58	IPA	08-Dec-17	02:38:38



Dataset: U:\G1.PRO\Results\2017\171207G3\171207G1-2.qld

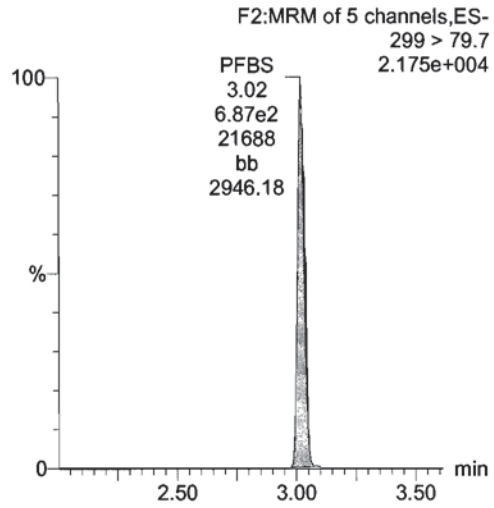
Last Altered: Friday, December 08, 2017 09:53:27 Pacific Standard Time

Printed: Friday, December 08, 2017 09:57:55 Pacific Standard Time

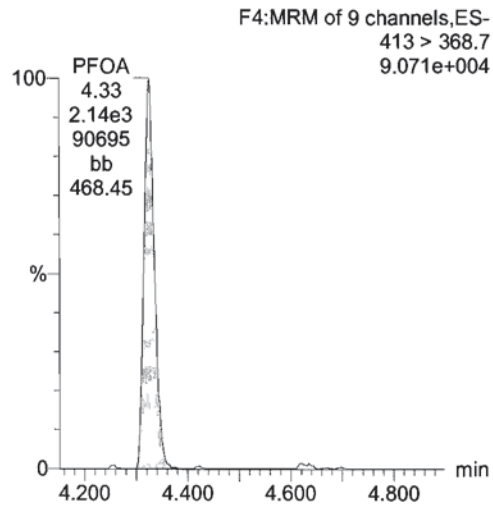
Method: U:\G1.PRO\MethDB\PFAS\_DW\_L3\_1126.mdb 27 Nov 2017 14:32:15  
Calibration: U:\G1.PRO\CurveDB\C18\_537\_Q1\_12-06-17\_L3.cdb 06 Dec 2017 15:37:11

Name: 171207G3\_2, Date: 07-Dec-2017, Time: 14:24:26, ID: ST171207G3-1 PFC CS-1 537 17K3024, Description: PFC CS-1 537 17K3024

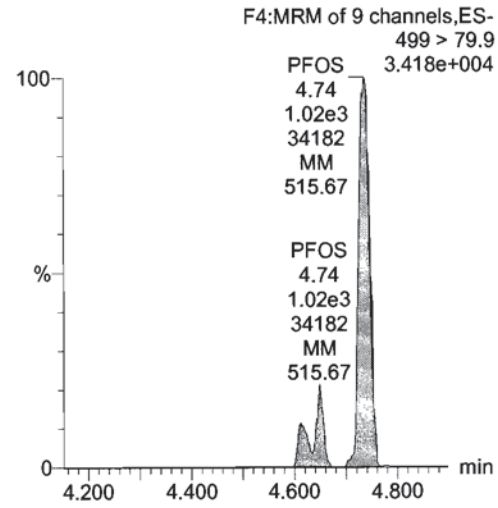
PFBS



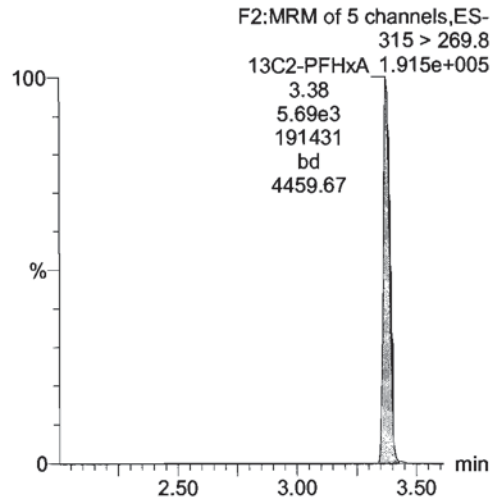
PFOA



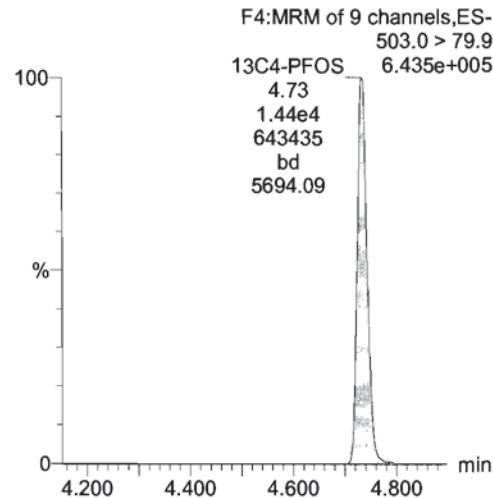
PFOS



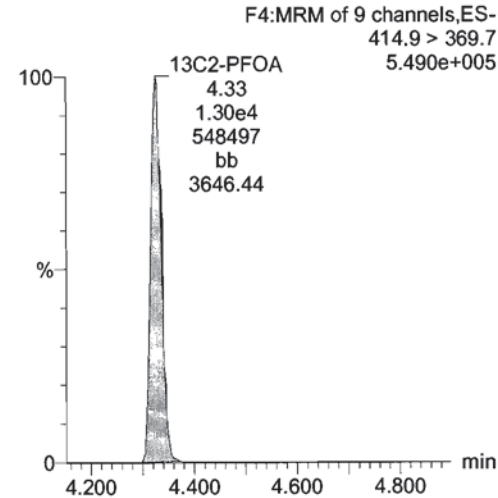
13C2-PFHxA



13C4-PFOS



13C2-PFOA



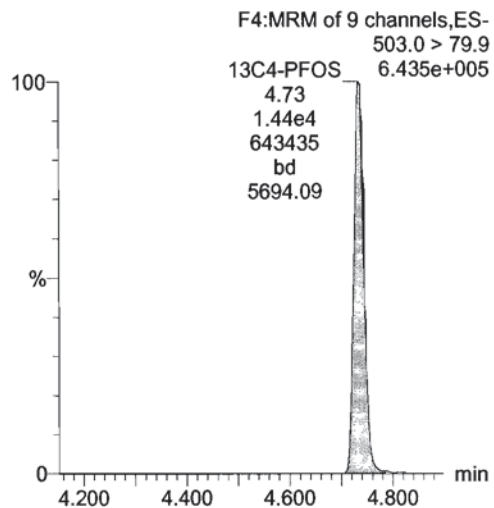
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Last Altered: Friday, December 08, 2017 09:53:27 Pacific Standard Time

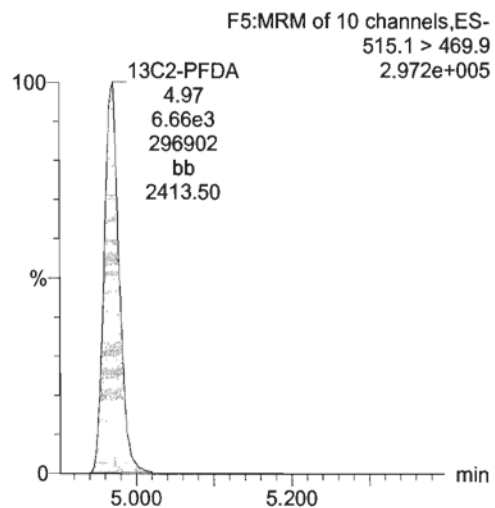
Printed: Friday, December 08, 2017 09:57:55 Pacific Standard Time

Name: 171207G3\_2, Date: 07-Dec-2017, Time: 14:24:26, ID: ST171207G3-1 PFC CS-1 537 17K3024, Description: PFC CS-1 537 17K3024

13C4-PFOS



13C2-PFDA



Dataset: U:\G1.PRO\Results\2017\171207G3\171207G1-29.qld

Last Altered: Friday, December 08, 2017 09:58:42 Pacific Standard Time  
Printed: Friday, December 08, 2017 09:58:54 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS\_DW\_L3\_1126.mdb 27 Nov 2017 14:32:15  
Calibration: U:\G1.PRO\CurveDB\C18\_537\_Q1\_12-06-17\_L3.cdb 06 Dec 2017 15:37:11

Name: 171207G3\_29, Date: 07-Dec-2017, Time: 20:00:25, ID: ST171207G3-2 PFC CS3 17K3027, Description: PFC CS3 17K3027

#	Name	Trace	Area	IS Area	RRF	wt/vol	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	299 > 79.7	1.43e4	1.09e4		1.0000	3.03	3.01	37.8	44.9	101.6
2	2 PFOA	413 > 368.7	4.41e4	1.08e4		1.0000	4.33	4.33	40.9	53.1	106.1
3	3 PFOS	499 > 79.9	2.06e4	1.09e4		1.0000	4.73	4.74	54.4	45.8	99.1
4	4 13C2-PFHxA	315 > 269.8	4.53e3	1.08e4	0.424	1.0000	3.39	3.38	4.19	9.90	99.0
5	5 13C2-PFDA	515.1 > 469.9	5.40e3	1.08e4	0.478	1.0000	4.96	4.97	5.00	10.5	104.6
6	6 13C2-PFOA	414.9 > 369.7	1.08e4	1.08e4	1.000	1.0000	4.41	4.33	10.0	10.0	100.0
7	7 13C4-PFOS	503.0 > 79.9	1.09e4	1.09e4	1.000	1.0000	4.81	4.73	28.7	28.7	100.0

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12/08/2017

Dataset: Untitled

Last Altered: Friday, December 08, 2017 10:12:58 Pacific Standard Time  
Printed: Friday, December 08, 2017 10:14:59 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS\_DW\_L3\_1126.mdb 27 Nov 2017 14:32:15  
Calibration: U:\G1.PRO\CurveDB\C18\_537\_Q1\_12-06-17\_L3.cdb 06 Dec 2017 15:37:11

Compound name: PFBS

	Name	ID	Acq.Date	Acq.Time
1	171207G3_1	IPA	07-Dec-17	14:11:58
2	171207G3_2	ST171207G3-1 PFC CS-1 537 17K3024	07-Dec-17	14:24:26
3	171207G3_3	IPA	07-Dec-17	14:36:50
4	171207G3_4	B7L0015-BS1 LFB 0.25	07-Dec-17	14:49:20
5	171207G3_5	B7L0015-BLK1 LRB 0.25	07-Dec-17	15:01:46
6	171207G3_6	B7L0015-MS1 LFSM 0.24696	07-Dec-17	15:14:14
7	171207G3_7	B7L0015-MSD1 LFSMD 0.25064	07-Dec-17	15:26:41
8	171207G3_8	1701807-01 CH-AT-1RW94-1117 0.24509	07-Dec-17	15:39:08
9	171207G3_9	1701807-02 CH-AT-1FB94-1117 0.24508	07-Dec-17	15:51:37
10	171207G3_10	1701807-03 CH-AT-1RW95-1117 0.25193	07-Dec-17	16:04:02
11	171207G3_11	1701807-04 CH-AT-1FB95-1117 0.25155	07-Dec-17	16:16:26
12	171207G3_12	1701807-05 CH-AT-1RW96-1117 0.24236	07-Dec-17	16:29:04
13	171207G3_13	1701807-06 CH-AT-1FB96-1117 0.24957	07-Dec-17	16:41:30
14	171207G3_14	1701807-07 CH-AT-1RW97-1117 0.24262	07-Dec-17	16:53:56
15	171207G3_15	1701807-08 CH-AT-1FB97-1117 0.24757	07-Dec-17	17:06:26
16	171207G3_16	1701826-01 CH-AT-2RW40-1217 0.24324	07-Dec-17	17:18:54
17	171207G3_17	1701826-02 CH-AT-2FB40-1217 0.24836	07-Dec-17	17:31:22
18	171207G3_18	1701826-03 CH-AT-1RW115-1217 0.23578	07-Dec-17	17:43:46
19	171207G3_19	1701826-04 CH-AT-1FB115-1217 0.25059	07-Dec-17	17:56:10
20	171207G3_20	1701826-05 CH-AT-2RW41-1217 0.2433	07-Dec-17	18:08:35
21	171207G3_21	1701826-06 CH-AT-2FB41-1217 0.23928	07-Dec-17	18:21:01
22	171207G3_22	1701826-07 CH-AT-2RW39-1217 0.2471	07-Dec-17	18:33:26
23	171207G3_23	1701826-08 CH-AT-2FB39-1217 0.25321	07-Dec-17	18:45:53
24	171207G3_24	1701826-09 CH-AT-1RW114-1217 0.23828	07-Dec-17	18:58:20
25	171207G3_25	1701826-10 CH-AT-1FB114-1217 0.25812	07-Dec-17	19:10:48
26	171207G3_26	1701826-11 CH-AT-1RW113-1217 0.25187	07-Dec-17	19:23:11
27	171207G3_27	1701826-12 CH-AT-1FB113-1217 0.252	07-Dec-17	19:35:34
28	171207G3_28	IPA	07-Dec-17	19:47:59
29	171207G3_29	ST171207G3-2 PFC CS3 17K3027	07-Dec-17	20:00:25
30	171207G3_30	IPA	07-Dec-17	20:12:51
31	171207G3_31	B7L0025-BS1 LFB 0.25	07-Dec-17	20:25:20

Dataset: Untitled

Last Altered: Friday, December 08, 2017 10:12:58 Pacific Standard Time

Printed: Friday, December 08, 2017 10:14:59 Pacific Standard Time

Compound name: PFBS

	Name	ID	Acq.Date	Acq.Time
32	171207G3_32	B7L0025-BLK1 LRB 0.25	07-Dec-17	20:37:45
33	171207G3_33	B7L0025-MS1 LFSM 0.24324	07-Dec-17	20:50:11
34	171207G3_34	B7L0025-MSD1 LFSMD 0.25571	07-Dec-17	21:02:37
35	171207G3_35	1701814-01 CH-AT-1RW109-1117 0.24963	07-Dec-17	21:15:04
36	171207G3_36	1701814-02 CH-AT-1FB109-1117 0.25812	07-Dec-17	21:27:30
37	171207G3_37	1701814-03 CH-AT-1RW110-1117 0.24886	07-Dec-17	21:39:54
38	171207G3_38	1701814-04 CH-AT-1FB110-1117 0.24932	07-Dec-17	21:52:18
39	171207G3_39	1701814-05 CH-AT-1RW111-1117 0.24827	07-Dec-17	22:04:43
40	171207G3_40	1701814-06 CH-AT-1FB111-1117 0.2532	07-Dec-17	22:17:09
41	171207G3_41	1701814-07 CH-AT-1RW112-1117 0.25353	07-Dec-17	22:29:34
42	171207G3_42	1701814-08 CH-AT-1FB112-1117 0.262	07-Dec-17	22:41:59
43	171207G3_43	1701814-09 CH-AT-1RW107-1117 0.26323	07-Dec-17	22:54:26
44	171207G3_44	1701814-10 CH-AT-1FB107-1117 0.26258	07-Dec-17	23:06:54
45	171207G3_45	1701814-11 CH-AT-1RW108-1117 0.25898	07-Dec-17	23:19:18
46	171207G3_46	1701814-12 CH-AT-1FB108-1117 0.25727	07-Dec-17	23:31:42
47	171207G3_47	IPA	07-Dec-17	23:44:07
48	171207G3_48	B7L0016-BS1 LFB 0.25	07-Dec-17	23:56:35
49	171207G3_49	B7L0016-BSD1 LFBD 0.25	08-Dec-17	00:09:00
50	171207G3_50	B7L0016-BLK1 LRB 0.25	08-Dec-17	00:21:26
51	171207G3_51	1701813-01 CH-AT-2RW20-1117 0.25836	08-Dec-17	00:33:52
52	171207G3_52	1701813-02 CH-AT-2FB20-1117 0.2625	08-Dec-17	00:46:19
53	171207G3_53	1701813-03 CH-AT-2RW21-1117 0.25745	08-Dec-17	00:58:45
54	171207G3_54	1701813-04 CH-AT-2FB21-1117 0.25393	08-Dec-17	01:11:11
55	171207G3_55	1701813-05 CH-AT-2RW22-1117 0.25543	08-Dec-17	01:23:39
56	171207G3_59	1701813-06 CH-AT-2FB22-1117 0.25226	08-Dec-17	01:36:08
57	171207G3_60	1701813-07 CH-AT-2RW23-1117 0.25821	08-Dec-17	01:48:36
58	171207G3_61	1701813-08 CH-AT-2FB23-1117 0.24936	08-Dec-17	02:01:00
59	171207G3_56	IPA	08-Dec-17	02:13:25
60	171207G3_57	ST171207G3-3 PFC CS5 537 17K3029	08-Dec-17	02:26:08
61	171207G3_58	IPA	08-Dec-17	02:38:38

Dataset: U:\G1.PRO\Results\2017\171207G3\171207G1-29.qld

Last Altered: Friday, December 08, 2017 09:58:42 Pacific Standard Time

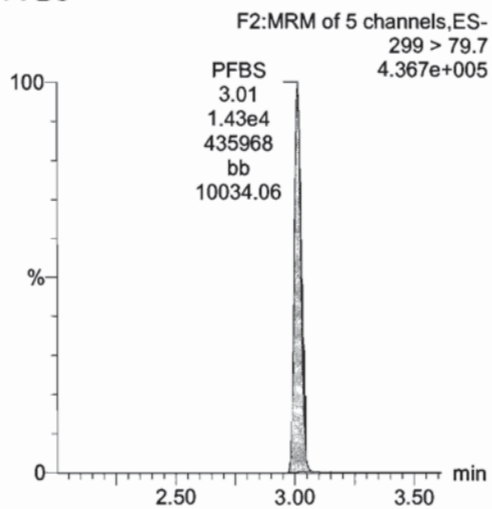
Printed: Friday, December 08, 2017 09:58:54 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS\_DW\_L3\_1126.mdb 27 Nov 2017 14:32:15

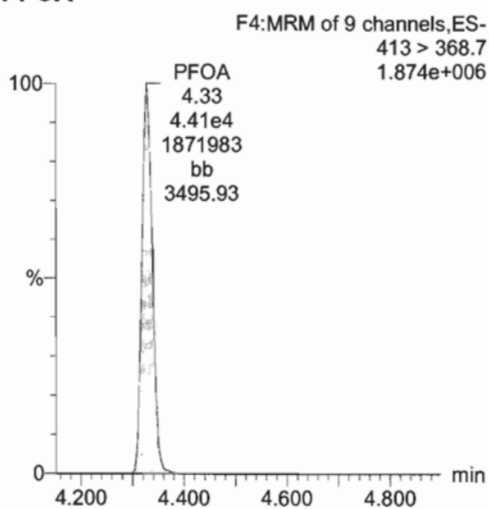
Calibration: U:\G1.PRO\CurveDB\C18\_537\_Q1\_12-06-17\_L3.cdb 06 Dec 2017 15:37:11

Name: 171207G3\_29, Date: 07-Dec-2017, Time: 20:00:25, ID: ST171207G3-2 PFC CS3 17K3027, Description: PFC CS3 17K3027

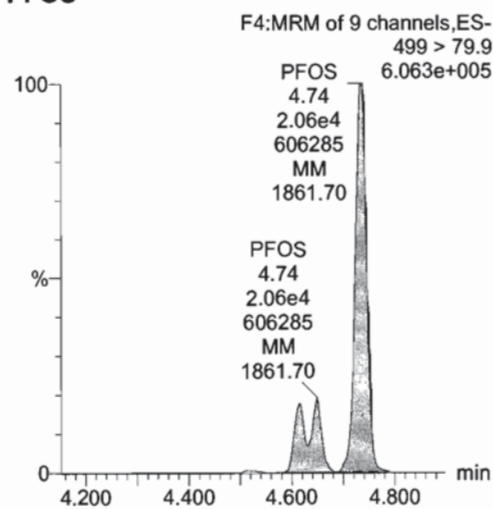
PFBS



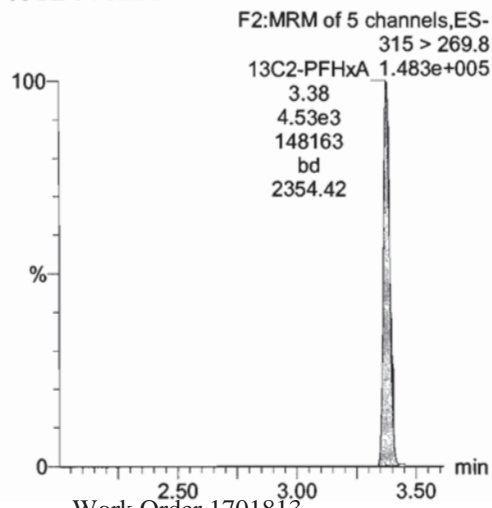
PFOA



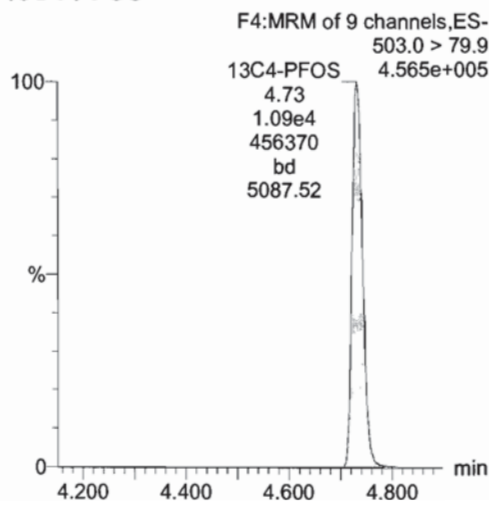
PFOS



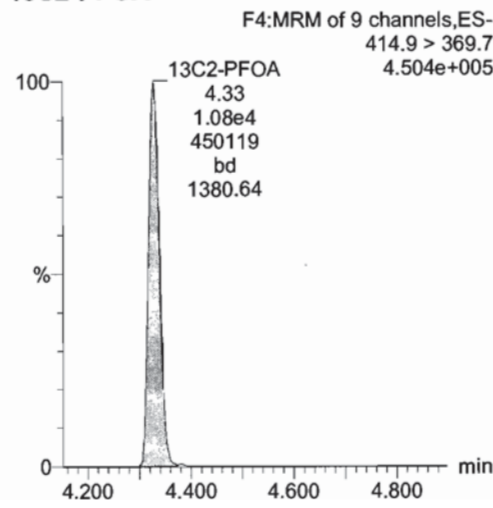
13C2-PFHxA



13C4-PFOS



13C2-PFOA



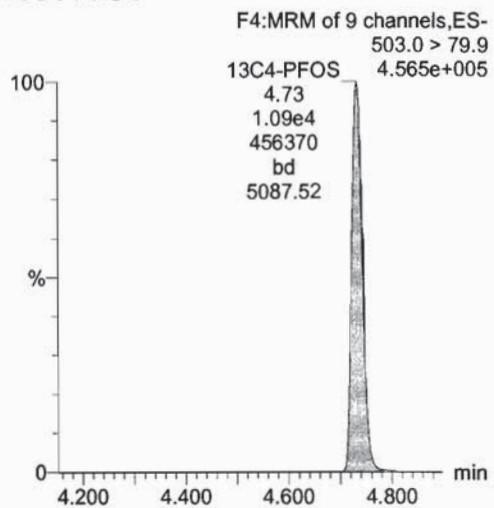
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Last Altered: Friday, December 08, 2017 09:58:42 Pacific Standard Time

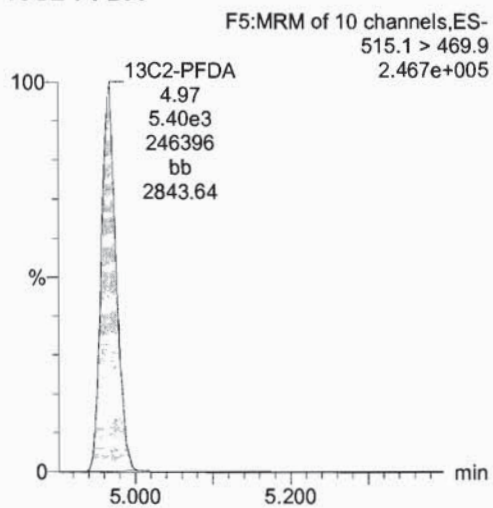
Printed: Friday, December 08, 2017 09:58:54 Pacific Standard Time

Name: 171207G3\_29, Date: 07-Dec-2017, Time: 20:00:25, ID: ST171207G3-2 PFC CS3 17K3027, Description: PFC CS3 17K3027

13C4-PFOS



13C2-PFDA



Dataset: U:\G1.PRO\Results\2017\171207G3\171207G1-57.qld

Last Altered: Friday, December 08, 2017 10:00:14 Pacific Standard Time

Printed: Friday, December 08, 2017 10:00:55 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS\_DW\_L3\_1126.mdb 27 Nov 2017 14:32:15

Calibration: U:\G1.PRO\CurveDB\C18\_537\_Q1\_12-06-17\_L3.cdb 06 Dec 2017 15:37:11

(A) Above limit criteria

Name: 171207G3\_57, Date: 08-Dec-2017, Time: 02:26:08, ID: ST171207G3-3 PFC CS5 537 17K3029, Description: PFC CS5 537 17K3029

#	Name	Trace	Area	IS Area	RRF	wt/vol	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	299 > 79.7	2.80e4	1.05e4		1.0000	3.03	3.02	76.5	126	(A) 143.1
2	2 PFOA	413 > 368.7	8.79e4	1.15e4		1.0000	4.32	4.32	76.1	99.2	99.2
3	3 PFOS	499 > 79.9	4.41e4	1.05e4		1.0000	4.73	4.73	120	137	(A) 148.8
4	4 13C2-PFHxA	315 > 269.8	4.97e3	1.15e4	0.424	1.0000	3.38	3.38	4.30	10.1	101.5
5	5 13C2-PFDA	515.1 > 469.9	4.99e3	1.15e4	0.478	1.0000	4.95	4.97	4.32	9.03	90.3
6	6 13C2-PFOA	414.9 > 369.7	1.15e4	1.15e4	1.000	1.0000	4.41	4.32	10.0	10.0	100.0
7	7 13C4-PFOS	503.0 > 79.9	1.05e4	1.05e4	1.000	1.0000	4.81	4.73	28.7	28.7	100.0

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Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Friday, December 08, 2017 10:12:58 Pacific Standard Time

Printed: Friday, December 08, 2017 10:14:59 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS\_DW\_L3\_1126.mdb 27 Nov 2017 14:32:15

Calibration: U:\G1.PRO\CurveDB\C18\_537\_Q1\_12-06-17\_L3.cdb 06 Dec 2017 15:37:11

Compound name: PFBS

	Name	ID	Acq.Date	Acq.Time
1	171207G3_1	IPA	07-Dec-17	14:11:58
2	171207G3_2	ST171207G3-1 PFC CS-1 537 17K3024	07-Dec-17	14:24:26
3	171207G3_3	IPA	07-Dec-17	14:36:50
4	171207G3_4	B7L0015-BS1 LFB 0.25	07-Dec-17	14:49:20
5	171207G3_5	B7L0015-BLK1 LRB 0.25	07-Dec-17	15:01:46
6	171207G3_6	B7L0015-MS1 LFSM 0.24696	07-Dec-17	15:14:14
7	171207G3_7	B7L0015-MSD1 LFSMD 0.25064	07-Dec-17	15:26:41
8	171207G3_8	1701807-01 CH-AT-1RW94-1117 0.24509	07-Dec-17	15:39:08
9	171207G3_9	1701807-02 CH-AT-1FB94-1117 0.24508	07-Dec-17	15:51:37
10	171207G3_10	1701807-03 CH-AT-1RW95-1117 0.25193	07-Dec-17	16:04:02
11	171207G3_11	1701807-04 CH-AT-1FB95-1117 0.25155	07-Dec-17	16:16:26
12	171207G3_12	1701807-05 CH-AT-1RW96-1117 0.24236	07-Dec-17	16:29:04
13	171207G3_13	1701807-06 CH-AT-1FB96-1117 0.24957	07-Dec-17	16:41:30
14	171207G3_14	1701807-07 CH-AT-1RW97-1117 0.24262	07-Dec-17	16:53:56
15	171207G3_15	1701807-08 CH-AT-1FB97-1117 0.24757	07-Dec-17	17:06:26
16	171207G3_16	1701826-01 CH-AT-2RW40-1217 0.24324	07-Dec-17	17:18:54
17	171207G3_17	1701826-02 CH-AT-2FB40-1217 0.24836	07-Dec-17	17:31:22
18	171207G3_18	1701826-03 CH-AT-1RW115-1217 0.23578	07-Dec-17	17:43:46
19	171207G3_19	1701826-04 CH-AT-1FB115-1217 0.25059	07-Dec-17	17:56:10
20	171207G3_20	1701826-05 CH-AT-2RW41-1217 0.2433	07-Dec-17	18:08:35
21	171207G3_21	1701826-06 CH-AT-2FB41-1217 0.23928	07-Dec-17	18:21:01
22	171207G3_22	1701826-07 CH-AT-2RW39-1217 0.2471	07-Dec-17	18:33:26
23	171207G3_23	1701826-08 CH-AT-2FB39-1217 0.25321	07-Dec-17	18:45:53
24	171207G3_24	1701826-09 CH-AT-1RW114-1217 0.23828	07-Dec-17	18:58:20
25	171207G3_25	1701826-10 CH-AT-1FB114-1217 0.25812	07-Dec-17	19:10:48
26	171207G3_26	1701826-11 CH-AT-1RW113-1217 0.25187	07-Dec-17	19:23:11
27	171207G3_27	1701826-12 CH-AT-1FB113-1217 0.252	07-Dec-17	19:35:34
28	171207G3_28	IPA	07-Dec-17	19:47:59
29	171207G3_29	ST171207G3-2 PFC CS3 17K3027	07-Dec-17	20:00:25
30	171207G3_30	IPA	07-Dec-17	20:12:51
31	171207G3_31	B7L0025-BS1 LFB 0.25	07-Dec-17	20:25:20

Dataset: Untitled

Last Altered: Friday, December 08, 2017 10:12:58 Pacific Standard Time  
Printed: Friday, December 08, 2017 10:14:59 Pacific Standard Time

Compound name: PFBS

	Name	ID	Acq.Date	Acq.Time
32	171207G3_32	B7L0025-BLK1 LRB 0.25	07-Dec-17	20:37:45
33	171207G3_33	B7L0025-MS1 LFSM 0.24324	07-Dec-17	20:50:11
34	171207G3_34	B7L0025-MSD1 LFSMD 0.25571	07-Dec-17	21:02:37
35	171207G3_35	1701814-01 CH-AT-1RW109-1117 0.24963	07-Dec-17	21:15:04
36	171207G3_36	1701814-02 CH-AT-1FB109-1117 0.25812	07-Dec-17	21:27:30
37	171207G3_37	1701814-03 CH-AT-1RW110-1117 0.24886	07-Dec-17	21:39:54
38	171207G3_38	1701814-04 CH-AT-1FB110-1117 0.24932	07-Dec-17	21:52:18
39	171207G3_39	1701814-05 CH-AT-1RW111-1117 0.24827	07-Dec-17	22:04:43
40	171207G3_40	1701814-06 CH-AT-1FB111-1117 0.2532	07-Dec-17	22:17:09
41	171207G3_41	1701814-07 CH-AT-1RW112-1117 0.25353	07-Dec-17	22:29:34
42	171207G3_42	1701814-08 CH-AT-1FB112-1117 0.262	07-Dec-17	22:41:59
43	171207G3_43	1701814-09 CH-AT-1RW107-1117 0.26323	07-Dec-17	22:54:26
44	171207G3_44	1701814-10 CH-AT-1FB107-1117 0.26258	07-Dec-17	23:06:54
45	171207G3_45	1701814-11 CH-AT-1RW108-1117 0.25898	07-Dec-17	23:19:18
46	171207G3_46	1701814-12 CH-AT-1FB108-1117 0.25727	07-Dec-17	23:31:42
47	171207G3_47	IPA	07-Dec-17	23:44:07
48	171207G3_48	B7L0016-BS1 LFB 0.25	07-Dec-17	23:56:35
49	171207G3_49	B7L0016-BSD1 LFB 0.25	08-Dec-17	00:09:00
50	171207G3_50	B7L0016-BLK1 LRB 0.25	08-Dec-17	00:21:26
51	171207G3_51	1701813-01 CH-AT-2RW20-1117 0.25836	08-Dec-17	00:33:52
52	171207G3_52	1701813-02 CH-AT-2FB20-1117 0.2625	08-Dec-17	00:46:19
53	171207G3_53	1701813-03 CH-AT-2RW21-1117 0.25745	08-Dec-17	00:58:45
54	171207G3_54	1701813-04 CH-AT-2FB21-1117 0.25393	08-Dec-17	01:11:11
55	171207G3_55	1701813-05 CH-AT-2RW22-1117 0.25543	08-Dec-17	01:23:39
56	171207G3_59	1701813-06 CH-AT-2FB22-1117 0.25226	08-Dec-17	01:36:08
57	171207G3_60	1701813-07 CH-AT-2RW23-1117 0.25821	08-Dec-17	01:48:36
58	171207G3_61	1701813-08 CH-AT-2FB23-1117 0.24936	08-Dec-17	02:01:00
59	171207G3_56	IPA	08-Dec-17	02:13:25
60	171207G3_57	ST171207G3-3 PFC CS5 537 17K3029	08-Dec-17	02:26:08
61	171207G3_58	IPA	08-Dec-17	02:38:38

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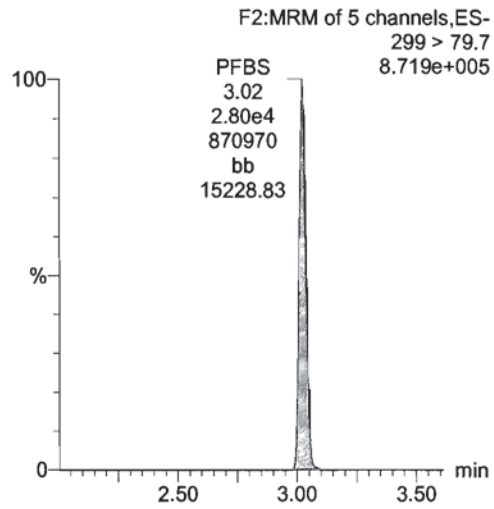
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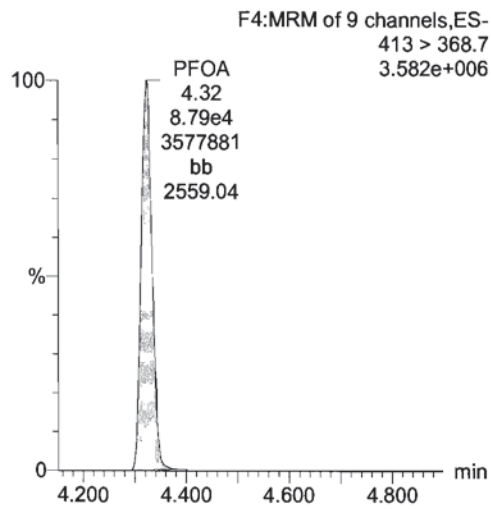
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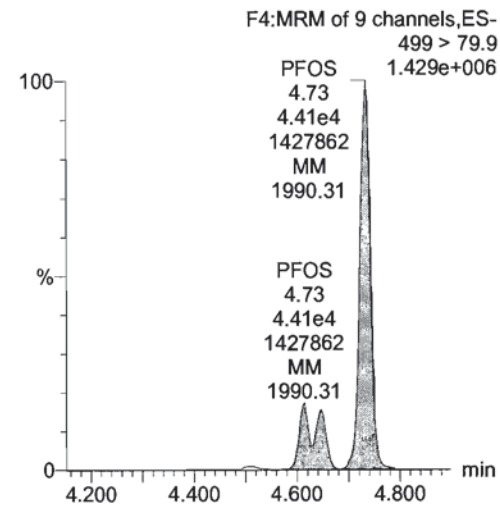
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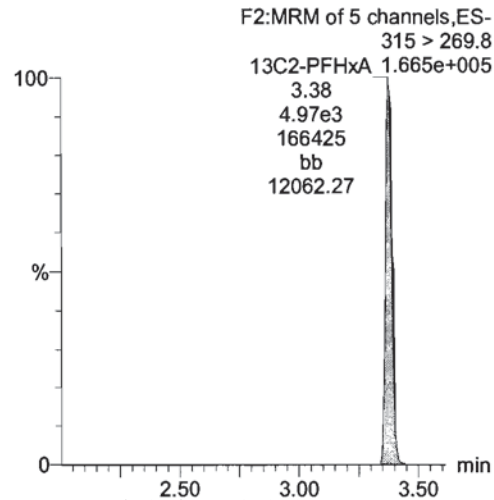
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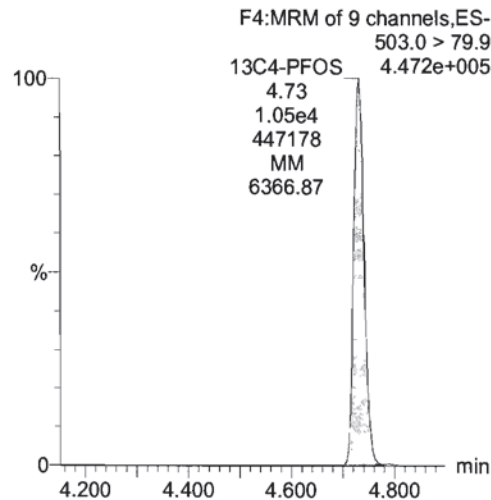
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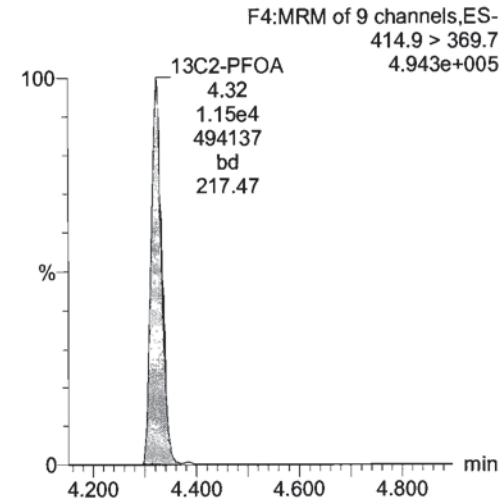
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13C4-PFOS



13C2-PFOA



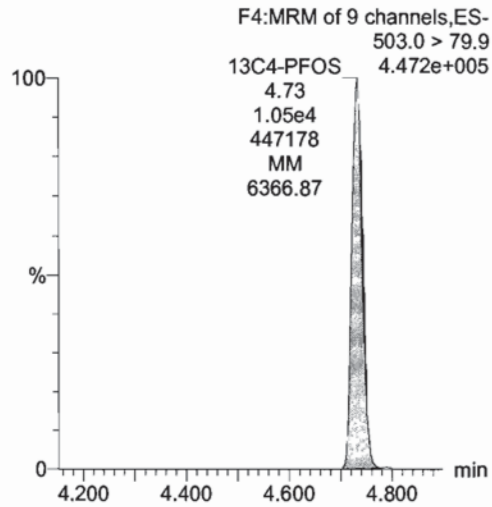
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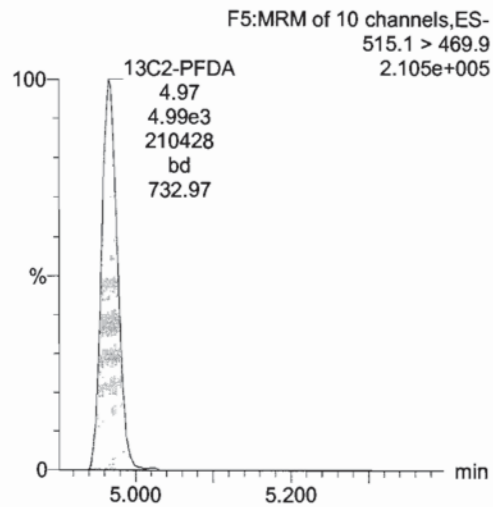
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13C4-PFOS



13C2-PFDA



IS Area

Ical

Compound 6: 13C2-PFOA

ID	Name	Type	Std. Conc	RT	Area	IS Area	Ical Area	Area %
1	ST171208G1-1 PFC CS-1 537 17K3024	171208G1_Analyte	10	4.31	12627.65	12627.65	11328.26	111.4704
2	IPA	171208G1_Analyte	10	4.32	3.073	3.073	11328.26	0.027127
3	B7L0015-BLK1 LRB 0.25	171208G1_Analyte	10	4.32	9138.599	9138.599	11328.26	80.67083
4	B7L0015-MSD1 LFSMD 0.25064	171208G1_Analyte	10	4.32	8731.165	8731.165	11328.26	77.07421
5	1701807-02 CH-AT-1FB94-1117 0.24508	171208G1_Analyte	10	4.32	9187.688	9187.688	11328.26	81.10416
6	1701807-04 CH-AT-1FB95-1117 0.25155	171208G1_Analyte	10	4.32	10397.54	10397.54	11328.26	91.78411
7	1701807-05 CH-AT-1RW96-1117 0.24236	171208G1_Analyte	10	4.32	9647.853	9647.853	11328.26	85.16626
8	1701807-08 CH-AT-1FB97-1117 0.24757	171208G1_Analyte	10	4.32	9641.529	9641.529	11328.26	85.11043
9	1701826-02 CH-AT-2FB40-1217 0.24836	171208G1_Analyte	10	4.32	9837.729	9837.729	11328.26	86.84238
10	1701826-03 CH-AT-1RW115-1217 0.23578	171208G1_Analyte	10	4.32	9461.793	9461.793	11328.26	83.52382
11	1701826-06 CH-AT-2FB41-1217 0.23928	171208G1_Analyte	10	4.32	9968.256	9968.256	11328.26	87.99461
12	1701826-09 CH-AT-1RW114-1217 0.23828	171208G1_Analyte	10	4.32	9783.975	9783.975	11328.26	86.36787
13	1701826-10 CH-AT-1FB114-1217 0.25812	171208G1_Analyte	10	4.32	9517.647	9517.647	11328.26	84.01687
14	1701826-12 CH-AT-1FB113-1217 0.252	171208G1_Analyte	10	4.32	9469.968	9469.968	11328.26	83.59598
15	1701813-09 CH-AT-2RW24-1117 0.25492	171208G1_Analyte	10	4.33	9098.896	9098.896	11328.26	80.32035
16	1701813-10 CH-AT-2FB24-1117 0.26256	171208G1_Analyte	10	4.32	9099.724	9099.724	11328.26	80.32766
17	1701813-11 CH-AT-2RW25-1117 0.25755	171208G1_Analyte	10	4.32	9430.05	9430.05	11328.26	83.24361
18	1701813-12 CH-AT-2FB25-1117 0.25959	171208G1_Analyte	10	4.32	9429.335	9429.335	11328.26	83.23729
19	1701813-13 CH-AT-2RW26-1117 0.25763	171208G1_Analyte	10	4.32	9282.278	9282.278	11328.26	81.93915
20	1701813-14 CH-AT-2FB26-1117 0.25837	171208G1_Analyte	10	4.32	9703.113	9703.113	11328.26	85.65406
21	1701813-15 CH-AT-2RW27-1117 0.25746	171208G1_Analyte	10	4.32	9555.123	9555.123	11328.26	84.34769
22	1701813-16 CH-AT-2FB27-1117 0.25485	171208G1_Analyte	10	4.32	8856.009	8856.009	11328.26	78.17627
23	1701813-17 CH-AT-2RW28-1117 0.25423	171208G1_Analyte	10	4.32	9233.376	9233.376	11328.26	81.50747
24	1701813-18 CH-AT-2FB28-1117 0.26414	171208G1_Analyte	10	4.32	9201.825	9201.825	11328.26	81.22895
25	1701813-19 CH-AT-2RW29-1117 0.23697	171208G1_Analyte	10	4.32	8897.581	8897.581	11328.26	78.54324
26	1701813-20 CH-AT-2FB29-1117 0.26487	171208G1_Analyte	10	4.33	8700.753	8700.753	11328.26	76.80575
27	IPA	171208G1_Analyte	10	4.21	0.572	0.572	11328.26	0.005049

28 ST171208G1-2 PFC CS3 17K3027 171208G1\_Analyte 10 4.32 10921.65 10921.65 11328.26 96.41069

Compound 7: 13C4-PFOS

ID	Name	Type	Std. Conc	RT	Area	IS Area	Ical Area	Area %
1	ST171208G1-1 PFC CS-1 537 17K3024	171208G1_Analyte	28.7	4.73	12906.77	12906.77	11328.26	113.9343
2	IPA	171208G1_Analyte	28.7	4.7	2.492	2.492	11328.26	0.021998
3	B7L0015-BLK1 LRB 0.25	171208G1_Analyte	28.7	4.73	9169.549	9169.549	11328.26	80.94404
4	B7L0015-MSD1 LFSMD 0.25064	171208G1_Analyte	28.7	4.73	10026.97	10026.97	11328.26	88.51293
5	1701807-02 CH-AT-1FB94-1117 0.24508	171208G1_Analyte	28.7	4.73	9389.564	9389.564	11328.26	82.88622
6	1701807-04 CH-AT-1FB95-1117 0.25155	171208G1_Analyte	28.7	4.73	11082.12	11082.12	11328.26	97.82726
7	1701807-05 CH-AT-1RW96-1117 0.24236	171208G1_Analyte	28.7	4.73	10108.59	10108.59	11328.26	89.23341
8	1701807-08 CH-AT-1FB97-1117 0.24757	171208G1_Analyte	28.7	4.73	10493.58	10493.58	11328.26	92.63191
9	1701826-02 CH-AT-2FB40-1217 0.24836	171208G1_Analyte	28.7	4.73	10273.69	10273.69	11328.26	90.69083
10	1701826-03 CH-AT-1RW115-1217 0.23578	171208G1_Analyte	28.7	4.73	10051.58	10051.58	11328.26	88.73014
11	1701826-06 CH-AT-2FB41-1217 0.23928	171208G1_Analyte	28.7	4.73	9895.271	9895.271	11328.26	87.35034
12	1701826-09 CH-AT-1RW114-1217 0.23828	171208G1_Analyte	28.7	4.73	11053.61	11053.61	11328.26	97.57554
13	1701826-10 CH-AT-1FB114-1217 0.25812	171208G1_Analyte	28.7	4.73	10120.03	10120.03	11328.26	89.33443
14	1701826-12 CH-AT-1FB113-1217 0.252	171208G1_Analyte	28.7	4.73	10792.6	10792.6	11328.26	95.2715
15	1701813-09 CH-AT-2RW24-1117 0.25492	171208G1_Analyte	28.7	4.73	10228.03	10228.03	11328.26	90.28776
16	1701813-10 CH-AT-2FB24-1117 0.26256	171208G1_Analyte	28.7	4.73	8833.352	8833.352	11328.26	77.97626
17	1701813-11 CH-AT-2RW25-1117 0.25755	171208G1_Analyte	28.7	4.73	10453.59	10453.59	11328.26	92.27889
18	1701813-12 CH-AT-2FB25-1117 0.25959	171208G1_Analyte	28.7	4.73	9192.003	9192.003	11328.26	81.14225
19	1701813-13 CH-AT-2RW26-1117 0.25763	171208G1_Analyte	28.7	4.73	10303.61	10303.61	11328.26	90.95496
20	1701813-14 CH-AT-2FB26-1117 0.25837	171208G1_Analyte	28.7	4.73	9442.297	9442.297	11328.26	83.35172
21	1701813-15 CH-AT-2RW27-1117 0.25746	171208G1_Analyte	28.7	4.73	10128.21	10128.21	11328.26	89.40657
22	1701813-16 CH-AT-2FB27-1117 0.25485	171208G1_Analyte	28.7	4.73	9320.671	9320.671	11328.26	82.27806
23	1701813-17 CH-AT-2RW28-1117 0.25423	171208G1_Analyte	28.7	4.73	10254.94	10254.94	11328.26	90.52529
24	1701813-18 CH-AT-2FB28-1117 0.26414	171208G1_Analyte	28.7	4.73	9809.184	9809.184	11328.26	86.5904
25	1701813-19 CH-AT-2RW29-1117 0.23697	171208G1_Analyte	28.7	4.73	9728.569	9728.569	11328.26	85.87878
26	1701813-20 CH-AT-2FB29-1117 0.26487	171208G1_Analyte	28.7	4.74	9553.583	9553.583	11328.26	84.33409
27	IPA	171208G1_Analyte	28.7	4.67	1.828	1.828	11328.26	0.016137
28	ST171208G1-2 PFC CS3 17K3027	171208G1_Analyte	28.7	4.73	11845.05	11845.05	11328.26	104.5619

## Ccal

Compound 6: 13C2-PFOA

ST171208G1-1 PFC CS-1 537 17K3024

ID	Name	Type	Std. Conc	RT	Area	IS Area	Ccal Area	Area %
1	ST171208G1-1 PFC CS-1 537 17K3024	171208G1_Analyte	10	4.31	12627.65	12627.65	12627.65	100
2	IPA	171208G1_Analyte	10	4.32	3.073	3.073	12627.65	0.024335
3	B7L0015-BLK1 LRB 0.25	171208G1_Analyte	10	4.32	9138.599	9138.599	12627.65	72.36975
4	B7L0015-MSD1 LFSMD 0.25064	171208G1_Analyte	10	4.32	8731.165	8731.165	12627.65	69.14322
5	1701807-02 CH-AT-1FB94-1117 0.24508	171208G1_Analyte	10	4.32	9187.688	9187.688	12627.65	72.75849
6	1701807-04 CH-AT-1FB95-1117 0.25155	171208G1_Analyte	10	4.32	10397.54	10397.54	12627.65	82.33946
7	1701807-05 CH-AT-1RW96-1117 0.24236	171208G1_Analyte	10	4.32	9647.853	9647.853	12627.65	76.40259
8	1701807-08 CH-AT-1FB97-1117 0.24757	171208G1_Analyte	10	4.32	9641.529	9641.529	12627.65	76.35251
9	1701826-02 CH-AT-2FB40-1217 0.24836	171208G1_Analyte	10	4.32	9837.729	9837.729	12627.65	77.90625
10	1701826-03 CH-AT-1RW115-1217 0.23578	171208G1_Analyte	10	4.32	9461.793	9461.793	12627.65	74.92916
11	1701826-06 CH-AT-2FB41-1217 0.23928	171208G1_Analyte	10	4.32	9968.256	9968.256	12627.65	78.93991
12	1701826-09 CH-AT-1RW114-1217 0.23828	171208G1_Analyte	10	4.32	9783.975	9783.975	12627.65	77.48056
13	1701826-10 CH-AT-1FB114-1217 0.25812	171208G1_Analyte	10	4.32	9517.647	9517.647	12627.65	75.37148
14	1701826-12 CH-AT-1FB113-1217 0.252	171208G1_Analyte	10	4.32	9469.968	9469.968	12627.65	74.9939
15	1701813-09 CH-AT-2RW24-1117 0.25492	171208G1_Analyte	10	4.33	9098.896	9098.896	12627.65	72.05533
16	1701813-10 CH-AT-2FB24-1117 0.26256	171208G1_Analyte	10	4.32	9099.724	9099.724	12627.65	72.06189
17	1701813-11 CH-AT-2RW25-1117 0.25755	171208G1_Analyte	10	4.32	9430.05	9430.05	12627.65	74.67778
18	1701813-12 CH-AT-2FB25-1117 0.25959	171208G1_Analyte	10	4.32	9429.335	9429.335	12627.65	74.67212
19	1701813-13 CH-AT-2RW26-1117 0.25763	171208G1_Analyte	10	4.32	9282.278	9282.278	12627.65	73.50756
20	1701813-14 CH-AT-2FB26-1117 0.25837	171208G1_Analyte	10	4.32	9703.113	9703.113	12627.65	76.84021
21	1701813-15 CH-AT-2RW27-1117 0.25746	171208G1_Analyte	10	4.32	9555.123	9555.123	12627.65	75.66825
22	1701813-16 CH-AT-2FB27-1117 0.25485	171208G1_Analyte	10	4.32	8856.009	8856.009	12627.65	70.13188
23	1701813-17 CH-AT-2RW28-1117 0.25423	171208G1_Analyte	10	4.32	9233.376	9233.376	12627.65	73.1203
24	1701813-18 CH-AT-2FB28-1117 0.26414	171208G1_Analyte	10	4.32	9201.825	9201.825	12627.65	72.87044
25	1701813-19 CH-AT-2RW29-1117 0.23697	171208G1_Analyte	10	4.32	8897.581	8897.581	12627.65	70.46109
26	1701813-20 CH-AT-2FB29-1117 0.26487	171208G1_Analyte	10	4.33	8700.753	8700.753	12627.65	68.90239
27	IPA	171208G1_Analyte	10	4.21	0.572	0.572	12627.65	0.00453
28	ST171208G1-2 PFC CS3 17K3027	171208G1_Analyte	10	4.32	10921.65	10921.65	12627.65	86.48997

## Compound 7: 13C4-PFOS

ST171208G1-1 PFC CS-1 537 17K3024

ID	Name	Type	Std. Conc	RT	Area	IS Area	Ccal Area	Area %
1	ST171208G1-1 PFC CS-1 537 17K3024	171208G1_Analyte	28.7	4.73	12906.77	12906.77	12906.77	100
2	IPA	171208G1_Analyte	28.7	4.7	2.492	2.492	12906.77	0.019308
3	B7L0015-BLK1 LRB 0.25	171208G1_Analyte	28.7	4.73	9169.549	9169.549	12906.77	71.04447
4	B7L0015-MSD1 LFSMD 0.25064	171208G1_Analyte	28.7	4.73	10026.97	10026.97	12906.77	77.68768
5	1701807-02 CH-AT-1FB94-1117 0.24508	171208G1_Analyte	28.7	4.73	9389.564	9389.564	12906.77	72.74912
6	1701807-04 CH-AT-1FB95-1117 0.25155	171208G1_Analyte	28.7	4.73	11082.12	11082.12	12906.77	85.86286
7	1701807-05 CH-AT-1RW96-1117 0.24236	171208G1_Analyte	28.7	4.73	10108.59	10108.59	12906.77	78.32004
8	1701807-08 CH-AT-1FB97-1117 0.24757	171208G1_Analyte	28.7	4.73	10493.58	10493.58	12906.77	81.3029
9	1701826-02 CH-AT-2FB40-1217 0.24836	171208G1_Analyte	28.7	4.73	10273.69	10273.69	12906.77	79.59922
10	1701826-03 CH-AT-1RW115-1217 0.23578	171208G1_Analyte	28.7	4.73	10051.58	10051.58	12906.77	77.87833
11	1701826-06 CH-AT-2FB41-1217 0.23928	171208G1_Analyte	28.7	4.73	9895.271	9895.271	12906.77	76.66727
12	1701826-09 CH-AT-1RW114-1217 0.23828	171208G1_Analyte	28.7	4.73	11053.61	11053.61	12906.77	85.64192
13	1701826-10 CH-AT-1FB114-1217 0.25812	171208G1_Analyte	28.7	4.73	10120.03	10120.03	12906.77	78.40871
14	1701826-12 CH-AT-1FB113-1217 0.252	171208G1_Analyte	28.7	4.73	10792.6	10792.6	12906.77	83.61967
15	1701813-09 CH-AT-2RW24-1117 0.25492	171208G1_Analyte	28.7	4.73	10228.03	10228.03	12906.77	79.24545
16	1701813-10 CH-AT-2FB24-1117 0.26256	171208G1_Analyte	28.7	4.73	8833.352	8833.352	12906.77	68.43966
17	1701813-11 CH-AT-2RW25-1117 0.25755	171208G1_Analyte	28.7	4.73	10453.59	10453.59	12906.77	80.99306
18	1701813-12 CH-AT-2FB25-1117 0.25959	171208G1_Analyte	28.7	4.73	9192.003	9192.003	12906.77	71.21844
19	1701813-13 CH-AT-2RW26-1117 0.25763	171208G1_Analyte	28.7	4.73	10303.61	10303.61	12906.77	79.83105
20	1701813-14 CH-AT-2FB26-1117 0.25837	171208G1_Analyte	28.7	4.73	9442.297	9442.297	12906.77	73.15769
21	1701813-15 CH-AT-2RW27-1117 0.25746	171208G1_Analyte	28.7	4.73	10128.21	10128.21	12906.77	78.47203
22	1701813-16 CH-AT-2FB27-1117 0.25485	171208G1_Analyte	28.7	4.73	9320.671	9320.671	12906.77	72.21535
23	1701813-17 CH-AT-2RW28-1117 0.25423	171208G1_Analyte	28.7	4.73	10254.94	10254.94	12906.77	79.45393
24	1701813-18 CH-AT-2FB28-1117 0.26414	171208G1_Analyte	28.7	4.73	9809.184	9809.184	12906.77	76.00028
25	1701813-19 CH-AT-2RW29-1117 0.23697	171208G1_Analyte	28.7	4.73	9728.569	9728.569	12906.77	75.37569
26	1701813-20 CH-AT-2FB29-1117 0.26487	171208G1_Analyte	28.7	4.74	9553.583	9553.583	12906.77	74.01992
27	IPA	171208G1_Analyte	28.7	4.67	1.828	1.828	12906.77	0.014163
28	ST171208G1-2 PFC CS3 17K3027	171208G1_Analyte	28.7	4.73	11845.05	11845.05	12906.77	91.77387



Dataset: U:\G1.PRO\Results\2017\171208G1\171208G1-2.qld

Last Altered: Sunday, December 10, 2017 08:43:38 Pacific Standard Time  
Printed: Monday, December 11, 2017 09:30:58 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS\_DW\_L3\_1126.mdb 27 Nov 2017 14:32:15  
Calibration: U:\G1.PRO\CurveDB\C18\_537\_Q1\_12-06-17\_L3.cdb 06 Dec 2017 15:37:11

Name: 171208G1\_2, Date: 08-Dec-2017, Time: 09:52:47, ID: ST171208G1-1 PFC CS-1 537 17K3024, Description: PFC CS-1 537 17K3024

#	Name	Trace	Area	IS Area	RRF	wt/vol	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	299 > 79.7	6.94e2	1.35e4		1.0000	3.03	3.01	1.47	1.52	86.0
2	2 PFOA	413 > 368.7	2.23e3	1.34e4		1.0000	4.31	4.31	1.67	2.16	107.8
3	3 PFOS	499 > 79.9	9.43e2	1.35e4		1.0000	4.73	4.73	2.00	1.50	80.9
4	4 13C2-PFHxA	315 > 269.8	5.83e3	1.34e4	0.424	1.0000	3.37	3.37	4.36	10.3	102.9
5	5 13C2-PFDA	515.1 > 469.9	6.86e3	1.34e4	0.478	1.0000	4.94	4.96	5.13	10.7	107.3
6	6 13C2-PFOA	414.9 > 369.7	1.34e4	1.34e4	1.000	1.0000	4.41	4.31	10.0	10.0	100.0
7	7 13C4-PFOS	503.0 > 79.9	1.35e4	1.35e4	1.000	1.0000	4.81	4.73	28.7	28.7	100.0

70-130  
↓

DM 12/11/17  
yja. 12/11/2017

Dataset: Untitled

Last Altered: Monday, December 11, 2017 09:32:18 Pacific Standard Time

Printed: Monday, December 11, 2017 09:33:00 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS\_DW\_L3\_1126.mdb 27 Nov 2017 14:32:15

Calibration: U:\G1.PRO\CurveDB\C18\_537\_Q1\_12-06-17\_L3.cdb 06 Dec 2017 15:37:11

Compound name: PFBS

	Name	ID	Acq.Date	Acq.Time
1	171208G1_1	IPA	08-Dec-17	09:40:19
2	171208G1_2	ST171208G1-1 PFC CS-1 537 17K3024	08-Dec-17	09:52:47
3	171208G1_3	IPA	08-Dec-17	10:05:10
4	171208G1_4	B7L0015-BLK1 LRB 0.25	08-Dec-17	10:17:38
5	171208G1_5	B7L0015-MSD1 LFSMD 0.25064	08-Dec-17	10:30:04
6	171208G1_6	1701807-02 CH-AT-1FB94-1117 0.24508	08-Dec-17	10:42:32
7	171208G1_7	1701807-04 CH-AT-1FB95-1117 0.25155	08-Dec-17	10:54:59
8	171208G1_8	1701807-05 CH-AT-1RW96-1117 0.24236	08-Dec-17	11:07:27
9	171208G1_9	1701807-08 CH-AT-1FB97-1117 0.24757	08-Dec-17	11:19:55
10	171208G1_10	1701826-02 CH-AT-2FB40-1217 0.24836	08-Dec-17	11:32:19
11	171208G1_11	1701826-03 CH-AT-1RW115-1217 0.23578	08-Dec-17	11:44:44
12	171208G1_12	1701826-06 CH-AT-2FB41-1217 0.23928	08-Dec-17	11:57:09
13	171208G1_13	1701826-09 CH-AT-1RW114-1217 0.23828	08-Dec-17	12:09:35
14	171208G1_14	1701826-10 CH-AT-1FB114-1217 0.25812	08-Dec-17	12:22:03
15	171208G1_15	1701826-12 CH-AT-1FB113-1217 0.252	08-Dec-17	12:34:30
16	171208G1_16	1701813-09 CH-AT-2RW24-1117 0.25492	08-Dec-17	12:46:57
17	171208G1_17	1701813-10 CH-AT-2FB24-1117 0.26256	08-Dec-17	12:59:25
18	171208G1_18	1701813-11 CH-AT-2RW25-1117 0.25755	08-Dec-17	13:11:49
19	171208G1_19	1701813-12 CH-AT-2FB25-1117 0.25959	08-Dec-17	13:24:14
20	171208G1_20	1701813-13 CH-AT-2RW26-1117 0.25763	08-Dec-17	13:36:38
21	171208G1_21	1701813-14 CH-AT-2FB26-1117 0.25837	08-Dec-17	13:49:03
22	171208G1_22	1701813-15 CH-AT-2RW27-1117 0.25746	08-Dec-17	14:01:29
23	171208G1_23	1701813-16 CH-AT-2FB27-1117 0.25485	08-Dec-17	14:13:55
24	171208G1_24	1701813-17 CH-AT-2RW28-1117 0.25423	08-Dec-17	14:26:23
25	171208G1_25	1701813-18 CH-AT-2FB28-1117 0.26414	08-Dec-17	14:38:52
26	171208G1_26	1701813-19 CH-AT-2RW29-1117 0.23697	08-Dec-17	14:51:15
27	171208G1_27	1701813-20 CH-AT-2FB29-1117 0.26487	08-Dec-17	15:03:39
28	171208G1_28	IPA	08-Dec-17	15:16:04
29	171208G1_29	ST171208G1-2 PFC CS3 17K3027	08-Dec-17	15:28:31
30	171208G1_30	IPA	08-Dec-17	15:40:56

# LC Calibration Standards Review Checklist

Q1

		ION Ratio	Concentration	C-Cals Name	Sign Date	Correct I-Cal	Manual Integrations	
Calibration ID: <u>S 717120861-1</u> <b>(L M H)</b>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<del>NA</del> ↓
Calibration ID: <u>                    -2</u> <b>(L M H)</b>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	↓
Calibration ID: <u>                    </u> <b>L M H</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Calibration ID: <u>                    </u> <b>L M H</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Calibration ID: <u>                    </u> <b>L M H</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Calibration ID: <u>                    </u> <b>L M H</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Calibration ID: <u>                    </u> <b>L M H</b>	<input type="checkbox"/>	<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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Calibration ID: <u>                    </u> <b>L M H</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Calibration ID: <u>                    </u> <b>L M H</b>	<input type="checkbox"/>	<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: JA 12/11/2017  
                    Initials/Date

Comments: DW-L3

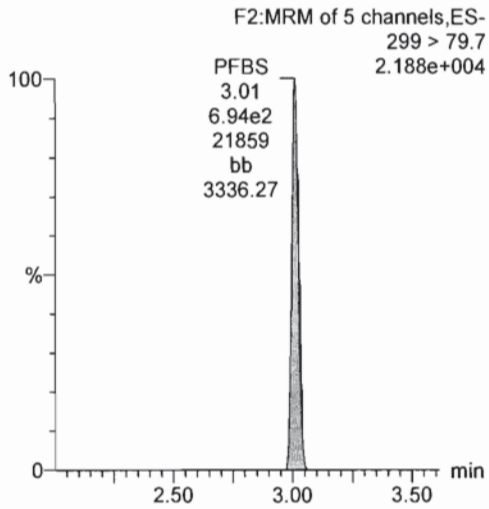
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Printed: Monday, December 11, 2017 09:30:58 Pacific Standard Time

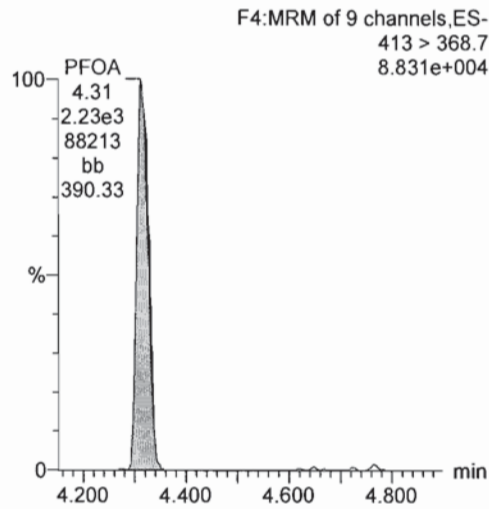
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Calibration: U:\G1.PRO\CurveDB\C18\_537\_Q1\_12-06-17\_L3.cdb 06 Dec 2017 15:37:11

Name: 171208G1\_2, Date: 08-Dec-2017, Time: 09:52:47, ID: ST171208G1-1 PFC CS-1 537 17K3024, Description: PFC CS-1 537 17K3024

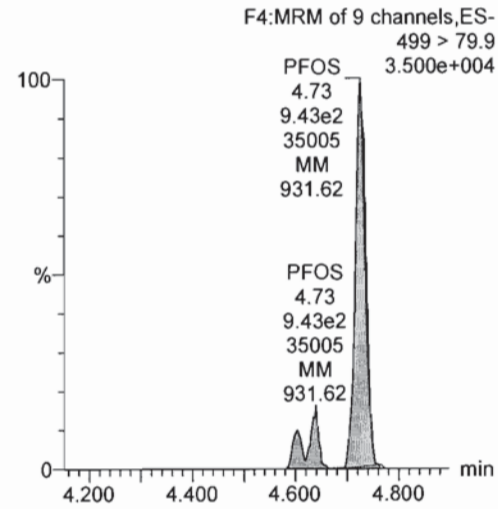
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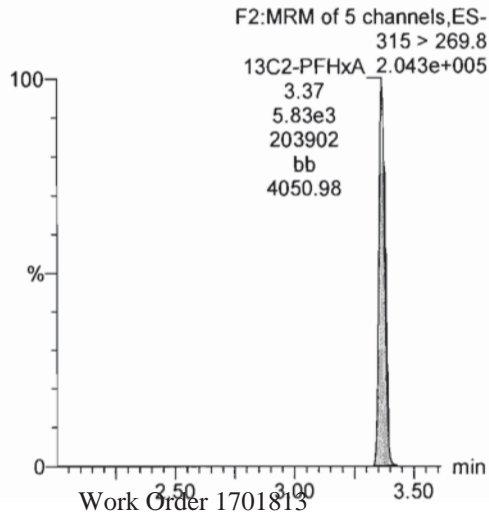
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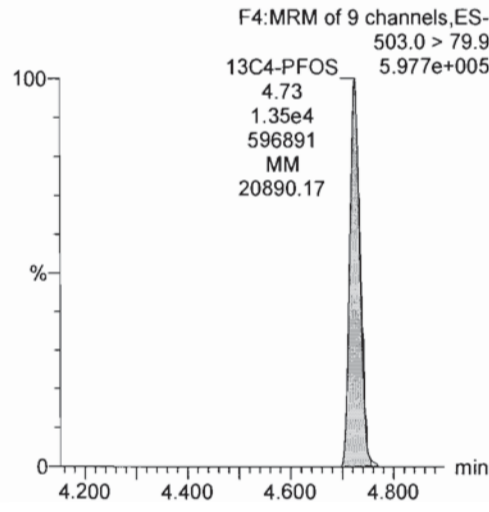
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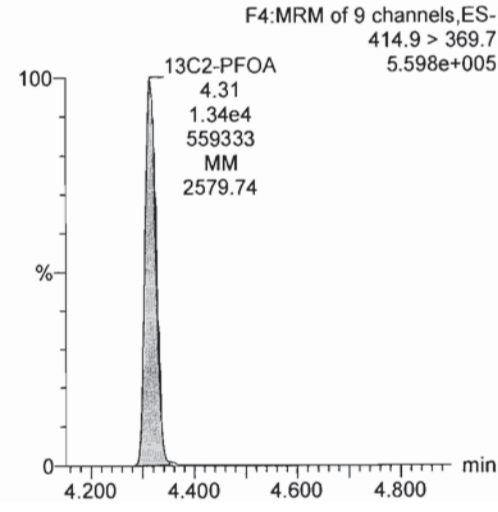
13C2-PFHxA



13C4-PFOS



13C2-PFOA

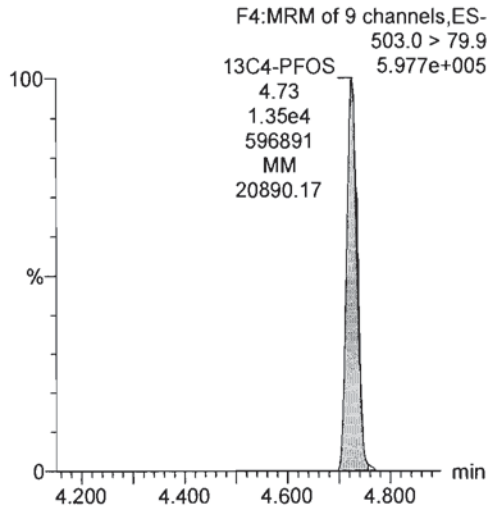


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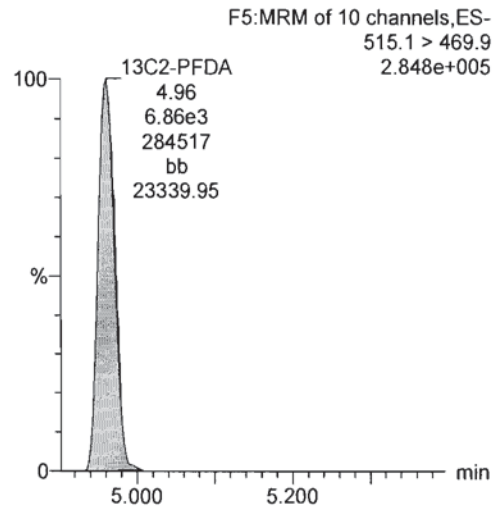
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Printed: Monday, December 11, 2017 09:30:58 Pacific Standard Time

Name: 171208G1\_2, Date: 08-Dec-2017, Time: 09:52:47, ID: ST171208G1-1 PFC CS-1 537 17K3024, Description: PFC CS-1 537 17K3024

13C4-PFOS



13C2-PFDA



Dataset: U:\G1.PRO\Results\2017\171208G1\171208G1-29.qld

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Calibration: U:\G1.PRO\CurveDB\C18\_537\_Q1\_12-06-17\_L3.cdb 06 Dec 2017 15:37:11

Name: 171208G1\_29, Date: 08-Dec-2017, Time: 15:28:31, ID: ST171208G1-2 PFC CS3 17K3027, Description: PFC CS3 17K3027

#	Name	Trace	Area	IS Area	RRF	wt/vol	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	299 > 79.7	1.38e4	1.18e4		1.0000	3.03	3.02	33.7	39.3	88.9
2	2 PFOA	413 > 368.7	4.32e4	1.09e4		1.0000	4.32	4.32	39.8	51.6	103.3
3	3 PFOS	499 > 79.9	2.20e4	1.18e4		1.0000	4.73	4.73	53.5	44.9	97.2
4	4 13C2-PFHxA	315 > 269.8	4.53e3	1.09e4	0.424	1.0000	3.38	3.38	4.17	9.84	98.4
5	5 13C2-PFDA	515.1 > 469.9	5.34e3	1.09e4	0.478	1.0000	4.95	4.97	4.91	10.3	102.8
6	6 13C2-PFOA	414.9 > 369.7	1.09e4	1.09e4	1.000	1.0000	4.41	4.32	10.0	10.0	100.0
7	7 13C4-PFOS	503.0 > 79.9	1.18e4	1.18e4	1.000	1.0000	4.81	4.73	28.7	28.7	100.0

70-130  
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VPA.  
12/11/2017

Dataset: Untitled

Last Altered: Monday, December 11, 2017 09:32:18 Pacific Standard Time

Printed: Monday, December 11, 2017 09:33:00 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS\_DW\_L3\_1126.mdb 27 Nov 2017 14:32:15

Calibration: U:\G1.PRO\CurveDB\C18\_537\_Q1\_12-06-17\_L3.cdb 06 Dec 2017 15:37:11

Compound name: PFBS

	Name	ID	Acq.Date	Acq.Time
1	171208G1_1	IPA	08-Dec-17	09:40:19
2	171208G1_2	ST171208G1-1 PFC CS-1 537 17K3024	08-Dec-17	09:52:47
3	171208G1_3	IPA	08-Dec-17	10:05:10
4	171208G1_4	B7L0015-BLK1 LRB 0.25	08-Dec-17	10:17:38
5	171208G1_5	B7L0015-MSD1 LFSMD 0.25064	08-Dec-17	10:30:04
6	171208G1_6	1701807-02 CH-AT-1FB94-1117 0.24508	08-Dec-17	10:42:32
7	171208G1_7	1701807-04 CH-AT-1FB95-1117 0.25155	08-Dec-17	10:54:59
8	171208G1_8	1701807-05 CH-AT-1RW96-1117 0.24236	08-Dec-17	11:07:27
9	171208G1_9	1701807-08 CH-AT-1FB97-1117 0.24757	08-Dec-17	11:19:55
10	171208G1_10	1701826-02 CH-AT-2FB40-1217 0.24836	08-Dec-17	11:32:19
11	171208G1_11	1701826-03 CH-AT-1RW115-1217 0.23578	08-Dec-17	11:44:44
12	171208G1_12	1701826-06 CH-AT-2FB41-1217 0.23928	08-Dec-17	11:57:09
13	171208G1_13	1701826-09 CH-AT-1RW114-1217 0.23828	08-Dec-17	12:09:35
14	171208G1_14	1701826-10 CH-AT-1FB114-1217 0.25812	08-Dec-17	12:22:03
15	171208G1_15	1701826-12 CH-AT-1FB113-1217 0.252	08-Dec-17	12:34:30
16	171208G1_16	1701813-09 CH-AT-2RW24-1117 0.25492	08-Dec-17	12:46:57
17	171208G1_17	1701813-10 CH-AT-2FB24-1117 0.26256	08-Dec-17	12:59:25
18	171208G1_18	1701813-11 CH-AT-2RW25-1117 0.25755	08-Dec-17	13:11:49
19	171208G1_19	1701813-12 CH-AT-2FB25-1117 0.25959	08-Dec-17	13:24:14
20	171208G1_20	1701813-13 CH-AT-2RW26-1117 0.25763	08-Dec-17	13:36:38
21	171208G1_21	1701813-14 CH-AT-2FB26-1117 0.25837	08-Dec-17	13:49:03
22	171208G1_22	1701813-15 CH-AT-2RW27-1117 0.25746	08-Dec-17	14:01:29
23	171208G1_23	1701813-16 CH-AT-2FB27-1117 0.25485	08-Dec-17	14:13:55
24	171208G1_24	1701813-17 CH-AT-2RW28-1117 0.25423	08-Dec-17	14:26:23
25	171208G1_25	1701813-18 CH-AT-2FB28-1117 0.26414	08-Dec-17	14:38:52
26	171208G1_26	1701813-19 CH-AT-2RW29-1117 0.23697	08-Dec-17	14:51:15
27	171208G1_27	1701813-20 CH-AT-2FB29-1117 0.26487	08-Dec-17	15:03:39
28	171208G1_28	IPA	08-Dec-17	15:16:04
29	171208G1_29	ST171208G1-2 PFC CS3 17K3027	08-Dec-17	15:28:31
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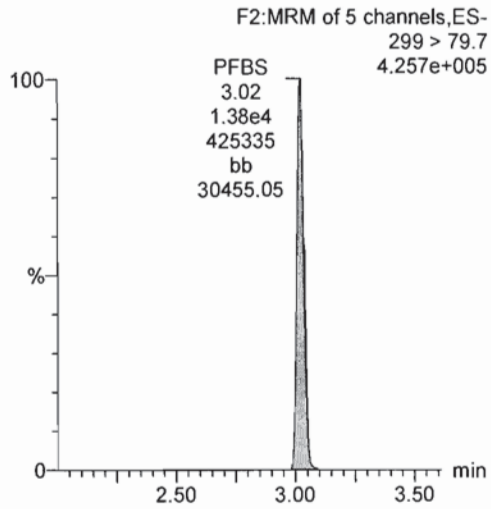
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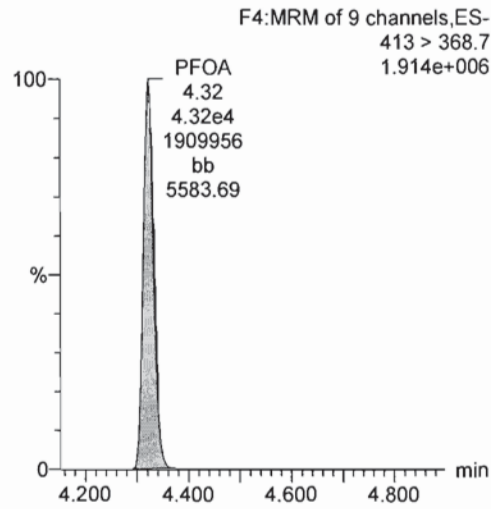
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Name: 171208G1\_29, Date: 08-Dec-2017, Time: 15:28:31, ID: ST171208G1-2 PFC CS3 17K3027, Description: PFC CS3 17K3027

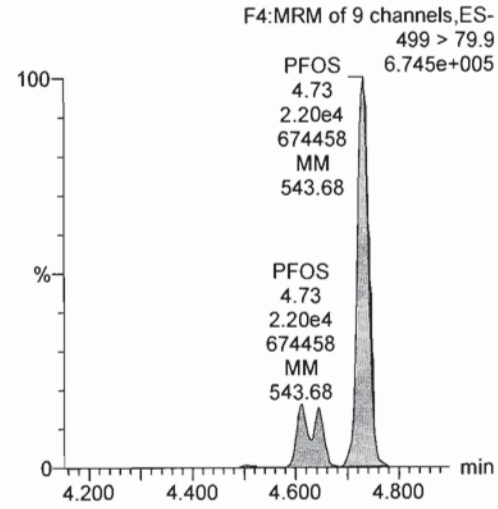
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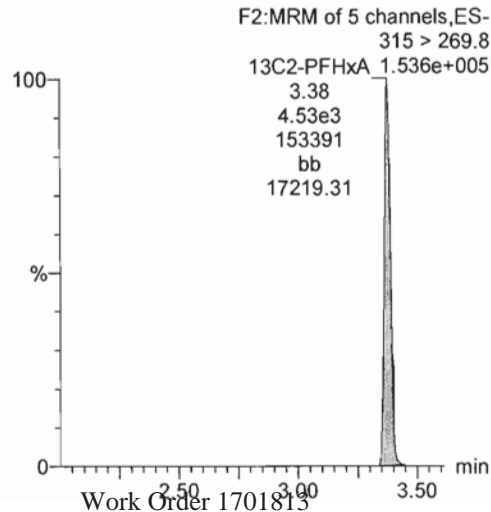
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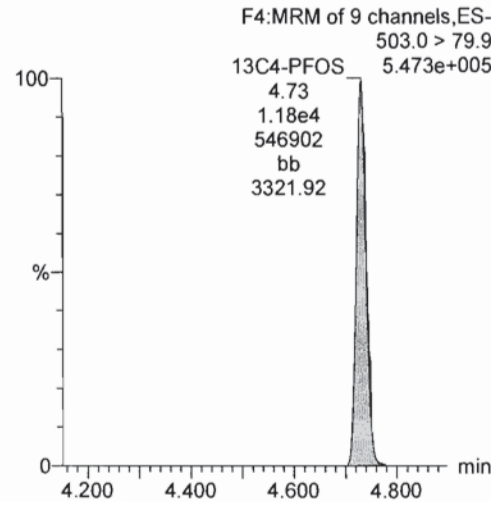
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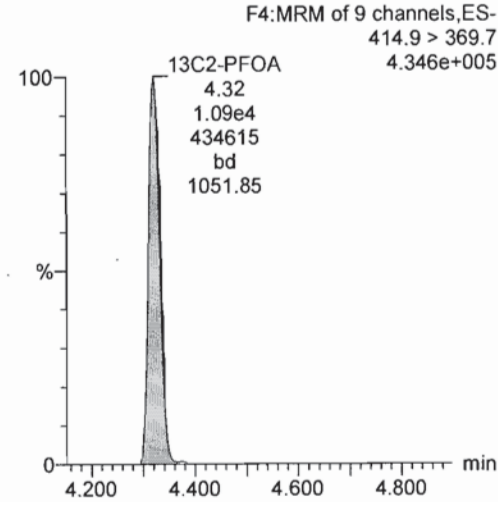
13C2-PFHxA



13C4-PFOS



13C2-PFOA



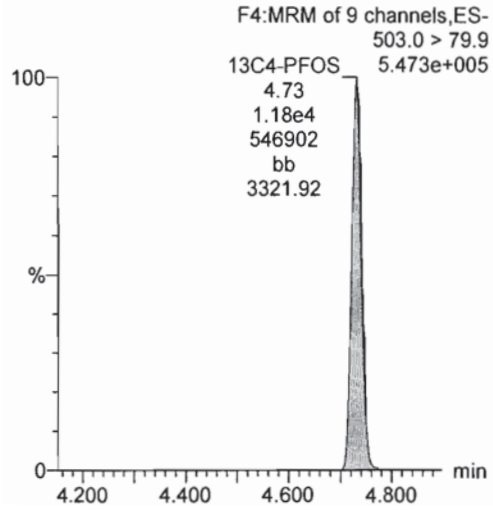


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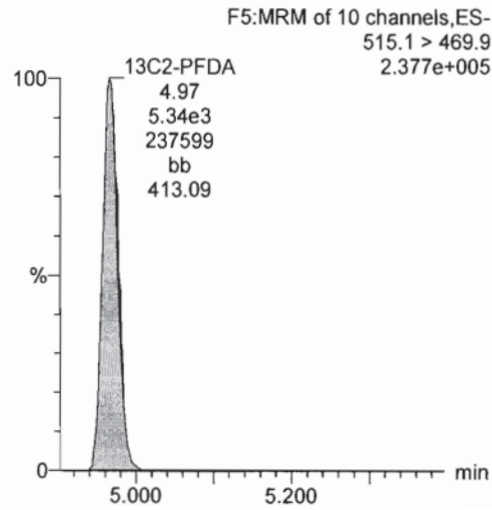
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Name: 171208G1\_29, Date: 08-Dec-2017, Time: 15:28:31, ID: ST171208G1-2 PFC CS3 17K3027, Description: PFC CS3 17K3027

13C4-PFOS



13C2-PFDA



## ICAL

Compound 6: 13C2-PFOA

ID	Name	Type	Std. Conc	RT	Area	IS Area	ICAL AREA	AREA%
1	ST171211G1-1 PFC CS-1 537 17L1106	Standard	10	4.31	10648.18	10648.18	12372.36	86.06424
2	IPA	Analyte	10				12372.36	0
3	1701813-10 CH-AT-2FB24-1117 0.26256	Analyte	10	4.31	8312.228	8312.228	12372.36	67.18385
4	1701813-20 CH-AT-2FB29-1117 0.26487	Analyte	10	4.31	7956.156	7956.156	12372.36	64.30589
5	B7L0034-BLK1 LRB 0.25	Analyte		4.32	9552.299	9552.299	12372.36	77.20677
6	IPA	Analyte	10				12372.36	0
7	ST171211G1-2 PFC CS3 17L1107	Analyte	10	4.32	10271.11	10271.11	12372.36	83.01659

Compound 7: 13C4-PFOS

## ICAL

ID	Name	Type	Std. Conc	RT	Area	IS Area	ICAL AREA	AREA%
1	ST171211G1-1 PFC CS-1 537 17L1106	Standard	28.7	4.72	11291.68	11291.68	13322.56	84.7561
2	IPA	Analyte	28.7				13322.56	0
3	1701813-10 CH-AT-2FB24-1117 0.26256	Analyte	28.7	4.73	9371.263	9371.263	13322.56	70.34131
4	1701813-20 CH-AT-2FB29-1117 0.26487	Analyte	28.7	4.73	9397.963	9397.963	13322.56	70.54172
5	B7L0034-BLK1 LRB 0.25	Analyte		4.73	10397.18	10397.18	13322.56	78.04189
6	IPA	Analyte	28.7				13322.56	0
7	ST171211G1-2 PFC CS3 17L1107	Analyte	28.7	4.73	10907.83	10907.83	13322.56	81.87489

## CCAL

Compound 6: 13C2-PFOA

ID	Name	Type	Std. Conc	RT	Area	IS Area	CCAL AREA	AREA%
1	ST171211G1-1 PFC CS-1 537 17L1106	Standard	10	4.31	10648.18	10648.18	10648.177	100

2	IPA	171211G1_3	Analyte	10					10648.177	0
3	1701813-10 CH-AT-2FB24-1117 0.26256	171211G1_4	Analyte	10	4.31	8312.228	8312.228		10648.177	78.06245
4	1701813-20 CH-AT-2FB29-1117 0.26487	171211G1_5	Analyte	10	4.31	7956.156	7956.156		10648.177	74.71848
5	B7L0034-BLK1 LRB 0.25	171211G1_6	Analyte		4.32	9552.299	9552.299		10648.177	89.7083
6	IPA	171211G1_7	Analyte	10					10648.177	0
7	ST171211G1-2 PFC CS3 17L1107	171211G1_8	Analyte	10	4.32	10271.11	10271.11		10648.177	96.45887

Compound 7: 13C4-PFOS

CCAL

ID	Name	Type	Std. Conc	RT	Area	IS Area	CCAL AREA	AREA%
1	ST171211G1-1 PFC CS-1 537 17L1106	Standard	28.7		4.72	11291.68	11291.68	11291.682 100
2	IPA	Analyte	28.7				11291.682	0
3	1701813-10 CH-AT-2FB24-1117 0.26256	Analyte	28.7		4.73	9371.263	9371.263	11291.682 82.99262
4	1701813-20 CH-AT-2FB29-1117 0.26487	Analyte	28.7		4.73	9397.963	9397.963	11291.682 83.22908
5	B7L0034-BLK1 LRB 0.25	Analyte			4.73	10397.18	10397.18	11291.682 92.0782
6	IPA	Analyte	28.7				11291.682	0
7	ST171211G1-2 PFC CS3 17L1107	Analyte	28.7		4.73	10907.83	10907.83	11291.682 96.6006

Dataset: U:\G1.PRO\Results\2017\171211G1\171211G1-2.qld

Last Altered: Monday, December 11, 2017 14:28:59 Pacific Standard Time

Printed: Monday, December 11, 2017 14:29:22 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS\_DW\_L3\_1126.mdb 27 Nov 2017 14:32:15

Calibration: U:\G1.PRO\CurveDB\C18\_537\_Q1\_12-08-17\_L3.cdb 10 Dec 2017 22:49:55

Name: 171211G1\_2, Date: 11-Dec-2017, Time: 11:51:01, ID: ST171211G1-1 PFC CS-1 537 17L1106, Description: PFC CS-1 537 17L1106

#	Name	Trace	Area	IS Area	RRF	wt/vol	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	299 > 79.7	6.09e2	1.13e4		1.0000	3.02	3.01	1.55	1.93	109.2
2	2 PFOA	413 > 368.7	1.64e3	1.06e4		1.0000	4.31	4.31	1.54	1.89	94.6
3	3 PFOS	499 > 79.9	9.32e2	1.13e4		1.0000	4.72	4.72	2.37	1.97	106.5
4	4 13C2-PFHxA	315 > 269.8	4.41e3	1.06e4	0.443	1.0000	3.37	3.37	4.14	9.34	93.4
5	5 13C2-PFDA	515.1 > 469.9	5.81e3	1.06e4	0.509	1.0000	4.94	4.95	5.46	10.7	107.2
6	6 13C2-PFOA	414.9 > 369.7	1.06e4	1.06e4	1.000	1.0000	4.41	4.31	10.0	10.0	100.0
7	7 13C4-PFOS	503.0 > 79.9	1.13e4	1.13e4	1.000	1.0000	4.81	4.72	28.7	28.7	100.0

70-130  
↓

MTT  
12/11/17

VJA.  
12/11/2017

Dataset: Untitled

Last Altered: Monday, December 11, 2017 14:18:34 Pacific Standard Time  
Printed: Monday, December 11, 2017 14:19:23 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS\_DW\_L3\_1126.mdb 27 Nov 2017 14:32:15  
Calibration: U:\G1.PRO\CurveDB\C18\_537\_Q1\_12-08-17\_L3.cdb 10 Dec 2017 22:49:55

Compound name: PFBS

	Name	ID	Acq.Date	Acq.Time
1	171211G1_1	IPA	11-Dec-17	11:38:33
2	171211G1_2	ST171211G1-1 PFC CS-1 537 17L1106	11-Dec-17	11:51:01
3	171211G1_3	IPA	11-Dec-17	12:03:25
4	171211G1_4	1701813-10 CH-AT-2FB24-1117 0.26256	11-Dec-17	12:15:55
5	171211G1_5	1701813-20 CH-AT-2FB29-1117 0.26487	11-Dec-17	12:28:21
6	171211G1_6	B7L0034-BLK1 LRB 0.25	11-Dec-17	12:40:48
7	171211G1_7	IPA	11-Dec-17	12:53:17
8	171211G1_8	ST171211G1-2 PFC CS3 17L1107	11-Dec-17	13:05:44
9	171211G1_9	IPA	11-Dec-17	13:18:08
10	171211G1_10	B7L0026-BS1 LFB 0.25		
11	171211G1_11	B7L0026-BSD1 LFBD 0.25		
12	171211G1_12	IPA		
13	171211G1_13	B7L0026-BLK1 LRB 0.25		
14	171211G1_14	1701815-01 CH-AT-1RW98A-1117 0.25004		
15	171211G1_15	1701815-02 CH-AT-1FB98A-1117 0.22006		
16	171211G1_16	1701815-03 CH-AT-1RW98B-1117 0.2516		
17	171211G1_17	1701815-04 CH-AT-1FB98B-1117 0.23954		
18	171211G1_18	1701815-05 CH-AT-1RW99-1117 0.23773		
19	171211G1_19	1701815-06 CH-AT-1FB99-1117 0.2595		
20	171211G1_20	1701815-07 CH-AT-1RW100-1117 0.23268		
21	171211G1_21	1701815-08 CH-AT-1FB100-1117 0.24391		
22	171211G1_22	1701815-09 CH-AT-1RW101-1117 0.23904		
23	171211G1_23	1701815-10 CH-AT-1FB101-1117 0.24933		
24	171211G1_24	1701815-11 CH-AT-1RW102-1117 0.22328		
25	171211G1_25	1701815-12 CH-AT-1FB102-1117 0.2476		
26	171211G1_26	1701815-13 CH-AT-1RW103-1117 0.23828		
27	171211G1_27	1701815-14 CH-AT-1FB103-1117 0.23541		
28	171211G1_28	1701815-15 CH-AT-1RW104-1117 0.23862		
29	171211G1_29	1701815-16 CH-AT-1FB104-1117 0.23966		
30	171211G1_30	1701815-17 CH-AT-1RW105-1117 0.23516		
31	171211G1_31	1701815-18 CH-AT-1FB105-1117 0.24394		
32	171211G1_32	1701815-19 CH-AT-1RW06-1117 0.24687		

# LC Calibration Standards Review Checklist

G

		ION Ratio	Concentration	C-Cals Name	Sign Date	Correct I-Cal	Manual Integrations	
ST Calibration ID: <u>171211G1-1</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"/>	<del>NA</del>
Calibration ID: <u>-2</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 checked="" type="checkbox"/>
Calibration ID: _____	L M H	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Calibration ID: _____	L M H	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Calibration ID: _____	L M H	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Calibration ID: _____	L M H	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Calibration ID: _____	L M H	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Calibration ID: _____	L M H	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Calibration ID: _____	L M H	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Calibration ID: _____	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: 4/15/17

Run Log Present:

# of Samples per Sequence Checked:

Reviewed By: JA 12/11/2017  
Initials/Date

*Curve*

**Comments:**  
 PFBS 1.770  $\mu\text{g}/\mu\text{l}$  - 44.2  $\mu\text{g}/\mu\text{l}$   
 PFOA 2.00  $\downarrow$  - 50.00  
 PFOS 1.85  $\downarrow$  - 46.20

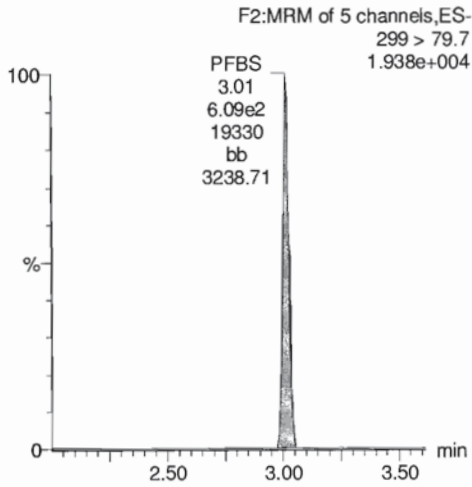
Dataset: U:\G1.PRO\Results\2017\171211G1\171211G1-2.qld

Last Altered: Monday, December 11, 2017 14:28:59 Pacific Standard Time  
Printed: Monday, December 11, 2017 14:29:22 Pacific Standard Time

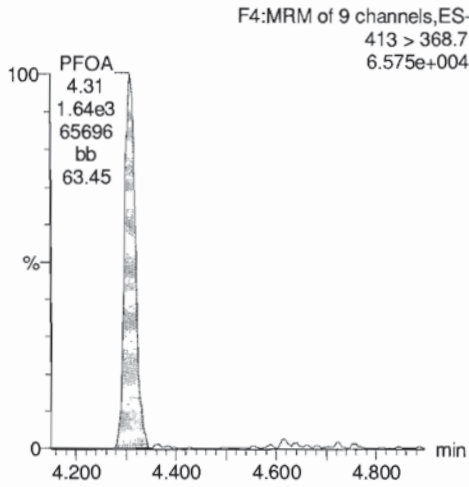
Method: U:\G1.PRO\MethDB\PFAS\_DW\_L3\_1126.mdb 27 Nov 2017 14:32:15  
Calibration: U:\G1.PRO\CurveDB\C18\_537\_Q1\_12-08-17\_L3.cdb 10 Dec 2017 22:49:55

Name: 171211G1\_2, Date: 11-Dec-2017, Time: 11:51:01, ID: ST171211G1-1 PFC CS-1 537 17L1106, Description: PFC CS-1 537 17L1106

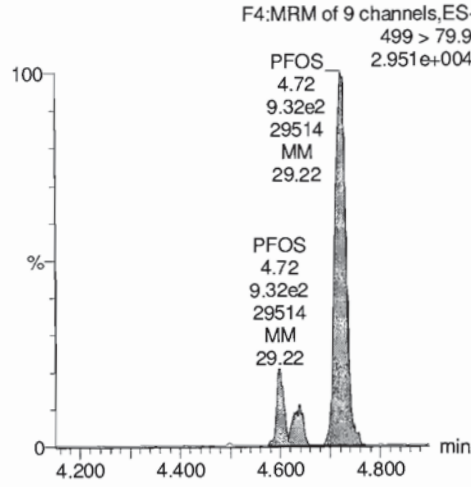
**PFBS**



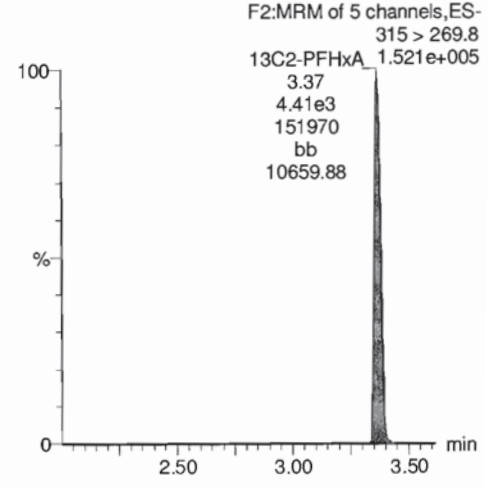
**PFOA**



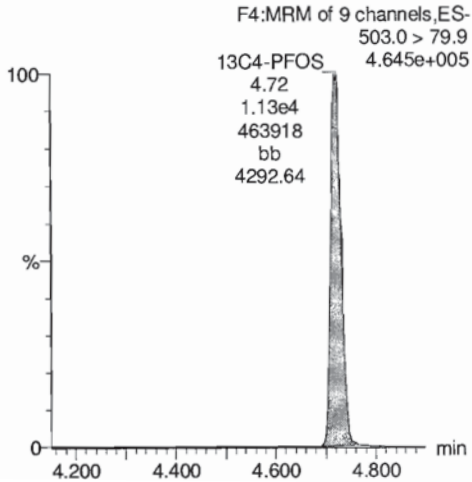
**PFOS**



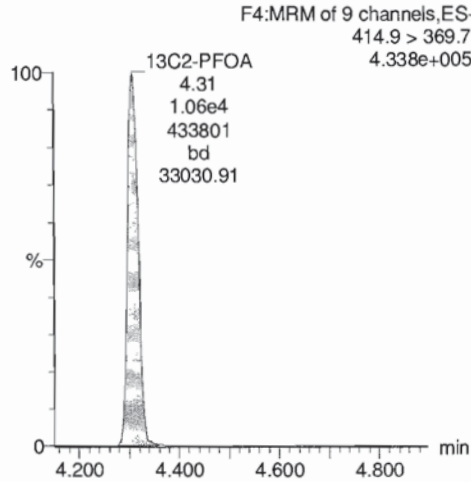
**13C2-PFHxA**



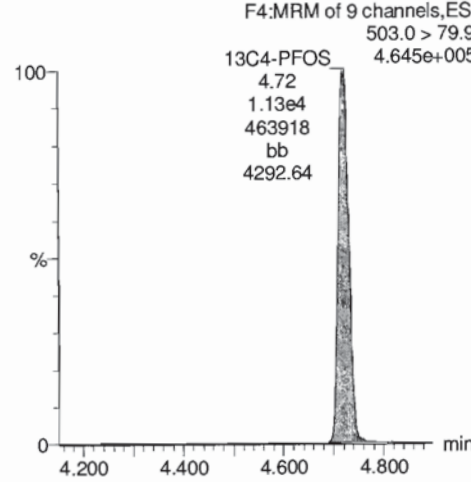
**13C4-PFOS**



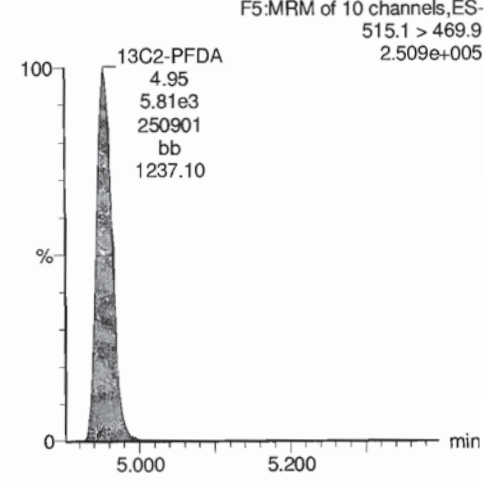
**13C2-PFOA**



**13C4-PFOS**



**13C2-PFDA**



Dataset: U:\G1.PRO\Results\2017\171211G1\171211G1-8.qld

Last Altered: Monday, December 11, 2017 14:30:40 Pacific Standard Time  
Printed: Monday, December 11, 2017 14:31:02 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS\_DW\_L3\_1126.mdb 27 Nov 2017 14:32:15  
Calibration: U:\G1.PRO\CurveDB\C18\_537\_Q1\_12-08-17\_L3.cdb 10 Dec 2017 22:49:55

Name: 171211G1\_8, Date: 11-Dec-2017, Time: 13:05:44, ID: ST171211G1-2 PFC CS3 17L1107, Description: PFC CS3 17L1107

#	Name	Trace	Area	IS Area	RRF	wt/vol	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	299 > 79.7	1.37e4	1.09e4		1.0000	3.03	3.02	36.1	45.1	102.0
2	2 PFOA	413 > 368.7	4.20e4	1.03e4		1.0000	4.32	4.32	40.8	50.3	100.6
3	3 PFOS	499 > 79.9	2.05e4	1.09e4		1.0000	4.73	4.73	54.0	44.9	97.2
4	4 13C2-PFHxA	315 > 269.8	4.53e3	1.03e4	0.443	1.0000	3.38	3.38	4.41	9.95	99.5
5	5 13C2-PFDA	515.1 > 469.9	4.87e3	1.03e4	0.509	1.0000	4.95	4.96	4.74	9.32	93.2
6	6 13C2-PFOA	414.9 > 369.7	1.03e4	1.03e4	1.000	1.0000	4.41	4.32	10.0	10.0	100.0
7	7 13C4-PFOS	503.0 > 79.9	1.09e4	1.09e4	1.000	1.0000	4.81	4.73	28.7	28.7	100.0

70-130%  
↓  
MJT 12/11/17  
JHA  
12/4/2017



Dataset: Untitled

Last Altered: Monday, December 11, 2017 14:18:34 Pacific Standard Time  
Printed: Monday, December 11, 2017 14:19:23 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS\_DW\_L3\_1126.mdb 27 Nov 2017 14:32:15  
Calibration: U:\G1.PRO\CurveDB\C18\_537\_Q1\_12-08-17\_L3.cdb 10 Dec 2017 22:49:55

Compound name: PFBS

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1	171211G1_1	IPA	11-Dec-17	11:38:33
2	171211G1_2	ST171211G1-1 PFC CS-1 537 17L1106	11-Dec-17	11:51:01
3	171211G1_3	IPA	11-Dec-17	12:03:25
4	171211G1_4	1701813-10 CH-AT-2FB24-1117 0.26256	11-Dec-17	12:15:55
5	171211G1_5	1701813-20 CH-AT-2FB29-1117 0.26487	11-Dec-17	12:28:21
6	171211G1_6	B7L0034-BLK1 LRB 0.25	11-Dec-17	12:40:48
7	171211G1_7	IPA	11-Dec-17	12:53:17
8	171211G1_8	ST171211G1-2 PFC CS3 17L1107	11-Dec-17	13:05:44
9	171211G1_9	IPA	11-Dec-17	13:18:08
10	171211G1_10	B7L0026-BS1 LFB 0.25		
11	171211G1_11	B7L0026-BSD1 LFB 0.25		
12	171211G1_12	IPA		
13	171211G1_13	B7L0026-BLK1 LRB 0.25		
14	171211G1_14	1701815-01 CH-AT-1RW98A-1117 0.25004		
15	171211G1_15	1701815-02 CH-AT-1FB98A-1117 0.22006		
16	171211G1_16	1701815-03 CH-AT-1RW98B-1117 0.2516		
17	171211G1_17	1701815-04 CH-AT-1FB98B-1117 0.23954		
18	171211G1_18	1701815-05 CH-AT-1RW99-1117 0.23773		
19	171211G1_19	1701815-06 CH-AT-1FB99-1117 0.2595		
20	171211G1_20	1701815-07 CH-AT-1RW100-1117 0.23268		
21	171211G1_21	1701815-08 CH-AT-1FB100-1117 0.24391		
22	171211G1_22	1701815-09 CH-AT-1RW101-1117 0.23904		
23	171211G1_23	1701815-10 CH-AT-1FB101-1117 0.24933		
24	171211G1_24	1701815-11 CH-AT-1RW102-1117 0.22328		
25	171211G1_25	1701815-12 CH-AT-1FB102-1117 0.2476		
26	171211G1_26	1701815-13 CH-AT-1RW103-1117 0.23828		
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28	171211G1_28	1701815-15 CH-AT-1RW104-1117 0.23862		
29	171211G1_29	1701815-16 CH-AT-1FB104-1117 0.23966		
30	171211G1_30	1701815-17 CH-AT-1RW105-1117 0.23516		
31	171211G1_31	1701815-18 CH-AT-1FB105-1117 0.24394		
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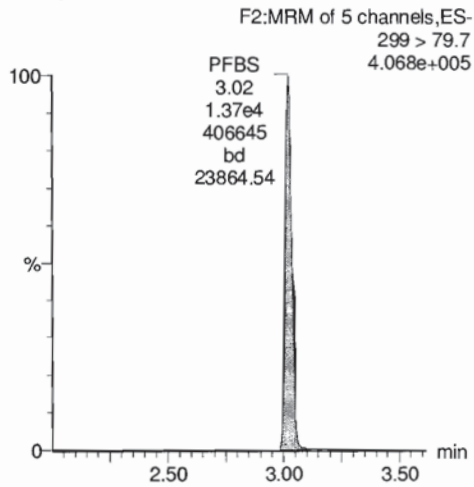
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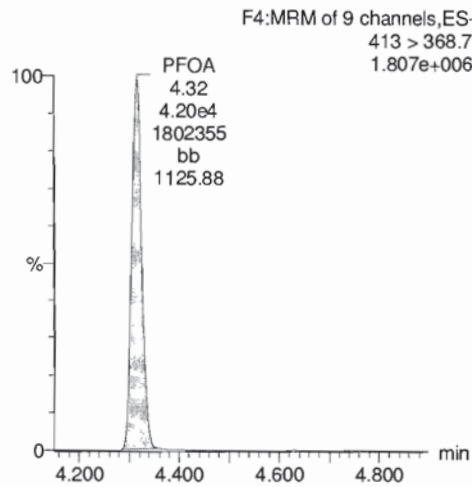
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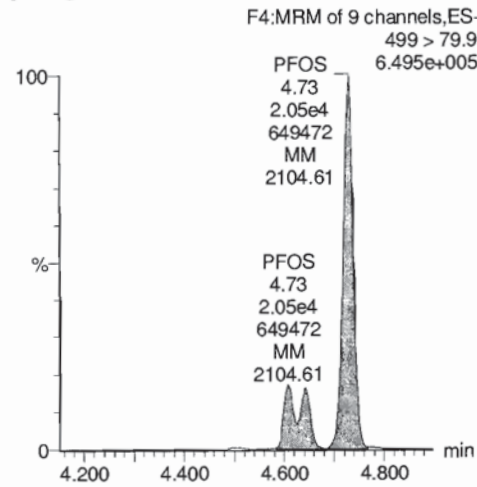
PFBS



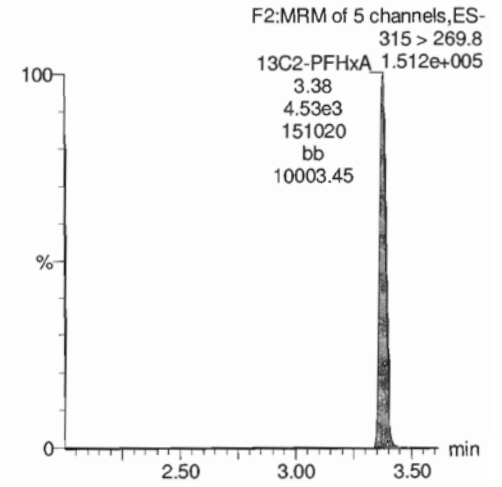
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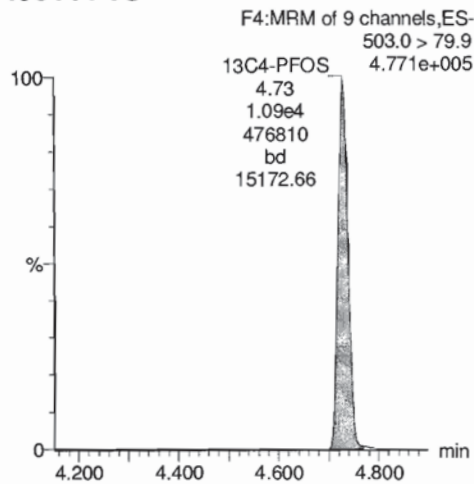
PFOS



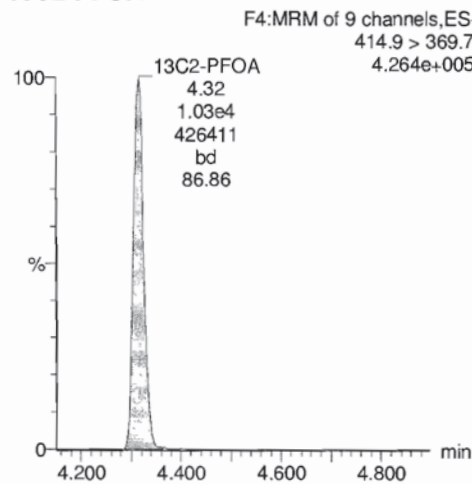
13C2-PFHxA



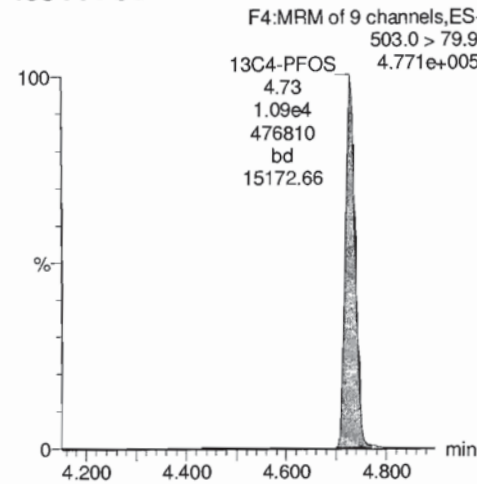
13C4-PFOS



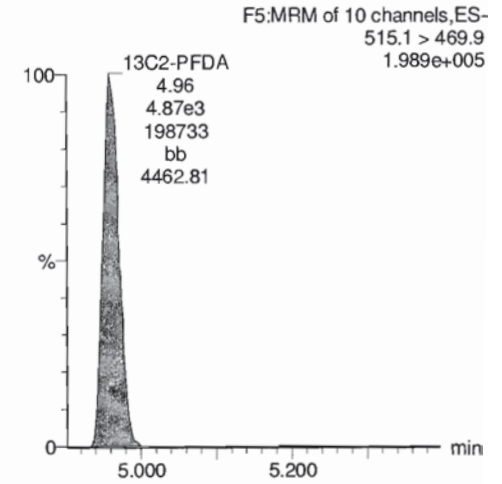
13C2-PFOA



13C4-PFOS



13C2-PFDA



**INITIAL CALIBRATION (ICAL)**  
**INCLUDING ASSOCIATED**  
**INITIAL CALIBRATION VERIFICATION (ICV)**

Dataset: U:\G1.PRO\Results\2017\171206G1\171206G1-CRV.qld

Last Altered: Wednesday, December 06, 2017 15:37:11 Pacific Standard Time  
 Printed: Wednesday, December 06, 2017 15:38:06 Pacific Standard Time

Method: C:\Projects\Q1.PRO\MethDB\PFAS\_L3\_DW\_1206.mdb 06 Dec 2017 11:11:24  
 Calibration: U:\G1.PRO\CurveDB\C18\_537\_Q1\_12-06-17\_L3.cdb 06 Dec 2017 15:37:11

**Compound name: PFBS**

Coefficient of Determination:  $R^2 = 0.996569$

Calibration curve:  $-0.00290792 * x^2 + 0.97246 * x$

Response type: Internal Std ( Ref 7 ), Area \* ( IS Conc. / IS Area )

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

*DM*  
*12/6/17*  
*✓ JA-12/06/2017*

#	Name	RT	Area	Resp	Std. Conc	Conc.	%Dev.	Coeff. Of Deter...	CD Flag	Primary Fl...
1	171206G1_2	3.04	142.813	1.43e2	0.443	0.359	-18.9	0.997	NO	bb
2	171206G1_3	3.02	324.776	3.25e2	0.885	0.771	-12.8	0.997	NO	bb
3	171206G1_4	3.02	668.558	6.69e2	1.77	1.61	-8.8	0.997	NO	bb
4	171206G1_5	3.02	1556.381	1.56e3	4.42	3.93	-11.2	0.997	NO	bb
5	171206G1_6	3.02	2968.026	2.97e3	8.85	8.28	-6.5	0.997	NO	bb
6	171206G1_7	3.02	7805.369	7.81e3	22.1	21.9	-1.0	0.997	NO	bb
7	171206G1_8	3.02	14630.842	1.46e4	44.2	45.5	2.9	0.997	NO	bb
8	171206G1_9	3.02	20594.424	2.06e4	66.3	73.0	10.1	0.997	NO	bb
9	171206G1_10	3.02	21594.979	2.16e4	88.4	81.8	-7.5	0.997	NO	bb

**Compound name: PFOA**

Coefficient of Determination:  $R^2 = 0.999044$

Calibration curve:  $-6.4601e-005 * x^2 + 0.773822 * x$

Response type: Internal Std ( Ref 6 ), Area \* ( IS Conc. / IS Area )

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

#	Name	RT	Area	Resp	Std. Conc	Conc.	%Dev.	Coeff. Of Deter...	CD Flag	Primary Fl...
1	171206G1_2	4.34	510.113	5.10e2	0.500	0.593	18.7	0.999	NO	bb
2	171206G1_3	4.34	1012.627	1.01e3	1.00	1.15	14.6	0.999	NO	bb
3	171206G1_4	4.33	1899.585	1.90e3	2.00	2.02	1.1	0.999	NO	bb
4	171206G1_5	4.32	4658.164	4.66e3	5.00	5.18	3.6	0.999	NO	bb
5	171206G1_6	4.32	8324.391	8.32e3	10.0	9.32	-6.8	0.999	NO	bb
6	171206G1_7	4.32	22925.570	2.29e4	25.0	25.8	3.1	0.999	NO	bb
7	171206G1_8	4.32	42348.156	4.23e4	50.0	48.9	-2.2	0.999	NO	bb
8	171206G1_9	4.32	60818.074	6.08e4	75.0	75.5	0.7	0.999	NO	MM
9	171206G1_10	4.33	59990.504	6.00e4	100	71.7	-28.3	0.999	NO	MMX

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Dataset: U:\G1.PRO\Results\2017\171206G1\171206G1-CRV.qld

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**Compound name: PFOS**

Coefficient of Determination:  $R^2 = 0.993252$

Calibration curve:  $-0.00340189 * x^2 + 1.34312 * x$

Response type: Internal Std ( Ref 7 ), Area \* ( IS Conc. / IS Area )

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

#	Name	RT	Area	Resp	Std. Conc	Conc.	%Dev.	Coeff. Of Deter...	CD Flag	Primary Fl...
1	171206G1_2	4.75	185.864	1.86e2	0.464	0.338	-27.2	0.993	NO	MM
2	171206G1_3	4.74	493.782	4.94e2	0.925	0.849	-8.2	0.993	NO	MM
3	171206G1_4	4.73	902.641	9.03e2	1.85	1.58	-14.7	0.993	NO	MM
4	171206G1_5	4.74	2129.515	2.13e3	4.63	3.88	-16.1	0.993	NO	MM
5	171206G1_6	4.73	4523.055	4.52e3	9.25	9.12	-1.5	0.993	NO	MM
6	171206G1_7	4.73	10605.408	1.06e4	23.1	21.3	-8.0	0.993	NO	MM
7	171206G1_8	4.73	22162.412	2.22e4	46.2	49.2	6.6	0.993	NO	MM
8	171206G1_9	4.74	31177.727	3.12e4	69.3	77.9	12.4	0.993	NO	MM
9	171206G1_10	4.74	31885.908	3.19e4	92.4	83.9	-9.2	0.993	NO	MM

**Compound name: 13C2-PFHxA**

Response Factor: 0.423896

RRF SD: 0.0162686, Relative SD: 3.83787

Response type: Internal Std ( Ref 6 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

#	Name	RT	Area	Resp	Std. Conc	Conc.	%Dev.	Coeff. Of Deter...	CD Flag	Primary Fl...
1	171206G1_2	3.39	5073.848	5.07e3	10.0	10.8	7.8		NO	bb
2	171206G1_3	3.38	4944.671	4.94e3	10.0	10.2	2.2		NO	bb
3	171206G1_4	3.38	5235.920	5.24e3	10.0	10.2	1.7		NO	bb
4	171206G1_5	3.38	4811.964	4.81e3	10.0	9.76	-2.4		NO	bb
5	171206G1_6	3.38	4790.378	4.79e3	10.0	9.78	-2.2		NO	bb
6	171206G1_7	3.38	4649.628	4.65e3	10.0	9.53	-4.7		NO	bb
7	171206G1_8	3.38	4648.559	4.65e3	10.0	9.76	-2.4		NO	bb
8	171206G1_9	3.38	4333.126	4.33e3	10.0	9.76	-2.4		NO	bb
9	171206G1_10	3.38	4725.684	4.73e3	10.0	10.2	2.4		NO	bb

Dataset: U:\G1.PRO\Results\2017\171206G1\171206G1-CRV.qld

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**Compound name: 13C2-PFDA**

Response Factor: 0.478193

RRF SD: 0.0266017, Relative SD: 5.56297

Response type: Internal Std ( Ref 6 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

#	Name	RT	Area	Resp	Std. Conc	Conc.	%Dev. Coeff. Of Deter...	CD Flag	Primary Fl...
1	171206G1_2	4.98	5062.541	5.06e3	10.0	9.53	-4.7	NO	bb
2	171206G1_3	4.98	5099.221	5.10e3	10.0	9.34	-6.6	NO	bb
3	171206G1_4	4.97	5576.278	5.58e3	10.0	9.60	-4.0	NO	bb
4	171206G1_5	4.97	5965.891	5.97e3	10.0	10.7	7.3	NO	bb
5	171206G1_6	4.97	5899.666	5.90e3	10.0	10.7	6.8	NO	bb
6	171206G1_7	4.97	5690.050	5.69e3	10.0	10.3	3.3	NO	bb
7	171206G1_8	4.97	5207.786	5.21e3	10.0	9.70	-3.0	NO	bb
8	171206G1_9	4.97	5270.729	5.27e3	10.0	10.5	5.3	NO	bb
9	171206G1_10	4.97	4978.183	4.98e3	10.0	9.56	-4.4	NO	bb

**Compound name: 13C2-PFOA**

Response Factor: 1

RRF SD: 0, Relative SD: 0

Response type: Internal Std ( Ref 6 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

#	Name	RT	Area	Resp	Std. Conc	Conc.	%Dev. Coeff. Of Deter...	CD Flag	Primary Fl...
1	171206G1_2	4.34	11108.171	1.11e4	10.0	10.0	0.0	NO	bb
2	171206G1_3	4.33	11418.653	1.14e4	10.0	10.0	0.0	NO	bb
3	171206G1_4	4.33	12142.067	1.21e4	10.0	10.0	0.0	NO	bb
4	171206G1_5	4.32	11630.019	1.16e4	10.0	10.0	0.0	NO	bb
5	171206G1_6	4.32	11552.979	1.16e4	10.0	10.0	0.0	NO	bb
6	171206G1_7	4.33	11514.271	1.15e4	10.0	10.0	0.0	NO	bb
7	171206G1_8	4.32	11232.531	1.12e4	10.0	10.0	0.0	NO	bb
8	171206G1_9	4.32	10471.047	1.05e4	10.0	10.0	0.0	NO	bb
9	171206G1_10	4.32	10884.580	1.09e4	10.0	10.0	0.0	NO	bb

Dataset: U:\G1.PRO\Results\2017\171206G1\171206G1-CRV.qld

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**Compound name: 13C4-PFOS**

Response Factor: 1

RRF SD: 7.85046e-017, Relative SD: 7.85046e-015

Response type: Internal Std ( Ref 7 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	#.Name	RT	Area	Resp	Std. Conc	Conc.	%Dev. Coeff. Of Deter...	CD Flag	Primary Fl...
1	1 171206G1_2	4.74	11759.643	1.18e4	28.7	28.7	0.0	NO	bb
2	2 171206G1_3	4.74	12454.042	1.25e4	28.7	28.7	0.0	NO	bb
3	3 171206G1_4	4.74	12278.325	1.23e4	28.7	28.7	0.0	NO	bb
4	4 171206G1_5	4.73	11838.263	1.18e4	28.7	28.7	0.0	NO	bb
5	5 171206G1_6	4.73	10853.454	1.09e4	28.7	28.7	0.0	NO	bb
6	6 171206G1_7	4.73	11267.227	1.13e4	28.7	28.7	0.0	NO	bb
7	7 171206G1_8	4.74	10990.055	1.10e4	28.7	28.7	0.0	NO	bb
8	8 171206G1_9	4.74	10653.778	1.07e4	28.7	28.7	0.0	NO	bb
9	9 171206G1_10	4.74	10316.487	1.03e4	28.7	28.7	0.0	NO	bb

Dataset: Untitled

Last Altered: Wednesday, December 06, 2017 13:44:16 Pacific Standard Time

Printed: Wednesday, December 06, 2017 13:44:59 Pacific Standard Time

Method: C:\Projects\Q1.PRO\MethDB\PFAS\_L3\_DW\_1206.mdb 06 Dec 2017 11:11:24

Calibration: U:\G1.PRO\CurveDB\C18\_537\_Q1\_12-06-17\_L3.cdb 06 Dec 2017 13:27:38

Compound name: PFBS

	Name	ID	Acq.Date	Acq.Time
1	171206G1_1	IPA	06-Dec-17	10:54:31
2	171206G1_2	ST171206G1-1 PFC CS-3 537 17K3022	06-Dec-17	11:07:34
3	171206G1_3	ST171206G1-2 PFC CS-2 537 17K3023	06-Dec-17	11:28:57
4	171206G1_4	ST171206G1-3 PFC CS-1 537 17K3024	06-Dec-17	11:41:21
5	171206G1_5	ST171206G1-4 PFC CS0 537 17K3025	06-Dec-17	11:53:46
6	171206G1_6	ST171206G1-5 PFC CS1 537 17K3026	06-Dec-17	12:06:11
7	171206G1_7	ST171206G1-6 PFC CS2 537 17K3033	06-Dec-17	12:18:38
8	171206G1_8	ST171206G1-7 PFC CS3 537 17K3027	06-Dec-17	12:31:04
9	171206G1_9	ST171206G1-8 PFC CS4 537 17K3028	06-Dec-17	12:43:31
10	171206G1_10	ST171206G1-9 PFC CS5 537 17K3029	06-Dec-17	12:55:59
11	171206G1_11	IPA	06-Dec-17	13:08:23
12	171206G1_12	ICV171206G1-1 PFC ICV 537 17K3030	06-Dec-17	13:20:50



Dataset: U:\G1.PRO\Results\2017\171206G1\171206G1-CRV.qld

Last Altered: Wednesday, December 06, 2017 15:37:11 Pacific Standard Time

Printed: Wednesday, December 06, 2017 15:37:35 Pacific Standard Time

Method: C:\Projects\Q1.PRO\MethDB\PFAS\_L3\_DW\_1206.mdb 06 Dec 2017 11:11:24

Calibration: U:\G1.PRO\CurveDB\C18\_537\_Q1\_12-06-17\_L3.cdb 06 Dec 2017 15:37:11

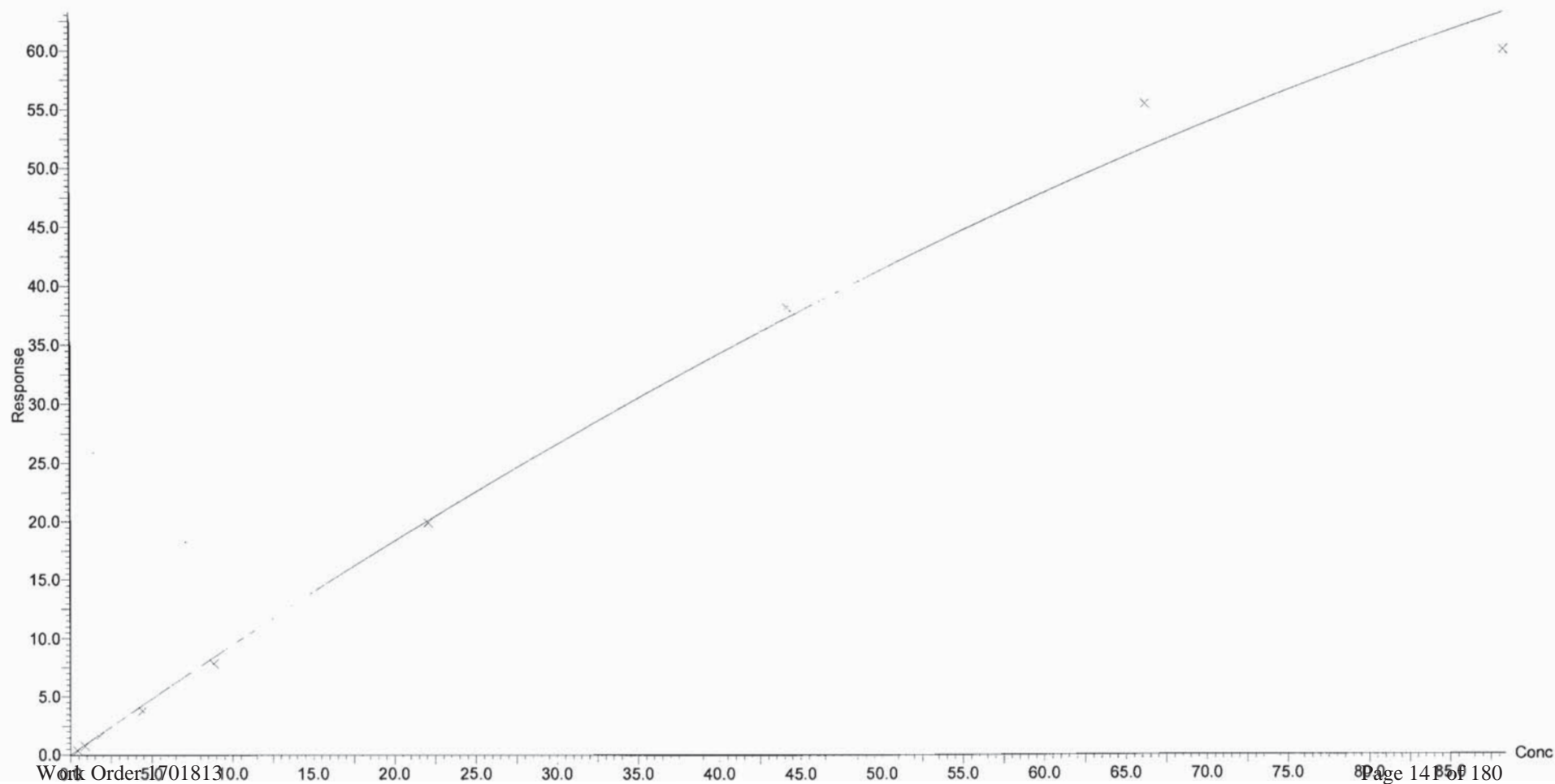
Compound name: PFBS

Coefficient of Determination:  $R^2 = 0.996569$

Calibration curve:  $-0.00290792 * x^2 + 0.97246 * x$

Response type: Internal Std ( Ref 7 ), Area \* ( IS Conc. / IS Area )

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



Dataset: U:\G1.PRO\Results\2017\171206G1\171206G1-CRV.qld

Last Altered: Wednesday, December 06, 2017 13:27:38 Pacific Standard Time

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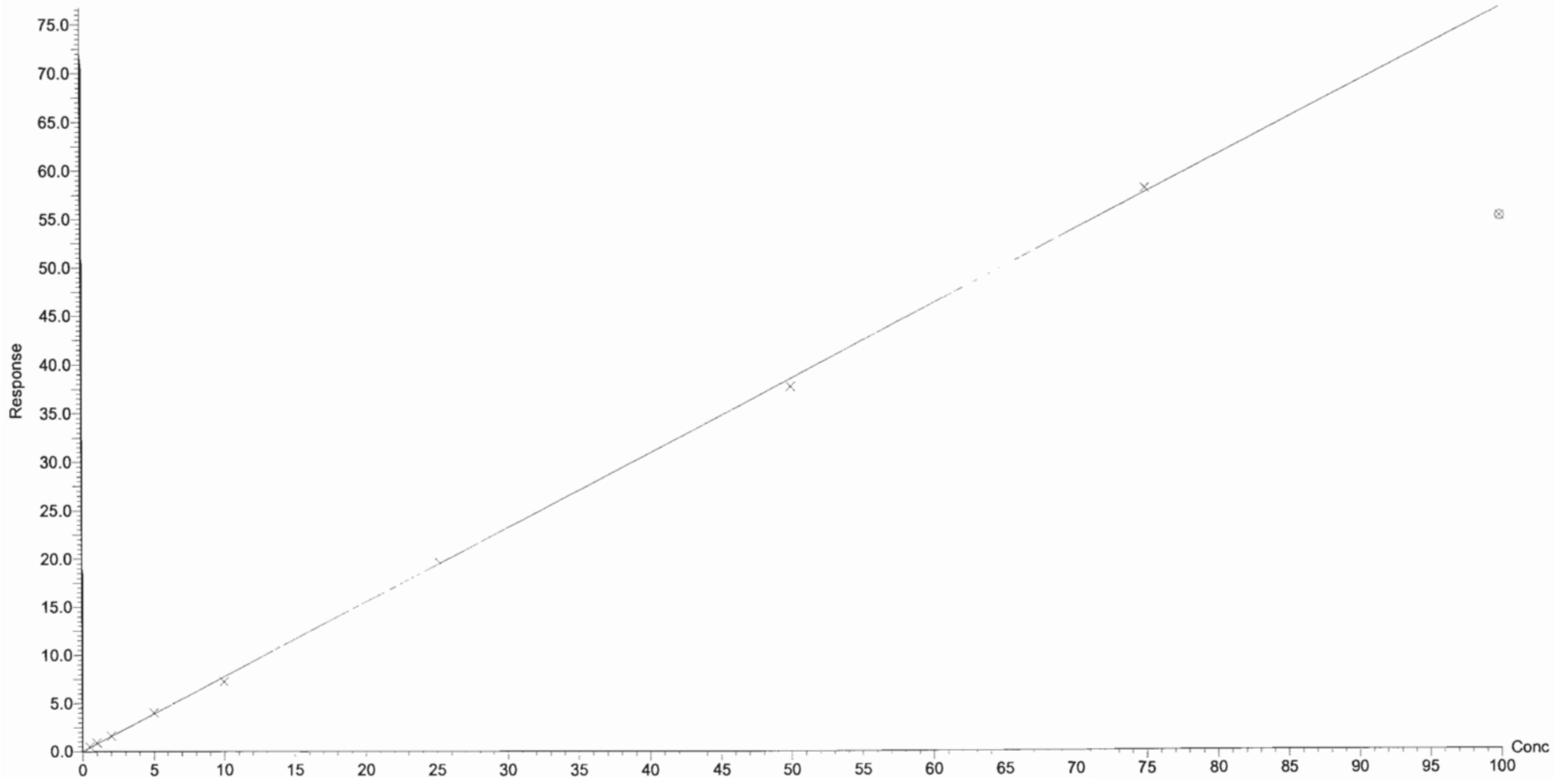
Compound name: PFOA

Coefficient of Determination:  $R^2 = 0.999044$

Calibration curve:  $-6.4601e-005 * x^2 + 0.773822 * x$

Response type: Internal Std ( Ref 6 ), Area \* ( IS Conc. / IS Area )

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

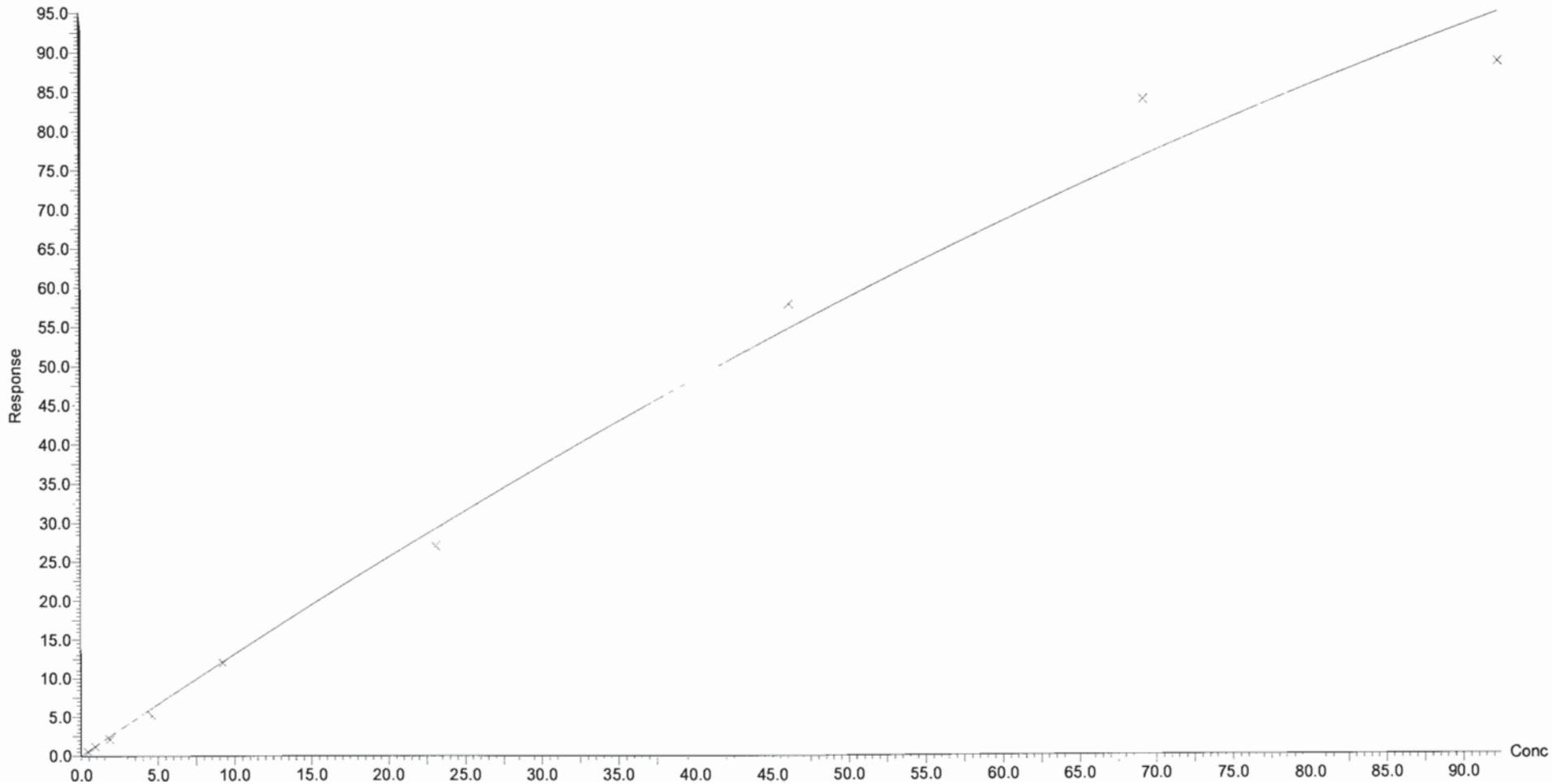


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Last Altered: Wednesday, December 06, 2017 13:27:38 Pacific Standard Time

Printed: Wednesday, December 06, 2017 13:35:49 Pacific Standard Time

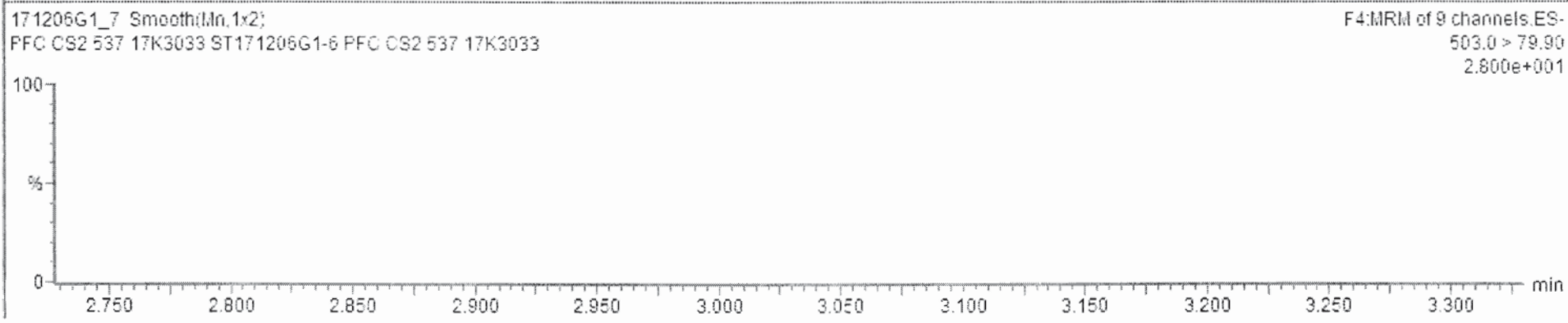
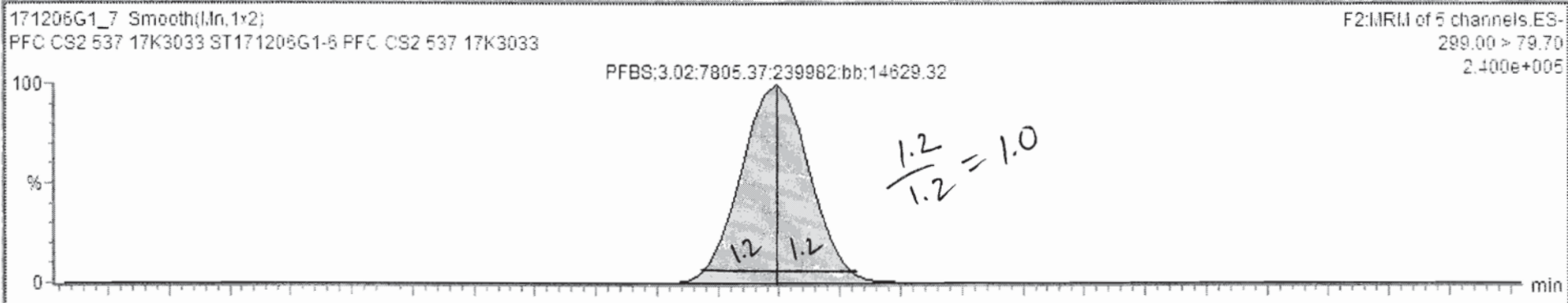
Compound name: PFOS  
Coefficient of Determination:  $R^2 = 0.993252$   
Calibration curve:  $-0.00340189 * x^2 + 1.34312 * x$   
Response type: Internal Std ( Ref 7 ), Area \* ( IS Conc. / IS Area )  
Curve type: 2nd Order, Origin: Force, Weighting: 1/x, Axis trans: None





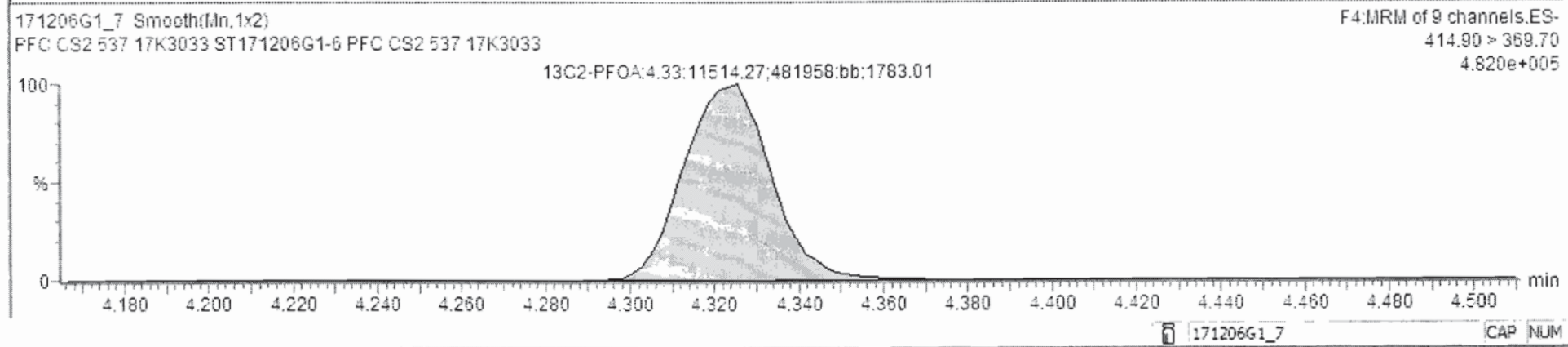
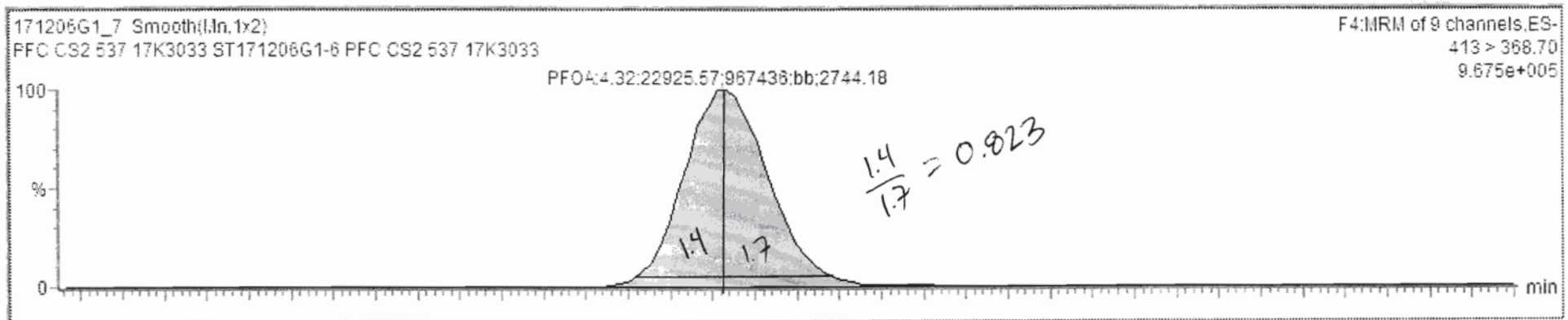
171206G1\_7 - ST171206G1-6 PFC CS2 537 17K3033 - PFC CS2 537 17K3033

Name	Trace	Area	RRF	Wt/Vol	RT	RRT	Conc.	%Rec	DL	%RSD	Coeff. Of D...
1	PFBS	299.00 > 79...	7.61e3	1.0000	3.02	0.00	25.1	113.6	0.0000000		0.9866
2	PFOA	413 > 368.70	2.29e4	1.0000	4.32	0.00	25.8	103.1	0.0000000		0.9990
3	PFOS	499.00 > 79...	1.06e4	1.0000	4.73	0.00	21.3	92.0	0.0000000		0.9933
4	13C2-PFH...	315.0 > 269...	4.65e3	0.424	3.36	0.00	9.53	95.3	0.0000000	3.84	
5	13C2-PFDA	515.10 > 46...	5.69e3	0.476	4.97	0.00	10.3	103.3	0.0000000	5.56	
6	13C2-PFOA	414.90 > 36...	1.15e4	1.00	4.33	0.00	10.0	100.0	0.0000000	0.000	
7	13C4-PFOS	503.0 > 79.90	1.13e4	1.00	4.73	0.00	25.7	100.0	0.0000000	0.000000000000007...	



171206G1\_7 - ST171206G1-6 PFC CS2 537 17K3033 - PFC CS2 537 17K3033

Name	Trace	Area	RRF	WtVol	RT	RRT	Conc.	%Rec	DL	%RSD	Coeff. Of D...
1	PFBS	299.00 > 79...	7.81e3	1.0000	3.02	0.00	25.1	113.6	0.0000000		0.9866
2	PFOA	413 > 368.70	2.29e4	1.0000	4.32	0.00	25.8	103.3	0.0000000		0.9990
3	PFOS	499.00 > 79...	1.06e4	1.0000	4.73	0.00	21.3	92.0	0.0000000		0.9933
4	13C2-PFH...	315.0 > 269...	4.65e3	0.424	3.36	0.00	9.53	95.3	0.0000000	3.84	
5	13C2-PFDA	515.10 > 46...	5.69e3	0.478	4.97	0.00	10.3	103.3	0.0000000	5.56	
6	13C2-PFOA	414.90 > 36...	1.15e4	1.00	4.33	0.00	10.0	100.0	0.0000000	0.000	
7	13C4-PFOS	503.0 > 79.90	1.13e4	1.00	4.73	0.00	26.7	100.0	0.0000000	0.000000000000007...	



Compound 6: 13C2-PFOA

ID	Name	Type	Std. Conc	RT	Area	IS Area	Primary Flags
1	ST171206G1-1 PFC CS-3 537 17K3022	171206G1_Standard	10	4.34	11108.17	11108.17	bb
2	ST171206G1-2 PFC CS-2 537 17K3023	171206G1_Standard	10	4.33	11418.65	11418.65	bb
3	ST171206G1-3 PFC CS-1 537 17K3024	171206G1_Standard	10	4.33	12142.07	12142.07	bb
4	ST171206G1-4 PFC CS0 537 17K3025	171206G1_Standard	10	4.32	11630.02	11630.02	bb
5	ST171206G1-5 PFC CS1 537 17K3026	171206G1_Standard	10	4.32	11552.98	11552.98	bb
6	ST171206G1-6 PFC CS2 537 17K3033	171206G1_Standard	10	4.33	11514.27	11514.27	bb
7	ST171206G1-7 PFC CS3 537 17K3027	171206G1_Standard	10	4.32	11232.53	11232.53	bb
8	ST171206G1-8 PFC CS4 537 17K3028	171206G1_Standard	10	4.32	10471.05	10471.05	bb
9	ST171206G1-9 PFC CS5 537 17K3029	171206G1_Standard	10	4.32	10884.58	10884.58	bb
					AVERAGE		RPD
					11328.26		14.77921174

Compound 7: 13C4-PFOS

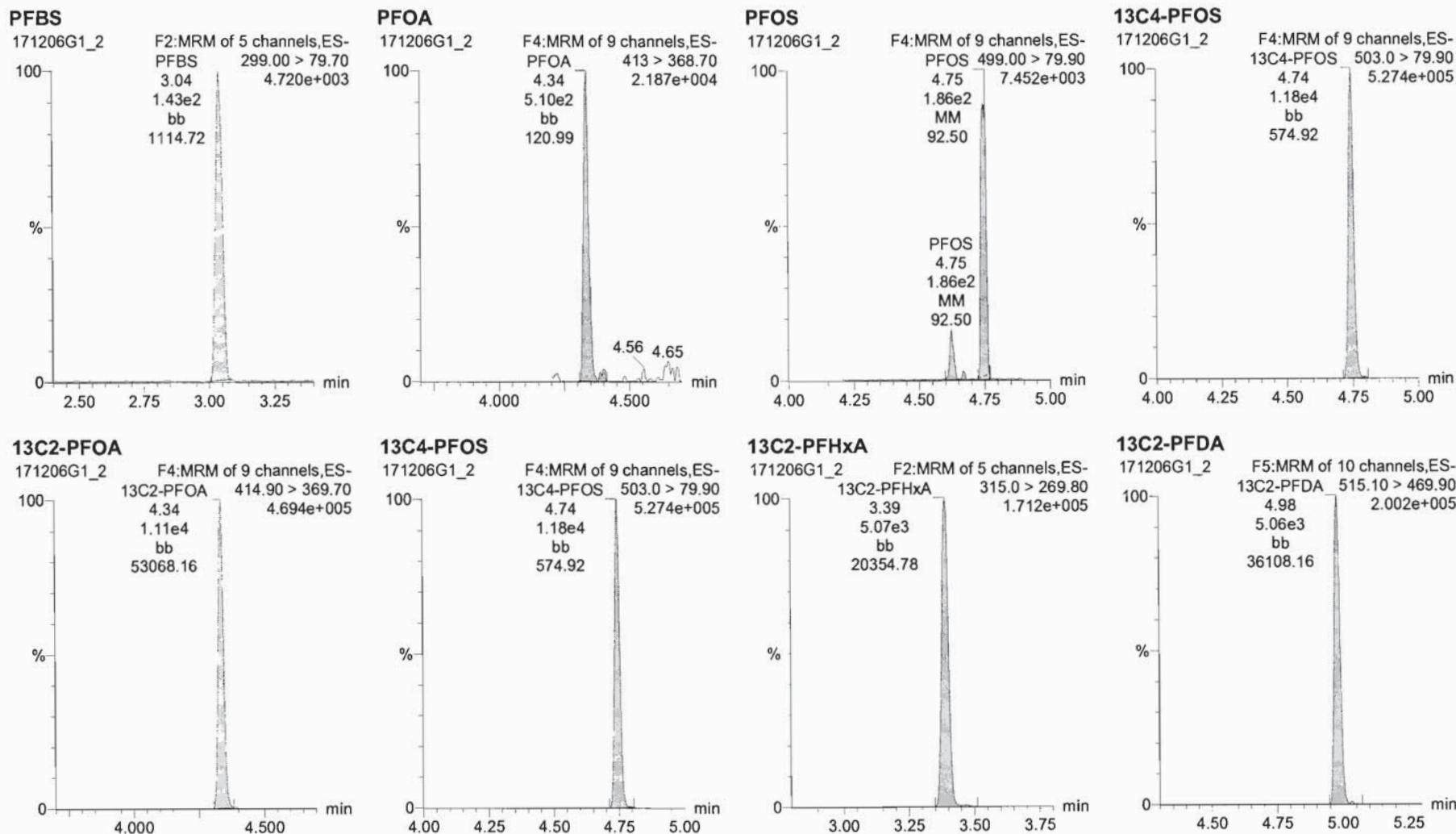
ID	Name	Type	Std. Conc	RT	Area	IS Area	Primary Flags
1	ST171206G1-1 PFC CS-3 537 17K3022	171206G1_Standard	28.7	4.74	11759.64	11759.64	bb
2	ST171206G1-2 PFC CS-2 537 17K3023	171206G1_Standard	28.7	4.74	12454.04	12454.04	bb
3	ST171206G1-3 PFC CS-1 537 17K3024	171206G1_Standard	28.7	4.74	12278.33	12278.33	bb
4	ST171206G1-4 PFC CS0 537 17K3025	171206G1_Standard	28.7	4.73	11838.26	11838.26	bb
5	ST171206G1-5 PFC CS1 537 17K3026	171206G1_Standard	28.7	4.73	10853.45	10853.45	bb
6	ST171206G1-6 PFC CS2 537 17K3033	171206G1_Standard	28.7	4.73	11267.23	11267.23	bb
7	ST171206G1-7 PFC CS3 537 17K3027	171206G1_Standard	28.7	4.74	10990.06	10990.06	bb
8	ST171206G1-8 PFC CS4 537 17K3028	171206G1_Standard	28.7	4.74	10653.78	10653.78	bb
9	ST171206G1-9 PFC CS5 537 17K3029	171206G1_Standard	28.7	4.74	10316.49	10316.49	bb
					AVERAGE		RPD
					11379.03		18.77475047

Dataset: U:\G1.PRO\Results\2017\171206G1\171206G1-CRV.qld

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Method: C:\Projects\Q1.PRO\MethDB\PFAS\_L3\_DW\_1206.mdb 06 Dec 2017 11:11:24  
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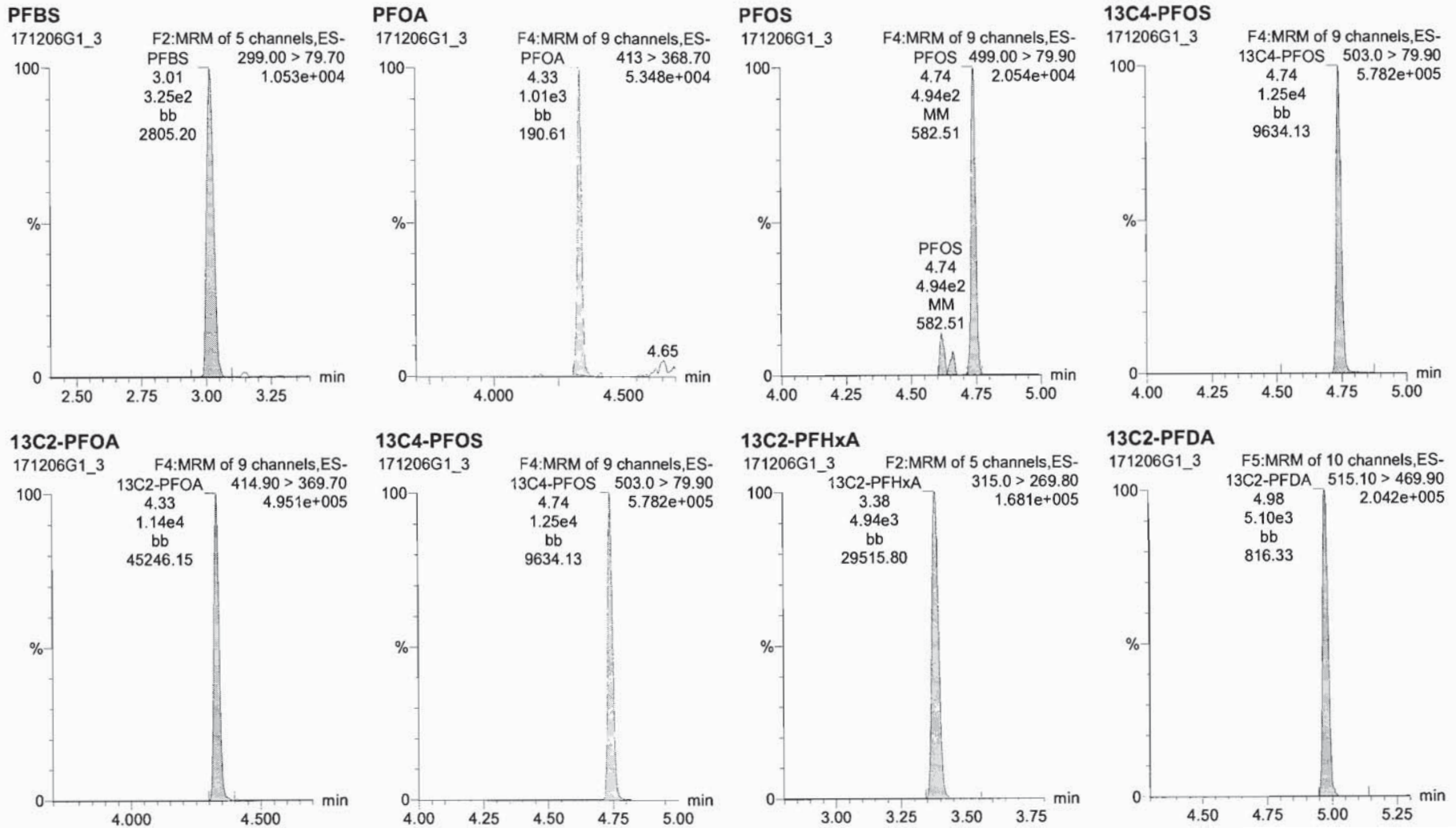
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Dataset: U:\G1.PRO\Results\2017\171206G1\171206G1-CRV.qld

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Printed: Wednesday, December 06, 2017 13:31:13 Pacific Standard Time

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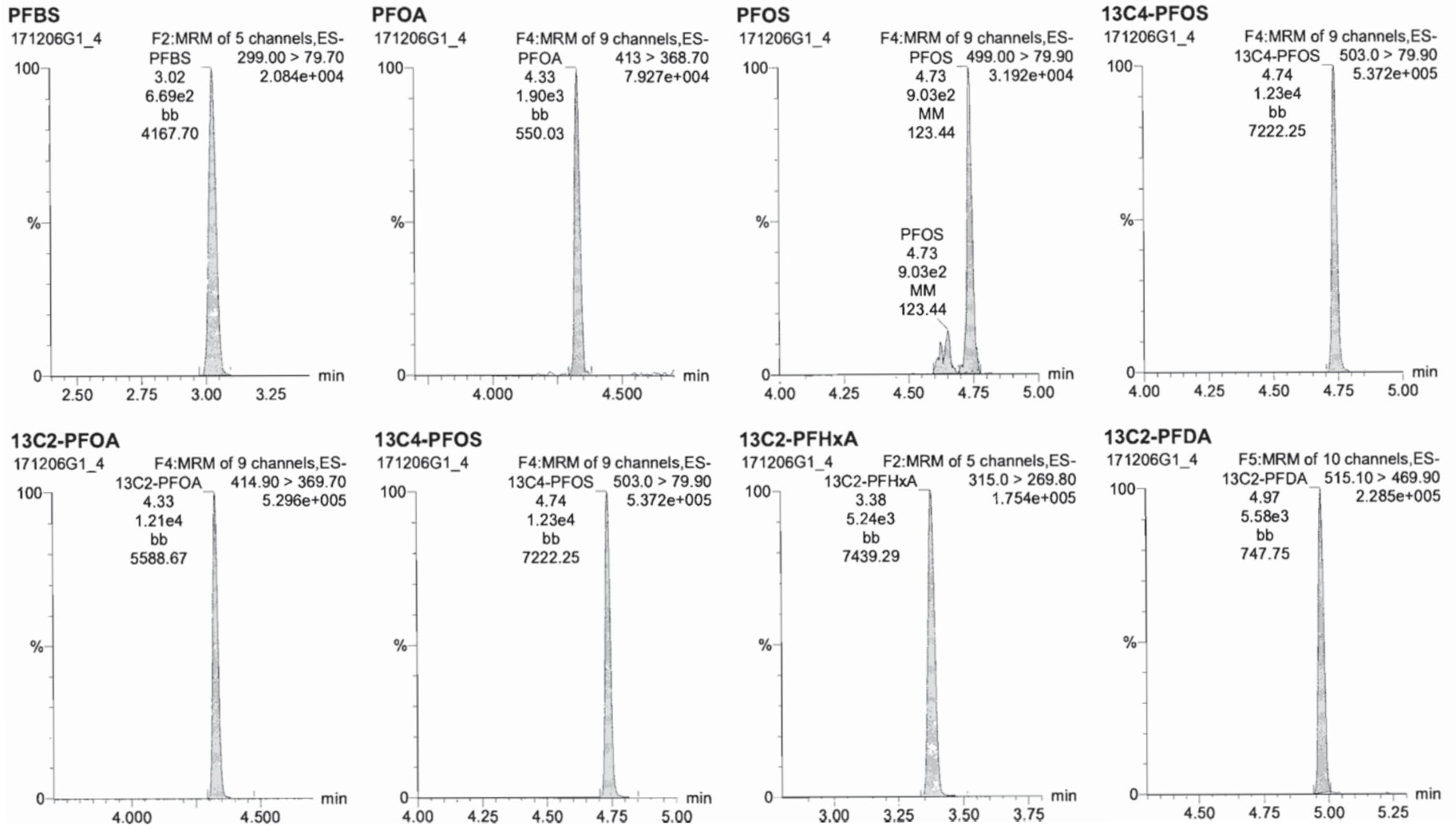




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Printed: Wednesday, December 06, 2017 13:31:13 Pacific Standard Time

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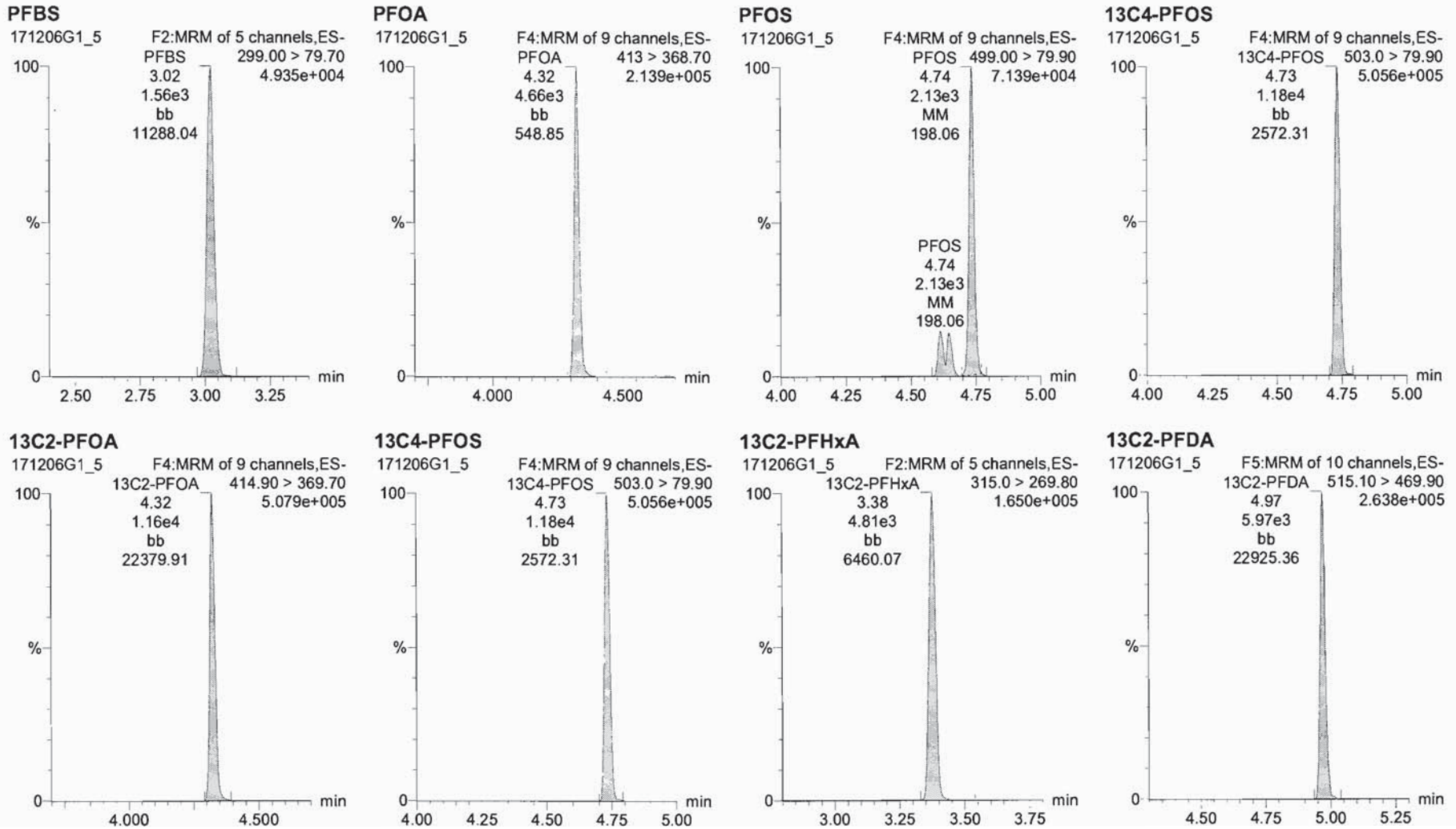


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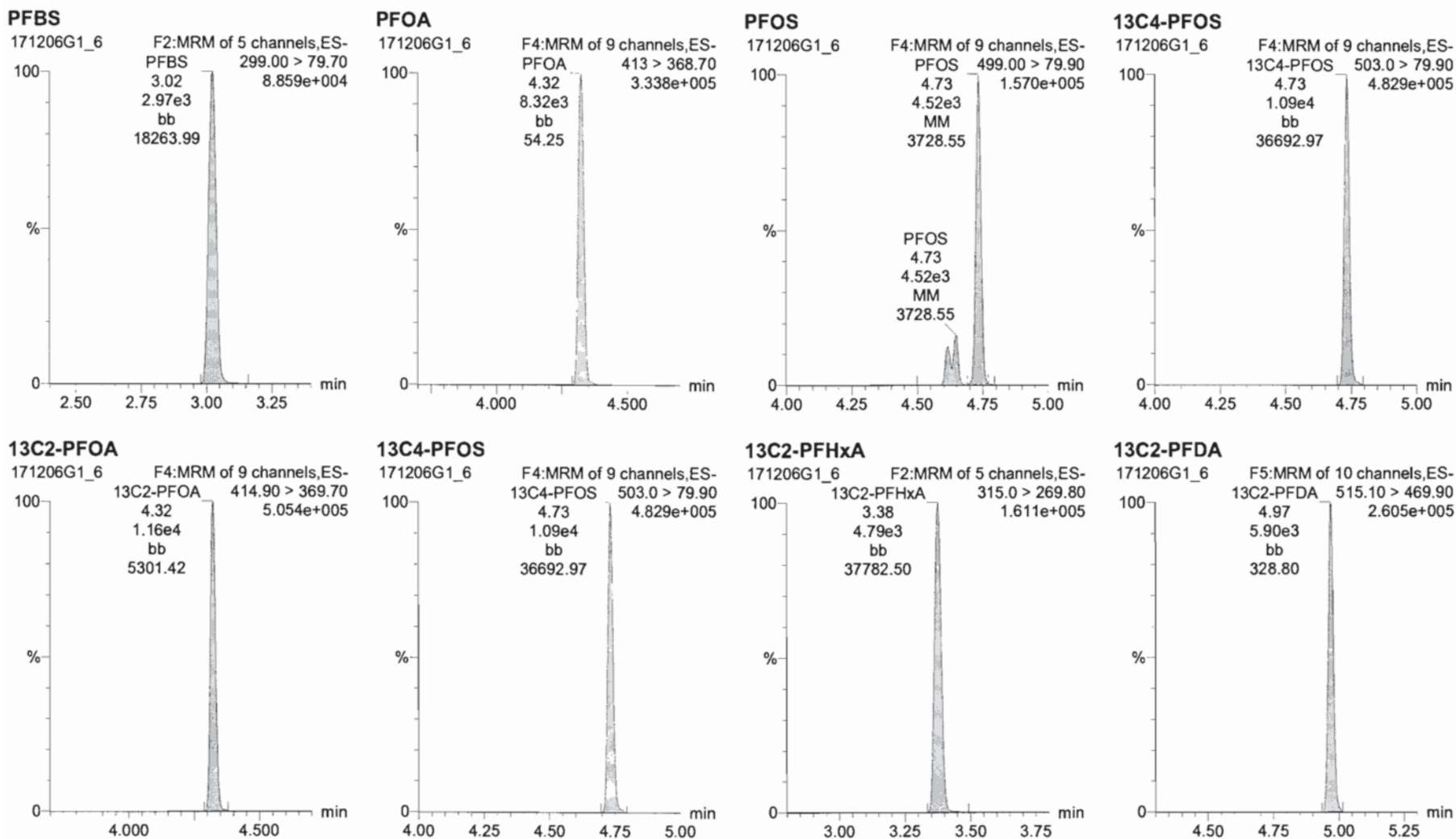
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Last Altered: Wednesday, December 06, 2017 13:27:38 Pacific Standard Time  
Printed: Wednesday, December 06, 2017 13:31:13 Pacific Standard Time

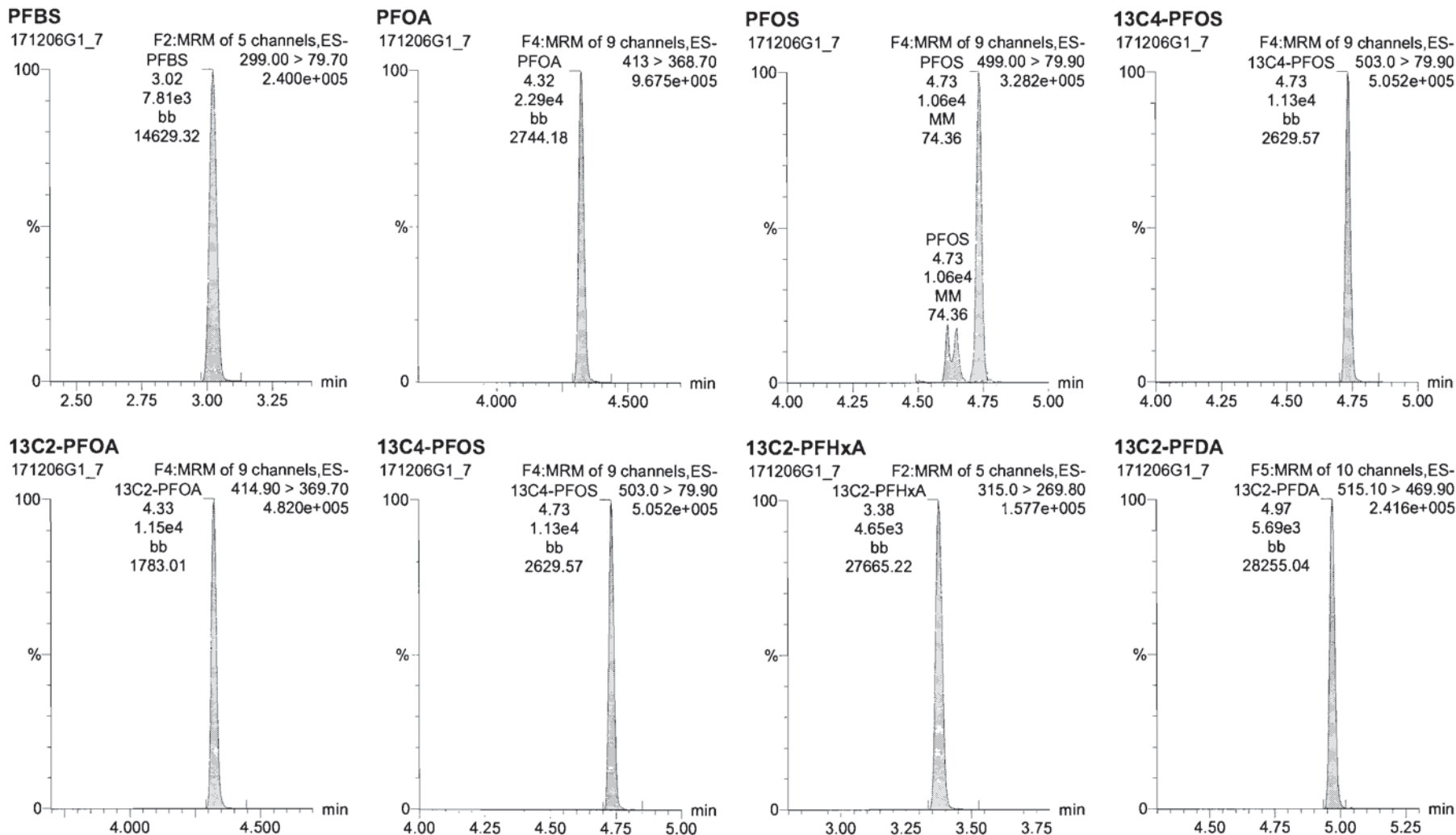
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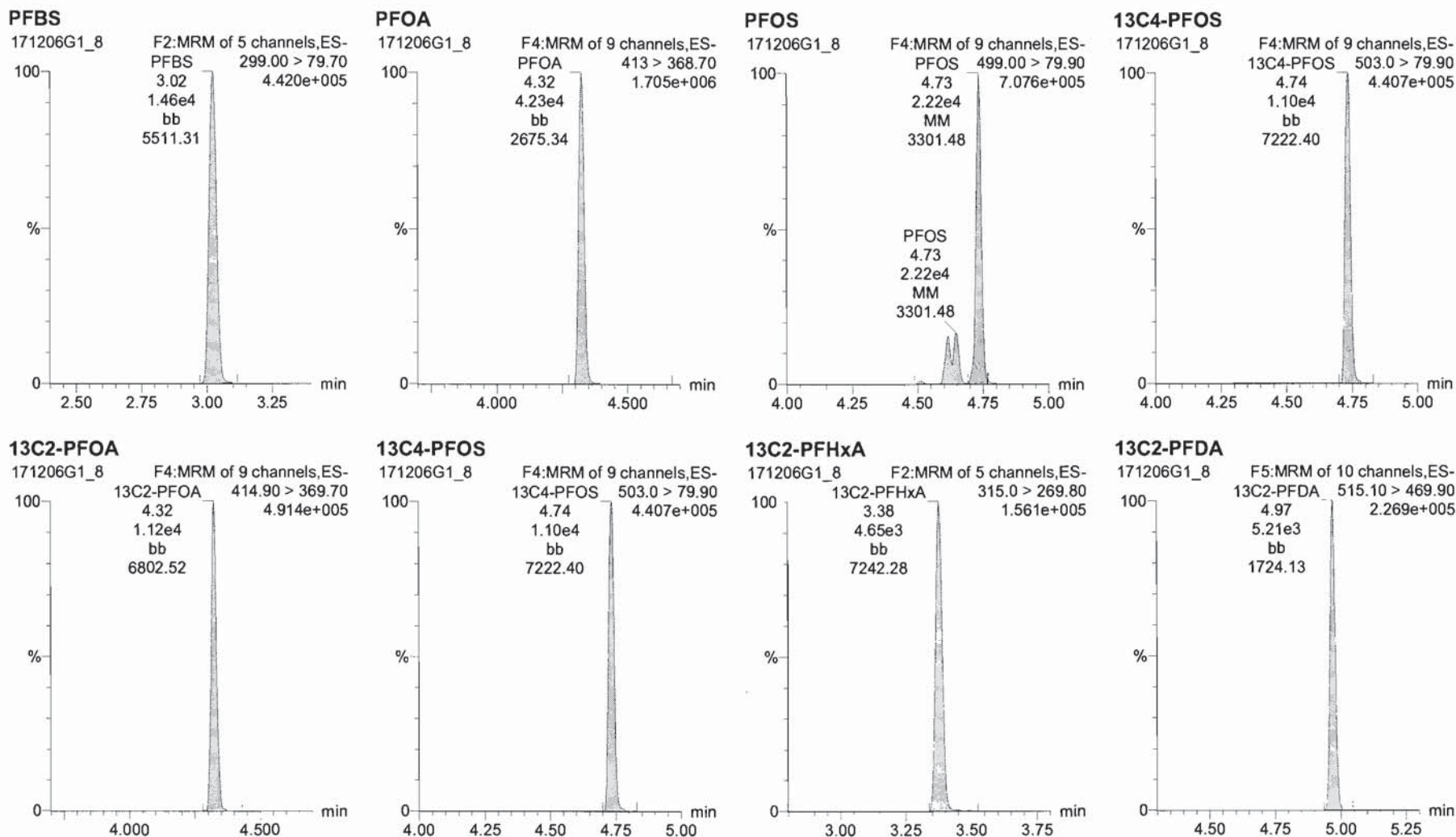
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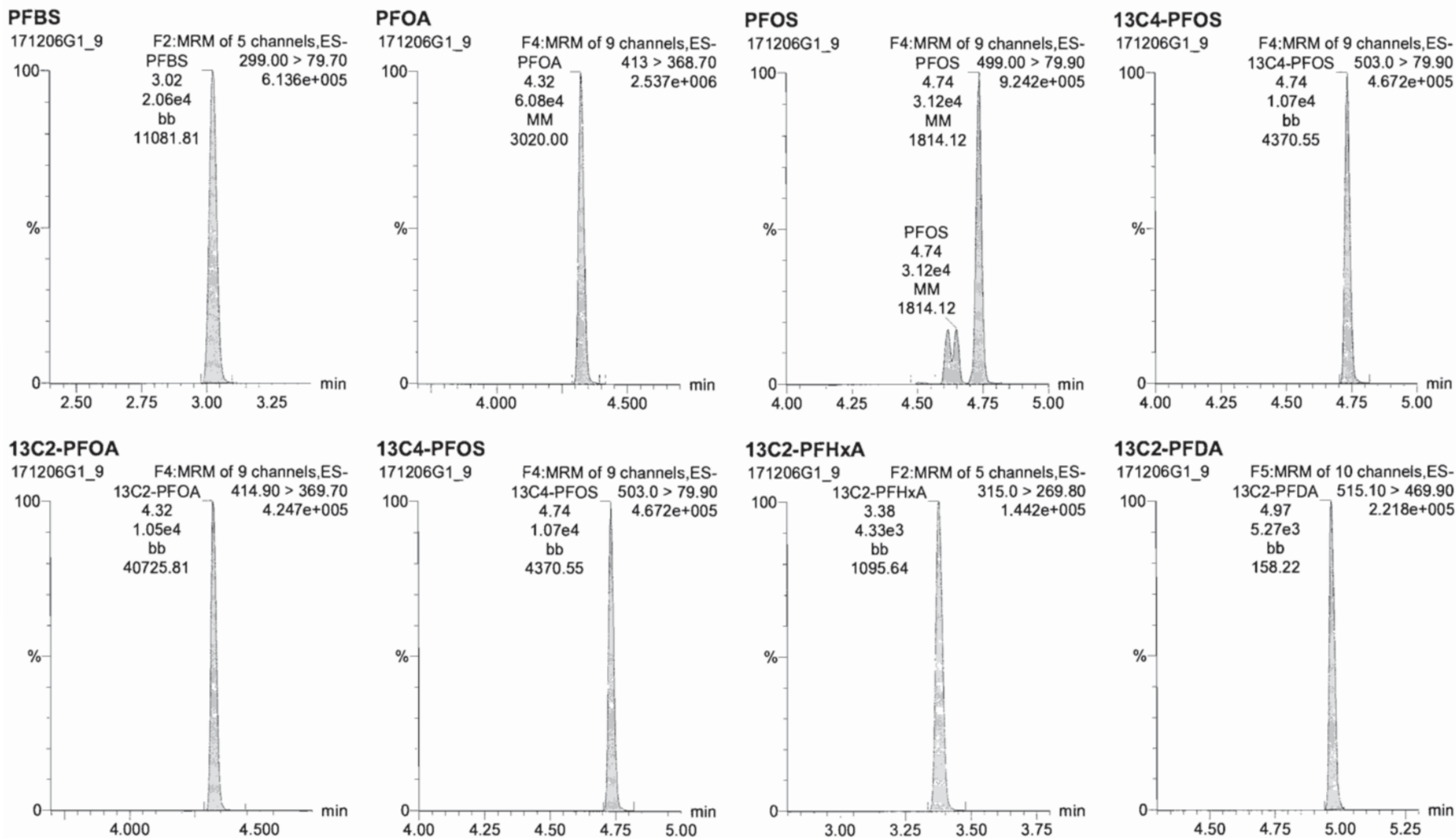
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Printed: Wednesday, December 06, 2017 13:31:13 Pacific Standard Time

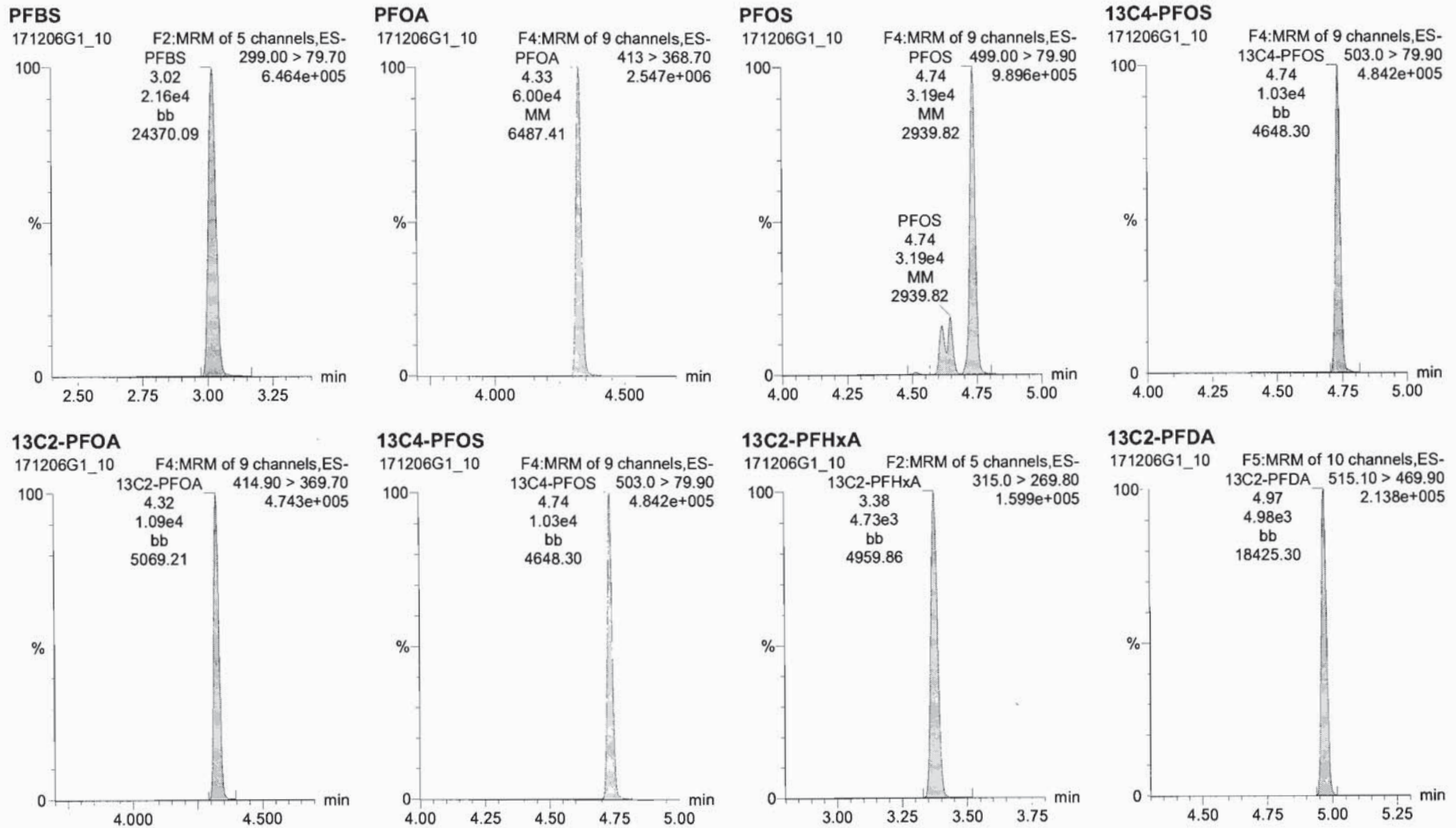
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Dataset: U:\G1.PRO\Results\2017\171206G1\171206G1-CRV.qld

Last Altered: Wednesday, December 06, 2017 13:27:38 Pacific Standard Time  
Printed: Wednesday, December 06, 2017 13:31:13 Pacific Standard Time

ID: ST171206G1-9 PFC CS5 537 17K3029, Description: PFC CS5 537 17K3029, Name: 171206G1\_10, Date: 06-Dec-2017, Time: 12:55:59, Instrument: , Lab: , User:



Dataset: U:\G1.PRO\Results\2017\171206G1\171206G1-12.qld

Last Altered: Wednesday, December 06, 2017 15:38:46 Pacific Standard Time

Printed: Wednesday, December 06, 2017 15:38:59 Pacific Standard Time

Method: C:\Projects\Q1.PRO\MethDB\PFAS\_L3\_DW\_1206.mdb 06 Dec 2017 11:11:24

Calibration: U:\G1.PRO\CurveDB\C18\_537\_Q1\_12-06-17\_L3.cdb 06 Dec 2017 15:37:11

ID: ICV171206G1-1 PFC ICV 537 17K3030, Description: PFC ICV 537 17K3030, Name: 171206G1\_12, Date: 06-Dec-2017, Time: 13:20:50

#	Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1 PFBS	299.00 > 79.70	3.252e3	1.050e4		1.00	3.02	9.41	94.1
2	2 PFOA	413 > 368.70	8.480e3	1.042e4		1.00	4.33	10.5	105
3	3 PFOS	499.00 > 79.90	4.681e3	1.050e4		1.00	4.74	9.77	97.7
4	4 13C2-PFHxA	315.0 > 269.80	4.418e3	1.042e4	0.424	1.00	3.38	10.0	100
5	5 13C2-PFDA	515.10 > 469.90	5.224e3	1.042e4	0.478	1.00	4.97	10.5	105
6	6 13C2-PFOA	414.90 > 369.70	1.042e4	1.042e4	1.000	1.00	4.33	10.0	100
7	7 13C4-PFOS	503.0 > 79.90	1.050e4	1.050e4	1.000	1.00	4.74	28.7	100

70-130  
↓

AM  
12/16/17

VIA.  
12/06/2017

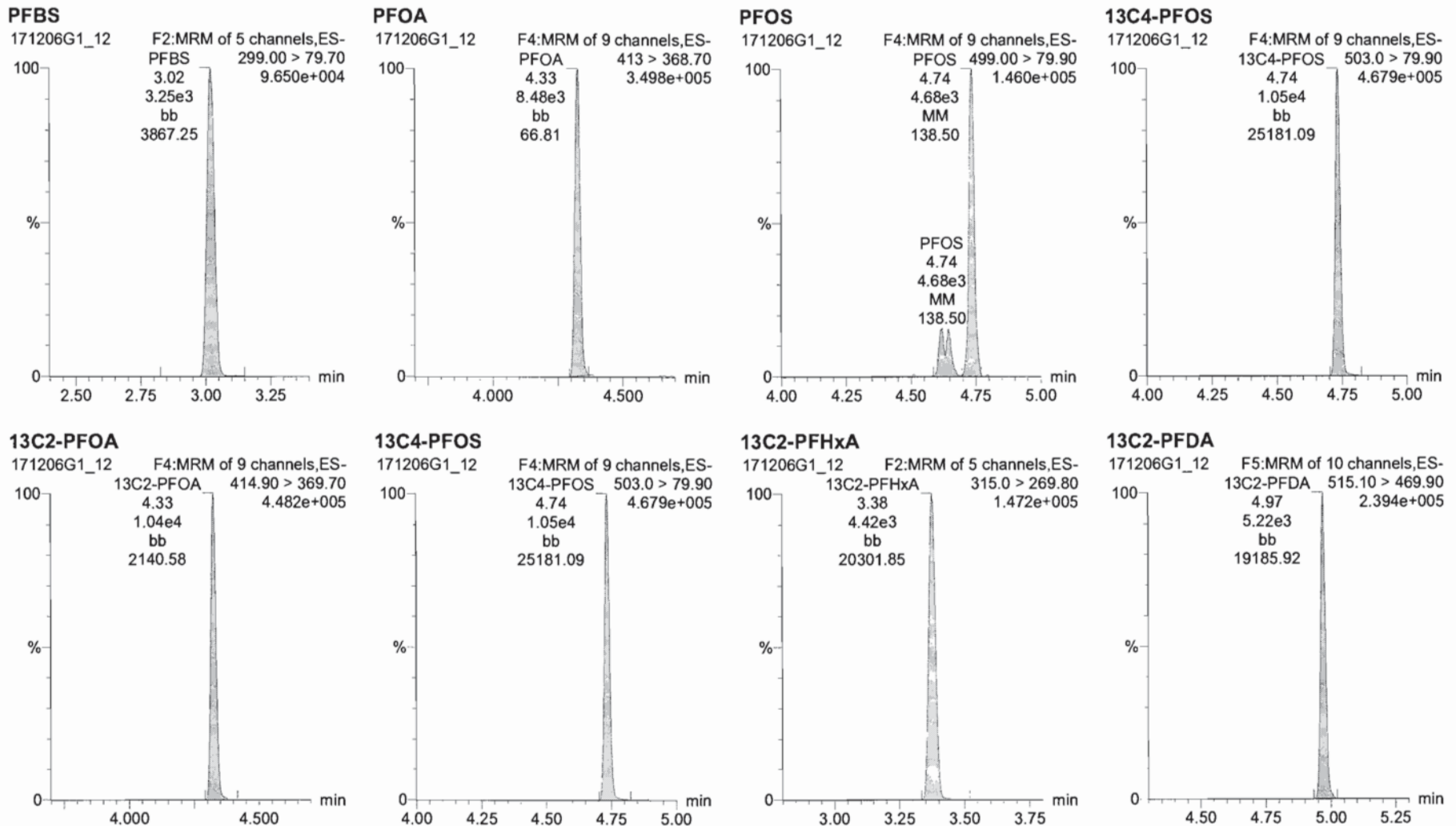


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Method: C:\Projects\Q1.PRO\MethDB\PFAS\_L3\_DW\_1206.mdb 06 Dec 2017 11:11:24  
Calibration: U:\G1.PRO\CurveDB\C18\_537\_Q1\_12-06-17\_L3.cdb 06 Dec 2017 15:37:11

ID: ICV171206G1-1 PFC ICV 537 17K3030, Description: PFC ICV 537 17K3030, Name: 171206G1\_12, Date: 06-Dec-2017, Time: 13:20:50, Instrument: , Lab: , User:



Dataset: U:\G1.PRO\Results\2017\171208G2\171208G2-CRV.qld

Last Altered: Sunday, December 10, 2017 22:49:55 Pacific Standard Time  
 Printed: Monday, December 11, 2017 10:37:29 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS\_DW\_L3\_1126.mdb 27 Nov 2017 14:32:15  
 Calibration: U:\G1.PRO\CurveDB\C18\_537\_Q1\_12-08-17\_L3.cdb 10 Dec 2017 22:49:55

**Compound name: PFBS**

Coefficient of Determination:  $R^2 = 0.994837$

Calibration curve:  $0.800672 * x$

Response type: Internal Std ( Ref 7 ), Area \* ( IS Conc. / IS Area )

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

*AM 12/11/17*  
*JMA 12/11/2017*

#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 171208G2_2	Standard	0.443	3.02	134.074	11857.967	0.325	0.4	-8.4	NO	0.995	NO	MMX
2	2 171208G2_3	Standard	0.885	3.01	428.832	15349.467	0.802	1.0	13.2	NO	0.995	NO	bbX
3	3 171208G2_4	Standard	1.770	3.01	759.007	14402.649	1.512	1.9	6.7	NO	0.995	NO	bb
4	4 171208G2_5	Standard	4.420	3.01	1983.680	14516.459	3.922	4.9	10.8	NO	0.995	NO	MM
5	5 171208G2_6	Standard	8.850	3.01	2903.323	11953.820	6.971	8.7	-1.6	NO	0.995	NO	bb
6	6 171208G2_7	Standard	22.100	3.01	8898.488	13445.892	18.994	23.7	7.3	NO	0.995	NO	bb
7	7 171208G2_8	Standard	44.200	3.01	14447.786	12293.957	33.728	42.1	-4.7	NO	0.995	NO	bb
8	8 171208G2_9	Standard	66.300	3.01	21148.451	10786.034	56.273	70.3	6.0	NO	0.995	NO	bbX
9	9 171208G2_10	Standard	88.400	3.01	29888.051	12003.273	71.463	89.3	1.0	NO	0.995	NO	bbX

**Compound name: PFOA**

Coefficient of Determination:  $R^2 = 0.997893$

Calibration curve:  $0.811837 * x$

Response type: Internal Std ( Ref 6 ), Area \* ( IS Conc. / IS Area )

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

#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 171208G2_2	Standard	0.500	4.33	504.601	11571.904	0.436	0.5	7.4	NO	0.998	NO	bbX
2	2 171208G2_3	Standard	1.000	4.31	1289.415	14038.166	0.919	1.1	13.1	NO	0.998	NO	bbX
3	3 171208G2_4	Standard	2.000	4.31	2044.709	12600.569	1.623	2.0	-0.1	NO	0.998	NO	bb
4	4 171208G2_5	Standard	5.000	4.31	5935.702	13262.253	4.476	5.5	10.3	NO	0.998	NO	bd
5	5 171208G2_6	Standard	10.000	4.31	8915.754	12044.611	7.402	9.1	-8.8	NO	0.998	NO	bd
6	6 171208G2_7	Standard	25.000	4.31	25977.795	12740.901	20.389	25.1	0.5	NO	0.998	NO	bd
7	7 171208G2_8	Standard	50.000	4.31	45749.875	11213.454	40.799	50.3	0.5	NO	0.998	NO	bd
8	8 171208G2_9	Standard	75.000	4.31	60947.063	9546.963	63.839	78.6	4.8	NO	0.998	NO	bdX
9	9 171208G2_10	Standard	100.000	4.31	85445.031	11090.062	77.046	94.9	-5.1	NO	0.998	NO	bbX

Dataset: U:\G1.PRO\Results\2017\171208G2\171208G2-CRV.qld

Last Altered: Sunday, December 10, 2017 22:49:55 Pacific Standard Time  
 Printed: Monday, December 11, 2017 10:37:29 Pacific Standard Time

**Compound name: PFOS**

Coefficient of Determination: R<sup>2</sup> = 0.998516

Calibration curve: 1.20278 \* x

Response type: Internal Std ( Ref 7 ), Area \* ( IS Conc. / IS Area )

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

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 171208G2_2	Standard	0.464	4.73	185.089	11857.967	0.448	0.4	-19.7	NO	0.999	NO	MMX
2	2 171208G2_3	Standard	0.925	4.73	617.089	15349.467	1.154	1.0	3.7	NO	0.999	NO	MMX
3	3 171208G2_4	Standard	1.850	4.72	889.150	14402.649	1.772	1.5	-20.4	NO	0.999	NO	MM
4	4 171208G2_5	Standard	4.625	4.73	2773.974	14516.459	5.484	4.6	-1.4	NO	0.999	NO	MM
5	5 171208G2_6	Standard	9.250	4.73	4524.466	11953.820	10.863	9.0	-2.4	NO	0.999	NO	MM
6	6 171208G2_7	Standard	23.100	4.73	13079.806	13445.892	27.919	23.2	0.5	NO	0.999	NO	MM
7	7 171208G2_8	Standard	46.200	4.72	24086.246	12293.957	56.229	46.7	1.2	NO	0.999	NO	MM
8	8 171208G2_9	Standard	69.300	4.72	33750.160	10786.034	89.804	74.7	7.7	NO	0.999	NO	MMX
9	9 171208G2_10	Standard	92.400	4.72	47716.457	12003.273	114.091	94.9	2.7	NO	0.999	NO	MMX

**Compound name: 13C2-PFHxA**

Response Factor: 0.44294

RRF SD: 0.0227764, Relative SD: 5.14209

Response type: Internal Std ( Ref 6 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 171208G2_2	Standard	10.000	3.38	4801.410	11571.904	4.149	9.4	-6.3	NO		NO	bbX
2	2 171208G2_3	Standard	10.000	3.37	6735.231	14038.166	4.798	10.8	8.3	NO		NO	bbX
3	3 171208G2_4	Standard	10.000	3.36	5697.994	12600.569	4.522	10.2	2.1	NO		NO	bb
4	4 171208G2_5	Standard	10.000	3.37	6341.437	13262.253	4.782	10.8	8.0	NO		NO	bb
5	5 171208G2_6	Standard	10.000	3.36	5086.919	12044.611	4.223	9.5	-4.7	NO		NO	bd
6	6 171208G2_7	Standard	10.000	3.36	5434.637	12740.901	4.266	9.6	-3.7	NO		NO	bb
7	7 171208G2_8	Standard	10.000	3.36	4882.918	11213.454	4.355	9.8	-1.7	NO		NO	bb
8	8 171208G2_9	Standard	10.000	3.36	4706.410	9546.963	4.930	11.1	11.3	NO		NO	bdX
9	9 171208G2_10	Standard	10.000	3.36	4749.668	11090.062	4.283	9.7	-3.3	NO		NO	bdX

Dataset: U:\G1.PRO\Results\2017\171208G2\171208G2-CRV.qld

Last Altered: Sunday, December 10, 2017 22:49:55 Pacific Standard Time  
 Printed: Monday, December 11, 2017 10:37:29 Pacific Standard Time

**Compound name: 13C2-PFDA**

Response Factor: 0.509254

RRF SD: 0.0328522, Relative SD: 6.45105

Response type: Internal Std ( Ref 6 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 171208G2_2	Standard	10.000	4.97	5579.112	11571.904	4.821	9.5	-5.3	NO		NO	bdX
2	2 171208G2_3	Standard	10.000	4.96	8625.498	14038.166	6.144	12.1	20.7	NO		NO	bbX
3	3 171208G2_4	Standard	10.000	4.96	6581.716	12600.569	5.223	10.3	2.6	NO		NO	bb
4	4 171208G2_5	Standard	10.000	4.96	7244.836	13262.253	5.463	10.7	7.3	NO		NO	bb
5	5 171208G2_6	Standard	10.000	4.96	5507.656	12044.611	4.573	9.0	-10.2	NO		NO	bb
6	6 171208G2_7	Standard	10.000	4.96	6576.478	12740.901	5.162	10.1	1.4	NO		NO	bb
7	7 171208G2_8	Standard	10.000	4.96	5654.003	11213.454	5.042	9.9	-1.0	NO		NO	bb
8	8 171208G2_9	Standard	10.000	4.96	5376.028	9546.963	5.631	11.1	10.6	NO		NO	bbX
9	9 171208G2_10	Standard	10.000	4.96	5314.285	11090.062	4.792	9.4	-5.9	NO		NO	bbX

**Compound name: 13C2-PFOA**

Response Factor: 1

RRF SD: 0, Relative SD: 0

Response type: Internal Std ( Ref 6 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 171208G2_2	Standard	10.000	4.33	11571.904	11571.904	10.000	10.0	0.0	NO		NO	bbX
2	2 171208G2_3	Standard	10.000	4.31	14038.166	14038.166	10.000	10.0	0.0	NO		NO	bbX
3	3 171208G2_4	Standard	10.000	4.31	12600.569	12600.569	10.000	10.0	0.0	NO		NO	bb
4	4 171208G2_5	Standard	10.000	4.31	13262.253	13262.253	10.000	10.0	0.0	NO		NO	bb
5	5 171208G2_6	Standard	10.000	4.31	12044.611	12044.611	10.000	10.0	0.0	NO		NO	bd
6	6 171208G2_7	Standard	10.000	4.31	12740.901	12740.901	10.000	10.0	0.0	NO		NO	bd
7	7 171208G2_8	Standard	10.000	4.31	11213.454	11213.454	10.000	10.0	0.0	NO		NO	bb
8	8 171208G2_9	Standard	10.000	4.31	9546.963	9546.963	10.000	10.0	0.0	NO		NO	bbX
9	9 171208G2_10	Standard	10.000	4.31	11090.062	11090.062	10.000	10.0	0.0	NO		NO	bdX

Dataset: U:\G1.PRO\Results\2017\171208G2\171208G2-CRV.qld

Last Altered: Sunday, December 10, 2017 22:49:55 Pacific Standard Time  
 Printed: Monday, December 11, 2017 10:37:29 Pacific Standard Time

**Compound name: 13C4-PFOS**

Response Factor: 1

RRF SD: 0, Relative SD: 0

Response type: Internal Std ( Ref 7 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 171208G2_2	Standard	28.700	4.74	11857.967	11857.967	28.700	28.7	0.0	NO		NO	bdX
2	2 171208G2_3	Standard	28.700	4.73	15349.467	15349.467	28.700	28.7	0.0	NO		NO	bbX
3	3 171208G2_4	Standard	28.700	4.72	14402.649	14402.649	28.700	28.7	0.0	NO		NO	bd
4	4 171208G2_5	Standard	28.700	4.73	14516.459	14516.459	28.700	28.7	0.0	NO		NO	bd
5	5 171208G2_6	Standard	28.700	4.72	11953.820	11953.820	28.700	28.7	0.0	NO		NO	MM
6	6 171208G2_7	Standard	28.700	4.72	13445.892	13445.892	28.700	28.7	0.0	NO		NO	bb
7	7 171208G2_8	Standard	28.700	4.72	12293.957	12293.957	28.700	28.7	0.0	NO		NO	bd
8	8 171208G2_9	Standard	28.700	4.72	10786.034	10786.034	28.700	28.7	0.0	NO		NO	bbX
9	9 171208G2_10	Standard	28.700	4.72	12003.273	12003.273	28.700	28.7	0.0	NO		NO	bbX

Dataset: Untitled

Last Altered: Monday, December 11, 2017 10:39:34 Pacific Standard Time

Printed: Monday, December 11, 2017 10:40:25 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS\_DW\_L3\_1126.mdb 27 Nov 2017 14:32:15

Calibration: U:\G1.PRO\CurveDB\C18\_537\_Q1\_12-08-17\_L3.cdb 10 Dec 2017 22:49:55

Compound name: PFBS

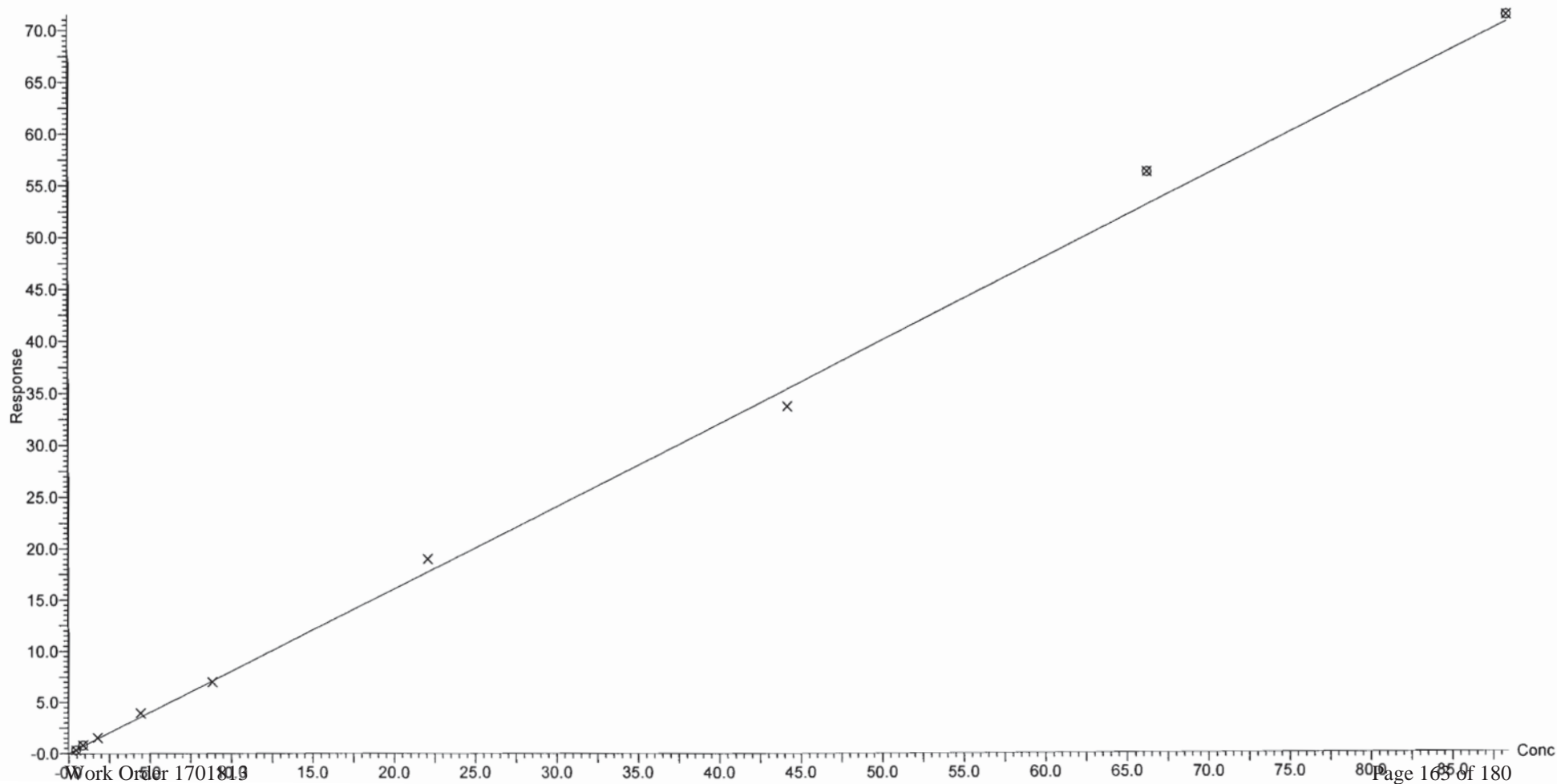
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3	171208G2_3	ST171208G2-2 PFC CS-2 537 17K3023	08-Dec-17	16:21:40
4	171208G2_4	ST171208G2-3 PFC CS-1 537 17K3024	08-Dec-17	16:34:04
5	171208G2_5	ST171208G2-4 PFC CS0 537 17K3025	08-Dec-17	16:46:29
6	171208G2_6	ST171208G2-5 PFC CS1 537 17K3026	08-Dec-17	16:58:55
7	171208G2_7	ST171208G2-6 PFC CS2 537 17K3033	08-Dec-17	17:11:21
8	171208G2_8	ST171208G2-7 PFC CS3 537 17K3027	08-Dec-17	17:23:47
9	171208G2_9	ST171208G2-8 PFC CS4 537 17K3028	08-Dec-17	17:36:15
10	171208G2_10	ST171208G2-9 PFC CS5 537 17K3029	08-Dec-17	17:48:42
11	171208G2_11	IPA	08-Dec-17	18:01:06
12	171208G2_12	ICV171208G2-1 PFC ICV 537 17K3030	08-Dec-17	18:13:34
13	171208G2_13	IPA	08-Dec-17	18:25:58

Dataset: U:\G1.PRO\Results\2017\171208G2\171208G2-CRV.qld

Last Altered: Sunday, December 10, 2017 22:49:55 Pacific Standard Time  
Printed: Monday, December 11, 2017 10:36:23 Pacific Standard Time

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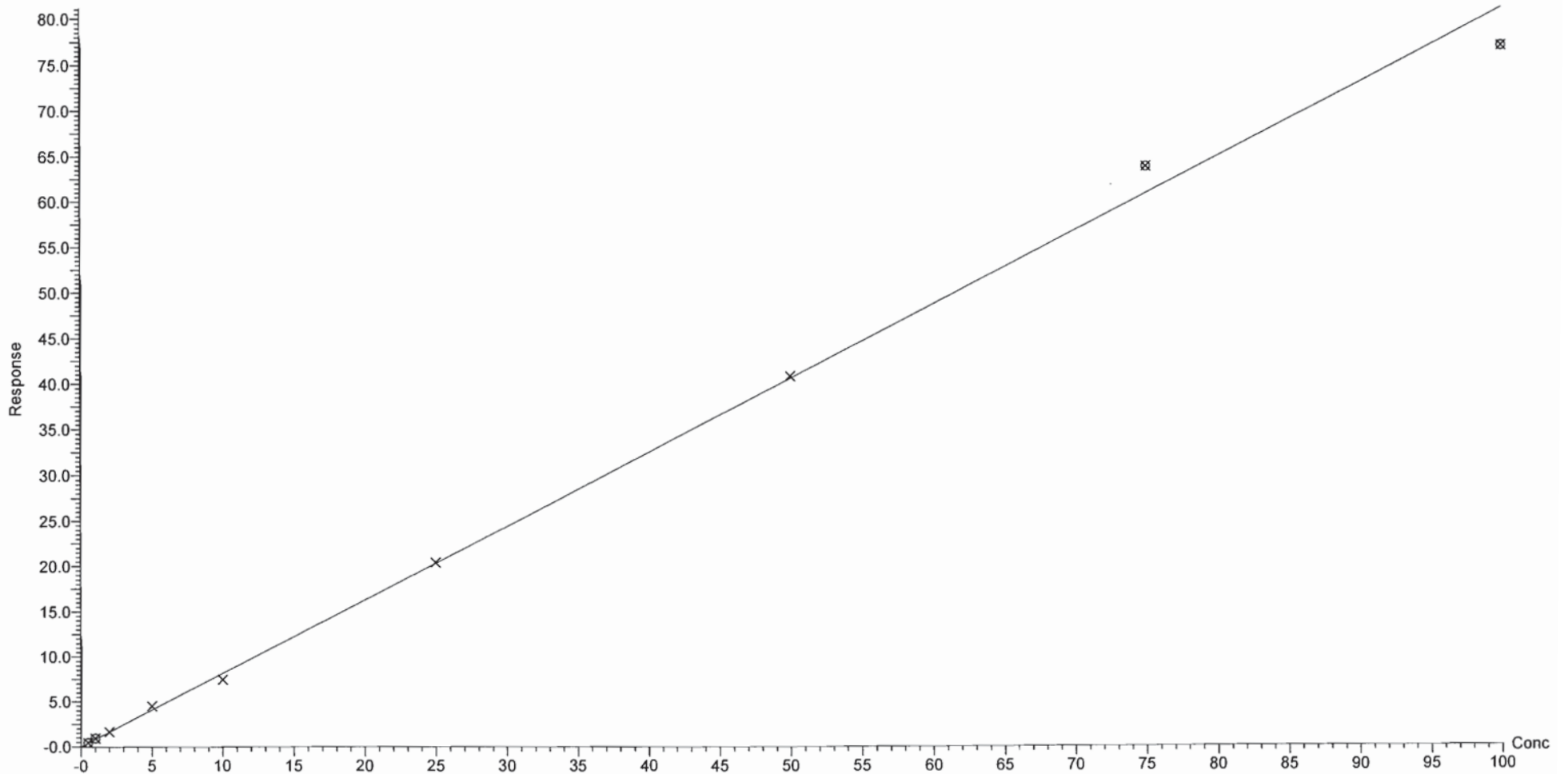
Compound name: PFBS  
Coefficient of Determination:  $R^2 = 0.994837$   
Calibration curve:  $0.800672 * x$   
Response type: Internal Std ( Ref 7 ), Area \* ( IS Conc. / IS Area )  
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None



Dataset: U:\G1.PRO\Results\2017\171208G2\171208G2-CRV.qld

Last Altered: Sunday, December 10, 2017 22:49:55 Pacific Standard Time  
Printed: Monday, December 11, 2017 10:36:23 Pacific Standard Time

Compound name: PFOA  
Coefficient of Determination:  $R^2 = 0.997893$   
Calibration curve:  $0.811837 * x$   
Response type: Internal Std ( Ref 6 ), Area \* ( IS Conc. / IS Area )  
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None

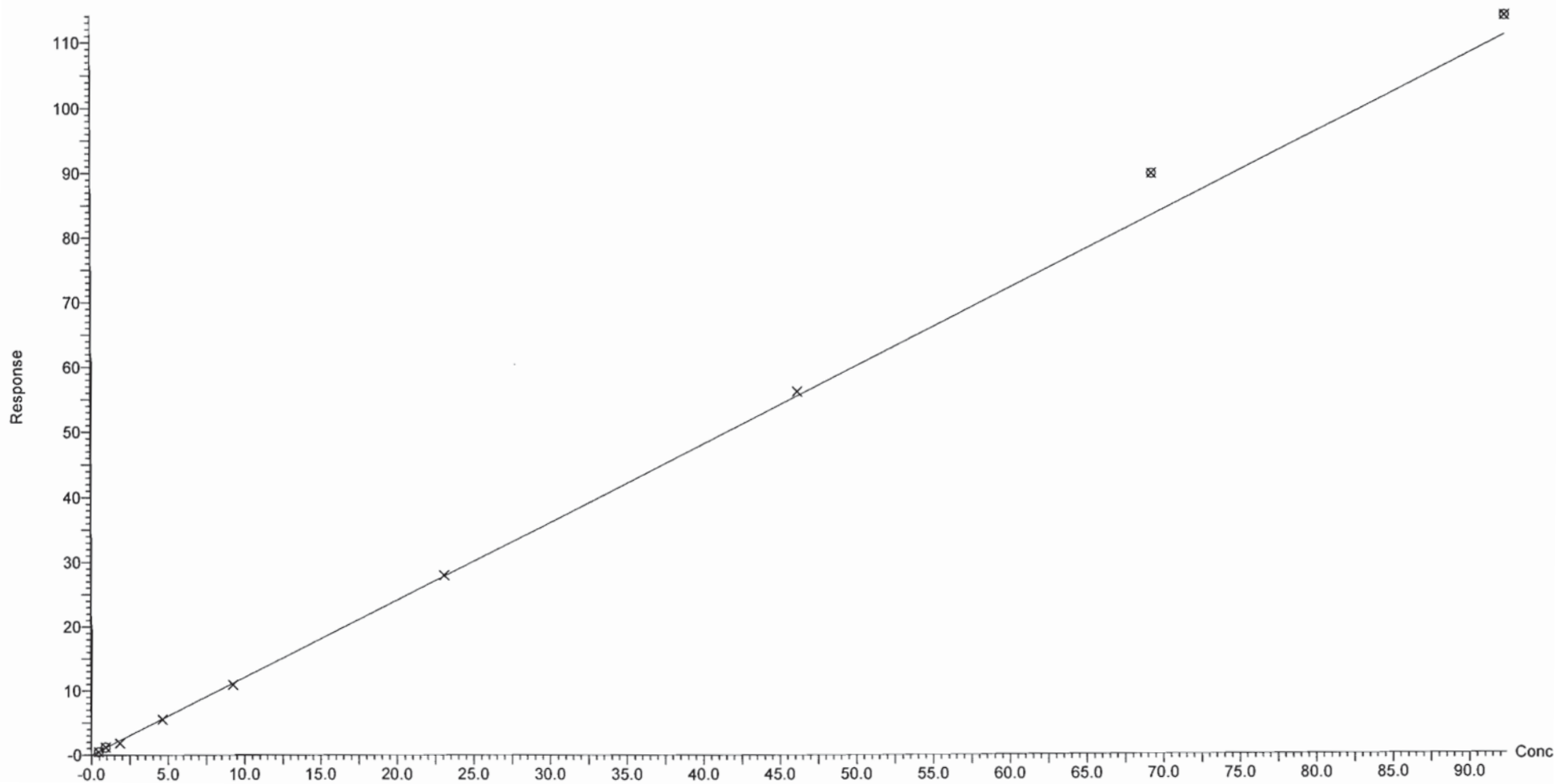




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Last Altered: Sunday, December 10, 2017 22:49:55 Pacific Standard Time  
Printed: Monday, December 11, 2017 10:36:23 Pacific Standard Time

Compound name: PFOS  
Coefficient of Determination:  $R^2 = 0.998516$   
Calibration curve:  $1.20278 * x$   
Response type: Internal Std ( Ref 7 ), Area \* ( IS Conc. / IS Area )  
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None



Compound 6: 13C2-PFOA

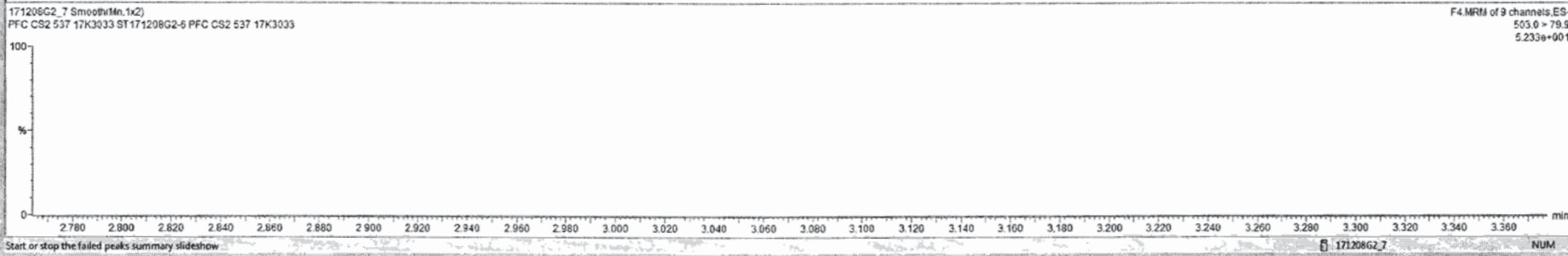
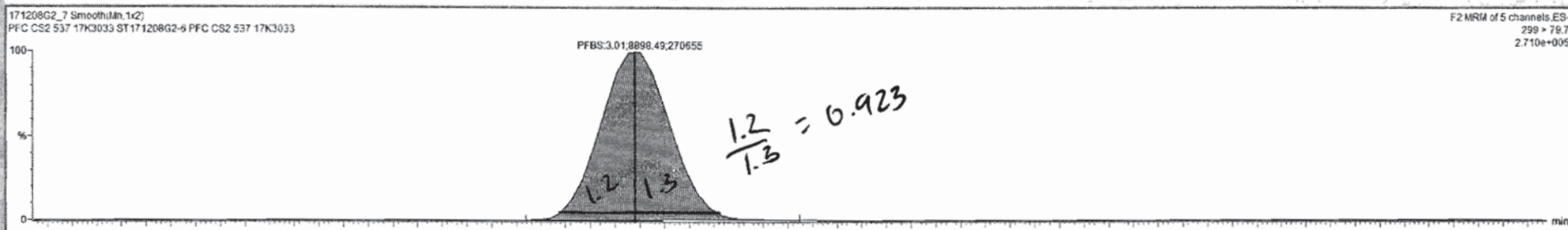
ID	Name	Type	Std. Conc	RT	Area	IS Area	Primary Flags
1	ST171208G2-1 PFC CS-3 537 17K3022	171208G2_Standard	10	4.33	11571.9	11571.9	bbX
2	ST171208G2-2 PFC CS-2 537 17K3023	171208G2_Standard	10	4.31	14038.17	14038.17	bbX
3	ST171208G2-3 PFC CS-1 537 17K3024	171208G2_Standard	10	4.31	12600.57	12600.57	bb
4	ST171208G2-4 PFC CS0 537 17K3025	171208G2_Standard	10	4.31	13262.25	13262.25	bb
5	ST171208G2-5 PFC CS1 537 17K3026	171208G2_Standard	10	4.31	12044.61	12044.61	bd
6	ST171208G2-6 PFC CS2 537 17K3033	171208G2_Standard	10	4.31	12740.9	12740.9	bd
7	ST171208G2-7 PFC CS3 537 17K3027	171208G2_Standard	10	4.31	11213.45	11213.45	bb
8	ST171208G2-8 PFC CS4 537 17K3028	171208G2_Standard	10	4.31	9546.963	9546.963	bbX
9	ST171208G2-9 PFC CS5 537 17K3029	171208G2_Standard	10	4.31	11090.06	11090.06	bdX
					average		RPD
					12372.36		16.74148984

Compound 7: 13C4-PFOS

ID	Name	Type	Std. Conc	RT	Area	IS Area	Primary Flags
1	ST171208G2-1 PFC CS-3 537 17K3022	171208G2_Standard	28.7	4.74	11857.97	11857.97	bdX
2	ST171208G2-2 PFC CS-2 537 17K3023	171208G2_Standard	28.7	4.73	15349.47	15349.47	bbX
3	ST171208G2-3 PFC CS-1 537 17K3024	171208G2_Standard	28.7	4.72	14402.65	14402.65	bd
4	ST171208G2-4 PFC CS0 537 17K3025	171208G2_Standard	28.7	4.73	14516.46	14516.46	bd
5	ST171208G2-5 PFC CS1 537 17K3026	171208G2_Standard	28.7	4.72	11953.82	11953.82	MM
6	ST171208G2-6 PFC CS2 537 17K3033	171208G2_Standard	28.7	4.72	13445.89	13445.89	bb
7	ST171208G2-7 PFC CS3 537 17K3027	171208G2_Standard	28.7	4.72	12293.96	12293.96	bd
8	ST171208G2-8 PFC CS4 537 17K3028	171208G2_Standard	28.7	4.72	10786.03	10786.03	bbX
9	ST171208G2-9 PFC CS5 537 17K3029	171208G2_Standard	28.7	4.72	12003.27	12003.27	bbX
					average		RPD
					13322.56		19.36238753

171208G2\_7 - ST171208G2-6 PFC-CS2 537 17K3033 - PFC CS2 537 17K3033

Name	Conc.	DL	%Rec	EMPC	Abs Resp	RRF	RT	#	ISE	RA	Y/N	RRT	Acq Date	Acq Time	1% Chr Noise	ID	Sample Text	Factor1	SWR	Cal.F/#	>MDL
1 PFBS	23.722139	0.06425	107.3		8.898e3		3.01	1	7			0.637	08-Dec-17	17:11:21		ST171208G...	PFC CS2 537 17...	1.0	1.00		YES
2 PFOA	25.115005	0.0102	100.5		2.588e4		4.31	2	6			0.999	08-Dec-17	17:11:21		ST171208G...	PFC CS2 537 17...	1.0	1.00		YES
3 PFOS	23.211714	0.0120	106.5		1.308e4		4.73	3	7			1.000	08-Dec-17	17:11:21		ST171208G...	PFC CS2 537 17...	1.0	1.00		YES
4 13C2-PFHA	8.6296817	0.00142	96.3		5.435e3	0.443	3.36	4	6			0.779	08-Dec-17	17:11:21		ST171208G...	PFC CS2 537 17...	1.0	1.00		NO
5 13C2-PFDA	10.135027	0.0473	131.4		6.576e3	0.509	4.96	5	6			1.149	08-Dec-17	17:11:21		ST171208G...	PFC CS2 537 17...	1.0	1.00		NO
6 13C2-PFOA	10.000000	0.006405	100.0		1.274e4	1.000	4.31	6	6			0.000	08-Dec-17	17:11:21		ST171208G...	PFC CS2 537 17...	1.0	1.00		NO
7 13C4-PFOS	28.706000	0.00414	100.0		1.345e4	1.000	4.72	7	7			0.000	08-Dec-17	17:11:21		ST171208G...	PFC CS2 537 17...	1.0	1.00		NO

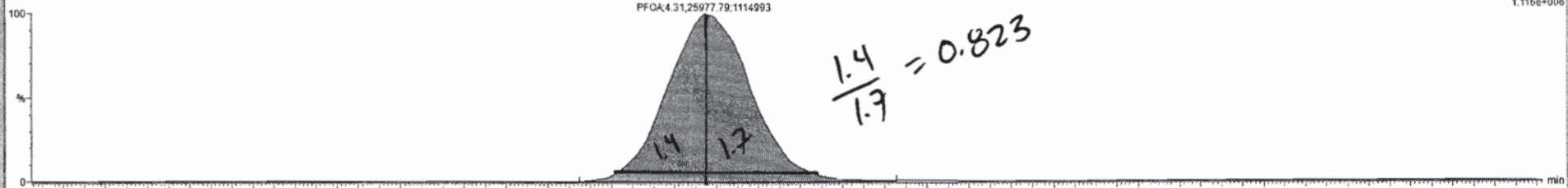


171208G2\_7 - ST171208G2-6 PFC CS2 537 17K3033 - PFC CS2 537 17K3033

Name	Conc.	DL	%Rec	EMPC	Abs.Resp	RRF	RT	#	IS#	RA	YN	RRT	Acq Date	Acq Time	1 <sup>st</sup> Chrt Nose	D	Sample Text	Factor1	SW1	Cal File	>MDL
1	PFBS	23.722139	0.00426	197.3	8.896e3		3.01	1	7			0.637	08-Dec-17	17:11:21		ST171208G...	PFC CS2 537 17...	1.0	1.00		YES
2	PFOA	25.115005	0.0102	100.5	2.588e4		4.31	2	6			0.999	08-Dec-17	17:11:21		ST171208G...	PFC CS2 537 17...	1.0	1.00		YES
3	PFOS	23.211714	0.0120	100.5	1.308e4		4.73	3	7			1.000	08-Dec-17	17:11:21		ST171208G...	PFC CS2 537 17...	1.0	1.00		YES
4	13C2-PFHxA	9.6299817	0.00142	96.3	5.435e3	0.443	3.36	4	6			0.779	08-Dec-17	17:11:21		ST171208G...	PFC CS2 537 17...	1.0	1.00		NO
5	13C2-PFDA	10.135827	0.0473	101.4	6.576e3	0.509	4.96	5	6			1.149	08-Dec-17	17:11:21		ST171208G...	PFC CS2 537 17...	1.0	1.00		NO
6	13C2-PFOA	10.000000	0.006405	100.0	1.274e4	1.000	4.31	6	6			0.000	08-Dec-17	17:11:21		ST171208G...	PFC CS2 537 17...	1.0	1.00		NO
7	13C4-PFOS	28.700000	0.06414	100.0	1.345e4	1.000	4.72	7	7			0.000	08-Dec-17	17:11:21		ST171208G...	PFC CS2 537 17...	1.0	1.00		NO

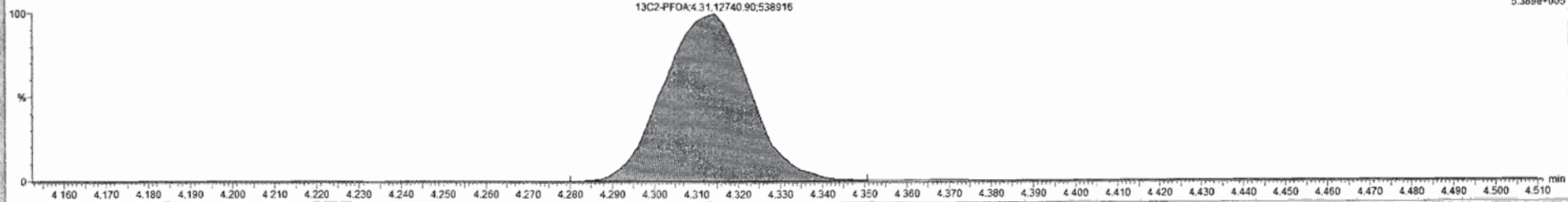
171208G2\_7 Smooth(Mn,1x2)  
 PFC CS2 537 17K3033 ST171208G2-6 PFC CS2 537 17K3033

F4.MRM of 9 channels,ES-  
 414.8 > 369.7  
 1.116e+006



171208G2\_7 Smooth(Mn,1x2)  
 PFC CS2 537 17K3033 ST171208G2-6 PFC CS2 537 17K3033

F4.MRM of 9 channels,ES-  
 414.8 > 369.7  
 5.389e+005



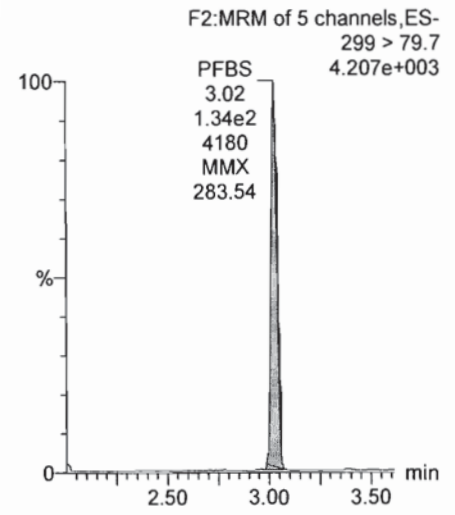
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Printed: Monday, December 11, 2017 10:34:58 Pacific Standard Time

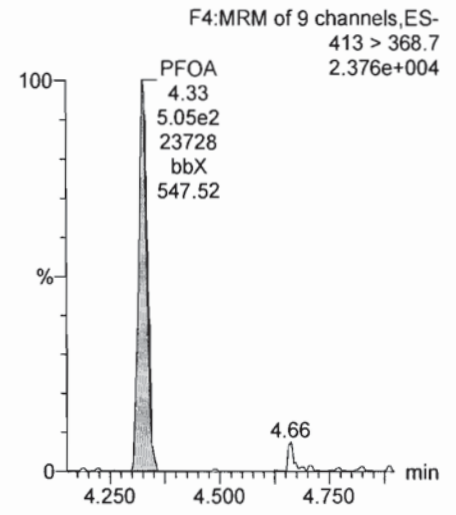
Method: U:\G1.PRO\MethDB\PFAS\_DW\_L3\_1126.mdb 27 Nov 2017 14:32:15  
Calibration: 10 Dec 2017 22:49:55

Name: 171208G2\_2, Date: 08-Dec-2017, Time: 16:09:15, ID: ST171208G2-1 PFC CS-3 537 17K3022, Description: PFC CS-3 537 17K3022

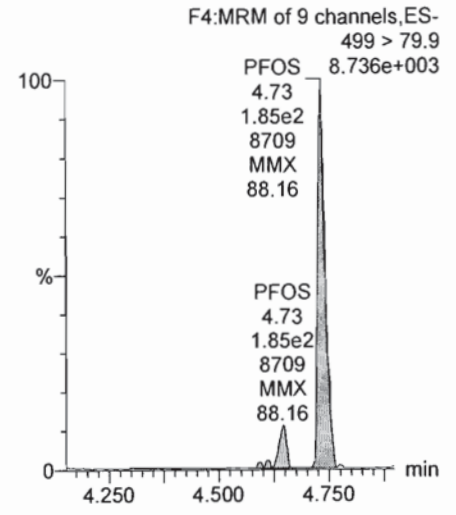
PFBS



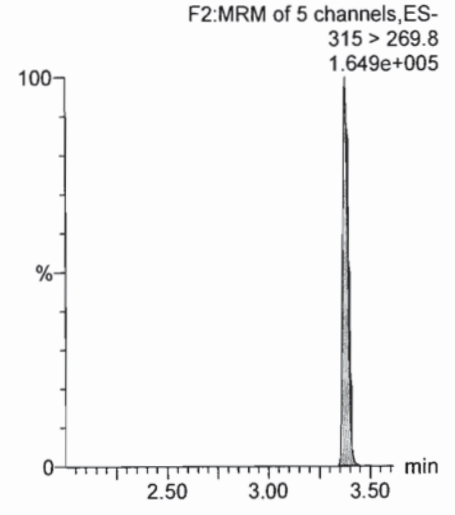
PFOA



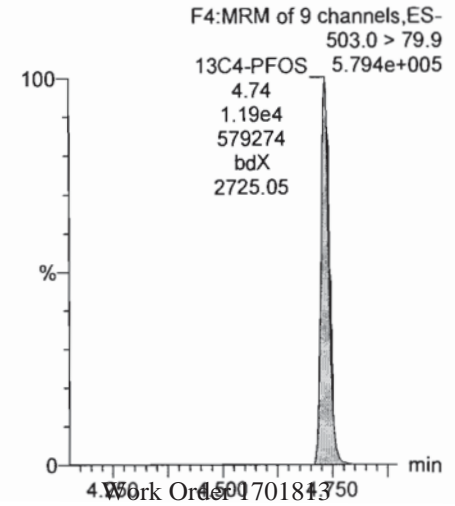
PFOS



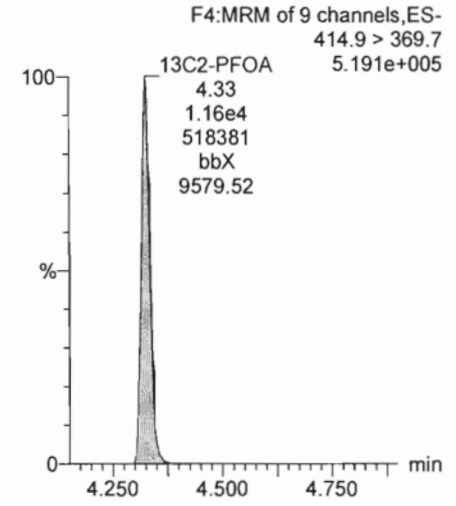
13C2-PFHxA



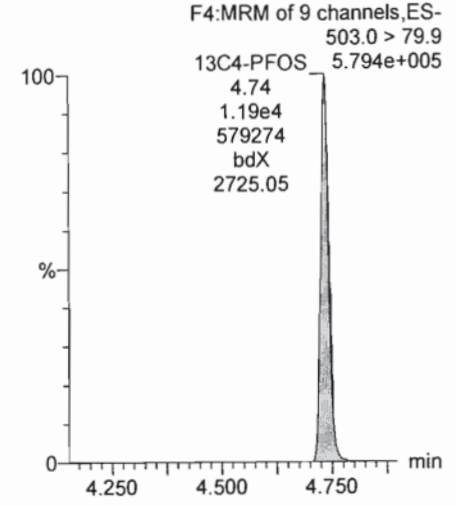
13C4-PFOS



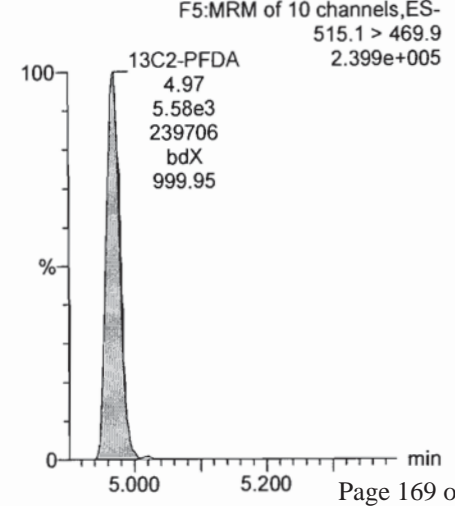
13C2-PFOA



13C4-PFOS



13C2-PFDA



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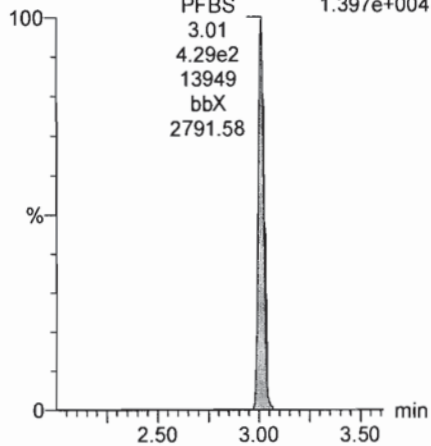
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Printed: Monday, December 11, 2017 10:34:58 Pacific Standard Time

Name: 171208G2\_3, Date: 08-Dec-2017, Time: 16:21:40, ID: ST171208G2-2 PFC CS-2 537 17K3023, Description: PFC CS-2 537 17K3023

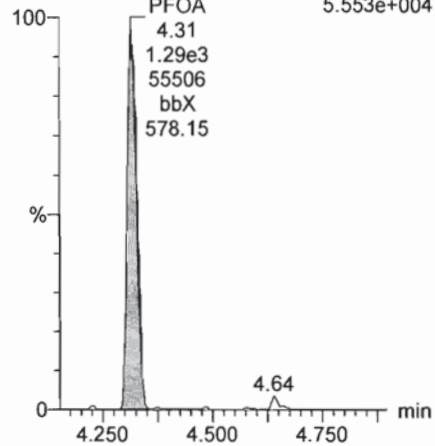
PFBS

F2:MRM of 5 channels,ES-  
299 > 79.7  
1.397e+004



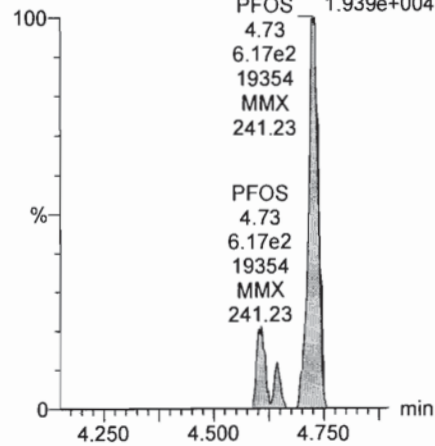
PFOA

F4:MRM of 9 channels,ES-  
413 > 368.7  
5.553e+004



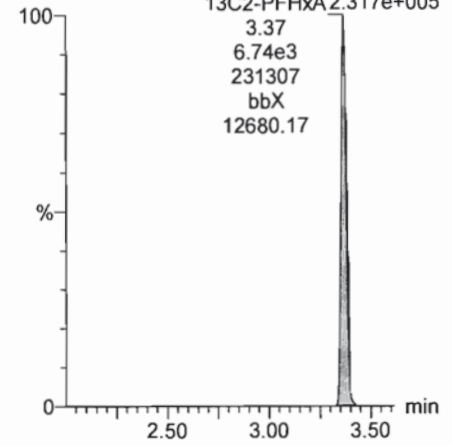
PFOS

F4:MRM of 9 channels,ES-  
499 > 79.9  
1.939e+004



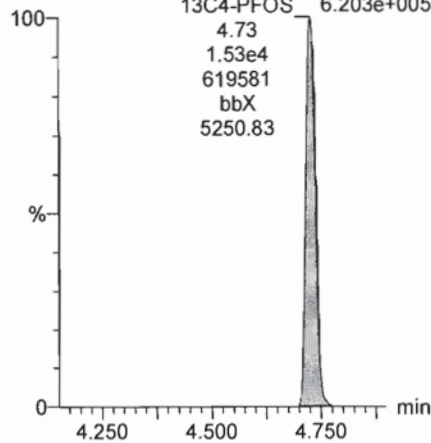
13C2-PFHxA

F2:MRM of 5 channels,ES-  
315 > 269.8  
3.37  
6.74e3  
231307  
12680.17



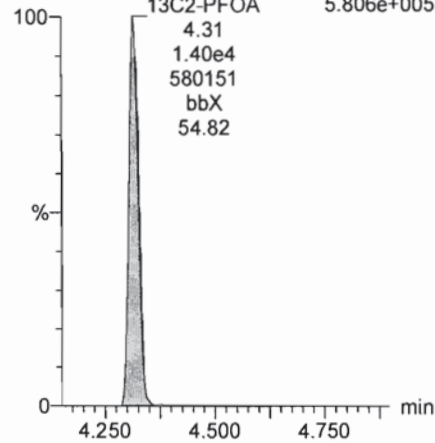
13C4-PFOS

F4:MRM of 9 channels,ES-  
503.0 > 79.9  
6.203e+005



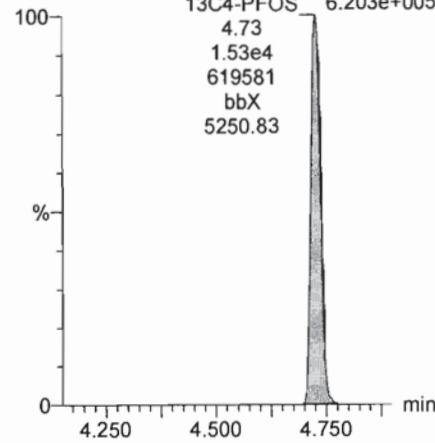
13C2-PFOA

F4:MRM of 9 channels,ES-  
414.9 > 369.7  
5.806e+005



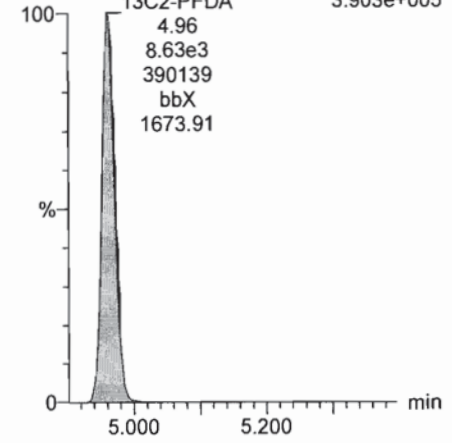
13C4-PFOS

F4:MRM of 9 channels,ES-  
503.0 > 79.9  
6.203e+005



13C2-PFDA

F5:MRM of 10 channels,ES-  
515.1 > 469.9  
4.96  
8.63e3  
390139  
1673.91



Dataset: U:\G1.PRO\Results\2017\171208G2\171208G2-CRV.qld

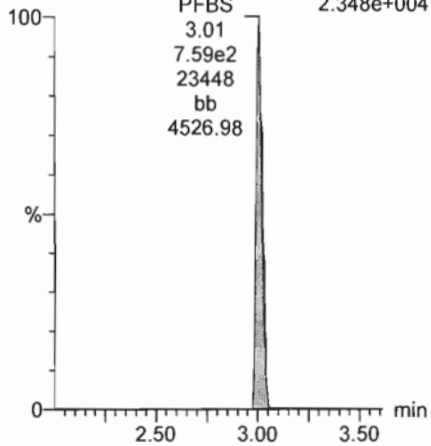
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Name: 171208G2\_4, Date: 08-Dec-2017, Time: 16:34:04, ID: ST171208G2-3 PFC CS-1 537 17K3024, Description: PFC CS-1 537 17K3024

**PFBS**

F2:MRM of 5 channels,ES-  
299 > 79.7  
2.348e+004

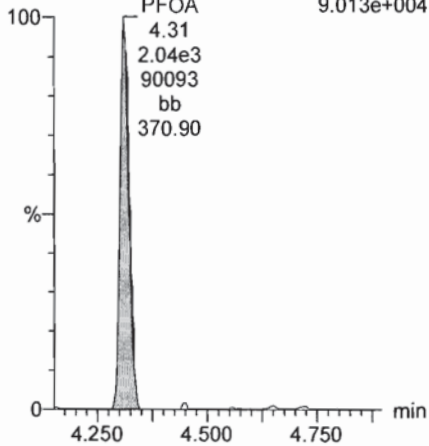
PFBS  
3.01  
7.59e2  
23448  
bb  
4526.98



**PFOA**

F4:MRM of 9 channels,ES-  
413 > 368.7  
9.013e+004

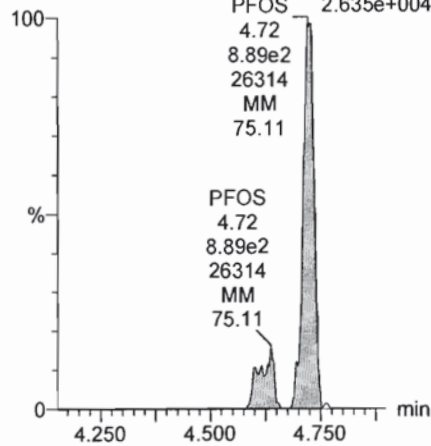
PFOA  
4.31  
2.04e3  
90093  
bb  
370.90



**PFOS**

F4:MRM of 9 channels,ES-  
499 > 79.9  
2.635e+004

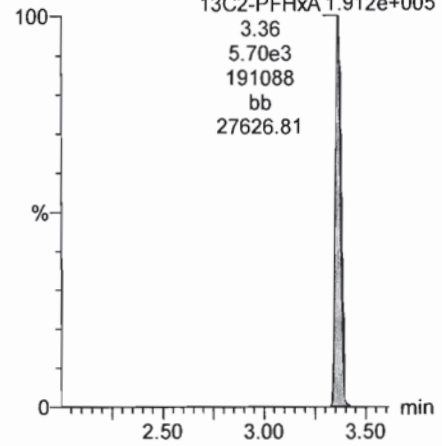
PFOS  
4.72  
8.89e2  
26314  
MM  
75.11



**13C2-PFHxA**

F2:MRM of 5 channels,ES-  
315 > 269.8  
1.912e+005

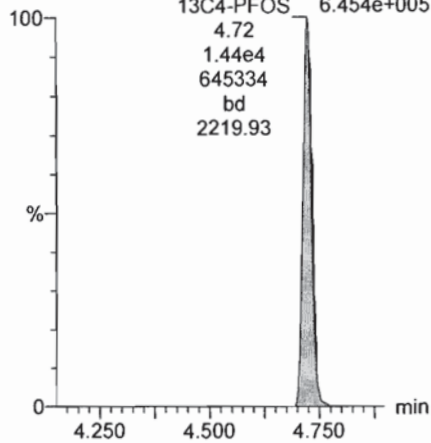
13C2-PFHxA  
3.36  
5.70e3  
191088  
bb  
27626.81



**13C4-PFOS**

F4:MRM of 9 channels,ES-  
503.0 > 79.9  
6.454e+005

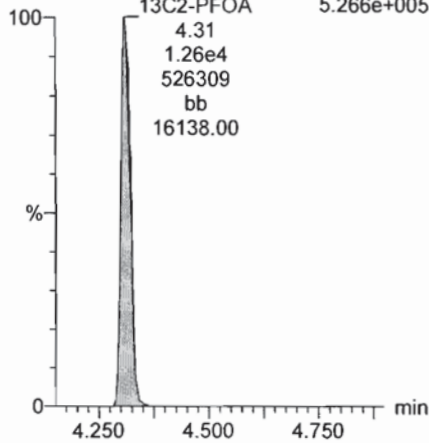
13C4-PFOS  
4.72  
1.44e4  
645334  
bd  
2219.93



**13C2-PFOA**

F4:MRM of 9 channels,ES-  
414.9 > 369.7  
5.266e+005

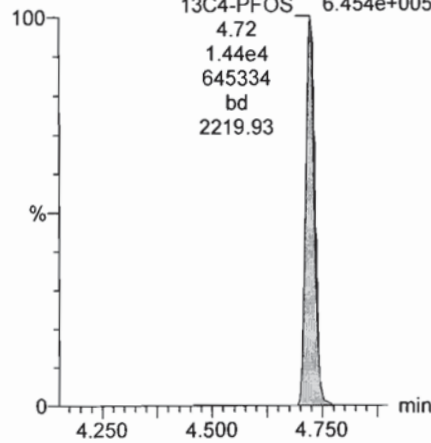
13C2-PFOA  
4.31  
1.26e4  
526309  
bb  
16138.00



**13C4-PFOS**

F4:MRM of 9 channels,ES-  
503.0 > 79.9  
6.454e+005

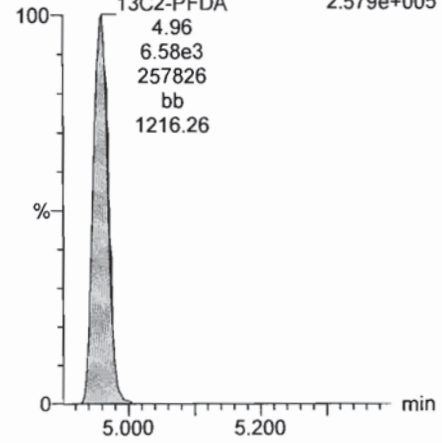
13C4-PFOS  
4.72  
1.44e4  
645334  
bd  
2219.93



**13C2-PFDA**

F5:MRM of 10 channels,ES-  
515.1 > 469.9  
2.579e+005

13C2-PFDA  
4.96  
6.58e3  
257826  
bb  
1216.26



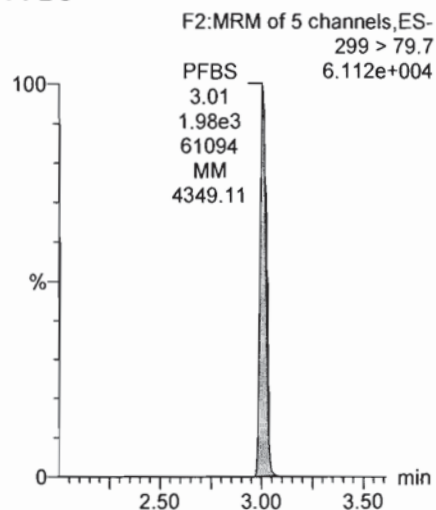
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Last Altered: Sunday, December 10, 2017 22:49:55 Pacific Standard Time

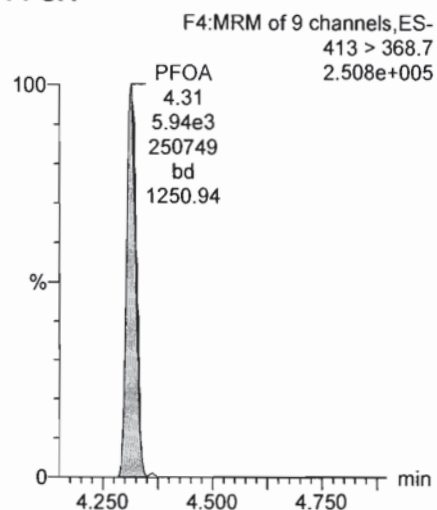
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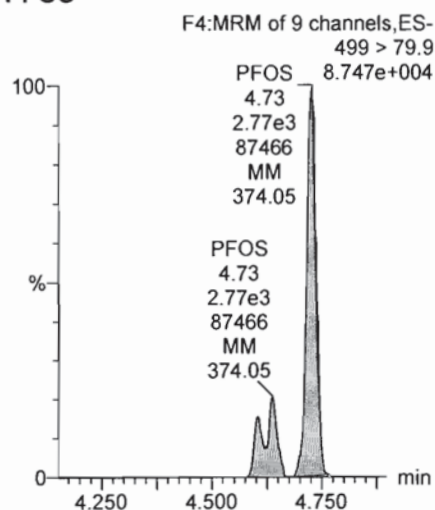
**PFBS**



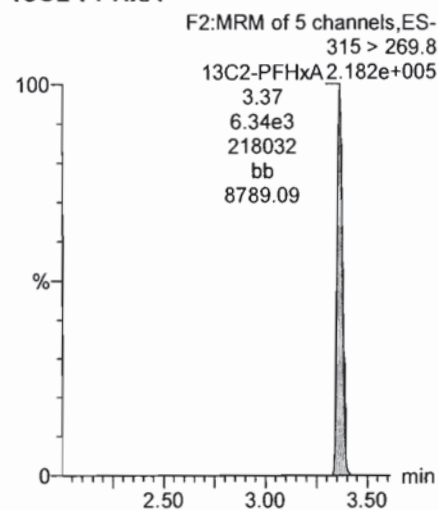
**PFOA**



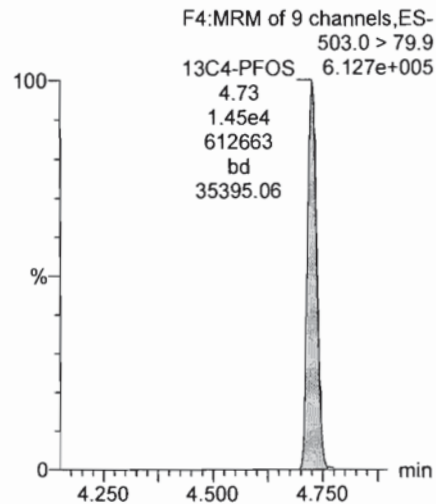
**PFOS**



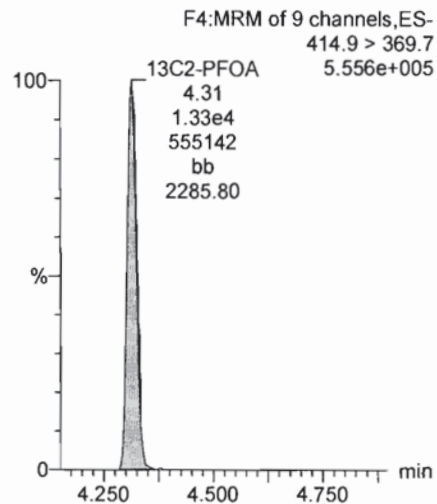
**13C2-PFHxA**



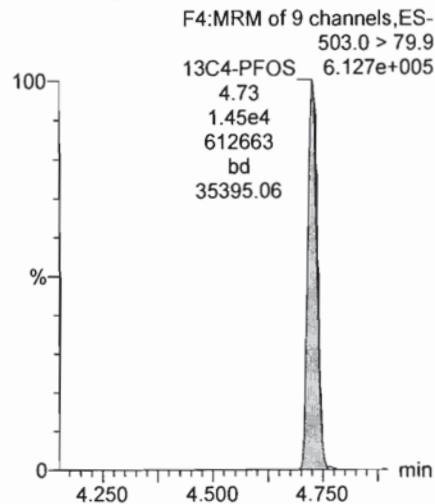
**13C4-PFOS**



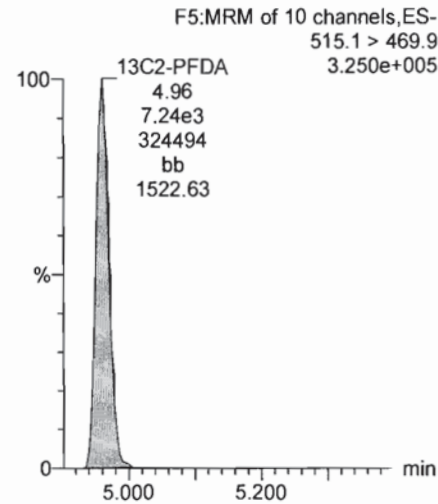
**13C2-PFOA**



**13C4-PFOS**



**13C2-PFDA**





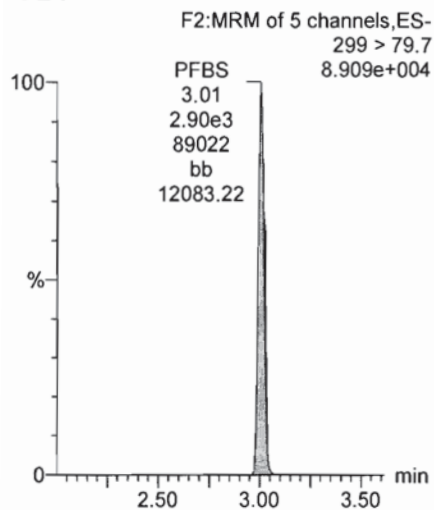
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Last Altered: Sunday, December 10, 2017 22:49:55 Pacific Standard Time

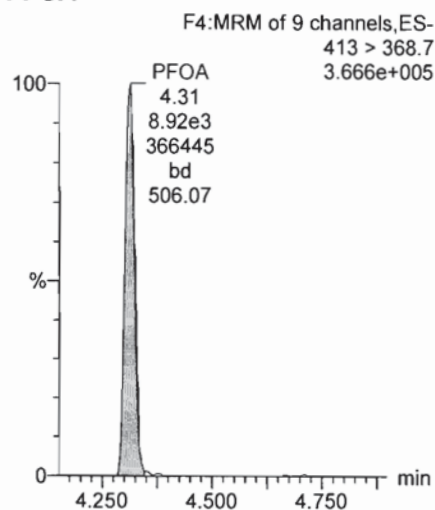
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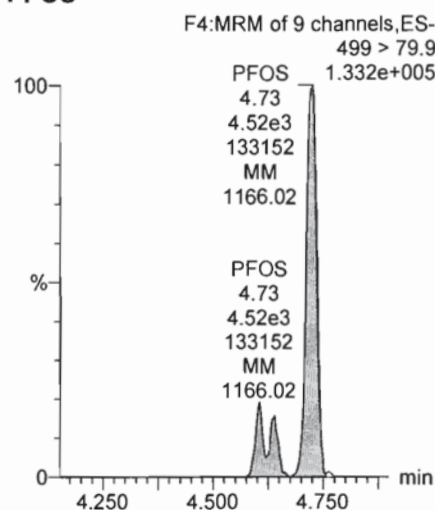
**PFBS**



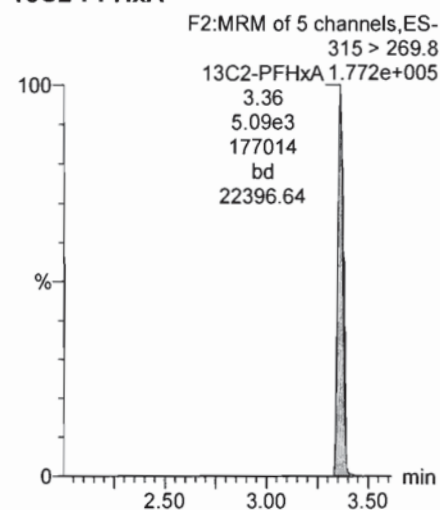
**PFOA**



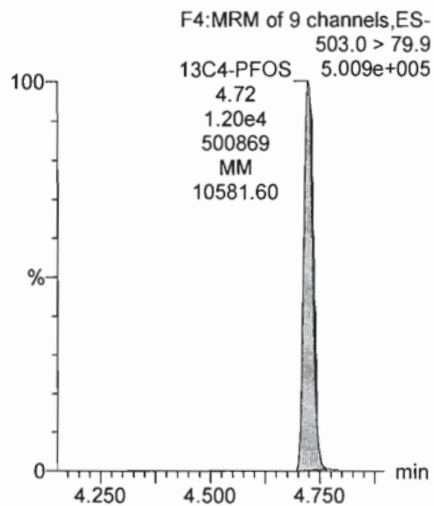
**PFOS**



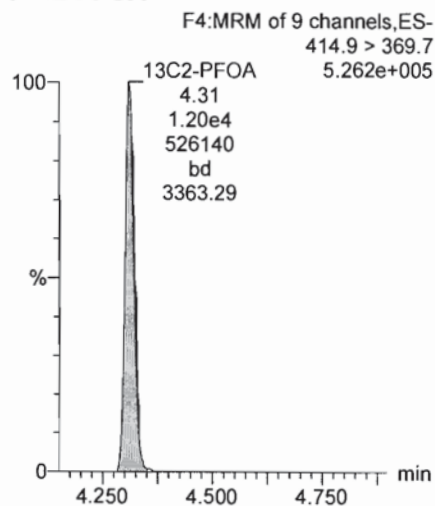
**13C2-PFHxA**



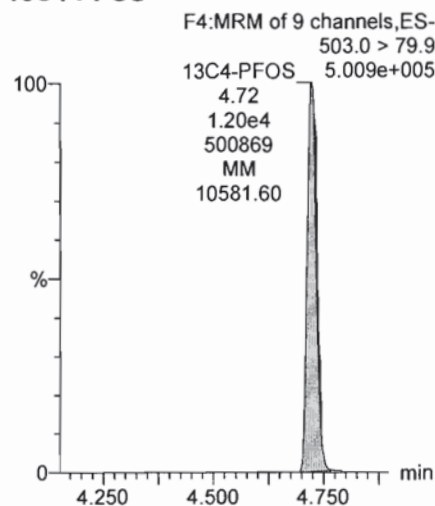
**13C4-PFOS**



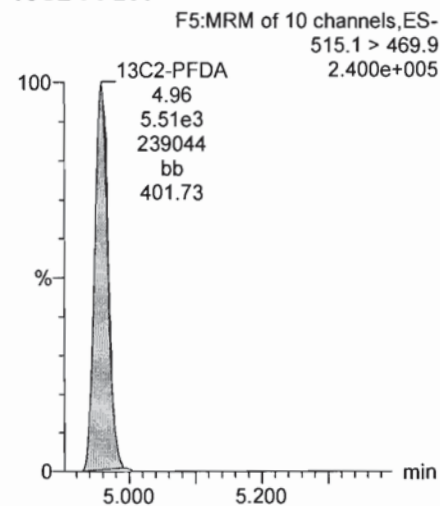
**13C2-PFOA**



**13C4-PFOS**



**13C2-PFDA**

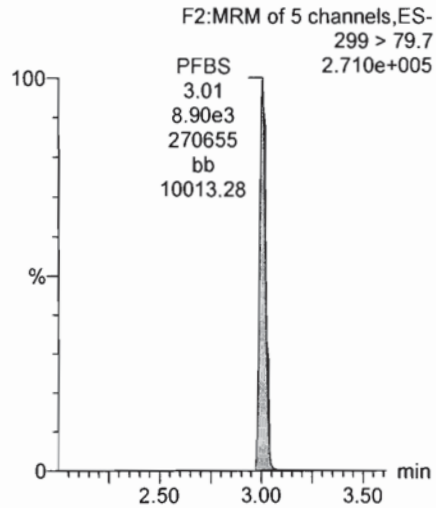


Dataset: U:\G1.PRO\Results\2017\171208G2\171208G2-CRV.qld

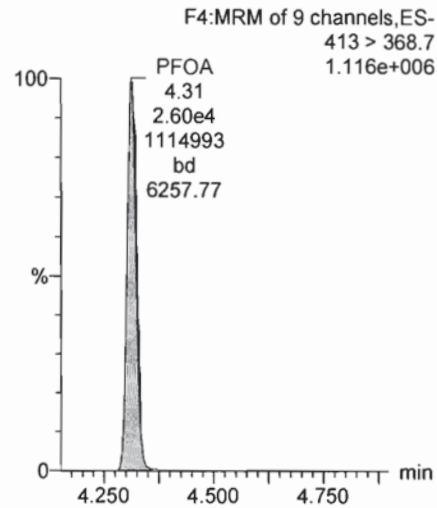
Last Altered: Sunday, December 10, 2017 22:49:55 Pacific Standard Time  
Printed: Monday, December 11, 2017 10:34:58 Pacific Standard Time

Name: 171208G2\_7, Date: 08-Dec-2017, Time: 17:11:21, ID: ST171208G2-6 PFC CS2 537 17K3033, Description: PFC CS2 537 17K3033

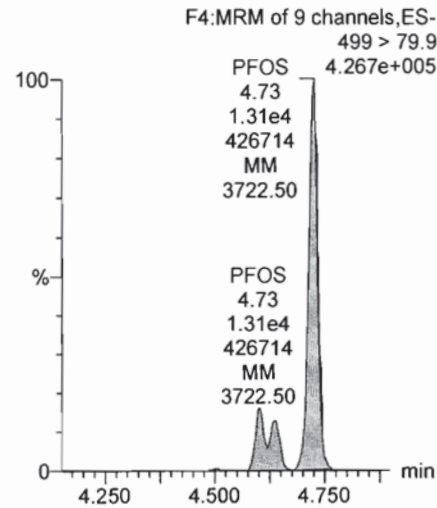
**PFBS**



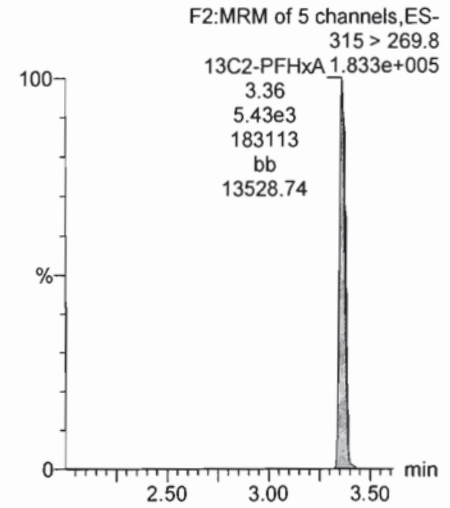
**PFOA**



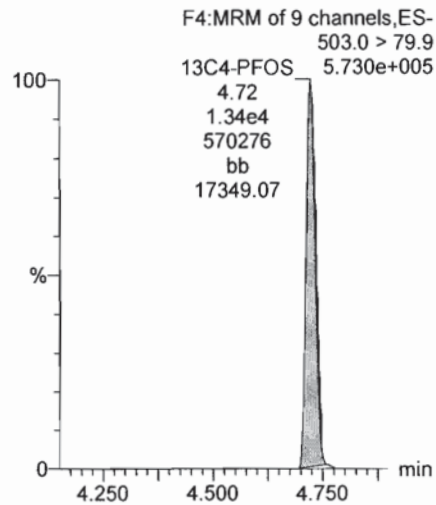
**PFOS**



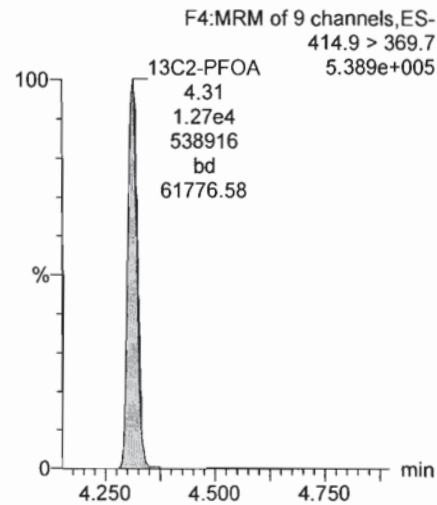
**13C2-PFHxA**



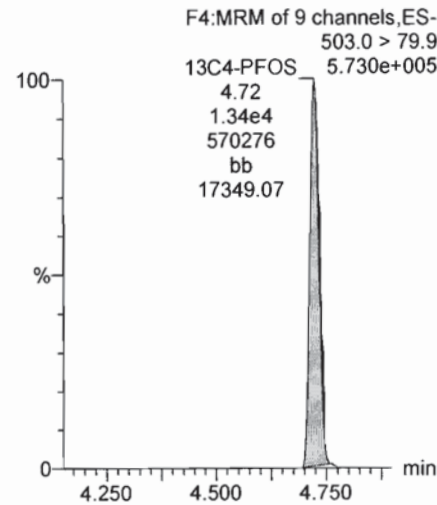
**13C4-PFOS**



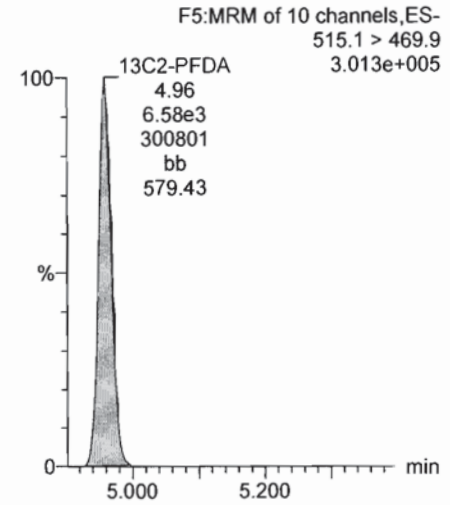
**13C2-PFOA**



**13C4-PFOS**



**13C2-PFDA**



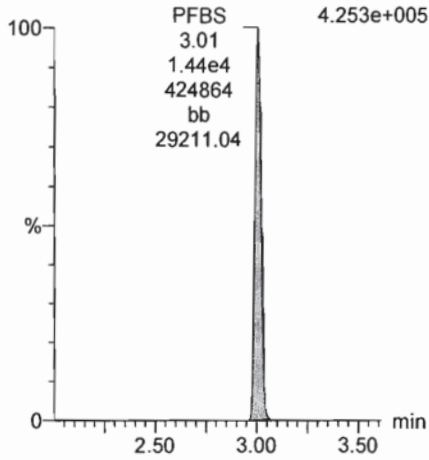
Dataset: U:\G1.PRO\Results\2017\171208G2\171208G2-CRV.qld

Last Altered: Sunday, December 10, 2017 22:49:55 Pacific Standard Time  
Printed: Monday, December 11, 2017 10:34:58 Pacific Standard Time

Name: 171208G2\_8, Date: 08-Dec-2017, Time: 17:23:47, ID: ST171208G2-7 PFC CS3 537 17K3027, Description: PFC CS3 537 17K3027

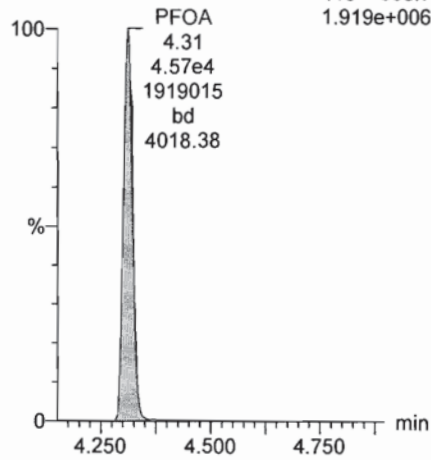
**PFBS**

F2:MRM of 5 channels,ES-  
299 > 79.7  
4.253e+005



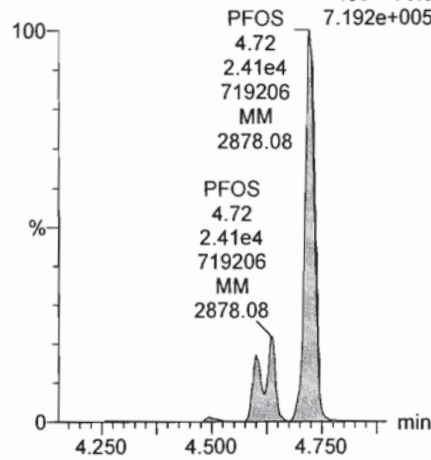
**PFOA**

F4:MRM of 9 channels,ES-  
413 > 368.7  
1.919e+006



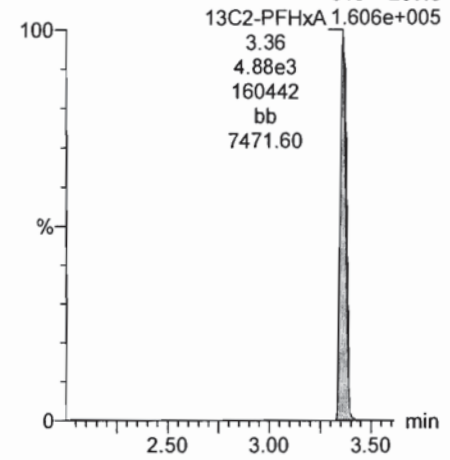
**PFOS**

F4:MRM of 9 channels,ES-  
499 > 79.9  
7.192e+005



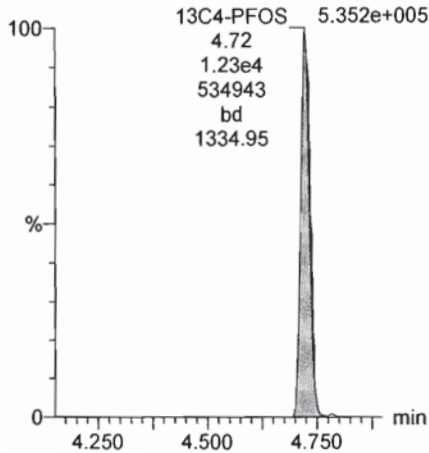
**13C2-PFHxA**

F2:MRM of 5 channels,ES-  
315 > 269.8  
1.606e+005



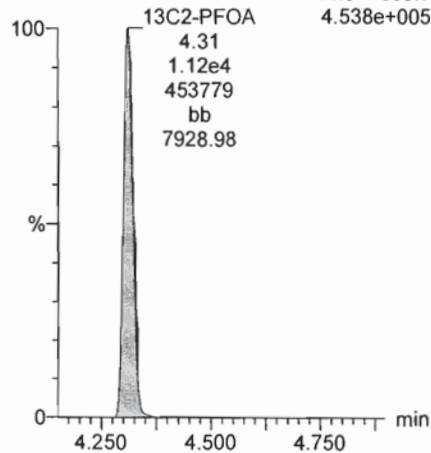
**13C4-PFOS**

F4:MRM of 9 channels,ES-  
503.0 > 79.9  
5.352e+005



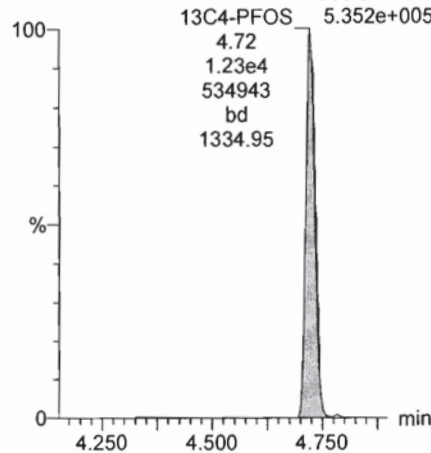
**13C2-PFOA**

F4:MRM of 9 channels,ES-  
414.9 > 369.7  
4.538e+005



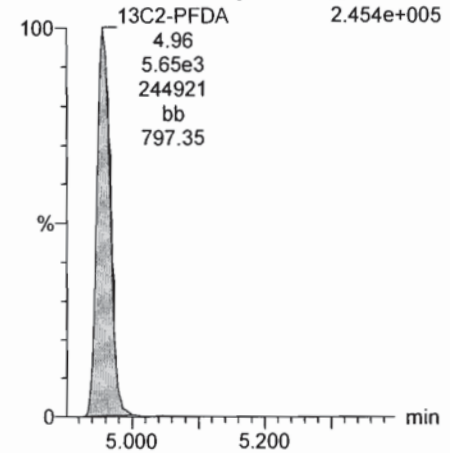
**13C4-PFOS**

F4:MRM of 9 channels,ES-  
503.0 > 79.9  
5.352e+005



**13C2-PFDA**

F5:MRM of 10 channels,ES-  
515.1 > 469.9  
2.454e+005



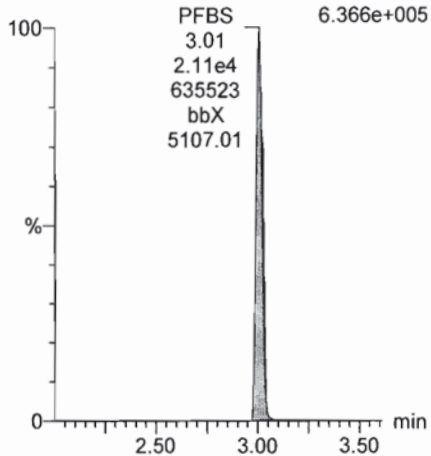
Dataset: U:\G1.PRO\Results\2017\171208G2\171208G2-CRV.qld

Last Altered: Sunday, December 10, 2017 22:49:55 Pacific Standard Time  
Printed: Monday, December 11, 2017 10:34:58 Pacific Standard Time

Name: 171208G2\_9, Date: 08-Dec-2017, Time: 17:36:15, ID: ST171208G2-8 PFC CS4 537 17K3028, Description: PFC CS4 537 17K3028

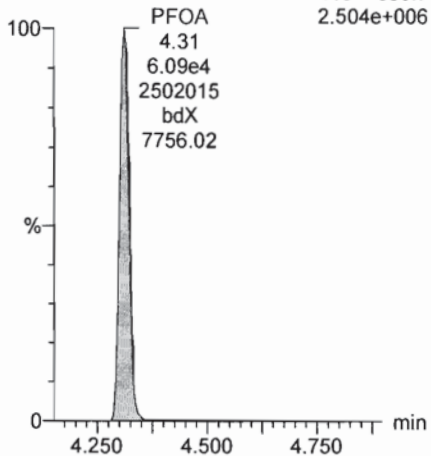
**PFBS**

F2:MRM of 5 channels,ES-  
299 > 79.7  
6.366e+005



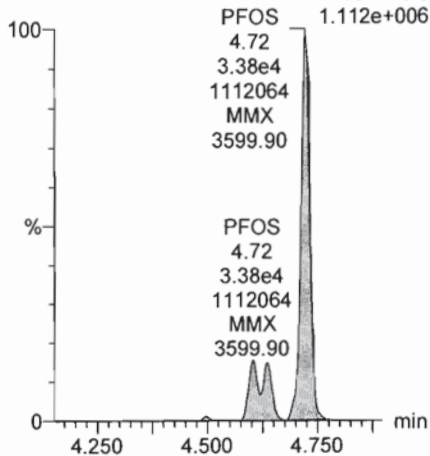
**PFOA**

F4:MRM of 9 channels,ES-  
413 > 368.7  
2.504e+006



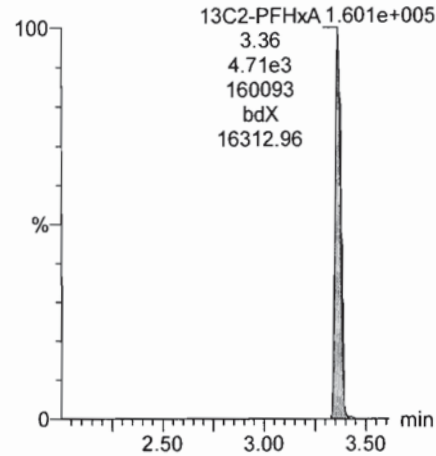
**PFOS**

F4:MRM of 9 channels,ES-  
499 > 79.9  
1.112e+006



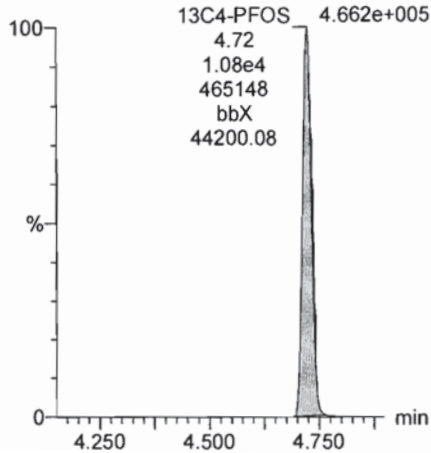
**13C2-PFHxA**

F2:MRM of 5 channels,ES-  
315 > 269.8  
1.601e+005



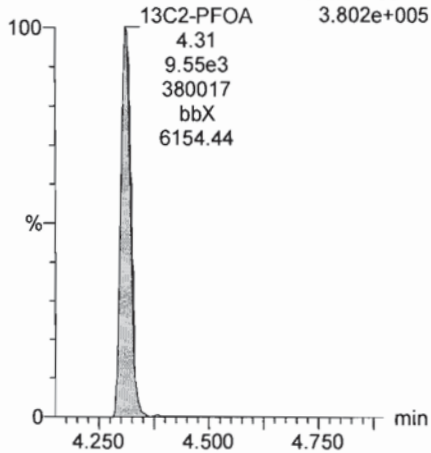
**13C4-PFOS**

F4:MRM of 9 channels,ES-  
503.0 > 79.9  
4.662e+005



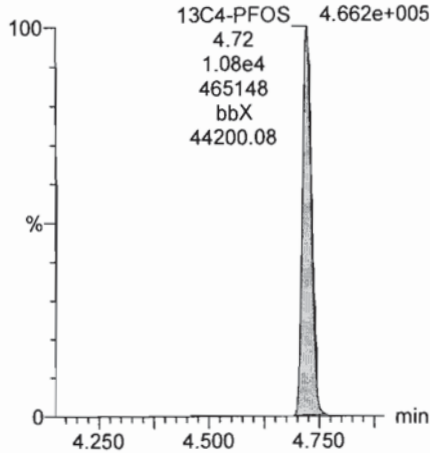
**13C2-PFOA**

F4:MRM of 9 channels,ES-  
414.9 > 369.7  
3.802e+005



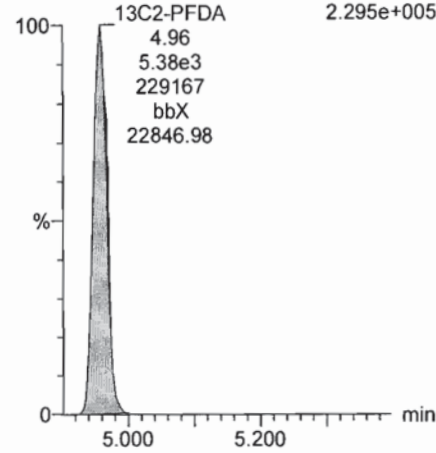
**13C4-PFOS**

F4:MRM of 9 channels,ES-  
503.0 > 79.9  
4.662e+005



**13C2-PFDA**

F5:MRM of 10 channels,ES-  
515.1 > 469.9  
2.295e+005



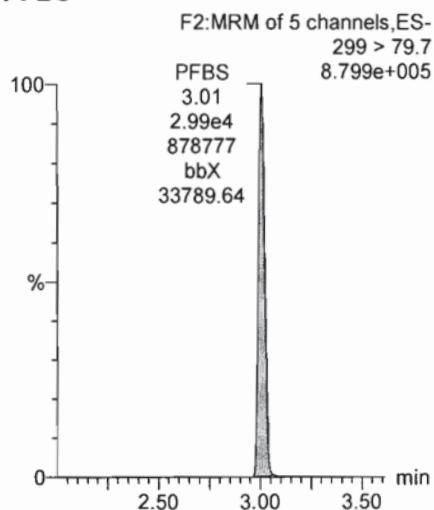
Dataset: U:\G1.PRO\Results\2017\171208G2\171208G2-CRV.qld

Last Altered: Sunday, December 10, 2017 22:49:55 Pacific Standard Time

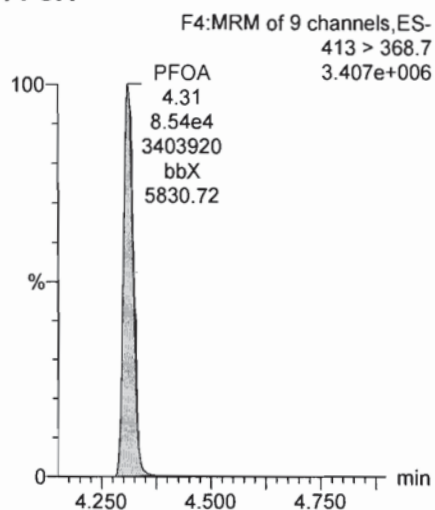
Printed: Monday, December 11, 2017 10:34:58 Pacific Standard Time

Name: 171208G2\_10, Date: 08-Dec-2017, Time: 17:48:42, ID: ST171208G2-9 PFC CS5 537 17K3029, Description: PFC CS5 537 17K3029

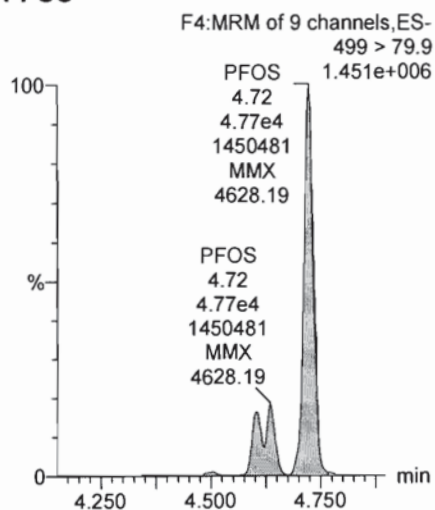
PFBS



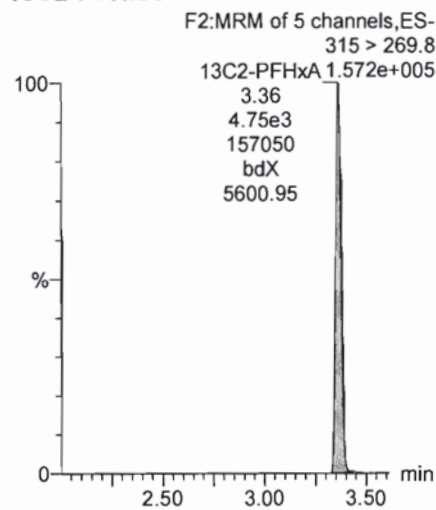
PFOA



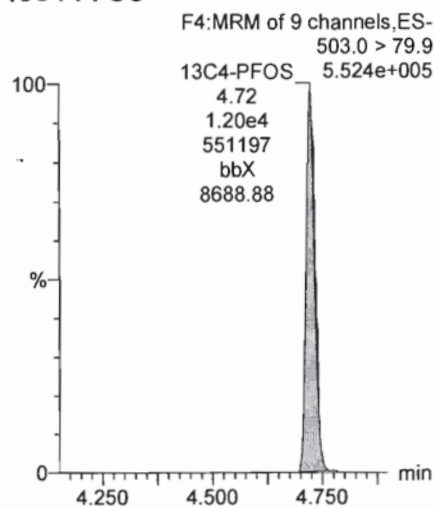
PFOS



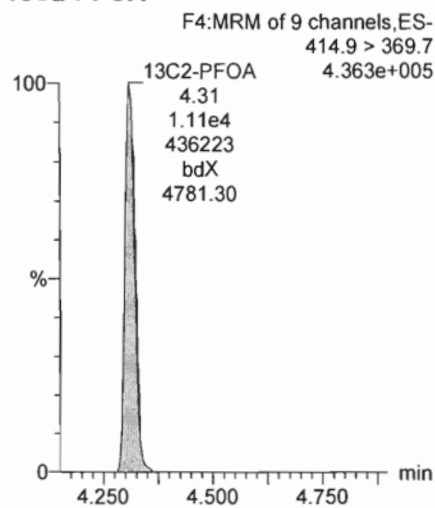
13C2-PFHxA



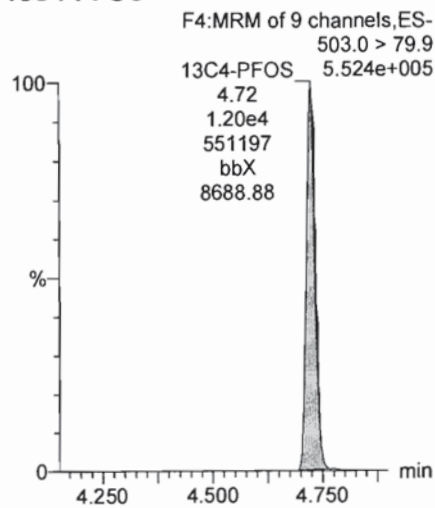
13C4-PFOS



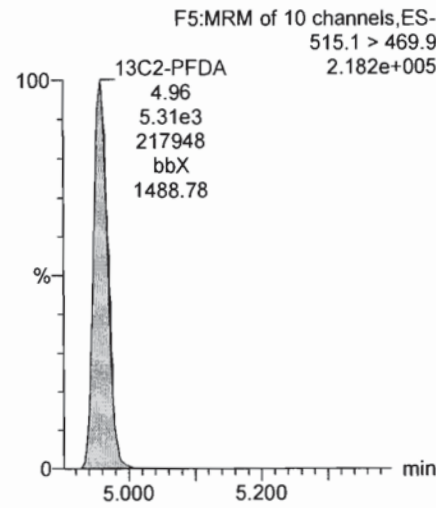
13C2-PFOA



13C4-PFOS



13C2-PFDA



Dataset: U:\G1.PRO\Results\2017\171208G2\171208G2-12.qld

Last Altered: Monday, December 11, 2017 10:41:12 Pacific Standard Time

Printed: Monday, December 11, 2017 10:41:34 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS\_DW\_L3\_1126.mdb 27 Nov 2017 14:32:15

Calibration: U:\G1.PRO\CurveDB\C18\_537\_Q1\_12-08-17\_L3.cdb 10 Dec 2017 22:49:55

Name: 171208G2\_12, Date: 08-Dec-2017, Time: 18:13:34, ID: ICV171208G2-1 PFC ICV 537 17K3030, Description: PFC ICV 537 17K3030

#	Name	Trace	Area	IS Area	RRF	wt/vol	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	299 > 79.7	3.46e3	1.15e4		1.0000	3.03	3.01	8.65	10.8	108.1
2	2 PFOA	413 > 368.7	8.56e3	1.03e4		1.0000	4.31	4.31	8.35	10.3	102.8
3	3 PFOS	499 > 79.9	5.12e3	1.15e4		1.0000	4.73	4.72	12.8	10.7	106.5
4	4 13C2-PFHxA	315 > 269.8	4.62e3	1.03e4	0.443	1.0000	3.37	3.36	4.50	10.2	101.6
5	5 13C2-PFDA	515.1 > 469.9	5.52e3	1.03e4	0.509	1.0000	4.94	4.96	5.38	10.6	105.6
6	6 13C2-PFOA	414.9 > 369.7	1.03e4	1.03e4	1.000	1.0000	4.41	4.31	10.0	10.0	100.0
7	7 13C4-PFOS	503.0 > 79.9	1.15e4	1.15e4	1.000	1.0000	4.81	4.73	28.7	28.7	100.0

70-130  
↓

*dm* 12/11/17

*JHA* 12/11/2017

Dataset: U:\G1.PRO\Results\2017\171208G2\171208G2-12.qld

Last Altered: Monday, December 11, 2017 10:41:12 Pacific Standard Time

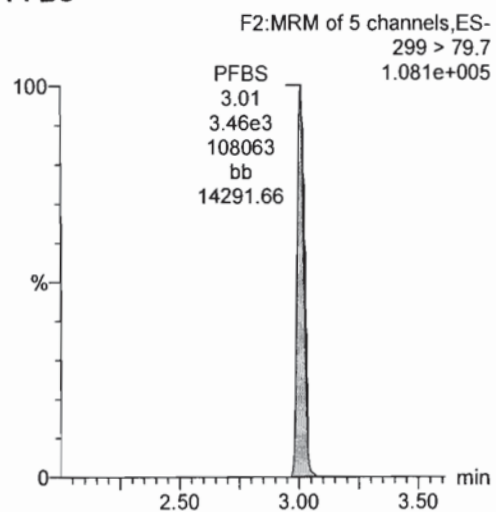
Printed: Monday, December 11, 2017 10:41:34 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS\_DW\_L3\_1126.mdb 27 Nov 2017 14:32:15

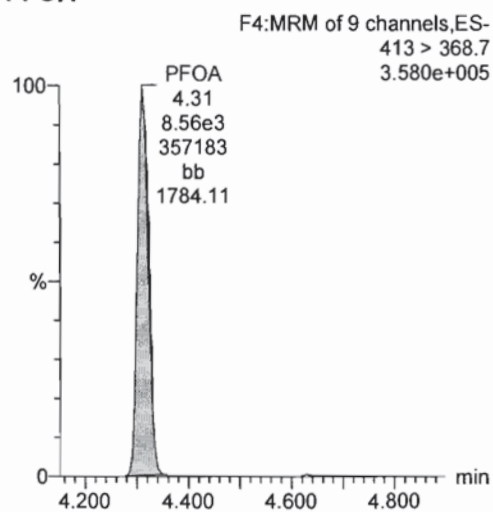
Calibration: U:\G1.PRO\CurveDB\C18\_537\_Q1\_12-08-17\_L3.cdb 10 Dec 2017 22:49:55

Name: 171208G2\_12, Date: 08-Dec-2017, Time: 18:13:34, ID: ICV171208G2-1 PFC ICV 537 17K3030, Description: PFC ICV 537 17K3030

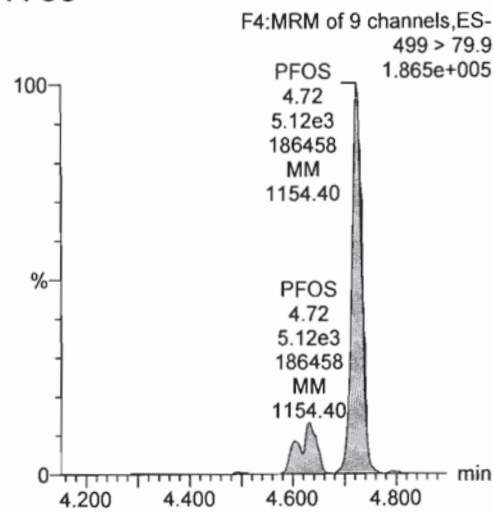
PFBS



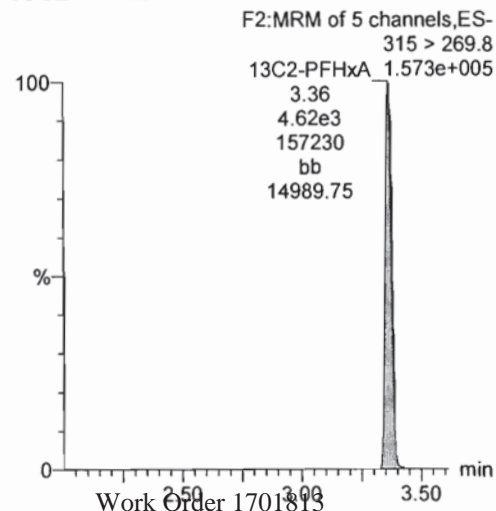
PFOA



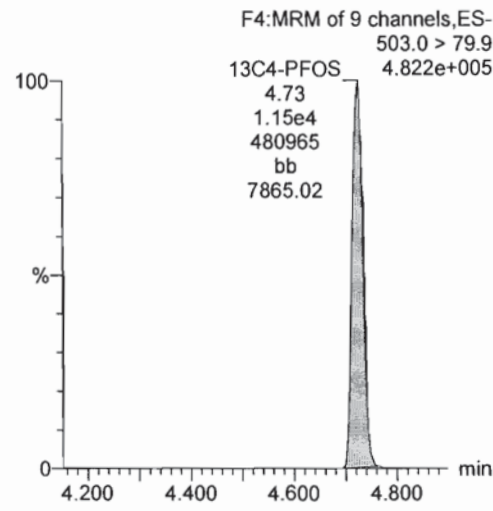
PFOS



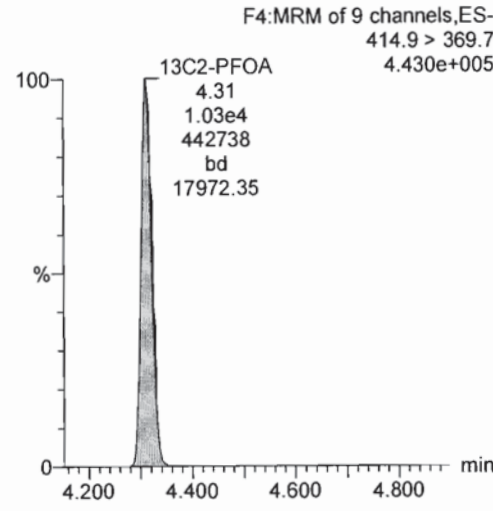
13C2-PFHxA



13C4-PFOS



13C2-PFOA



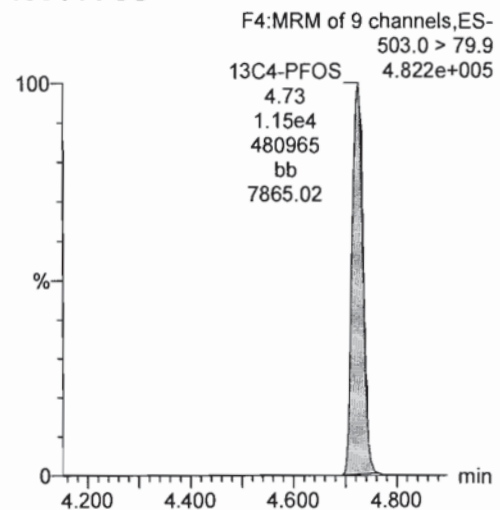
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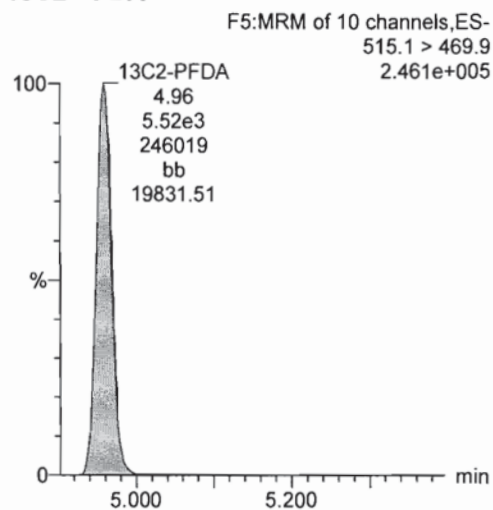
Printed: Monday, December 11, 2017 10:41:34 Pacific Standard Time

Name: 171208G2\_12, Date: 08-Dec-2017, Time: 18:13:34, ID: ICV171208G2-1 PFC ICV 537 17K3030, Description: PFC ICV 537 17K3030

13C4-PFOS



13C2-PFDA









Results

Contract_ID	DO_CTO _Number	Phase	Installation_ID	GC_ Column_ Type	Analysis_ Result_Typ e	Result_ Narrative	QC_ Control_ Limit_ Code	QC_ Accuracy_ Upper	QC_ Accuracy_ Lower	Control_L imit_ Date	QC_ Narrative	MDL	Detection _Limit	QSM_ Version	DL	LOD	LOQ	SDG	Analysis_ Batch
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	0.429	4.84	9.68	1701813	S7L0022
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	1.05	4.84	9.68	1701813	S7L0022
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	1.01	4.84	9.68	1701813	S7L0022
N6247016D9000	0008		CHERRY_POINT_MCAS	PR			SLSA	130	70					5.1				1701813	S7L0022
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	0.422	4.76	9.52	1701813	S7L0022
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	1.03	4.76	9.52	1701813	S7L0022
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	0.990	4.76	9.52	1701813	S7L0022
N6247016D9000	0008		CHERRY_POINT_MCAS	PR			SLSA	130	70					5.1				1701813	S7L0022
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	0.430	4.86	9.71	1701813	S7L0022
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	1.05	4.86	9.71	1701813	S7L0022
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	1.01	4.86	9.71	1701813	S7L0022
N6247016D9000	0008		CHERRY_POINT_MCAS	PR			SLSA	130	70					5.1				1701813	S7L0022
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	0.436	4.92	9.85	1701813	S7L0022
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	1.06	4.92	9.85	1701813	S7L0022
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	1.02	4.92	9.85	1701813	S7L0022
N6247016D9000	0008		CHERRY_POINT_MCAS	PR			SLSA	130	70					5.1				1701813	S7L0022
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	0.434	4.89	9.79	1701813	S7L0022
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	1.06	4.89	9.79	1701813	S7L0022
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	1.02	4.89	9.79	1701813	S7L0022
N6247016D9000	0008		CHERRY_POINT_MCAS	PR			SLSA	130	70					5.1				1701813	S7L0022
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	0.439	4.96	9.91	1701813	S7L0022
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	1.07	4.96	9.91	1701813	S7L0022
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	1.03	4.96	9.91	1701813	S7L0022
N6247016D9000	0008		CHERRY_POINT_MCAS	PR			SLSA	130	70					5.1				1701813	S7L0022
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	0.429	4.84	9.68	1701813	S7L0022
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	1.05	4.84	9.68	1701813	S7L0022
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	1.01	4.84	9.68	1701813	S7L0022
N6247016D9000	0008		CHERRY_POINT_MCAS	PR			SLSA	130	70					5.1				1701813	S7L0022
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	0.444	5.01	10.0	1701813	S7L0022
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	1.08	5.01	10.0	1701813	S7L0022
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N6247016D9000	0008		CHERRY_POINT_MCAS	PR			SLSA	130	70					5.1				1701813	S7L0022
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	0.434	4.90	9.81	1701813	S7L0022
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	1.06	4.90	9.81	1701813	S7L0022
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	1.02	4.90	9.81	1701813	S7L0022
N6247016D9000	0008		CHERRY_POINT_MCAS	PR			SLSA	130	70					5.1				1701813	S7L0022
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	0.422	4.76	9.52	1701813	S7L0022
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	1.03	4.76	9.52	1701813	S7L0022
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	0.990	4.76	9.52	1701813	S7L0022
N6247016D9000	0008		CHERRY_POINT_MCAS	PR			SLSA	130	70					5.1				1701813	S7L0022
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	0.430	4.85	9.71	1701813	S7L0022
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	1.05	4.85	9.71	1701813	S7L0022
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	1.01	4.85	9.71	1701813	S7L0022
N6247016D9000	0008		CHERRY_POINT_MCAS	PR			SLSA	130	70					5.1				1701813	S7L0022
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	0.427	4.82	9.63	1701813	S7L0022
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	1.04	4.82	9.63	1701813	S7L0022
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	1.00	4.82	9.63	1701813	S7L0022
N6247016D9000	0008		CHERRY_POINT_MCAS	PR			SLSA	130	70					5.1				1701813	S7L0022
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	0.430	4.85	9.70	1701813	S7L0022
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	1.05	4.85	9.70	1701813	S7L0022
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	1.01	4.85	9.70	1701813	S7L0022
N6247016D9000	0008		CHERRY_POINT_MCAS	PR			SLSA	130	70					5.1				1701813	S7L0022
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	0.429	4.84	9.68	1701813	S7L0022
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	1.05	4.84	9.68	1701813	S7L0022
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	1.01	4.84	9.68	1701813	S7L0022
N6247016D9000	0008		CHERRY_POINT_MCAS	PR			SLSA	130	70					5.1				1701813	S7L0022
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	0.430	4.86	9.71	1701813	S7L0022
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	1.05	4.86	9.71	1701813	S7L0022



## Results

Contract_ID	DO_CTO _Number	Phase	Installation_ID	Leachate _Time	Extraction_ Date	Extraction_ Time	Analysis_ Date	Analysis_ Time	Lab_Sample_ID	Dilution	Run_ Number	Percent Moisture	Percent_ Lipid	Chem_Name	Analyte_ID	Analyte_ Value	Original_ Analyte_ Value	Result_Uni ts	Lab_Qual ifier	Validator_ Qualifier
N6247016D9000	0008		CHERRY_POINT_MCAS		20171205	14:15:00	20171208	14:01:00	1701813-15	1	-999			Perfluorooctane Sulfonate (PFOS)	1763-23-1	4.86	NG_L	U		
N6247016D9000	0008		CHERRY_POINT_MCAS		20171205	14:15:00	20171208	14:01:00	1701813-15	1	-999			13C2-PFHxA	13C2-PFHxA	99.0	PCT_REC			
N6247016D9000	0008		CHERRY_POINT_MCAS		20171205	14:15:00	20171208	14:13:00	1701813-16	1	-999			Perfluorobutanesulfonic acid (PFBS)	375-73-5	4.90	NG_L	U		
N6247016D9000	0008		CHERRY_POINT_MCAS		20171205	14:15:00	20171208	14:13:00	1701813-16	1	-999			Perfluorooctanoic acid (PFOA)	335-67-1	4.90	NG_L	U		
N6247016D9000	0008		CHERRY_POINT_MCAS		20171205	14:15:00	20171208	14:13:00	1701813-16	1	-999			Perfluorooctane Sulfonate (PFOS)	1763-23-1	4.90	NG_L	U		
N6247016D9000	0008		CHERRY_POINT_MCAS		20171205	14:15:00	20171208	14:13:00	1701813-16	1	-999			13C2-PFHxA	13C2-PFHxA	109	PCT_REC			
N6247016D9000	0008		CHERRY_POINT_MCAS		20171205	14:15:00	20171208	14:26:00	1701813-17	1	-999			Perfluorobutanesulfonic acid (PFBS)	375-73-5	4.92	NG_L	U		
N6247016D9000	0008		CHERRY_POINT_MCAS		20171205	14:15:00	20171208	14:26:00	1701813-17	1	-999			Perfluorooctanoic acid (PFOA)	335-67-1	4.92	NG_L	U		
N6247016D9000	0008		CHERRY_POINT_MCAS		20171205	14:15:00	20171208	14:26:00	1701813-17	1	-999			Perfluorooctane Sulfonate (PFOS)	1763-23-1	4.92	NG_L	U		
N6247016D9000	0008		CHERRY_POINT_MCAS		20171205	14:15:00	20171208	14:26:00	1701813-17	1	-999			13C2-PFHxA	13C2-PFHxA	97.4	PCT_REC			
N6247016D9000	0008		CHERRY_POINT_MCAS		20171205	14:15:00	20171208	14:38:00	1701813-18	1	-999			Perfluorobutanesulfonic acid (PFBS)	375-73-5	4.73	NG_L	U		
N6247016D9000	0008		CHERRY_POINT_MCAS		20171205	14:15:00	20171208	14:38:00	1701813-18	1	-999			Perfluorooctanoic acid (PFOA)	335-67-1	4.73	NG_L	U		
N6247016D9000	0008		CHERRY_POINT_MCAS		20171205	14:15:00	20171208	14:38:00	1701813-18	1	-999			Perfluorooctane Sulfonate (PFOS)	1763-23-1	4.73	NG_L	U		
N6247016D9000	0008		CHERRY_POINT_MCAS		20171205	14:15:00	20171208	14:38:00	1701813-18	1	-999			13C2-PFHxA	13C2-PFHxA	100	PCT_REC			
N6247016D9000	0008		CHERRY_POINT_MCAS		20171205	14:15:00	20171208	14:51:00	1701813-19	1	-999			Perfluorobutanesulfonic acid (PFBS)	375-73-5	5.27	NG_L	U		
N6247016D9000	0008		CHERRY_POINT_MCAS		20171205	14:15:00	20171208	14:51:00	1701813-19	1	-999			Perfluorooctanoic acid (PFOA)	335-67-1	5.27	NG_L	U		
N6247016D9000	0008		CHERRY_POINT_MCAS		20171205	14:15:00	20171208	14:51:00	1701813-19	1	-999			Perfluorooctane Sulfonate (PFOS)	1763-23-1	5.27	NG_L	U		
N6247016D9000	0008		CHERRY_POINT_MCAS		20171205	14:15:00	20171211	12:28:00	1701813-20	1	-999			Perfluorobutanesulfonic acid (PFBS)	375-73-5	4.72	NG_L	U		
N6247016D9000	0008		CHERRY_POINT_MCAS		20171205	14:15:00	20171211	12:28:00	1701813-20	1	-999			Perfluorooctanoic acid (PFOA)	335-67-1	4.72	NG_L	U		
N6247016D9000	0008		CHERRY_POINT_MCAS		20171205	14:15:00	20171211	12:28:00	1701813-20	1	-999			Perfluorooctane Sulfonate (PFOS)	1763-23-1	4.72	NG_L	U		
N6247016D9000	0008		CHERRY_POINT_MCAS		20171205	14:15:00	20171211	12:28:00	1701813-20	1	-999			13C2-PFHxA	13C2-PFHxA	103	PCT_REC			
N6247016D9000	0008		CHERRY_POINT_MCAS		20171205	14:15:00	20171208	00:09:00	B7L0016-BLK1	1	-999			Perfluorobutanesulfonic acid (PFBS)	375-73-5	5.00	NG_L	U		
N6247016D9000	0008		CHERRY_POINT_MCAS		20171205	14:15:00	20171208	00:09:00	B7L0016-BLK1	1	-999			Perfluorooctanoic acid (PFOA)	335-67-1	5.00	NG_L	U		
N6247016D9000	0008		CHERRY_POINT_MCAS		20171205	14:15:00	20171208	00:09:00	B7L0016-BLK1	1	-999			Perfluorooctane Sulfonate (PFOS)	1763-23-1	5.00	NG_L	U		
N6247016D9000	0008		CHERRY_POINT_MCAS		20171205	14:15:00	20171208	00:09:00	B7L0016-BLK1	1	-999			13C2-PFHxA	13C2-PFHxA	95.1	PCT_REC			
N6247016D9000	0008		CHERRY_POINT_MCAS		20171205	14:15:00	20171207	23:56:00	B7L0016-BS1	1	-999			Perfluorobutanesulfonic acid (PFBS)	375-73-5	37.2	NG_L			
N6247016D9000	0008		CHERRY_POINT_MCAS		20171205	14:15:00	20171207	23:56:00	B7L0016-BS1	1	-999			Perfluorooctanoic acid (PFOA)	335-67-1	44.9	NG_L			
N6247016D9000	0008		CHERRY_POINT_MCAS		20171205	14:15:00	20171207	23:56:00	B7L0016-BS1	1	-999			Perfluorooctane Sulfonate (PFOS)	1763-23-1	37.0	NG_L			
N6247016D9000	0008		CHERRY_POINT_MCAS		20171205	14:15:00	20171207	23:56:00	B7L0016-BS1	1	-999			13C2-PFHxA	13C2-PFHxA	99.5	PCT_REC			
N6247016D9000	0008		CHERRY_POINT_MCAS		20171205	14:15:00	20171208	00:21:00	B7L0016-BSD1	1	-999			Perfluorobutanesulfonic acid (PFBS)	375-73-5	33.4	NG_L			
N6247016D9000	0008		CHERRY_POINT_MCAS		20171205	14:15:00	20171208	00:21:00	B7L0016-BSD1	1	-999			Perfluorooctanoic acid (PFOA)	335-67-1	46.4	NG_L			
N6247016D9000	0008		CHERRY_POINT_MCAS		20171205	14:15:00	20171208	00:21:00	B7L0016-BSD1	1	-999			Perfluorooctane Sulfonate (PFOS)	1763-23-1	36.7	NG_L			
N6247016D9000	0008		CHERRY_POINT_MCAS		20171205	14:15:00	20171208	00:21:00	B7L0016-BSD1	1	-999			13C2-PFHxA	13C2-PFHxA	109	PCT_REC			

Results

Contract_ID	DO_CTO _Number	Phase	Installation_ID	GC_ Column_ Type	Analysis_ Result_Typ e	Result_ Narrative	QC_ Control_ Limit_Code	QC_ Accuracy_ Upper	QC_ Accuracy_ Lower	Control_L imit_ Date	QC_ Narrative	MDL	Detection _Limit	QSM_ Version	DL	LOD	LOQ	SDG	Analysis_ Batch
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	1.01	4.86	9.71	1701813	S7L0022
N6247016D9000	0008		CHERRY_POINT_MCAS	PR			SLSA	130	70					5.1				1701813	S7L0022
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	0.435	4.90	9.81	1701813	S7L0022
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	1.06	4.90	9.81	1701813	S7L0022
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	1.02	4.90	9.81	1701813	S7L0022
N6247016D9000	0008		CHERRY_POINT_MCAS	PR			SLSA	130	70					5.1				1701813	S7L0022
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	0.436	4.92	9.83	1701813	S7L0022
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	1.06	4.92	9.83	1701813	S7L0022
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	1.02	4.92	9.83	1701813	S7L0022
N6247016D9000	0008		CHERRY_POINT_MCAS	PR			SLSA	130	70					5.1				1701813	S7L0022
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	0.419	4.73	9.46	1701813	S7L0022
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	1.02	4.73	9.46	1701813	S7L0022
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	0.984	4.73	9.46	1701813	S7L0022
N6247016D9000	0008		CHERRY_POINT_MCAS	PR			SLSA	130	70					5.1				1701813	S7L0022
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	0.467	5.27	10.5	1701813	S7L0022
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	1.14	5.27	10.5	1701813	S7L0022
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	1.10	5.27	10.5	1701813	S7L0022
N6247016D9000	0008		CHERRY_POINT_MCAS	PR			SLSA	130	70					5.1				1701813	S7L0022
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	0.418	4.72	9.44	1701813	S7L0022
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	1.02	4.72	9.44	1701813	S7L0022
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	0.982	4.72	9.44	1701813	S7L0022
N6247016D9000	0008		CHERRY_POINT_MCAS	PR			SLSA	130	70					5.1				1701813	S7L0022
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	0.443	5.00	10.0	1701813	S7L0022
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	1.08	5.00	10.0	1701813	S7L0022
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG									5.1	1.04	5.00	10.0	1701813	S7L0022
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	SUR		SLSA	130	70					5.1				1701813	S7L0022
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG		LSA	130	70					5.1	0.443	5.00	10.0	1701813	S7L0022
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG		LSA	130	70					5.1	1.08	5.00	10.0	1701813	S7L0022
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG		LSA	130	70					5.1	1.04	5.00	10.0	1701813	S7L0022
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	SUR		LSA	130	70					5.1				1701813	S7L0022
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG		LSA	130	70					5.1	0.443	5.00	10.0	1701813	S7L0022
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG		LSA	130	70					5.1	1.08	5.00	10.0	1701813	S7L0022
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	TRG		LSA	130	70					5.1	1.04	5.00	10.0	1701813	S7L0022
N6247016D9000	0008		CHERRY_POINT_MCAS	PR	SUR		LSA	130	70					5.1				1701813	S7L0022

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

Client: CH2M HILL, Inc., Corvallis, Oregon  
 SDG: 1701813  
 Laboratory: Vista Analytical Laboratory, El Dorado Hills, California  
 Site: MCOLF Atlantic, North Carolina  
 Date: January 13, 2018

PFCs			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	CH-AT-2RW20-1117	1701813-01	Water
2	CH-AT-2FB20-1117	1701813-02	Water
3	CH-AT-2RW21-1117	1701813-03	Water
4	CH-AT-2FB21-1117	1701813-04	Water
5	CH-AT-2RW22-1117	1701813-05	Water
6	CH-AT-2FB22-1117	1701813-06	Water
7	CH-AT-2RW23-1117	1701813-07	Water
8	CH-AT-2FB23-1117	1701813-08	Water
9	CH-AT-2RW24-1117	1701813-09	Water
10	CH-AT-2FB24-1117	1701813-10	Water
11	CH-AT-2RW25-1117	1701813-11	Water
12	CH-AT-2FB25-1117	1701813-12	Water
13	CH-AT-2RW26-1117	1701813-13	Water
14	CH-AT-2FB26-1117	1701813-14	Water
15	CH-AT-2RW27-1117	1701813-15	Water
16	CH-AT-2FB27-1117	1701813-16	Water
17	CH-AT-2RW28-1117	1701813-17	Water
18	CH-AT-2FB28-1117	1701813-18	Water
19	CH-AT-2RW29-1117	1701813-19	Water
20	CH-AT-2FB29-1117	1701813-20	Water

A full data validation was performed on the analytical data for ten water samples and ten aqueous field blank samples collected on November 29, 2017 by CH2M HILL at the MCOLF Atlantic site in Atlantic, North Carolina. The samples were analyzed under the EPA Method “Determination of Selected Perfluorinated Alkyl Acids in Drinking Water by Solid Phase Extraction and Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS)”.

Specific method references are as follows:

Analysis  
PFCs

Method References  
USEPA Method 537

The data have been validated according to the protocols and quality control (QC) requirements of the analytical method, and the U.S. Department of Defense (DoD) Quality Systems Manual (QSM),

Version 5.0 (July 2013) and the USEPA National Functional Guidelines for Organic Data Review as follows:

- The USEPA “Contract Laboratories Program National Functional Guidelines for Organic Superfund Methods Data Review,” January 2017;
- and the reviewer's professional judgment.

The following data quality indicators were reviewed for this report:

### ***Organics***

- Date Completeness, Case Narrative & Custody Documentation
- Holding times
- Liquid Chromatography/Mass Spectrometry (LC/MS) Tuning
- Initial and continuing calibration summaries
- Method blank and field QC blank contamination
- Surrogate Spike recoveries
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) recoveries
- Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD) recoveries
- Internal standard area and retention time summary forms
- Target Compound Identification
- Compound Quantitation
- Field Duplicate sample precision

A full (Level IV) data validation was performed with this review including a recalculation of 10% of the detected results in the samples.

### **Data Usability Assessment**

There were no rejections of data.

Overall the data is acceptable for the intended purposes. There were no qualifications.

### **Perfluorinated Compounds (PFCs)**

#### **Data Completeness, Case Narrative & Custody Documentation**

- The case narrative and chain-of-custody documentation were included in the data package as required. All criteria were met.

#### **Holding Times**

- All samples were extracted within 14 days for water samples and analyzed within 28 days.



### LC/MS Tuning

- All criteria were met.

### Initial Calibration

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

### Continuing Calibration

- All percent difference (%D) and RRF criteria were met.

### Method Blank

- The method blanks were free of contamination.

### Field QC Blank

- Field QC samples were free of contamination.

Blank ID	Compound	Conc. ng/L	Qualifier	Affected Samples
CH-AT-2FB20-1117	None - ND	-	-	-
CH-AT-2FB21-1117	None - ND	-	-	-
CH-AT-2FB22-1117	None - ND	-	-	-
CH-AT-2FB23-1117	None - ND	-	-	-
CH-AT-2FB24-1117	None - ND	-	-	-
CH-AT-2FB25-1117	None - ND	-	-	-
CH-AT-2FB26-1117	None - ND	-	-	-
CH-AT-2FB27-1117	None - ND	-	-	-
CH-AT-2FB28-1117	None - ND	-	-	-
CH-AT-2FB29-1117	None - ND	-	-	-

### Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate %R values.

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

- MS/MSD samples were not analyzed.

**Laboratory Control Samples**

- The LCS samples exhibited acceptable percent recoveries (%R).

**Internal Standard (IS) Area Performance**

- All internal standards met response and retention time (RT) criteria.

**Target Compound Identification**

- All mass spectra and quantitation criteria were met.

**Compound Quantitation**

- All criteria were met.

**Field Duplicate Sample Precision**

- Field duplicate samples were not collected.

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

Signed: Nancy Weaver  
Nancy Weaver  
Senior Chemist

Dated: 1/15/18

<b>Data Qualifier</b>	<b>Definition</b>
U	The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
J	The analyte is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
NJ	The analysis has been "tentatively identified" or "presumptively" as present and the associated numerical value is the estimated concentration in the samples.
UJ	The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the samples.



**Sample ID: CH-AT-2RW20-1117**

**EPA Method 537**

Client Data		Laboratory Data	
Name: CH2M Hill	Matrix: Drinking Water	Lab Sample: 1701813-01	Column: BEH C18
Project: CTO-08/MCOLF ATLANTIC PFAS INV.	Date Collected: 29-Nov-17 09:15	Date Received: 01-Dec-17 09:40	

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.429	4.84	9.68		B7L0016	05-Dec-17	0.258 L	08-Dec-17 00:33	1
PFOA	ND	1.05	4.84	9.68		B7L0016	05-Dec-17	0.258 L	08-Dec-17 00:33	1
PFOS	ND	1.01	4.84	9.68		B7L0016	05-Dec-17	0.258 L	08-Dec-17 00:33	1
Labeled Standards	% Recovery	Limits								
13C2-PFHxA	106	70 - 130								

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

new 11,3,11,8

Sample ID: CH-AT-2FB20-1117												EPA Method 537			
Client Data				Laboratory Data											
Name:	CH2M Hill	Matrix:	Drinking Water	Lab Sample:	1701813-02	Batch	Extracted	Samp Size	Analyzed	Dilution	Column:	BEH C18			
Project:	CTO-08/MCOLF ATLANTIC PFAS INV.	Date Collected:	29-Nov-17 09:15	Date Received:	01-Dec-17 09:40										
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution					
PFBS	ND	0.422	4.76	9.52		B7L0016	05-Dec-17	0.263 L	08-Dec-17 00:46	1					
PFOA	ND	1.03	4.76	9.52		B7L0016	05-Dec-17	0.263 L	08-Dec-17 00:46	1					
PFOS	ND	0.990	4.76	9.52		B7L0016	05-Dec-17	0.263 L	08-Dec-17 00:46	1					
Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution						
13C2-PFHxA	SURR	105	70 - 130		B7L0016	05-Dec-17	0.263 L	08-Dec-17 00:46	1						

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

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

LOD - Limit of Detection  
LOQ - Limit of quantitation

DL - Detection Limit

170181318

**Sample ID: CH-AT-2RW21-1117**

**EPA Method 537**

Client Data		Laboratory Data	
Name:	CH2M Hill	Lab Sample:	1701813-03
Project:	CTO-08/MCOLF ATLANTIC PEAS INV.	Date Received:	01-Dec-17 09:40
Matrix:	Drinking Water	Column:	BEH C18
Date Collected:	29-Nov-17 09:27		

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.430	4.86	9.71		B7L0016	05-Dec-17	0.257 L	08-Dec-17 00:58	1
PFOA	ND	1.05	4.86	9.71		B7L0016	05-Dec-17	0.257 L	08-Dec-17 00:58	1
PFOS	ND	1.01	4.86	9.71		B7L0016	05-Dec-17	0.257 L	08-Dec-17 00:58	1
Labeled Standards	% Recovery	Limits								
13C2-PFHxA	100	70 - 130								

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

11, 3, 18

**Sample ID: CH-AT-2FB21-1117**

**EPA Method 537**

Client Data		Laboratory Data								
Name:	CH2M Hill	Lab Sample:	1701813-04							
Project:	CTO-08/MCOLF ATLANTIC PFAS INV.	Date Received:	01-Dec-17 09:40							
Matrix:	Drinking Water	Column:	BEH C18							
Date Collected:	29-Nov-17 09:27									
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.436	4.92	9.85		B7L0016	05-Dec-17	0.254 L	08-Dec-17 01:11	1
PFOA	ND	1.06	4.92	9.85		B7L0016	05-Dec-17	0.254 L	08-Dec-17 01:11	1
PFOS	ND	1.02	4.92	9.85		B7L0016	05-Dec-17	0.254 L	08-Dec-17 01:11	1
Labeled Standards	Type	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
13C2-PFHxA	SURR	70 - 130			B7L0016	05-Dec-17	0.254 L	08-Dec-17 01:11	1	

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

see 1131.8



**Sample ID: CH-AT-2RW22-1117**

**EPA Method 537**

Client Data		Laboratory Data								
Name:	CH2M Hill	Lab Sample:	1701813-05							
Project:	CTO-08/MCOLF ATLANTIC PEAS INV.	Date Received:	01-Dec-17 09:40							
Matrix:	Drinking Water	Column:	BEH C18							
Date Collected:	29-Nov-17 10:07									
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.434	4.89	9.79		B7L0016	05-Dec-17	0.255 L	08-Dec-17 01:23	1
PFOA	ND	1.06	4.89	9.79		B7L0016	05-Dec-17	0.255 L	08-Dec-17 01:23	1
PFOS	ND	1.02	4.89	9.79		B7L0016	05-Dec-17	0.255 L	08-Dec-17 01:23	1
Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
13C2-PFHxA	SURR	108	70 - 130		B7L0016	05-Dec-17	0.255 L	08-Dec-17 01:23	1	

DL - Detection Limit

LOD - Limit of Detection

LOQ - Limit of Quantitation

LCL-UCL- Lower control limit - upper control limit

Results reported to the DL

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

Only the linear isomer is reported for all other analytes.

1701813

**Sample ID: CH-AT-2FB22-1117**

**EPA Method 537**

Client Data		Laboratory Data								
Name:	CH2M Hill	Lab Sample:	1701813-06	Column:	BEH C18					
Project:	CTO-08/MCOLF ATLANTIC PFAS INV.	Date Collected:	29-Nov-17 10:07	Date Received:	01-Dec-17 09:40					
		Matrix:	Drinking Water							
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.439	4.96	9.91		B7L0016	05-Dec-17	0.252 L	08-Dec-17 01:36	1
PFOA	ND	1.07	4.96	9.91		B7L0016	05-Dec-17	0.252 L	08-Dec-17 01:36	1
PFOS	ND	1.03	4.96	9.91		B7L0016	05-Dec-17	0.252 L	08-Dec-17 01:36	1
Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
13C2-PFHxA	SURR	106	70 - 130		B7L0016	05-Dec-17	0.252 L	08-Dec-17 01:36	1	

DL - Detection Limit

LOD - Limit of Detection

LOQ - Limit of Quantitation

LCL-UCL- Lower control limit - upper control limit

Results reported to the DL.

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

Only the linear isomer is reported for all other analytes

new 11.3.1.8

Sample ID: CH-AT-2RW23-1117

EPA Method 537

Client Data		Laboratory Data	
Name:	CH2M Hill	Lab Sample:	1701813-07
Project:	CTO-08/MCOLF ATLANTIC PFAS INV.	Date Received:	01-Dec-17 09:40
Matrix:	Drinking Water	Column:	BEH C18
Date Collected:	29-Nov-17 10:46		

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.429	4.84	9.68		B7L0016	05-Dec-17	0.258 L	08-Dec-17 01:48	1
PFOA	ND	1.05	4.84	9.68		B7L0016	05-Dec-17	0.258 L	08-Dec-17 01:48	1
PFOS	ND	1.01	4.84	9.68		B7L0016	05-Dec-17	0.258 L	08-Dec-17 01:48	1
Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
13C2-PFHxA	SURR	100	70 - 130		B7L0016	05-Dec-17	0.258 L	08-Dec-17 01:48	1	

DL - Detection Limit  
 LOD - Limit of Detection  
 LOQ - Limit of Quantitation

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

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

new 11.31.18

**Sample ID: CH-AT-2FB23-1117**

**EPA Method 537**

Client Data		Laboratory Data								
Name:	CH2M Hill	Lab Sample:	1701813-08							
Project:	CTO-08/MCOLF ATLANTIC PFAS INV.	Date Received:	01-Dec-17 09:40							
Matrix:	Drinking Water	Column:	BEH C18							
Date Collected:	29-Nov-17 10:46									
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.444	5.01	10.0		B7L0016	05-Dec-17	0.249 L	08-Dec-17 02:01	1
PFOA	ND	1.08	5.01	10.0		B7L0016	05-Dec-17	0.249 L	08-Dec-17 02:01	1
PFOS	ND	1.04	5.01	10.0		B7L0016	05-Dec-17	0.249 L	08-Dec-17 02:01	1
Labeled Standards	Type	% Recovery		Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	105		70 - 130		B7L0016	05-Dec-17	0.249 L	08-Dec-17 02:01	1

DL - Detection Limit

LOD - Limit of Detection

LOQ - Limit of Quantitation

LCL-UCL - Lower control limit - upper control limit

Results reported to the DL

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

Only the linear isomer is reported for all other analytes

1701131.8

**Sample ID: CH-AT-2RW24-1117**

**EPA Method 537**

Client Data		Laboratory Data								
Name:	CH2M Hill	Lab Sample:	1701813-09							
Project:	CTO-08/MCOLF ATLANTIC PFAS INV.	Date Received:	01-Dec-17 09:40							
Matrix:	Drinking Water	Column:	BEH C18							
Date Collected:	29-Nov-17 13:12									
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.434	4.90	9.81		B7L0016	05-Dec-17	0.255 L	08-Dec-17 12:46	1
PFOA	ND	1.06	4.90	9.81		B7L0016	05-Dec-17	0.255 L	08-Dec-17 12:46	1
PFOS	ND	1.02	4.90	9.81		B7L0016	05-Dec-17	0.255 L	08-Dec-17 12:46	1
Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
13C2-PFHxA	SURR	95.3	70 - 130		B7L0016	05-Dec-17	0.255 L	08-Dec-17 12:46	1	

DL - Detection Limit

LOD - Limit of Detection

LOQ - Limit of quantitation

LCL-UCL- Lower control limit - upper control limit

Results reported to the DL

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

Only the linear isomer is reported for all other analytes.

170181318

**Sample ID: CH-AT-2FB24-1117**

**EPA Method 537**

Client Data		Laboratory Data								
Name:	CH2M Hill	Lab Sample:	1701813-10	Column:	BEH C18					
Project:	CTO-08/MCOLF ATLANTIC PFAS INV.	Date Collected:	29-Nov-17 13:12	Date Received:	01-Dec-17 09:40					
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.422	4.76	9.52		B7L0016	05-Dec-17	0.263 L	11-Dec-17 12:15	1
PFOA	ND	1.03	4.76	9.52		B7L0016	05-Dec-17	0.263 L	11-Dec-17 12:15	1
PFOS	ND	0.990	4.76	9.52		B7L0016	05-Dec-17	0.263 L	11-Dec-17 12:15	1
Labeled Standards	% Recovery	Limits								
13C2-PFHxA	97.4	70 - 130								

DL - Detection Limit  
 LOD - Limit of Detection  
 LOQ - Limit of Quantitation

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

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

NW11.31.8

Sample ID: CH-AT-2RW25-1117		EPA Method 537													
Client Data		Laboratory Data													
Name:	CH2M Hill	Matrix:	Drinking Water	Lab Sample:	1701813-11	Batch:	05-Dec-17	Extracted:	05-Dec-17	Samp Size:	0.258 L	Analyzed:	08-Dec-17 13:11	Dilution:	1
Project:	CTO-08/MCOLF ATLANTIC PFAS INV.	Date Collected:	29-Nov-17 13:41	Date Received:	01-Dec-17 09:40	Batch:	05-Dec-17	Extracted:	05-Dec-17	Samp Size:	0.258 L	Analyzed:	08-Dec-17 13:11	Dilution:	1
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution					
PFBS	ND	0.430	4.85	9.71		B7L0016	05-Dec-17	0.258 L	08-Dec-17 13:11	1					
PFOA	ND	1.05	4.85	9.71		B7L0016	05-Dec-17	0.258 L	08-Dec-17 13:11	1					
PFOS	ND	1.01	4.85	9.71		B7L0016	05-Dec-17	0.258 L	08-Dec-17 13:11	1					
Labeled Standards	Type	% Recovery	Limits												
13C2-PFHxA	SURR	105	70 - 130												

DL - Detection Limit  
 LOD - Limit of Detection  
 LOQ - Limit of quantitation  
 LCL-UCL- Lower control limit - upper control limit  
 Results reported to the DL.

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

11,318

**Sample ID: CH-AT-2FB25-1117**

**EPA Method 537**

Client Data		Laboratory Data								
Name:	CH2M Hill	Lab Sample:	1701813-12							
Project:	CTO-08/MCOLF ATLANTIC PFAS INV.	Date Received:	01-Dec-17 09:40							
	Matrix: Drinking Water	Column:	BEH C18							
	Date Collected: 29-Nov-17 13:41									
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.427	4.82	9.63		B7L0016	05-Dec-17	0.260 L	08-Dec-17 13:24	1
PFOA	ND	1.04	4.82	9.63		B7L0016	05-Dec-17	0.260 L	08-Dec-17 13:24	1
PFOS	ND	1.00	4.82	9.63		B7L0016	05-Dec-17	0.260 L	08-Dec-17 13:24	1
Labeled Standards	Type	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
13C2-PFHxA	SURR	70 - 130			B7L0016	05-Dec-17	0.260 L	08-Dec-17 13:24	1	

DL - Detection Limit

LOD - Limit of Detection

LOQ - Limit of quantitation

LCL-UCL- Lower control limit - upper control limit

Results reported to the DL.

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

Only the linear isomer is reported for all other analytes

new 11.3.18



**Sample ID: CH-AT-2RW26-1117**

**EPA Method 537**

Client Data		Laboratory Data								
Name:	CH2M Hill	Lab Sample:	1701813-13							
Project:	CTO-08/MCOLF ATLANTIC PFAS INV.	Date Received:	01-Dec-17 09:40							
Matrix:	Drinking Water	Column:	BEH C18							
Date Collected:	29-Nov-17 14:01									
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.430	4.85	9.70		B7L0016	05-Dec-17	0.258 L	08-Dec-17 13:36	1
PFOA	ND	1.05	4.85	9.70		B7L0016	05-Dec-17	0.258 L	08-Dec-17 13:36	1
PFOS	ND	1.01	4.85	9.70		B7L0016	05-Dec-17	0.258 L	08-Dec-17 13:36	1
Labeled Standards	Type	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
13C2-PFHxA	SURR	70 - 130			B7L0016	05-Dec-17	0.258 L	08-Dec-17 13:36	1	

DL - Detection Limit

LOD - Limit of Detection

LOQ - Limit of Quantitation

LCL-UCL- Lower control limit - upper control limit

Results reported to the DL

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

Only the linear isomer is reported for all other analytes

1701813.8

**Sample ID: CH-AT-2FB26-1117**

**EPA Method 537**

Client Data		Laboratory Data								
Name:	CH2M Hill	Lab Sample:	1701813-14	Column:	BEH C18					
Project:	CTO-08/MCOLF ATLANTIC PFAS INV.	Date Received:	01-Dec-17 09:40							
	Matrix: Drinking Water									
	Date Collected: 29-Nov-17 14:01									
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.429	4.84	9.68		B7L0016	05-Dec-17	0.258 L	08-Dec-17 13:49	1
PFOA	ND	1.05	4.84	9.68		B7L0016	05-Dec-17	0.258 L	08-Dec-17 13:49	1
PFOS	ND	1.01	4.84	9.68		B7L0016	05-Dec-17	0.258 L	08-Dec-17 13:49	1
Labeled Standards	Type	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
13C2-PFHxA	SURR	70 - 130			B7L0016	05-Dec-17	0.258 L	08-Dec-17 13:49	1	

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

new 11.31.8

**Sample ID: CH-AT-2RW27-1117**

**EPA Method 537**

Client Data		Laboratory Data								
Name:	CH2M Hill	Lab Sample:	1701813-15	Column:	BEH C18					
Project:	CTO-08/MCOLF ATLANTIC PFAS INV.	Date Received:	01-Dec-17 09:40							
	Matrix: Drinking Water									
	Date Collected: 29-Nov-17 14:53									
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.430	4.86	9.71		B7L0016	05-Dec-17	0.257 L	08-Dec-17 14:01	1
PFOA	ND	1.05	4.86	9.71		B7L0016	05-Dec-17	0.257 L	08-Dec-17 14:01	1
PFOS	ND	1.01	4.86	9.71		B7L0016	05-Dec-17	0.257 L	08-Dec-17 14:01	1
Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
13C2-PFHxA	SURR	99.0	70 - 130		B7L0016	05-Dec-17	0.257 L	08-Dec-17 14:01	1	

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

1701813-15

**Sample ID: CH-AT-2FB27-1117**

**EPA Method 537**

Client Data		Laboratory Data								
Name:	CH2M Hill	Lab Sample:	1701813-16							
Project:	CTO-08/MCOLF ATLANTIC PFAS INV.	Date Received:	01-Dec-17 09:40							
Matrix:	Drinking Water	Column:	BEH C18							
Date Collected:	29-Nov-17 14:53									
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.435	4.90	9.81		B7L0016	05-Dec-17	0.255 L	08-Dec-17 14:13	1
PFOA	ND	1.06	4.90	9.81		B7L0016	05-Dec-17	0.255 L	08-Dec-17 14:13	1
PFOS	ND	1.02	4.90	9.81		B7L0016	05-Dec-17	0.255 L	08-Dec-17 14:13	1
Labeled Standards	Type	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
13C2-PFHxA	SURR	70 - 130			B7L0016	05-Dec-17	0.255 L	08-Dec-17 14:13	1	

DL - Detection Limit

LOD - Limit of Detection

LOQ - Limit of Quantitation

LCL-UCL- Lower control limit - upper control limit

Results reported to the DL

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

Only the linear isomer is reported for all other analytes

NEW 11318

**Sample ID: CH-AT-2RW28-1117**

**EPA Method 537**

Client Data		Laboratory Data								
Name:	CH2M Hill	Lab Sample:	1701813-17	Column:	BEH C 18					
Project:	CTO-08/MCOLF ATLANTIC PFAS INV.	Date Collected:	29-Nov-17 16:24	Date Received:	01-Dec-17 09:40					
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.436	4.92	9.83		B7L0016	05-Dec-17	0.254 L	08-Dec-17 14:26	1
PFOA	ND	1.06	4.92	9.83		B7L0016	05-Dec-17	0.254 L	08-Dec-17 14:26	1
PFOS	ND	1.02	4.92	9.83		B7L0016	05-Dec-17	0.254 L	08-Dec-17 14:26	1
Labeled Standards	Type	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
13C2-PFHxA	SURR	70 - 130			B7L0016	05-Dec-17	0.254 L	08-Dec-17 14:26	1	

DL - Detection Limit

LOD - Limit of Detection

LOQ - Limit of quantitation

LCL-UCL- Lower control limit - upper control limit

Results reported to the DL

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

Only the linear isomer is reported for all other analytes

new 11.3 1.8

**Sample ID: CH-AT-2FB28-1117**

**EPA Method 537**

Client Data		Laboratory Data								
Name:	CH2M Hill	Lab Sample:	1701813-18	Column:	BEH C18					
Project:	CTO-08/MCOLF ATLANTIC PEAS INV.	Date Collected:	29-Nov-17 16:24	Date Received:	01-Dec-17 09:40					
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.419	4.73	9.46		B7L0016	05-Dec-17	0.264 L	08-Dec-17 14:38	1
PFOA	ND	1.02	4.73	9.46		B7L0016	05-Dec-17	0.264 L	08-Dec-17 14:38	1
PFOS	ND	0.984	4.73	9.46		B7L0016	05-Dec-17	0.264 L	08-Dec-17 14:38	1
Labeled Standards	Type	% Recovery		Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	100		70 - 130		B7L0016	05-Dec-17	0.264 L	08-Dec-17 14:38	1

DL - Detection Limit

LOD - Limit of Detection

LOQ - Limit of quantitation

LCL-UCL- Lower control limit - upper control limit

Results reported to the DL

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

Only the linear isomer is reported for all other analytes

170181318

**Sample ID: CH-AT-2RW/29-1117**

**EPA Method 537**

Client Data		Laboratory Data													
Name:	CH2M Hill	Matrix:	Drinking Water	Lab Sample:	1701813-19	Batch:	B7L0016	Extracted:	05-Dec-17	Samp Size:	0.237 L	Analyzed:	08-Dec-17 14:51	Dilution:	1
Project:	CTO-08/MCOLF ATLANTIC PFAS INV.	Date Collected:	29-Nov-17 16:45	Date Received:	01-Dec-17 09:40	Batch:	B7L0016	Extracted:	05-Dec-17	Samp Size:	0.237 L	Analyzed:	08-Dec-17 14:51	Dilution:	1
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution					
PFBS	ND	0.467	5.27	10.5		B7L0016	05-Dec-17	0.237 L	08-Dec-17 14:51	1					
PFOA	ND	1.14	5.27	10.5		B7L0016	05-Dec-17	0.237 L	08-Dec-17 14:51	1					
PFOS	ND	1.10	5.27	10.5		B7L0016	05-Dec-17	0.237 L	08-Dec-17 14:51	1					
Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution						
13C2-PFHxA	SURR	106	70 - 130		B7L0016	05-Dec-17	0.237 L	08-Dec-17 14:51	1						

DL - Detection Limit

LOD - Limit of Detection

LOQ - Limit of quantitation

LCL-UCL- Lower control limit - upper control limit

Results reported to the DL

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

Only the linear isomer is reported for all other analytes

1701813.8

**Sample ID: CH-AT-2FB29-1117**

**EPA Method 537**

Client Data		Laboratory Data								
Name:	CH2M Hill	Lab Sample:	1701813-20	Column:	BEH C18					
Project:	CTO-08/MCOLF ATLANTIC PEAS INV.	Date Collected:	29-Nov-17 16:45	Date Received:	01-Dec-17 09:40					
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.418	4.72	9.44		B7L0016	05-Dec-17	0.265 L	11-Dec-17 12:28	1
PFOA	ND	1.02	4.72	9.44		B7L0016	05-Dec-17	0.265 L	11-Dec-17 12:28	1
PFOS	ND	0.982	4.72	9.44		B7L0016	05-Dec-17	0.265 L	11-Dec-17 12:28	1
Labeled Standards	Type	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
13C2-PFHxA	SURR	70 - 130			B7L0016	05-Dec-17	0.265 L	11-Dec-17 12:28	1	

DL - Detection Limit

LOD - Limit of Detection

LOQ - Limit of quantitation

LCL-UCL- Lower control limit - upper control limit

Results reported to the DL

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

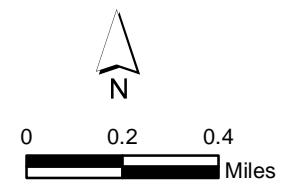
Only the linear isomer is reported for all other analytes

new 11.31.18





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



1 inch = 0.4 mile  
Imagery: Esri, 2016

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