Naval Facilities Engineering Command

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 320-24069

Outlying Landing Field Coupeville
Naval Air Station Whidbey Island
Coupeville, Washington

February 2019

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

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TestAmerica Job ID: 320-24069-1
Client Project/Site: Whidbey Island

For:
CH2M Hill Constructors, Inc.
1100 NE Circle Blvd
Corvallis, Oregon 97330

Attn: Tiffany Hill

Authorized for release by:
12/15/2016 1:30:23 PM

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Table of Contents

Qualifiers

LCMS

Qualifier	Qualifier Description
Q	One or more quality control criteria failed.
U	Undetected at the Limit of Detection.
M	Manual integrated compound.
J	Estimated: The analyte was positively identified; the quantitation is an estimation

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job ID: 320-24069-1

Laboratory: TestAmerica Sacramento

Narrative

CASE NARRATIVE

Client: CH2M Hill Constructors, Inc.

Project: Whidbey Island

Report Number: 320-24069-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica Sacramento attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the applicable methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

TestAmerica utilizes USEPA approved methods and DOD QSM, where applicable, in all analytical work. The samples presented in this report were analyzed for the parameter(s) listed on the analytical methods summary page in accordance with the method(s) indicated. A summary of QC data for these analyses is included at the back of the report.

All parameters for which TestAmerica Sacramento has certification were evaluated to the QSM specified reporting convention or to the client specified format if different from QSM. Parameters not certified under QSM, if any, were evaluated to the detection limit (DL) and include qualified results where applicable.

The sample(s) that contain constituents flagged with U are undetected. The result associated with this flag is the limit of detection (LOD).

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 12/06/2016; the samples arrived in good condition, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 0.2º C and 0.4º C.

PFOA/PFOS

Samples WI-CV-1RW13-1216 (320-24069-1), WI-CV-1FB13-1216 (320-24069-2), WI-CV-1RW14-1216 (320-24069-3), WI-CV-1FB14-1216 (320-24069-4), WI-CV-1RW15-1216 (320-24069-5), WI-CV-1FB15-1216 (320-24069-6), WI-CV-1RW16-1216 (320-24069-7), WI-CV-1FB16-1216 (320-24069-8), WI-CV-1RW17-1216 (320-24069-9), WI-CV-1FB17-1216 (320-24069-10), WI-CV-3RW14-1216 (320-24069-11), WI-CV-3FB14-1216 (320-24069-12), WI-CV-3RW15-1216 (320-24069-13), WI-CV-3FB15-1216 (320-24069-14), WI-CV-3RW16-1216 (320-24069-15), WI-CV-3FB16-1216 (320-24069-16), WI-CV-1RW18-1216 (320-24069-17), WI-CV-1FB18-1216 (320-24069-18), WI-CV-1RW19-1216 (320-24069-19), WI-CV-1FB19-1216 (320-24069-20), WI-CV-1RW20-1216 (320-24069-21), WI-CV-1FB20-1216 (320-24069-22), WI-CV-1RW21-1216 (320-24069-23), WI-CV-1FB21-1216 (320-24069-24), WI-CV-1RW22-1216

Job ID: 320-24069-1 (Continued)

Laboratory: TestAmerica Sacramento (Continued)

(320-24069-25), WI-CV-1FB22-1216 (320-24069-26), WI-CV-3RW17-1216 (320-24069-27), WI-CV-3FB17-1216 (320-24069-28), WI-CV-3RW18-1216 (320-24069-29) and WI-CV-3FB18-1216 (320-24069-30) were analyzed for PFOA/PFOS in accordance with 537. The samples were prepared on 12/08/2016 and analyzed on 12/13/2016 and 12/14/2016.

The following samples were received with a pH of 7, except sample 320-24069-A-2 which has a pH of 9. WI-CV-1RW13-1216 (320-24069-1), WI-CV-1FB13-1216 (320-24069-2), WI-CV-1RW14-1216 (320-24069-3), WI-CV-1FB14-1216 (320-24069-4), WI-CV-1RW15-1216 (320-24069-5), WI-CV-1FB15-1216 (320-24069-6), WI-CV-1RW16-1216 (320-24069-7), WI-CV-1FB16-1216 (320-24069-8), WI-CV-1RW17-1216 (320-24069-9), WI-CV-1FB17-1216 (320-24069-10), WI-CV-3RW14-1216 (320-24069-11), WI-CV-3FB14-1216 (320-24069-12), WI-CV-3RW15-1216 (320-24069-13), WI-CV-3FB15-1216 (320-24069-14), WI-CV-3RW16-1216 (320-24069-15), WI-CV-3FB16-1216 (320-24069-16), WI-CV-1RW18-1216 (320-24069-17), WI-CV-1FB18-1216 (320-24069-18), WI-CV-1RW19-1216 (320-24069-19) and WI-CV-1FB19-1216 (320-24069-20)

The following samples are yellow: WI-CV-1RW15-1216 (320-24069-5) and WI-CV-3RW14-1216 (320-24069-11).

The following sample deposited a black sediment/precipitate after loading the sample onto the column: WI-CV-1RW19-1216 (320-24069-19).

The extract for the following sample had an orange-brown sediment at final concentration: WI-CV-1RW21-1216 (320-24069-23).

The extracts for the following samples had a yellow sediment at final concentration: WI-CV-1RW20-1216 (320-24069-21) and WI-CV-3RW17-1216 (320-24069-27).

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batches 320-141212 and 320-141328.

Surrogate recovery for the laboratory control sample duplicate (LCSD) was slightly high above the control limits for 13C2 PFDA at 130.5% recovery with the limit at 130%. The target analytes for the LCSD were in control. Re-analysis was performed with concurring results. The second analysis has been reported.

The surrogate recoveries for the following sample was outside control limits: WI-CV-1RW13-1216 (320-24069-1). Re-extraction and/or re-analysis was performed with concurring results. There is no impact on the data as the associated target analytes were Non-Detect (ND). The second analysis has been reported due to slightly better recoveries of the surrogates.

Surrogate recovery and Internal standard (ISTD) response for the following sample was outside control limits: WI-CV-1RW15-1216 (320-24069-5). The sample was re-analyzed with concurring results, and the second set of data has been reported.

Internal standard (ISTD) response for the following sample was outside control limits: WI-CV-1FB15-1216 (320-24069-6). The sample was re-analyzed and the internal standard response was in control however one of the surrogate compounds was out slightly high above the control limits. In both analyses the target compounds are ND. Both sets of data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: CH2M Hill Constructors, Inc.
Project/Site: Whidbey Island

TestAmerica Job ID: 320-24069-1

Client Sample ID: WI-CV-1RW13-1216 — **Lab Sample ID: 320-24069-1**

No Detections.

Client Sample ID: WI-CV-1FB13-1216 — **Lab Sample ID: 320-24069-2**

No Detections.

Client Sample ID: WI-CV-1RW14-1216 — **Lab Sample ID: 320-24069-3**

No Detections.

Client Sample ID: WI-CV-1FB14-1216 — **Lab Sample ID: 320-24069-4**

No Detections.

Client Sample ID: WI-CV-1RW15-1216 — **Lab Sample ID: 320-24069-5**

No Detections.

Client Sample ID: WI-CV-1FB15-1216 — **Lab Sample ID: 320-24069-6**

No Detections.

Client Sample ID: WI-CV-1RW16-1216 — **Lab Sample ID: 320-24069-7**

No Detections.

Client Sample ID: WI-CV-1FB16-1216 — **Lab Sample ID: 320-24069-8**

No Detections.

Client Sample ID: WI-CV-1RW17-1216 — **Lab Sample ID: 320-24069-9**

No Detections.

Client Sample ID: WI-CV-1FB17-1216 — **Lab Sample ID: 320-24069-10**

No Detections.

Client Sample ID: WI-CV-3RW14-1216 — **Lab Sample ID: 320-24069-11**

No Detections.

Client Sample ID: WI-CV-3FB14-1216 — **Lab Sample ID: 320-24069-12**

No Detections.

Client Sample ID: WI-CV-3RW15-1216 — **Lab Sample ID: 320-24069-13**

No Detections.

Client Sample ID: WI-CV-3FB15-1216 — **Lab Sample ID: 320-24069-14**

No Detections.

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: CH2M Hill Constructors, Inc.
Project/Site: Whidbey Island

TestAmerica Job ID: 320-24069-1

Client Sample ID: WI-CV-3RW16-1216 — **Lab Sample ID: 320-24069-15**

No Detections.

Client Sample ID: WI-CV-3FB16-1216 — **Lab Sample ID: 320-24069-16**

No Detections.

Client Sample ID: WI-CV-1RW18-1216 — **Lab Sample ID: 320-24069-17**

No Detections.

Client Sample ID: WI-CV-1FB18-1216 — **Lab Sample ID: 320-24069-18**

No Detections.

Client Sample ID: WI-CV-1RW19-1216 — **Lab Sample ID: 320-24069-19**

No Detections.

Client Sample ID: WI-CV-1FB19-1216 — **Lab Sample ID: 320-24069-20**

No Detections.

Client Sample ID: WI-CV-1RW20-1216 — **Lab Sample ID: 320-24069-21**

No Detections.

Client Sample ID: WI-CV-1FB20-1216 — **Lab Sample ID: 320-24069-22**

No Detections.

Client Sample ID: WI-CV-1RW21-1216 — **Lab Sample ID: 320-24069-23**

No Detections.

Client Sample ID: WI-CV-1FB21-1216 — **Lab Sample ID: 320-24069-24**

No Detections.

Client Sample ID: WI-CV-1RW22-1216 — **Lab Sample ID: 320-24069-25**

No Detections.

Client Sample ID: WI-CV-1FB22-1216 — **Lab Sample ID: 320-24069-26**

No Detections.

Client Sample ID: WI-CV-3RW17-1216 — **Lab Sample ID: 320-24069-27**

No Detections.

Client Sample ID: WI-CV-3FB17-1216 — **Lab Sample ID: 320-24069-28**

No Detections.

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: CH2M Hill Constructors, Inc.
Project/Site: Whidbey Island

TestAmerica Job ID: 320-24069-1

Client Sample ID: WI-CV-3RW18-1216 — Lab Sample ID: 320-24069-29

No Detections.

Client Sample ID: WI-CV-3FB18-1216 — Lab Sample ID: 320-24069-30

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample ID: WI-CV-1RW13-1216

Lab Sample ID: 320-24069-1
Date Collected: 12/02/16 09:09
Matrix: Water
Date Received: 12/06/16 10:30

Method: 537 - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	0.047	U	0.059	0.015	ug/L		12/08/16 11:45	12/14/16 06:24	1
Perfluorooctanoic acid (PFOA)	0.024	U M	0.029	0.0092	ug/L		12/08/16 11:45	12/14/16 06:24	1
Perfluorobutanesulfonic acid (PFBS)	0.11	U	0.14	0.047	ug/L		12/08/16 11:45	12/14/16 06:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA	*135*	*Q*	*70 - 130*	*12/08/16 11:45*	*12/14/16 06:24*	*1*
13C2 PFDA	*137*	*Q*	*70 - 130*	*12/08/16 11:45*	*12/14/16 06:24*	*1*

Client Sample ID: WI-CV-1FB13-1216

Lab Sample ID: 320-24069-2
Date Collected: 12/02/16 09:08
Matrix: Water
Date Received: 12/06/16 10:30

Method: 537 - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	0.045	U	0.056	0.014	ug/L		12/08/16 11:45	12/13/16 08:56	1
Perfluorooctanoic acid (PFOA)	0.022	U	0.028	0.0088	ug/L		12/08/16 11:45	12/13/16 08:56	1
Perfluorobutanesulfonic acid (PFBS)	0.10	U	0.13	0.044	ug/L		12/08/16 11:45	12/13/16 08:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA	*112*		*70 - 130*	*12/08/16 11:45*	*12/13/16 08:56*	*1*
13C2 PFDA	*118*		*70 - 130*	*12/08/16 11:45*	*12/13/16 08:56*	*1*

Client Sample ID: WI-CV-1RW14-1216

Lab Sample ID: 320-24069-3
Date Collected: 12/02/16 09:53
Matrix: Water
Date Received: 12/06/16 10:30

Method: 537 - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	0.046	U	0.057	0.015	ug/L		12/08/16 11:45	12/14/16 06:54	1
Perfluorooctanoic acid (PFOA)	0.023	U	0.029	0.0090	ug/L		12/08/16 11:45	12/14/16 06:54	1
Perfluorobutanesulfonic acid (PFBS)	0.11	U	0.13	0.045	ug/L		12/08/16 11:45	12/14/16 06:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA	*130*		*70 - 130*	*12/08/16 11:45*	*12/14/16 06:54*	*1*
13C2 PFDA	*129*		*70 - 130*	*12/08/16 11:45*	*12/14/16 06:54*	*1*

Client Sample ID: WI-CV-1FB14-1216

Lab Sample ID: 320-24069-4
Date Collected: 12/02/16 09:52
Matrix: Water
Date Received: 12/06/16 10:30

Method: 537 - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	0.047	U M	0.058	0.015	ug/L		12/08/16 11:45	12/14/16 07:23	1
Perfluorooctanoic acid (PFOA)	0.023	U M	0.029	0.0092	ug/L		12/08/16 11:45	12/14/16 07:23	1
Perfluorobutanesulfonic acid (PFBS)	0.11	U	0.14	0.046	ug/L		12/08/16 11:45	12/14/16 07:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA	*115*		*70 - 130*	*12/08/16 11:45*	*12/14/16 07:23*	*1*
13C2 PFDA	*117*		*70 - 130*	*12/08/16 11:45*	*12/14/16 07:23*	*1*

Client Sample ID: WI-CV-1RW15-1216

Lab Sample ID: 320-24069-5
Matrix: Water
Date Collected: 12/02/16 11:25
Date Received: 12/06/16 10:30

Method: 537 - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	0.047	U	0.059	0.015	ug/L		12/08/16 11:45	12/14/16 07:53	1
Perfluorooctanoic acid (PFOA)	0.024	U	0.029	0.0092	ug/L		12/08/16 11:45	12/14/16 07:53	1
Perfluorobutanesulfonic acid (PFBS)	0.11	U	0.14	0.047	ug/L		12/08/16 11:45	12/14/16 07:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA	*142*	*Q*	*70 - 130*	*12/08/16 11:45*	*12/14/16 07:53*	*1*
13C2 PFDA	*140*	*Q*	*70 - 130*	*12/08/16 11:45*	*12/14/16 07:53*	*1*

Client Sample ID: WI-CV-1FB15-1216

Lab Sample ID: 320-24069-6
Matrix: Water
Date Collected: 12/02/16 11:24
Date Received: 12/06/16 10:30

Method: 537 - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	0.047	U	0.059	0.015	ug/L		12/08/16 11:45	12/13/16 10:54	1
Perfluorooctanoic acid (PFOA)	0.023	U M	0.029	0.0092	ug/L		12/08/16 11:45	12/13/16 10:54	1
Perfluorobutanesulfonic acid (PFBS)	0.11	U	0.14	0.047	ug/L		12/08/16 11:45	12/13/16 10:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA	*124*		*70 - 130*	*12/08/16 11:45*	*12/13/16 10:54*	*1*
13C2 PFDA	*125*		*70 - 130*	*12/08/16 11:45*	*12/13/16 10:54*	*1*

Method: 537 - Perfluorinated Alkyl Acids (LC/MS) - RA

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	0.047	U	0.059	0.015	ug/L		12/08/16 11:45	12/14/16 08:23	1
Perfluorooctanoic acid (PFOA)	0.023	U	0.029	0.0092	ug/L		12/08/16 11:45	12/14/16 08:23	1
Perfluorobutanesulfonic acid (PFBS)	0.11	U	0.14	0.047	ug/L		12/08/16 11:45	12/14/16 08:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA	*126*		*70 - 130*	*12/08/16 11:45*	*12/14/16 08:23*	*1*
13C2 PFDA	*131*	*Q*	*70 - 130*	*12/08/16 11:45*	*12/14/16 08:23*	*1*

Client Sample ID: WI-CV-1RW16-1216

Lab Sample ID: 320-24069-7
Matrix: Water
Date Collected: 12/02/16 14:09
Date Received: 12/06/16 10:30

Method: 537 - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	0.047	U	0.059	0.015	ug/L		12/08/16 11:45	12/13/16 11:24	1
Perfluorooctanoic acid (PFOA)	0.024	U	0.029	0.0093	ug/L		12/08/16 11:45	12/13/16 11:24	1
Perfluorobutanesulfonic acid (PFBS)	0.11	U	0.14	0.047	ug/L		12/08/16 11:45	12/13/16 11:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA	*110*		*70 - 130*	*12/08/16 11:45*	*12/13/16 11:24*	*1*
13C2 PFDA	*106*		*70 - 130*	*12/08/16 11:45*	*12/13/16 11:24*	*1*

Client Sample ID: WI-CV-1FB16-1216

Lab Sample ID: 320-24069-8
Matrix: Water
Date Collected: 12/02/16 14:08
Date Received: 12/06/16 10:30

Method: 537 - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	0.045	U	0.057	0.015	ug/L		12/08/16 11:45	12/13/16 11:53	1
Perfluorooctanoic acid (PFOA)	0.023	U	0.028	0.0089	ug/L		12/08/16 11:45	12/13/16 11:53	1
Perfluorobutanesulfonic acid (PFBS)	0.10	U	0.13	0.045	ug/L		12/08/16 11:45	12/13/16 11:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA	*114*		*70 - 130*	*12/08/16 11:45*	*12/13/16 11:53*	*1*
13C2 PFDA	*116*		*70 - 130*	*12/08/16 11:45*	*12/13/16 11:53*	*1*

Client Sample ID: WI-CV-1RW17-1216

Lab Sample ID: 320-24069-9
Matrix: Water
Date Collected: 12/02/16 14:17
Date Received: 12/06/16 10:30

Method: 537 - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	0.047	U	0.058	0.015	ug/L		12/08/16 11:45	12/13/16 12:23	1
Perfluorooctanoic acid (PFOA)	0.023	U	0.029	0.0092	ug/L		12/08/16 11:45	12/13/16 12:23	1
Perfluorobutanesulfonic acid (PFBS)	0.11	U	0.14	0.046	ug/L		12/08/16 11:45	12/13/16 12:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA	*107*		*70 - 130*	*12/08/16 11:45*	*12/13/16 12:23*	*1*
13C2 PFDA	*117*		*70 - 130*	*12/08/16 11:45*	*12/13/16 12:23*	*1*

Client Sample ID: WI-CV-1FB17-1216

Lab Sample ID: 320-24069-10
Matrix: Water
Date Collected: 12/02/16 14:16
Date Received: 12/06/16 10:30

Method: 537 - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	0.045	U	0.056	0.014	ug/L		12/08/16 11:45	12/13/16 12:52	1
Perfluorooctanoic acid (PFOA)	0.022	U	0.028	0.0088	ug/L		12/08/16 11:45	12/13/16 12:52	1
Perfluorobutanesulfonic acid (PFBS)	0.10	U	0.13	0.044	ug/L		12/08/16 11:45	12/13/16 12:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA	*114*		*70 - 130*	*12/08/16 11:45*	*12/13/16 12:52*	*1*
13C2 PFDA	*111*		*70 - 130*	*12/08/16 11:45*	*12/13/16 12:52*	*1*

Client Sample ID: WI-CV-3RW14-1216

Lab Sample ID: 320-24069-11
Matrix: Water
Date Collected: 12/02/16 14:31
Date Received: 12/06/16 10:30

Method: 537 - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	0.047	U	0.058	0.015	ug/L		12/08/16 11:45	12/13/16 13:22	1
Perfluorooctanoic acid (PFOA)	0.023	U	0.029	0.0091	ug/L		12/08/16 11:45	12/13/16 13:22	1
Perfluorobutanesulfonic acid (PFBS)	0.11	U	0.14	0.046	ug/L		12/08/16 11:45	12/13/16 13:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA	*97*		*70 - 130*	*12/08/16 11:45*	*12/13/16 13:22*	*1*
13C2 PFDA	*114*		*70 - 130*	*12/08/16 11:45*	*12/13/16 13:22*	*1*

Client Sample ID: WI-CV-3FB14-1216

Lab Sample ID: 320-24069-12
Date Collected: 12/02/16 14:32
Matrix: Water
Date Received: 12/06/16 10:30

Method: 537 - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	0.044	U	0.055	0.014	ug/L		12/08/16 11:45	12/13/16 15:36	1
Perfluorooctanoic acid (PFOA)	0.022	U	0.028	0.0087	ug/L		12/08/16 11:45	12/13/16 15:36	1
Perfluorobutanesulfonic acid (PFBS)	0.10	U	0.13	0.044	ug/L		12/08/16 11:45	12/13/16 15:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA	*114*		*70 - 130*	*12/08/16 11:45*	*12/13/16 15:36*	*1*
13C2 PFDA	*122*		*70 - 130*	*12/08/16 11:45*	*12/13/16 15:36*	*1*

Client Sample ID: WI-CV-3RW15-1216

Lab Sample ID: 320-24069-13
Date Collected: 12/02/16 14:47
Matrix: Water
Date Received: 12/06/16 10:30

Method: 537 - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	0.045	U M	0.056	0.015	ug/L		12/08/16 11:45	12/13/16 16:06	1
Perfluorooctanoic acid (PFOA)	0.023	U	0.028	0.0089	ug/L		12/08/16 11:45	12/13/16 16:06	1
Perfluorobutanesulfonic acid (PFBS)	0.10	U	0.13	0.045	ug/L		12/08/16 11:45	12/13/16 16:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA	*115*		*70 - 130*	*12/08/16 11:45*	*12/13/16 16:06*	*1*
13C2 PFDA	*117*		*70 - 130*	*12/08/16 11:45*	*12/13/16 16:06*	*1*

Client Sample ID: WI-CV-3FB15-1216

Lab Sample ID: 320-24069-14
Date Collected: 12/02/16 14:48
Matrix: Water
Date Received: 12/06/16 10:30

Method: 537 - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	0.047	U	0.059	0.015	ug/L		12/08/16 11:45	12/13/16 16:35	1
Perfluorooctanoic acid (PFOA)	0.024	U	0.029	0.0092	ug/L		12/08/16 11:45	12/13/16 16:35	1
Perfluorobutanesulfonic acid (PFBS)	0.11	U	0.14	0.047	ug/L		12/08/16 11:45	12/13/16 16:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA	*114*		*70 - 130*	*12/08/16 11:45*	*12/13/16 16:35*	*1*
13C2 PFDA	*110*		*70 - 130*	*12/08/16 11:45*	*12/13/16 16:35*	*1*

Client Sample ID: WI-CV-3RW16-1216

Lab Sample ID: 320-24069-15
Date Collected: 12/02/16 17:25
Matrix: Water
Date Received: 12/06/16 10:30

Method: 537 - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	0.044	U	0.056	0.014	ug/L		12/08/16 11:45	12/13/16 17:05	1
Perfluorooctanoic acid (PFOA)	0.022	U	0.028	0.0087	ug/L		12/08/16 11:45	12/13/16 17:05	1
Perfluorobutanesulfonic acid (PFBS)	0.10	U	0.13	0.044	ug/L		12/08/16 11:45	12/13/16 17:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA	*106*		*70 - 130*	*12/08/16 11:45*	*12/13/16 17:05*	*1*
13C2 PFDA	*110*		*70 - 130*	*12/08/16 11:45*	*12/13/16 17:05*	*1*

Client Sample ID: WI-CV-3FB16-1216

Lab Sample ID: 320-24069-16
Date Collected: 12/02/16 17:26
Matrix: Water
Date Received: 12/06/16 10:30

Method: 537 - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	0.045	U	0.056	0.015	ug/L		12/08/16 11:45	12/13/16 17:35	1
Perfluorooctanoic acid (PFOA)	0.023	U	0.028	0.0088	ug/L		12/08/16 11:45	12/13/16 17:35	1
Perfluorobutanesulfonic acid (PFBS)	0.10	U	0.13	0.045	ug/L		12/08/16 11:45	12/13/16 17:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA	*119*		*70 - 130*	*12/08/16 11:45*	*12/13/16 17:35*	*1*
13C2 PFDA	*118*		*70 - 130*	*12/08/16 11:45*	*12/13/16 17:35*	*1*

Client Sample ID: WI-CV-1RW18-1216

Lab Sample ID: 320-24069-17
Date Collected: 12/03/16 09:05
Matrix: Water
Date Received: 12/06/16 10:30

Method: 537 - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	0.045	U	0.056	0.014	ug/L		12/08/16 11:45	12/13/16 18:04	1
Perfluorooctanoic acid (PFOA)	0.022	U	0.028	0.0088	ug/L		12/08/16 11:45	12/13/16 18:04	1
Perfluorobutanesulfonic acid (PFBS)	0.10	U M	0.13	0.044	ug/L		12/08/16 11:45	12/13/16 18:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA	*115*		*70 - 130*	*12/08/16 11:45*	*12/13/16 18:04*	*1*
13C2 PFDA	*116*		*70 - 130*	*12/08/16 11:45*	*12/13/16 18:04*	*1*

Client Sample ID: WI-CV-1FB18-1216

Lab Sample ID: 320-24069-18
Date Collected: 12/03/16 09:04
Matrix: Water
Date Received: 12/06/16 10:30

Method: 537 - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	0.045	U	0.056	0.015	ug/L		12/08/16 11:45	12/13/16 18:34	1
Perfluorooctanoic acid (PFOA)	0.022	U	0.028	0.0088	ug/L		12/08/16 11:45	12/13/16 18:34	1
Perfluorobutanesulfonic acid (PFBS)	0.10	U	0.13	0.045	ug/L		12/08/16 11:45	12/13/16 18:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA	*115*		*70 - 130*	*12/08/16 11:45*	*12/13/16 18:34*	*1*
13C2 PFDA	*117*		*70 - 130*	*12/08/16 11:45*	*12/13/16 18:34*	*1*

Client Sample ID: WI-CV-1RW19-1216

Lab Sample ID: 320-24069-19
Date Collected: 12/03/16 10:05
Matrix: Water
Date Received: 12/06/16 10:30

Method: 537 - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	0.045	U	0.056	0.014	ug/L		12/08/16 11:45	12/13/16 19:03	1
Perfluorooctanoic acid (PFOA)	0.022	U	0.028	0.0088	ug/L		12/08/16 11:45	12/13/16 19:03	1
Perfluorobutanesulfonic acid (PFBS)	0.10	U	0.13	0.044	ug/L		12/08/16 11:45	12/13/16 19:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA	*119*		*70 - 130*	*12/08/16 11:45*	*12/13/16 19:03*	*1*
13C2 PFDA	*125*		*70 - 130*	*12/08/16 11:45*	*12/13/16 19:03*	*1*

Client Sample ID: WI-CV-1FB19-1216

Lab Sample ID: 320-24069-20
Date Collected: 12/03/16 10:04
Matrix: Water
Date Received: 12/06/16 10:30

Method: 537 - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	0.046	U	0.058	0.015	ug/L		12/08/16 11:45	12/13/16 19:33	1
Perfluorooctanoic acid (PFOA)	0.023	U	0.029	0.0091	ug/L		12/08/16 11:45	12/13/16 19:33	1
Perfluorobutanesulfonic acid (PFBS)	0.11	U	0.13	0.046	ug/L		12/08/16 11:45	12/13/16 19:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA	*120*		*70 - 130*	*12/08/16 11:45*	*12/13/16 19:33*	*1*
13C2 PFDA	*118*		*70 - 130*	*12/08/16 11:45*	*12/13/16 19:33*	*1*

Client Sample ID: WI-CV-1RW20-1216

Lab Sample ID: 320-24069-21
Date Collected: 12/03/16 10:46
Matrix: Water
Date Received: 12/06/16 10:30

Method: 537 - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	0.044	U M	0.055	0.014	ug/L		12/08/16 18:21	12/14/16 16:46	1
Perfluorooctanoic acid (PFOA)	0.022	U M	0.027	0.0086	ug/L		12/08/16 18:21	12/14/16 16:46	1
Perfluorobutanesulfonic acid (PFBS)	0.10	U	0.13	0.043	ug/L		12/08/16 18:21	12/14/16 16:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA	*112*		*70 - 130*	*12/08/16 18:21*	*12/14/16 16:46*	*1*
13C2 PFDA	*119*		*70 - 130*	*12/08/16 18:21*	*12/14/16 16:46*	*1*

Client Sample ID: WI-CV-1FB20-1216

Lab Sample ID: 320-24069-22
Date Collected: 12/03/16 10:45
Matrix: Water
Date Received: 12/06/16 10:30

Method: 537 - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	0.042	U M	0.053	0.014	ug/L		12/08/16 18:21	12/14/16 17:15	1
Perfluorooctanoic acid (PFOA)	0.021	U	0.026	0.0083	ug/L		12/08/16 18:21	12/14/16 17:15	1
Perfluorobutanesulfonic acid (PFBS)	0.097	U	0.12	0.042	ug/L		12/08/16 18:21	12/14/16 17:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA	*121*		*70 - 130*	*12/08/16 18:21*	*12/14/16 17:15*	*1*
13C2 PFDA	*124*		*70 - 130*	*12/08/16 18:21*	*12/14/16 17:15*	*1*

Client Sample ID: WI-CV-1RW21-1216

Lab Sample ID: 320-24069-23
Date Collected: 12/03/16 11:22
Matrix: Water
Date Received: 12/06/16 10:30

Method: 537 - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	0.045	U	0.057	0.015	ug/L		12/08/16 18:21	12/14/16 17:45	1
Perfluorooctanoic acid (PFOA)	0.023	U	0.028	0.0089	ug/L		12/08/16 18:21	12/14/16 17:45	1
Perfluorobutanesulfonic acid (PFBS)	0.10	U	0.13	0.045	ug/L		12/08/16 18:21	12/14/16 17:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA	*108*		*70 - 130*	*12/08/16 18:21*	*12/14/16 17:45*	*1*
13C2 PFDA	*113*		*70 - 130*	*12/08/16 18:21*	*12/14/16 17:45*	*1*

Client Sample ID: WI-CV-1FB21-1216

Lab Sample ID: 320-24069-24
Date Collected: 12/03/16 11:21
Matrix: Water
Date Received: 12/06/16 10:30

Method: 537 - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	0.043	U M	0.054	0.014	ug/L		12/08/16 18:21	12/14/16 00:29	1
Perfluorooctanoic acid (PFOA)	0.022	U	0.027	0.0084	ug/L		12/08/16 18:21	12/14/16 00:29	1
Perfluorobutanesulfonic acid (PFBS)	0.099	U	0.13	0.043	ug/L		12/08/16 18:21	12/14/16 00:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA	*114*		*70 - 130*	*12/08/16 18:21*	*12/14/16 00:29*	*1*
13C2 PFDA	*114*		*70 - 130*	*12/08/16 18:21*	*12/14/16 00:29*	*1*

Client Sample ID: WI-CV-1RW22-1216

Lab Sample ID: 320-24069-25
Date Collected: 12/03/16 12:02
Matrix: Water
Date Received: 12/06/16 10:30

Method: 537 - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	0.043	U	0.054	0.014	ug/L		12/08/16 18:21	12/14/16 00:59	1
Perfluorooctanoic acid (PFOA)	0.022	U M	0.027	0.0085	ug/L		12/08/16 18:21	12/14/16 00:59	1
Perfluorobutanesulfonic acid (PFBS)	0.10	U	0.13	0.043	ug/L		12/08/16 18:21	12/14/16 00:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA	*110*		*70 - 130*	*12/08/16 18:21*	*12/14/16 00:59*	*1*
13C2 PFDA	*105*		*70 - 130*	*12/08/16 18:21*	*12/14/16 00:59*	*1*

Client Sample ID: WI-CV-1FB22-1216

Lab Sample ID: 320-24069-26
Date Collected: 12/03/16 12:01
Matrix: Water
Date Received: 12/06/16 10:30

Method: 537 - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	0.042	U	0.053	0.014	ug/L		12/08/16 18:21	12/14/16 18:14	1
Perfluorooctanoic acid (PFOA)	0.021	U	0.026	0.0083	ug/L		12/08/16 18:21	12/14/16 18:14	1
Perfluorobutanesulfonic acid (PFBS)	0.096	U	0.12	0.042	ug/L		12/08/16 18:21	12/14/16 18:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA	*113*		*70 - 130*	*12/08/16 18:21*	*12/14/16 18:14*	*1*
13C2 PFDA	*118*		*70 - 130*	*12/08/16 18:21*	*12/14/16 18:14*	*1*

Client Sample ID: WI-CV-3RW17-1216

Lab Sample ID: 320-24069-27
Date Collected: 12/03/16 09:13
Matrix: Water
Date Received: 12/06/16 10:30

Method: 537 - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	0.044	U M	0.055	0.014	ug/L		12/08/16 18:21	12/14/16 01:58	1
Perfluorooctanoic acid (PFOA)	0.022	U M	0.028	0.0087	ug/L		12/08/16 18:21	12/14/16 01:58	1
Perfluorobutanesulfonic acid (PFBS)	0.10	U	0.13	0.044	ug/L		12/08/16 18:21	12/14/16 01:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA	*110*		*70 - 130*	*12/08/16 18:21*	*12/14/16 01:58*	*1*
13C2 PFDA	*100*		*70 - 130*	*12/08/16 18:21*	*12/14/16 01:58*	*1*

Client Sample ID: WI-CV-3FB17-1216

Lab Sample ID: 320-24069-28

Date Collected: 12/03/16 09:14

Matrix: Water

Date Received: 12/06/16 10:30

Method: 537 - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	0.043	U M	0.054	0.014	ug/L		12/08/16 18:21	12/14/16 03:56	1
Perfluorooctanoic acid (PFOA)	0.022	U M	0.027	0.0084	ug/L		12/08/16 18:21	12/14/16 03:56	1
Perfluorobutanesulfonic acid (PFBS)	0.099	U	0.13	0.043	ug/L		12/08/16 18:21	12/14/16 03:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA	*106*		*70 - 130*	*12/08/16 18:21*	*12/14/16 03:56*	*1*
13C2 PFDA	*110*		*70 - 130*	*12/08/16 18:21*	*12/14/16 03:56*	*1*

Client Sample ID: WI-CV-3RW18-1216

Lab Sample ID: 320-24069-29

Date Collected: 12/03/16 12:08

Matrix: Water

Date Received: 12/06/16 10:30

Method: 537 - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	0.044	U	0.055	0.014	ug/L		12/08/16 18:21	12/14/16 04:26	1
Perfluorooctanoic acid (PFOA)	0.022	U	0.027	0.0086	ug/L		12/08/16 18:21	12/14/16 04:26	1
Perfluorobutanesulfonic acid (PFBS)	0.10	U	0.13	0.044	ug/L		12/08/16 18:21	12/14/16 04:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA	*115*		*70 - 130*	*12/08/16 18:21*	*12/14/16 04:26*	*1*
13C2 PFDA	*113*		*70 - 130*	*12/08/16 18:21*	*12/14/16 04:26*	*1*

Client Sample ID: WI-CV-3FB18-1216

Lab Sample ID: 320-24069-30

Date Collected: 12/03/16 12:09

Matrix: Water

Date Received: 12/06/16 10:30

Method: 537 - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	0.043	U	0.053	0.014	ug/L		12/08/16 18:21	12/14/16 04:55	1
Perfluorooctanoic acid (PFOA)	0.021	U	0.027	0.0084	ug/L		12/08/16 18:21	12/14/16 04:55	1
Perfluorobutanesulfonic acid (PFBS)	0.098	U	0.12	0.042	ug/L		12/08/16 18:21	12/14/16 04:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA	*102*		*70 - 130*	*12/08/16 18:21*	*12/14/16 04:55*	*1*
13C2 PFDA	*108*		*70 - 130*	*12/08/16 18:21*	*12/14/16 04:55*	*1*

Surrogate Summary

Client: CH2M Hill Constructors, Inc.
Project/Site: Whidbey Island

TestAmerica Job ID: 320-24069-1

Method: 537 - Perfluorinated Alkyl Acids (LC/MS)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		3C2 PFHx	3C2 PFDA
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
320-24069-1	WI-CV-1RW13-1216	135 Q	137 Q
320-24069-2	WI-CV-1FB13-1216	112	118
320-24069-3	WI-CV-1RW14-1216	130	129
320-24069-4	WI-CV-1FB14-1216	115	117
320-24069-5	WI-CV-1RW15-1216	142 Q	140 Q
320-24069-6	WI-CV-1FB15-1216	124	125
320-24069-6 - RA	WI-CV-1FB15-1216	126	131 Q
320-24069-7	WI-CV-1RW16-1216	110	106
320-24069-8	WI-CV-1FB16-1216	114	116
320-24069-9	WI-CV-1RW17-1216	107	117
320-24069-10	WI-CV-1FB17-1216	114	111
320-24069-11	WI-CV-3RW14-1216	97	114
320-24069-12	WI-CV-3FB14-1216	114	122
320-24069-13	WI-CV-3RW15-1216	115	117
320-24069-14	WI-CV-3FB15-1216	114	110
320-24069-15	WI-CV-3RW16-1216	106	110
320-24069-16	WI-CV-3FB16-1216	119	118
320-24069-17	WI-CV-1RW18-1216	115	116
320-24069-18	WI-CV-1FB18-1216	115	117
320-24069-19	WI-CV-1RW19-1216	119	125
320-24069-20	WI-CV-1FB19-1216	120	118
320-24069-21	WI-CV-1RW20-1216	112	119
320-24069-22	WI-CV-1FB20-1216	121	124
320-24069-23	WI-CV-1RW21-1216	108	113
320-24069-24	WI-CV-1FB21-1216	114	114
320-24069-25	WI-CV-1RW22-1216	110	105
320-24069-26	WI-CV-1FB22-1216	113	118
320-24069-27	WI-CV-3RW17-1216	110	100
320-24069-28	WI-CV-3FB17-1216	106	110
320-24069-29	WI-CV-3RW18-1216	115	113
320-24069-30	WI-CV-3FB18-1216	102	108
LCS 320-141212/2-A	Lab Control Sample	123	123
LCSD 320-141212/3-A	Lab Control Sample Dup	126	131 Q
LLCS 320-141328/2-A	Lab Control Sample	124	129
LLCSD 320-141328/3-A	Lab Control Sample Dup	119	116
MB 320-141212/1-A	Method Blank	113	111
MB 320-141328/1-A	Method Blank	121	120

Surrogate Legend

13C2 PFHxA = 13C2 PFHxA

13C2 PFDA = 13C2 PFDA

Method: 537 - Perfluorinated Alkyl Acids (LC/MS)

Lab Sample ID: MB 320-141212/1-A
Matrix: Water
Analysis Batch: 141767

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 141212

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	0.048	U	0.060	0.016	ug/L		12/08/16 11:45	12/13/16 05:28	1
Perfluorooctanoic acid (PFOA)	0.024	U	0.030	0.0094	ug/L		12/08/16 11:45	12/13/16 05:28	1
Perfluorobutanesulfonic acid (PFBS)	0.11	U	0.14	0.048	ug/L		12/08/16 11:45	12/13/16 05:28	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA	*113*		*70 - 130*	*12/08/16 11:45*	*12/13/16 05:28*	*1*
13C2 PFDA	*111*		*70 - 130*	*12/08/16 11:45*	*12/13/16 05:28*	*1*

Lab Sample ID: LCS 320-141212/2-A
Matrix: Water
Analysis Batch: 141771

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 141212

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorooctanesulfonic acid (PFOS)	0.300	0.307		ug/L		102	70 - 130
Perfluorooctanoic acid (PFOA)	0.146	0.155		ug/L		106	70 - 130
Perfluorobutanesulfonic acid (PFBS)	0.673	0.632		ug/L		94	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C2 PFHxA	*123*		*70 - 130*
13C2 PFDA	*123*		*70 - 130*

Lab Sample ID: LCSD 320-141212/3-A
Matrix: Water
Analysis Batch: 141771

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 141212

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perfluorooctanesulfonic acid (PFOS)	0.300	0.292		ug/L		97	70 - 130	5	30
Perfluorooctanoic acid (PFOA)	0.146	0.154		ug/L		105	70 - 130	1	30
Perfluorobutanesulfonic acid (PFBS)	0.673	0.620		ug/L		92	70 - 130	2	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
13C2 PFHxA	*126*		*70 - 130*
13C2 PFDA	*131*	*Q*	*70 - 130*

Lab Sample ID: MB 320-141328/1-A
Matrix: Water
Analysis Batch: 141770

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 141328

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	0.048	U	0.060	0.016	ug/L		12/08/16 18:21	12/13/16 21:31	1
Perfluorooctanoic acid (PFOA)	0.024	U	0.030	0.0094	ug/L		12/08/16 18:21	12/13/16 21:31	1
Perfluorobutanesulfonic acid (PFBS)	0.11	U	0.14	0.048	ug/L		12/08/16 18:21	12/13/16 21:31	1

Method: 537 - Perfluorinated Alkyl Acids (LC/MS) (Continued)

Lab Sample ID: MB 320-141328/1-A
Matrix: Water
Analysis Batch: 141770

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 141328

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFHxA	121		70 - 130	12/08/16 18:21	12/13/16 21:31	1
13C2 PFDA	120		70 - 130	12/08/16 18:21	12/13/16 21:31	1

Lab Sample ID: LLCS 320-141328/2-A
Matrix: Water
Analysis Batch: 141770

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 141328

Analyte			Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Perfluorooctanesulfonic acid (PFOS)			0.0401	0.0326	J	ug/L		81	50 - 150		
Perfluorooctanoic acid (PFOA)			0.0198	0.0189	J M	ug/L		95	50 - 150		
Perfluorobutanesulfonic acid (PFBS)			0.0898	0.0838	J	ug/L		93	50 - 150		

Surrogate	LLCS %Recovery	LLCS Qualifier	Limits
13C2 PFHxA	124		70 - 130
13C2 PFDA	129		70 - 130

Lab Sample ID: LLCSD 320-141328/3-A
Matrix: Water
Analysis Batch: 141770

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 141328

Analyte			Spike Added	LLCSD Result	LLCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perfluorooctanesulfonic acid (PFOS)			0.0401	0.0355	J	ug/L		89	50 - 150	9	50
Perfluorooctanoic acid (PFOA)			0.0198	0.0184	J M	ug/L		93	50 - 150	2	50
Perfluorobutanesulfonic acid (PFBS)			0.0898	0.0876	J	ug/L		98	50 - 150	4	50

Surrogate	LLCSD %Recovery	LLCSD Qualifier	Limits
13C2 PFHxA	119		70 - 130
13C2 PFDA	116		70 - 130

LCMS

Prep Batch: 141212

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-24069-1	WI-CV-1RW13-1216	Total/NA	Water	537	
320-24069-2	WI-CV-1FB13-1216	Total/NA	Water	537	
320-24069-3	WI-CV-1RW14-1216	Total/NA	Water	537	
320-24069-4	WI-CV-1FB14-1216	Total/NA	Water	537	
320-24069-5	WI-CV-1RW15-1216	Total/NA	Water	537	
320-24069-6	WI-CV-1FB15-1216	Total/NA	Water	537	
320-24069-6 - RA	WI-CV-1FB15-1216	Total/NA	Water	537	
320-24069-7	WI-CV-1RW16-1216	Total/NA	Water	537	
320-24069-8	WI-CV-1FB16-1216	Total/NA	Water	537	
320-24069-9	WI-CV-1RW17-1216	Total/NA	Water	537	
320-24069-10	WI-CV-1FB17-1216	Total/NA	Water	537	
320-24069-11	WI-CV-3RW14-1216	Total/NA	Water	537	
320-24069-12	WI-CV-3FB14-1216	Total/NA	Water	537	
320-24069-13	WI-CV-3RW15-1216	Total/NA	Water	537	
320-24069-14	WI-CV-3FB15-1216	Total/NA	Water	537	
320-24069-15	WI-CV-3RW16-1216	Total/NA	Water	537	
320-24069-16	WI-CV-3FB16-1216	Total/NA	Water	537	
320-24069-17	WI-CV-1RW18-1216	Total/NA	Water	537	
320-24069-18	WI-CV-1FB18-1216	Total/NA	Water	537	
320-24069-19	WI-CV-1RW19-1216	Total/NA	Water	537	
320-24069-20	WI-CV-1FB19-1216	Total/NA	Water	537	
MB 320-141212/1-A	Method Blank	Total/NA	Water	537	
LCS 320-141212/2-A	Lab Control Sample	Total/NA	Water	537	
LCSD 320-141212/3-A	Lab Control Sample Dup	Total/NA	Water	537	

Prep Batch: 141328

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-24069-21	WI-CV-1RW20-1216	Total/NA	Water	537	
320-24069-22	WI-CV-1FB20-1216	Total/NA	Water	537	
320-24069-23	WI-CV-1RW21-1216	Total/NA	Water	537	
320-24069-24	WI-CV-1FB21-1216	Total/NA	Water	537	
320-24069-25	WI-CV-1RW22-1216	Total/NA	Water	537	
320-24069-26	WI-CV-1FB22-1216	Total/NA	Water	537	
320-24069-27	WI-CV-3RW17-1216	Total/NA	Water	537	
320-24069-28	WI-CV-3FB17-1216	Total/NA	Water	537	
320-24069-29	WI-CV-3RW18-1216	Total/NA	Water	537	
320-24069-30	WI-CV-3FB18-1216	Total/NA	Water	537	
MB 320-141328/1-A	Method Blank	Total/NA	Water	537	
LLCS 320-141328/2-A	Lab Control Sample	Total/NA	Water	537	
LLCSD 320-141328/3-A	Lab Control Sample Dup	Total/NA	Water	537	

Analysis Batch: 141767

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 320-141212/1-A	Method Blank	Total/NA	Water	537	141212

Analysis Batch: 141768

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-24069-2	WI-CV-1FB13-1216	Total/NA	Water	537	141212
320-24069-6	WI-CV-1FB15-1216	Total/NA	Water	537	141212
320-24069-7	WI-CV-1RW16-1216	Total/NA	Water	537	141212
320-24069-8	WI-CV-1FB16-1216	Total/NA	Water	537	141212

LCMS (Continued)

Analysis Batch: 141768 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-24069-9	WI-CV-1RW17-1216	Total/NA	Water	537	141212
320-24069-10	WI-CV-1FB17-1216	Total/NA	Water	537	141212
320-24069-11	WI-CV-3RW14-1216	Total/NA	Water	537	141212

Analysis Batch: 141769

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-24069-12	WI-CV-3FB14-1216	Total/NA	Water	537	141212
320-24069-13	WI-CV-3RW15-1216	Total/NA	Water	537	141212
320-24069-14	WI-CV-3FB15-1216	Total/NA	Water	537	141212
320-24069-15	WI-CV-3RW16-1216	Total/NA	Water	537	141212
320-24069-16	WI-CV-3FB16-1216	Total/NA	Water	537	141212
320-24069-17	WI-CV-1RW18-1216	Total/NA	Water	537	141212
320-24069-18	WI-CV-1FB18-1216	Total/NA	Water	537	141212
320-24069-19	WI-CV-1RW19-1216	Total/NA	Water	537	141212
320-24069-20	WI-CV-1FB19-1216	Total/NA	Water	537	141212

Analysis Batch: 141770

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-24069-24	WI-CV-1FB21-1216	Total/NA	Water	537	141328
320-24069-25	WI-CV-1RW22-1216	Total/NA	Water	537	141328
320-24069-27	WI-CV-3RW17-1216	Total/NA	Water	537	141328
MB 320-141328/1-A	Method Blank	Total/NA	Water	537	141328
LLCS 320-141328/2-A	Lab Control Sample	Total/NA	Water	537	141328
LLCSD 320-141328/3-A	Lab Control Sample Dup	Total/NA	Water	537	141328

Analysis Batch: 141771

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-24069-1	WI-CV-1RW13-1216	Total/NA	Water	537	141212
320-24069-3	WI-CV-1RW14-1216	Total/NA	Water	537	141212
320-24069-4	WI-CV-1FB14-1216	Total/NA	Water	537	141212
320-24069-5	WI-CV-1RW15-1216	Total/NA	Water	537	141212
320-24069-6 - RA	WI-CV-1FB15-1216	Total/NA	Water	537	141212
320-24069-28	WI-CV-3FB17-1216	Total/NA	Water	537	141328
320-24069-29	WI-CV-3RW18-1216	Total/NA	Water	537	141328
320-24069-30	WI-CV-3FB18-1216	Total/NA	Water	537	141328
LCS 320-141212/2-A	Lab Control Sample	Total/NA	Water	537	141212
LCSD 320-141212/3-A	Lab Control Sample Dup	Total/NA	Water	537	141212

Analysis Batch: 141966

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-24069-21	WI-CV-1RW20-1216	Total/NA	Water	537	141328
320-24069-22	WI-CV-1FB20-1216	Total/NA	Water	537	141328
320-24069-23	WI-CV-1RW21-1216	Total/NA	Water	537	141328
320-24069-26	WI-CV-1FB22-1216	Total/NA	Water	537	141328

Lab Chronicle

Client: CH2M Hill Constructors, Inc.
Project/Site: Whidbey Island

TestAmerica Job ID: 320-24069-1

Client Sample ID: WI-CV-1RW13-1216
Date Collected: 12/02/16 09:09
Date Received: 12/06/16 10:30

Lab Sample ID: 320-24069-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537			254.6 mL	1.0 mL	141212	12/08/16 11:45	VPM	TAL SAC
Total/NA	Analysis	537		1			141771	12/14/16 06:24	JRB	TAL SAC

Client Sample ID: WI-CV-1FB13-1216
Date Collected: 12/02/16 09:08
Date Received: 12/06/16 10:30

Lab Sample ID: 320-24069-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537			268.2 mL	1.0 mL	141212	12/08/16 11:45	VPM	TAL SAC
Total/NA	Analysis	537		1			141768	12/13/16 08:56	JRB	TAL SAC

Client Sample ID: WI-CV-1RW14-1216
Date Collected: 12/02/16 09:53
Date Received: 12/06/16 10:30

Lab Sample ID: 320-24069-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537			261.9 mL	1.0 mL	141212	12/08/16 11:45	VPM	TAL SAC
Total/NA	Analysis	537		1			141771	12/14/16 06:54	JRB	TAL SAC

Client Sample ID: WI-CV-1FB14-1216
Date Collected: 12/02/16 09:52
Date Received: 12/06/16 10:30

Lab Sample ID: 320-24069-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537			257.1 mL	1.0 mL	141212	12/08/16 11:45	VPM	TAL SAC
Total/NA	Analysis	537		1			141771	12/14/16 07:23	JRB	TAL SAC

Client Sample ID: WI-CV-1RW15-1216
Date Collected: 12/02/16 11:25
Date Received: 12/06/16 10:30

Lab Sample ID: 320-24069-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537			255.2 mL	1.0 mL	141212	12/08/16 11:45	VPM	TAL SAC
Total/NA	Analysis	537		1			141771	12/14/16 07:53	JRB	TAL SAC

Client Sample ID: WI-CV-1FB15-1216
Date Collected: 12/02/16 11:24
Date Received: 12/06/16 10:30

Lab Sample ID: 320-24069-6
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537			255.7 mL	1.0 mL	141212	12/08/16 11:45	VPM	TAL SAC
Total/NA	Analysis	537		1			141768	12/13/16 10:54	JRB	TAL SAC

Lab Chronicle

Client: CH2M Hill Constructors, Inc.
Project/Site: Whidbey Island

TestAmerica Job ID: 320-24069-1

Client Sample ID: WI-CV-1FB15-1216
Date Collected: 12/02/16 11:24
Date Received: 12/06/16 10:30

Lab Sample ID: 320-24069-6
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537	RA		255.7 mL	1.0 mL	141212	12/08/16 11:45	VPM	TAL SAC
Total/NA	Analysis	537	RA	1			141771	12/14/16 08:23	JRB	TAL SAC

Client Sample ID: WI-CV-1RW16-1216
Date Collected: 12/02/16 14:09
Date Received: 12/06/16 10:30

Lab Sample ID: 320-24069-7
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537			254.5 mL	1.0 mL	141212	12/08/16 11:45	VPM	TAL SAC
Total/NA	Analysis	537		1			141768	12/13/16 11:24	JRB	TAL SAC

Client Sample ID: WI-CV-1FB16-1216
Date Collected: 12/02/16 14:08
Date Received: 12/06/16 10:30

Lab Sample ID: 320-24069-8
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537			264.5 mL	1.0 mL	141212	12/08/16 11:45	VPM	TAL SAC
Total/NA	Analysis	537		1			141768	12/13/16 11:53	JRB	TAL SAC

Client Sample ID: WI-CV-1RW17-1216
Date Collected: 12/02/16 14:17
Date Received: 12/06/16 10:30

Lab Sample ID: 320-24069-9
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537			257.3 mL	1.0 mL	141212	12/08/16 11:45	VPM	TAL SAC
Total/NA	Analysis	537		1			141768	12/13/16 12:23	JRB	TAL SAC

Client Sample ID: WI-CV-1FB17-1216
Date Collected: 12/02/16 14:16
Date Received: 12/06/16 10:30

Lab Sample ID: 320-24069-10
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537			268.6 mL	1.0 mL	141212	12/08/16 11:45	VPM	TAL SAC
Total/NA	Analysis	537		1			141768	12/13/16 12:52	JRB	TAL SAC

Client Sample ID: WI-CV-3RW14-1216
Date Collected: 12/02/16 14:31
Date Received: 12/06/16 10:30

Lab Sample ID: 320-24069-11
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537			258 mL	1.0 mL	141212	12/08/16 11:45	VPM	TAL SAC
Total/NA	Analysis	537		1			141768	12/13/16 13:22	JRB	TAL SAC

Lab Chronicle

Client: CH2M Hill Constructors, Inc.
Project/Site: Whidbey Island

TestAmerica Job ID: 320-24069-1

Client Sample ID: WI-CV-3FB14-1216
Lab Sample ID: 320-24069-12
Date Collected: 12/02/16 14:32
Matrix: Water
Date Received: 12/06/16 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537			270.4 mL	1.0 mL	141212	12/08/16 11:45	VPM	TAL SAC
Total/NA	Analysis	537		1			141769	12/13/16 15:36	JRB	TAL SAC

Client Sample ID: WI-CV-3RW15-1216
Lab Sample ID: 320-24069-13
Date Collected: 12/02/16 14:47
Matrix: Water
Date Received: 12/06/16 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537			265.9 mL	1.0 mL	141212	12/08/16 11:45	VPM	TAL SAC
Total/NA	Analysis	537		1			141769	12/13/16 16:06	JRB	TAL SAC

Client Sample ID: WI-CV-3FB15-1216
Lab Sample ID: 320-24069-14
Date Collected: 12/02/16 14:48
Matrix: Water
Date Received: 12/06/16 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537			255.1 mL	1.0 mL	141212	12/08/16 11:45	VPM	TAL SAC
Total/NA	Analysis	537		1			141769	12/13/16 16:35	JRB	TAL SAC

Client Sample ID: WI-CV-3RW16-1216
Lab Sample ID: 320-24069-15
Date Collected: 12/02/16 17:25
Matrix: Water
Date Received: 12/06/16 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537			270.1 mL	1.0 mL	141212	12/08/16 11:45	VPM	TAL SAC
Total/NA	Analysis	537		1			141769	12/13/16 17:05	JRB	TAL SAC

Client Sample ID: WI-CV-3FB16-1216
Lab Sample ID: 320-24069-16
Date Collected: 12/02/16 17:26
Matrix: Water
Date Received: 12/06/16 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537			266.2 mL	1.0 mL	141212	12/08/16 11:45	VPM	TAL SAC
Total/NA	Analysis	537		1			141769	12/13/16 17:35	JRB	TAL SAC

Client Sample ID: WI-CV-1RW18-1216
Lab Sample ID: 320-24069-17
Date Collected: 12/03/16 09:05
Matrix: Water
Date Received: 12/06/16 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537			267.5 mL	1.0 mL	141212	12/08/16 11:45	VPM	TAL SAC
Total/NA	Analysis	537		1			141769	12/13/16 18:04	JRB	TAL SAC

Lab Chronicle

Client: CH2M Hill Constructors, Inc.
Project/Site: Whidbey Island

TestAmerica Job ID: 320-24069-1

Client Sample ID: WI-CV-1FB18-1216
Lab Sample ID: 320-24069-18
Date Collected: 12/03/16 09:04
Matrix: Water
Date Received: 12/06/16 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537			267 mL	1.0 mL	141212	12/08/16 11:45	VPM	TAL SAC
Total/NA	Analysis	537		1			141769	12/13/16 18:34	JRB	TAL SAC

Client Sample ID: WI-CV-1RW19-1216
Lab Sample ID: 320-24069-19
Date Collected: 12/03/16 10:05
Matrix: Water
Date Received: 12/06/16 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537			268.3 mL	1.0 mL	141212	12/08/16 11:45	VPM	TAL SAC
Total/NA	Analysis	537		1			141769	12/13/16 19:03	JRB	TAL SAC

Client Sample ID: WI-CV-1FB19-1216
Lab Sample ID: 320-24069-20
Date Collected: 12/03/16 10:04
Matrix: Water
Date Received: 12/06/16 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537			259.5 mL	1.0 mL	141212	12/08/16 11:45	VPM	TAL SAC
Total/NA	Analysis	537		1			141769	12/13/16 19:33	JRB	TAL SAC

Client Sample ID: WI-CV-1RW20-1216
Lab Sample ID: 320-24069-21
Date Collected: 12/03/16 10:46
Matrix: Water
Date Received: 12/06/16 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537			274.2 mL	1.00 mL	141328	12/08/16 18:21	JER	TAL SAC
Total/NA	Analysis	537		1			141966	12/14/16 16:46	JRB	TAL SAC

Client Sample ID: WI-CV-1FB20-1216
Lab Sample ID: 320-24069-22
Date Collected: 12/03/16 10:45
Matrix: Water
Date Received: 12/06/16 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537			284.3 mL	1.00 mL	141328	12/08/16 18:21	JER	TAL SAC
Total/NA	Analysis	537		1			141966	12/14/16 17:15	JRB	TAL SAC

Client Sample ID: WI-CV-1RW21-1216
Lab Sample ID: 320-24069-23
Date Collected: 12/03/16 11:22
Matrix: Water
Date Received: 12/06/16 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537			263.9 mL	1.00 mL	141328	12/08/16 18:21	JER	TAL SAC
Total/NA	Analysis	537		1			141966	12/14/16 17:45	JRB	TAL SAC

Lab Chronicle

Client: CH2M Hill Constructors, Inc.
Project/Site: Whidbey Island

TestAmerica Job ID: 320-24069-1

Client Sample ID: WI-CV-1FB21-1216
Lab Sample ID: 320-24069-24
Date Collected: 12/03/16 11:21
Matrix: Water
Date Received: 12/06/16 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537			278.9 mL	1.00 mL	141328	12/08/16 18:21	JER	TAL SAC
Total/NA	Analysis	537		1			141770	12/14/16 00:29	JRB	TAL SAC

Client Sample ID: WI-CV-1RW22-1216
Lab Sample ID: 320-24069-25
Date Collected: 12/03/16 12:02
Matrix: Water
Date Received: 12/06/16 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537			276.1 mL	1.00 mL	141328	12/08/16 18:21	JER	TAL SAC
Total/NA	Analysis	537		1			141770	12/14/16 00:59	JRB	TAL SAC

Client Sample ID: WI-CV-1FB22-1216
Lab Sample ID: 320-24069-26
Date Collected: 12/03/16 12:01
Matrix: Water
Date Received: 12/06/16 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537			285.4 mL	1.00 mL	141328	12/08/16 18:21	JER	TAL SAC
Total/NA	Analysis	537		1			141966	12/14/16 18:14	JRB	TAL SAC

Client Sample ID: WI-CV-3RW17-1216
Lab Sample ID: 320-24069-27
Date Collected: 12/03/16 09:13
Matrix: Water
Date Received: 12/06/16 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537			271.3 mL	1.00 mL	141328	12/08/16 18:21	JER	TAL SAC
Total/NA	Analysis	537		1			141770	12/14/16 01:58	JRB	TAL SAC

Client Sample ID: WI-CV-3FB17-1216
Lab Sample ID: 320-24069-28
Date Collected: 12/03/16 09:14
Matrix: Water
Date Received: 12/06/16 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537			278.7 mL	1.00 mL	141328	12/08/16 18:21	JER	TAL SAC
Total/NA	Analysis	537		1			141771	12/14/16 03:56	JRB	TAL SAC

Client Sample ID: WI-CV-3RW18-1216
Lab Sample ID: 320-24069-29
Date Collected: 12/03/16 12:08
Matrix: Water
Date Received: 12/06/16 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537			273.4 mL	1.00 mL	141328	12/08/16 18:21	JER	TAL SAC
Total/NA	Analysis	537		1			141771	12/14/16 04:26	JRB	TAL SAC

Lab Chronicle

Client: CH2M Hill Constructors, Inc.
Project/Site: Whidbey Island

TestAmerica Job ID: 320-24069-1

Client Sample ID: WI-CV-3FB18-1216 — **Lab Sample ID: 320-24069-30**
Date Collected: 12/03/16 12:09 — **Matrix: Water**
Date Received: 12/06/16 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537			281.6 mL	1.00 mL	141328	12/08/16 18:21	JER	TAL SAC
Total/NA	Analysis	537		1			141771	12/14/16 04:55	JRB	TAL SAC

Laboratory References:

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Certification Summary

Client: CH2M Hill Constructors, Inc.
Project/Site: Whidbey Island

TestAmerica Job ID: 320-24069-1

Laboratory: TestAmerica Sacramento

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
A2LA	DoD ELAP		2928-01	01-31-17

Analysis Method	Prep Method	Matrix	Analyte

Method Summary

Client: CH2M Hill Constructors, Inc.
Project/Site: Whidbey Island

TestAmerica Job ID: 320-24069-1

Method	Method Description	Protocol	Laboratory
537	Perfluorinated Alkyl Acids (LC/MS)	EPA	TAL SAC

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Sample Summary

Client: CH2M Hill Constructors, Inc.
Project/Site: Whidbey Island

TestAmerica Job ID: 320-24069-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-24069-1	WI-CV-1RW13-1216	Water	12/02/16 09:09	12/06/16 10:30
320-24069-2	WI-CV-1FB13-1216	Water	12/02/16 09:08	12/06/16 10:30
320-24069-3	WI-CV-1RW14-1216	Water	12/02/16 09:53	12/06/16 10:30
320-24069-4	WI-CV-1FB14-1216	Water	12/02/16 09:52	12/06/16 10:30
320-24069-5	WI-CV-1RW15-1216	Water	12/02/16 11:25	12/06/16 10:30
320-24069-6	WI-CV-1FB15-1216	Water	12/02/16 11:24	12/06/16 10:30
320-24069-7	WI-CV-1RW16-1216	Water	12/02/16 14:09	12/06/16 10:30
320-24069-8	WI-CV-1FB16-1216	Water	12/02/16 14:08	12/06/16 10:30
320-24069-9	WI-CV-1RW17-1216	Water	12/02/16 14:17	12/06/16 10:30
320-24069-10	WI-CV-1FB17-1216	Water	12/02/16 14:16	12/06/16 10:30
320-24069-11	WI-CV-3RW14-1216	Water	12/02/16 14:31	12/06/16 10:30
320-24069-12	WI-CV-3FB14-1216	Water	12/02/16 14:32	12/06/16 10:30
320-24069-13	WI-CV-3RW15-1216	Water	12/02/16 14:47	12/06/16 10:30
320-24069-14	WI-CV-3FB15-1216	Water	12/02/16 14:48	12/06/16 10:30
320-24069-15	WI-CV-3RW16-1216	Water	12/02/16 17:25	12/06/16 10:30
320-24069-16	WI-CV-3FB16-1216	Water	12/02/16 17:26	12/06/16 10:30
320-24069-17	WI-CV-1RW18-1216	Water	12/03/16 09:05	12/06/16 10:30
320-24069-18	WI-CV-1FB18-1216	Water	12/03/16 09:04	12/06/16 10:30
320-24069-19	WI-CV-1RW19-1216	Water	12/03/16 10:05	12/06/16 10:30
320-24069-20	WI-CV-1FB19-1216	Water	12/03/16 10:04	12/06/16 10:30
320-24069-21	WI-CV-1RW20-1216	Water	12/03/16 10:46	12/06/16 10:30
320-24069-22	WI-CV-1FB20-1216	Water	12/03/16 10:45	12/06/16 10:30
320-24069-23	WI-CV-1RW21-1216	Water	12/03/16 11:22	12/06/16 10:30
320-24069-24	WI-CV-1FB21-1216	Water	12/03/16 11:21	12/06/16 10:30
320-24069-25	WI-CV-1RW22-1216	Water	12/03/16 12:02	12/06/16 10:30
320-24069-26	WI-CV-1FB22-1216	Water	12/03/16 12:01	12/06/16 10:30
320-24069-27	WI-CV-3RW17-1216	Water	12/03/16 09:13	12/06/16 10:30
320-24069-28	WI-CV-3FB17-1216	Water	12/03/16 09:14	12/06/16 10:30
320-24069-29	WI-CV-3RW18-1216	Water	12/03/16 12:08	12/06/16 10:30
320-24069-30	WI-CV-3FB18-1216	Water	12/03/16 12:09	12/06/16 10:30

TestAmerica Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
phone 916.373.5600 fax

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Regulatory Program: ☐DW ☐NPDES ☐RCRA ☐Other:

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Katie Tippin	Site Contact: Eric Epple	Date: ~~11/12016~~ 12/5/2016	COC No: 5
Tiffany Hill	Tel/Fax: (757) 671-6258	Lab Contact: Laura Turpen	Carrier: FedEx	1 of 3 COCs
Project Chemist	Analysis Turnaround Time			Sampler:
1100 NE Circle Blvd Ste 300 Corvallis, OR 97330	☑CALENDAR DAYS ☐WORKING DAYS			For Lab Use Only:
(541) 768-3109	TAT if different from Below _7-Day_____			Walk-in Client:
(541) 908-3794	☐ 2 weeks			Lab Sampling:
Project Name: CTO-08	☐ 1 week			
Site: OLF Coupeville	☐ 2 days			Job / SDG No.:
P O #: 100067106050 - 679580.09.FI.FS	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y / N)	Perform MS / MSD (Y / N)	USEPA Method 537 (PFOA, PFOS, and PFBS)	Sample Specific Notes:
WI-CV-1RW13-1216	12/2/16	9:09	G	DW	2	N	N	X	
WI-CV-1FB13-1216	12/2/16	9:08	G	DW	2	N	N	X	
WI-CV-1RW14-1216	12/2/16	9:53	G	DW	2	N	N	X	
WI-CV-1FB14-1216	12/2/16	9:52	G	DW	2	N	N	X	
WI-CV-1RW15-1216	12/2/16	11:25	G	DW	2	N	N	X	
WI-CV-1FB15-1216	12/2/16	11:24	G	DW	2	N	N	X	
WI-CV-1RW16-1216	12/2/16	14:09	G	DW	2	N	N	X	
WI-CV-1FB16-1216	12/2/16	14:08	G	DW	2	N	N	X	
WI-CV-1RW17-1216	12/2/16	14:17	G	DW	2	N	N	X	
WI-CV-1FB17-1216	12/2/16	14:16	G	DW	2	N	N	X	
WI-CV-3RW14-1216	12/2/16	14:31	G	DW	2	N	N	X	
WI-CV-3FB14-1216	12/2/16	14:32	G	DW	2	N	N	X	

320-24069 Chain of Custody

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☑Non-Hazard ☐Flammable ☐Skin Irritant ☐Poison B ☐Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐Return to Client ☑Disposal by Lab ☐Archive for_____ Months

Special Instructions/QC Requirements & Comments:

1.3 0.4 12

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: 1.1 Corr'd: 0.2 Therm ID No.: 12

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Eric Epple /	CH2M	12-5-16/1600		TAWS	12/6/16 1030
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

Form No. CA-C-WI-002, Rev. 4.3, dated 12/05/2013

TestAmerica Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
phone 916.373.5600 fax

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Regulatory Program: ☐DW ☐NPDES ☐RCRA ☐Other:

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Katie Tippin	Site Contact: Eric Epple	Date: ~~11/ 12016~~ 12/5/2016	COC No: 5
Tiffany Hill	Tel/Fax: (757) 671-6258	Lab Contact: Laura Turpen	Carrier: FedEx	2 of 3 COCs
Project Chemist	Analysis Turnaround Time			Sampler:
1100 NE Circle Blvd Ste 300 Corvallis, OR 97330	☑CALENDAR DAYS ☐WORKING DAYS			For Lab Use Only:
(541) 768-3109	TAT if different from Below _7-Day_____			Walk-in Client:
(541) 908-3794	☐ 2 weeks			Lab Sampling:
Project Name: CTO-08	☐ 1 week			
Site: OLF Coupeville	☐ 2 days			Job / SDG No.:
P O #: 100067106050 - 679580.09.FI.FS	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y / N)	Perform MS / MSD (Y / N)	USEPA Method 537 (PFOA, PFOS, and PFBS)	Sample Specific Notes:
WI-CV-3RW15-1216	12/2/16	14:47	G	DW	2	N	N	X	
WI-CV-3FB15-1216	12/2/16	14:48	G	DW	2	N	N	X	
WI-CV-3RW16-1216	12/2/16	17:25	G	DW	2	N	N	X	
WI-CV-3FB16-1216	12/2/16	17:26	G	DW	2	N	N	X	
WI-CV-1RW18-1216	12/3/16	9:05	G	DW	1	N	N	X	
WI-CV-1FB18-1216	12/3/16	9:04	G	DW	1	N	N	X	
WI-CV-1RW19-1216	12/3/16	10:05	G	DW	2	N	N	X	
WI-CV-1FB19-1216	12/3/16	10:04	G	DW	2	N	N	X	
WI-CV-1RW20-1216	12/3/16	10:46	G	DW	2	N	N	X	
WI-CV-1FB20-1216	12/3/16	10:45	G	DW	2	N	N	X	
WI-CV-1RW21-1216	12/3/16	11:22	G	DW	1	N	N	X	
WI-CV-1FB21-1216	12/3/16	11:21	G	DW	1	N	N	X	

Preservation Used: 1= Ice, 2= HCl; 3= H_2SO_4; 4=HNO_3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☑Non-Hazard ☐Flammable ☐Skin Irritant ☐Poison B ☐Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐Return to Client ☑Disposal by Lab ☐Archive for_____ Months

Special Instructions/QC Requirements & Comments:

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: 1.1 Corr'd: 0.2 Therm ID No.: 12

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Eric Epple /	CH2M	12-5-16/1600		JAWS	12/6/16 1030
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

Form No. CA-C-WI-002, Rev. 4.3, dated 12/05/2013

TestAmerica Sacramento
880 Riverside Parkway

West Sacramento, CA 95605
phone 916.373.5600 fax

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Regulatory Program: ☐DW ☐NPDES ☐RCRA ☐Other:

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Katie Tippin	Site Contact: Eric Epple	Date: ~~11/ 12016~~ 12/5/2016	COC No: 5
Tiffany Hill	Tel/Fax: (757) 671-6258	Lab Contact: Laura Turpen	Carrier: FedEx	3 of 3 COCs
Project Chemist	Analysis Turnaround Time			Sampler:
1100 NE Circle Blvd Ste 300 Corvallis, OR 97330	☑CALENDAR DAYS ☐WORKING DAYS			For Lab Use Only:
(541) 768-3109	TAT if different from Below _7-Day_____			Walk-in Client:
(541) 908-3794	☐ 2 weeks			Lab Sampling:
Project Name: CTO-08	☐ 1 week			
Site: OLF Coupeville	☐ 2 days			Job / SDG No.:
P O #: 100067106050 - 679580.09.FI.FS	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y / N)	Perform MS / MSD (Y / N)	USEPA Method 537 (PFOA, PFOS, and PFBS)	Sample Specific Notes:
WI-CV-1RW22-1216	12/3/16	12:02	G	DW	1	N	N	X	
WI-CV-1FB22-1216	12/3/16	12:01	G	DW	1	N	N	X	
WI-CV-3RW17-1216	12/3/16	9:13	G	DW	2	N	N	X	
WI-CV-3FB17-1216	12/3/16	9:14	G	DW	2	N	N	X	
WI-CV-3RW18-1216	12/3/16	12:08	G	DW	2	N	N	X	
WI-CV-3FB18-1216	12/3/16	12:09	G	DW	2	N	N	X	

Preservation Used: 1= Ice, 2= HCl; 3= H_2SO_4; 4=HNO_3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☑Non-Hazard ☐Flammable ☐Skin Irritant ☐Poison B ☐Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐Return to Client ☑Disposal by Lab ☐Archive for_____ Months

Special Instructions/QC Requirements & Comments:

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:		Cooler Temp. (°C): Obs'd: 1.1	Corr'd: 0.2	Therm ID No.: 12
Relinquished by: Eric Epple	Company: CH2M	Date/Time: 12-5-16/1600	Received by:	Company: TAWS	Date/Time: 12/6/16 1630
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

Form No. CA-C-WI-002, Rev. 4.3, dated 12/05/2013

Login Sample Receipt Checklist

Client: CH2M Hill Constructors, Inc.

Job Number: 320-24069-1

Login Number: 24069
List Number: 1
Creator: Nelson, Kym D

List Source: TestAmerica Sacramento

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

ANALYTICAL REPORT

Job Number: 320-24069-1

Job Description: Whidbey Island

For:
CH2M Hill Constructors, Inc.
1100 NE Circle Blvd
Corvallis, OR 97330

Attention: Tiffany Hill

Approved for release.
Laura Turpen
Project Manager I
12/15/2016 1:32 PM

Laura Turpen, Project Manager I
880 Riverside Parkway, West Sacramento, CA, 95605
(916)374-4414
laura.turpen@testamericainc.com
12/15/2016

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Qualifiers

LCMS

Qualifier	Qualifier Description
Q	One or more quality control criteria failed.
U	Undetected at the Limit of Detection.
M	Manual integrated compound.
J	Estimated: The analyte was positively identified; the quantitation is an estimation

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

CASE NARRATIVE

Client: CH2M Hill Constructors, Inc.

Project: Whidbey Island

Report Number: 320-24069-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica Sacramento attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the applicable methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

TestAmerica utilizes USEPA approved methods and DOD QSM, where applicable, in all analytical work. The samples presented in this report were analyzed for the parameter(s) listed on the analytical methods summary page in accordance with the method(s) indicated. A summary of QC data for these analyses is included at the back of the report.

All parameters for which TestAmerica Sacramento has certification were evaluated to the QSM specified reporting convention or to the client specified format if different from QSM. Parameters not certified under QSM, if any, were evaluated to the detection limit (DL) and include qualified results where applicable.

The sample(s) that contain constituents flagged with U are undetected. The result associated with this flag is the limit of detection (LOD).

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 12/06/2016; the samples arrived in good condition, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 0.2º C and 0.4º C.

PFOA/PFOS

Samples WI-CV-1RW13-1216 (320-24069-1), WI-CV-1FB13-1216 (320-24069-2), WI-CV-1RW14-1216 (320-24069-3), WI-CV-1FB14-1216 (320-24069-4), WI-CV-1RW15-1216 (320-24069-5), WI-CV-1FB15-1216 (320-24069-6), WI-CV-1RW16-1216 (320-24069-7), WI-CV-1FB16-1216 (320-24069-8), WI-CV-1RW17-1216 (320-24069-9), WI-CV-1FB17-1216 (320-24069-10), WI-CV-3RW14-1216 (320-24069-11), WI-CV-3FB14-1216 (320-24069-12), WI-CV-3RW15-1216 (320-24069-13), WI-CV-3FB15-1216 (320-24069-14), WI-CV-3RW16-1216 (320-24069-15), WI-CV-3FB16-1216 (320-24069-16), WI-CV-1RW18-1216 (320-24069-17), WI-CV-1FB18-1216 (320-24069-18), WI-CV-1RW19-1216 (320-24069-19), WI-CV-1FB19-1216 (320-24069-20), WI-CV-1RW20-1216 (320-24069-21), WI-CV-1FB20-1216 (320-24069-22), WI-CV-1RW21-1216 (320-24069-23), WI-CV-1FB21-1216 (320-24069-24), WI-CV-1RW22-1216 (320-24069-25), WI-CV-1FB22-1216 (320-24069-26), WI-CV-3RW17-1216 (320-24069-27), WI-CV-3FB17-1216 (320-24069-28), WI-CV-3RW18-1216 (320-24069-29) and WI-CV-3FB18-1216 (320-24069-30) were analyzed for PFOA/PFOS in accordance with 537. The samples were prepared on 12/08/2016 and analyzed on 12/13/2016 and 12/14/2016.

The following samples were received with a pH of 7, except sample 320-24069-A-2 which has a pH of 9.
WI-CV-1RW13-1216 (320-24069-1), WI-CV-1FB13-1216 (320-24069-2), WI-CV-1RW14-1216 (320-24069-3), WI-CV-1FB14-1216 (320-24069-4), WI-CV-1RW15-1216 (320-24069-5), WI-CV-1FB15-1216 (320-24069-6), WI-CV-1RW16-1216 (320-24069-7), WI-CV-1FB16-1216 (320-24069-8), WI-CV-1RW17-1216 (320-24069-9), WI-CV-1FB17-1216 (320-24069-10), WI-CV-3RW14-1216 (320-24069-11), WI-CV-3FB14-1216 (320-24069-12), WI-CV-3RW15-1216 (320-24069-13), WI-CV-3FB15-1216 (320-24069-14), WI-CV-3RW16-1216 (320-24069-15), WI-CV-3FB16-1216 (320-24069-16), WI-CV-1RW18-1216 (320-24069-17), WI-CV-1FB18-1216 (320-24069-18), WI-CV-1RW19-1216 (320-24069-19) and WI-CV-1FB19-1216 (320-24069-20)

The following samples are yellow: WI-CV-1RW15-1216 (320-24069-5) and WI-CV-3RW14-1216 (320-24069-11).

The following sample deposited a black sediment/precipitate after loading the sample onto the column: WI-CV-1RW19-1216 (320-24069-19).

The extract for the following sample had an orange-brown sediment at final concentration: WI-CV-1RW21-1216 (320-24069-23).

The extracts for the following samples had a yellow sediment at final concentration: WI-CV-1RW20-1216 (320-24069-21) and WI-CV-3RW17-1216 (320-24069-27).

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batches 320-141212 and 320-141328.

Surrogate recovery for the laboratory control sample duplicate (LCSD) was slightly high above the control limits for 13C2 PFDA at 130.5% recovery with the limit at 130%. The target analytes for the LCSD were in control. Re-analysis was performed with concurring results. The second analysis has been reported.

The surrogate recoveries for the following sample was outside control limits: WI-CV-1RW13-1216 (320-24069-1). Re-extraction and/or re-analysis was performed with concurring results. There is no impact on the data as the associated target analytes were Non-Detect (ND). The second analysis has been reported due to slightly better recoveries of the surrogates.

Surrogate recovery and Internal standard (ISTD) response for the following sample was outside control limits: WI-CV-1RW15-1216 (320-24069-5). The sample was re-analyzed with concurring results, and the second set of data has been reported.

Internal standard (ISTD) response for the following sample was outside control limits: WI-CV-1FB15-1216 (320-24069-6). The sample was re-analyzed and the internal standard response was in control however one of the surrogate compounds was out slightly high above the control limits. In both analyses the target compounds are ND. Both sets of data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: CH2M Hill Constructors, Inc.
Project/Site: Whidbey Island

TestAmerica Job ID: 320-24069-1

Client Sample ID: WI-CV-1RW13-1216 — **Lab Sample ID: 320-24069-1**

No Detections.

Client Sample ID: WI-CV-1FB13-1216 — **Lab Sample ID: 320-24069-2**

No Detections.

Client Sample ID: WI-CV-1RW14-1216 — **Lab Sample ID: 320-24069-3**

No Detections.

Client Sample ID: WI-CV-1FB14-1216 — **Lab Sample ID: 320-24069-4**

No Detections.

Client Sample ID: WI-CV-1RW15-1216 — **Lab Sample ID: 320-24069-5**

No Detections.

Client Sample ID: WI-CV-1FB15-1216 — **Lab Sample ID: 320-24069-6**

No Detections.

Client Sample ID: WI-CV-1RW16-1216 — **Lab Sample ID: 320-24069-7**

No Detections.

Client Sample ID: WI-CV-1FB16-1216 — **Lab Sample ID: 320-24069-8**

No Detections.

Client Sample ID: WI-CV-1RW17-1216 — **Lab Sample ID: 320-24069-9**

No Detections.

Client Sample ID: WI-CV-1FB17-1216 — **Lab Sample ID: 320-24069-10**

No Detections.

Client Sample ID: WI-CV-3RW14-1216 — **Lab Sample ID: 320-24069-11**

No Detections.

Client Sample ID: WI-CV-3FB14-1216 — **Lab Sample ID: 320-24069-12**

No Detections.

Client Sample ID: WI-CV-3RW15-1216 — **Lab Sample ID: 320-24069-13**

No Detections.

Client Sample ID: WI-CV-3FB15-1216 — **Lab Sample ID: 320-24069-14**

No Detections.

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: CH2M Hill Constructors, Inc.
Project/Site: Whidbey Island

TestAmerica Job ID: 320-24069-1

Client Sample ID: WI-CV-3RW16-1216 **Lab Sample ID: 320-24069-15**

No Detections.

Client Sample ID: WI-CV-3FB16-1216 **Lab Sample ID: 320-24069-16**

No Detections.

Client Sample ID: WI-CV-1RW18-1216 **Lab Sample ID: 320-24069-17**

No Detections.

Client Sample ID: WI-CV-1FB18-1216 **Lab Sample ID: 320-24069-18**

No Detections.

Client Sample ID: WI-CV-1RW19-1216 **Lab Sample ID: 320-24069-19**

No Detections.

Client Sample ID: WI-CV-1FB19-1216 **Lab Sample ID: 320-24069-20**

No Detections.

Client Sample ID: WI-CV-1RW20-1216 **Lab Sample ID: 320-24069-21**

No Detections.

Client Sample ID: WI-CV-1FB20-1216 **Lab Sample ID: 320-24069-22**

No Detections.

Client Sample ID: WI-CV-1RW21-1216 **Lab Sample ID: 320-24069-23**

No Detections.

Client Sample ID: WI-CV-1FB21-1216 **Lab Sample ID: 320-24069-24**

No Detections.

Client Sample ID: WI-CV-1RW22-1216 **Lab Sample ID: 320-24069-25**

No Detections.

Client Sample ID: WI-CV-1FB22-1216 **Lab Sample ID: 320-24069-26**

No Detections.

Client Sample ID: WI-CV-3RW17-1216 **Lab Sample ID: 320-24069-27**

No Detections.

Client Sample ID: WI-CV-3FB17-1216 **Lab Sample ID: 320-24069-28**

No Detections.

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: CH2M Hill Constructors, Inc.
Project/Site: Whidbey Island

TestAmerica Job ID: 320-24069-1

Client Sample ID: WI-CV-3RW18-1216 — Lab Sample ID: 320-24069-29

No Detections.

Client Sample ID: WI-CV-3FB18-1216 — Lab Sample ID: 320-24069-30

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample ID: WI-CV-1RW13-1216

Lab Sample ID: 320-24069-1

Date Collected: 12/02/16 09:09

Matrix: Water

Date Received: 12/06/16 10:30

Method: 537 - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	0.047	U	0.059	0.015	ug/L		12/08/16 11:45	12/14/16 06:24	1
Perfluorooctanoic acid (PFOA)	0.024	U M	0.029	0.0092	ug/L		12/08/16 11:45	12/14/16 06:24	1
Perfluorobutanesulfonic acid (PFBS)	0.11	U	0.14	0.047	ug/L		12/08/16 11:45	12/14/16 06:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA	*135*	Q	*70 - 130*	*12/08/16 11:45*	*12/14/16 06:24*	*1*
13C2 PFDA	*137*	Q	*70 - 130*	*12/08/16 11:45*	*12/14/16 06:24*	*1*

Client Sample ID: WI-CV-1FB13-1216

Lab Sample ID: 320-24069-2

Date Collected: 12/02/16 09:08

Matrix: Water

Date Received: 12/06/16 10:30

Method: 537 - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	0.045	U	0.056	0.014	ug/L		12/08/16 11:45	12/13/16 08:56	1
Perfluorooctanoic acid (PFOA)	0.022	U	0.028	0.0088	ug/L		12/08/16 11:45	12/13/16 08:56	1
Perfluorobutanesulfonic acid (PFBS)	0.10	U	0.13	0.044	ug/L		12/08/16 11:45	12/13/16 08:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA	*112*		*70 - 130*	*12/08/16 11:45*	*12/13/16 08:56*	*1*
13C2 PFDA	*118*		*70 - 130*	*12/08/16 11:45*	*12/13/16 08:56*	*1*

Client Sample ID: WI-CV-1RW14-1216

Lab Sample ID: 320-24069-3

Date Collected: 12/02/16 09:53

Matrix: Water

Date Received: 12/06/16 10:30

Method: 537 - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	0.046	U	0.057	0.015	ug/L		12/08/16 11:45	12/14/16 06:54	1
Perfluorooctanoic acid (PFOA)	0.023	U	0.029	0.0090	ug/L		12/08/16 11:45	12/14/16 06:54	1
Perfluorobutanesulfonic acid (PFBS)	0.11	U	0.13	0.045	ug/L		12/08/16 11:45	12/14/16 06:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA	*130*		*70 - 130*	*12/08/16 11:45*	*12/14/16 06:54*	*1*
13C2 PFDA	*129*		*70 - 130*	*12/08/16 11:45*	*12/14/16 06:54*	*1*

Client Sample ID: WI-CV-1FB14-1216

Lab Sample ID: 320-24069-4

Date Collected: 12/02/16 09:52

Matrix: Water

Date Received: 12/06/16 10:30

Method: 537 - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	0.047	U M	0.058	0.015	ug/L		12/08/16 11:45	12/14/16 07:23	1
Perfluorooctanoic acid (PFOA)	0.023	U M	0.029	0.0092	ug/L		12/08/16 11:45	12/14/16 07:23	1
Perfluorobutanesulfonic acid (PFBS)	0.11	U	0.14	0.046	ug/L		12/08/16 11:45	12/14/16 07:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA	*115*		*70 - 130*	*12/08/16 11:45*	*12/14/16 07:23*	*1*
13C2 PFDA	*117*		*70 - 130*	*12/08/16 11:45*	*12/14/16 07:23*	*1*

Client Sample ID: WI-CV-1RW15-1216

Lab Sample ID: 320-24069-5

Date Collected: 12/02/16 11:25

Matrix: Water

Date Received: 12/06/16 10:30

Method: 537 - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	0.047	U	0.059	0.015	ug/L		12/08/16 11:45	12/14/16 07:53	1
Perfluorooctanoic acid (PFOA)	0.024	U	0.029	0.0092	ug/L		12/08/16 11:45	12/14/16 07:53	1
Perfluorobutanesulfonic acid (PFBS)	0.11	U	0.14	0.047	ug/L		12/08/16 11:45	12/14/16 07:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA	*142*	*Q*	*70 - 130*	*12/08/16 11:45*	*12/14/16 07:53*	*1*
13C2 PFDA	*140*	*Q*	*70 - 130*	*12/08/16 11:45*	*12/14/16 07:53*	*1*

Client Sample ID: WI-CV-1FB15-1216

Lab Sample ID: 320-24069-6

Date Collected: 12/02/16 11:24

Matrix: Water

Date Received: 12/06/16 10:30

Method: 537 - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	0.047	U	0.059	0.015	ug/L		12/08/16 11:45	12/13/16 10:54	1
Perfluorooctanoic acid (PFOA)	0.023	U M	0.029	0.0092	ug/L		12/08/16 11:45	12/13/16 10:54	1
Perfluorobutanesulfonic acid (PFBS)	0.11	U	0.14	0.047	ug/L		12/08/16 11:45	12/13/16 10:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA	*124*		*70 - 130*	*12/08/16 11:45*	*12/13/16 10:54*	*1*
13C2 PFDA	*125*		*70 - 130*	*12/08/16 11:45*	*12/13/16 10:54*	*1*

Method: 537 - Perfluorinated Alkyl Acids (LC/MS) - RA

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	0.047	U	0.059	0.015	ug/L		12/08/16 11:45	12/14/16 08:23	1
Perfluorooctanoic acid (PFOA)	0.023	U	0.029	0.0092	ug/L		12/08/16 11:45	12/14/16 08:23	1
Perfluorobutanesulfonic acid (PFBS)	0.11	U	0.14	0.047	ug/L		12/08/16 11:45	12/14/16 08:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA	*126*		*70 - 130*	*12/08/16 11:45*	*12/14/16 08:23*	*1*
13C2 PFDA	*131*	*Q*	*70 - 130*	*12/08/16 11:45*	*12/14/16 08:23*	*1*

Client Sample ID: WI-CV-1RW16-1216

Lab Sample ID: 320-24069-7

Date Collected: 12/02/16 14:09

Matrix: Water

Date Received: 12/06/16 10:30

Method: 537 - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	0.047	U	0.059	0.015	ug/L		12/08/16 11:45	12/13/16 11:24	1
Perfluorooctanoic acid (PFOA)	0.024	U	0.029	0.0093	ug/L		12/08/16 11:45	12/13/16 11:24	1
Perfluorobutanesulfonic acid (PFBS)	0.11	U	0.14	0.047	ug/L		12/08/16 11:45	12/13/16 11:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA	*110*		*70 - 130*	*12/08/16 11:45*	*12/13/16 11:24*	*1*
13C2 PFDA	*106*		*70 - 130*	*12/08/16 11:45*	*12/13/16 11:24*	*1*

Client Sample ID: WI-CV-1FB16-1216

Lab Sample ID: 320-24069-8

Date Collected: 12/02/16 14:08

Matrix: Water

Date Received: 12/06/16 10:30

Method: 537 - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	0.045	U	0.057	0.015	ug/L		12/08/16 11:45	12/13/16 11:53	1
Perfluorooctanoic acid (PFOA)	0.023	U	0.028	0.0089	ug/L		12/08/16 11:45	12/13/16 11:53	1
Perfluorobutanesulfonic acid (PFBS)	0.10	U	0.13	0.045	ug/L		12/08/16 11:45	12/13/16 11:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA	*114*		*70 - 130*	*12/08/16 11:45*	*12/13/16 11:53*	*1*
13C2 PFDA	*116*		*70 - 130*	*12/08/16 11:45*	*12/13/16 11:53*	*1*

Client Sample ID: WI-CV-1RW17-1216

Lab Sample ID: 320-24069-9

Date Collected: 12/02/16 14:17

Matrix: Water

Date Received: 12/06/16 10:30

Method: 537 - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	0.047	U	0.058	0.015	ug/L		12/08/16 11:45	12/13/16 12:23	1
Perfluorooctanoic acid (PFOA)	0.023	U	0.029	0.0092	ug/L		12/08/16 11:45	12/13/16 12:23	1
Perfluorobutanesulfonic acid (PFBS)	0.11	U	0.14	0.046	ug/L		12/08/16 11:45	12/13/16 12:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA	*107*		*70 - 130*	*12/08/16 11:45*	*12/13/16 12:23*	*1*
13C2 PFDA	*117*		*70 - 130*	*12/08/16 11:45*	*12/13/16 12:23*	*1*

Client Sample ID: WI-CV-1FB17-1216

Lab Sample ID: 320-24069-10

Date Collected: 12/02/16 14:16

Matrix: Water

Date Received: 12/06/16 10:30

Method: 537 - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	0.045	U	0.056	0.014	ug/L		12/08/16 11:45	12/13/16 12:52	1
Perfluorooctanoic acid (PFOA)	0.022	U	0.028	0.0088	ug/L		12/08/16 11:45	12/13/16 12:52	1
Perfluorobutanesulfonic acid (PFBS)	0.10	U	0.13	0.044	ug/L		12/08/16 11:45	12/13/16 12:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA	*114*		*70 - 130*	*12/08/16 11:45*	*12/13/16 12:52*	*1*
13C2 PFDA	*111*		*70 - 130*	*12/08/16 11:45*	*12/13/16 12:52*	*1*

Client Sample ID: WI-CV-3RW14-1216

Lab Sample ID: 320-24069-11

Date Collected: 12/02/16 14:31

Matrix: Water

Date Received: 12/06/16 10:30

Method: 537 - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	0.047	U	0.058	0.015	ug/L		12/08/16 11:45	12/13/16 13:22	1
Perfluorooctanoic acid (PFOA)	0.023	U	0.029	0.0091	ug/L		12/08/16 11:45	12/13/16 13:22	1
Perfluorobutanesulfonic acid (PFBS)	0.11	U	0.14	0.046	ug/L		12/08/16 11:45	12/13/16 13:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA	*97*		*70 - 130*	*12/08/16 11:45*	*12/13/16 13:22*	*1*
13C2 PFDA	*114*		*70 - 130*	*12/08/16 11:45*	*12/13/16 13:22*	*1*

Client Sample ID: WI-CV-3FB14-1216

Lab Sample ID: 320-24069-12

Date Collected: 12/02/16 14:32

Matrix: Water

Date Received: 12/06/16 10:30

Method: 537 - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	0.044	U	0.055	0.014	ug/L		12/08/16 11:45	12/13/16 15:36	1
Perfluorooctanoic acid (PFOA)	0.022	U	0.028	0.0087	ug/L		12/08/16 11:45	12/13/16 15:36	1
Perfluorobutanesulfonic acid (PFBS)	0.10	U	0.13	0.044	ug/L		12/08/16 11:45	12/13/16 15:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA	*114*		*70 - 130*	*12/08/16 11:45*	*12/13/16 15:36*	*1*
13C2 PFDA	*122*		*70 - 130*	*12/08/16 11:45*	*12/13/16 15:36*	*1*

Client Sample ID: WI-CV-3RW15-1216

Lab Sample ID: 320-24069-13

Date Collected: 12/02/16 14:47

Matrix: Water

Date Received: 12/06/16 10:30

Method: 537 - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	0.045	U M	0.056	0.015	ug/L		12/08/16 11:45	12/13/16 16:06	1
Perfluorooctanoic acid (PFOA)	0.023	U	0.028	0.0089	ug/L		12/08/16 11:45	12/13/16 16:06	1
Perfluorobutanesulfonic acid (PFBS)	0.10	U	0.13	0.045	ug/L		12/08/16 11:45	12/13/16 16:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA	*115*		*70 - 130*	*12/08/16 11:45*	*12/13/16 16:06*	*1*
13C2 PFDA	*117*		*70 - 130*	*12/08/16 11:45*	*12/13/16 16:06*	*1*

Client Sample ID: WI-CV-3FB15-1216

Lab Sample ID: 320-24069-14

Date Collected: 12/02/16 14:48

Matrix: Water

Date Received: 12/06/16 10:30

Method: 537 - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	0.047	U	0.059	0.015	ug/L		12/08/16 11:45	12/13/16 16:35	1
Perfluorooctanoic acid (PFOA)	0.024	U	0.029	0.0092	ug/L		12/08/16 11:45	12/13/16 16:35	1
Perfluorobutanesulfonic acid (PFBS)	0.11	U	0.14	0.047	ug/L		12/08/16 11:45	12/13/16 16:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA	*114*		*70 - 130*	*12/08/16 11:45*	*12/13/16 16:35*	*1*
13C2 PFDA	*110*		*70 - 130*	*12/08/16 11:45*	*12/13/16 16:35*	*1*

Client Sample ID: WI-CV-3RW16-1216

Lab Sample ID: 320-24069-15

Date Collected: 12/02/16 17:25

Matrix: Water

Date Received: 12/06/16 10:30

Method: 537 - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	0.044	U	0.056	0.014	ug/L		12/08/16 11:45	12/13/16 17:05	1
Perfluorooctanoic acid (PFOA)	0.022	U	0.028	0.0087	ug/L		12/08/16 11:45	12/13/16 17:05	1
Perfluorobutanesulfonic acid (PFBS)	0.10	U	0.13	0.044	ug/L		12/08/16 11:45	12/13/16 17:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA	*106*		*70 - 130*	*12/08/16 11:45*	*12/13/16 17:05*	*1*
13C2 PFDA	*110*		*70 - 130*	*12/08/16 11:45*	*12/13/16 17:05*	*1*

Client Sample ID: WI-CV-3FB16-1216

Lab Sample ID: 320-24069-16

Date Collected: 12/02/16 17:26

Matrix: Water

Date Received: 12/06/16 10:30

Method: 537 - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	0.045	U	0.056	0.015	ug/L		12/08/16 11:45	12/13/16 17:35	1
Perfluorooctanoic acid (PFOA)	0.023	U	0.028	0.0088	ug/L		12/08/16 11:45	12/13/16 17:35	1
Perfluorobutanesulfonic acid (PFBS)	0.10	U	0.13	0.045	ug/L		12/08/16 11:45	12/13/16 17:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA	*119*		*70 - 130*	*12/08/16 11:45*	*12/13/16 17:35*	*1*
13C2 PFDA	*118*		*70 - 130*	*12/08/16 11:45*	*12/13/16 17:35*	*1*

Client Sample ID: WI-CV-1RW18-1216

Lab Sample ID: 320-24069-17

Date Collected: 12/03/16 09:05

Matrix: Water

Date Received: 12/06/16 10:30

Method: 537 - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	0.045	U	0.056	0.014	ug/L		12/08/16 11:45	12/13/16 18:04	1
Perfluorooctanoic acid (PFOA)	0.022	U	0.028	0.0088	ug/L		12/08/16 11:45	12/13/16 18:04	1
Perfluorobutanesulfonic acid (PFBS)	0.10	U M	0.13	0.044	ug/L		12/08/16 11:45	12/13/16 18:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA	*115*		*70 - 130*	*12/08/16 11:45*	*12/13/16 18:04*	*1*
13C2 PFDA	*116*		*70 - 130*	*12/08/16 11:45*	*12/13/16 18:04*	*1*

Client Sample ID: WI-CV-1FB18-1216

Lab Sample ID: 320-24069-18

Date Collected: 12/03/16 09:04

Matrix: Water

Date Received: 12/06/16 10:30

Method: 537 - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	0.045	U	0.056	0.015	ug/L		12/08/16 11:45	12/13/16 18:34	1
Perfluorooctanoic acid (PFOA)	0.022	U	0.028	0.0088	ug/L		12/08/16 11:45	12/13/16 18:34	1
Perfluorobutanesulfonic acid (PFBS)	0.10	U	0.13	0.045	ug/L		12/08/16 11:45	12/13/16 18:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA	*115*		*70 - 130*	*12/08/16 11:45*	*12/13/16 18:34*	*1*
13C2 PFDA	*117*		*70 - 130*	*12/08/16 11:45*	*12/13/16 18:34*	*1*

Client Sample ID: WI-CV-1RW19-1216

Lab Sample ID: 320-24069-19

Date Collected: 12/03/16 10:05

Matrix: Water

Date Received: 12/06/16 10:30

Method: 537 - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	0.045	U	0.056	0.014	ug/L		12/08/16 11:45	12/13/16 19:03	1
Perfluorooctanoic acid (PFOA)	0.022	U	0.028	0.0088	ug/L		12/08/16 11:45	12/13/16 19:03	1
Perfluorobutanesulfonic acid (PFBS)	0.10	U	0.13	0.044	ug/L		12/08/16 11:45	12/13/16 19:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA	*119*		*70 - 130*	*12/08/16 11:45*	*12/13/16 19:03*	*1*
13C2 PFDA	*125*		*70 - 130*	*12/08/16 11:45*	*12/13/16 19:03*	*1*

Client Sample ID: WI-CV-1FB19-1216

Lab Sample ID: 320-24069-20

Date Collected: 12/03/16 10:04
Matrix: Water
Date Received: 12/06/16 10:30

Method: 537 - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	0.046	U	0.058	0.015	ug/L		12/08/16 11:45	12/13/16 19:33	1
Perfluorooctanoic acid (PFOA)	0.023	U	0.029	0.0091	ug/L		12/08/16 11:45	12/13/16 19:33	1
Perfluorobutanesulfonic acid (PFBS)	0.11	U	0.13	0.046	ug/L		12/08/16 11:45	12/13/16 19:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA	*120*		*70 - 130*	*12/08/16 11:45*	*12/13/16 19:33*	*1*
13C2 PFDA	*118*		*70 - 130*	*12/08/16 11:45*	*12/13/16 19:33*	*1*

Client Sample ID: WI-CV-1RW20-1216

Lab Sample ID: 320-24069-21

Date Collected: 12/03/16 10:46
Matrix: Water
Date Received: 12/06/16 10:30

Method: 537 - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	0.044	U M	0.055	0.014	ug/L		12/08/16 18:21	12/14/16 16:46	1
Perfluorooctanoic acid (PFOA)	0.022	U M	0.027	0.0086	ug/L		12/08/16 18:21	12/14/16 16:46	1
Perfluorobutanesulfonic acid (PFBS)	0.10	U	0.13	0.043	ug/L		12/08/16 18:21	12/14/16 16:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA	*112*		*70 - 130*	*12/08/16 18:21*	*12/14/16 16:46*	*1*
13C2 PFDA	*119*		*70 - 130*	*12/08/16 18:21*	*12/14/16 16:46*	*1*

Client Sample ID: WI-CV-1FB20-1216

Lab Sample ID: 320-24069-22

Date Collected: 12/03/16 10:45
Matrix: Water
Date Received: 12/06/16 10:30

Method: 537 - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	0.042	U M	0.053	0.014	ug/L		12/08/16 18:21	12/14/16 17:15	1
Perfluorooctanoic acid (PFOA)	0.021	U	0.026	0.0083	ug/L		12/08/16 18:21	12/14/16 17:15	1
Perfluorobutanesulfonic acid (PFBS)	0.097	U	0.12	0.042	ug/L		12/08/16 18:21	12/14/16 17:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA	*121*		*70 - 130*	*12/08/16 18:21*	*12/14/16 17:15*	*1*
13C2 PFDA	*124*		*70 - 130*	*12/08/16 18:21*	*12/14/16 17:15*	*1*

Client Sample ID: WI-CV-1RW21-1216

Lab Sample ID: 320-24069-23

Date Collected: 12/03/16 11:22
Matrix: Water
Date Received: 12/06/16 10:30

Method: 537 - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	0.045	U	0.057	0.015	ug/L		12/08/16 18:21	12/14/16 17:45	1
Perfluorooctanoic acid (PFOA)	0.023	U	0.028	0.0089	ug/L		12/08/16 18:21	12/14/16 17:45	1
Perfluorobutanesulfonic acid (PFBS)	0.10	U	0.13	0.045	ug/L		12/08/16 18:21	12/14/16 17:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA	*108*		*70 - 130*	*12/08/16 18:21*	*12/14/16 17:45*	*1*
13C2 PFDA	*113*		*70 - 130*	*12/08/16 18:21*	*12/14/16 17:45*	*1*

Client Sample ID: WI-CV-1FB21-1216

Lab Sample ID: 320-24069-24

Date Collected: 12/03/16 11:21

Matrix: Water

Date Received: 12/06/16 10:30

Method: 537 - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	0.043	U M	0.054	0.014	ug/L		12/08/16 18:21	12/14/16 00:29	1
Perfluorooctanoic acid (PFOA)	0.022	U	0.027	0.0084	ug/L		12/08/16 18:21	12/14/16 00:29	1
Perfluorobutanesulfonic acid (PFBS)	0.099	U	0.13	0.043	ug/L		12/08/16 18:21	12/14/16 00:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA	*114*		*70 - 130*	*12/08/16 18:21*	*12/14/16 00:29*	*1*
13C2 PFDA	*114*		*70 - 130*	*12/08/16 18:21*	*12/14/16 00:29*	*1*

Client Sample ID: WI-CV-1RW22-1216

Lab Sample ID: 320-24069-25

Date Collected: 12/03/16 12:02

Matrix: Water

Date Received: 12/06/16 10:30

Method: 537 - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	0.043	U	0.054	0.014	ug/L		12/08/16 18:21	12/14/16 00:59	1
Perfluorooctanoic acid (PFOA)	0.022	U M	0.027	0.0085	ug/L		12/08/16 18:21	12/14/16 00:59	1
Perfluorobutanesulfonic acid (PFBS)	0.10	U	0.13	0.043	ug/L		12/08/16 18:21	12/14/16 00:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA	*110*		*70 - 130*	*12/08/16 18:21*	*12/14/16 00:59*	*1*
13C2 PFDA	*105*		*70 - 130*	*12/08/16 18:21*	*12/14/16 00:59*	*1*

Client Sample ID: WI-CV-1FB22-1216

Lab Sample ID: 320-24069-26

Date Collected: 12/03/16 12:01

Matrix: Water

Date Received: 12/06/16 10:30

Method: 537 - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	0.042	U	0.053	0.014	ug/L		12/08/16 18:21	12/14/16 18:14	1
Perfluorooctanoic acid (PFOA)	0.021	U	0.026	0.0083	ug/L		12/08/16 18:21	12/14/16 18:14	1
Perfluorobutanesulfonic acid (PFBS)	0.096	U	0.12	0.042	ug/L		12/08/16 18:21	12/14/16 18:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA	*113*		*70 - 130*	*12/08/16 18:21*	*12/14/16 18:14*	*1*
13C2 PFDA	*118*		*70 - 130*	*12/08/16 18:21*	*12/14/16 18:14*	*1*

Client Sample ID: WI-CV-3RW17-1216

Lab Sample ID: 320-24069-27

Date Collected: 12/03/16 09:13

Matrix: Water

Date Received: 12/06/16 10:30

Method: 537 - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	0.044	U M	0.055	0.014	ug/L		12/08/16 18:21	12/14/16 01:58	1
Perfluorooctanoic acid (PFOA)	0.022	U M	0.028	0.0087	ug/L		12/08/16 18:21	12/14/16 01:58	1
Perfluorobutanesulfonic acid (PFBS)	0.10	U	0.13	0.044	ug/L		12/08/16 18:21	12/14/16 01:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA	*110*		*70 - 130*	*12/08/16 18:21*	*12/14/16 01:58*	*1*
13C2 PFDA	*100*		*70 - 130*	*12/08/16 18:21*	*12/14/16 01:58*	*1*

Client Sample ID: WI-CV-3FB17-1216

Lab Sample ID: 320-24069-28

Date Collected: 12/03/16 09:14

Matrix: Water

Date Received: 12/06/16 10:30

Method: 537 - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	0.043	U M	0.054	0.014	ug/L		12/08/16 18:21	12/14/16 03:56	1
Perfluorooctanoic acid (PFOA)	0.022	U M	0.027	0.0084	ug/L		12/08/16 18:21	12/14/16 03:56	1
Perfluorobutanesulfonic acid (PFBS)	0.099	U	0.13	0.043	ug/L		12/08/16 18:21	12/14/16 03:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA	*106*		*70 - 130*	*12/08/16 18:21*	*12/14/16 03:56*	*1*
13C2 PFDA	*110*		*70 - 130*	*12/08/16 18:21*	*12/14/16 03:56*	*1*

Client Sample ID: WI-CV-3RW18-1216

Lab Sample ID: 320-24069-29

Date Collected: 12/03/16 12:08

Matrix: Water

Date Received: 12/06/16 10:30

Method: 537 - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	0.044	U	0.055	0.014	ug/L		12/08/16 18:21	12/14/16 04:26	1
Perfluorooctanoic acid (PFOA)	0.022	U	0.027	0.0086	ug/L		12/08/16 18:21	12/14/16 04:26	1
Perfluorobutanesulfonic acid (PFBS)	0.10	U	0.13	0.044	ug/L		12/08/16 18:21	12/14/16 04:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA	*115*		*70 - 130*	*12/08/16 18:21*	*12/14/16 04:26*	*1*
13C2 PFDA	*113*		*70 - 130*	*12/08/16 18:21*	*12/14/16 04:26*	*1*

Client Sample ID: WI-CV-3FB18-1216

Lab Sample ID: 320-24069-30

Date Collected: 12/03/16 12:09

Matrix: Water

Date Received: 12/06/16 10:30

Method: 537 - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	0.043	U	0.053	0.014	ug/L		12/08/16 18:21	12/14/16 04:55	1
Perfluorooctanoic acid (PFOA)	0.021	U	0.027	0.0084	ug/L		12/08/16 18:21	12/14/16 04:55	1
Perfluorobutanesulfonic acid (PFBS)	0.098	U	0.12	0.042	ug/L		12/08/16 18:21	12/14/16 04:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA	*102*		*70 - 130*	*12/08/16 18:21*	*12/14/16 04:55*	*1*
13C2 PFDA	*108*		*70 - 130*	*12/08/16 18:21*	*12/14/16 04:55*	*1*

Default Detection Limits

Client: CH2M Hill Constructors, Inc.
Project/Site: Whidbey Island

TestAmerica Job ID: 320-24069-1

Method: 537 - Perfluorinated Alkyl Acids (LC/MS)

Prep: 537

Analyte	LOQ	DL	Units	Method
Perfluorobutanesulfonic acid (PFBS)	0.14	0.048	ug/L	537
Perfluorooctanesulfonic acid (PFOS)	0.060	0.016	ug/L	537
Perfluorooctanoic acid (PFOA)	0.030	0.0094	ug/L	537

Surrogate Summary

Client: CH2M Hill Constructors, Inc.
Project/Site: Whidbey Island

TestAmerica Job ID: 320-24069-1

Method: 537 - Perfluorinated Alkyl Acids (LC/MS)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)									
		3C2 PFHx	3C2 PFDA								
Lab Sample ID	Client Sample ID	(70-130)	(70-130)								
320-24069-1	WI-CV-1RW13-1216	135 Q	137 Q								
320-24069-2	WI-CV-1FB13-1216	112	118								
320-24069-3	WI-CV-1RW14-1216	130	129								
320-24069-4	WI-CV-1FB14-1216	115	117								
320-24069-5	WI-CV-1RW15-1216	142 Q	140 Q								
320-24069-6	WI-CV-1FB15-1216	124	125								
320-24069-6 - RA	WI-CV-1FB15-1216	126	131 Q								
320-24069-7	WI-CV-1RW16-1216	110	106								
320-24069-8	WI-CV-1FB16-1216	114	116								
320-24069-9	WI-CV-1RW17-1216	107	117								
320-24069-10	WI-CV-1FB17-1216	114	111								
320-24069-11	WI-CV-3RW14-1216	97	114								
320-24069-12	WI-CV-3FB14-1216	114	122								
320-24069-13	WI-CV-3RW15-1216	115	117								
320-24069-14	WI-CV-3FB15-1216	114	110								
320-24069-15	WI-CV-3RW16-1216	106	110								
320-24069-16	WI-CV-3FB16-1216	119	118								
320-24069-17	WI-CV-1RW18-1216	115	116								
320-24069-18	WI-CV-1FB18-1216	115	117								
320-24069-19	WI-CV-1RW19-1216	119	125								
320-24069-20	WI-CV-1FB19-1216	120	118								
320-24069-21	WI-CV-1RW20-1216	112	119								
320-24069-22	WI-CV-1FB20-1216	121	124								
320-24069-23	WI-CV-1RW21-1216	108	113								
320-24069-24	WI-CV-1FB21-1216	114	114								
320-24069-25	WI-CV-1RW22-1216	110	105								
320-24069-26	WI-CV-1FB22-1216	113	118								
320-24069-27	WI-CV-3RW17-1216	110	100								
320-24069-28	WI-CV-3FB17-1216	106	110								
320-24069-29	WI-CV-3RW18-1216	115	113								
320-24069-30	WI-CV-3FB18-1216	102	108								
LCS 320-141212/2-A	Lab Control Sample	123	123								
LCSD 320-141212/3-A	Lab Control Sample Dup	126	131 Q								
LLCS 320-141328/2-A	Lab Control Sample	124	129								
LLCSD 320-141328/3-A	Lab Control Sample Dup	119	116								
MB 320-141212/1-A	Method Blank	113	111								
MB 320-141328/1-A	Method Blank	121	120								

Surrogate Legend

13C2 PFHxA = 13C2 PFHxA
13C2 PFDA = 13C2 PFDA

Method: 537 - Perfluorinated Alkyl Acids (LC/MS)

Lab Sample ID: MB 320-141212/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 141767 — **Prep Batch: 141212**

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	0.048	U	0.060	0.016	ug/L		12/08/16 11:45	12/13/16 05:28	1
Perfluorooctanoic acid (PFOA)	0.024	U	0.030	0.0094	ug/L		12/08/16 11:45	12/13/16 05:28	1
Perfluorobutanesulfonic acid (PFBS)	0.11	U	0.14	0.048	ug/L		12/08/16 11:45	12/13/16 05:28	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA	*113*		*70 - 130*	*12/08/16 11:45*	*12/13/16 05:28*	*1*
13C2 PFDA	*111*		*70 - 130*	*12/08/16 11:45*	*12/13/16 05:28*	*1*

Lab Sample ID: LCS 320-141212/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 141771 — **Prep Batch: 141212**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorooctanesulfonic acid (PFOS)	0.300	0.307		ug/L		102	70 - 130
Perfluorooctanoic acid (PFOA)	0.146	0.155		ug/L		106	70 - 130
Perfluorobutanesulfonic acid (PFBS)	0.673	0.632		ug/L		94	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C2 PFHxA	*123*		*70 - 130*
13C2 PFDA	*123*		*70 - 130*

Lab Sample ID: LCSD 320-141212/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 141771 — **Prep Batch: 141212**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perfluorooctanesulfonic acid (PFOS)	0.300	0.292		ug/L		97	70 - 130	5	30
Perfluorooctanoic acid (PFOA)	0.146	0.154		ug/L		105	70 - 130	1	30
Perfluorobutanesulfonic acid (PFBS)	0.673	0.620		ug/L		92	70 - 130	2	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
13C2 PFHxA	*126*		*70 - 130*
13C2 PFDA	*131*	*Q*	*70 - 130*

Lab Sample ID: MB 320-141328/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 141770 — **Prep Batch: 141328**

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	0.048	U	0.060	0.016	ug/L		12/08/16 18:21	12/13/16 21:31	1
Perfluorooctanoic acid (PFOA)	0.024	U	0.030	0.0094	ug/L		12/08/16 18:21	12/13/16 21:31	1
Perfluorobutanesulfonic acid (PFBS)	0.11	U	0.14	0.048	ug/L		12/08/16 18:21	12/13/16 21:31	1

Method: 537 - Perfluorinated Alkyl Acids (LC/MS) (Continued)

Lab Sample ID: MB 320-141328/1-A
Matrix: Water
Analysis Batch: 141770

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 141328

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFHxA	121		70 - 130	12/08/16 18:21	12/13/16 21:31	1
13C2 PFDA	120		70 - 130	12/08/16 18:21	12/13/16 21:31	1

Lab Sample ID: LLCS 320-141328/2-A
Matrix: Water
Analysis Batch: 141770

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 141328

Analyte			Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Perfluorooctanesulfonic acid (PFOS)			0.0401	0.0326	J	ug/L		81	50 - 150		
Perfluorooctanoic acid (PFOA)			0.0198	0.0189	J M	ug/L		95	50 - 150		
Perfluorobutanesulfonic acid (PFBS)			0.0898	0.0838	J	ug/L		93	50 - 150		

Surrogate	LLCS %Recovery	LLCS Qualifier	Limits
13C2 PFHxA	124		70 - 130
13C2 PFDA	129		70 - 130

Lab Sample ID: LLCSD 320-141328/3-A
Matrix: Water
Analysis Batch: 141770

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 141328

Analyte			Spike Added	LLCSD Result	LLCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perfluorooctanesulfonic acid (PFOS)			0.0401	0.0355	J	ug/L		89	50 - 150	9	50
Perfluorooctanoic acid (PFOA)			0.0198	0.0184	J M	ug/L		93	50 - 150	2	50
Perfluorobutanesulfonic acid (PFBS)			0.0898	0.0876	J	ug/L		98	50 - 150	4	50

Surrogate	LLCSD %Recovery	LLCSD Qualifier	Limits
13C2 PFHxA	119		70 - 130
13C2 PFDA	116		70 - 130

LCMS

Prep Batch: 141212

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-24069-1	WI-CV-1RW13-1216	Total/NA	Water	537	
320-24069-2	WI-CV-1FB13-1216	Total/NA	Water	537	
320-24069-3	WI-CV-1RW14-1216	Total/NA	Water	537	
320-24069-4	WI-CV-1FB14-1216	Total/NA	Water	537	
320-24069-5	WI-CV-1RW15-1216	Total/NA	Water	537	
320-24069-6 - RA	WI-CV-1FB15-1216	Total/NA	Water	537	
320-24069-6	WI-CV-1FB15-1216	Total/NA	Water	537	
320-24069-7	WI-CV-1RW16-1216	Total/NA	Water	537	
320-24069-8	WI-CV-1FB16-1216	Total/NA	Water	537	
320-24069-9	WI-CV-1RW17-1216	Total/NA	Water	537	
320-24069-10	WI-CV-1FB17-1216	Total/NA	Water	537	
320-24069-11	WI-CV-3RW14-1216	Total/NA	Water	537	
320-24069-12	WI-CV-3FB14-1216	Total/NA	Water	537	
320-24069-13	WI-CV-3RW15-1216	Total/NA	Water	537	
320-24069-14	WI-CV-3FB15-1216	Total/NA	Water	537	
320-24069-15	WI-CV-3RW16-1216	Total/NA	Water	537	
320-24069-16	WI-CV-3FB16-1216	Total/NA	Water	537	
320-24069-17	WI-CV-1RW18-1216	Total/NA	Water	537	
320-24069-18	WI-CV-1FB18-1216	Total/NA	Water	537	
320-24069-19	WI-CV-1RW19-1216	Total/NA	Water	537	
320-24069-20	WI-CV-1FB19-1216	Total/NA	Water	537	
MB 320-141212/1-A	Method Blank	Total/NA	Water	537	
LCS 320-141212/2-A	Lab Control Sample	Total/NA	Water	537	
LCSD 320-141212/3-A	Lab Control Sample Dup	Total/NA	Water	537	

Prep Batch: 141328

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-24069-21	WI-CV-1RW20-1216	Total/NA	Water	537	
320-24069-22	WI-CV-1FB20-1216	Total/NA	Water	537	
320-24069-23	WI-CV-1RW21-1216	Total/NA	Water	537	
320-24069-24	WI-CV-1FB21-1216	Total/NA	Water	537	
320-24069-25	WI-CV-1RW22-1216	Total/NA	Water	537	
320-24069-26	WI-CV-1FB22-1216	Total/NA	Water	537	
320-24069-27	WI-CV-3RW17-1216	Total/NA	Water	537	
320-24069-28	WI-CV-3FB17-1216	Total/NA	Water	537	
320-24069-29	WI-CV-3RW18-1216	Total/NA	Water	537	
320-24069-30	WI-CV-3FB18-1216	Total/NA	Water	537	
MB 320-141328/1-A	Method Blank	Total/NA	Water	537	
LLCS 320-141328/2-A	Lab Control Sample	Total/NA	Water	537	
LLCSD 320-141328/3-A	Lab Control Sample Dup	Total/NA	Water	537	

Analysis Batch: 141767

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 320-141212/1-A	Method Blank	Total/NA	Water	537	141212

Analysis Batch: 141768

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-24069-2	WI-CV-1FB13-1216	Total/NA	Water	537	141212
320-24069-6	WI-CV-1FB15-1216	Total/NA	Water	537	141212
320-24069-7	WI-CV-1RW16-1216	Total/NA	Water	537	141212
320-24069-8	WI-CV-1FB16-1216	Total/NA	Water	537	141212

LCMS (Continued)

Analysis Batch: 141768 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-24069-9	WI-CV-1RW17-1216	Total/NA	Water	537	141212
320-24069-10	WI-CV-1FB17-1216	Total/NA	Water	537	141212
320-24069-11	WI-CV-3RW14-1216	Total/NA	Water	537	141212

Analysis Batch: 141769

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-24069-12	WI-CV-3FB14-1216	Total/NA	Water	537	141212
320-24069-13	WI-CV-3RW15-1216	Total/NA	Water	537	141212
320-24069-14	WI-CV-3FB15-1216	Total/NA	Water	537	141212
320-24069-15	WI-CV-3RW16-1216	Total/NA	Water	537	141212
320-24069-16	WI-CV-3FB16-1216	Total/NA	Water	537	141212
320-24069-17	WI-CV-1RW18-1216	Total/NA	Water	537	141212
320-24069-18	WI-CV-1FB18-1216	Total/NA	Water	537	141212
320-24069-19	WI-CV-1RW19-1216	Total/NA	Water	537	141212
320-24069-20	WI-CV-1FB19-1216	Total/NA	Water	537	141212

Analysis Batch: 141770

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-24069-24	WI-CV-1FB21-1216	Total/NA	Water	537	141328
320-24069-25	WI-CV-1RW22-1216	Total/NA	Water	537	141328
320-24069-27	WI-CV-3RW17-1216	Total/NA	Water	537	141328
MB 320-141328/1-A	Method Blank	Total/NA	Water	537	141328
LLCS 320-141328/2-A	Lab Control Sample	Total/NA	Water	537	141328
LLCSD 320-141328/3-A	Lab Control Sample Dup	Total/NA	Water	537	141328

Analysis Batch: 141771

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-24069-1	WI-CV-1RW13-1216	Total/NA	Water	537	141212
320-24069-3	WI-CV-1RW14-1216	Total/NA	Water	537	141212
320-24069-4	WI-CV-1FB14-1216	Total/NA	Water	537	141212
320-24069-5	WI-CV-1RW15-1216	Total/NA	Water	537	141212
320-24069-6 - RA	WI-CV-1FB15-1216	Total/NA	Water	537	141212
320-24069-28	WI-CV-3FB17-1216	Total/NA	Water	537	141328
320-24069-29	WI-CV-3RW18-1216	Total/NA	Water	537	141328
320-24069-30	WI-CV-3FB18-1216	Total/NA	Water	537	141328
LCS 320-141212/2-A	Lab Control Sample	Total/NA	Water	537	141212
LCSD 320-141212/3-A	Lab Control Sample Dup	Total/NA	Water	537	141212

Analysis Batch: 141966

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-24069-21	WI-CV-1RW20-1216	Total/NA	Water	537	141328
320-24069-22	WI-CV-1FB20-1216	Total/NA	Water	537	141328
320-24069-23	WI-CV-1RW21-1216	Total/NA	Water	537	141328
320-24069-26	WI-CV-1FB22-1216	Total/NA	Water	537	141328

Client Sample ID: WI-CV-1RW13-1216
Lab Sample ID: 320-24069-1
Date Collected: 12/02/16 09:09
Matrix: Water
Date Received: 12/06/16 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537			141212	12/08/16 11:45	VPM	TAL SAC
Total/NA	Analysis	537		1	141771	12/14/16 06:24	JRB	TAL SAC

Client Sample ID: WI-CV-1FB13-1216
Lab Sample ID: 320-24069-2
Date Collected: 12/02/16 09:08
Matrix: Water
Date Received: 12/06/16 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537			141212	12/08/16 11:45	VPM	TAL SAC
Total/NA	Analysis	537		1	141768	12/13/16 08:56	JRB	TAL SAC

Client Sample ID: WI-CV-1RW14-1216
Lab Sample ID: 320-24069-3
Date Collected: 12/02/16 09:53
Matrix: Water
Date Received: 12/06/16 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537			141212	12/08/16 11:45	VPM	TAL SAC
Total/NA	Analysis	537		1	141771	12/14/16 06:54	JRB	TAL SAC

Client Sample ID: WI-CV-1FB14-1216
Lab Sample ID: 320-24069-4
Date Collected: 12/02/16 09:52
Matrix: Water
Date Received: 12/06/16 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537			141212	12/08/16 11:45	VPM	TAL SAC
Total/NA	Analysis	537		1	141771	12/14/16 07:23	JRB	TAL SAC

Client Sample ID: WI-CV-1RW15-1216
Lab Sample ID: 320-24069-5
Date Collected: 12/02/16 11:25
Matrix: Water
Date Received: 12/06/16 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537			141212	12/08/16 11:45	VPM	TAL SAC
Total/NA	Analysis	537		1	141771	12/14/16 07:53	JRB	TAL SAC

Client Sample ID: WI-CV-1FB15-1216
Lab Sample ID: 320-24069-6
Date Collected: 12/02/16 11:24
Matrix: Water
Date Received: 12/06/16 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537			141212	12/08/16 11:45	VPM	TAL SAC
Total/NA	Analysis	537		1	141768	12/13/16 10:54	JRB	TAL SAC

Client Sample ID: WI-CV-1FB15-1216
Lab Sample ID: 320-24069-6
Date Collected: 12/02/16 11:24
Matrix: Water
Date Received: 12/06/16 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537	RA		141212	12/08/16 11:45	VPM	TAL SAC
Total/NA	Analysis	537	RA	1	141771	12/14/16 08:23	JRB	TAL SAC

Client Sample ID: WI-CV-1RW16-1216
Lab Sample ID: 320-24069-7
Date Collected: 12/02/16 14:09
Matrix: Water
Date Received: 12/06/16 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537			141212	12/08/16 11:45	VPM	TAL SAC
Total/NA	Analysis	537		1	141768	12/13/16 11:24	JRB	TAL SAC

Client Sample ID: WI-CV-1FB16-1216
Lab Sample ID: 320-24069-8
Date Collected: 12/02/16 14:08
Matrix: Water
Date Received: 12/06/16 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537			141212	12/08/16 11:45	VPM	TAL SAC
Total/NA	Analysis	537		1	141768	12/13/16 11:53	JRB	TAL SAC

Client Sample ID: WI-CV-1RW17-1216
Lab Sample ID: 320-24069-9
Date Collected: 12/02/16 14:17
Matrix: Water
Date Received: 12/06/16 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537			141212	12/08/16 11:45	VPM	TAL SAC
Total/NA	Analysis	537		1	141768	12/13/16 12:23	JRB	TAL SAC

Client Sample ID: WI-CV-1FB17-1216
Lab Sample ID: 320-24069-10
Date Collected: 12/02/16 14:16
Matrix: Water
Date Received: 12/06/16 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537			141212	12/08/16 11:45	VPM	TAL SAC
Total/NA	Analysis	537		1	141768	12/13/16 12:52	JRB	TAL SAC

Client Sample ID: WI-CV-3RW14-1216
Lab Sample ID: 320-24069-11
Date Collected: 12/02/16 14:31
Matrix: Water
Date Received: 12/06/16 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537			141212	12/08/16 11:45	VPM	TAL SAC
Total/NA	Analysis	537		1	141768	12/13/16 13:22	JRB	TAL SAC

Client Sample ID: WI-CV-3FB14-1216
Lab Sample ID: 320-24069-12
Date Collected: 12/02/16 14:32
Matrix: Water
Date Received: 12/06/16 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537			141212	12/08/16 11:45	VPM	TAL SAC
Total/NA	Analysis	537		1	141769	12/13/16 15:36	JRB	TAL SAC

Client Sample ID: WI-CV-3RW15-1216
Lab Sample ID: 320-24069-13
Date Collected: 12/02/16 14:47
Matrix: Water
Date Received: 12/06/16 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537			141212	12/08/16 11:45	VPM	TAL SAC
Total/NA	Analysis	537		1	141769	12/13/16 16:06	JRB	TAL SAC

Client Sample ID: WI-CV-3FB15-1216
Lab Sample ID: 320-24069-14
Date Collected: 12/02/16 14:48
Matrix: Water
Date Received: 12/06/16 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537			141212	12/08/16 11:45	VPM	TAL SAC
Total/NA	Analysis	537		1	141769	12/13/16 16:35	JRB	TAL SAC

Client Sample ID: WI-CV-3RW16-1216
Lab Sample ID: 320-24069-15
Date Collected: 12/02/16 17:25
Matrix: Water
Date Received: 12/06/16 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537			141212	12/08/16 11:45	VPM	TAL SAC
Total/NA	Analysis	537		1	141769	12/13/16 17:05	JRB	TAL SAC

Client Sample ID: WI-CV-3FB16-1216
Lab Sample ID: 320-24069-16
Date Collected: 12/02/16 17:26
Matrix: Water
Date Received: 12/06/16 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537			141212	12/08/16 11:45	VPM	TAL SAC
Total/NA	Analysis	537		1	141769	12/13/16 17:35	JRB	TAL SAC

Client Sample ID: WI-CV-1RW18-1216
Lab Sample ID: 320-24069-17
Date Collected: 12/03/16 09:05
Matrix: Water
Date Received: 12/06/16 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537			141212	12/08/16 11:45	VPM	TAL SAC
Total/NA	Analysis	537		1	141769	12/13/16 18:04	JRB	TAL SAC

Client Sample ID: WI-CV-1FB18-1216
Lab Sample ID: 320-24069-18
Date Collected: 12/03/16 09:04
Matrix: Water
Date Received: 12/06/16 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537			141212	12/08/16 11:45	VPM	TAL SAC
Total/NA	Analysis	537		1	141769	12/13/16 18:34	JRB	TAL SAC

Client Sample ID: WI-CV-1RW19-1216
Lab Sample ID: 320-24069-19
Date Collected: 12/03/16 10:05
Matrix: Water
Date Received: 12/06/16 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537			141212	12/08/16 11:45	VPM	TAL SAC
Total/NA	Analysis	537		1	141769	12/13/16 19:03	JRB	TAL SAC

Client Sample ID: WI-CV-1FB19-1216
Lab Sample ID: 320-24069-20
Date Collected: 12/03/16 10:04
Matrix: Water
Date Received: 12/06/16 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537			141212	12/08/16 11:45	VPM	TAL SAC
Total/NA	Analysis	537		1	141769	12/13/16 19:33	JRB	TAL SAC

Client Sample ID: WI-CV-1RW20-1216
Lab Sample ID: 320-24069-21
Date Collected: 12/03/16 10:46
Matrix: Water
Date Received: 12/06/16 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537			141328	12/08/16 18:21	JER	TAL SAC
Total/NA	Analysis	537		1	141966	12/14/16 16:46	JRB	TAL SAC

Client Sample ID: WI-CV-1FB20-1216
Lab Sample ID: 320-24069-22
Date Collected: 12/03/16 10:45
Matrix: Water
Date Received: 12/06/16 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537			141328	12/08/16 18:21	JER	TAL SAC
Total/NA	Analysis	537		1	141966	12/14/16 17:15	JRB	TAL SAC

Client Sample ID: WI-CV-1RW21-1216
Lab Sample ID: 320-24069-23
Date Collected: 12/03/16 11:22
Matrix: Water
Date Received: 12/06/16 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537			141328	12/08/16 18:21	JER	TAL SAC
Total/NA	Analysis	537		1	141966	12/14/16 17:45	JRB	TAL SAC

Client Sample ID: WI-CV-1FB21-1216
Lab Sample ID: 320-24069-24
Date Collected: 12/03/16 11:21
Matrix: Water
Date Received: 12/06/16 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537			141328	12/08/16 18:21	JER	TAL SAC
Total/NA	Analysis	537		1	141770	12/14/16 00:29	JRB	TAL SAC

Client Sample ID: WI-CV-1RW22-1216
Lab Sample ID: 320-24069-25
Date Collected: 12/03/16 12:02
Matrix: Water
Date Received: 12/06/16 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537			141328	12/08/16 18:21	JER	TAL SAC
Total/NA	Analysis	537		1	141770	12/14/16 00:59	JRB	TAL SAC

Client Sample ID: WI-CV-1FB22-1216
Lab Sample ID: 320-24069-26
Date Collected: 12/03/16 12:01
Matrix: Water
Date Received: 12/06/16 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537			141328	12/08/16 18:21	JER	TAL SAC
Total/NA	Analysis	537		1	141966	12/14/16 18:14	JRB	TAL SAC

Client Sample ID: WI-CV-3RW17-1216
Lab Sample ID: 320-24069-27
Date Collected: 12/03/16 09:13
Matrix: Water
Date Received: 12/06/16 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537			141328	12/08/16 18:21	JER	TAL SAC
Total/NA	Analysis	537		1	141770	12/14/16 01:58	JRB	TAL SAC

Client Sample ID: WI-CV-3FB17-1216
Lab Sample ID: 320-24069-28
Date Collected: 12/03/16 09:14
Matrix: Water
Date Received: 12/06/16 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537			141328	12/08/16 18:21	JER	TAL SAC
Total/NA	Analysis	537		1	141771	12/14/16 03:56	JRB	TAL SAC

Client Sample ID: WI-CV-3RW18-1216
Lab Sample ID: 320-24069-29
Date Collected: 12/03/16 12:08
Matrix: Water
Date Received: 12/06/16 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537			141328	12/08/16 18:21	JER	TAL SAC
Total/NA	Analysis	537		1	141771	12/14/16 04:26	JRB	TAL SAC

Client Sample ID: WI-CV-3FB18-1216

Date Collected: 12/03/16 12:09
Date Received: 12/06/16 10:30

Lab Sample ID: 320-24069-30

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537			141328	12/08/16 18:21	JER	TAL SAC
Total/NA	Analysis	537		1	141771	12/14/16 04:55	JRB	TAL SAC

Laboratory References:

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Certification Summary

Client: CH2M Hill Constructors, Inc.
Project/Site: Whidbey Island

TestAmerica Job ID: 320-24069-1

Laboratory: TestAmerica Sacramento

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
A2LA	DoD ELAP		2928-01	01-31-17

Analysis Method	Prep Method	Matrix	Analyte

Method Summary

Client: CH2M Hill Constructors, Inc.
Project/Site: Whidbey Island

TestAmerica Job ID: 320-24069-1

Method	Method Description	Protocol	Laboratory
537	Perfluorinated Alkyl Acids (LC/MS)	EPA	TAL SAC

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Sample Summary

Client: CH2M Hill Constructors, Inc.
Project/Site: Whidbey Island

TestAmerica Job ID: 320-24069-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-24069-1	WI-CV-1RW13-1216	Water	12/02/16 09:09	12/06/16 10:30
320-24069-2	WI-CV-1FB13-1216	Water	12/02/16 09:08	12/06/16 10:30
320-24069-3	WI-CV-1RW14-1216	Water	12/02/16 09:53	12/06/16 10:30
320-24069-4	WI-CV-1FB14-1216	Water	12/02/16 09:52	12/06/16 10:30
320-24069-5	WI-CV-1RW15-1216	Water	12/02/16 11:25	12/06/16 10:30
320-24069-6	WI-CV-1FB15-1216	Water	12/02/16 11:24	12/06/16 10:30
320-24069-7	WI-CV-1RW16-1216	Water	12/02/16 14:09	12/06/16 10:30
320-24069-8	WI-CV-1FB16-1216	Water	12/02/16 14:08	12/06/16 10:30
320-24069-9	WI-CV-1RW17-1216	Water	12/02/16 14:17	12/06/16 10:30
320-24069-10	WI-CV-1FB17-1216	Water	12/02/16 14:16	12/06/16 10:30
320-24069-11	WI-CV-3RW14-1216	Water	12/02/16 14:31	12/06/16 10:30
320-24069-12	WI-CV-3FB14-1216	Water	12/02/16 14:32	12/06/16 10:30
320-24069-13	WI-CV-3RW15-1216	Water	12/02/16 14:47	12/06/16 10:30
320-24069-14	WI-CV-3FB15-1216	Water	12/02/16 14:48	12/06/16 10:30
320-24069-15	WI-CV-3RW16-1216	Water	12/02/16 17:25	12/06/16 10:30
320-24069-16	WI-CV-3FB16-1216	Water	12/02/16 17:26	12/06/16 10:30
320-24069-17	WI-CV-1RW18-1216	Water	12/03/16 09:05	12/06/16 10:30
320-24069-18	WI-CV-1FB18-1216	Water	12/03/16 09:04	12/06/16 10:30
320-24069-19	WI-CV-1RW19-1216	Water	12/03/16 10:05	12/06/16 10:30
320-24069-20	WI-CV-1FB19-1216	Water	12/03/16 10:04	12/06/16 10:30
320-24069-21	WI-CV-1RW20-1216	Water	12/03/16 10:46	12/06/16 10:30
320-24069-22	WI-CV-1FB20-1216	Water	12/03/16 10:45	12/06/16 10:30
320-24069-23	WI-CV-1RW21-1216	Water	12/03/16 11:22	12/06/16 10:30
320-24069-24	WI-CV-1FB21-1216	Water	12/03/16 11:21	12/06/16 10:30
320-24069-25	WI-CV-1RW22-1216	Water	12/03/16 12:02	12/06/16 10:30
320-24069-26	WI-CV-1FB22-1216	Water	12/03/16 12:01	12/06/16 10:30
320-24069-27	WI-CV-3RW17-1216	Water	12/03/16 09:13	12/06/16 10:30
320-24069-28	WI-CV-3FB17-1216	Water	12/03/16 09:14	12/06/16 10:30
320-24069-29	WI-CV-3RW18-1216	Water	12/03/16 12:08	12/06/16 10:30
320-24069-30	WI-CV-3FB18-1216	Water	12/03/16 12:09	12/06/16 10:30

LCMS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Instrument ID: A6 Analysis Batch Number: 140688

Lab Sample ID: STD 320-140688/2 IC Client Sample ID:

Date Analyzed: 12/05/16 17:26 Lab File ID: 05DEC2016A6A_004.d GC Column: Acquity ID: 2.1(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perfluoroheptanoic acid	19.37	Split Peak	barnettj	12/06/16 10:00
Perfluorooctanoic acid (PFOA)	20.05	Split Peak	barnettj	12/06/16 10:00

Lab Sample ID: STD 320-140688/3 IC Client Sample ID:

Date Analyzed: 12/05/16 17:55 Lab File ID: 05DEC2016A6A_005.d GC Column: Acquity ID: 2.1(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perfluoroheptanoic acid	19.38	Split Peak	barnettj	12/06/16 10:03
Perfluorooctanoic acid (PFOA)	20.05	Split Peak	barnettj	12/06/16 10:03

Lab Sample ID: CCV 320-140688/9 CCVL Client Sample ID:

Date Analyzed: 12/05/16 20:53 Lab File ID: 05DEC2016A6A_011.d GC Column: Acquity ID: 2.1(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perfluoroheptanoic acid	19.38	Split Peak	barnettj	12/06/16 10:08
Perfluorooctanoic acid (PFOA)	20.05	Split Peak	barnettj	12/06/16 10:08

LCMS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Instrument ID: A6 Analysis Batch Number: 141768

Lab Sample ID: 320-24069-6 Client Sample ID: WI-CV-1FB15-1216

Date Analyzed: 12/13/16 10:54 Lab File ID: 11DEC2016A6A_098.d GC Column: Acquity ID: 2.1(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perfluorooctanoic acid (PFOA)	20.01	Split Peak	barnettj	12/13/16 15:17

LCMS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Instrument ID: A6 Analysis Batch Number: 141769

Lab Sample ID: 320-24069-13 Client Sample ID: WI-CV-3RW15-1216

Date Analyzed: 12/13/16 16:06 Lab File ID: 11DEC2016A6A_108.d GC Column: Acquity ID: 2.1(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perfluorooctanesulfonic acid (PFOS)	20.67	Missed Peak	barnettj	12/13/16 16:54

Lab Sample ID: 320-24069-17 Client Sample ID: WI-CV-1RW18-1216

Date Analyzed: 12/13/16 18:04 Lab File ID: 11DEC2016A6A_112.d GC Column: Acquity ID: 2.1(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perfluorobutanesulfonic acid (PFBS)	17.61	Missed Peak	barnettj	12/14/16 09:57

LCMS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Instrument ID: A6 Analysis Batch Number: 141770

Lab Sample ID: LLCS 320-141328/2-A Client Sample ID:

Date Analyzed: 12/13/16 22:01 Lab File ID: 11DEC2016A6A_120.d GC Column: Acquity ID: 2.1(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perfluorooctanoic acid (PFOA)	20.06	Split Peak	barnettj	12/14/16 10:03

Lab Sample ID: LLCSD 320-141328/3-A Client Sample ID:

Date Analyzed: 12/13/16 22:31 Lab File ID: 11DEC2016A6A_121.d GC Column: Acquity ID: 2.1(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perfluorooctanoic acid (PFOA)	20.05	Split Peak	barnettj	12/14/16 10:04

Lab Sample ID: 320-24069-24 Client Sample ID: WI-CV-1FB21-1216

Date Analyzed: 12/14/16 00:29 Lab File ID: 11DEC2016A6A_125.d GC Column: Acquity ID: 2.1(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perfluorooctanesulfonic acid (PFOS)	20.69	Missed Peak	barnettj	12/14/16 10:09

Lab Sample ID: 320-24069-25 Client Sample ID: WI-CV-1RW22-1216

Date Analyzed: 12/14/16 00:59 Lab File ID: 11DEC2016A6A_126.d GC Column: Acquity ID: 2.1(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perfluorooctanoic acid (PFOA)	20.02	Split Peak	barnettj	12/14/16 10:10

LCMS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Instrument ID: A6 Analysis Batch Number: 141770

Lab Sample ID: 320-24069-27 Client Sample ID: WI-CV-3RW17-1216

Date Analyzed: 12/14/16 01:58 Lab File ID: 11DEC2016A6A_128.d GC Column: Acquity ID: 2.1(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perfluorooctanoic acid (PFOA)	20.06	Split Peak	barnettj	12/14/16 10:12
Perfluorooctanesulfonic acid (PFOS)	20.66	Missed Peak	barnettj	12/14/16 10:12

LCMS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Instrument ID: A6 Analysis Batch Number: 141771

Lab Sample ID: 320-24069-28 Client Sample ID: WI-CV-3FB17-1216

Date Analyzed: 12/14/16 03:56 Lab File ID: 11DEC2016A6A_132.d GC Column: Acquity ID: 2.1(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perfluorooctanoic acid (PFOA)	20.05	Missed Peak	barnettj	12/14/16 10:15
Perfluorooctanesulfonic acid (PFOS)	20.67	Missed Peak	barnettj	12/14/16 10:15

Lab Sample ID: 320-24069-1 Client Sample ID: WI-CV-1RW13-1216

Date Analyzed: 12/14/16 06:24 Lab File ID: 11DEC2016A6A_137.d GC Column: Acquity ID: 2.1(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perfluorooctanoic acid (PFOA)	20.07	Split Peak	barnettj	12/14/16 10:33

Lab Sample ID: 320-24069-4 Client Sample ID: WI-CV-1FB14-1216

Date Analyzed: 12/14/16 07:23 Lab File ID: 11DEC2016A6A_139.d GC Column: Acquity ID: 2.1(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perfluorooctanoic acid (PFOA)	20.08	Split Peak	barnettj	12/14/16 10:44
Perfluorooctanesulfonic acid (PFOS)	20.68	Missed Peak	barnettj	12/14/16 10:44

LCMS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Instrument ID: A6 Analysis Batch Number: 141966

Lab Sample ID: 320-24069-21 Client Sample ID: WI-CV-1RW20-1216

Date Analyzed: 12/14/16 16:46 Lab File ID: 11DEC2016A6A_158.d GC Column: Acquity ID: 2.1(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perfluorooctanoic acid (PFOA)	20.01	Split Peak	barnettj	12/15/16 09:50
Perfluorooctanesulfonic acid (PFOS)	20.64	Missed Peak	barnettj	12/15/16 09:50

Lab Sample ID: 320-24069-22 Client Sample ID: WI-CV-1FB20-1216

Date Analyzed: 12/14/16 17:15 Lab File ID: 11DEC2016A6A_159.d GC Column: Acquity ID: 2.1(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perfluorooctanesulfonic acid (PFOS)	20.64	Missed Peak	barnettj	12/15/16 09:51

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
LC537-HSP_00013	05/21/17	11/21/16	Methanol, Lot 090285	10000 uL	LC537SPIM_00017	375 uL	Perfluorobutane Sulfonate	3366 ng/mL
							Perfluorobutanesulfonic acid (PFBS)	3366 ng/mL
							Perfluoroheptanoic acid	385.529 ng/mL
							Perfluorohexanesulfonic acid	1134.68 ng/mL
							Perfluorononanoic acid	777.808 ng/mL
							Perfluorooctanoic acid (PFOA)	731.96 ng/mL
							Perfluorooctanesulfonic acid (PFOS)	1502.49 ng/mL
.LC537SPIM_00017	05/21/17	11/21/16	Methanol, Lot 104453	10000 uL	LC537-PFBS_00006	440 uL	Perfluorobutane Sulfonate	89.76 ug/mL
							Perfluorobutanesulfonic acid (PFBS)	89.76 ug/mL
					LC537-PFHpA_00012	100 uL	Perfluoroheptanoic acid	10.2808 ug/mL
					LC537-PFHxS_00008	300 uL	Perfluorohexanesulfonic acid	30.2582 ug/mL
					LC537-PFNA_00011	200 uL	Perfluorononanoic acid	20.7415 ug/mL
					LC537-PFOA_00011	100 uL	Perfluorooctanoic acid (PFOA)	19.5189 ug/mL
					LC537-PFOS_00006	400 uL	Perfluorooctanesulfonic acid (PFOS)	40.0664 ug/mL
..LC537-PFBS_00006	07/28/17	07/28/16	Methanol, Lot 090285	5 mL	LC537_PFBS_00002	0.0102 g	Perfluorobutane Sulfonate	2040 ug/mL
							Perfluorobutanesulfonic acid (PFBS)	2040 ug/mL
...LC537_PFBS_00002	04/01/18		Sigma, Lot MKBP8842V		(Purchased Reagent)		Perfluorobutane Sulfonate	1 g/g
							Perfluorobutanesulfonic acid (PFBS)	1 g/g
..LC537-PFHpA_00012	11/04/17	11/18/16	Methanol, Lot 090285	13 mL	LC537_PFHpA_00002	0.0135 g	Perfluoroheptanoic acid	1028.08 ug/mL
...LC537_PFHpA_00002	04/01/18		Aldrich, Lot BCBM2579V		(Purchased Reagent)		Perfluoroheptanoic acid	0.99 g/g
..LC537-PFHxS_00008	07/28/17	07/28/16	Methanol, Lot 090285	5.5 mL	LC537_PFHxS_00002	0.0061 g	Perfluorohexanesulfonic acid	1008.61 ug/mL
...LC537_PFHxS_00002	04/01/18		Sigma, Lot BCBL3545V		(Purchased Reagent)		Perfluorohexanesulfonic acid	0.9094 g/g
..LC537-PFNA_00011	11/21/17	11/21/16	Methanol, Lot 090285	6.5 mL	LC537_PFNA_00002	0.007 g	Perfluorononanoic acid	1037.08 ug/mL
...LC537_PFNA_00002	04/01/18		TCI America, Lot QN44F		(Purchased Reagent)		Perfluorononanoic acid	0.963 g/g
..LC537-PFOA_00011	11/21/17	11/21/16	Methanol, Lot 090285	6.5 mL	LC537_PFOA_00002	0.0127 g	Perfluorooctanoic acid (PFOA)	1951.89 ug/mL
...LC537_PFOA_00002	11/04/18		Fluka, Lot SZBD308XV		(Purchased Reagent)		Perfluorooctanoic acid (PFOA)	0.999 g/g
..LC537-PFOS_00006	07/28/17	07/28/16	Methanol, Lot 090285	6 mL	LC537_PFOS_00002	0.0066 g	Perfluorooctanesulfonic acid (PFOS)	1001.66 ug/mL
...LC537_PFOS_00002	08/09/17		Fluka, Lot SZBC222XV		(Purchased Reagent)		Perfluorooctanesulfonic acid (PFOS)	0.9106 g/g
LC537-ICV_00017	01/13/17	08/09/16	MeOH/H2O, Lot 067374	10 mL	LC537-IS_00018	200 uL	13C2-PFOA	10 ng/mL
							13C4 PFOS	28.68 ng/mL
.LC537-IS_00018	01/13/17	07/13/16	Methanol, Lot 090285	10000 uL	LCM2PFOA_00004	100 uL	13C2-PFOA	0.5 ug/mL
					LCMPFOS_00013	300 uL	13C4 PFOS	1.434 ug/mL
..LCM2PFOA_00004	03/19/17		Wellington Laboratories, Lot M2PFOA0312		(Purchased Reagent)		13C2-PFOA	50 ug/mL
..LCMPFOS_00013	01/22/21		Wellington Laboratories, Lot MPFOS0116		(Purchased Reagent)		13C4 PFOS	47.8 ug/mL
LC537-ICV_00017	01/13/17	08/09/16	MeOH/H2O, Lot 067374	10 mL	LC537-SU_00017	500 uL	13C2 PFDA	10 ng/mL
							13C2 PFHxA	10 ng/mL
					LC537ICIM_00013	25 uL	Perfluorobutanesulfonic acid (PFBS)	114.77 ng/mL
							Perfluorooctanoic acid (PFOA)	25.0965 ng/mL

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Perfluorooctanesulfonic acid (PFOS)	27.2389 ng/mL
.LC537-SU_00017	01/19/17	07/19/16	Methanol, Lot 104453	25000 uL	LCMPFDA_00008	100 uL	13C2 PFDA	0.2 ug/mL
					LCMPFHxA_00009	100 uL	13C2 PFHxA	0.2 ug/mL
..LCMPFDA_00008	08/19/20	Wellington Laboratories, Lot MPFDA0815			(Purchased Reagent)		13C2 PFDA	50 ug/mL
..LCMPFHxA_00009	04/09/20	Wellington Laboratories, Lot MPFHxA0415			(Purchased Reagent)		13C2 PFHxA	50 ug/mL
.LC537ICIM_00013	02/05/17	08/09/16	Methanol, Lot 090285	25 mL	LC537-PFBS2_00005	0.5 mL	Perfluorobutanesulfonic acid (PFBS)	45.908 ug/mL
					LC537-PFOA2_00007	0.13 mL	Perfluorooctanoic acid (PFOA)	10.0386 ug/mL
					LC537-PFOS2_00005	0.22 mL	Perfluorooctanesulfonic acid (PFOS)	10.8956 ug/mL
..LC537-PFBS2_00005	03/01/17	02/29/16	Methanol, Lot 090285	10 mL	LC537_PFBS2_00001	0.023 g	Perfluorobutanesulfonic acid (PFBS)	2295.4 ug/mL
...LC537_PFBS2_00001	08/09/17	Santa Cruz Biotechnology, Lot H0112			(Purchased Reagent)		Perfluorobutanesulfonic acid (PFBS)	0.998 g/g
..LC537-PFOA2_00007	07/25/17	08/05/16	Methanol, Lot 090285	10 mL	LC537_PFOA2_00001	0.0195 g	Perfluorooctanoic acid (PFOA)	1930.5 ug/mL
...LC537_PFOA2_00001	07/25/17	Afla Aesar, Lot D24Y026			(Purchased Reagent)		Perfluorooctanoic acid (PFOA)	0.99 g/g
..LC537-PFOS2_00005	03/01/17	02/29/16	Methanol, Lot 090285	10 mL	LC537_PFOS2_00001	0.0159 g	Perfluorooctanesulfonic acid (PFOS)	1238.13 ug/mL
...LC537_PFOS2_00001	07/26/17	Sigma, Lot BCBF5116V			(Purchased Reagent)		Perfluorooctanesulfonic acid (PFOS)	0.7787 g/g
LC537-IS_00026	03/19/17	12/05/16	Methanol, Lot 090285	10000 uL	LCM2PFOA_00003	100 uL	13C2-PFOA	0.5 ug/mL
					LCMPFOS_00018	300 uL	13C4 PFOS	1.434 ug/mL
.LCM2PFOA_00003	03/19/17	Wellington Laboratories, Lot M2PFOA0312			(Purchased Reagent)		13C2-PFOA	50 ug/mL
.LCMPFOS_00018	08/03/21	Wellington Laboratories, Lot MPFOS0816			(Purchased Reagent)		13C4 PFOS	47.8 ug/mL
LC537-L1_00015	01/13/17	07/28/16	MeOH/H2O, Lot 090285	5 mL	LC537-IS_00018	100 uL	13C2-PFOA	10 ng/mL
							13C4 PFOS	28.68 ng/mL
					LC537-MSP_00012	24.4 uL	Perfluorobutanesulfonic acid (PFBS)	8.76058 ng/mL
							Perfluoroheptanoic acid	0.993847 ng/mL
							Perfluorohexanesulfonic acid	2.9532 ng/mL
							Perfluorononanoic acid	1.91737 ng/mL
							Perfluorooctanoic acid (PFOA)	1.9793 ng/mL
							Perfluorooctanesulfonic acid (PFOS)	3.91048 ng/mL
					LC537-SU_00017	250 uL	13C2 PFDA	10 ng/mL
							13C2 PFHxA	10 ng/mL
.LC537-IS_00018	01/13/17	07/13/16	Methanol, Lot 090285	10000 uL	LCM2PFOA_00004	100 uL	13C2-PFOA	0.5 ug/mL
					LCMPFOS_00013	300 uL	13C4 PFOS	1.434 ug/mL
..LCM2PFOA_00004	03/19/17	Wellington Laboratories, Lot M2PFOA0312			(Purchased Reagent)		13C2-PFOA	50 ug/mL
..LCMPFOS_00013	01/22/21	Wellington Laboratories, Lot MPFOS0116			(Purchased Reagent)		13C4 PFOS	47.8 ug/mL
.LC537-MSP_00012	01/28/17	07/28/16	Methanol, Lot 090285	10000 uL	LC537SPIM_00012	200 uL	Perfluorobutanesulfonic acid (PFBS)	1795.2 ng/mL
							Perfluoroheptanoic acid	203.657 ng/mL
							Perfluorohexanesulfonic acid	605.164 ng/mL
							Perfluorononanoic acid	392.904 ng/mL
							Perfluorooctanoic acid (PFOA)	405.594 ng/mL

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Perfluorooctanesulfonic acid (PFOS)	801.328 ng/mL
..LC537SPIM_00012	01/28/17	07/28/16	Methanol, Lot 104453	10 mL	LC537-PFBS_00006	0.44 mL	Perfluorobutanesulfonic acid (PFBS)	89.76 ug/mL
					LC537-PFHpA_00010	0.1 mL	Perfluoroheptanoic acid	10.1829 ug/mL
					LC537-PFHxS_00008	0.3 mL	Perfluorohexanesulfonic acid	30.2582 ug/mL
					LC537-PFNA_00008	0.2 mL	Perfluorononanoic acid	19.6452 ug/mL
					LC537-PFOA_00009	0.098 mL	Perfluorooctanoic acid (PFOA)	20.2797 ug/mL
					LC537-PFOS_00006	0.4 mL	Perfluorooctanesulfonic acid (PFOS)	40.0664 ug/mL
...LC537-PFBS_00006	07/28/17	07/28/16	Methanol, Lot 090285	5 mL	LC537_PFBS_00002	0.0102 g	Perfluorobutanesulfonic acid (PFBS)	2040 ug/mL
....LC537_PFBS_00002	04/01/18		Sigma, Lot MKBP8842V		(Purchased Reagent)		Perfluorobutanesulfonic acid (PFBS)	1 g/g
...LC537-PFHpA_00010	07/28/17	07/28/16	Methanol, Lot 090285	7 mL	LC537_PFHpA_00002	0.0072 g	Perfluoroheptanoic acid	1018.29 ug/mL
....LC537_PFHpA_00002	04/01/18		Aldrich, Lot BCBM2579V		(Purchased Reagent)		Perfluoroheptanoic acid	0.99 g/g
...LC537-PFHxS_00008	07/28/17	07/28/16	Methanol, Lot 090285	5.5 mL	LC537_PFHxS_00002	0.0061 g	Perfluorohexanesulfonic acid	1008.61 ug/mL
....LC537_PFHxS_00002	04/01/18		Sigma, Lot BCBL3545V		(Purchased Reagent)		Perfluorohexanesulfonic acid	0.9094 g/g
...LC537-PFNA_00008	07/28/17	07/28/16	Methanol, Lot 090285	5 mL	LC537_PFNA_00002	0.0051 g	Perfluorononanoic acid	982.26 ug/mL
....LC537_PFNA_00002	04/01/18		TCI America, Lot QN44F		(Purchased Reagent)		Perfluorononanoic acid	0.963 g/g
...LC537-PFOA_00009	07/28/17	07/28/16	Methanol, Lot 090285	7 mL	LC537_PFOA_00002	0.0145 g	Perfluorooctanoic acid (PFOA)	2069.36 ug/mL
....LC537_PFOA_00002	11/04/18		Fluka, Lot SZBD308XV		(Purchased Reagent)		Perfluorooctanoic acid (PFOA)	0.999 g/g
...LC537-PFOS_00006	07/28/17	07/28/16	Methanol, Lot 090285	6 mL	LC537_PFOS_00002	0.0066 g	Perfluorooctanesulfonic acid (PFOS)	1001.66 ug/mL
....LC537_PFOS_00002	08/09/17		Fluka, Lot SZBC222XV		(Purchased Reagent)		Perfluorooctanesulfonic acid (PFOS)	0.9106 g/g
.LC537-SU_00017	01/19/17	07/19/16	Methanol, Lot 104453	25000 uL	LCMPFDA_00008	100 uL	13C2 PFDA	0.2 ug/mL
					LCMPFHxA_00009	100 uL	13C2 PFHxA	0.2 ug/mL
..LCMPFDA_00008	08/19/20		Wellington Laboratories, Lot MPFDA0815		(Purchased Reagent)		13C2 PFDA	50 ug/mL
..LCMPFHxA_00009	04/09/20		Wellington Laboratories, Lot MPFHxA0415		(Purchased Reagent)		13C2 PFHxA	50 ug/mL
LC537-L2_00014	01/13/17	07/28/16	MeOH/H2O, Lot 090285	5 mL	LC537-HSP_00010	34 uL	Perfluorobutanesulfonic acid (PFBS)	22.8888 ng/mL
							Perfluoroheptanoic acid	2.59663 ng/mL
							Perfluorohexanesulfonic acid	7.71585 ng/mL
							Perfluorononanoic acid	5.00953 ng/mL
							Perfluorooctanoic acid (PFOA)	5.17132 ng/mL
							Perfluorooctanesulfonic acid (PFOS)	10.2169 ng/mL
					LC537-IS_00018	100 uL	13C2-PFOA	10 ng/mL
							13C4 PFOS	28.68 ng/mL
					LC537-SU_00017	250 uL	13C2 PFDA	10 ng/mL
							13C2 PFHxA	10 ng/mL
.LC537-HSP_00010	01/28/17	07/28/16	Methanol, Lot 090285	10000 uL	LC537SPIM_00012	375 uL	Perfluorobutanesulfonic acid (PFBS)	3366 ng/mL
							Perfluoroheptanoic acid	381.857 ng/mL
							Perfluorohexanesulfonic acid	1134.68 ng/mL
							Perfluorononanoic acid	736.695 ng/mL
							Perfluorooctanoic acid (PFOA)	760.489 ng/mL

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Perfluorooctanesulfonic acid (PFOS)	1502.49 ng/mL
..LC537SPIM_00012	01/28/17	07/28/16	Methanol, Lot 104453	10 mL	LC537-PFBS_00006	0.44 mL	Perfluorobutanesulfonic acid (PFBS)	89.76 ug/mL
					LC537-PFHpA_00010	0.1 mL	Perfluoroheptanoic acid	10.1829 ug/mL
					LC537-PFHxS_00008	0.3 mL	Perfluorohexanesulfonic acid	30.2582 ug/mL
					LC537-PFNA_00008	0.2 mL	Perfluorononanoic acid	19.6452 ug/mL
					LC537-PFOA_00009	0.098 mL	Perfluorooctanoic acid (PFOA)	20.2797 ug/mL
					LC537-PFOS_00006	0.4 mL	Perfluorooctanesulfonic acid (PFOS)	40.0664 ug/mL
...LC537-PFBS_00006	07/28/17	07/28/16	Methanol, Lot 090285	5 mL	LC537_PFBS_00002	0.0102 g	Perfluorobutanesulfonic acid (PFBS)	2040 ug/mL
....LC537_PFBS_00002	04/01/18		Sigma, Lot MKBP8842V		(Purchased Reagent)		Perfluorobutanesulfonic acid (PFBS)	1 g/g
...LC537-PFHpA_00010	07/28/17	07/28/16	Methanol, Lot 090285	7 mL	LC537_PFHpA_00002	0.0072 g	Perfluoroheptanoic acid	1018.29 ug/mL
....LC537_PFHpA_00002	04/01/18		Aldrich, Lot BCBM2579V		(Purchased Reagent)		Perfluoroheptanoic acid	0.99 g/g
...LC537-PFHxS_00008	07/28/17	07/28/16	Methanol, Lot 090285	5.5 mL	LC537_PFHxS_00002	0.0061 g	Perfluorohexanesulfonic acid	1008.61 ug/mL
....LC537_PFHxS_00002	04/01/18		Sigma, Lot BCBL3545V		(Purchased Reagent)		Perfluorohexanesulfonic acid	0.9094 g/g
...LC537-PFNA_00008	07/28/17	07/28/16	Methanol, Lot 090285	5 mL	LC537_PFNA_00002	0.0051 g	Perfluorononanoic acid	982.26 ug/mL
....LC537_PFNA_00002	04/01/18		TCI America, Lot QN44F		(Purchased Reagent)		Perfluorononanoic acid	0.963 g/g
...LC537-PFOA_00009	07/28/17	07/28/16	Methanol, Lot 090285	7 mL	LC537_PFOA_00002	0.0145 g	Perfluorooctanoic acid (PFOA)	2069.36 ug/mL
....LC537_PFOA_00002	11/04/18		Fluka, Lot SZBD308XV		(Purchased Reagent)		Perfluorooctanoic acid (PFOA)	0.999 g/g
...LC537-PFOS_00006	07/28/17	07/28/16	Methanol, Lot 090285	6 mL	LC537_PFOS_00002	0.0066 g	Perfluorooctanesulfonic acid (PFOS)	1001.66 ug/mL
....LC537_PFOS_00002	08/09/17		Fluka, Lot SZBC222XV		(Purchased Reagent)		Perfluorooctanesulfonic acid (PFOS)	0.9106 g/g
.LC537-IS_00018	01/13/17	07/13/16	Methanol, Lot 090285	10000 uL	LCM2PFOA_00004	100 uL	13C2-PFOA	0.5 ug/mL
					LCMPFOS_00013	300 uL	13C4 PFOS	1.434 ug/mL
..LCM2PFOA_00004	03/19/17		Wellington Laboratories, Lot M2PFOA0312		(Purchased Reagent)		13C2-PFOA	50 ug/mL
..LCMPFOS_00013	01/22/21		Wellington Laboratories, Lot MPFOS0116		(Purchased Reagent)		13C4 PFOS	47.8 ug/mL
.LC537-SU_00017	01/19/17	07/19/16	Methanol, Lot 104453	25000 uL	LCMPFDA_00008	100 uL	13C2 PFDA	0.2 ug/mL
					LCMPFHxA_00009	100 uL	13C2 PFHxA	0.2 ug/mL
..LCMPFDA_00008	08/19/20		Wellington Laboratories, Lot MPFDA0815		(Purchased Reagent)		13C2 PFDA	50 ug/mL
..LCMPFHxA_00009	04/09/20		Wellington Laboratories, Lot MPFHxA0415		(Purchased Reagent)		13C2 PFHxA	50 ug/mL
LC537-L3_00016	01/28/17	11/07/16	MeOH/H2O, Lot 090285	5 mL	LC537-HSP_00010	67 uL	Perfluorobutanesulfonic acid (PFBS)	45.1044 ng/mL
							Perfluoroheptanoic acid	5.11689 ng/mL
							Perfluorohexanesulfonic acid	15.2048 ng/mL
							Perfluorononanoic acid	9.87171 ng/mL
							Perfluorooctanoic acid (PFOA)	10.1905 ng/mL
							Perfluorooctanesulfonic acid (PFOS)	20.1334 ng/mL
					LC537-IS_00024	100 uL	13C2-PFOA	10 ng/mL
							13C4 PFOS	28.68 ng/mL
					LC537-SU_00020	250 uL	13C2 PFDA	10 ng/mL
							13C2 PFHxA	10 ng/mL
.LC537-HSP_00010	01/28/17	07/28/16	Methanol, Lot 090285	10000 uL	LC537SPIM_00012	375 uL	Perfluorobutanesulfonic acid (PFBS)	3366 ng/mL
							Perfluoroheptanoic acid	381.857 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Perfluorohexanesulfonic acid	1134.68 ng/mL
							Perfluorononanoic acid	736.695 ng/mL
							Perfluorooctanoic acid (PFOA)	760.489 ng/mL
							Perfluorooctanesulfonic acid (PFOS)	1502.49 ng/mL
..LC537SPIM_00012	01/28/17	07/28/16	Methanol, Lot 104453	10 mL	LC537-PFBS_00006	0.44 mL	Perfluorobutanesulfonic acid (PFBS)	89.76 ug/mL
					LC537-PFHpA_00010	0.1 mL	Perfluoroheptanoic acid	10.1829 ug/mL
					LC537-PFHxS_00008	0.3 mL	Perfluorohexanesulfonic acid	30.2582 ug/mL
					LC537-PFNA_00008	0.2 mL	Perfluorononanoic acid	19.6452 ug/mL
					LC537-PFOA_00009	0.098 mL	Perfluorooctanoic acid (PFOA)	20.2797 ug/mL
					LC537-PFOS_00006	0.4 mL	Perfluorooctanesulfonic acid (PFOS)	40.0664 ug/mL
...LC537-PFBS_00006	07/28/17	07/28/16	Methanol, Lot 090285	5 mL	LC537_PFBS_00002	0.0102 g	Perfluorobutanesulfonic acid (PFBS)	2040 ug/mL
....LC537_PFBS_00002	04/01/18		Sigma, Lot MKBP8842V		(Purchased Reagent)		Perfluorobutanesulfonic acid (PFBS)	1 g/g
...LC537-PFHpA_00010	07/28/17	07/28/16	Methanol, Lot 090285	7 mL	LC537_PFHpA_00002	0.0072 g	Perfluoroheptanoic acid	1018.29 ug/mL
....LC537_PFHpA_00002	04/01/18		Aldrich, Lot BCBM2579V		(Purchased Reagent)		Perfluoroheptanoic acid	0.99 g/g
...LC537-PFHxS_00008	07/28/17	07/28/16	Methanol, Lot 090285	5.5 mL	LC537_PFHxS_00002	0.0061 g	Perfluorohexanesulfonic acid	1008.61 ug/mL
....LC537_PFHxS_00002	04/01/18		Sigma, Lot BCBL3545V		(Purchased Reagent)		Perfluorohexanesulfonic acid	0.9094 g/g
...LC537-PFNA_00008	07/28/17	07/28/16	Methanol, Lot 090285	5 mL	LC537_PFNA_00002	0.0051 g	Perfluorononanoic acid	982.26 ug/mL
....LC537_PFNA_00002	04/01/18		TCI America, Lot QN44F		(Purchased Reagent)		Perfluorononanoic acid	0.963 g/g
...LC537-PFOA_00009	07/28/17	07/28/16	Methanol, Lot 090285	7 mL	LC537_PFOA_00002	0.0145 g	Perfluorooctanoic acid (PFOA)	2069.36 ug/mL
....LC537_PFOA_00002	11/04/18		Fluka, Lot SZBD308XV		(Purchased Reagent)		Perfluorooctanoic acid (PFOA)	0.999 g/g
...LC537-PFOS_00006	07/28/17	07/28/16	Methanol, Lot 090285	6 mL	LC537_PFOS_00002	0.0066 g	Perfluorooctanesulfonic acid (PFOS)	1001.66 ug/mL
....LC537_PFOS_00002	08/09/17		Fluka, Lot SZBC222XV		(Purchased Reagent)		Perfluorooctanesulfonic acid (PFOS)	0.9106 g/g
.LC537-IS_00024	03/19/17	11/03/16	Methanol, Lot 090285	10000 uL	LCM2PFOA_00003	100 uL	13C2-PFOA	0.5 ug/mL
					LCMPFOS_00018	300 uL	13C4 PFOS	1.434 ug/mL
..LCM2PFOA_00003	03/19/17		Wellington Laboratories, Lot M2PFOA0312		(Purchased Reagent)		13C2-PFOA	50 ug/mL
..LCMPFOS_00018	08/03/21		Wellington Laboratories, Lot MPFOS0816		(Purchased Reagent)		13C4 PFOS	47.8 ug/mL
.LC537-SU_00020	04/07/17	10/07/16	Methanol, Lot 104453	25000 uL	LCMPFDA_00008	100 uL	13C2 PFDA	0.2 ug/mL
					LCMPFHxA_00009	100 uL	13C2 PFHxA	0.2 ug/mL
..LCMPFDA_00008	08/19/20		Wellington Laboratories, Lot MPFDA0815		(Purchased Reagent)		13C2 PFDA	50 ug/mL
..LCMPFHxA_00009	04/09/20		Wellington Laboratories, Lot MPFHxA0415		(Purchased Reagent)		13C2 PFHxA	50 ug/mL
LC537-L4_00015	01/13/17	07/28/16	MeOH/H2O, Lot 090285	5 mL	LC537-HSP_00010	135 uL	Perfluorobutanesulfonic acid (PFBS)	90.882 ng/mL
							Perfluoroheptanoic acid	10.3101 ng/mL
							Perfluorohexanesulfonic acid	30.6364 ng/mL
							Perfluorononanoic acid	19.8908 ng/mL
							Perfluorooctanoic acid (PFOA)	20.5332 ng/mL
							Perfluorooctanesulfonic acid (PFOS)	40.5672 ng/mL
					LC537-IS_00018	100 uL	13C2-PFOA	10 ng/mL
							13C4 PFOS	28.68 ng/mL
					LC537-SU_00017	250 uL	13C2 PFDA	10 ng/mL
							13C2 PFHxA	10 ng/mL

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.LC537-HSP_00010	01/28/17	07/28/16	Methanol, Lot 090285	10000 uL	LC537SPIM_00012	375 uL	Perfluorobutanesulfonic acid (PFBS)	3366 ng/mL
							Perfluoroheptanoic acid	381.857 ng/mL
							Perfluorohexanesulfonic acid	1134.68 ng/mL
							Perfluorononanoic acid	736.695 ng/mL
							Perfluorooctanoic acid (PFOA)	760.489 ng/mL
							Perfluorooctanesulfonic acid (PFOS)	1502.49 ng/mL
..LC537SPIM_00012	01/28/17	07/28/16	Methanol, Lot 104453	10 mL	LC537-PFBS_00006	0.44 mL	Perfluorobutanesulfonic acid (PFBS)	89.76 ug/mL
					LC537-PFHpA_00010	0.1 mL	Perfluoroheptanoic acid	10.1829 ug/mL
					LC537-PFHxS_00008	0.3 mL	Perfluorohexanesulfonic acid	30.2582 ug/mL
					LC537-PFNA_00008	0.2 mL	Perfluorononanoic acid	19.6452 ug/mL
					LC537-PFOA_00009	0.098 mL	Perfluorooctanoic acid (PFOA)	20.2797 ug/mL
					LC537-PFOS_00006	0.4 mL	Perfluorooctanesulfonic acid (PFOS)	40.0664 ug/mL
...LC537-PFBS_00006	07/28/17	07/28/16	Methanol, Lot 090285	5 mL	LC537_PFBS_00002	0.0102 g	Perfluorobutanesulfonic acid (PFBS)	2040 ug/mL
....LC537_PFBS_00002	04/01/18		Sigma, Lot MKBP8842V		(Purchased Reagent)		Perfluorobutanesulfonic acid (PFBS)	1 g/g
...LC537-PFHpA_00010	07/28/17	07/28/16	Methanol, Lot 090285	7 mL	LC537_PFHpA_00002	0.0072 g	Perfluoroheptanoic acid	1018.29 ug/mL
....LC537_PFHpA_00002	04/01/18		Aldrich, Lot BCBM2579V		(Purchased Reagent)		Perfluoroheptanoic acid	0.99 g/g
...LC537-PFHxS_00008	07/28/17	07/28/16	Methanol, Lot 090285	5.5 mL	LC537_PFHxS_00002	0.0061 g	Perfluorohexanesulfonic acid	1008.61 ug/mL
....LC537_PFHxS_00002	04/01/18		Sigma, Lot BCBL3545V		(Purchased Reagent)		Perfluorohexanesulfonic acid	0.9094 g/g
...LC537-PFNA_00008	07/28/17	07/28/16	Methanol, Lot 090285	5 mL	LC537_PFNA_00002	0.0051 g	Perfluorononanoic acid	982.26 ug/mL
....LC537_PFNA_00002	04/01/18		TCI America, Lot QN44F		(Purchased Reagent)		Perfluorononanoic acid	0.963 g/g
...LC537-PFOA_00009	07/28/17	07/28/16	Methanol, Lot 090285	7 mL	LC537_PFOA_00002	0.0145 g	Perfluorooctanoic acid (PFOA)	2069.36 ug/mL
....LC537_PFOA_00002	11/04/18		Fluka, Lot SZBD308XV		(Purchased Reagent)		Perfluorooctanoic acid (PFOA)	0.999 g/g
...LC537-PFOS_00006	07/28/17	07/28/16	Methanol, Lot 090285	6 mL	LC537_PFOS_00002	0.0066 g	Perfluorooctanesulfonic acid (PFOS)	1001.66 ug/mL
....LC537_PFOS_00002	08/09/17		Fluka, Lot SZBC222XV		(Purchased Reagent)		Perfluorooctanesulfonic acid (PFOS)	0.9106 g/g
.LC537-IS_00018	01/13/17	07/13/16	Methanol, Lot 090285	10000 uL	LCM2PFOA_00004	100 uL	13C2-PFOA	0.5 ug/mL
					LCMPFOS_00013	300 uL	13C4 PFOS	1.434 ug/mL
..LCM2PFOA_00004	03/19/17		Wellington Laboratories, Lot M2PFOA0312		(Purchased Reagent)		13C2-PFOA	50 ug/mL
..LCMPFOS_00013	01/22/21		Wellington Laboratories, Lot MPFOS0116		(Purchased Reagent)		13C4 PFOS	47.8 ug/mL
.LC537-SU_00017	01/19/17	07/19/16	Methanol, Lot 104453	25000 uL	LCMPFDA_00008	100 uL	13C2 PFDA	0.2 ug/mL
					LCMPFHxA_00009	100 uL	13C2 PFHxA	0.2 ug/mL
..LCMPFDA_00008	08/19/20		Wellington Laboratories, Lot MPFDA0815		(Purchased Reagent)		13C2 PFDA	50 ug/mL
..LCMPFHxA_00009	04/09/20		Wellington Laboratories, Lot MPFHxA0415		(Purchased Reagent)		13C2 PFHxA	50 ug/mL
LC537-L5_00017	01/28/17	11/07/16	MeOH/H2O, Lot 090285	5 mL	LC537-HSP_00010	200 uL	Perfluorobutanesulfonic acid (PFBS)	134.64 ng/mL
							Perfluoroheptanoic acid	15.2743 ng/mL
							Perfluorohexanesulfonic acid	45.3873 ng/mL
							Perfluorononanoic acid	29.4678 ng/mL
							Perfluorooctanoic acid (PFOA)	30.4196 ng/mL
							Perfluorooctanesulfonic acid (PFOS)	60.0996 ng/mL
					LC537-IS_00024	100 uL	13C2-PFOA	10 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							13C4 PFOS	28.68 ng/mL
					LC537-SU_00020	250 uL	13C2 PFDA	10 ng/mL
							13C2 PFHxA	10 ng/mL
.LC537-HSP_00010	01/28/17	07/28/16	Methanol, Lot 090285	10000 uL	LC537SPIM_00012	375 uL	Perfluorobutanesulfonic acid (PFBS)	3366 ng/mL
							Perfluoroheptanoic acid	381.857 ng/mL
							Perfluorohexanesulfonic acid	1134.68 ng/mL
							Perfluorononanoic acid	736.695 ng/mL
							Perfluorooctanoic acid (PFOA)	760.489 ng/mL
							Perfluorooctanesulfonic acid (PFOS)	1502.49 ng/mL
..LC537SPIM_00012	01/28/17	07/28/16	Methanol, Lot 104453	10 mL	LC537-PFBS_00006	0.44 mL	Perfluorobutanesulfonic acid (PFBS)	89.76 ug/mL
					LC537-PFHpA_00010	0.1 mL	Perfluoroheptanoic acid	10.1829 ug/mL
					LC537-PFHxS_00008	0.3 mL	Perfluorohexanesulfonic acid	30.2582 ug/mL
					LC537-PFNA_00008	0.2 mL	Perfluorononanoic acid	19.6452 ug/mL
					LC537-PFOA_00009	0.098 mL	Perfluorooctanoic acid (PFOA)	20.2797 ug/mL
					LC537-PFOS_00006	0.4 mL	Perfluorooctanesulfonic acid (PFOS)	40.0664 ug/mL
...LC537-PFBS_00006	07/28/17	07/28/16	Methanol, Lot 090285	5 mL	LC537_PFBS_00002	0.0102 g	Perfluorobutanesulfonic acid (PFBS)	2040 ug/mL
....LC537_PFBS_00002	04/01/18		Sigma, Lot MKBP8842V		(Purchased Reagent)		Perfluorobutanesulfonic acid (PFBS)	1 g/g
...LC537-PFHpA_00010	07/28/17	07/28/16	Methanol, Lot 090285	7 mL	LC537_PFHpA_00002	0.0072 g	Perfluoroheptanoic acid	1018.29 ug/mL
....LC537_PFHpA_00002	04/01/18		Aldrich, Lot BCBM2579V		(Purchased Reagent)		Perfluoroheptanoic acid	0.99 g/g
...LC537-PFHxS_00008	07/28/17	07/28/16	Methanol, Lot 090285	5.5 mL	LC537_PFHxS_00002	0.0061 g	Perfluorohexanesulfonic acid	1008.61 ug/mL
....LC537_PFHxS_00002	04/01/18		Sigma, Lot BCBL3545V		(Purchased Reagent)		Perfluorohexanesulfonic acid	0.9094 g/g
...LC537-PFNA_00008	07/28/17	07/28/16	Methanol, Lot 090285	5 mL	LC537_PFNA_00002	0.0051 g	Perfluorononanoic acid	982.26 ug/mL
....LC537_PFNA_00002	04/01/18		TCI America, Lot QN44F		(Purchased Reagent)		Perfluorononanoic acid	0.963 g/g
...LC537-PFOA_00009	07/28/17	07/28/16	Methanol, Lot 090285	7 mL	LC537_PFOA_00002	0.0145 g	Perfluorooctanoic acid (PFOA)	2069.36 ug/mL
....LC537_PFOA_00002	11/04/18		Fluka, Lot SZBD308XV		(Purchased Reagent)		Perfluorooctanoic acid (PFOA)	0.999 g/g
...LC537-PFOS_00006	07/28/17	07/28/16	Methanol, Lot 090285	6 mL	LC537_PFOS_00002	0.0066 g	Perfluorooctanesulfonic acid (PFOS)	1001.66 ug/mL
....LC537_PFOS_00002	08/09/17		Fluka, Lot SZBC222XV		(Purchased Reagent)		Perfluorooctanesulfonic acid (PFOS)	0.9106 g/g
.LC537-IS_00024	03/19/17	11/03/16	Methanol, Lot 090285	10000 uL	LCM2PFOA_00003	100 uL	13C2-PFOA	0.5 ug/mL
					LCMPFOS_00018	300 uL	13C4 PFOS	1.434 ug/mL
..LCM2PFOA_00003	03/19/17		Wellington Laboratories, Lot M2PFOA0312		(Purchased Reagent)		13C2-PFOA	50 ug/mL
..LCMPFOS_00018	08/03/21		Wellington Laboratories, Lot MPFOS0816		(Purchased Reagent)		13C4 PFOS	47.8 ug/mL
.LC537-SU_00020	04/07/17	10/07/16	Methanol, Lot 104453	25000 uL	LCMPFDA_00008	100 uL	13C2 PFDA	0.2 ug/mL
					LCMPFHxA_00009	100 uL	13C2 PFHxA	0.2 ug/mL
..LCMPFDA_00008	08/19/20		Wellington Laboratories, Lot MPFDA0815		(Purchased Reagent)		13C2 PFDA	50 ug/mL
..LCMPFHxA_00009	04/09/20		Wellington Laboratories, Lot MPFHxA0415		(Purchased Reagent)		13C2 PFHxA	50 ug/mL
LC537-L6_00014	01/13/17	07/28/16	MeOH/H2O, Lot 090285	5 mL	LC537-HSP_00010	265 uL	Perfluorobutanesulfonic acid (PFBS)	178.398 ng/mL
							Perfluoroheptanoic acid	20.2384 ng/mL
							Perfluorohexanesulfonic acid	60.1382 ng/mL
							Perfluorononanoic acid	39.0448 ng/mL
							Perfluorooctanoic acid (PFOA)	40.3059 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Perfluorooctanesulfonic acid (PFOS)	79.632 ng/mL
					LC537-IS_00018	100 uL	13C2-PFOA	10 ng/mL
							13C4 PFOS	28.68 ng/mL
					LC537-SU_00017	250 uL	13C2 PFDA	10 ng/mL
							13C2 PFHxA	10 ng/mL
.LC537-HSP_00010	01/28/17	07/28/16	Methanol, Lot 090285	10000 uL	LC537SPIM_00012	375 uL	Perfluorobutanesulfonic acid (PFBS)	3366 ng/mL
							Perfluoroheptanoic acid	381.857 ng/mL
							Perfluorohexanesulfonic acid	1134.68 ng/mL
							Perfluorononanoic acid	736.695 ng/mL
							Perfluorooctanoic acid (PFOA)	760.489 ng/mL
							Perfluorooctanesulfonic acid (PFOS)	1502.49 ng/mL
..LC537SPIM_00012	01/28/17	07/28/16	Methanol, Lot 104453	10 mL	LC537-PFBS_00006	0.44 mL	Perfluorobutanesulfonic acid (PFBS)	89.76 ug/mL
					LC537-PFHpA_00010	0.1 mL	Perfluoroheptanoic acid	10.1829 ug/mL
					LC537-PFHxS_00008	0.3 mL	Perfluorohexanesulfonic acid	30.2582 ug/mL
					LC537-PFNA_00008	0.2 mL	Perfluorononanoic acid	19.6452 ug/mL
					LC537-PFOA_00009	0.098 mL	Perfluorooctanoic acid (PFOA)	20.2797 ug/mL
					LC537-PFOS_00006	0.4 mL	Perfluorooctanesulfonic acid (PFOS)	40.0664 ug/mL
...LC537-PFBS_00006	07/28/17	07/28/16	Methanol, Lot 090285	5 mL	LC537_PFBS_00002	0.0102 g	Perfluorobutanesulfonic acid (PFBS)	2040 ug/mL
....LC537_PFBS_00002	04/01/18		Sigma, Lot MKBP8842V		(Purchased Reagent)		Perfluorobutanesulfonic acid (PFBS)	1 g/g
...LC537-PFHpA_00010	07/28/17	07/28/16	Methanol, Lot 090285	7 mL	LC537_PFHpA_00002	0.0072 g	Perfluoroheptanoic acid	1018.29 ug/mL
....LC537_PFHpA_00002	04/01/18		Aldrich, Lot BCBM2579V		(Purchased Reagent)		Perfluoroheptanoic acid	0.99 g/g
...LC537-PFHxS_00008	07/28/17	07/28/16	Methanol, Lot 090285	5.5 mL	LC537_PFHxS_00002	0.0061 g	Perfluorohexanesulfonic acid	1008.61 ug/mL
....LC537_PFHxS_00002	04/01/18		Sigma, Lot BCBL3545V		(Purchased Reagent)		Perfluorohexanesulfonic acid	0.9094 g/g
...LC537-PFNA_00008	07/28/17	07/28/16	Methanol, Lot 090285	5 mL	LC537_PFNA_00002	0.0051 g	Perfluorononanoic acid	982.26 ug/mL
....LC537_PFNA_00002	04/01/18		TCI America, Lot QN44F		(Purchased Reagent)		Perfluorononanoic acid	0.963 g/g
...LC537-PFOA_00009	07/28/17	07/28/16	Methanol, Lot 090285	7 mL	LC537_PFOA_00002	0.0145 g	Perfluorooctanoic acid (PFOA)	2069.36 ug/mL
....LC537_PFOA_00002	11/04/18		Fluka, Lot SZBD308XV		(Purchased Reagent)		Perfluorooctanoic acid (PFOA)	0.999 g/g
...LC537-PFOS_00006	07/28/17	07/28/16	Methanol, Lot 090285	6 mL	LC537_PFOS_00002	0.0066 g	Perfluorooctanesulfonic acid (PFOS)	1001.66 ug/mL
....LC537_PFOS_00002	08/09/17		Fluka, Lot SZBC222XV		(Purchased Reagent)		Perfluorooctanesulfonic acid (PFOS)	0.9106 g/g
.LC537-IS_00018	01/13/17	07/13/16	Methanol, Lot 090285	10000 uL	LCM2PFOA_00004	100 uL	13C2-PFOA	0.5 ug/mL
					LCMPFOS_00013	300 uL	13C4 PFOS	1.434 ug/mL
..LCM2PFOA_00004	03/19/17		Wellington Laboratories, Lot M2PFOA0312		(Purchased Reagent)		13C2-PFOA	50 ug/mL
..LCMPFOS_00013	01/22/21		Wellington Laboratories, Lot MPFOS0116		(Purchased Reagent)		13C4 PFOS	47.8 ug/mL
.LC537-SU_00017	01/19/17	07/19/16	Methanol, Lot 104453	25000 uL	LCMPFDA_00008	100 uL	13C2 PFDA	0.2 ug/mL
					LCMPFHxA_00009	100 uL	13C2 PFHxA	0.2 ug/mL
..LCMPFDA_00008	08/19/20		Wellington Laboratories, Lot MPFDA0815		(Purchased Reagent)		13C2 PFDA	50 ug/mL
..LCMPFHxA_00009	04/09/20		Wellington Laboratories, Lot MPFHxA0415		(Purchased Reagent)		13C2 PFHxA	50 ug/mL
LC537-LSP_00016	05/04/17	11/04/16	Methanol, Lot 090285	10000 uL	LC537SPIM_00015	50 uL	Perfluorobutane Sulfonate	448.8 ng/mL
							Perfluorobutanesulfonic acid (PFBS)	448.8 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Perfluoroheptanoic acid	53.7429 ng/mL
							Perfluorohexanesulfonic acid	151.291 ng/mL
							Perfluorononanoic acid	101.553 ng/mL
							Perfluorooctanoic acid (PFOA)	99.234 ng/mL
							Perfluorooctanesulfonic acid (PFOS)	200.332 ng/mL
.LC537SPIM_00015	05/04/17	11/04/16	Methanol, Lot 104453	10000 uL	LC537-PFBS_00006	440 uL	Perfluorobutane Sulfonate	89.76 ug/mL
							Perfluorobutanesulfonic acid (PFBS)	89.76 ug/mL
					LC537-PFHpA_00011	100 uL	Perfluoroheptanoic acid	10.7486 ug/mL
					LC537-PFHxS_00008	300 uL	Perfluorohexanesulfonic acid	30.2582 ug/mL
					LC537-PFNA_00009	200 uL	Perfluorononanoic acid	20.3105 ug/mL
					LC537-PFOA_00010	100 uL	Perfluorooctanoic acid (PFOA)	19.8468 ug/mL
					LC537-PFOS_00006	400 uL	Perfluorooctanesulfonic acid (PFOS)	40.0664 ug/mL
..LC537-PFBS_00006	07/28/17	07/28/16	Methanol, Lot 090285	5 mL	LC537_PFBS_00002	0.0102 g	Perfluorobutane Sulfonate	2040 ug/mL
							Perfluorobutanesulfonic acid (PFBS)	2040 ug/mL
...LC537_PFBS_00002	04/01/18		Sigma, Lot MKBP8842V		(Purchased Reagent)		Perfluorobutane Sulfonate	1 g/g
							Perfluorobutanesulfonic acid (PFBS)	1 g/g
..LC537-PFHpA_00011	11/04/17	11/04/16	Methanol, Lot 090285	7 mL	LC537_PFHpA_00002	0.0076 g	Perfluoroheptanoic acid	1074.86 ug/mL
...LC537_PFHpA_00002	04/01/18		Aldrich, Lot BCBM2579V		(Purchased Reagent)		Perfluoroheptanoic acid	0.99 g/g
..LC537-PFHxS_00008	07/28/17	07/28/16	Methanol, Lot 090285	5.5 mL	LC537_PFHxS_00002	0.0061 g	Perfluorohexanesulfonic acid	1008.61 ug/mL
...LC537_PFHxS_00002	04/01/18		Sigma, Lot BCBL3545V		(Purchased Reagent)		Perfluorohexanesulfonic acid	0.9094 g/g
..LC537-PFNA_00009	11/04/17	11/04/16	Methanol, Lot 090285	5.5 mL	LC537_PFNA_00002	0.0058 g	Perfluorononanoic acid	1015.53 ug/mL
...LC537_PFNA_00002	04/01/18		TCI America, Lot QN44F		(Purchased Reagent)		Perfluorononanoic acid	0.963 g/g
..LC537-PFOA_00010	11/04/17	11/04/16	Methanol, Lot 090285	7.5 mL	LC537_PFOA_00002	0.0149 g	Perfluorooctanoic acid (PFOA)	1984.68 ug/mL
...LC537_PFOA_00002	11/04/18		Fluka, Lot SZBD308XV		(Purchased Reagent)		Perfluorooctanoic acid (PFOA)	0.999 g/g
..LC537-PFOS_00006	07/28/17	07/28/16	Methanol, Lot 090285	6 mL	LC537_PFOS_00002	0.0066 g	Perfluorooctanesulfonic acid (PFOS)	1001.66 ug/mL
...LC537_PFOS_00002	08/09/17		Fluka, Lot SZBC222XV		(Purchased Reagent)		Perfluorooctanesulfonic acid (PFOS)	0.9106 g/g
LC537-SU_00024	06/05/17	12/05/16	Methanol, Lot 104453	20000 uL	LCMPFDA_00008	80 uL	13C2 PFDA	0.2 ug/mL
					LCMPFHxA_00009	80 uL	13C2 PFHxA	0.2 ug/mL
.LCMPFDA_00008	08/19/20		Wellington Laboratories, Lot MPFDA0815		(Purchased Reagent)		13C2 PFDA	50 ug/mL
.LCMPFHxA_00009	04/09/20		Wellington Laboratories, Lot MPFHxA0415		(Purchased Reagent)		13C2 PFHxA	50 ug/mL

Reagent

LC537_PFBS_00002

R: 4/1/15 SPV

SIGMA-ALDRICH®

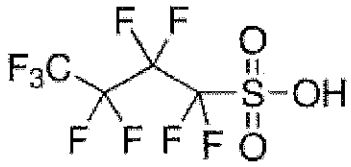
sigma-aldrich.com

3050 Spruce Street, Saint Louis, MO 63103, USA
Website: www.sigmaaldrich.com
Email USA: techserv@sial.com
Outside USA: eurtechserv@sial.com

Certificate of Analysis

Product Name:
Nonafluorobutane-1-sulfonic acid - 97%

Product Number:	**562629**
Batch Number:	**MKBP8842V**
Brand:	ALDRICH
CAS Number:	375-73-5
MDL Number:	MFCD01320794
Formula:	C4HF9O3S
Formula Weight:	300.10 g/mol
Storage Temperature:	Store at 2 - 8 °C
Quality Release Date:	11 OCT 2013



PFBS

Test	Specification	Result
Appearance (Color)	Colorless	Colorless
Appearance (Form)	Liquid	Liquid
Infrared Spectrum	Conforms to Structure	Conforms
Fluorine NMR Spectrum	Conforms to Structure	Conforms
Purity (Titration by NaOH)	96.5 - 103.5 %	101.6 %

Jamie Gleason

Jamie Gleason, Manager
Quality Control
Milwaukee, Wisconsin US

Reagent

LC537_PFBS2_00001

CERTIFICATE OF ANALYSIS

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

Catalog Number:	sc-236187
Product Name:	Nonafluorobutane-1-sulfonic acid
CAS Number:	375-73-5
Molecular Formula:	$C_4HF_9O_3S$
Molecular Weight:	300.10
Lot Number:	H0112

Test		Result
Refractive Index	1.3200 to 1.3290	1.3219
Purity (Titration)	min. 98.0%	99.8%

Test Conditions: Refractive Index: n20/D

Reagent

LC537_PFHpA_00002

R: 4/1/15 SRV

SIGMA-ALDRICH®

3050 Spruce Street, Saint Louis, MO 63103 USA
Email USA: techserv@sial.com Outside USA: eurtechserv@sial.com

Certificate of Analysis

PFHpA

Product Name:	PERFLUOROHEPTANOIC ACID 99 %
Product Number:	342041
Batch Number:	BCBM2579V
Brand:	Aldrich
CAS Number:	375-85-9
Formula:	$CF_3(CF_2)_5CO_2H$
Formula Weight:	364.06
Quality Release Date:	06 DEC 2013
Recommended Retest Date:	OCT 2018

TEST	SPECIFICATION	RESULT
APPEARANCE (COLOR)	COLORLESS OR WHITE	WHITE
APPEARANCE (FORM)	LIQUID OR SOLID	SOLID
TITRATION	98.5 - 101.5 %	99.8 %
TITRATION (METHOD)	-	BACK TITRATION
PURITY (GC AREA %)	≥ 98.5 %	99.5 %
INFRARED SPECTRUM	CONFORMS TO STRUCTURE	CONFORMS

Claudia Geitner

Dr. Claudia Geitner
Manager Quality Control
Buchs, Switzerland

Reagent

LC537_PFHxS_00002

Y: 4/1/15 SKV

SIGMA-ALDRICH®

3050 Spruce Street, Saint Louis, MO 63103 USA
Email USA: techserv@sial.com Outside USA: eurtechserv@sial.com

Certificate of Analysis

Product Name:	TRIDECAFLUOROHEXANE-1-SULFONIC ACID POTASSIUM SALT >= 98.0 % T
Product Number:	50929
Batch Number:	BCBL3545V
Brand:	Aldrich
CAS Number:	3871-99-6
Formula:	$C_6F_{13}KO_3S$
Formula Weight:	438.20
Quality Release Date:	20 JUN 2013

PFH_xS-K

TEST	SPECIFICATION	RESULT
APPEARANCE (COLOR)	WHITE TO FAINT BEIGE	WHITE
APPEARANCE (FORM)	POWDER OR CRYSTALS	POWDER
TITRATION (ION EXCHANGE)	≥ 98.0 %	99.5 %
INFRARED SPECTRUM	CONFORMS TO STRUCTURE	CONFORMS

Claudia Geitner

Dr. Claudia Geitner
Manager Quality Control
Buchs, Switzerland

$$\text{MW corr} = \frac{(\text{Kform}) - (\text{K}) + (\text{H})}{438.20\ (\text{K form})} = \frac{(438.20 - 39.10 + 1.01)}{438.20\ (\text{K form})} = 0.91307 \text{ (anion form)}$$

Purity = 90.94 % w/m.w correction

SKV 4/1/15

Reagent

LC537_PFNA_00002

R: 4/1/15 SKV

Certificate of Analysis

Apr 2, 2015 (JST)

TOKYO CHEMICAL INDUSTRY CO.,LTD.
4-10-1 Nihonbashi-Honcho, Chuo-ku, Tokyo 103-0023 Japan

Chemical Name: Heptadecafluorononanoic Acid		
Product Number: H0843 CAS: 375-95-1	Lot: QN44F	

Tests	Results	Specifications
Purity(GC)	96.3 %	min. 95.0 %
Purity(Neutralization titration)	98.1 %	min. 95.0 %
Melting point	63.3 deg-C	62.0 to 67.0 deg-C

TCI Lot numbers are 4-5 characters in length.
Characters listed after the first 4-5 characters are control numbers for internal purpose only.

Customer service:

TCI AMERICA
Tel: +1-800-423-8616 / +1-503-283-1681
Fax: +1-888-520-1075 / +1-503-283-1987
E-mail: Sales-US@TCIchemicals.com

PFNA

Reagent

LC537_PFOA_00002

P: 3/26/15 RV

SIGMA-ALDRICH®

CERTIFICATE OF ANALYSIS

Sigma-Aldrich Laborchemikalien GmbH D-30918 Seelze
Telefon: +49 5137 8238-150

Seelze, 13.11.2013/505378/13/24029

Order-No.:
Customer-No.:

Order-Code:

Quantity:

Production Date: 04.Nov.2013
Expiry Date: 04.Nov.2018

Article/Product: 33824 Batch : SZBD308XV

PFOA

Pentadecafluorooctanoic acid OEKANAL®

Reference Material (RM)

1. General Information

Formula: C8HF15O2
CAS-No.: [335-67-1]
Usage : PFOA

Molar mass: 414.07 g/Mole
Recomm. storage temp.: roomtemp.

The estimated uncertainty of a single measurement of the assay can be expected to be 0.5 % relative (confidence level = 95%, n= 6) whereby the assay measurements are calculated by 100% minus found impurities.

2. Batch Analysis

identiy (GC-MS)	complying
Assay (GCMS)	99.4 %
Date of Analysis	13.Nov.2013

3. Advice and Remarks

- The expiry date is based on the current knowledge and holds only for proper storage conditions in the originally closed flasks/ packages.
- Whenever the container is opened for removal of aliqout portions of the substance, the person handling the substance must assure, that the integrity of the substance is maintained and proper records of all its handlings are kept. Special care has to be taken to avoid any contamination or adulteration of the substance.
- We herewith confirm that the delivery is effected according to the technical delivery conditions agreed.
- Particular properties of the products or the suitability for a particular area of application are not assured.
- We guarantee a proper quality within our General Conditions of Sales.

Sigma-Aldrich Laborchemikalien GmbH
Quality Management SA-LC

This document was produced electronically and is valid without a signature

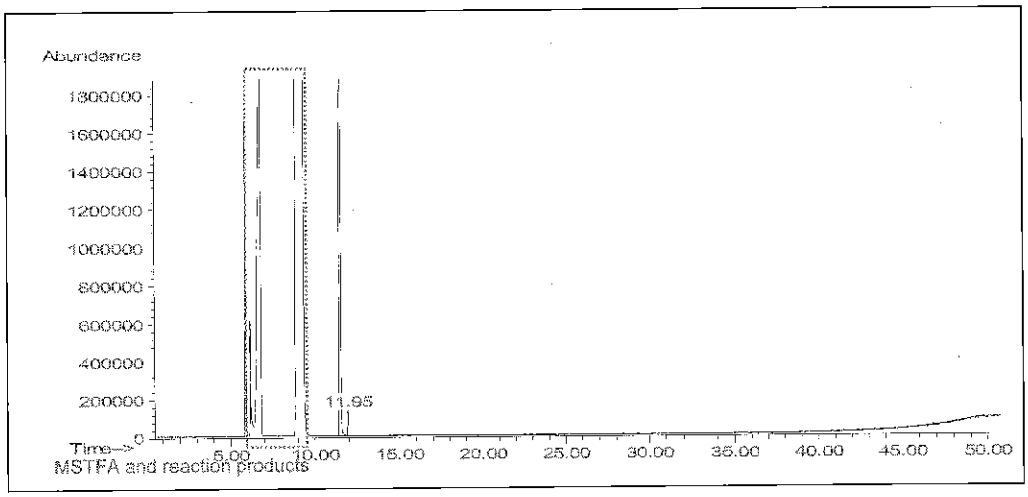
GC/MS-Method

Analytical Department

Article: **Pentadecafluorooctanoic acid OEKANAL**
Article-No.: **33824**
Batch: **SZBD308XV**

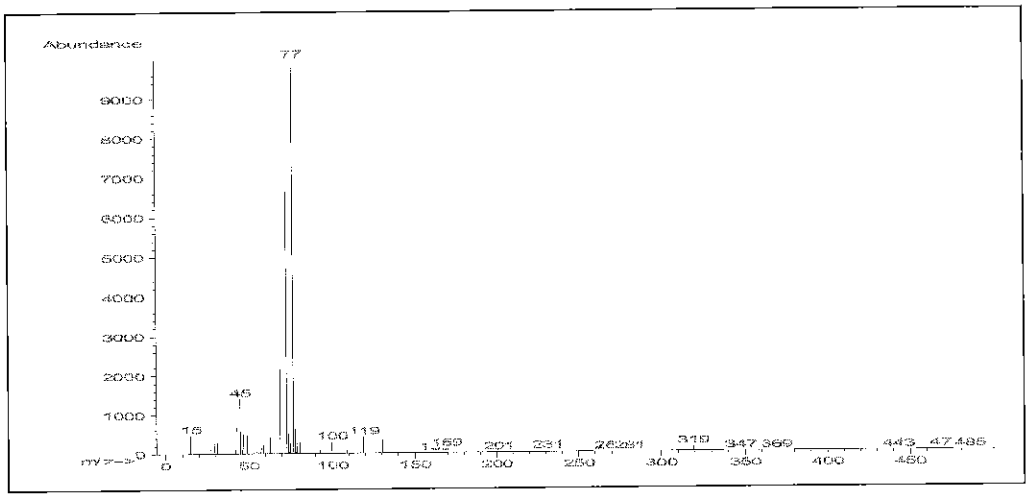
Column:	XTI-5 (Restek); 30 m; fs cap.; I.D.:0.25 mm; 1 µm df
Injector:	Split mode
Injection:	approx. 1 µl of reaction mixture with MSTFA (approx. 10 mg + 200 µl MSTFA)
Inj.-temp.:	280°C
Oven-temp.:	40°C (for 2 min) to 320°C (6°C/min) hold for 2 min
Split:	1:100
Flow:	1 ml He/min (Constant flow mode)
Detector:	MSD
Mass range:	10-600 amu (Scan mode)
Evaluation:	Purity: Total Ion Chromatogram (MSTFA and reaction products blinded out in report) Identity: Mass spectrum complies
Operator:	Ahrens / 2013-11-13

Total Ion Chromatogram:



Ret.time	Area	Area-%	Com
11.54	565.1670	99.4	Pentadecafluorooctanoic acid (as TMS-ester)
11.95	3.6792	0.64	

Mass spectrum (rt = 11.54 min):



Reagent

LC537_PFOA2_00001

Certificate of Analysis

Alfa Aesar
A Johnson Matthey Company

Product No.:	L08862
Product:	Perfluorooctanoic acid, 95%
Lot No.:	D24Y026

PFOA

Appearance	White solid
Melting point	58 - 60°C
Assay	99 %
Identity	Matches reference

This document has been electronically generated and does not require a signature.

Reagent

LC537_PFOS_00002

Γ: 4/1/15 SV

SIGMA-ALDRICH®

CERTIFICATE OF ANALYSIS

Sigma-Aldrich Laborchemikalien GmbH D-30918 Seelze
Telefon: +49 5137 8238-150

Seelze, 13.08.2012/419060/12/17583

Order-No.:
Customer-No.:

Order-Code:

Quantity:

Production Date: 09.Aug.2012
Expiry Date: 09.Aug.2017 – EXP date

Article/Product: 33829 Batch : SZBC222XV

Heptadecafluorooctanesulfonic acid potassium salt OEKANAL® PFOS-K+

Reference Material (RM)

1. General Information

Formula: C8F17KO3S
CAS-No.: [2795-39-3]
Usage : PFOS

Molar mass: 538.22 g/Mole
Recomm. storage temp.: roomtemp.

The estimated uncertainty of a single measurement of the assay can be expected to be 0.5 % relative (confidence level = 95%, n= 6) whereby the assay measurements are calculated by 100% minus found impurities.

2. Batch Analysis

Identity	complying
Assay (LC-MS)	98 %
Date of Analysis	10.Aug.2012

PFOS-correction: $\frac{538.22 - 39.10 + 1.01}{538.22} = \frac{500.13}{538.22} = 0.92923$

Purity = 91.06 %

3. Advice and Remarks

- The minimum shelf life is based on the current knowledge and holds only for proper storage conditions in the originally closed flasks/ packages.
- Whenever the container is opened for removal of aliqout portions of the substance, the person handling the substance must assure, that the integrity of the substance is maintained and proper records of all its handlings are kept. Special care has to be taken to avoid any contamination or adulteration of the substance.
- We herewith confirm that the delivery is effected according to the technical delivery conditions agreed.
- Particular properties of the products or the suitability for a particular area of application are not assured.
- We guarantee a proper quality within our General Conditions of Sales.

Sigma-Aldrich Laborchemikalien GmbH
Quality Management SA-LC

This document was produced electronically and is valid without a signature

Reagent

LC537_PFOS2_00001

SIGMA-ALDRICH

ALDRICH

Industriestrasse 25, CH-9471 Buchs (SG), Switzerland
Tel: +41 81 755 2511 Fax: +41 81 756 5449

INV 820
12LCMS 0579

Certificate of Analysis

Product Name:	HEPTADECAFLUOROOCTANESULFONIC ACID TETRAETHYLAMMONIUM SALT 98 %
Product Number:	365289
Product Brand:	Aldrich
Molecular Formula:	$C_{16}H_{20}F_{17}NO_3S$
Molecular Mass:	629.37
CAS Number:	56773-42-3

TEST	SPECIFICATION	LOT BCBF5116V RESULTS
APPEARANCE (COLOR)	OFF-WHITE TO WHITE	WHITE
APPEARANCE (FORM)	POWDER, LUMPS OR CHUNKS	POWDER WITH LUMPS
CARBON CONTENT	29.77 % - 31.29 %	30.52
INFRARED SPECTRUM	CONFORMS TO STRUCTURE	CONFORMS

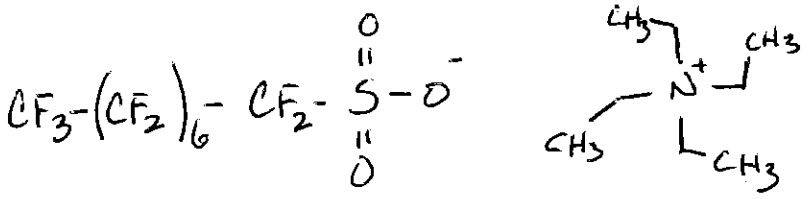
QC RELEASE DATE 13/APR/11

MW correction = $\frac{500.125}{629.37}$ = 0.7946 ~~H00=99.46%~~ DEH 7-26-12

Purity + MW Correction = 77.87%

E. Schwärzler

Edeltraud Schwärzler, Manager
Quality Control
Buchs, Switzerland



	$C_8F_{17}SO_3H$	$C_8H_{20}N$
C = 12.011	96.088	96.088
F = 18.998	322.964	-
S = 32.066	32.066	-
O = 15.999	47.997	-
H = 1.008	1.008	20.160
N = 14.007	-	14.007
	500.125	130.255 →

SIGMA-ALDRICH

3050 Spruce Street, Saint Louis, MO 63103 USA
Website: www.sigmaaldrich.com
Email USA techserv@sial.com
Outside USA eurtechserv@sial.com

Certificate of Origin

Product Name:	Heptadecafluorooctanesulfonic acid tetraethylammonium salt 98 %
Product Number:	365289
Product Brand:	Aldrich
Lot:	BCBF5116V
Molecular Formula:	$C_{16}H_{20}F_{17}NO_3S$
Molecular Mass:	629.37
CAS Number:	56773-42-3
Date of Issue:	30-MAR-11

Country of Origin	China

product is of synthetic origin	yes
only synthetic materials used in the manufacturing process	yes
compounds of animal origin used	no
genetically modified organisms used	no
allergenic materials used	no
procedures in place to avoid cross contamination with residue of animal, human, GMO or allergenes in manufacturing process	yes

Sigma-Aldrich has quality systems and procedures in place for monitoring the production process, traceablility and batch consistency.

Document issued by Sigma-Aldrich Corporation "Sigma-Aldrich". This document is valid without signature and has been produced digitally.

This information is to be used for the purpose of determining animal or other biological origin only and not to be confused with "Country of Origin" for import/export purposes. Data provided on this document are property of Sigma-Aldrich.

This information is considered accurate and reliable as of the date appearing on the document and is presented in good faith.

Sigma-Aldrich shall not be held liable for any damage resulting from handling or from processing the above product(s). This document does not make any warranty, express or implied, of fitness for any particular use of the product(s). Purchaser must determine the suitability of the product(s) for its use under the applicable law and regulations.

For further questions please contact your local Sigma-Aldrich representative.

We are committed to the success of our Customers, Employees and Shareholders through leadership in Life Science, High Technology and Service.

Reagent

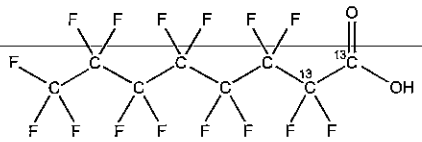
LCM2PFOA_00003

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: M2PFOA
LOT NUMBER: M2PFOA0312
COMPOUND: Perfluoro-n-[1,2-$^{13}C_2$]octanoic acid

STRUCTURE:
CAS #: Not available



MOLECULAR FORMULA: $^{13}C_2{}^{12}C_6HF_{15}O_2$
MOLECULAR WEIGHT: 416.05
CONCENTRATION: 50 ± 2.5 µg/ml
SOLVENT(S): Methanol
Water (<1%)
CHEMICAL PURITY: >98%
ISOTOPIC PURITY: ≥99% ^{13}C ($1,2\text{-}^{13}C_2$)
LAST TESTED: (mm/dd/yyyy) 03/19/2012
EXPIRY DATE: (mm/dd/yyyy) 03/19/2017
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: B.G. Chittim **Date:** 01/09/2013 (mm/dd/yyyy)

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. They are designed to be used as reference standards for the identification and/or quantification of specific chemical compound(s).

HAZARDS:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Material Safety Data Sheets (MSDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Where possible, all of our products are synthesized using single-product, unambiguous routes. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, x-ray crystallography and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS and/or LC/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products are compared to older lots in the same manner, which further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters x_1, x_2,...x_n on which it depends is:

$$u_c(y(x_1, x_2, ...x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly tested by an external, ISO/IEC 17025:2005 accredited calibration company. In addition, their calibration is verified prior to each weighing using NIST and/or NRC traceable external weights. All volumetric glassware used is of Class A tolerance and has been tested according to the appropriate ASTM procedures, which are ultimately traceable to NIST. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration for the period of time specified by the expiry date in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

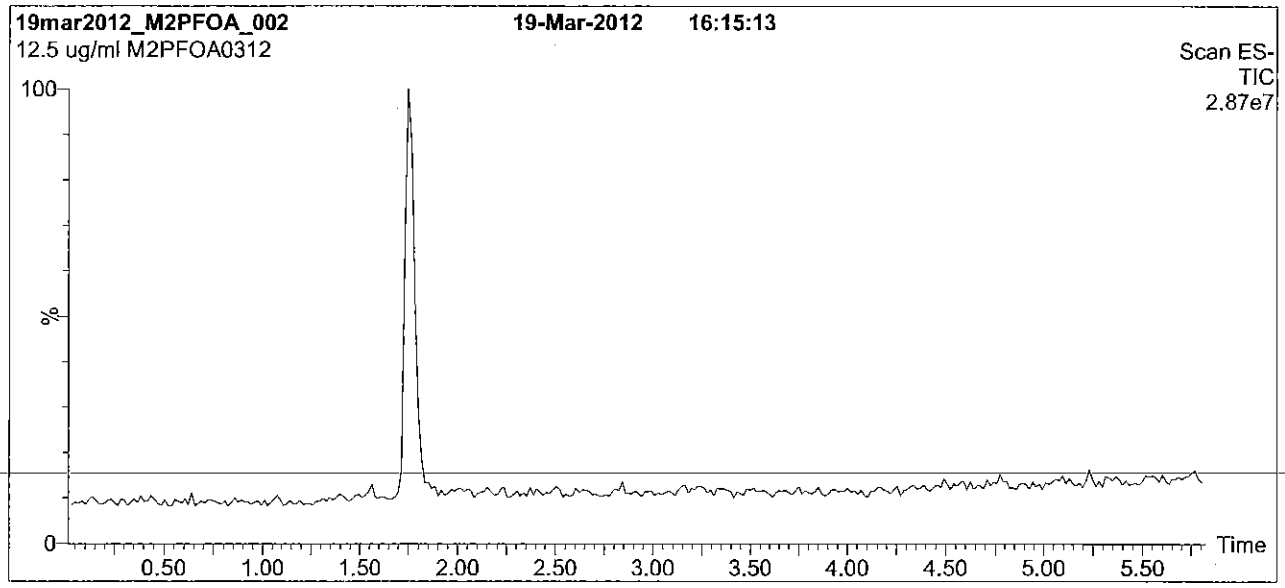
This product was produced using a Quality Management System registered to ISO 9001:2008 by SAI Global, ISO/IEC 17025:2005 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO GUIDE 34:2009 by ACLASS (certificate number AR-1523).

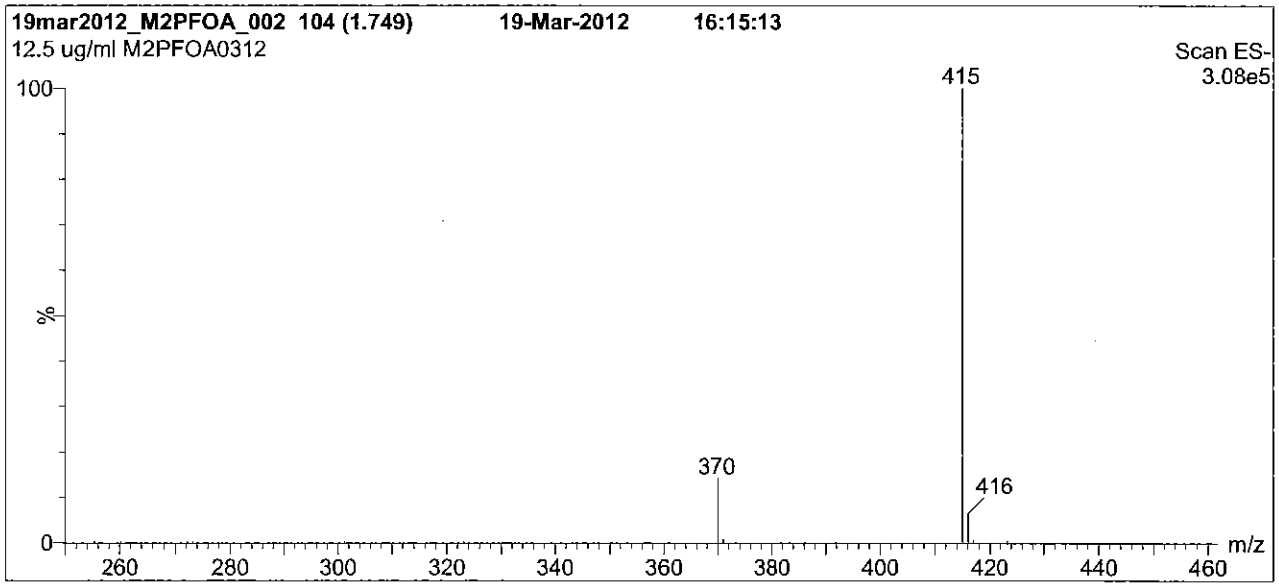
CALA

ACLASS ACCREDITED REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Figure 1: **M2PFOA; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Micromass Quattro *micro* API MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 60% (80:20 MeOH:ACN) / 40% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 6.5 min and hold for 2 min before returning to initial conditions in 0.5 min.
Time: 10 min

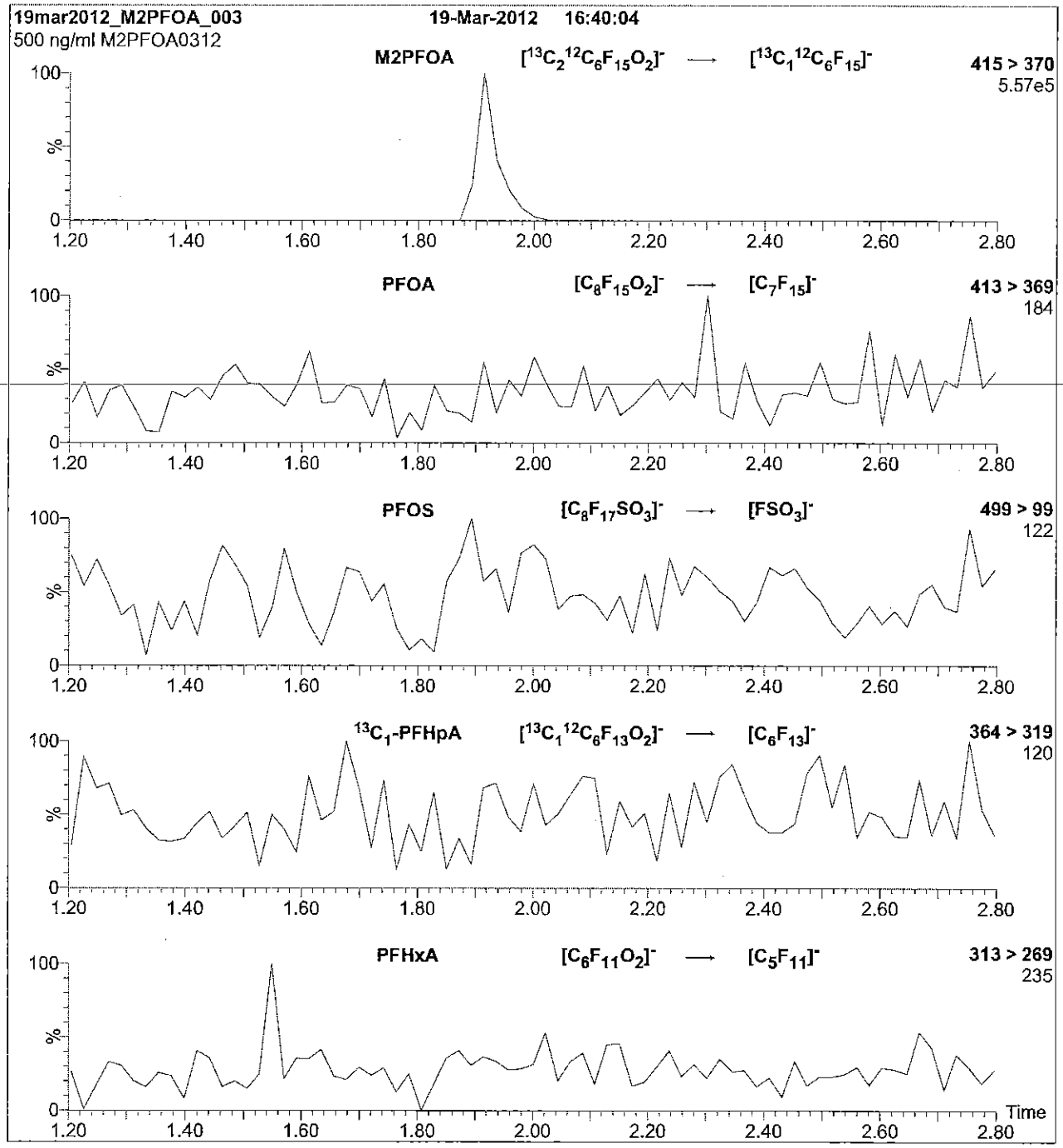
Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (250 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 15.00
Cone Gas Flow (l/hr) = 100
Desolvation Gas Flow (l/hr) = 750

Figure 2: **M2PFOA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection:	Direct loop injection 10 µl (500 ng/ml M2PFOA)
Mobile phase:	Isocratic 70% (80:20 MeOH:ACN) / 30% H_2O (both with 10 mM NH_4OAc buffer)
Flow:	300 µl/min

MS Parameters

Collision Gas (mbar) = 3.35e-3
Collision Energy (eV) = 11

Reagent

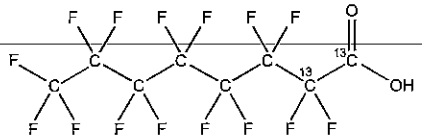
LCM2PFOA_00004

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: M2PFOA
LOT NUMBER: M2PFOA0312
COMPOUND: Perfluoro-n-[1,2-$^{13}C_2$]octanoic acid

STRUCTURE:
CAS #: Not available



MOLECULAR FORMULA: $^{13}C_2{}^{12}C_6HF_{15}O_2$
MOLECULAR WEIGHT: 416.05
CONCENTRATION: 50 ± 2.5 µg/ml
SOLVENT(S): Methanol
Water (<1%)
CHEMICAL PURITY: >98%
ISOTOPIC PURITY: ≥99% ^{13}C ($1,2\text{-}^{13}C_2$)
LAST TESTED: (mm/dd/yyyy) 03/19/2012
EXPIRY DATE: (mm/dd/yyyy) 03/19/2017
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: B.G. Chittim **Date:** 01/09/2013 (mm/dd/yyyy)

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

INTENDED USE:

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HAZARDS:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Material Safety Data Sheets (MSDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

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where x is expressed as a relative standard uncertainty of the individual parameter.

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All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly tested by an external, ISO/IEC 17025:2005 accredited calibration company. In addition, their calibration is verified prior to each weighing using NIST and/or NRC traceable external weights. All volumetric glassware used is of Class A tolerance and has been tested according to the appropriate ASTM procedures, which are ultimately traceable to NIST. For certain products, traceability to international interlaboratory studies has also been established.

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CALA Testing Accreditation No.: A1226

ACLASS ACCREDITED REFERENCE MATERIAL PRODUCER

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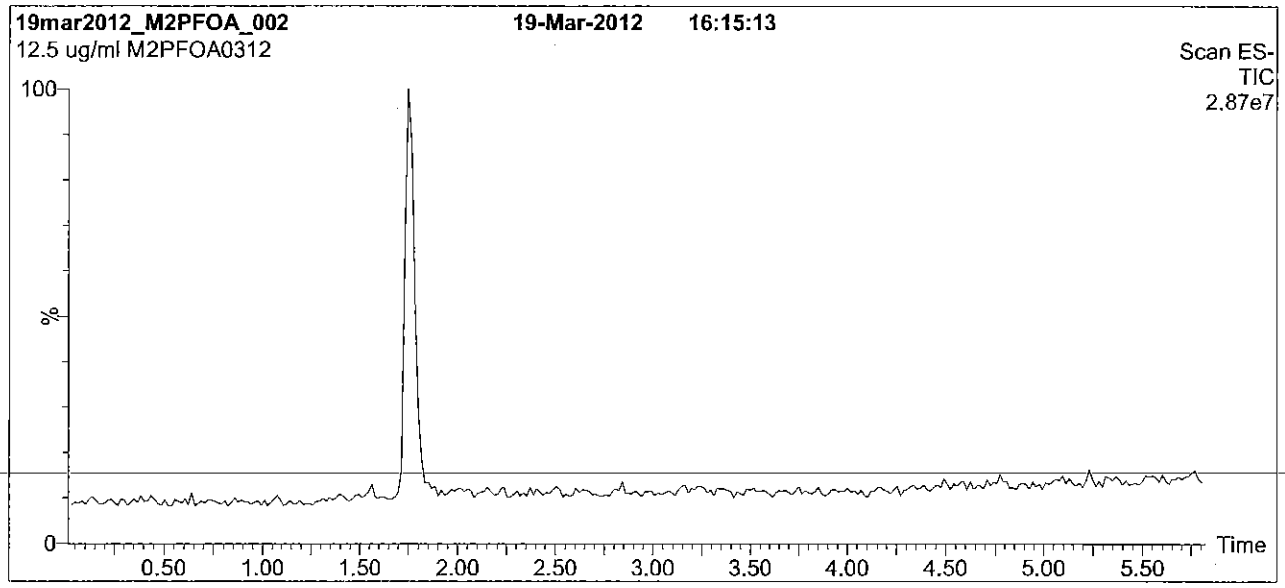
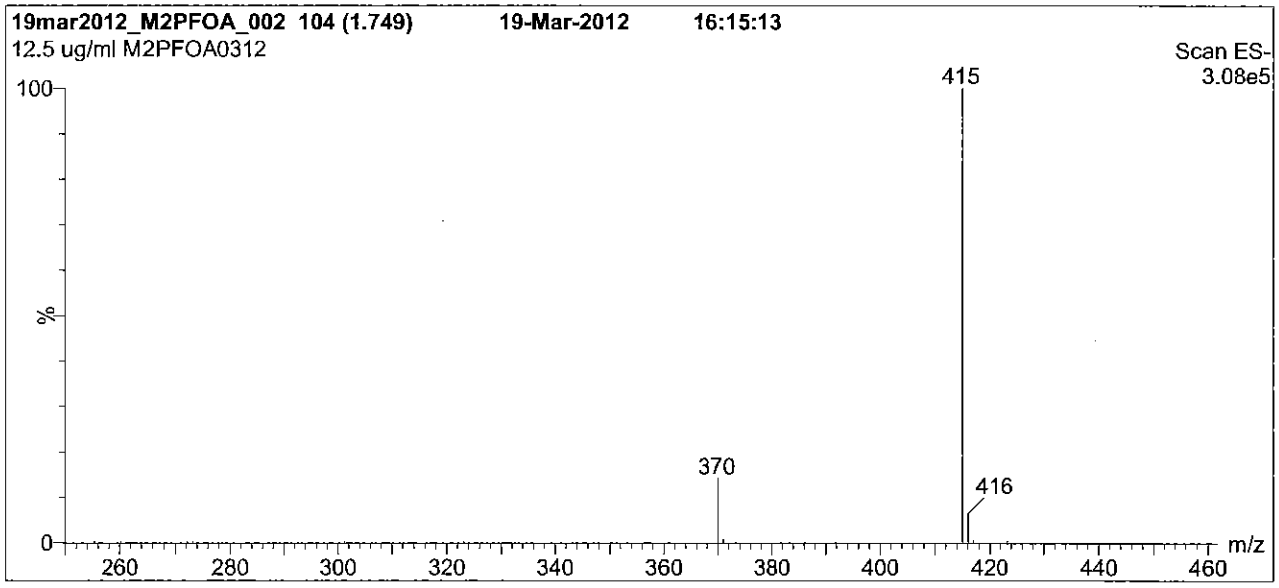
Figure 1: **M2PFOA; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Micromass Quattro *micro* API MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 60% (80:20 MeOH:ACN) / 40% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 6.5 min and hold for 2 min before returning to initial conditions in 0.5 min.
Time: 10 min

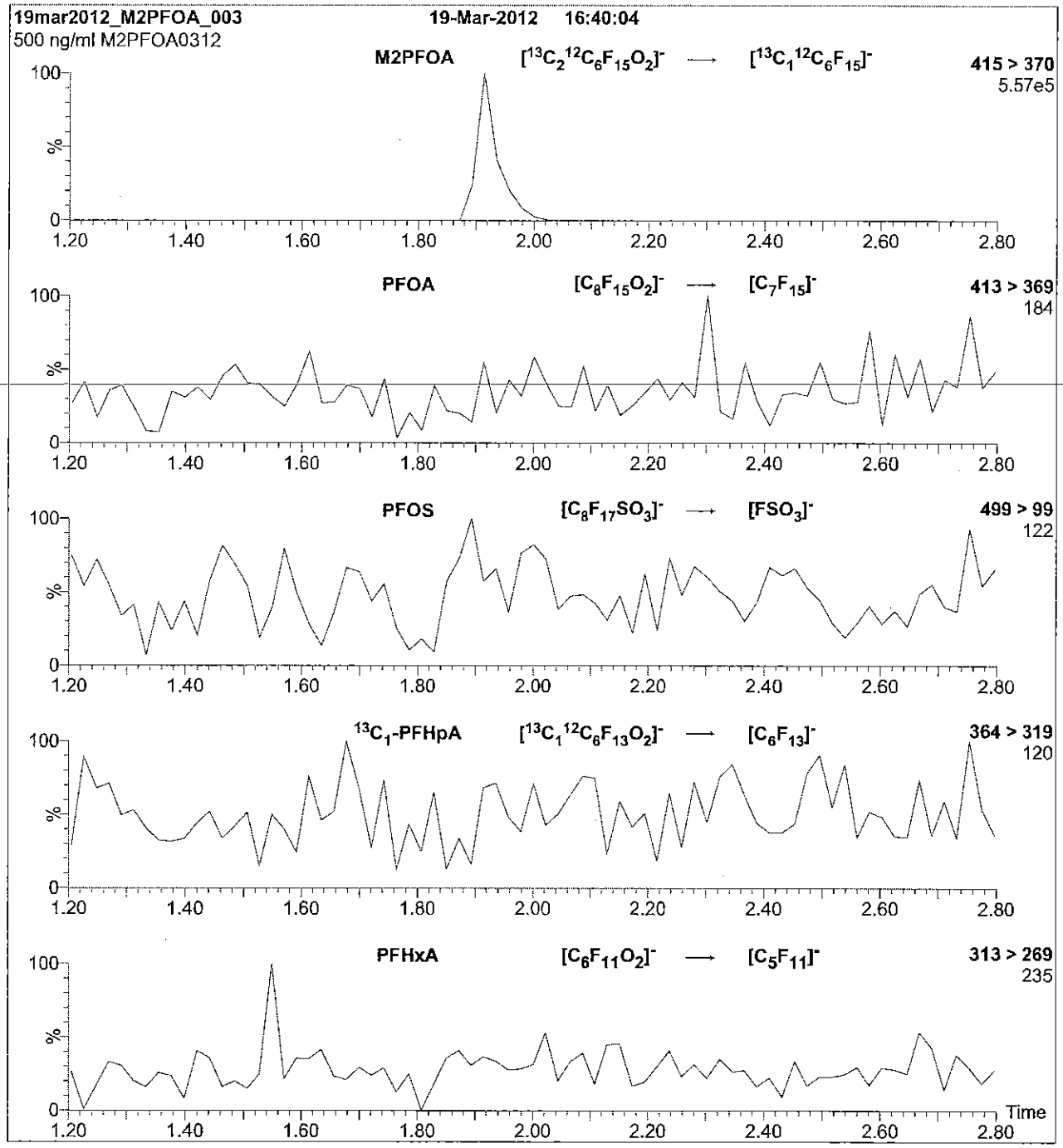
Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (250 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 15.00
Cone Gas Flow (l/hr) = 100
Desolvation Gas Flow (l/hr) = 750

Figure 2: **M2PFOA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection:	Direct loop injection 10 µl (500 ng/ml M2PFOA)
Mobile phase:	Isocratic 70% (80:20 MeOH:ACN) / 30% H_2O (both with 10 mM NH_4OAc buffer)
Flow:	300 µl/min

MS Parameters

Collision Gas (mbar) = 3.35e-3
Collision Energy (eV) = 11

Reagent

LCMPFDA_00008

Rec. 3/29/16 JRB ✓

WELLINGTON LABORATORIES

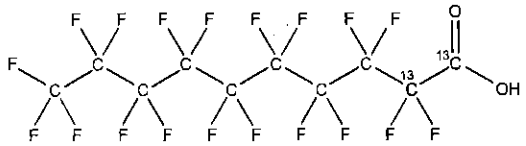
CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: MPFDA
COMPOUND: Perfluoro-n-[1,2-$^{13}C_2$]decanoic acid

LOT NUMBER: MPFDA0815

STRUCTURE:

CAS #: Not available



MOLECULAR FORMULA:	$^{13}C_2{}^{12}C_8HF_{19}O_2$	**MOLECULAR WEIGHT:**	516.07
CONCENTRATION:	50 ± 2.5 µg/ml	**SOLVENT(S):**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C ($1,2\text{-}^{13}C_2$)
LAST TESTED: (mm/dd/yyyy)	08/19/2015		
EXPIRY DATE: (mm/dd/yyyy)	08/19/2020		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Contains < 0.1% of $^{13}C_1$-PFNA.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: B.G. Chittim **Date:** 08/21/2015 (mm/dd/yyyy)

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

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The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly tested by an external ISO/IEC 17025 accredited calibration company. In addition, their calibration is verified prior to each weighing using NIST and/or NRC traceable external weights. All volumetric glassware used is of Class A tolerance and has been tested according to the appropriate ASTM procedures, which are ultimately traceable to NIST. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

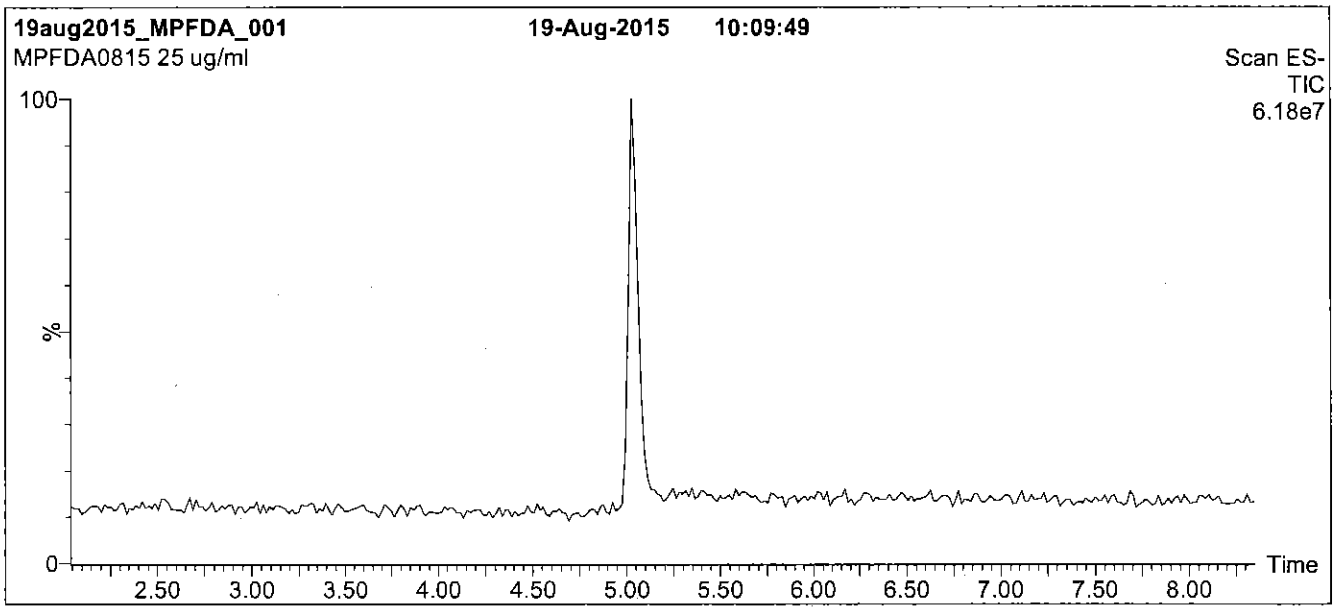
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO GUIDE 34 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

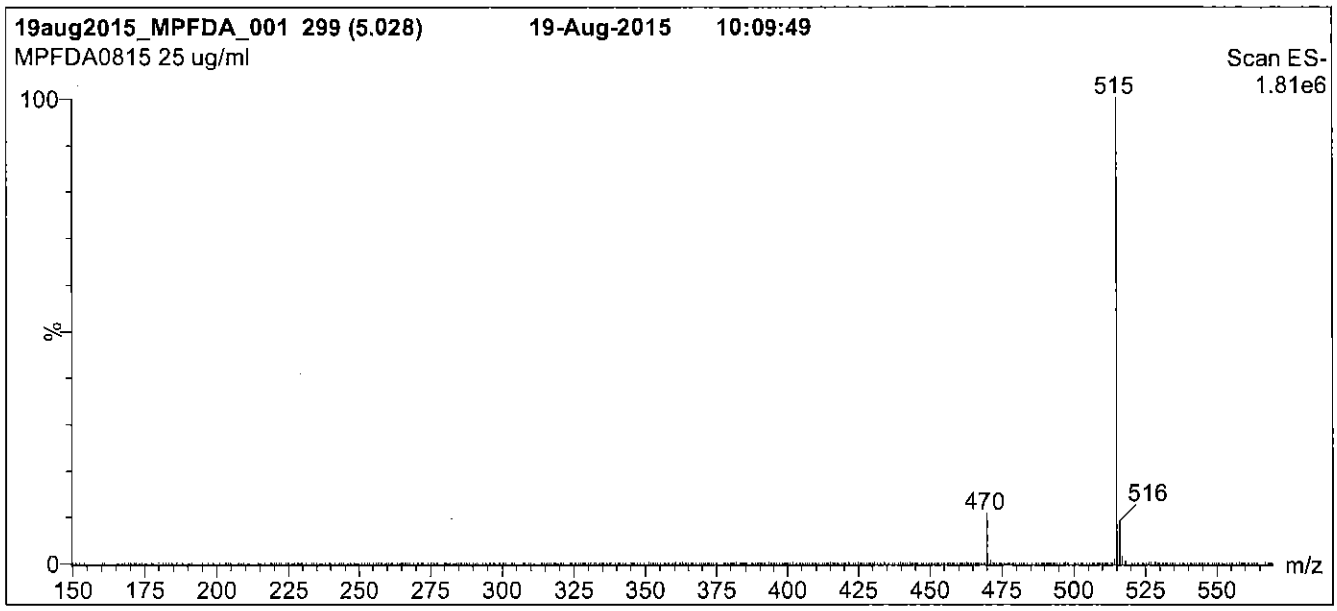
CALA Testing

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Figure 1: **MPFDA; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Micromass Quattro *micro* API MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 50% (80:20 MeOH:ACN) / 50% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 7 min and hold for 2 min
before returning to initial conditions in 0.5 min.
Time: 10 min

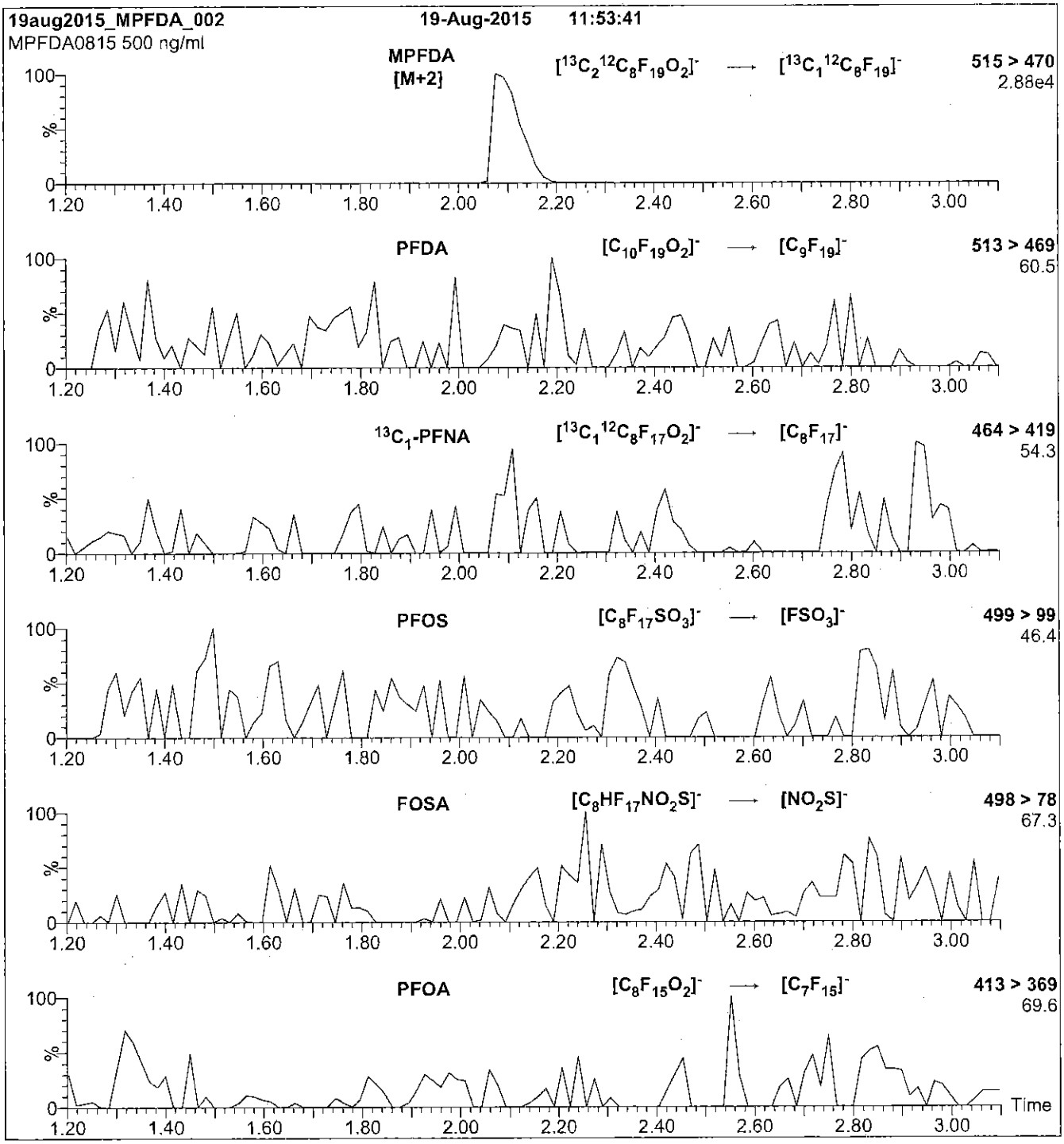
Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (150 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 15.00
Cone Gas Flow (l/hr) = 50
Desolvation Gas Flow (l/hr) = 750

Figure 2: **MPFDA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: Direct loop injection
10 µl (500 ng/ml MPFDA)

Mobile phase: Isocratic 80% (80:20 MeOH:ACN) / 20% H_2O
(both with 10 mM NH_4OAc buffer)

Flow: 300 µl/min

MS Parameters

Collision Gas (mbar) = 3.35e-3
Collision Energy (eV) = 13

Reagent

LCMPFHxA_00009

605244
ID: LCMPFHxA_00009
Exp: 04/09/20 Prpd: CBW
13C2-Perfluorohexanoic ac

Rec. 3/29/16 JRB ✓

WELLINGTON LABORATORIES

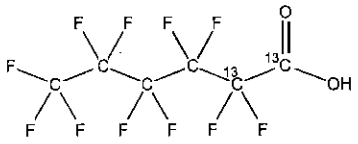
CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: MPFHxA
COMPOUND: Perfluoro-n-[1,2-$^{13}C_2$]hexanoic acid

LOT NUMBER: MPFHxA0415

STRUCTURE:

CAS #: Not available



MOLECULAR FORMULA:	$^{13}C_2{}^{12}C_4HF_{11}O_2$	**MOLECULAR WEIGHT:**	316.04
CONCENTRATION:	50 ± 2.5 µg/ml	**SOLVENT(S):**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C ($1,2\text{-}^{13}C_2$)
LAST TESTED: (mm/dd/yyyy)	04/09/2015		
EXPIRY DATE: (mm/dd/yyyy)	04/09/2020		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Contains < 0.1% of perfluoro-n-hexanoic acid and ~ 0.3% of perfluoro-n-octanoic acid.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: B.G. Chittim **Date:** 04/14/2015 (mm/dd/yyyy)

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compound it contains.

HAZARDS:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

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HOMOGENEITY:

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CALA

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

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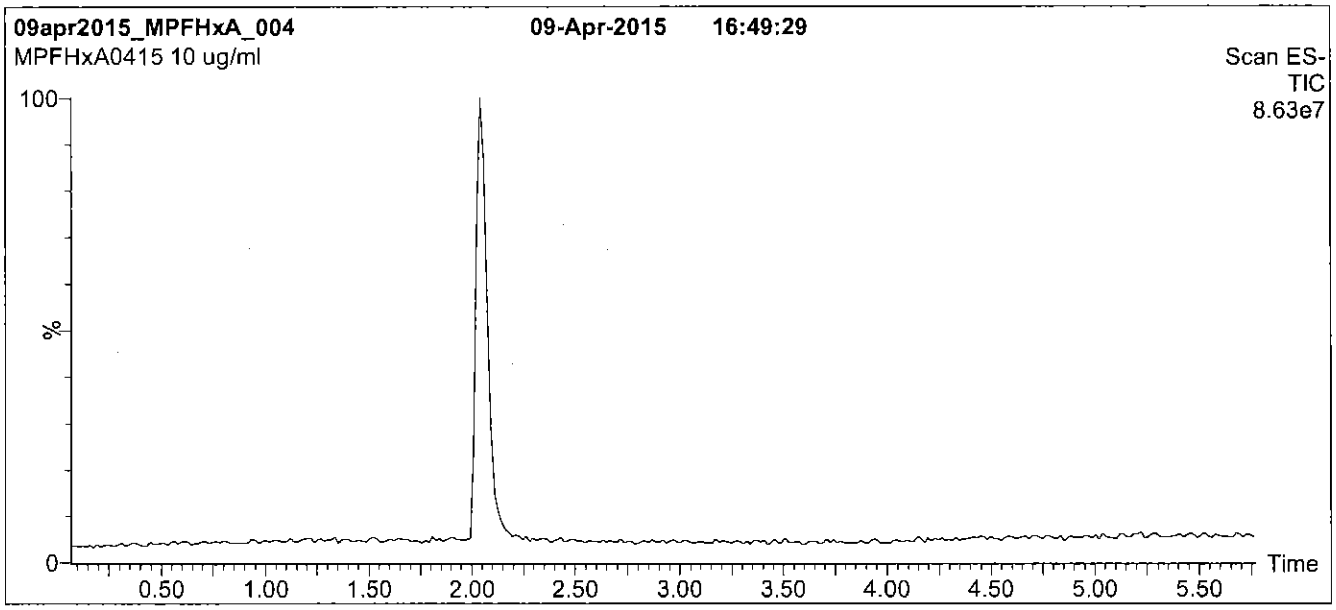
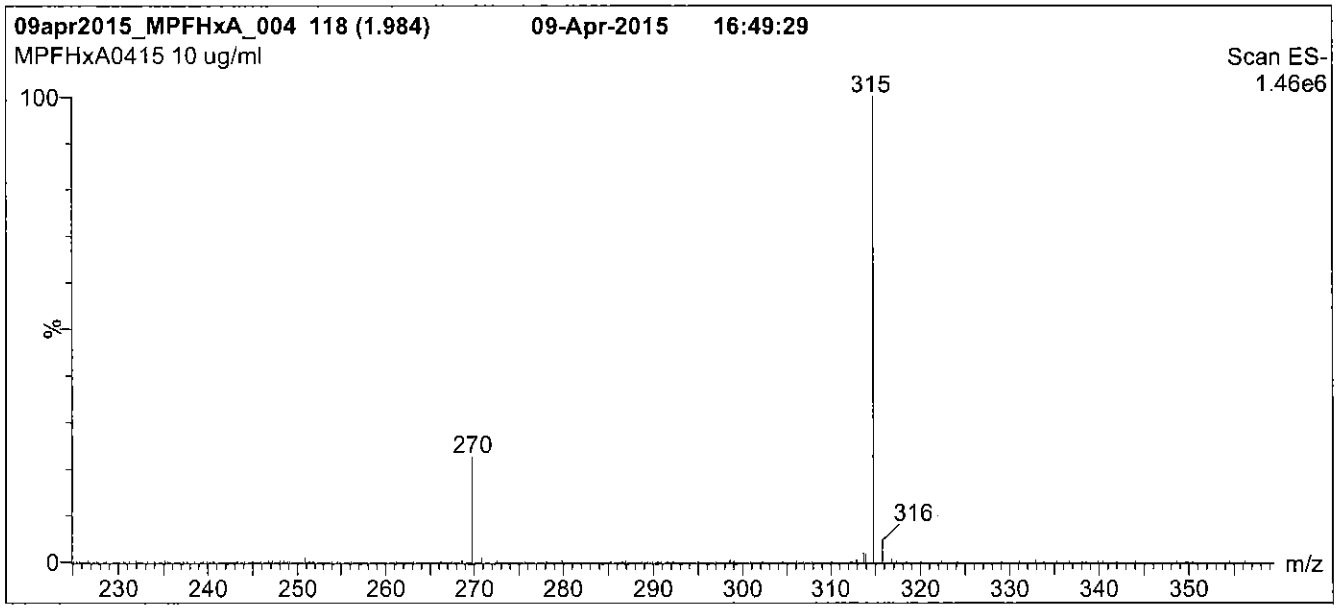
Figure 1: **MPFHxA; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Micromass Quattro *micro* API MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 50% (80:20 MeOH:ACN) / 50% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 7 min and hold for 2 min
before returning to initial conditions over 0.5 min.
Time: 10 min

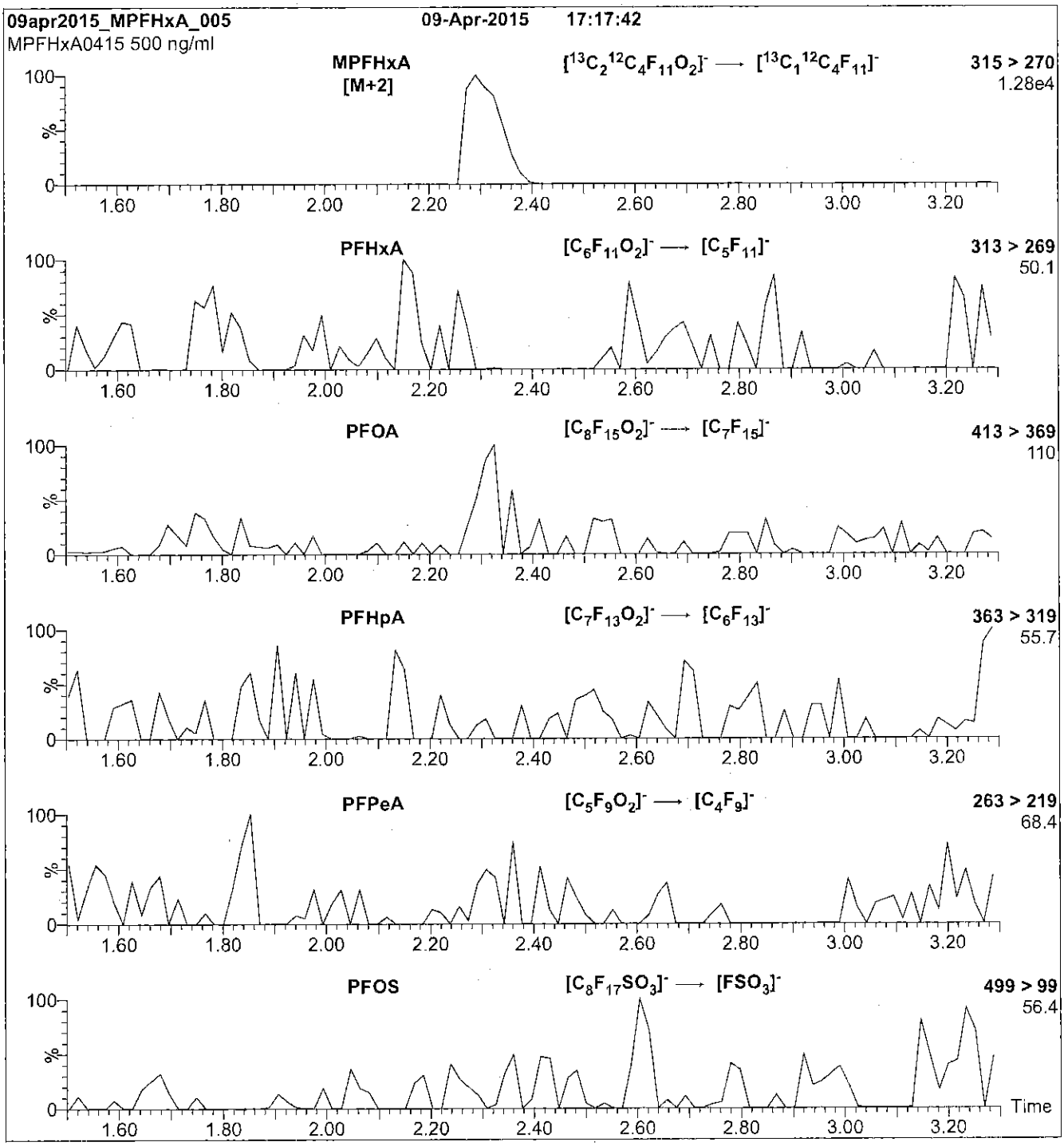
Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 15.00
Cone Gas Flow (l/hr) = 100
Desolvation Gas Flow (l/hr) = 750

Figure 2: **MPFHxA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: Direct loop injection
10 µl (500 ng/ml MPFHxA)

Mobile phase: Isocratic 80% (80:20 MeOH:ACN) / 20% H_2O
(both with 10 mM NH_4OAc buffer)

Flow: 300 µl/min

MS Parameters

Collision Gas (mbar) = 3.20e-3
Collision Energy (eV) = 10

Reagent

LCMPFOS_00013

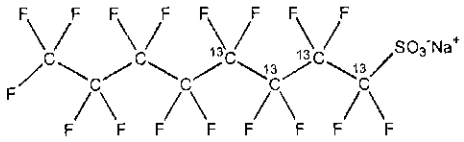
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: MPFOS **LOT NUMBER:** MPFOS0116

COMPOUND: Sodium perfluoro-1-[1,2,3,4-$^{13}C_4$]octanesulfonate

STRUCTURE: **CAS #:** Not available



MOLECULAR FORMULA:	$^{13}C_4{}^{12}C_4F_{17}SO_3Na$	**MOLECULAR WEIGHT:**	526.08
CONCENTRATION:	50.0 ± 2.5 µg/ml (Na salt) 47.8 ± 2.4 µg/ml (MPFOS anion)	**SOLVENT(S):**	Methanol
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C ($1,2,3,4\text{-}^{13}C_4$)
LAST TESTED: (mm/dd/yyyy)	01/22/2016		
EXPIRY DATE: (mm/dd/yyyy)	01/22/2021		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains ~ 0.8% Sodium perfluoro-1-[1,2,3-$^{13}C_3$]heptanesulfonate.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: B.G. Chittim **Date:** 02/01/2016 (mm/dd/yyyy)

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compound it contains.

HAZARDS:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

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HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products are compared to older lots in the same manner, which further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers.

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LIMITED WARRANTY:

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CALA

ANAB ACCREDITED

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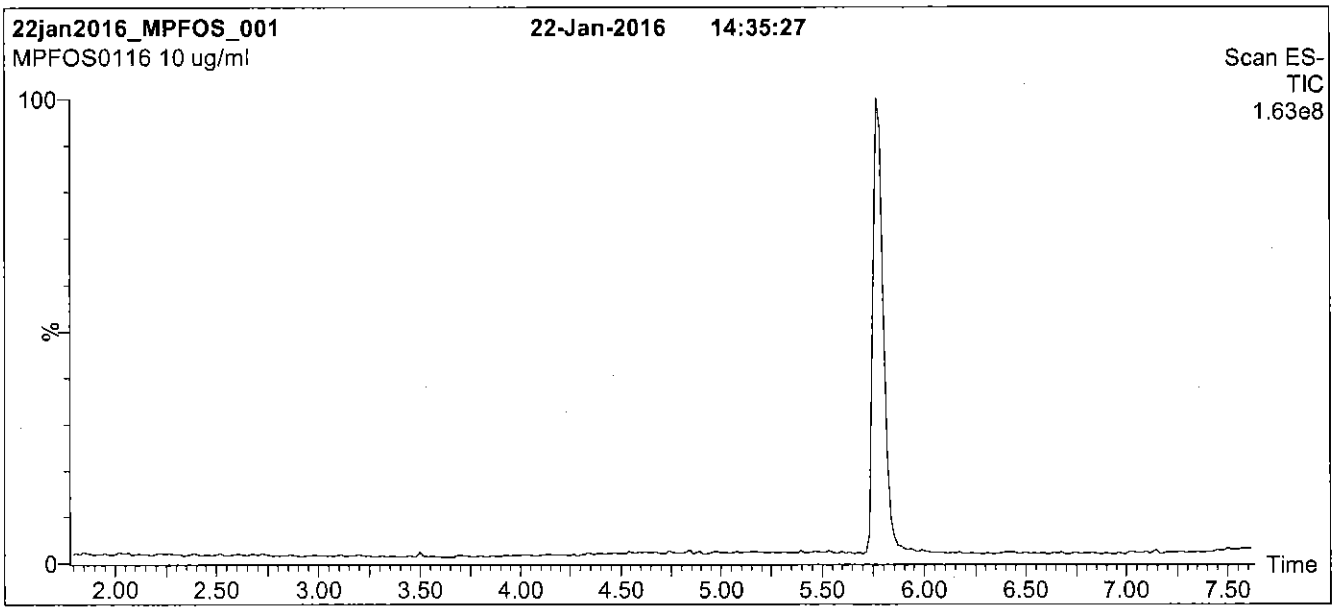
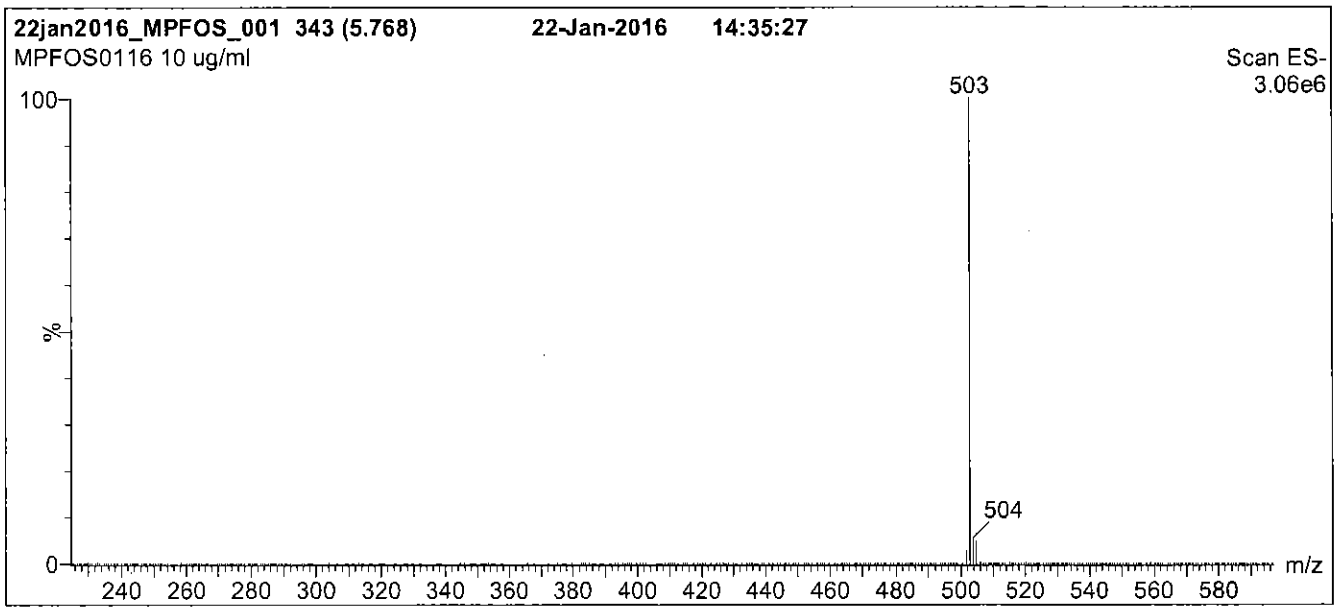
Figure 1: **MPFOS; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Micromass Quattro *micro* API MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 55% (80:20 MeOH:ACN) / 45% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 7 min and hold for 2 min
before returning to initial conditions in 0.5 min.
Time: 10 min

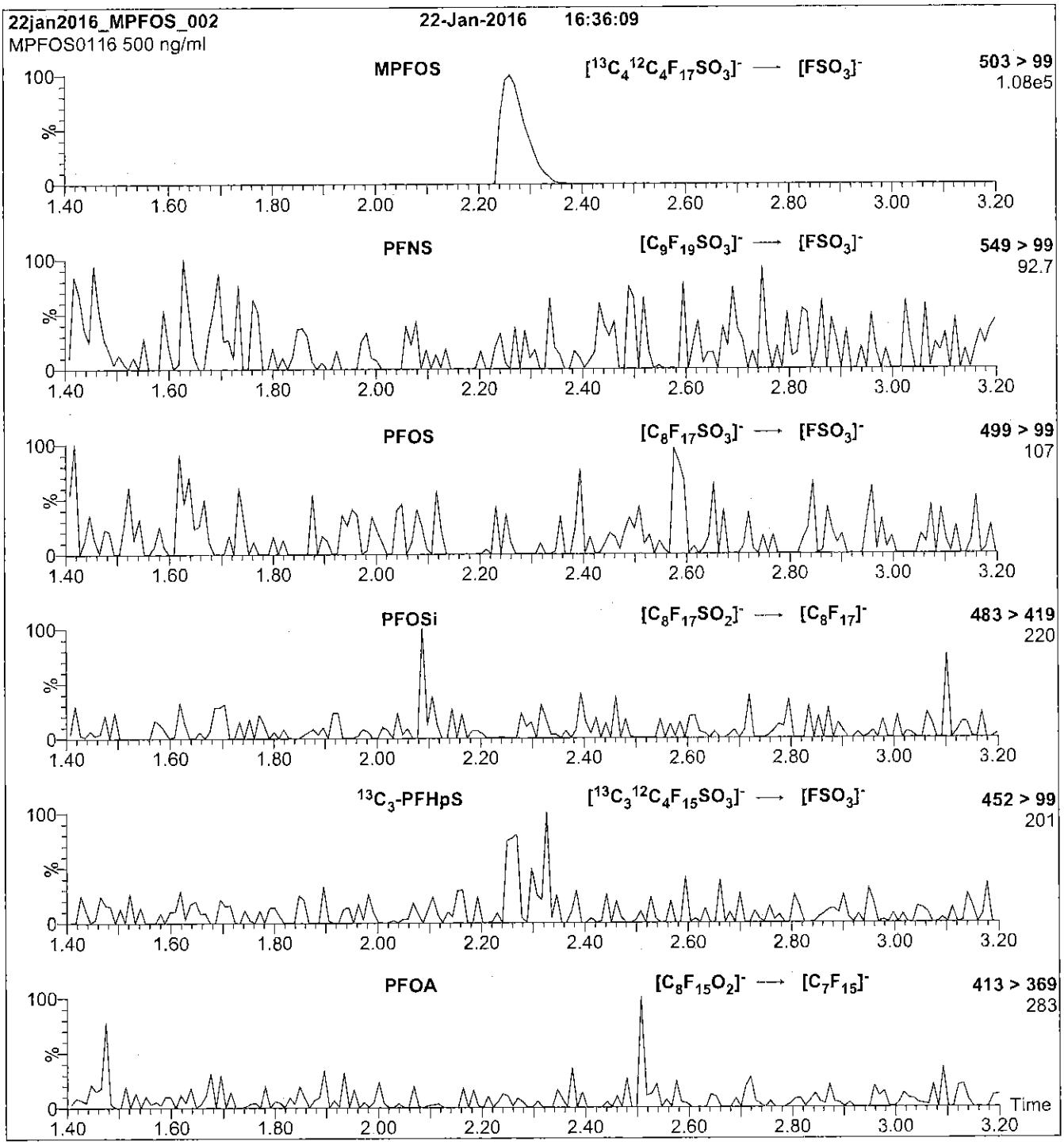
Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 60.00
Cone Gas Flow (l/hr) = 50
Desolvation Gas Flow (l/hr) = 750

Figure 2: **MPFOS; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: Direct loop injection
10 µl (500 ng/ml MPFOS)

Mobile phase: Isocratic 80% (80:20 MeOH:ACN) / 20% H_2O
(both with 10 mM NH_4OAc buffer)

Flow: 300 µl/min

MS Parameters

Collision Gas (mbar) = 3.70e-3
Collision Energy (eV) = 40

Reagent

LCMPFOS_00018

R: SBC 9/22/16

738686
ID: LCMPFOS_00018
Exp: 08/03/21 Ppd: SBC
13C4-Perfluorooctanesulfo

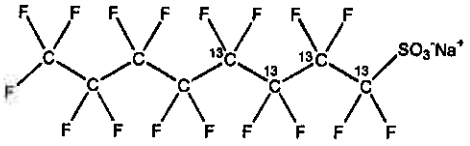
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: MPFOS **LOT NUMBER:** MPFOS0816

COMPOUND: Sodium perfluoro-1-[1,2,3,4-$^{13}C_4$]octanesulfonate

STRUCTURE: **CAS #:** Not available



MOLECULAR FORMULA:	$^{13}C_4{}^{12}C_4F_{17}SO_3Na$	**MOLECULAR WEIGHT:**	526.08
CONCENTRATION:	50.0 ± 2.5 µg/ml (Na salt) 47.8 ± 2.4 µg/ml (MPFOS anion)	**SOLVENT(S):**	Methanol
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C ($1,2,3,4\text{-}^{13}C_4$)
LAST TESTED: (mm/dd/yyyy)	08/03/2016		
EXPIRY DATE: (mm/dd/yyyy)	08/03/2021		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains ~ 0.8% Sodium perfluoro-1-[1,2,3-$^{13}C_3$]heptanesulfonate.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: B.G. Chittim **Date:** 08/05/2016 (mm/dd/yyyy)

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

Form#:27, Issued 2004-11-10
Revision#:3, Revised 2015-03-24

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CALA

ANAB ACCREDITED

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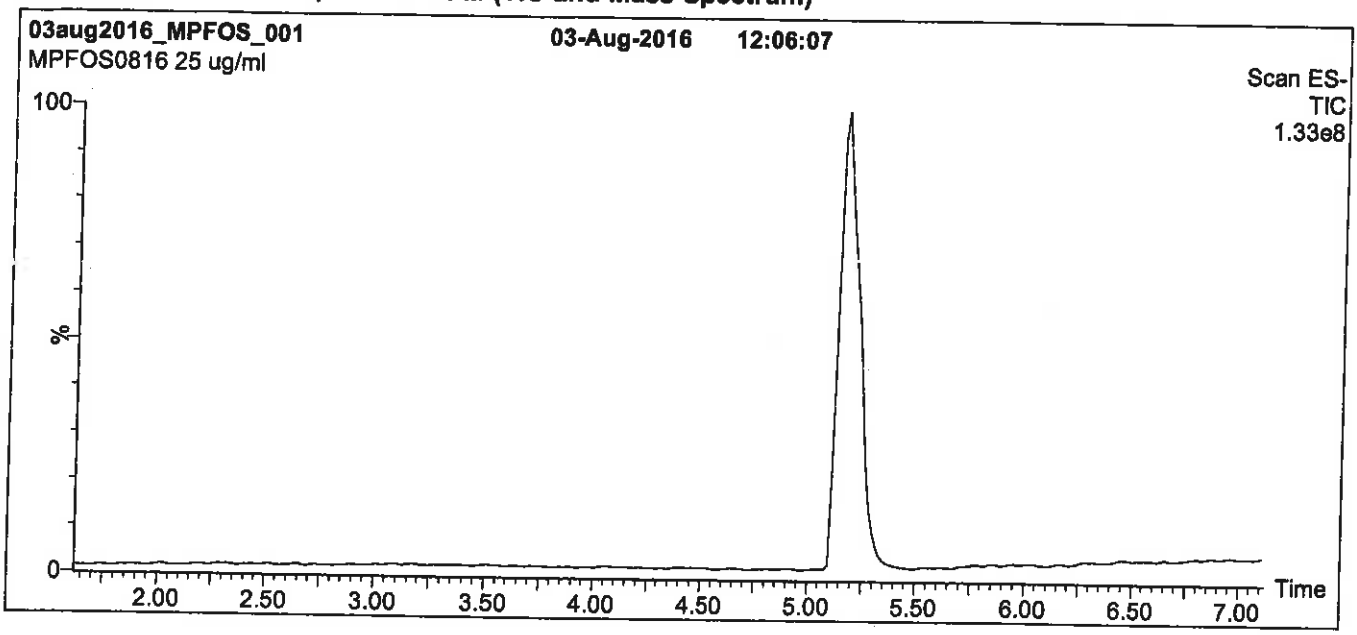
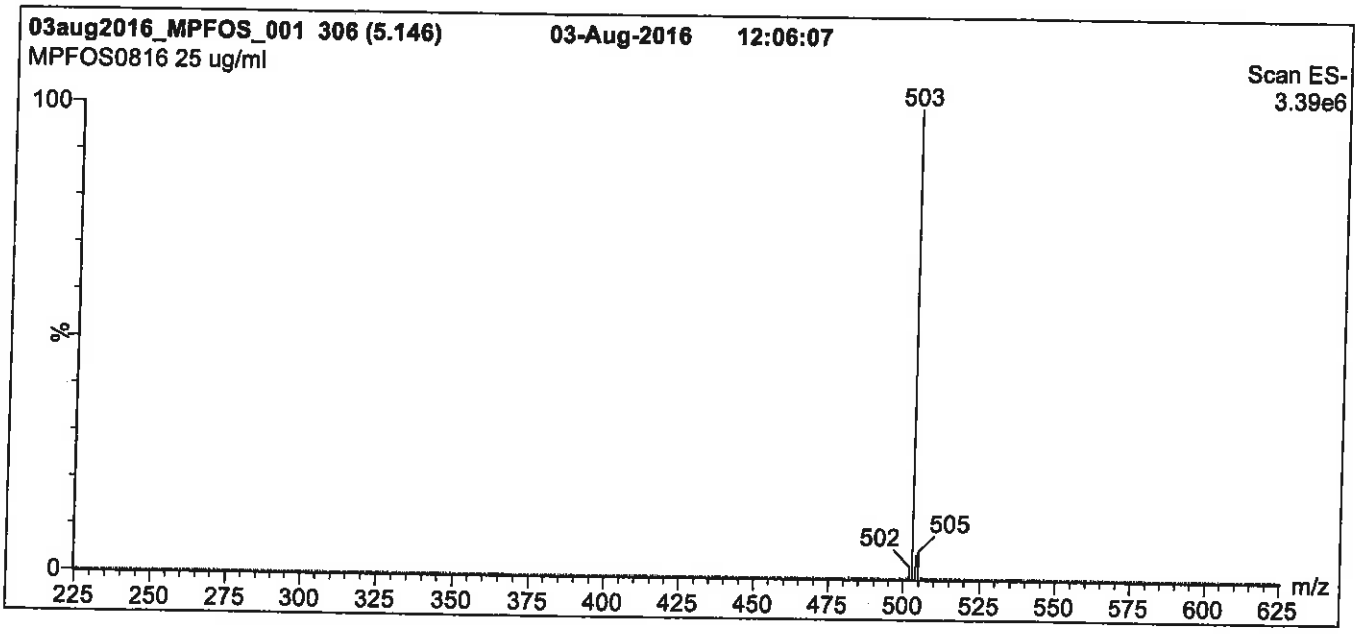
Figure 1: **MPFOS; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: Waters Acquity Ultra Performance LC
MS: Micromass Quattro *micro* API MS

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 45% (80:20 MeOH:ACN) / 55% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 7 min and hold for 1.5 min
before returning to initial conditions in 0.5 min.
Time: 10 min

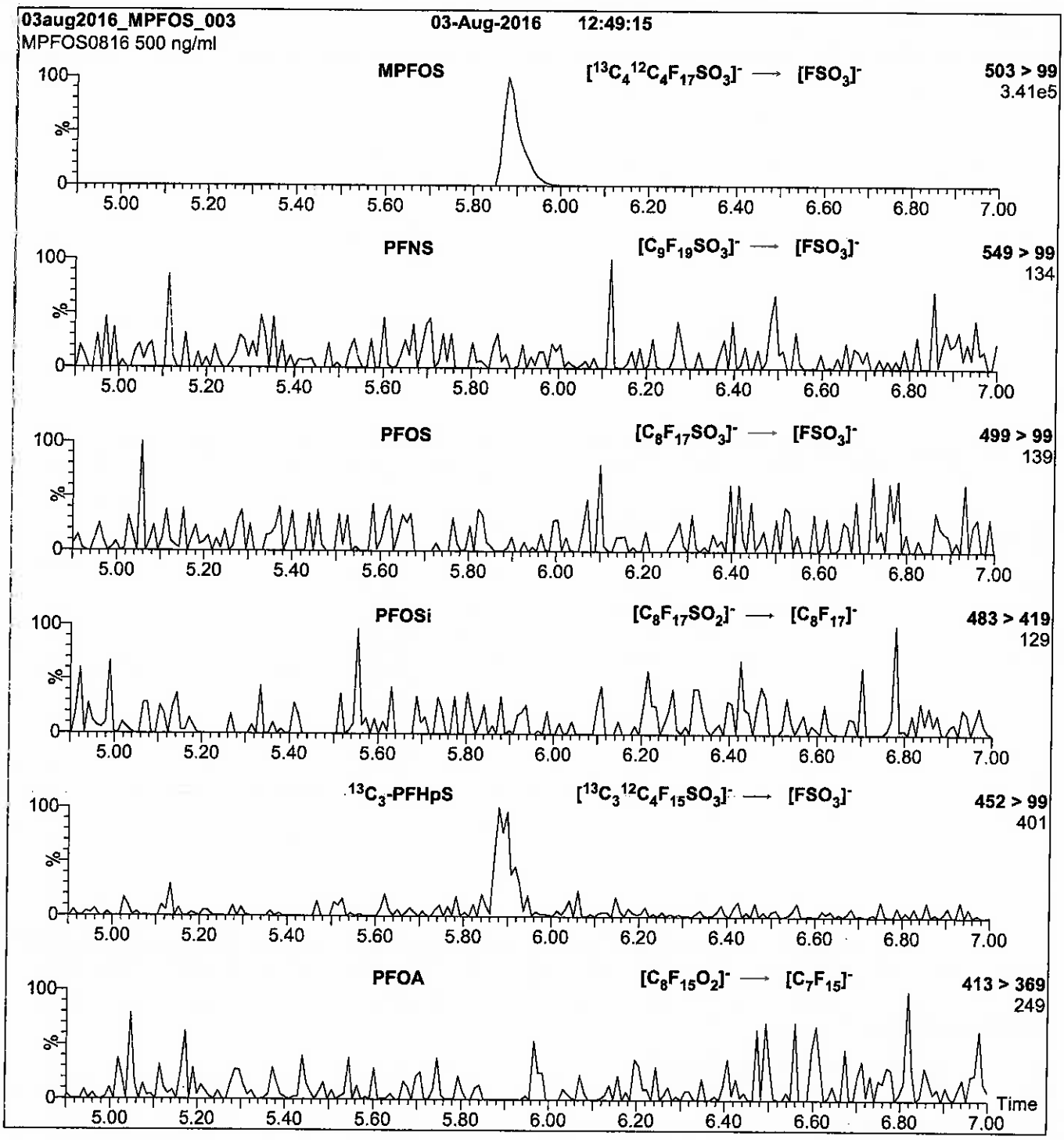
Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 3.00
Cone Voltage (V) = 60.00
Cone Gas Flow (l/hr) = 50
Desolvation Gas Flow (l/hr) = 750

Figure 2: **MPFOS; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: Direct loop injection
10 µl (500 ng/ml MPFOS)

Mobile phase: Isocratic 80% (80:20 MeOH:ACN) / 20% H_2O
(both with 10 mM NH_4OAc buffer)

Flow: 300 µl/min

MS Parameters

Collision Gas (mbar) = 3.46e-3
Collision Energy (eV) = 40

Method 537 DOD

Perfluorinated Alkyl Acids (LC/MS) by Method 537 DOD

FORM II
LCMS SURROGATE RECOVERY

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): Acquity ID: 2.1 (mm)

Client Sample ID	Lab Sample ID	PFHxA	#	PFDA	#
WI-CV-1RW13-1216	320-24069-1	135	Q	137	Q
WI-CV-1FB13-1216	320-24069-2	112		118	
WI-CV-1RW14-1216	320-24069-3	130		129	
WI-CV-1FB14-1216	320-24069-4	115		117	
WI-CV-1RW15-1216	320-24069-5	142	Q	140	Q
WI-CV-1FB15-1216	320-24069-6	124		125	
WI-CV-1FB15-1216 RA	320-24069-6 RA	126		131	Q
WI-CV-1RW16-1216	320-24069-7	110		106	
WI-CV-1FB16-1216	320-24069-8	114		116	
WI-CV-1RW17-1216	320-24069-9	107		117	
WI-CV-1FB17-1216	320-24069-10	114		111	
WI-CV-3RW14-1216	320-24069-11	97		114	
WI-CV-3FB14-1216	320-24069-12	114		122	
WI-CV-3RW15-1216	320-24069-13	115		117	
WI-CV-3FB15-1216	320-24069-14	114		110	
WI-CV-3RW16-1216	320-24069-15	106		110	
WI-CV-3FB16-1216	320-24069-16	119		118	
WI-CV-1RW18-1216	320-24069-17	115		116	
WI-CV-1FB18-1216	320-24069-18	115		117	
WI-CV-1RW19-1216	320-24069-19	119		125	
WI-CV-1FB19-1216	320-24069-20	120		118	
WI-CV-1RW20-1216	320-24069-21	112		119	
WI-CV-1FB20-1216	320-24069-22	121		124	
WI-CV-1RW21-1216	320-24069-23	108		113	
WI-CV-1FB21-1216	320-24069-24	114		114	
WI-CV-1RW22-1216	320-24069-25	110		105	
WI-CV-1FB22-1216	320-24069-26	113		118	
WI-CV-3RW17-1216	320-24069-27	110		100	
WI-CV-3FB17-1216	320-24069-28	106		110	
WI-CV-3RW18-1216	320-24069-29	115		113	
WI-CV-3FB18-1216	320-24069-30	102		108	
	MB 320-141212/1-A	113		111	
	MB 320-141328/1-A	121		120	

	QC LIMITS
PFHxA = 13C2 PFHxA	70-130
PFDA = 13C2 PFDA	70-130

Column to be used to flag recovery values

FORM II 537

FORM II
LCMS SURROGATE RECOVERY

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): Acquity ID: 2.1 (mm)

Client Sample ID	Lab Sample ID	PFHxA #	PFDA #
	LCS 320-141212/2-A	123	123
	LCSD 320-141212/3-A	126	131 Q
	LLCS 320-141328/2-A	124	129
	LLCSD 320-141328/3-A	119	116

	QC LIMITS
PFHxA = 13C2 PFHxA	70-130
PFDA = 13C2 PFDA	70-130

Column to be used to flag recovery values

FORM II 537

FORM III
LCMS LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 11DEC2016A6A_135.d

Lab ID: LCS 320-141212/2-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Perfluorooctanesulfonic acid (PFOS)	0.300	0.307	102	70-130	
Perfluorooctanoic acid (PFOA)	0.146	0.155	106	70-130	
Perfluorobutanesulfonic acid (PFBS)	0.673	0.632	94	70-130	

Column to be used to flag recovery and RPD values

FORM III 537

FORM III
LCMS LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 11DEC2016A6A_136.d

Lab ID: LCSD 320-141212/3-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS		#
					RPD	REC	
Perfluorooctanesulfonic acid (PFOS)	0.300	0.292	97	5	30	70-130	
Perfluorooctanoic acid (PFOA)	0.146	0.154	105	1	30	70-130	
Perfluorobutanesulfonic acid (PFBS)	0.673	0.620	92	2	30	70-130	

Column to be used to flag recovery and RPD values

FORM III 537

FORM III
LCMS LOW LEVEL CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 11DEC2016A6A_120.d

Lab ID: LLCS 320-141328/2-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LLCS CONCENTRATION (ug/L)	LLCS % REC	QC LIMITS REC	#
Perfluorooctanesulfonic acid (PFOS)	0.0401	0.0326 J	81	50-150	
Perfluorooctanoic acid (PFOA)	0.0198	0.0189 J	95	50-150	M
Perfluorobutanesulfonic acid (PFBS)	0.0898	0.0838 J	93	50-150	

Column to be used to flag recovery and RPD values

FORM III 537

FORM III
LCMS LOW LEVEL CONTROL STANDARD DUPLICATE RECOVERY

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 11DEC2016A6A_121.d

Lab ID: LLCSD 320-141328/3-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LLCSD CONCENTRATION (ug/L)	LLCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Perfluorooctanesulfonic acid (PFOS)	0.0401	0.0355 J	89	9	50	50-150	
Perfluorooctanoic acid (PFOA)	0.0198	0.0184 J	93	2	50	50-150	M
Perfluorobutanesulfonic acid (PFBS)	0.0898	0.0876 J	98	4	50	50-150	

Column to be used to flag recovery and RPD values

FORM III 537

FORM IV
LCMS METHOD BLANK SUMMARY

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Lab File ID: 11DEC2016A6A_087.d Lab Sample ID: MB 320-141212/1-A

Matrix: Water Date Extracted: 12/08/2016 11:45

Instrument ID: A6 Date Analyzed: 12/13/2016 05:28

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
WI-CV-1FB13-1216	320-24069-2	11DEC2016A6A_094.d	12/13/2016 08:56
WI-CV-1FB15-1216	320-24069-6	11DEC2016A6A_098.d	12/13/2016 10:54
WI-CV-1RW16-1216	320-24069-7	11DEC2016A6A_099.d	12/13/2016 11:24
WI-CV-1FB16-1216	320-24069-8	11DEC2016A6A_100.d	12/13/2016 11:53
WI-CV-1RW17-1216	320-24069-9	11DEC2016A6A_101.d	12/13/2016 12:23
WI-CV-1FB17-1216	320-24069-10	11DEC2016A6A_102.d	12/13/2016 12:52
WI-CV-3RW14-1216	320-24069-11	11DEC2016A6A_103.d	12/13/2016 13:22
WI-CV-3FB14-1216	320-24069-12	11DEC2016A6A_107.d	12/13/2016 15:36
WI-CV-3RW15-1216	320-24069-13	11DEC2016A6A_108.d	12/13/2016 16:06
WI-CV-3FB15-1216	320-24069-14	11DEC2016A6A_109.d	12/13/2016 16:35
WI-CV-3RW16-1216	320-24069-15	11DEC2016A6A_110.d	12/13/2016 17:05
WI-CV-3FB16-1216	320-24069-16	11DEC2016A6A_111.d	12/13/2016 17:35
WI-CV-1RW18-1216	320-24069-17	11DEC2016A6A_112.d	12/13/2016 18:04
WI-CV-1FB18-1216	320-24069-18	11DEC2016A6A_113.d	12/13/2016 18:34
WI-CV-1RW19-1216	320-24069-19	11DEC2016A6A_114.d	12/13/2016 19:03
WI-CV-1FB19-1216	320-24069-20	11DEC2016A6A_115.d	12/13/2016 19:33
	LCS 320-141212/2-A	11DEC2016A6A_135.d	12/14/2016 05:25
	LCSD 320-141212/3-A	11DEC2016A6A_136.d	12/14/2016 05:55
WI-CV-1RW13-1216	320-24069-1	11DEC2016A6A_137.d	12/14/2016 06:24
WI-CV-1RW14-1216	320-24069-3	11DEC2016A6A_138.d	12/14/2016 06:54
WI-CV-1FB14-1216	320-24069-4	11DEC2016A6A_139.d	12/14/2016 07:23
WI-CV-1RW15-1216	320-24069-5	11DEC2016A6A_140.d	12/14/2016 07:53

FORM IV
LCMS METHOD BLANK SUMMARY

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Lab File ID: 11DEC2016A6A_087.d Lab Sample ID: MB 320-141212/1-A

Matrix: Water Date Extracted: 12/08/2016 11:45

Instrument ID: A6 Date Analyzed: 12/13/2016 05:28

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
WI-CV-1FB15-1216 RA	320-24069-6 RA	11DEC2016A6A_141.d	12/14/2016 08:23

FORM IV
LCMS METHOD BLANK SUMMARY

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Lab File ID: 11DEC2016A6A_119.d Lab Sample ID: MB 320-141328/1-A

Matrix: Water Date Extracted: 12/08/2016 18:21

Instrument ID: A6 Date Analyzed: 12/13/2016 21:31

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LLCS 320-141328/2-A	11DEC2016A6A_120.d	12/13/2016 22:01
	LLCSD 320-141328/3-A	11DEC2016A6A_121.d	12/13/2016 22:31
WI-CV-1FB21-1216	320-24069-24	11DEC2016A6A_125.d	12/14/2016 00:29
WI-CV-1RW22-1216	320-24069-25	11DEC2016A6A_126.d	12/14/2016 00:59
WI-CV-3RW17-1216	320-24069-27	11DEC2016A6A_128.d	12/14/2016 01:58
WI-CV-3FB17-1216	320-24069-28	11DEC2016A6A_132.d	12/14/2016 03:56
WI-CV-3RW18-1216	320-24069-29	11DEC2016A6A_133.d	12/14/2016 04:26
WI-CV-3FB18-1216	320-24069-30	11DEC2016A6A_134.d	12/14/2016 04:55
WI-CV-1RW20-1216	320-24069-21	11DEC2016A6A_158.d	12/14/2016 16:46
WI-CV-1FB20-1216	320-24069-22	11DEC2016A6A_159.d	12/14/2016 17:15
WI-CV-1RW21-1216	320-24069-23	11DEC2016A6A_160.d	12/14/2016 17:45
WI-CV-1FB22-1216	320-24069-26	11DEC2016A6A_161.d	12/14/2016 18:14

FORM VIII
LCMS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Instrument ID: A6 Calibration Start Date: 12/05/2016 17:26

GC Column: Acquity ID: 2.1(mm) Calibration End Date: 12/05/2016 19:54

Calibration ID: 26888

		13PFOA		PFOS			
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MEAN AREA AND MEAN RT		965911	20.05	2046916	20.67		
UPPER LIMIT		1448867	20.55	3070374	21.17		
LOWER LIMIT		482956	19.55	1023458	20.17		
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCV 320-140688/9 CCVL		1025187	20.05	2358079	20.67		
ICV 320-140688/11		877210	20.05	2015178	20.67		
CCV 320-141573/3 CCVL		802153	20.06	1836390	20.68		
CCV 320-141767/2 CCVIS		856689	20.05	1855712	20.67		
MB 320-141212/1-A		732917	20.06	2037934	20.67		
CCV 320-141767/15 CCVIS		917652	20.05	1848738	20.67		
CCV 320-141768/15 CCVIS		917652	20.05	1848738	20.67		
320-24069-2	WI-CV-1FB13-1216	716053	20.05	2077875	20.67		
320-24069-6	WI-CV-1FB15-1216	618501Q	20.04	1770011	20.66		
320-24069-7	WI-CV-1RW16-1216	734304	20.04	1965935	20.66		
320-24069-8	WI-CV-1FB16-1216	694562	20.04	1798389	20.66		
320-24069-9	WI-CV-1RW17-1216	709363	20.04	2035941	20.66		
320-24069-10	WI-CV-1FB17-1216	697435	20.05	1849727	20.67		
320-24069-11	WI-CV-3RW14-1216	668316	20.05	1719729	20.67		
CCV 320-141768/28 CCVIS		792414	20.04	1686222	20.67		
CCV 320-141769/28 CCVIS		792414	20.04	1686222	20.67		
320-24069-12	WI-CV-3FB14-1216	681160	20.04	1745778	20.67		
320-24069-13	WI-CV-3RW15-1216	653207	20.04	1714966	20.66		
320-24069-14	WI-CV-3FB15-1216	715253	20.05	1968331	20.67		
320-24069-15	WI-CV-3RW16-1216	706621	20.05	2016011	20.67		
320-24069-16	WI-CV-3FB16-1216	777282	20.06	2094863	20.68		
320-24069-17	WI-CV-1RW18-1216	707735	20.05	1813088	20.67		
320-24069-18	WI-CV-1FB18-1216	780946	20.05	2017060	20.68		
320-24069-19	WI-CV-1RW19-1216	622007	20.04	1751844	20.67		
320-24069-20	WI-CV-1FB19-1216	694184	20.04	1804008	20.67		
CCV 320-141769/40 CCVIS		835720	20.05	1749819	20.68		

13PFOA = 13C2-PFOA
PFOS = 13C4 PFOS

Area Limit = 50%-150% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 537

FORM VIII
LCMS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Instrument ID: A6 Calibration Start Date: 12/05/2016 17:26

GC Column: Acquity ID: 2.1(mm) Calibration End Date: 12/05/2016 19:54

Calibration ID: 26888

		13PFOA		PFOS			
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MEAN AREA AND MEAN RT		965911	20.05	2046916	20.67		
UPPER LIMIT		1448867	20.55	3070374	21.17		
LOWER LIMIT		482956	19.55	1023458	20.17		
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCV 320-141770/40 CCVIS		835720	20.05	1749819	20.68		
MB 320-141328/1-A		662536	20.05	1841720	20.67		
LLCS 320-141328/2-A		622346	20.06	1754986	20.68		
LLCSD 320-141328/3-A		586374	20.05	1650823	20.68		
320-24069-24	WI-CV-1FB21-1216	676775	20.04	1931558	20.68		
320-24069-25	WI-CV-1RW22-1216	593937	20.04	1709450	20.67		
320-24069-27	WI-CV-3RW17-1216	617492	20.02	1619333	20.66		
CCV 320-141770/53 CCVIS		713785	20.04	1794330	20.67		
CCV 320-141771/53 CCVIS		713785	20.04	1794330	20.67		
320-24069-28	WI-CV-3FB17-1216	612207	20.04	1637453	20.66		
320-24069-29	WI-CV-3RW18-1216	608502	20.02	1667316	20.64		
320-24069-30	WI-CV-3FB18-1216	650767	20.04	1798362	20.66		
LCS 320-141212/2-A		609978	20.04	1586260	20.66		
LCSD 320-141212/3-A		606413	20.04	1609248	20.66		
320-24069-1	WI-CV-1RW13-1216	511250	20.04	1702997	20.67		
320-24069-3	WI-CV-1RW14-1216	526919	20.04	1730705	20.67		
320-24069-4	WI-CV-1FB14-1216	657974	20.04	1910837	20.67		
320-24069-5	WI-CV-1RW15-1216	476576Q	20.04	1650013	20.66		
320-24069-6 RA	WI-CV-1FB15-1216 RA	533806	20.04	1640709	20.66		
CCV 320-141771/59 CCVIS		784308	20.04	1688354	20.67		
CCV 320-141966/15 CCVIS		721956	20.02	1640855	20.64		
320-24069-21	WI-CV-1RW20-1216	594902	20.01	1657183	20.64		
320-24069-22	WI-CV-1FB20-1216	612927	20.01	1695405	20.64		
320-24069-23	WI-CV-1RW21-1216	572824	20.01	1451600	20.64		
320-24069-26	WI-CV-1FB22-1216	620541	20.01	1675607	20.63		
CCV 320-141966/25 CCVIS		782016	20.04	1765509	20.66		

13PFOA = 13C2-PFOA
PFOS = 13C4 PFOS

Area Limit = 50%-150% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 537

FORM VIII
LCMS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Sample No.: CCV 320-141767/2 Date Analyzed: 12/13/2016 01:32

Instrument ID: A6 GC Column: Acquity ID: 2.1(mm)

Lab File ID (Standard): 11DEC2016A6A_079.d Heated Purge: (Y/N) N

Calibration ID: 26888

		13PFOA		PFOS			
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		856689	20.05	1855712	20.67		
UPPER LIMIT		1199365	20.55	2597997	21.17		
LOWER LIMIT		599682	19.55	1298998	20.17		
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 320-141212/1-A		732917	20.06	2037934	20.67		

13PFOA = 13C2-PFOA
PFOS = 13C4 PFOS
PFOS = 13C4 PFOS

Area Limit = 70%-140% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 537

FORM VIII
LCMS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Sample No.: CCV 320-141767/15 Date Analyzed: 12/13/2016 07:56

Instrument ID: A6 GC Column: Acquity ID: 2.1(mm)

Lab File ID (Standard): 11DEC2016A6A_092.d Heated Purge: (Y/N) N

Calibration ID: 26888

		13PFOA		PFOS			
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		917652	20.05	1848738	20.67		
UPPER LIMIT		1284713	20.55	2588233	21.17		
LOWER LIMIT		642356	19.55	1294117	20.17		
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 320-141212/1-A		732917	20.06	2037934	20.67		

13PFOA = 13C2-PFOA
PFOS = 13C4 PFOS
PFOS = 13C4 PFOS

Area Limit = 70%-140% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 537

FORM VIII
LCMS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Sample No.: CCV 320-141768/15 Date Analyzed: 12/13/2016 07:56

Instrument ID: A6 GC Column: Acquity ID: 2.1(mm)

Lab File ID (Standard): 11DEC2016A6A_092.d Heated Purge: (Y/N) N

Calibration ID: 26888

		13PFOA		PFOS			
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		917652	20.05	1848738	20.67		
UPPER LIMIT		1284713	20.55	2588233	21.17		
LOWER LIMIT		642356	19.55	1294117	20.17		
LAB SAMPLE ID	CLIENT SAMPLE ID						
320-24069-2	WI-CV-1FB13-1216	716053	20.05	2077875	20.67		
320-24069-6	WI-CV-1FB15-1216	618501Q	20.04	1770011	20.66		
320-24069-7	WI-CV-1RW16-1216	734304	20.04	1965935	20.66		
320-24069-8	WI-CV-1FB16-1216	694562	20.04	1798389	20.66		
320-24069-9	WI-CV-1RW17-1216	709363	20.04	2035941	20.66		
320-24069-10	WI-CV-1FB17-1216	697435	20.05	1849727	20.67		
320-24069-11	WI-CV-3RW14-1216	668316	20.05	1719729	20.67		

13PFOA = 13C2-PFOA
13PFOA = 13C2-PFOA
PFOS = 13C4 PFOS
PFOS = 13C4 PFOS
Area Limit = 70%-140% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 537

FORM VIII
LCMS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Sample No.: CCV 320-141768/28 Date Analyzed: 12/13/2016 14:21

Instrument ID: A6 GC Column: Acquity ID: 2.1(mm)

Lab File ID (Standard): 11DEC2016A6A_105.d Heated Purge: (Y/N) N

Calibration ID: 26888

		13PFOA		PFOS			
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		792414	20.04	1686222	20.67		
UPPER LIMIT		1109380	20.54	2360711	21.17		
LOWER LIMIT		554690	19.54	1180355	20.17		
LAB SAMPLE ID	CLIENT SAMPLE ID						
320-24069-2	WI-CV-1FB13-1216	716053	20.05	2077875	20.67		
320-24069-6	WI-CV-1FB15-1216	618501Q	20.04	1770011	20.66		
320-24069-7	WI-CV-1RW16-1216	734304	20.04	1965935	20.66		
320-24069-8	WI-CV-1FB16-1216	694562	20.04	1798389	20.66		
320-24069-9	WI-CV-1RW17-1216	709363	20.04	2035941	20.66		
320-24069-10	WI-CV-1FB17-1216	697435	20.05	1849727	20.67		
320-24069-11	WI-CV-3RW14-1216	668316	20.05	1719729	20.67		

13PFOA = 13C2-PFOA
13PFOA = 13C2-PFOA
PFOS = 13C4 PFOS
PFOS = 13C4 PFOS
Area Limit = 70%-140% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 537

FORM VIII
LCMS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Sample No.: CCV 320-141769/28 Date Analyzed: 12/13/2016 14:21

Instrument ID: A6 GC Column: Acquity ID: 2.1(mm)

Lab File ID (Standard): 11DEC2016A6A_105.d Heated Purge: (Y/N) N

Calibration ID: 26888

		13PFOA		PFOS			
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		792414	20.04	1686222	20.67		
UPPER LIMIT		1109380	20.54	2360711	21.17		
LOWER LIMIT		554690	19.54	1180355	20.17		
LAB SAMPLE ID	CLIENT SAMPLE ID						
320-24069-12	WI-CV-3FB14-1216	681160	20.04	1745778	20.67		
320-24069-13	WI-CV-3RW15-1216	653207	20.04	1714966	20.66		
320-24069-14	WI-CV-3FB15-1216	715253	20.05	1968331	20.67		
320-24069-15	WI-CV-3RW16-1216	706621	20.05	2016011	20.67		
320-24069-16	WI-CV-3FB16-1216	777282	20.06	2094863	20.68		
320-24069-17	WI-CV-1RW18-1216	707735	20.05	1813088	20.67		
320-24069-18	WI-CV-1FB18-1216	780946	20.05	2017060	20.68		
320-24069-19	WI-CV-1RW19-1216	622007	20.04	1751844	20.67		
320-24069-20	WI-CV-1FB19-1216	694184	20.04	1804008	20.67		

13PFOA = 13C2-PFOA
13PFOA = 13C2-PFOA
PFOS = 13C4 PFOS

Area Limit = 70%-140% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 537

FORM VIII
LCMS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Sample No.: CCV 320-141769/40 Date Analyzed: 12/13/2016 20:32

Instrument ID: A6 GC Column: Acquity ID: 2.1(mm)

Lab File ID (Standard): 11DEC2016A6A_117.d Heated Purge: (Y/N) N

Calibration ID: 26888

		13PFOA		PFOS			
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		835720	20.05	1749819	20.68		
UPPER LIMIT		1170008	20.55	2449747	21.18		
LOWER LIMIT		585004	19.55	1224873	20.18		
LAB SAMPLE ID	CLIENT SAMPLE ID						
320-24069-12	WI-CV-3FB14-1216	681160	20.04	1745778	20.67		
320-24069-13	WI-CV-3RW15-1216	653207	20.04	1714966	20.66		
320-24069-14	WI-CV-3FB15-1216	715253	20.05	1968331	20.67		
320-24069-15	WI-CV-3RW16-1216	706621	20.05	2016011	20.67		
320-24069-16	WI-CV-3FB16-1216	777282	20.06	2094863	20.68		
320-24069-17	WI-CV-1RW18-1216	707735	20.05	1813088	20.67		
320-24069-18	WI-CV-1FB18-1216	780946	20.05	2017060	20.68		
320-24069-19	WI-CV-1RW19-1216	622007	20.04	1751844	20.67		
320-24069-20	WI-CV-1FB19-1216	694184	20.04	1804008	20.67		

13PFOA = 13C2-PFOA
13PFOA = 13C2-PFOA
PFOS = 13C4 PFOS

Area Limit = 70%-140% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 537

FORM VIII
LCMS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Sample No.: CCV 320-141770/40 Date Analyzed: 12/13/2016 20:32

Instrument ID: A6 GC Column: Acquity ID: 2.1(mm)

Lab File ID (Standard): 11DEC2016A6A_117.d Heated Purge: (Y/N) N

Calibration ID: 26888

		13PFOA		PFOS			
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		835720	20.05	1749819	20.68		
UPPER LIMIT		1170008	20.55	2449747	21.18		
LOWER LIMIT		585004	19.55	1224873	20.18		
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 320-141328/1-A		662536	20.05	1841720	20.67		
LLCS 320-141328/2-A		622346	20.06	1754986	20.68		
LLCSD 320-141328/3-A		586374	20.05	1650823	20.68		
320-24069-24	WI-CV-1FB21-1216	676775	20.04	1931558	20.68		
320-24069-25	WI-CV-1RW22-1216	593937	20.04	1709450	20.67		
320-24069-27	WI-CV-3RW17-1216	617492	20.02	1619333	20.66		

13PFOA = 13C2-PFOA
PFOS = 13C4 PFOS

Area Limit = 70%-140% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 537

FORM VIII
LCMS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Sample No.: CCV 320-141770/53 Date Analyzed: 12/14/2016 02:57

Instrument ID: A6 GC Column: Acquity ID: 2.1(mm)

Lab File ID (Standard): 11DEC2016A6A_130.d Heated Purge: (Y/N) N

Calibration ID: 26888

		13PFOA		PFOS			
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		713785	20.04	1794330	20.67		
UPPER LIMIT		999299	20.54	2512062	21.17		
LOWER LIMIT		499650	19.54	1256031	20.17		
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 320-141328/1-A		662536	20.05	1841720	20.67		
LLCS 320-141328/2-A		622346	20.06	1754986	20.68		
LLCSD 320-141328/3-A		586374	20.05	1650823	20.68		
320-24069-24	WI-CV-1FB21-1216	676775	20.04	1931558	20.68		
320-24069-25	WI-CV-1RW22-1216	593937	20.04	1709450	20.67		
320-24069-27	WI-CV-3RW17-1216	617492	20.02	1619333	20.66		

13PFOA = 13C2-PFOA
PFOS = 13C4 PFOS

Area Limit = 70%-140% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 537

FORM VIII
LCMS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Sample No.: CCV 320-141771/53 Date Analyzed: 12/14/2016 02:57

Instrument ID: A6 GC Column: Acquity ID: 2.1(mm)

Lab File ID (Standard): 11DEC2016A6A_130.d Heated Purge: (Y/N) N

Calibration ID: 26888

		13PFOA		PFOS			
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		713785	20.04	1794330	20.67		
UPPER LIMIT		999299	20.54	2512062	21.17		
LOWER LIMIT		499650	19.54	1256031	20.17		
LAB SAMPLE ID	CLIENT SAMPLE ID						
320-24069-28	WI-CV-3FB17-1216	612207	20.04	1637453	20.66		
320-24069-29	WI-CV-3RW18-1216	608502	20.02	1667316	20.64		
320-24069-30	WI-CV-3FB18-1216	650767	20.04	1798362	20.66		
LCS 320-141212/2-A		609978	20.04	1586260	20.66		
LCSD 320-141212/3-A		606413	20.04	1609248	20.66		
320-24069-1	WI-CV-1RW13-1216	511250	20.04	1702997	20.67		
320-24069-3	WI-CV-1RW14-1216	526919	20.04	1730705	20.67		
320-24069-4	WI-CV-1FB14-1216	657974	20.04	1910837	20.67		
320-24069-5	WI-CV-1RW15-1216	476576Q	20.04	1650013	20.66		
320-24069-6 RA	WI-CV-1FB15-1216 RA	533806	20.04	1640709	20.66		

13PFOA = 13C2-PFOA
13PFOA = 13C2-PFOA
PFOS = 13C4 PFOS
PFOS = 13C4 PFOS
Area Limit = 70%-140% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 537

FORM VIII
LCMS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Sample No.: CCV 320-141771/59 Date Analyzed: 12/14/2016 09:22

Instrument ID: A6 GC Column: Acquity ID: 2.1(mm)

Lab File ID (Standard): 11DEC2016A6A_143.d Heated Purge: (Y/N) N

Calibration ID: 26888

		13PFOA		PFOS			
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		784308	20.04	1688354	20.67		
UPPER LIMIT		1098031	20.54	2363696	21.17		
LOWER LIMIT		549016	19.54	1181848	20.17		
LAB SAMPLE ID	CLIENT SAMPLE ID						
320-24069-28	WI-CV-3FB17-1216	612207	20.04	1637453	20.66		
320-24069-29	WI-CV-3RW18-1216	608502	20.02	1667316	20.64		
320-24069-30	WI-CV-3FB18-1216	650767	20.04	1798362	20.66		
LCS 320-141212/2-A		609978	20.04	1586260	20.66		
LCSD 320-141212/3-A		606413	20.04	1609248	20.66		
320-24069-1	WI-CV-1RW13-1216	511250	20.04	1702997	20.67		
320-24069-3	WI-CV-1RW14-1216	526919	20.04	1730705	20.67		
320-24069-4	WI-CV-1FB14-1216	657974	20.04	1910837	20.67		
320-24069-5	WI-CV-1RW15-1216	476576Q	20.04	1650013	20.66		
320-24069-6 RA	WI-CV-1FB15-1216 RA	533806	20.04	1640709	20.66		

13PFOA = 13C2-PFOA
13PFOA = 13C2-PFOA
PFOS = 13C4 PFOS
PFOS = 13C4 PFOS
Area Limit = 70%-140% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 537

FORM VIII
LCMS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Sample No.: CCV 320-141966/15 Date Analyzed: 12/14/2016 15:44

Instrument ID: A6 GC Column: Acquity ID: 2.1(mm)

Lab File ID (Standard): 11DEC2016A6A_156.d Heated Purge: (Y/N) N

Calibration ID: 26888

		13PFOA		PFOS			
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		721956	20.02	1640855	20.64		
UPPER LIMIT		1010738	20.52	2297197	21.14		
LOWER LIMIT		505369	19.52	1148599	20.14		
LAB SAMPLE ID	CLIENT SAMPLE ID						
320-24069-21	WI-CV-1RW20-1216	594902	20.01	1657183	20.64		
320-24069-22	WI-CV-1FB20-1216	612927	20.01	1695405	20.64		
320-24069-23	WI-CV-1RW21-1216	572824	20.01	1451600	20.64		
320-24069-26	WI-CV-1FB22-1216	620541	20.01	1675607	20.63		

13PFOA = 13C2-PFOA
13PFOA = 13C2-PFOA
PFOS = 13C4 PFOS
PFOS = 13C4 PFOS
Area Limit = 70%-140% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 537

FORM VIII
LCMS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Sample No.: CCV 320-141966/25 Date Analyzed: 12/14/2016 20:42

Instrument ID: A6 GC Column: Acquity ID: 2.1(mm)

Lab File ID (Standard): 11DEC2016A6A_166.d Heated Purge: (Y/N) N

Calibration ID: 26888

		13PFOA		PFOS			
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		782016	20.04	1765509	20.66		
UPPER LIMIT		1094822	20.54	2471713	21.16		
LOWER LIMIT		547411	19.54	1235856	20.16		
LAB SAMPLE ID	CLIENT SAMPLE ID						
320-24069-21	WI-CV-1RW20-1216	594902	20.01	1657183	20.64		
320-24069-22	WI-CV-1FB20-1216	612927	20.01	1695405	20.64		
320-24069-23	WI-CV-1RW21-1216	572824	20.01	1451600	20.64		
320-24069-26	WI-CV-1FB22-1216	620541	20.01	1675607	20.63		

13PFOA = 13C2-PFOA
13PFOA = 13C2-PFOA
PFOS = 13C4 PFOS
PFOS = 13C4 PFOS
Area Limit = 70%-140% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 537

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Client Sample ID: WI-CV-1RW13-1216 Lab Sample ID: 320-24069-1

Matrix: Water Lab File ID: 11DEC2016A6A_137.d

Analysis Method: 537 Date Collected: 12/02/2016 09:09

Extraction Method: 537 Date Extracted: 12/08/2016 11:45

Sample wt/vol: 254.6(mL) Date Analyzed: 12/14/2016 06:24

Con. Extract Vol.: 1.0(mL) Dilution Factor: 1

Injection Volume: 10(uL) GC Column: Acquity ID: 2.1(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 141771 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	0.047	U	0.059	0.047	0.015
335-67-1	Perfluorooctanoic acid (PFOA)	0.024	U M	0.029	0.024	0.0092
375-73-5	Perfluorobutanesulfonic acid (PFBS)	0.11	U	0.14	0.11	0.047

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00993	13C2 PFHxA	135	Q	70-130
STL00996	13C2 PFDA	137	Q	70-130

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_137.d
Lims ID: 320-24069-A-1-A
Client ID: WI-CV-1RW13-1216
Sample Type: Client
Inject. Date: 14-Dec-2016 06:24:39 ALS Bottle#: 22 Worklist Smp#: 63
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 320-24069-a-1-a
Misc. Info.: Acquity BEH 1.7um, 3X150mm T=35*C
Operator ID: CBW Instrument ID: A6

Method: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\537__A6.m
Limit Group: LC 537 ICAL
Last Update: 14-Dec-2016 10:53:05 Calib Date: 05-Dec-2016 19:54:00
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d

Column 1 : Acquity BEH C18 (2.10 mm) Det: F1:MRM
Process Host: XAWRK017

First Level Reviewer: barnettj Date: 14-Dec-2016 10:33:20

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	S/N	Flags
1 Perfluorobutanesulfonic acid								
299.0 > 80.0	17.612	17.605	0.007	1.000	5309	0.1275	9.6	
$ 2 13C2 PFHxA								
315.0 > 270.0	18.585	18.585	0.0	1.000	804716	13.5	25881	
4 Perfluoroheptanoic acid								
363.0 > 319.0	19.380	19.380	0.0	1.000	781	0.0126	0.9	
* 5 13C2-PFOA								
415.0 > 370.0	20.035	20.035	0.0		511250	10.0	13316	
6 Perfluorooctanoic acid								M
413.0 > 369.0	20.070	20.035	0.035	1.000	300	0.005640	0.2	M
* 8 13C4 PFOS								
503.0 > 80.0	20.667	20.667	0.0		1702997	28.7	44396	
9 Perfluorononanoic acid								
463.0 > 419.0	20.726	20.738	-0.012	1.000	4258	0.0734	122	
$ 10 13C2 PFDA								
515.0 > 470.0	21.471	21.471	0.0	1.000	615627	13.7	19520	

QC Flag Legend

Review Flags
M - Manually Integrated

Report Date: 14-Dec-2016 10:53:15 Chrom Revision: 2.2 05-Dec-2016 12:37:22

TestAmerica Sacramento

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_137.d

Injection Date: 14-Dec-2016 06:24:39 Instrument ID: A6

Lims ID: 320-24069-A-1-A Lab Sample ID:

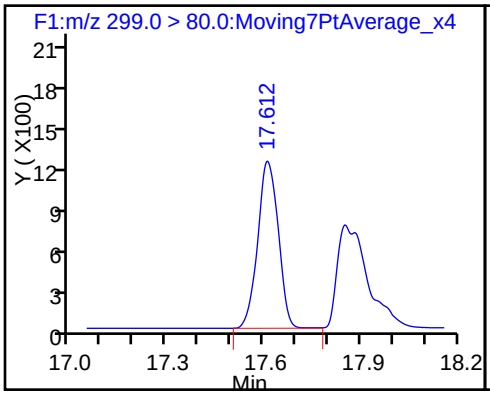
Client ID: WI-CV-1RW13-1216

Operator ID: CBW ALS Bottle#: 22 Worklist Smp#: 63

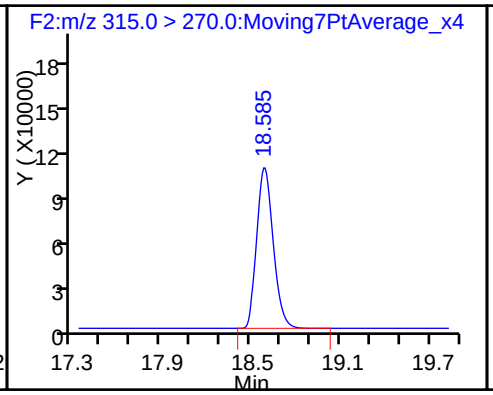
Injection Vol: 10.0 ul Dil. Factor: 1.0000

Method: 537__A6 Limit Group: LC 537 ICAL

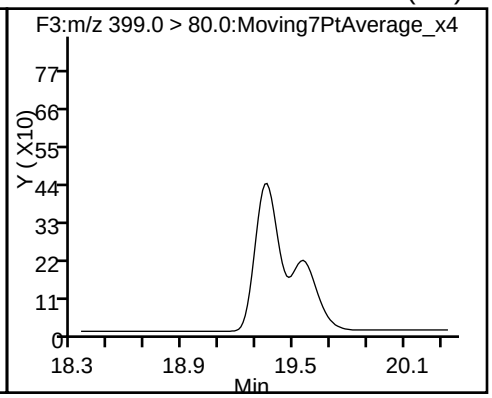
1 Perfluorobutanesulfonic acid



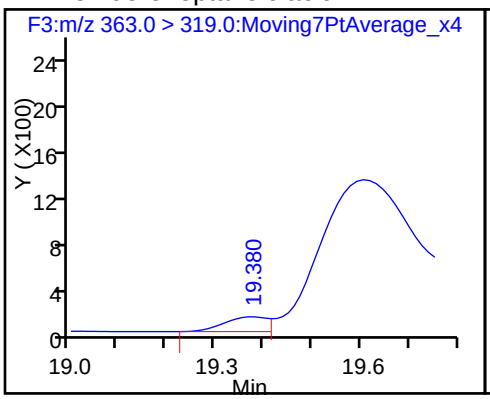
$ 2 13C2 PFHxA



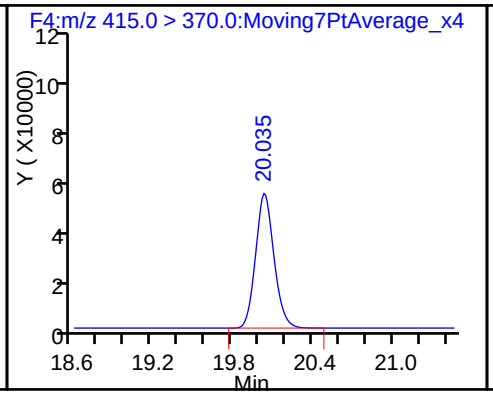
3 Perfluorohexanesulfonic acid (ND)



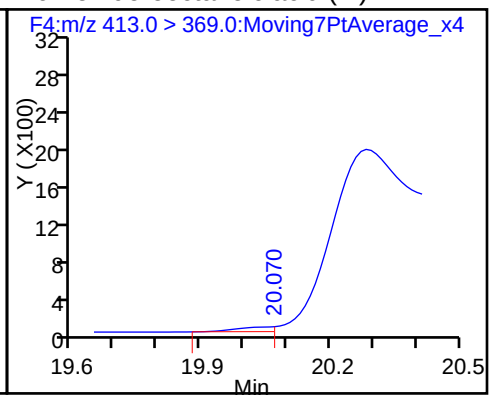
4 Perfluoroheptanoic acid



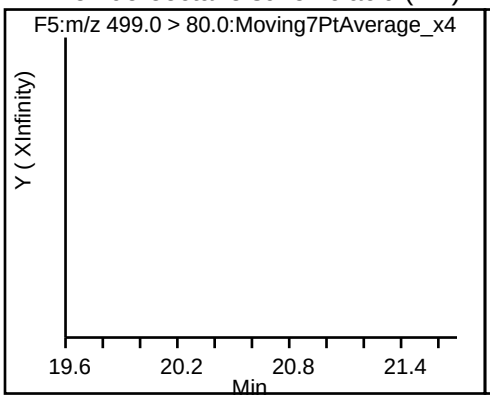
* 5 13C2-PFOA



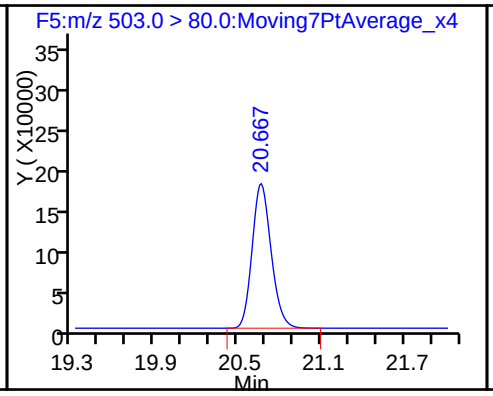
6 Perfluorooctanoic acid (M)



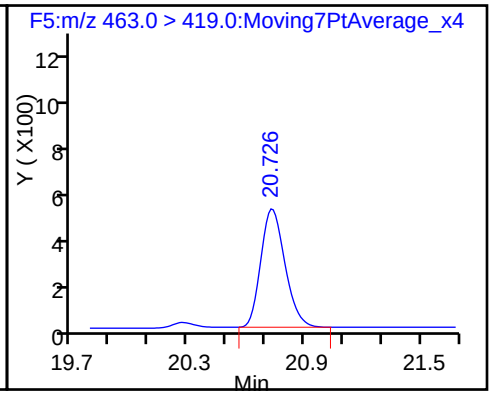
7 Perfluorooctane sulfonic acid (ND)



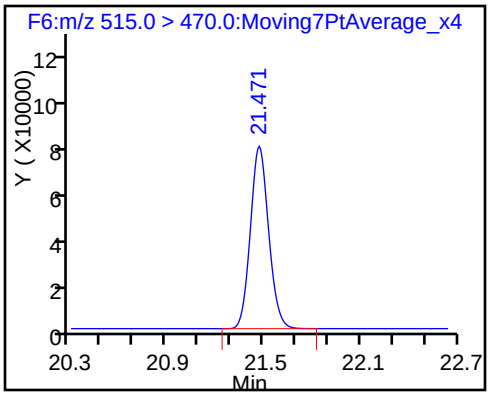
* 8 13C4 PFOS



9 Perfluorononanoic acid



$ 10 13C2 PFDA



TestAmerica Sacramento
Recovery Report

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_137.d
Lims ID: 320-24069-A-1-A
Client ID: WI-CV-1RW13-1216
Sample Type: Client
Inject. Date: 14-Dec-2016 06:24:39 ALS Bottle#: 22 Worklist Smp#: 63
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 320-24069-a-1-a
Misc. Info.: Acquity BEH 1.7um, 3X150mm T=35*C
Operator ID: CBW Instrument ID: A6

Method: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\537__A6.m
Limit Group: LC 537 ICAL
Last Update: 14-Dec-2016 10:53:05 Calib Date: 05-Dec-2016 19:54:00
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d

Column 1 : Acquity BEH C18 (2.10 mm) Det: F1:MRM
Process Host: XAWRK017

First Level Reviewer: barnettj Date: 14-Dec-2016 10:33:20

Compound	Amount Added	Amount Recovered	% Rec.
$ 2 13C2 PFHxA	10.0	13.5	134.93
$ 10 13C2 PFDA	10.0	13.7	137.42

TestAmerica Sacramento

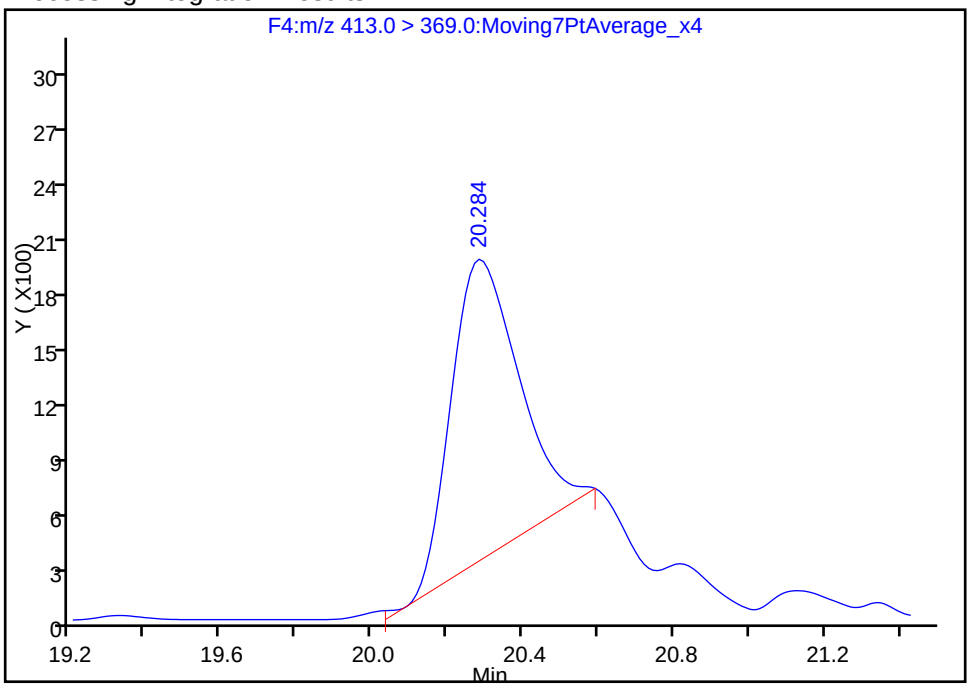
Data File:	\\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_137.d				
Injection Date:	14-Dec-2016 06:24:39	Instrument ID:	A6		
Lims ID:	320-24069-A-1-A	Lab Sample ID:			
Client ID:	WI-CV-1RW13-1216				
Operator ID:	CBW	ALS Bottle#:	22	Worklist Smp#:	63
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	537__A6	Limit Group:	LC 537 ICAL		
Column:	Acquity BEH C18 (2.10 mm)	Detector	F4:MRM		

6 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

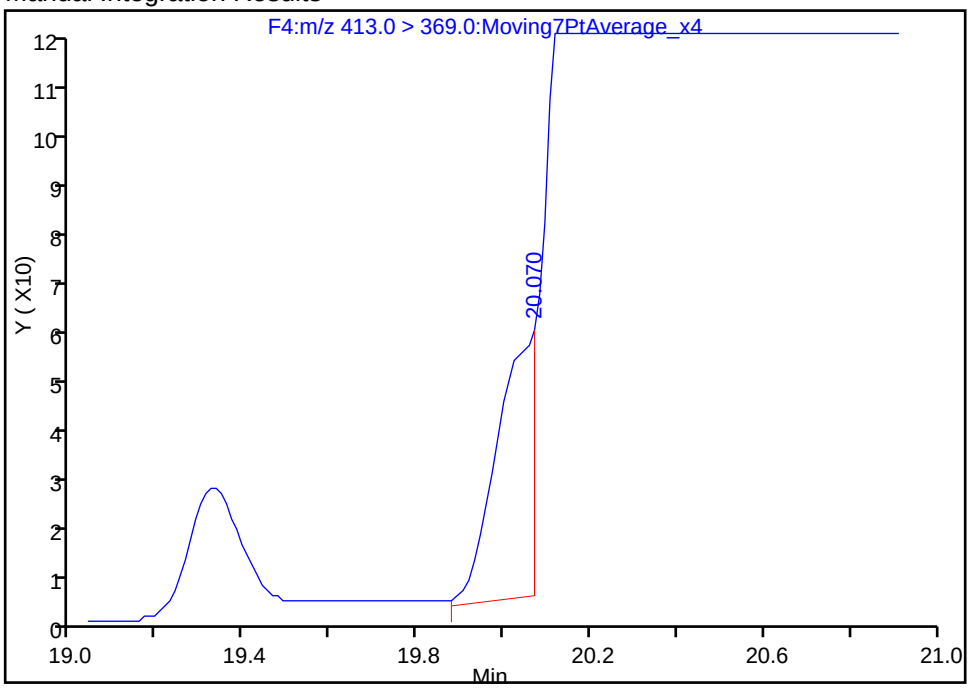
Processing Integration Results

RT: 20.28
Area: 20138
Amount: 0.378593
Amount Units: ng/ml



Manual Integration Results

RT: 20.07
Area: 300
Amount: 0.005640
Amount Units: ng/ml



Reviewer: barnettj, 14-Dec-2016 10:33:20
Audit Action: Manually Integrated Audit Reason: Split Peak

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento | Job No.: 320-24069-1

SDG No.:

Client Sample ID: WI-CV-1FB13-1216 | Lab Sample ID: 320-24069-2

Matrix: Water | Lab File ID: 11DEC2016A6A_094.d

Analysis Method: 537 | Date Collected: 12/02/2016 09:08

Extraction Method: 537 | Date Extracted: 12/08/2016 11:45

Sample wt/vol: 268.2(mL) | Date Analyzed: 12/13/2016 08:56

Con. Extract Vol.: 1.0(mL) | Dilution Factor: 1

Injection Volume: 10(uL) | GC Column: Acquity ID: 2.1(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 141768 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	0.045	U	0.056	0.045	0.014
335-67-1	Perfluorooctanoic acid (PFOA)	0.022	U	0.028	0.022	0.0088
375-73-5	Perfluorobutanesulfonic acid (PFBS)	0.10	U	0.13	0.10	0.044

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00993	13C2 PFHxA	112		70-130
STL00996	13C2 PFDA	118		70-130

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_094.d
Lims ID: 320-24069-A-2-A
Client ID: WI-CV-1FB13-1216
Sample Type: Client
Inject. Date: 13-Dec-2016 08:56:08 ALS Bottle#: 23 Worklist Smp#: 17
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 320-24069-a-2-a
Misc. Info.: Acquity BEH 1.7um, 3X150mm T=35*C
Operator ID: CBW Instrument ID: A6

Method: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\537__A6.m
Limit Group: LC 537 ICAL
Last Update: 13-Dec-2016 16:08:42 Calib Date: 05-Dec-2016 19:54:00
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d

Column 1 : Acquity BEH C18 (2.10 mm) Det: F1:MRM
Process Host: XAWRK022

First Level Reviewer: barnettj Date: 13-Dec-2016 14:22:57

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	S/N	Flags
$ 2 13C2 PFHxA								
315.0 > 270.0	18.603	18.603	0.0	1.000	937022	11.2	29914	
* 5 13C2-PFOA								
415.0 > 370.0	20.047	20.047	0.0		716053	10.0	18703	
* 8 13C4 PFOS								
503.0 > 80.0	20.667	20.667	0.0		2077875	28.7	54776	
9 Perfluorononanoic acid								
463.0 > 419.0	20.738	20.750	-0.012	1.000	5019	0.0618	148	
$ 10 13C2 PFDA								
515.0 > 470.0	21.471	21.480	-0.009	1.000	741079	11.8	23363	

TestAmerica Sacramento

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_094.d

Injection Date: 13-Dec-2016 08:56:08 Instrument ID: A6

Lims ID: 320-24069-A-2-A Lab Sample ID: 320-24069-2

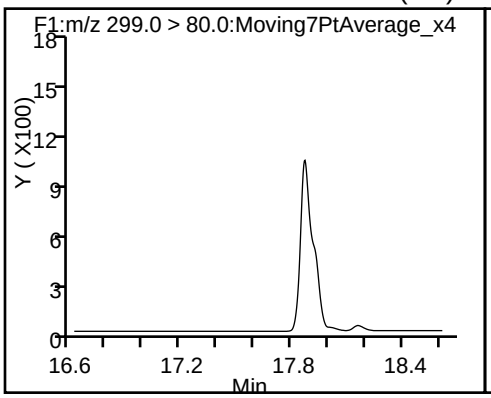
Client ID: WI-CV-1FB13-1216

Operator ID: CBW ALS Bottle#: 23 Worklist Smp#: 17

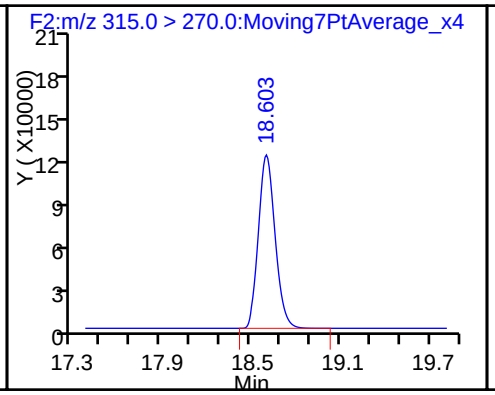
Injection Vol: 10.0 ul Dil. Factor: 1.0000

Method: 537__A6 Limit Group: LC 537 ICAL

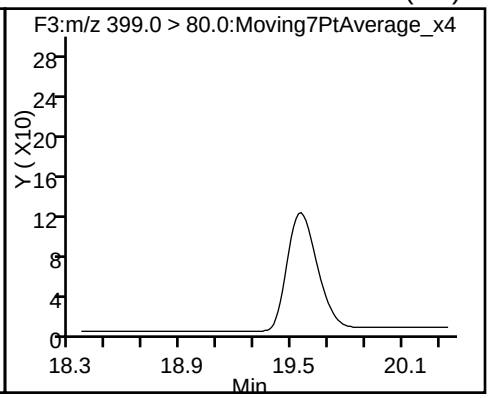
1 Perfluorobutanesulfonic acid (ND)



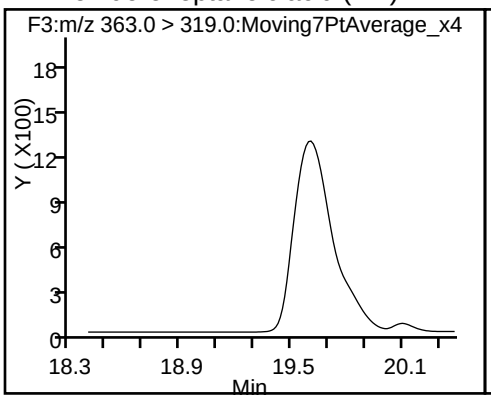
$ 2 13C2 PFHxA



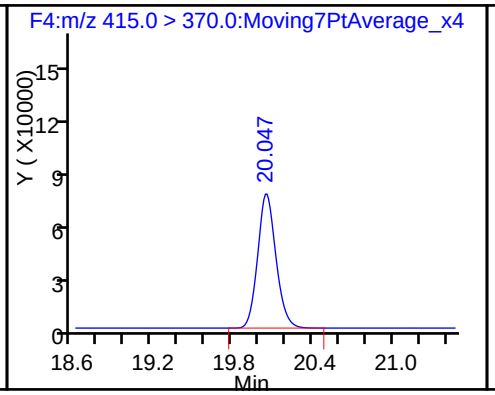
3 Perfluorohexanesulfonic acid (ND)



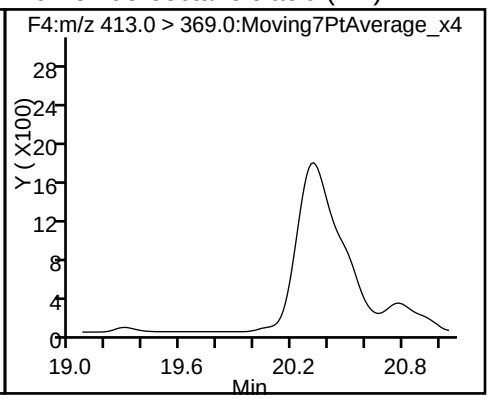
4 Perfluoroheptanoic acid (ND)



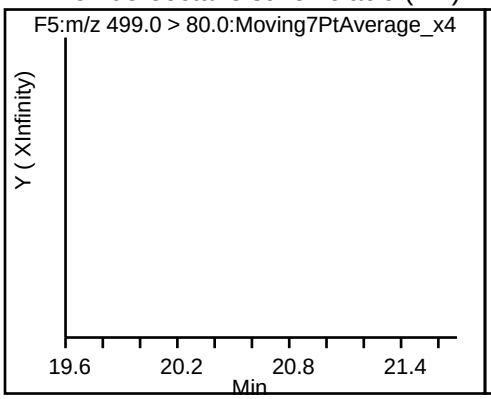
* 5 13C2-PFOA



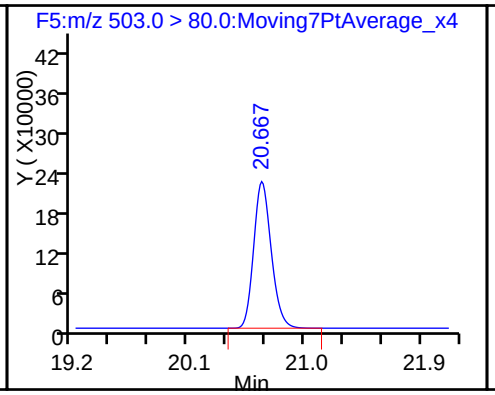
6 Perfluorooctanoic acid (ND)



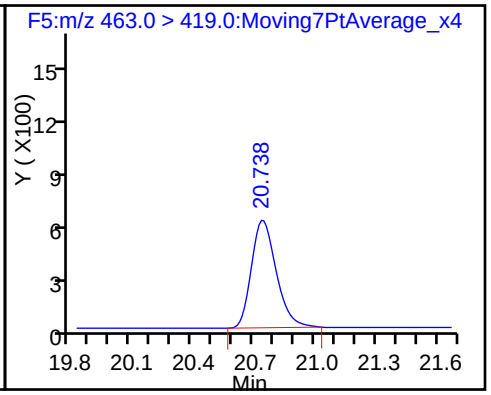
7 Perfluorooctane sulfonic acid (ND)



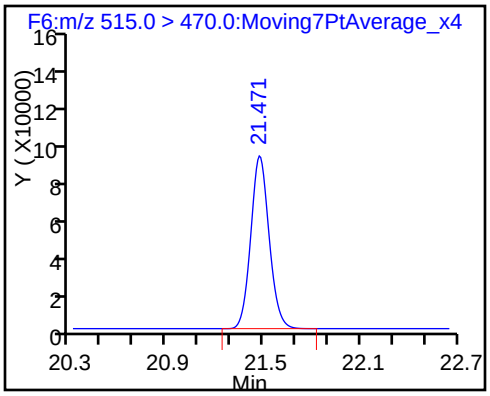
* 8 13C4 PFOS



9 Perfluorononanoic acid



$ 10 13C2 PFDA



TestAmerica Sacramento
Recovery Report

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_094.d
Lims ID: 320-24069-A-2-A
Client ID: WI-CV-1FB13-1216
Sample Type: Client
Inject. Date: 13-Dec-2016 08:56:08 ALS Bottle#: 23 Worklist Smp#: 17
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 320-24069-a-2-a
Misc. Info.: Acquity BEH 1.7um, 3X150mm T=35*C
Operator ID: CBW Instrument ID: A6

Method: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\537__A6.m
Limit Group: LC 537 ICAL
Last Update: 13-Dec-2016 16:08:42 Calib Date: 05-Dec-2016 19:54:00
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d

Column 1 : Acquity BEH C18 (2.10 mm) Det: F1:MRM
Process Host: XAWRK022

First Level Reviewer: barnettj Date: 13-Dec-2016 14:22:57

Compound	Amount Added	Amount Recovered	% Rec.
$ 2 13C2 PFHxA	10.0	11.2	112.18
$ 10 13C2 PFDA	10.0	11.8	118.11

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Client Sample ID: WI-CV-1RW14-1216 Lab Sample ID: 320-24069-3

Matrix: Water Lab File ID: 11DEC2016A6A_138.d

Analysis Method: 537 Date Collected: 12/02/2016 09:53

Extraction Method: 537 Date Extracted: 12/08/2016 11:45

Sample wt/vol: 261.9(mL) Date Analyzed: 12/14/2016 06:54

Con. Extract Vol.: 1.0(mL) Dilution Factor: 1

Injection Volume: 10(uL) GC Column: Acquity ID: 2.1(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 141771 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	0.046	U	0.057	0.046	0.015
335-67-1	Perfluorooctanoic acid (PFOA)	0.023	U	0.029	0.023	0.0090
375-73-5	Perfluorobutanesulfonic acid (PFBS)	0.11	U	0.13	0.11	0.045

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00993	13C2 PFHxA	130		70-130
STL00996	13C2 PFDA	129		70-130

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_138.d
Lims ID: 320-24069-A-3-A
Client ID: WI-CV-1RW14-1216
Sample Type: Client
Inject. Date: 14-Dec-2016 06:54:15 ALS Bottle#: 24 Worklist Smp#: 64
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 320-24069-a-3-a
Misc. Info.: Acquity BEH 1.7um, 3X150mm T=35*C
Operator ID: CBW Instrument ID: A6

Method: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\537__A6.m
Limit Group: LC 537 ICAL
Last Update: 14-Dec-2016 10:53:05 Calib Date: 05-Dec-2016 19:54:00
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d

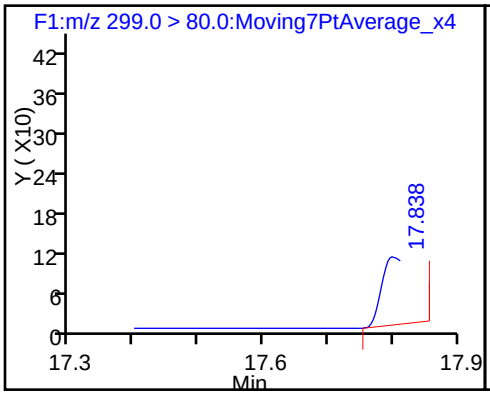
Column 1 : Acquity BEH C18 (2.10 mm) Det: F1:MRM
Process Host: XAWRK017

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	S/N	Flags
1 Perfluorobutanesulfonic acid								
299.0 > 80.0	17.838	17.605	0.233	1.000	1656	0.0391	6.1	
$ 2 13C2 PFHxA								
315.0 > 270.0	18.594	18.585	0.009	1.000	796531	13.0	25580	
4 Perfluoroheptanoic acid								
363.0 > 319.0	19.380	19.380	0.0	1.000	205	0.003202	0.3	
* 5 13C2-PFOA								
415.0 > 370.0	20.035	20.035	0.0		526919	10.0	13811	
* 8 13C4 PFOS								
503.0 > 80.0	20.667	20.667	0.0		1730705	28.7	45073	
$ 10 13C2 PFDA								
515.0 > 470.0	21.471	21.471	0.0	1.000	595564	12.9	18844	

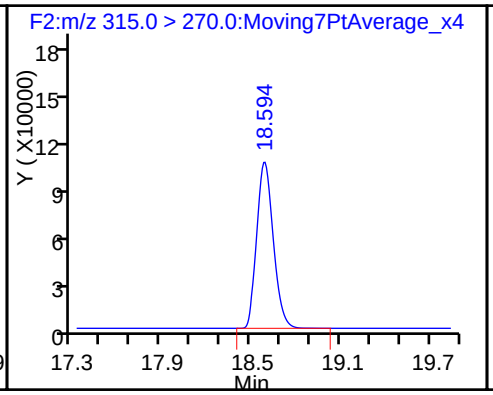
TestAmerica Sacramento

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_138.d
Injection Date: 14-Dec-2016 06:54:15 Instrument ID: A6
Lims ID: 320-24069-A-3-A Lab Sample ID:
Client ID: WI-CV-1RW14-1216
Operator ID: CBW ALS Bottle#: 24 Worklist Smp#: 64
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 537__A6 Limit Group: LC 537 ICAL

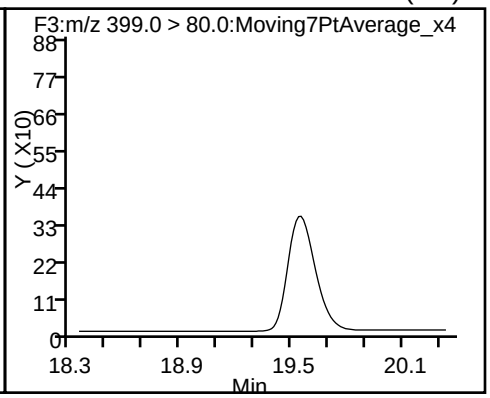
1 Perfluorobutanesulfonic acid



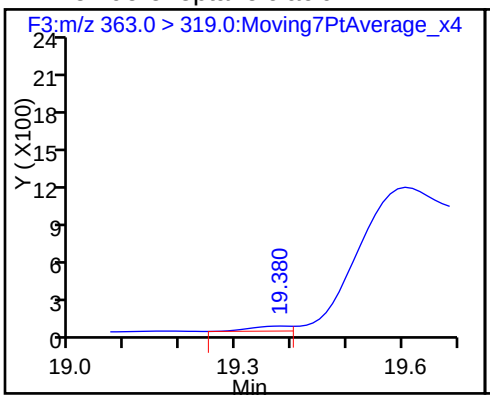
$ 2 13C2 PFHxA



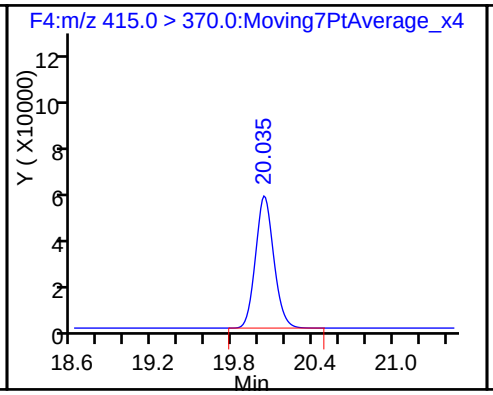
3 Perfluorohexanesulfonic acid (ND)



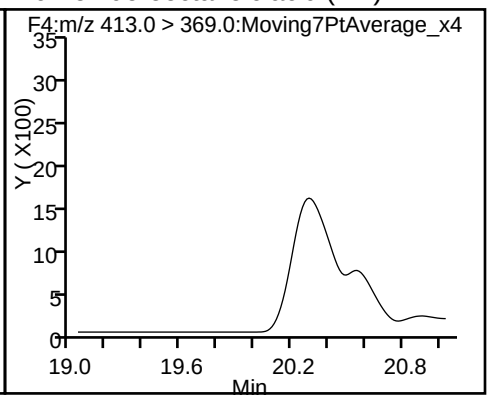
4 Perfluoroheptanoic acid



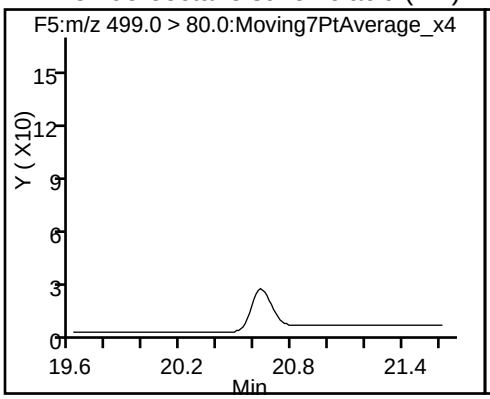
* 5 13C2-PFOA



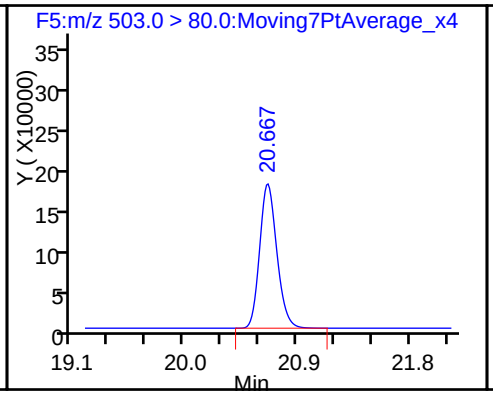
6 Perfluorooctanoic acid (ND)



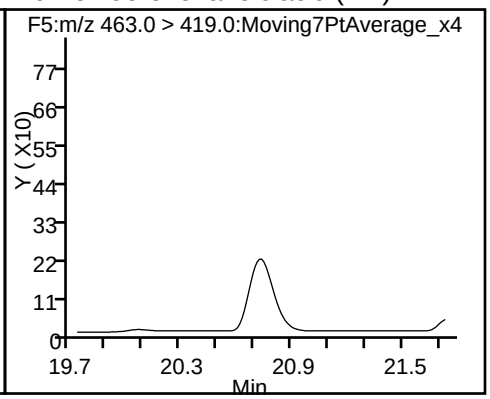
7 Perfluorooctane sulfonic acid (ND)



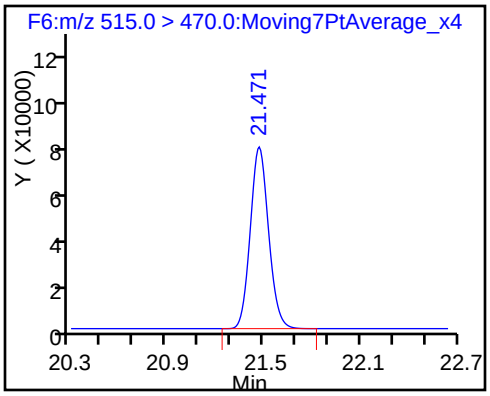
* 8 13C4 PFOS



9 Perfluorononanoic acid (ND)



$ 10 13C2 PFDA



TestAmerica Sacramento
Recovery Report

Data File:	\\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_138.d				
Lims ID:	320-24069-A-3-A				
Client ID:	WI-CV-1RW14-1216				
Sample Type:	Client				
Inject. Date:	14-Dec-2016 06:54:15	ALS Bottle#:	24	Worklist Smp#:	64
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Sample Info:	320-24069-a-3-a				
Misc. Info.:	Acquity BEH 1.7um, 3X150mm T=35*C				
Operator ID:	CBW	Instrument ID:	A6		
Method:	\\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\537__A6.m				
Limit Group:	LC 537 ICAL				
Last Update:	14-Dec-2016 10:53:05	Calib Date:	05-Dec-2016 19:54:00		
Integrator:	Picker				
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d				
Column 1 :	Acquity BEH C18 (2.10 mm)		Det: F1:MRM		
Process Host:	XAWRK017				

Compound	Amount Added	Amount Recovered	% Rec.
$ 2 13C2 PFHxA	10.0	13.0	129.59
$ 10 13C2 PFDA	10.0	12.9	128.99

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Client Sample ID: WI-CV-1FB14-1216 Lab Sample ID: 320-24069-4

Matrix: Water Lab File ID: 11DEC2016A6A_139.d

Analysis Method: 537 Date Collected: 12/02/2016 09:52

Extraction Method: 537 Date Extracted: 12/08/2016 11:45

Sample wt/vol: 257.1(mL) Date Analyzed: 12/14/2016 07:23

Con. Extract Vol.: 1.0(mL) Dilution Factor: 1

Injection Volume: 10(uL) GC Column: Acquity ID: 2.1(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 141771 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	0.047	U M	0.058	0.047	0.015
335-67-1	Perfluorooctanoic acid (PFOA)	0.023	U M	0.029	0.023	0.0092
375-73-5	Perfluorobutanesulfonic acid (PFBS)	0.11	U	0.14	0.11	0.046

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00993	13C2 PFHxA	115		70-130
STL00996	13C2 PFDA	117		70-130

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_139.d
Lims ID: 320-24069-A-4-A
Client ID: WI-CV-1FB14-1216
Sample Type: Client
Inject. Date: 14-Dec-2016 07:23:53 ALS Bottle#: 25 Worklist Smp#: 65
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 320-24069-a-4-a
Misc. Info.: Acquity BEH 1.7um, 3X150mm T=35*C
Operator ID: CBW Instrument ID: A6

Method: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\537__A6.m
Limit Group: LC 537 ICAL
Last Update: 14-Dec-2016 10:53:05 Calib Date: 05-Dec-2016 19:54:00
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d

Column 1 : Acquity BEH C18 (2.10 mm) Det: F1:MRM
Process Host: XAWRK017

First Level Reviewer: barnettj Date: 14-Dec-2016 10:44:42

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	S/N	Flags
1 Perfluorobutanesulfonic acid								
299.0 > 80.0	17.624	17.605	0.019	1.000	3324	0.0711	3.9	
$ 2 13C2 PFHxA								
315.0 > 270.0	18.585	18.585	0.0	1.000	880895	11.5	28580	
* 5 13C2-PFOA								
415.0 > 370.0	20.035	20.035	0.0		657974	10.0	17076	
6 Perfluorooctanoic acid								M
413.0 > 369.0	20.082	20.035	0.047	1.000	467	0.006822	1.0	M
7 Perfluorooctane sulfonic acid								M
499.0 > 80.0	20.679	20.619	0.060	1.000	1105	0.0159	27.0	M
* 8 13C4 PFOS								
503.0 > 80.0	20.667	20.667	0.0		1910837	28.7	39845	
$ 10 13C2 PFDA								
515.0 > 470.0	21.471	21.471	0.0	1.000	673445	11.7	21075	

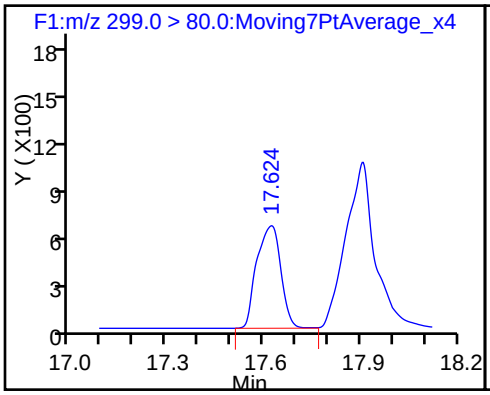
QC Flag Legend

Review Flags
M - Manually Integrated

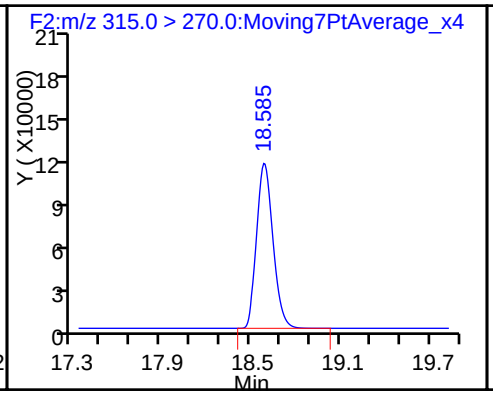
TestAmerica Sacramento

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_139.d
Injection Date: 14-Dec-2016 07:23:53 Instrument ID: A6
Lims ID: 320-24069-A-4-A Lab Sample ID:
Client ID: WI-CV-1FB14-1216
Operator ID: CBW ALS Bottle#: 25 Worklist Smp#: 65
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 537__A6 Limit Group: LC 537 ICAL

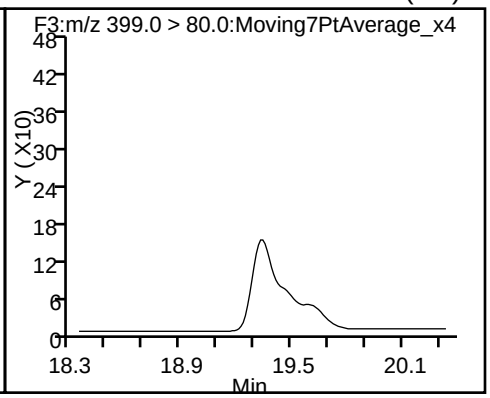
1 Perfluorobutanesulfonic acid



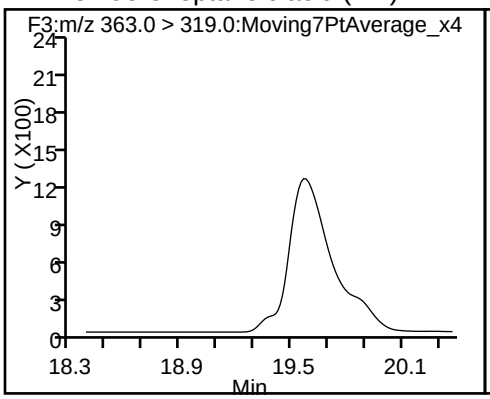
$ 2 13C2 PFHxA



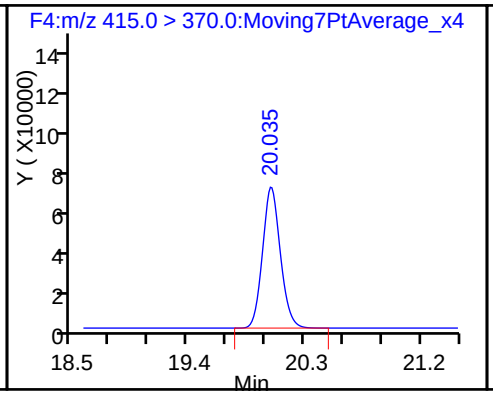
3 Perfluorohexanesulfonic acid (ND)



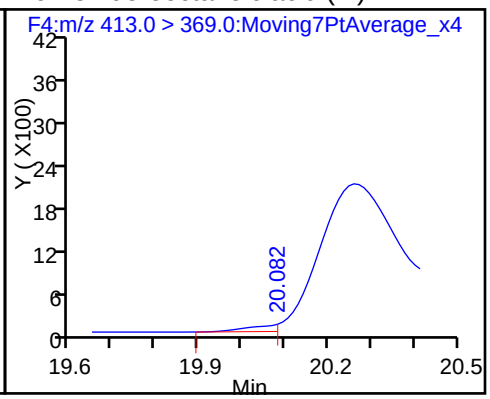
4 Perfluoroheptanoic acid (ND)



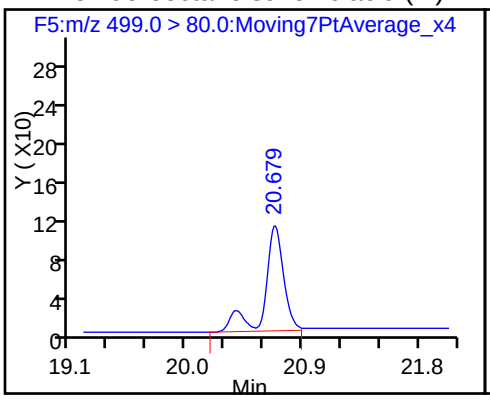
* 5 13C2-PFOA



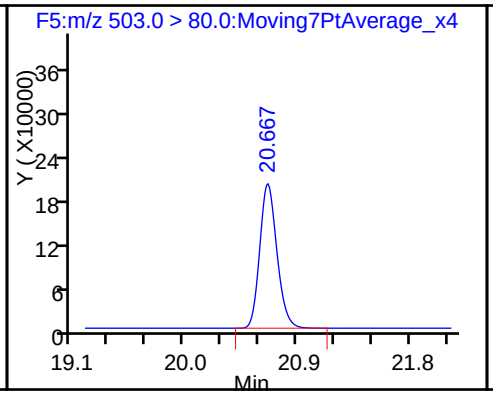
6 Perfluorooctanoic acid (M)



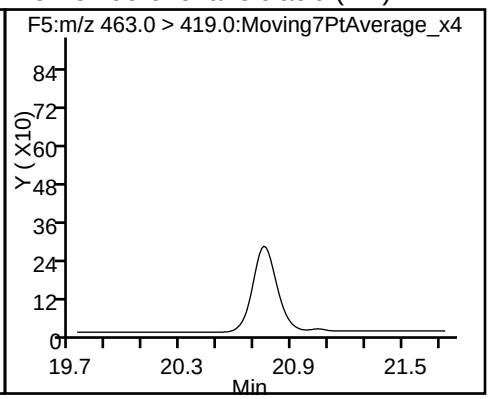
7 Perfluorooctane sulfonic acid (M)



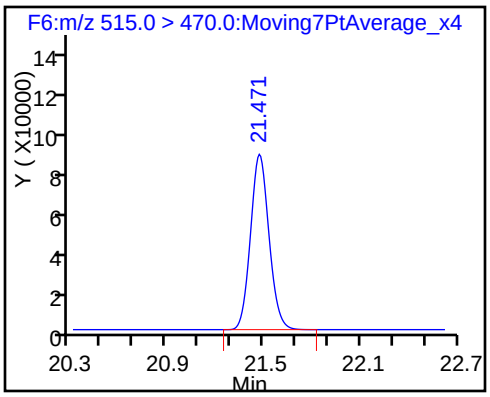
* 8 13C4 PFOS



9 Perfluorononanoic acid (ND)



$ 10 13C2 PFDA



TestAmerica Sacramento
Recovery Report

Data File:	\\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_139.d				
Lims ID:	320-24069-A-4-A				
Client ID:	WI-CV-1FB14-1216				
Sample Type:	Client				
Inject. Date:	14-Dec-2016 07:23:53	ALS Bottle#:	25	Worklist Smp#:	65
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Sample Info:	320-24069-a-4-a				
Misc. Info.:	Acquity BEH 1.7um, 3X150mm T=35*C				
Operator ID:	CBW	Instrument ID:	A6		
Method:	\\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\537__A6.m				
Limit Group:	LC 537 ICAL				
Last Update:	14-Dec-2016 10:53:05	Calib Date:	05-Dec-2016 19:54:00		
Integrator:	Picker				
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d				
Column 1 :	Acquity BEH C18 (2.10 mm)		Det: F1:MRM		
Process Host:	XAWRK017				

First Level Reviewer: barnettj Date: 14-Dec-2016 10:44:42

Compound	Amount Added	Amount Recovered	% Rec.
$ 2 13C2 PFHxA	10.0	11.5	114.77
$ 10 13C2 PFDA	10.0	11.7	116.80

Manual Integration/User Assign Peak Report

TestAmerica Sacramento

Data File:	\\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_139.d				
Injection Date:	14-Dec-2016 07:23:53	Instrument ID:	A6		
Lims ID:	320-24069-A-4-A	Lab Sample ID:			
Client ID:	WI-CV-1FB14-1216				
Operator ID:	CBW	ALS Bottle#:	25	Worklist Smp#:	65
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	537__A6	Limit Group:	LC 537 ICAL		
Column:	Acquity BEH C18 (2.10 mm)	Detector	F5:MRM		

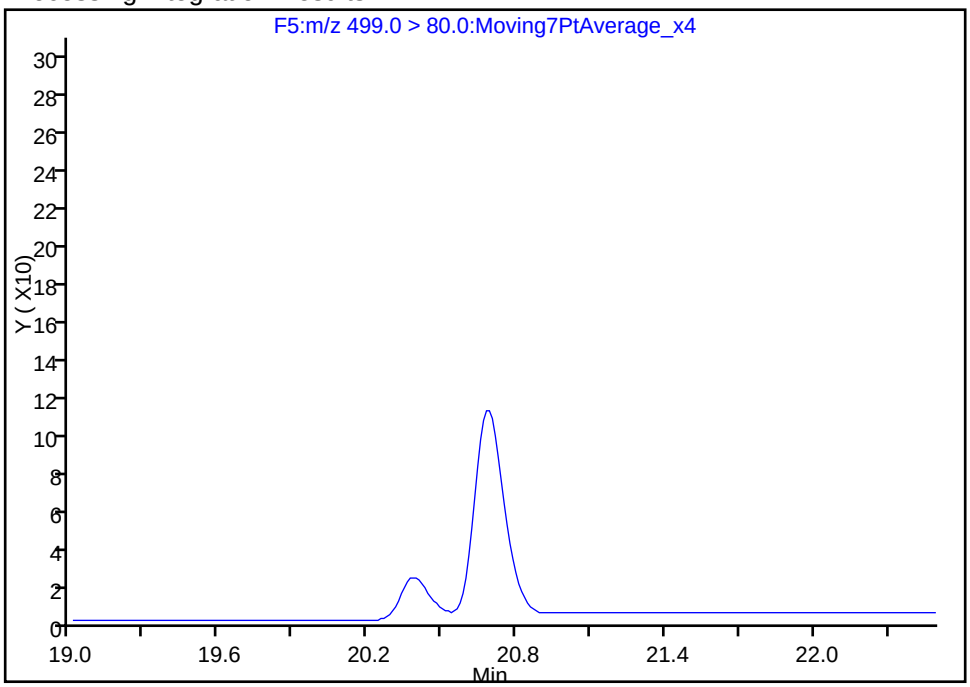
7 Perfluorooctane sulfonic acid, CAS: 1763-23-1

Signal: 1

Processing Integration Results

Not Detected

Expected RT: 20.62



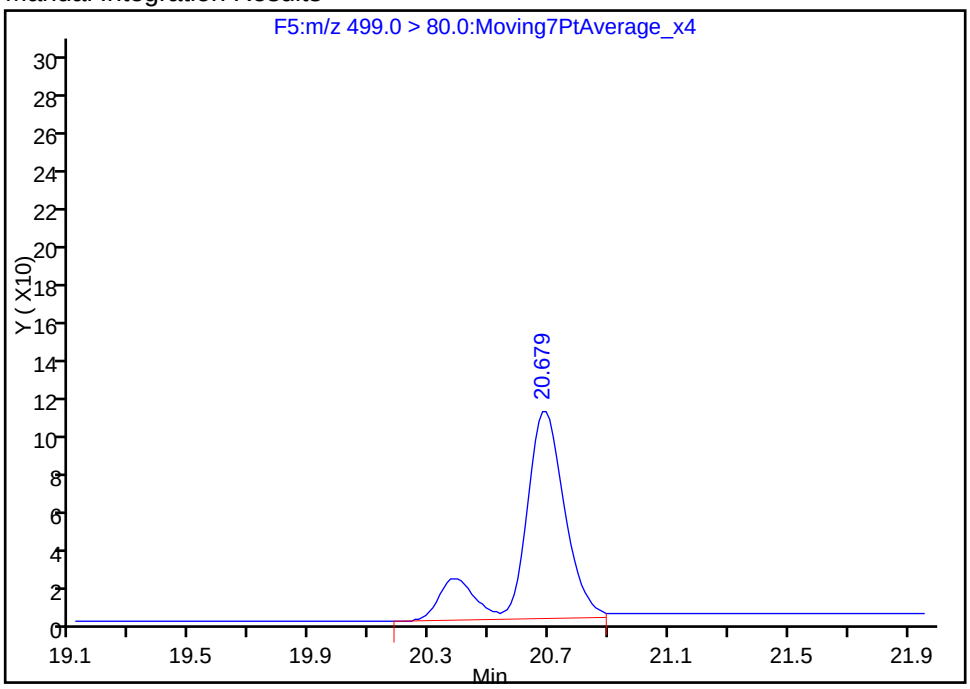
Manual Integration Results

RT: 20.68

Area: 1105

Amount: 0.015886

Amount Units: ng/ml



Reviewer: barnettj, 14-Dec-2016 10:44:42

Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

TestAmerica Sacramento

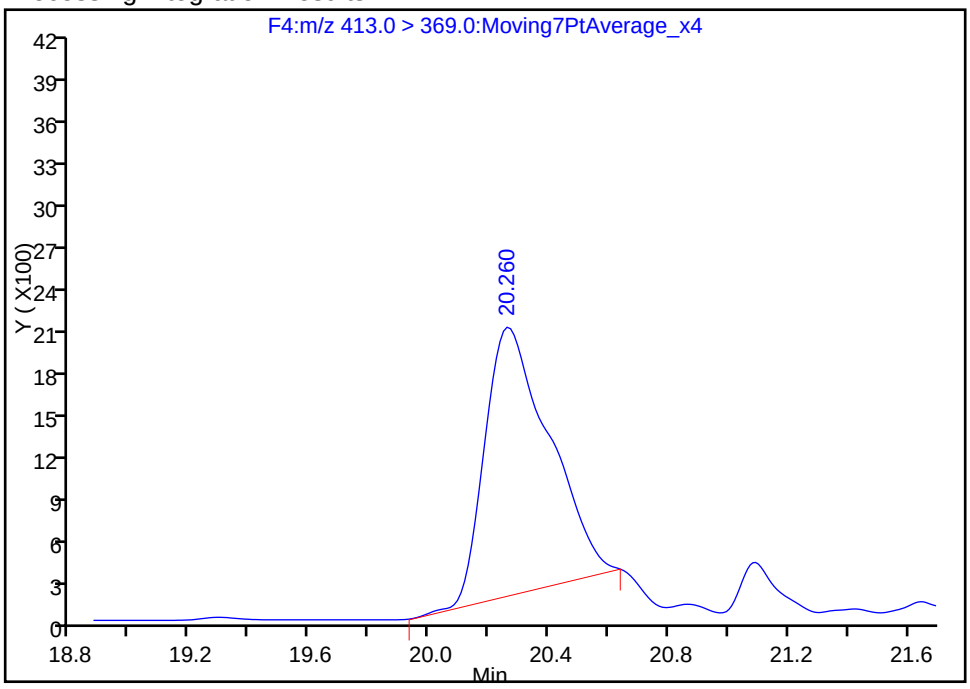
Data File:	\\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_139.d				
Injection Date:	14-Dec-2016 07:23:53	Instrument ID:	A6		
Lims ID:	320-24069-A-4-A	Lab Sample ID:			
Client ID:	WI-CV-1FB14-1216				
Operator ID:	CBW	ALS Bottle#:	25	Worklist Smp#:	65
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	537__A6	Limit Group:	LC 537 ICAL		
Column:	Acquity BEH C18 (2.10 mm)	Detector	F4:MRM		

6 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

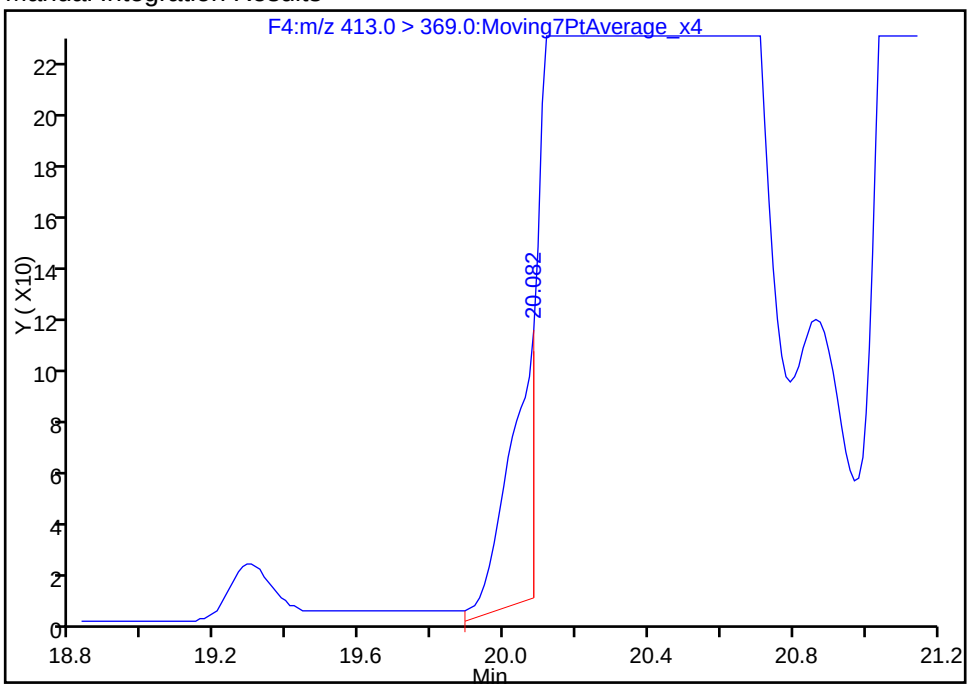
Processing Integration Results

RT: 20.26
Area: 29108
Amount: 0.425200
Amount Units: ng/ml



Manual Integration Results

RT: 20.08
Area: 467
Amount: 0.006822
Amount Units: ng/ml



Reviewer: barnettj, 14-Dec-2016 10:44:42

Audit Action: Manually Integrated Audit Reason: Split Peak

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento | Job No.: 320-24069-1

SDG No.:

Client Sample ID: WI-CV-1RW15-1216 | Lab Sample ID: 320-24069-5

Matrix: Water | Lab File ID: 11DEC2016A6A_140.d

Analysis Method: 537 | Date Collected: 12/02/2016 11:25

Extraction Method: 537 | Date Extracted: 12/08/2016 11:45

Sample wt/vol: 255.2(mL) | Date Analyzed: 12/14/2016 07:53

Con. Extract Vol.: 1.0(mL) | Dilution Factor: 1

Injection Volume: 10(uL) | GC Column: Acquity ID: 2.1(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 141771 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	0.047	U	0.059	0.047	0.015
335-67-1	Perfluorooctanoic acid (PFOA)	0.024	U	0.029	0.024	0.0092
375-73-5	Perfluorobutanesulfonic acid (PFBS)	0.11	U	0.14	0.11	0.047

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00993	13C2 PFHxA	142	Q	70-130
STL00996	13C2 PFDA	140	Q	70-130

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_140.d
Lims ID: 320-24069-A-5-A
Client ID: WI-CV-1RW15-1216
Sample Type: Client
Inject. Date: 14-Dec-2016 07:53:28 ALS Bottle#: 26 Worklist Smp#: 66
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 320-24069-a-5-a
Misc. Info.: Acquity BEH 1.7um, 3X150mm T=35*C
Operator ID: CBW Instrument ID: A6

Method: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\537__A6.m
Limit Group: LC 537 ICAL
Last Update: 14-Dec-2016 10:53:05 Calib Date: 05-Dec-2016 19:54:00
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d

Column 1 : Acquity BEH C18 (2.10 mm) Det: F1:MRM
Process Host: XAWRK017

First Level Reviewer: barnettj Date: 14-Dec-2016 10:48:05

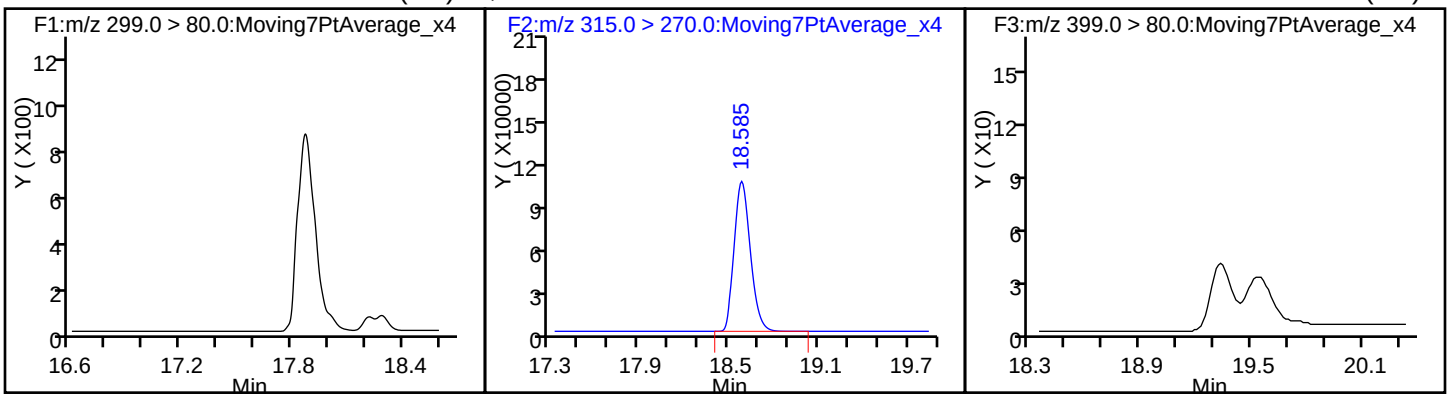
Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	S/N	Flags
$ 2 13C2 PFHxA								
315.0 > 270.0	18.585	18.585	0.0	1.000	792206	14.2	25998	
* 5 13C2-PFOA								s
415.0 > 370.0	20.035	20.035	0.0		476576	10.0	12396	
* 8 13C4 PFOS								
503.0 > 80.0	20.655	20.667	-0.012		1650013	28.7	28426	
$ 10 13C2 PFDA								
515.0 > 470.0	21.462	21.471	-0.009	1.000	586598	14.0	18477	

QC Flag Legend

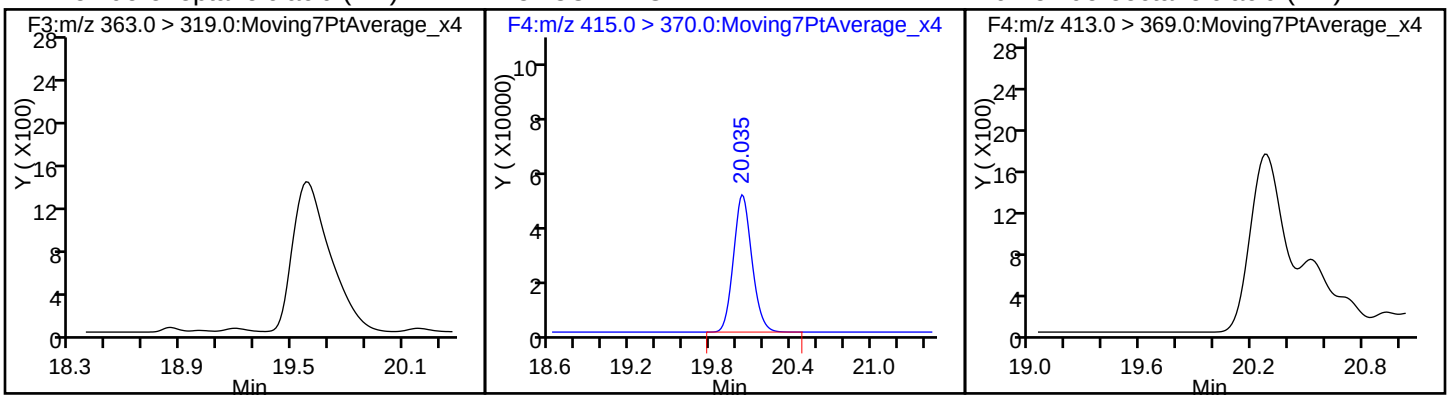
Processing Flags
s - Failed ISTD Recovery Test

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_140.d
Injection Date: 14-Dec-2016 07:53:28 Instrument ID: A6
Lims ID: 320-24069-A-5-A Lab Sample ID:
Client ID: WI-CV-1RW15-1216
Operator ID: CBW ALS Bottle#: 26 Worklist Smp#: 66
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 537__A6 Limit Group: LC 537 ICAL

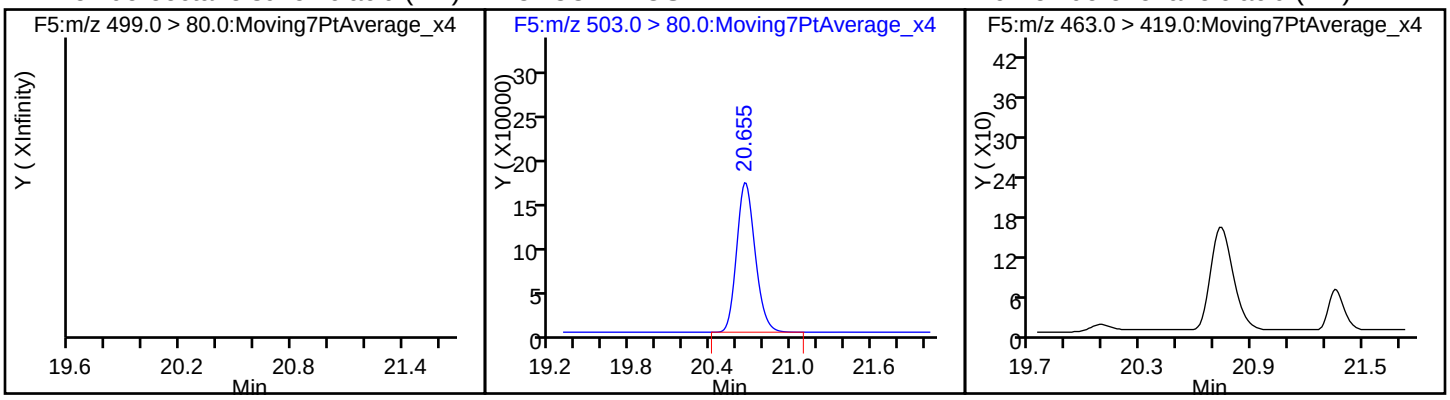
1 Perfluorobutanesulfonic acid (ND) $ 2 13C2 PFHxA 3 Perfluorohexanesulfonic acid (ND)



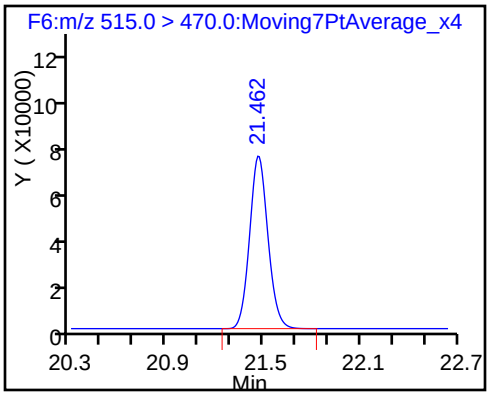
4 Perfluoroheptanoic acid (ND) * 5 13C2-PFOA 6 Perfluorooctanoic acid (ND)



7 Perfluorooctane sulfonic acid (ND) * 8 13C4 PFOS 9 Perfluorononanoic acid (ND)



$ 10 13C2 PFDA



TestAmerica Sacramento
Recovery Report

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_140.d
Lims ID: 320-24069-A-5-A
Client ID: WI-CV-1RW15-1216
Sample Type: Client
Inject. Date: 14-Dec-2016 07:53:28 ALS Bottle#: 26 Worklist Smp#: 66
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 320-24069-a-5-a
Misc. Info.: Acquity BEH 1.7um, 3X150mm T=35*C
Operator ID: CBW Instrument ID: A6

Method: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\537__A6.m
Limit Group: LC 537 ICAL
Last Update: 14-Dec-2016 10:53:05 Calib Date: 05-Dec-2016 19:54:00
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d

Column 1 : Acquity BEH C18 (2.10 mm) Det: F1:MRM
Process Host: XAWRK017

First Level Reviewer: barnettj Date: 14-Dec-2016 10:48:05

Compound	Amount Added	Amount Recovered	% Rec.
$ 2 13C2 PFHxA	10.0	14.2	142.50
$ 10 13C2 PFDA	10.0	14.0	140.46

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento | Job No.: 320-24069-1

SDG No.:

Client Sample ID: WI-CV-1FB15-1216 | Lab Sample ID: 320-24069-6

Matrix: Water | Lab File ID: 11DEC2016A6A_098.d

Analysis Method: 537 | Date Collected: 12/02/2016 11:24

Extraction Method: 537 | Date Extracted: 12/08/2016 11:45

Sample wt/vol: 255.7(mL) | Date Analyzed: 12/13/2016 10:54

Con. Extract Vol.: 1.0(mL) | Dilution Factor: 1

Injection Volume: 10(uL) | GC Column: Acquity ID: 2.1(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 141768 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	0.047	U	0.059	0.047	0.015
335-67-1	Perfluorooctanoic acid (PFOA)	0.023	U M	0.029	0.023	0.0092
375-73-5	Perfluorobutanesulfonic acid (PFBS)	0.11	U	0.14	0.11	0.047

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00993	13C2 PFHxA	124		70-130
STL00996	13C2 PFDA	125		70-130

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_098.d
Lims ID: 320-24069-A-6-A
Client ID: WI-CV-1FB15-1216
Sample Type: Client
Inject. Date: 13-Dec-2016 10:54:33 ALS Bottle#: 27 Worklist Smp#: 21
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 320-24069-a-6-a
Misc. Info.: Acquity BEH 1.7um, 3X150mm T=35*C
Operator ID: CBW Instrument ID: A6

Method: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\537__A6.m
Limit Group: LC 537 ICAL
Last Update: 13-Dec-2016 16:08:42 Calib Date: 05-Dec-2016 19:54:00
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d

Column 1 : Acquity BEH C18 (2.10 mm) Det: F1:MRM
Process Host: XAWRK022

First Level Reviewer: barnettj Date: 13-Dec-2016 15:17:02

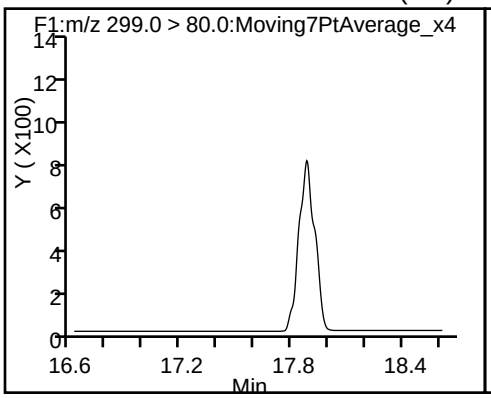
Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	S/N	Flags
$ 2 13C2 PFHxA								
315.0 > 270.0	18.576	18.603	-0.027	1.000	897872	12.4	28924	
* 5 13C2-PFOA								s
415.0 > 370.0	20.035	20.047	-0.012		618501	10.0	15936	
6 Perfluorooctanoic acid								M
413.0 > 369.0	20.011	20.058	-0.047	1.000	337	0.005237	0.1	M
* 8 13C4 PFOS								
503.0 > 80.0	20.655	20.667	-0.012		1770011	28.7	46505	
9 Perfluorononanoic acid								M
463.0 > 419.0	20.714	20.750	-0.036	1.000	1417	0.0202	42.5	M
$ 10 13C2 PFDA								
515.0 > 470.0	21.453	21.480	-0.027	1.000	675170	12.5	21085	

QC Flag Legend

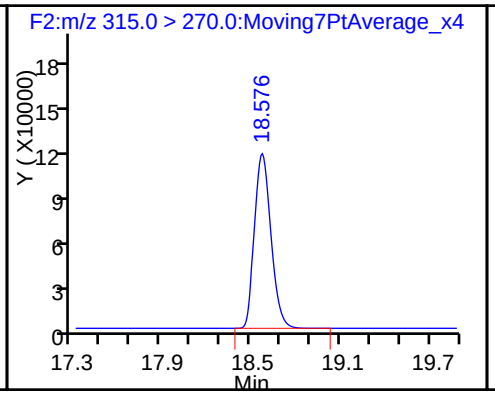
Processing Flags
s - Failed ISTD Recovery Test
Review Flags
M - Manually Integrated

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_098.d
Injection Date: 13-Dec-2016 10:54:33 Instrument ID: A6
Lims ID: 320-24069-A-6-A Lab Sample ID: 320-24069-6
Client ID: WI-CV-1FB15-1216
Operator ID: CBW ALS Bottle#: 27 Worklist Smp#: 21
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 537__A6 Limit Group: LC 537 ICAL

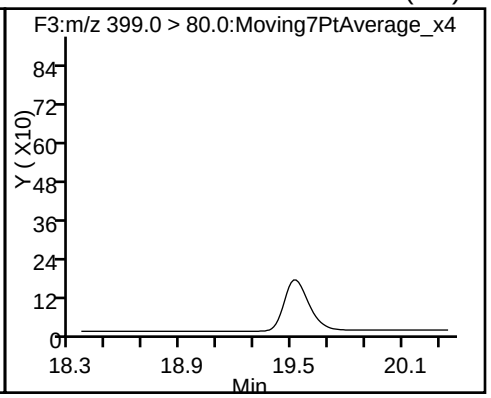
1 Perfluorobutanesulfonic acid (ND)



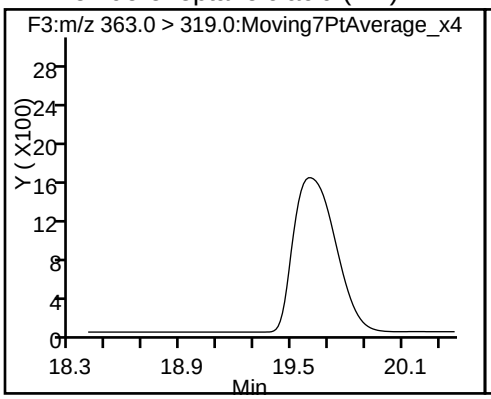
$ 2 13C2 PFHxA



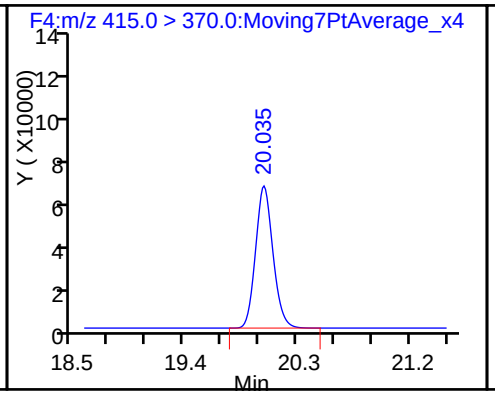
3 Perfluorohexanesulfonic acid (ND)



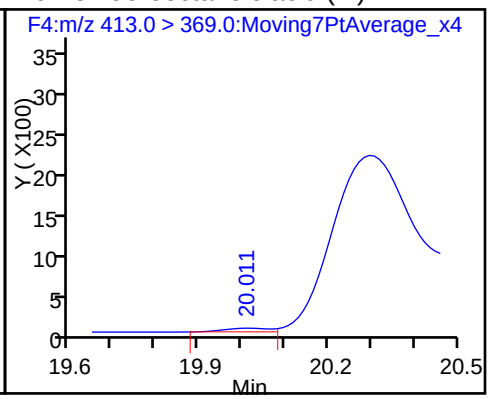
4 Perfluoroheptanoic acid (ND)



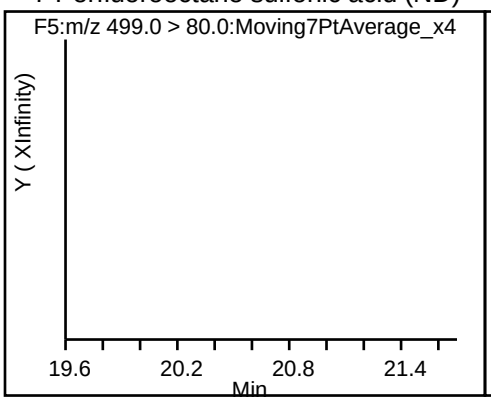
* 5 13C2-PFOA



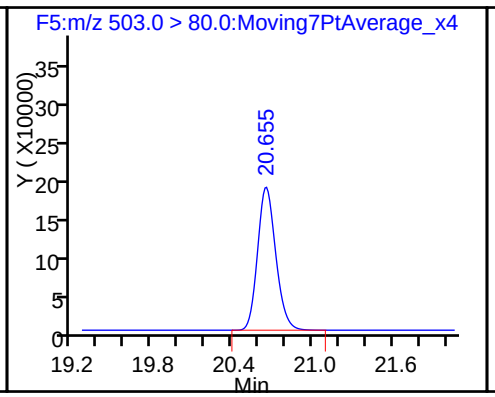
6 Perfluorooctanoic acid (M)



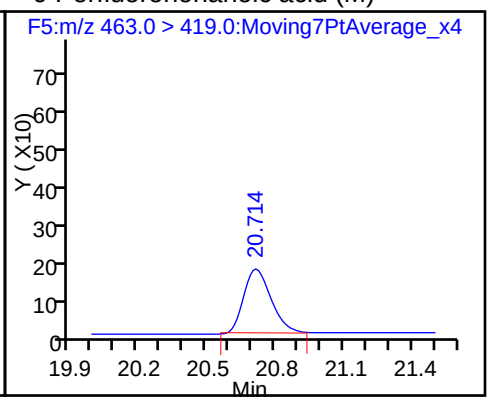
7 Perfluorooctane sulfonic acid (ND)



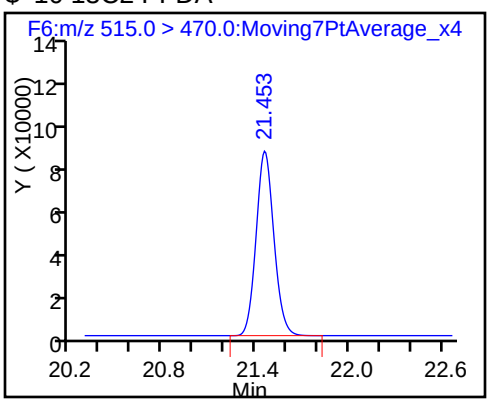
* 8 13C4 PFOS



9 Perfluorononanoic acid (M)



$ 10 13C2 PFDA



TestAmerica Sacramento
Recovery Report

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_098.d
Lims ID: 320-24069-A-6-A
Client ID: WI-CV-1FB15-1216
Sample Type: Client
Inject. Date: 13-Dec-2016 10:54:33 ALS Bottle#: 27 Worklist Smp#: 21
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 320-24069-a-6-a
Misc. Info.: Acquity BEH 1.7um, 3X150mm T=35*C
Operator ID: CBW Instrument ID: A6

Method: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\537__A6.m
Limit Group: LC 537 ICAL
Last Update: 13-Dec-2016 16:08:42 Calib Date: 05-Dec-2016 19:54:00
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d

Column 1 : Acquity BEH C18 (2.10 mm) Det: F1:MRM
Process Host: XAWRK022

First Level Reviewer: barnettj Date: 13-Dec-2016 15:17:02

Compound	Amount Added	Amount Recovered	% Rec.
$ 2 13C2 PFHxA	10.0	12.4	124.45
$ 10 13C2 PFDA	10.0	12.5	124.58

Manual Integration/User Assign Peak Report

TestAmerica Sacramento

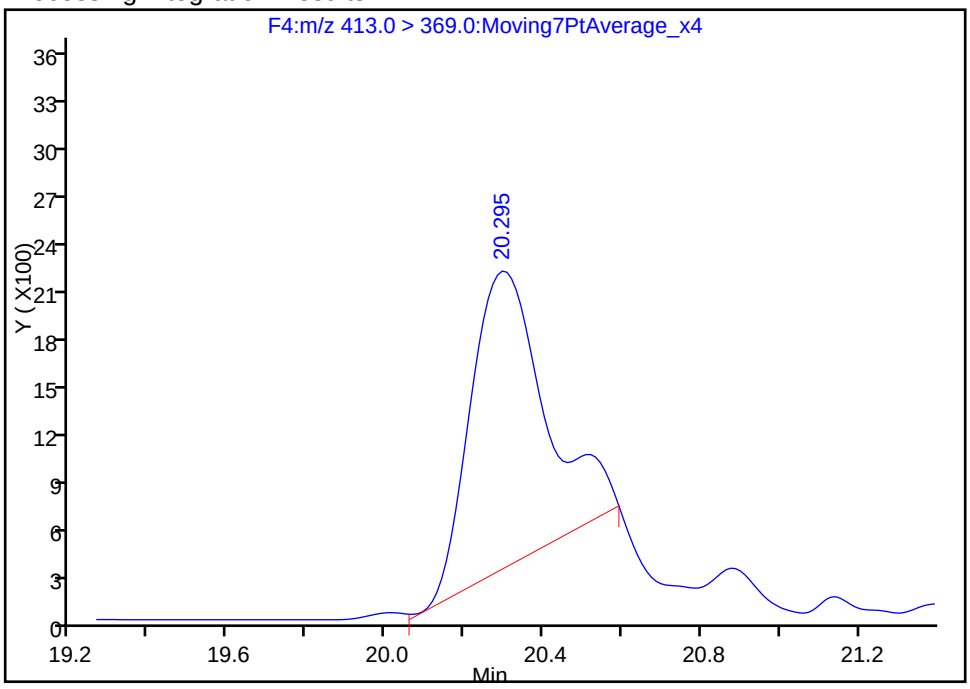
Data File:	\\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_098.d				
Injection Date:	13-Dec-2016 10:54:33	Instrument ID:	A6		
Lims ID:	320-24069-A-6-A	Lab Sample ID:	320-24069-6		
Client ID:	WI-CV-1FB15-1216				
Operator ID:	CBW	ALS Bottle#:	27	Worklist Smp#:	21
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	537__A6	Limit Group:	LC 537 ICAL		
Column:	Acquity BEH C18 (2.10 mm)	Detector	F4:MRM		

6 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

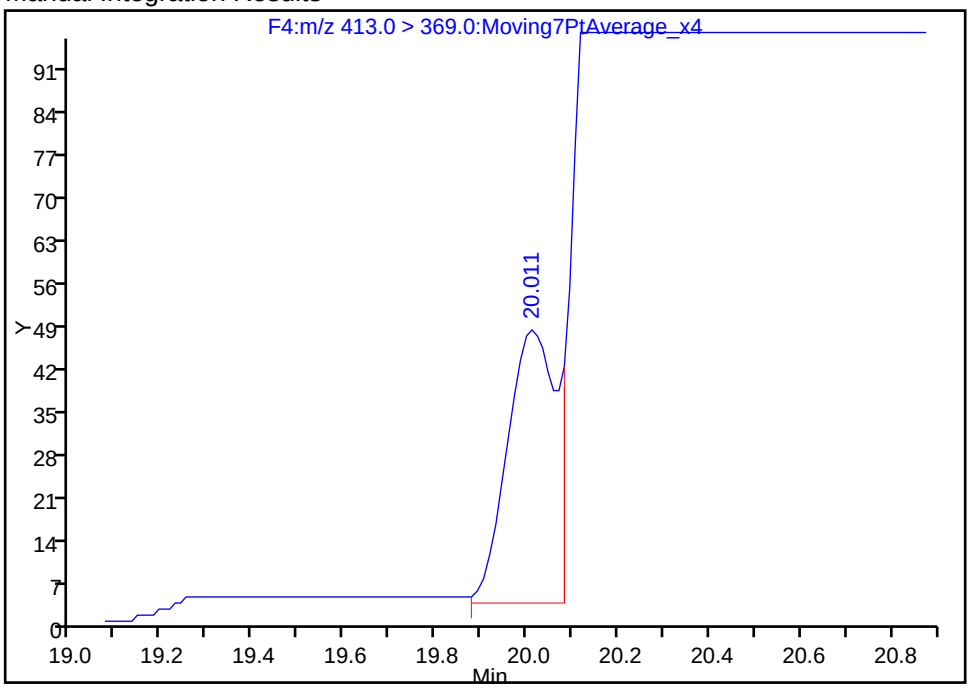
Processing Integration Results

RT: 20.30
Area: 24358
Amount: 0.378521
Amount Units: ng/ml



Manual Integration Results

RT: 20.01
Area: 337
Amount: 0.005237
Amount Units: ng/ml



Reviewer: barnettj, 13-Dec-2016 15:17:02

Audit Action: Manually Integrated Audit Reason: Split Peak

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento | Job No.: 320-24069-1

SDG No.:

Client Sample ID: WI-CV-1FB15-1216 RA | Lab Sample ID: 320-24069-6 RA

Matrix: Water | Lab File ID: 11DEC2016A6A_141.d

Analysis Method: 537 | Date Collected: 12/02/2016 11:24

Extraction Method: 537 | Date Extracted: 12/08/2016 11:45

Sample wt/vol: 255.7(mL) | Date Analyzed: 12/14/2016 08:23

Con. Extract Vol.: 1.0(mL) | Dilution Factor: 1

Injection Volume: 10(uL) | GC Column: Acquity ID: 2.1(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 141771 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
1763-23-1	*Perfluorooctanesulfonic acid (PFOS)*	*0.047*	*U*	*0.059*	0.047	*0.015*
335-67-1	*Perfluorooctanoic acid (PFOA)*	*0.023*	*U*	*0.029*	0.023	*0.0092*
375-73-5	*Perfluorobutanesulfonic acid (PFBS)*	*0.11*	*U*	*0.14*	0.11	*0.047*

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00993	13C2 PFHxA	126		70-130
STL00996	13C2 PFDA	131	*Q*	70-130

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_141.d
Lims ID: 320-24069-A-6-A
Client ID: WI-CV-1FB15-1216
Sample Type: Client
Inject. Date: 14-Dec-2016 08:23:04 ALS Bottle#: 27 Worklist Smp#: 67
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 320-24069-a-6-a
Misc. Info.: Acquity BEH 1.7um, 3X150mm T=35*C
Operator ID: CBW Instrument ID: A6

Method: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\537__A6.m
Limit Group: LC 537 ICAL
Last Update: 14-Dec-2016 10:53:05 Calib Date: 05-Dec-2016 19:54:00
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d

Column 1 : Acquity BEH C18 (2.10 mm) Det: F1:MRM
Process Host: XAWRK017

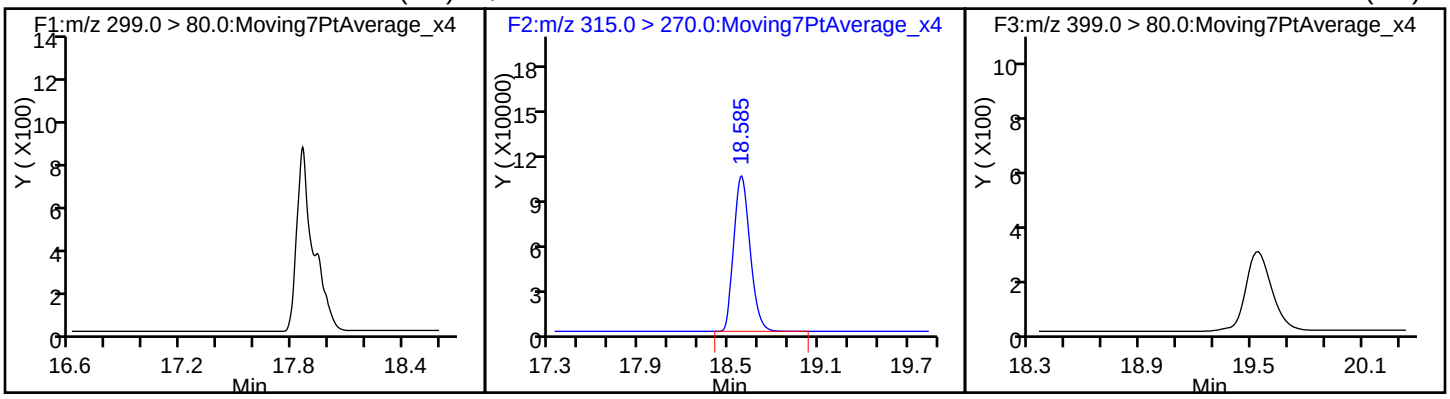
First Level Reviewer: barnettj Date: 14-Dec-2016 10:51:50

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	S/N	Flags
$ 2 13C2 PFHxA								
315.0 > 270.0	18.585	18.585	0.0	1.000	782588	12.6	25572	
* 5 13C2-PFOA								
415.0 > 370.0	20.035	20.035	0.0		533806	10.0	13879	
* 8 13C4 PFOS								
503.0 > 80.0	20.655	20.667	-0.012		1640709	28.7	34459	
$ 10 13C2 PFDA								
515.0 > 470.0	21.462	21.471	-0.009	1.000	612441	13.1	19213	

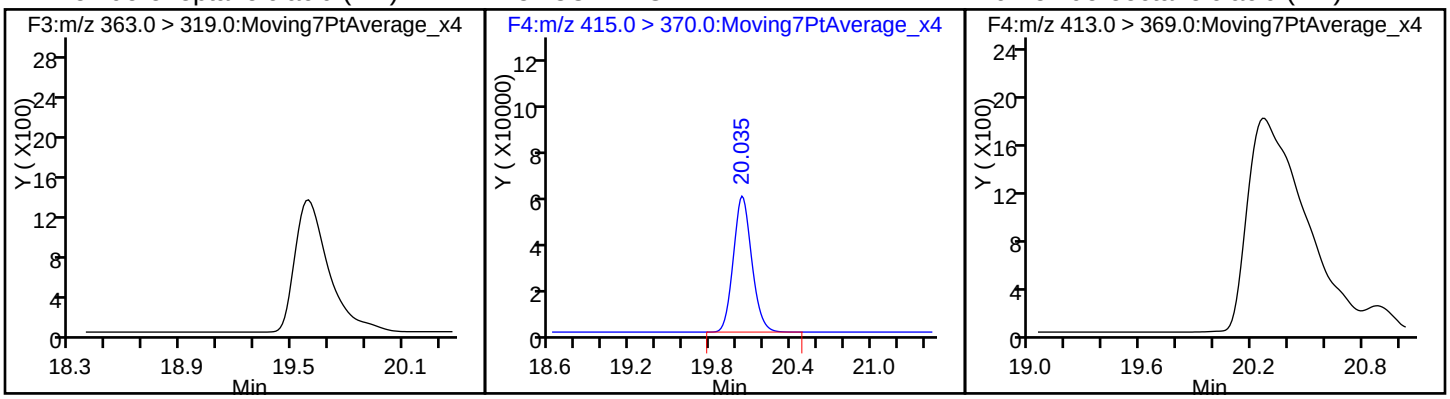
TestAmerica Sacramento

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_141.d
Injection Date: 14-Dec-2016 08:23:04 Instrument ID: A6
Lims ID: 320-24069-A-6-A Lab Sample ID:
Client ID: WI-CV-1FB15-1216
Operator ID: CBW ALS Bottle#: 27 Worklist Smp#: 67
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 537__A6 Limit Group: LC 537 ICAL

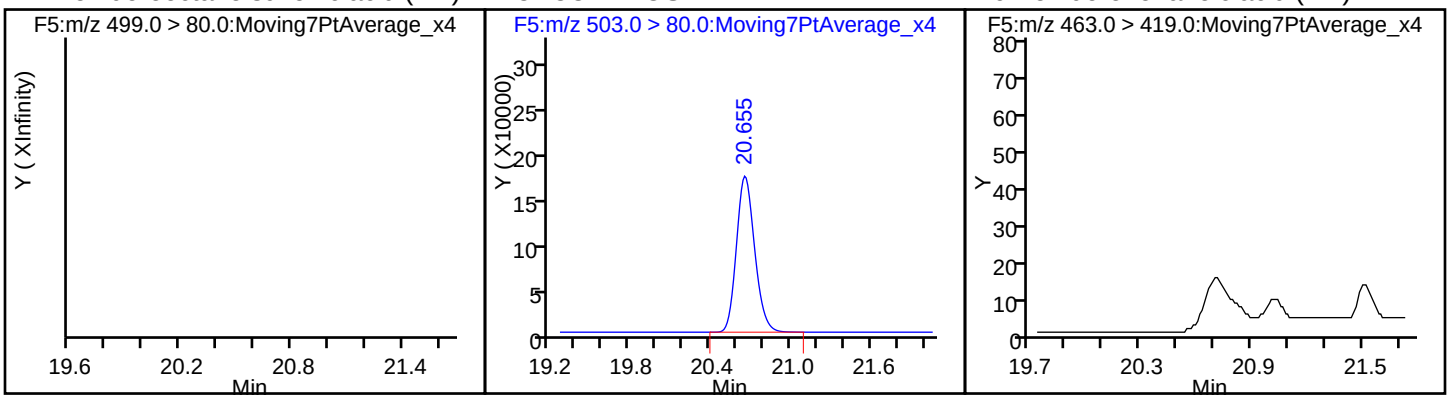
1 Perfluorobutanesulfonic acid (ND) $ 2 13C2 PFHxA 3 Perfluorohexanesulfonic acid (ND)



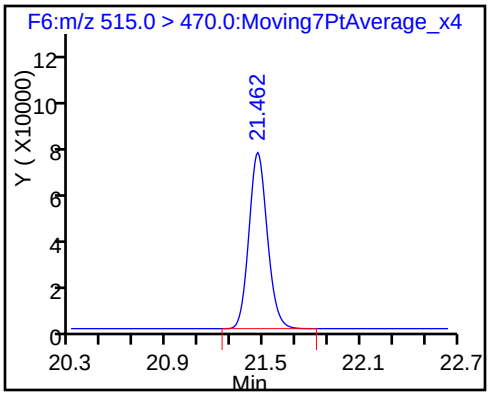
4 Perfluoroheptanoic acid (ND) * 5 13C2-PFOA 6 Perfluorooctanoic acid (ND)



7 Perfluorooctane sulfonic acid (ND) * 8 13C4 PFOS 9 Perfluorononanoic acid (ND)



$ 10 13C2 PFDA



TestAmerica Sacramento
Recovery Report

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_141.d
Lims ID: 320-24069-A-6-A
Client ID: WI-CV-1FB15-1216
Sample Type: Client
Inject. Date: 14-Dec-2016 08:23:04 ALS Bottle#: 27 Worklist Smp#: 67
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 320-24069-a-6-a
Misc. Info.: Acquity BEH 1.7um, 3X150mm T=35*C
Operator ID: CBW Instrument ID: A6

Method: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\537__A6.m
Limit Group: LC 537 ICAL
Last Update: 14-Dec-2016 10:53:05 Calib Date: 05-Dec-2016 19:54:00
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d

Column 1 : Acquity BEH C18 (2.10 mm) Det: F1:MRM
Process Host: XAWRK017

First Level Reviewer: barnettj Date: 14-Dec-2016 10:51:50

Compound	Amount Added	Amount Recovered	% Rec.
$ 2 13C2 PFHxA	10.0	12.6	125.68
$ 10 13C2 PFDA	10.0	13.1	130.93

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento | Job No.: 320-24069-1

SDG No.:

Client Sample ID: WI-CV-1RW16-1216 | Lab Sample ID: 320-24069-7

Matrix: Water | Lab File ID: 11DEC2016A6A_099.d

Analysis Method: 537 | Date Collected: 12/02/2016 14:09

Extraction Method: 537 | Date Extracted: 12/08/2016 11:45

Sample wt/vol: 254.5(mL) | Date Analyzed: 12/13/2016 11:24

Con. Extract Vol.: 1.0(mL) | Dilution Factor: 1

Injection Volume: 10(uL) | GC Column: Acquity ID: 2.1(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 141768 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	0.047	U	0.059	0.047	0.015
335-67-1	Perfluorooctanoic acid (PFOA)	0.024	U	0.029	0.024	0.0093
375-73-5	Perfluorobutanesulfonic acid (PFBS)	0.11	U	0.14	0.11	0.047

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00993	13C2 PFHxA	110		70-130
STL00996	13C2 PFDA	106		70-130

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_099.d
Lims ID: 320-24069-A-7-A
Client ID: WI-CV-1RW16-1216
Sample Type: Client
Inject. Date: 13-Dec-2016 11:24:07 ALS Bottle#: 28 Worklist Smp#: 22
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 320-24069-a-7-a
Misc. Info.: Acquity BEH 1.7um, 3X150mm T=35*C
Operator ID: CBW Instrument ID: A6

Method: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\537__A6.m
Limit Group: LC 537 ICAL
Last Update: 13-Dec-2016 16:08:42 Calib Date: 05-Dec-2016 19:54:00
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d

Column 1 : Acquity BEH C18 (2.10 mm) Det: F1:MRM
Process Host: XAWRK022

First Level Reviewer: barnettj Date: 13-Dec-2016 15:17:43

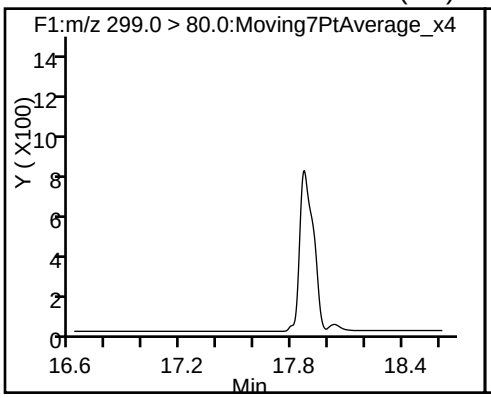
Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	S/N	Flags
$ 2 13C2 PFHxA								
315.0 > 270.0	18.576	18.603	-0.027	1.000	938342	11.0	30575	
* 5 13C2-PFOA								
415.0 > 370.0	20.035	20.047	-0.012		734304	10.0	19181	
* 8 13C4 PFOS								
503.0 > 80.0	20.655	20.667	-0.012		1965935	28.7	51852	
9 Perfluorononanoic acid								M
463.0 > 419.0	20.726	20.750	-0.024	1.000	1876	0.0225	55.3	M
$ 10 13C2 PFDA								
515.0 > 470.0	21.462	21.480	-0.018	1.000	683878	10.6	21398	

QC Flag Legend

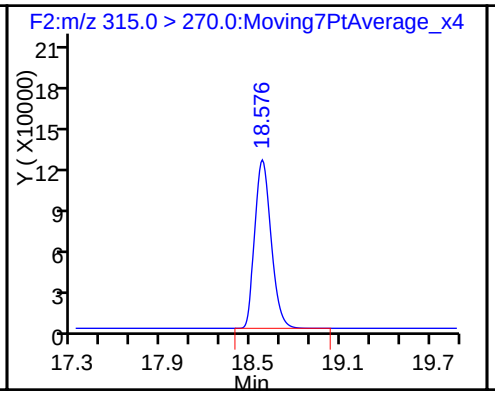
Review Flags
M - Manually Integrated

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_099.d
Injection Date: 13-Dec-2016 11:24:07 Instrument ID: A6
Lims ID: 320-24069-A-7-A Lab Sample ID: 320-24069-7
Client ID: WI-CV-1RW16-1216
Operator ID: CBW ALS Bottle#: 28 Worklist Smp#: 22
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 537__A6 Limit Group: LC 537 ICAL

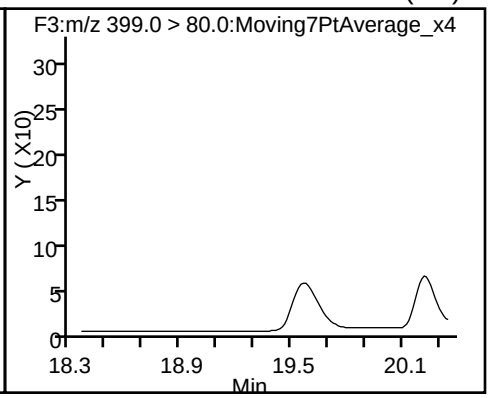
1 Perfluorobutanesulfonic acid (ND)



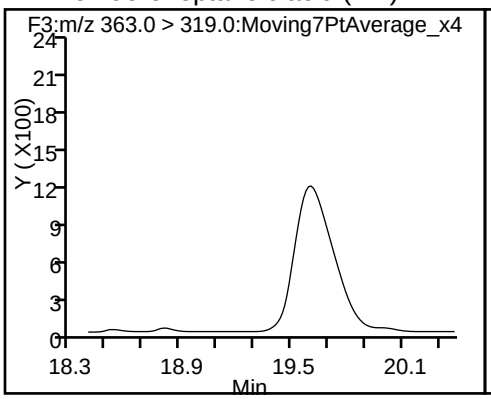
$ 2 13C2 PFHxA



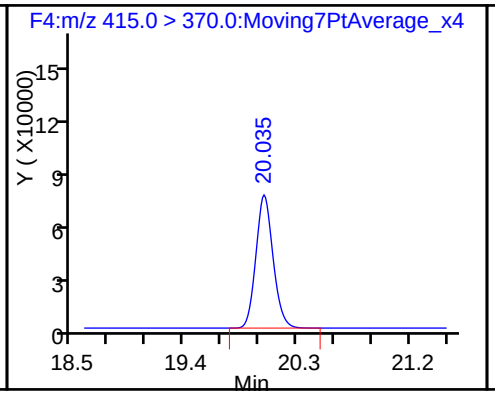
3 Perfluorohexanesulfonic acid (ND)



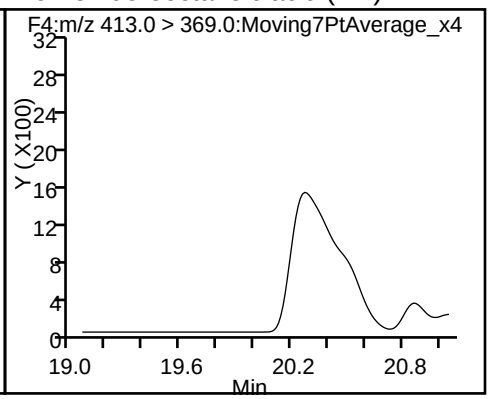
4 Perfluoroheptanoic acid (ND)



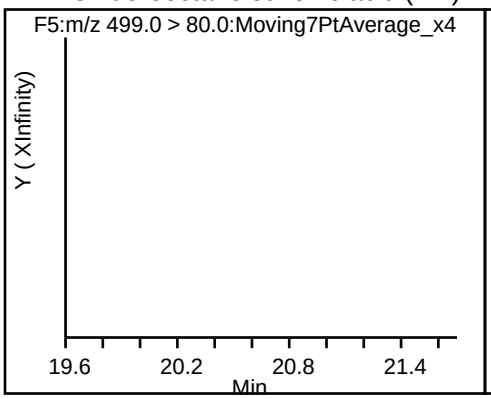
* 5 13C2-PFOA



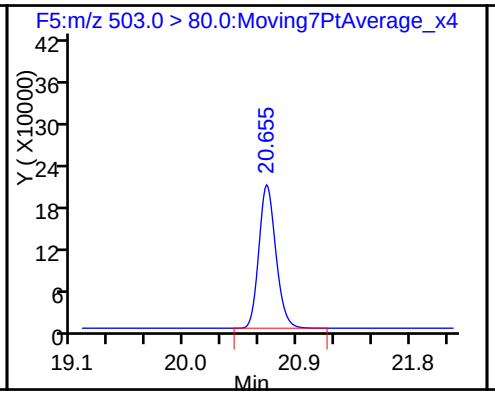
6 Perfluorooctanoic acid (ND)



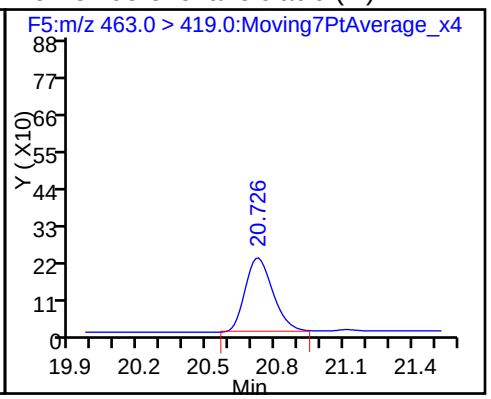
7 Perfluorooctane sulfonic acid (ND)



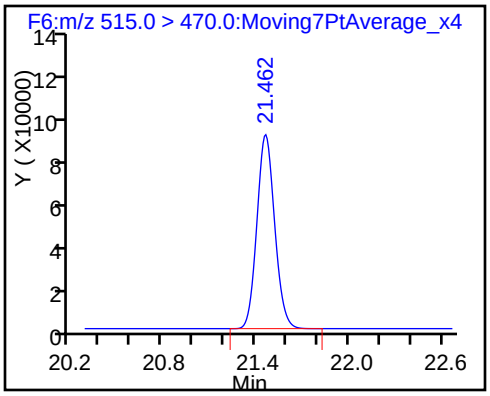
* 8 13C4 PFOS



9 Perfluorononanoic acid (M)



$ 10 13C2 PFDA



TestAmerica Sacramento
Recovery Report

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_099.d
Lims ID: 320-24069-A-7-A
Client ID: WI-CV-1RW16-1216
Sample Type: Client
Inject. Date: 13-Dec-2016 11:24:07 ALS Bottle#: 28 Worklist Smp#: 22
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 320-24069-a-7-a
Misc. Info.: Acquity BEH 1.7um, 3X150mm T=35*C
Operator ID: CBW Instrument ID: A6

Method: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\537__A6.m
Limit Group: LC 537 ICAL
Last Update: 13-Dec-2016 16:08:42 Calib Date: 05-Dec-2016 19:54:00
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d

Column 1 : Acquity BEH C18 (2.10 mm) Det: F1:MRM
Process Host: XAWRK022

First Level Reviewer: barnettj Date: 13-Dec-2016 15:17:43

Compound	Amount Added	Amount Recovered	% Rec.
$ 2 13C2 PFHxA	10.0	11.0	109.54
$ 10 13C2 PFDA	10.0	10.6	106.28

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Client Sample ID: WI-CV-1FB16-1216 Lab Sample ID: 320-24069-8

Matrix: Water Lab File ID: 11DEC2016A6A_100.d

Analysis Method: 537 Date Collected: 12/02/2016 14:08

Extraction Method: 537 Date Extracted: 12/08/2016 11:45

Sample wt/vol: 264.5(mL) Date Analyzed: 12/13/2016 11:53

Con. Extract Vol.: 1.0(mL) Dilution Factor: 1

Injection Volume: 10(uL) GC Column: Acquity ID: 2.1(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 141768 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	0.045	U	0.057	0.045	0.015
335-67-1	Perfluorooctanoic acid (PFOA)	0.023	U	0.028	0.023	0.0089
375-73-5	Perfluorobutanesulfonic acid (PFBS)	0.10	U	0.13	0.10	0.045

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00993	13C2 PFHxA	114		70-130
STL00996	13C2 PFDA	116		70-130

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_100.d
Lims ID: 320-24069-A-8-A
Client ID: WI-CV-1FB16-1216
Sample Type: Client
Inject. Date: 13-Dec-2016 11:53:44 ALS Bottle#: 29 Worklist Smp#: 23
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 320-24069-a-8-a
Misc. Info.: Acquity BEH 1.7um, 3X150mm T=35*C
Operator ID: CBW Instrument ID: A6

Method: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\537__A6.m
Limit Group: LC 537 ICAL
Last Update: 13-Dec-2016 16:08:42 Calib Date: 05-Dec-2016 19:54:00
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d

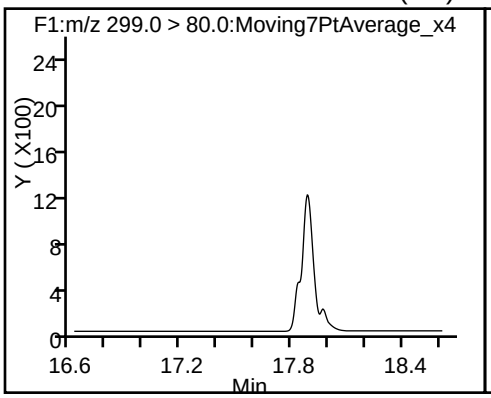
Column 1 : Acquity BEH C18 (2.10 mm) Det: F1:MRM
Process Host: XAWRK022

First Level Reviewer: barnettj Date: 13-Dec-2016 15:18:14

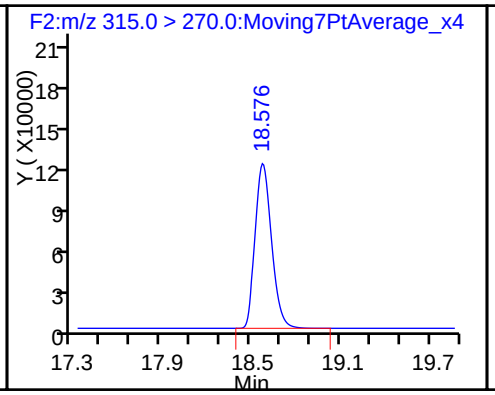
Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	S/N	Flags
$ 2 13C2 PFHxA								
315.0 > 270.0	18.576	18.603	-0.027	1.000	923258	11.4	29889	
* 5 13C2-PFOA								
415.0 > 370.0	20.035	20.047	-0.012		694562	10.0	17903	
* 8 13C4 PFOS								
503.0 > 80.0	20.655	20.667	-0.012		1798389	28.7	47110	
9 Perfluorononanoic acid								
463.0 > 419.0	20.714	20.750	-0.036	1.000	4045	0.0513	114	
$ 10 13C2 PFDA								
515.0 > 470.0	21.453	21.480	-0.027	1.000	704250	11.6	22299	

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_100.d
Injection Date: 13-Dec-2016 11:53:44 Instrument ID: A6
Lims ID: 320-24069-A-8-A Lab Sample ID: 320-24069-8
Client ID: WI-CV-1FB16-1216
Operator ID: CBW ALS Bottle#: 29 Worklist Smp#: 23
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 537__A6 Limit Group: LC 537 ICAL

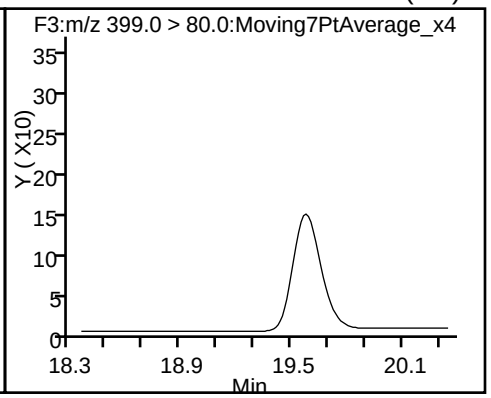
1 Perfluorobutanesulfonic acid (ND)



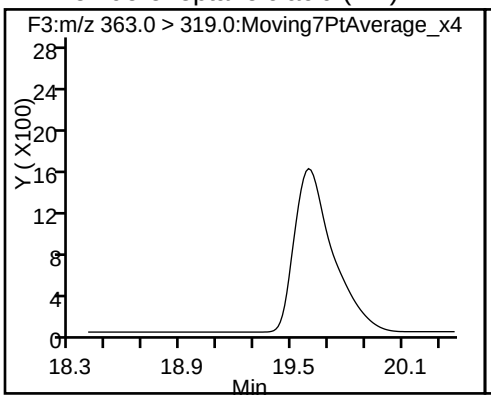
$ 2 13C2 PFHxA



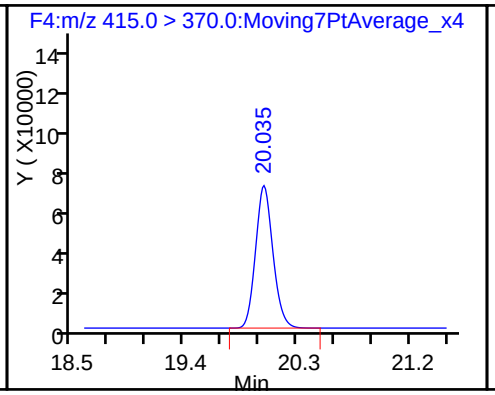
3 Perfluorohexanesulfonic acid (ND)



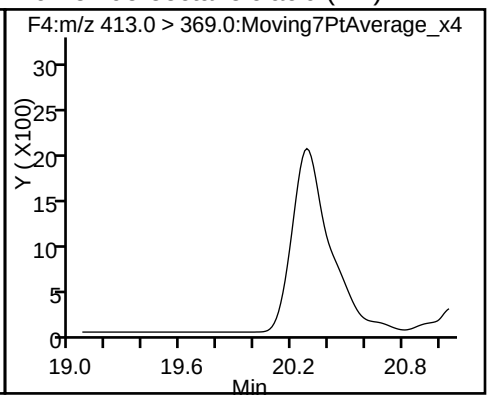
4 Perfluoroheptanoic acid (ND)



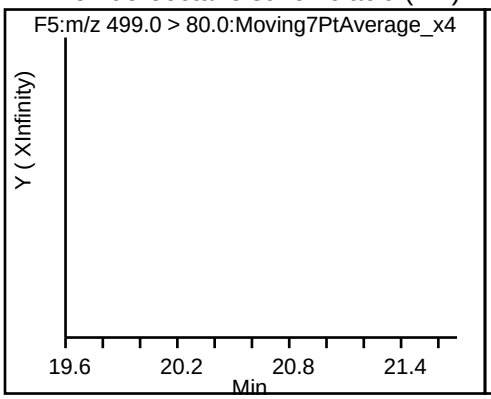
* 5 13C2-PFOA



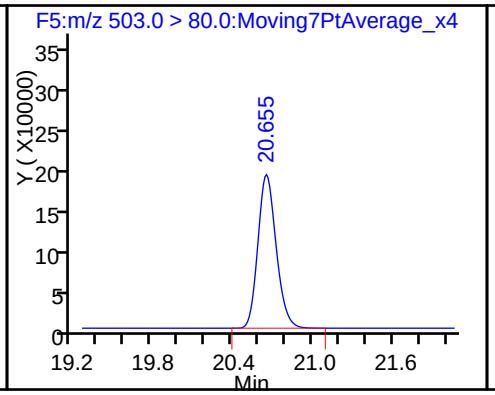
6 Perfluorooctanoic acid (ND)



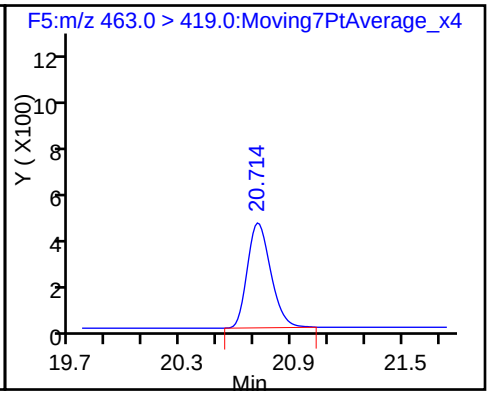
7 Perfluorooctane sulfonic acid (ND)



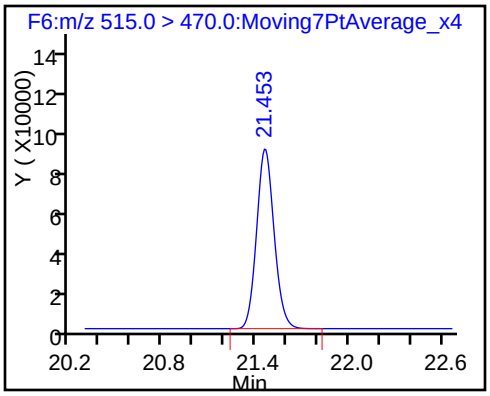
* 8 13C4 PFOS



9 Perfluorononanoic acid



$ 10 13C2 PFDA



TestAmerica Sacramento
Recovery Report

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_100.d
Lims ID: 320-24069-A-8-A
Client ID: WI-CV-1FB16-1216
Sample Type: Client
Inject. Date: 13-Dec-2016 11:53:44 ALS Bottle#: 29 Worklist Smp#: 23
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 320-24069-a-8-a
Misc. Info.: Acquity BEH 1.7um, 3X150mm T=35*C
Operator ID: CBW Instrument ID: A6

Method: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\537__A6.m
Limit Group: LC 537 ICAL
Last Update: 13-Dec-2016 16:08:42 Calib Date: 05-Dec-2016 19:54:00
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d

Column 1 : Acquity BEH C18 (2.10 mm) Det: F1:MRM
Process Host: XAWRK022

First Level Reviewer: barnettj Date: 13-Dec-2016 15:18:14

Compound	Amount Added	Amount Recovered	% Rec.
$ 2 13C2 PFHxA	10.0	11.4	113.95
$ 10 13C2 PFDA	10.0	11.6	115.71

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento | Job No.: 320-24069-1

SDG No.:

Client Sample ID: WI-CV-1RW17-1216 | Lab Sample ID: 320-24069-9

Matrix: Water | Lab File ID: 11DEC2016A6A_101.d

Analysis Method: 537 | Date Collected: 12/02/2016 14:17

Extraction Method: 537 | Date Extracted: 12/08/2016 11:45

Sample wt/vol: 257.3(mL) | Date Analyzed: 12/13/2016 12:23

Con. Extract Vol.: 1.0(mL) | Dilution Factor: 1

Injection Volume: 10(uL) | GC Column: Acquity ID: 2.1(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 141768 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	0.047	U	0.058	0.047	0.015
335-67-1	Perfluorooctanoic acid (PFOA)	0.023	U	0.029	0.023	0.0092
375-73-5	Perfluorobutanesulfonic acid (PFBS)	0.11	U	0.14	0.11	0.046

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00993	13C2 PFHxA	107		70-130
STL00996	13C2 PFDA	117		70-130

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_101.d
Lims ID: 320-24069-A-9-A
Client ID: WI-CV-1RW17-1216
Sample Type: Client
Inject. Date: 13-Dec-2016 12:23:19 ALS Bottle#: 30 Worklist Smp#: 24
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 320-24069-a-9-a
Misc. Info.: Acquity BEH 1.7um, 3X150mm T=35*C
Operator ID: CBW Instrument ID: A6

Method: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\537__A6.m
Limit Group: LC 537 ICAL
Last Update: 13-Dec-2016 16:08:42 Calib Date: 05-Dec-2016 19:54:00
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d

Column 1 : Acquity BEH C18 (2.10 mm) Det: F1:MRM
Process Host: XAWRK022

First Level Reviewer: barnettj Date: 13-Dec-2016 15:19:28

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	S/N	Flags
1 Perfluorobutanesulfonic acid								
299.0 > 80.0	17.599	17.618	-0.019	1.000	1932	0.0388	4.0	
$ 2 13C2 PFHxA								
315.0 > 270.0	18.576	18.603	-0.027	1.000	883494	10.7	28235	
3 Perfluorohexanesulfonic acid								M
399.0 > 80.0	19.344	19.356	-0.012	1.000	944	0.0148	7.9	M
* 5 13C2-PFOA								
415.0 > 370.0	20.035	20.047	-0.012		709363	10.0	18410	
* 8 13C4 PFOS								
503.0 > 80.0	20.655	20.667	-0.012		2035941	28.7	53124	
9 Perfluorononanoic acid								M
463.0 > 419.0	20.714	20.750	-0.036	1.000	1083	0.0135	15.4	M
$ 10 13C2 PFDA								
515.0 > 470.0	21.462	21.480	-0.018	1.000	726058	11.7	22781	

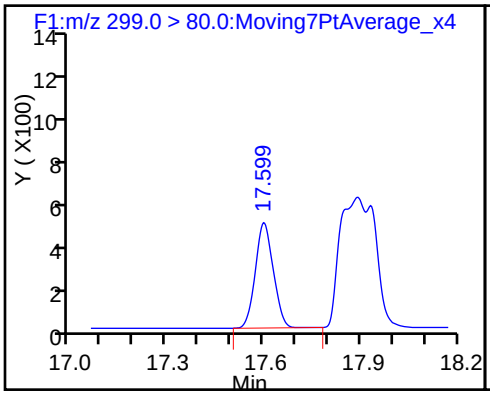
QC Flag Legend

Review Flags
M - Manually Integrated

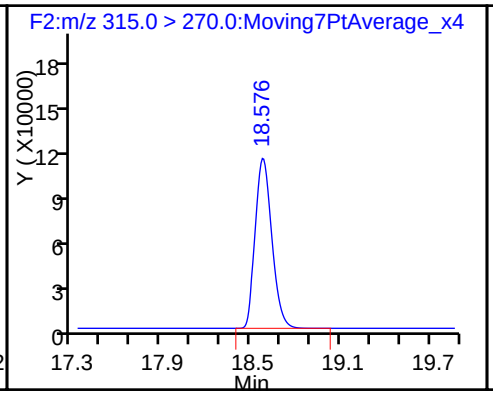
TestAmerica Sacramento

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_101.d
Injection Date: 13-Dec-2016 12:23:19 Instrument ID: A6
Lims ID: 320-24069-A-9-A Lab Sample ID: 320-24069-9
Client ID: WI-CV-1RW17-1216
Operator ID: CBW ALS Bottle#: 30 Worklist Smp#: 24
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 537__A6 Limit Group: LC 537 ICAL

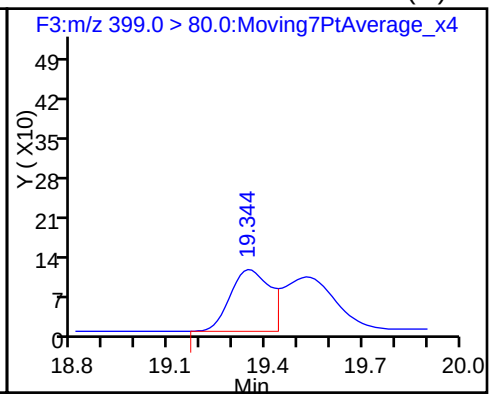
1 Perfluorobutanesulfonic acid



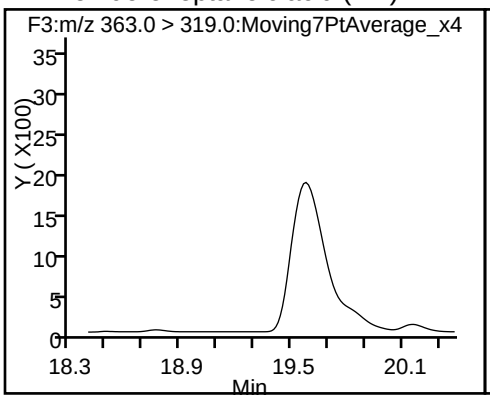
$ 2 13C2 PFHxA



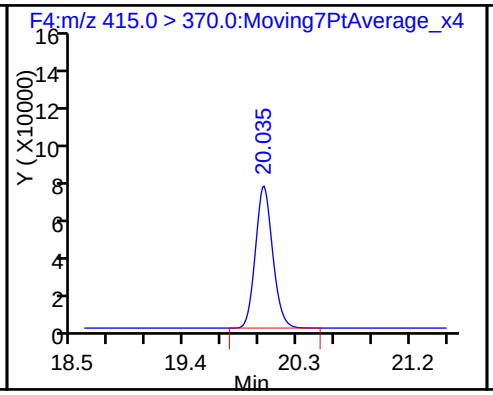
3 Perfluorohexanesulfonic acid (M)



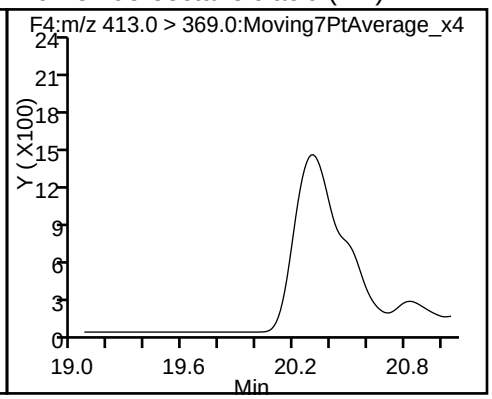
4 Perfluoroheptanoic acid (ND)



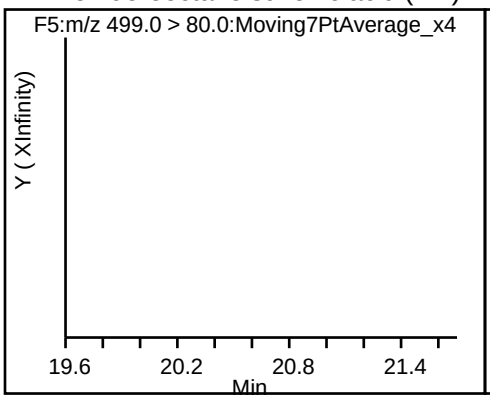
* 5 13C2-PFOA



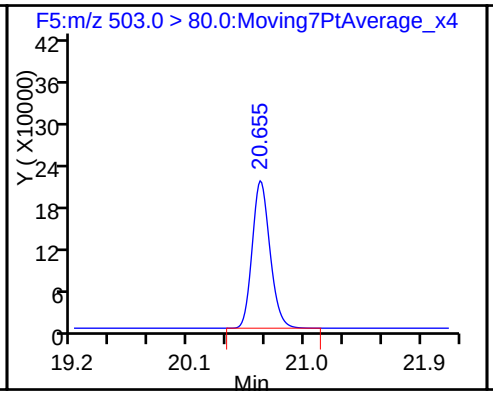
6 Perfluorooctanoic acid (ND)



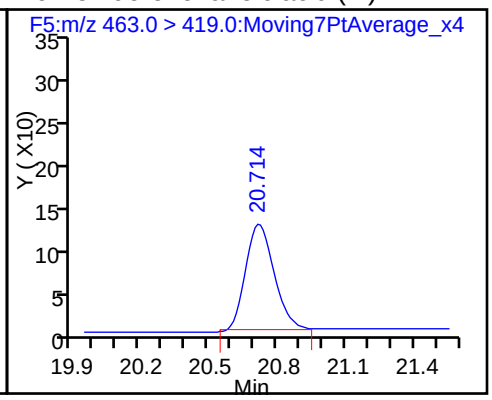
7 Perfluorooctane sulfonic acid (ND)



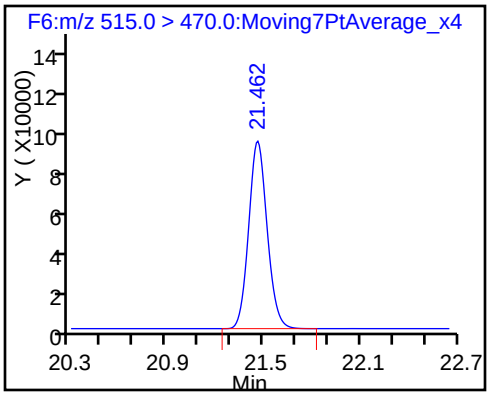
* 8 13C4 PFOS



9 Perfluorononanoic acid (M)



$ 10 13C2 PFDA



TestAmerica Sacramento
Recovery Report

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_101.d
Lims ID: 320-24069-A-9-A
Client ID: WI-CV-1RW17-1216
Sample Type: Client
Inject. Date: 13-Dec-2016 12:23:19 ALS Bottle#: 30 Worklist Smp#: 24
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 320-24069-a-9-a
Misc. Info.: Acquity BEH 1.7um, 3X150mm T=35*C
Operator ID: CBW Instrument ID: A6

Method: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\537__A6.m
Limit Group: LC 537 ICAL
Last Update: 13-Dec-2016 16:08:42 Calib Date: 05-Dec-2016 19:54:00
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d

Column 1 : Acquity BEH C18 (2.10 mm) Det: F1:MRM
Process Host: XAWRK022

First Level Reviewer: barnettj Date: 13-Dec-2016 15:19:28

Compound	Amount Added	Amount Recovered	% Rec.
$ 2 13C2 PFHxA	10.0	10.7	106.77
$ 10 13C2 PFDA	10.0	11.7	116.81

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento | Job No.: 320-24069-1

SDG No.:

Client Sample ID: WI-CV-1FB17-1216 | Lab Sample ID: 320-24069-10

Matrix: Water | Lab File ID: 11DEC2016A6A_102.d

Analysis Method: 537 | Date Collected: 12/02/2016 14:16

Extraction Method: 537 | Date Extracted: 12/08/2016 11:45

Sample wt/vol: 268.6(mL) | Date Analyzed: 12/13/2016 12:52

Con. Extract Vol.: 1.0(mL) | Dilution Factor: 1

Injection Volume: 10(uL) | GC Column: Acquity ID: 2.1(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 141768 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	0.045	U	0.056	0.045	0.014
335-67-1	Perfluorooctanoic acid (PFOA)	0.022	U	0.028	0.022	0.0088
375-73-5	Perfluorobutanesulfonic acid (PFBS)	0.10	U	0.13	0.10	0.044

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00993	13C2 PFHxA	114		70-130
STL00996	13C2 PFDA	111		70-130

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_102.d
Lims ID: 320-24069-A-10-A
Client ID: WI-CV-1FB17-1216
Sample Type: Client
Inject. Date: 13-Dec-2016 12:52:55 ALS Bottle#: 31 Worklist Smp#: 25
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 320-24069-a-10-a
Misc. Info.: Acquity BEH 1.7um, 3X150mm T=35*C
Operator ID: CBW Instrument ID: A6

Method: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\537__A6.m
Limit Group: LC 537 ICAL
Last Update: 13-Dec-2016 16:08:42 Calib Date: 05-Dec-2016 19:54:00
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d

Column 1 : Acquity BEH C18 (2.10 mm) Det: F1:MRM
Process Host: XAWRK022

First Level Reviewer: barnettj Date: 13-Dec-2016 15:20:12

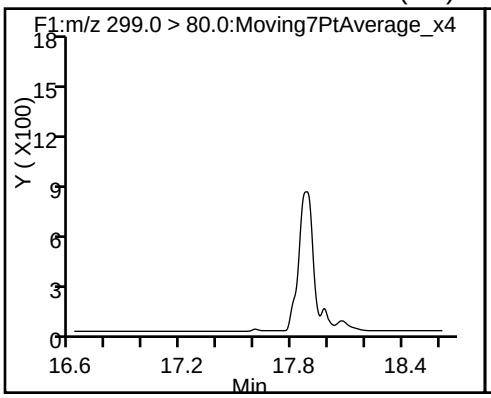
Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	S/N	Flags
$ 2 13C2 PFHxA								
315.0 > 270.0	18.594	18.603	-0.009	1.000	923925	11.4	29764	
* 5 13C2-PFOA								
415.0 > 370.0	20.047	20.047	0.0		697435	10.0	18213	
* 8 13C4 PFOS								
503.0 > 80.0	20.667	20.667	0.0		1849727	28.7	32390	
9 Perfluorononanoic acid								M
463.0 > 419.0	20.714	20.750	-0.036	1.000	397	0.005019	11.8	M
$ 10 13C2 PFDA								
515.0 > 470.0	21.471	21.480	-0.009	1.000	677075	11.1	21460	

QC Flag Legend

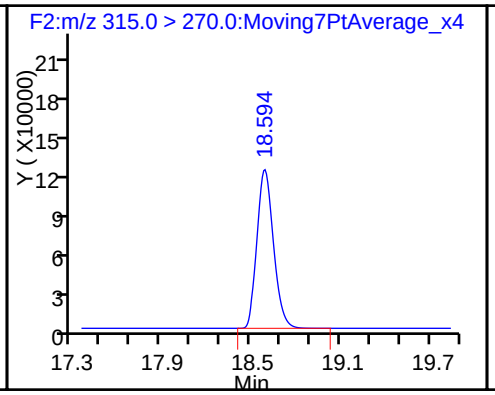
Review Flags
M - Manually Integrated

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_102.d
Injection Date: 13-Dec-2016 12:52:55 Instrument ID: A6
Lims ID: 320-24069-A-10-A Lab Sample ID: 320-24069-10
Client ID: WI-CV-1FB17-1216
Operator ID: CBW ALS Bottle#: 31 Worklist Smp#: 25
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 537__A6 Limit Group: LC 537 ICAL

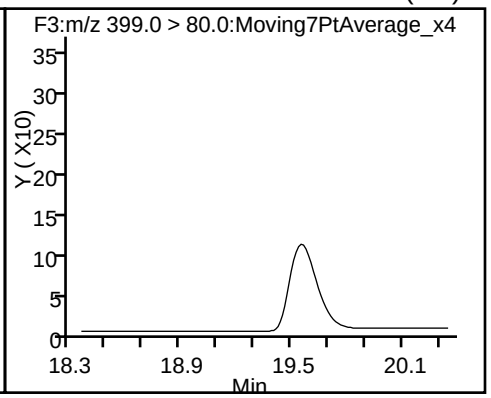
1 Perfluorobutanesulfonic acid (ND)



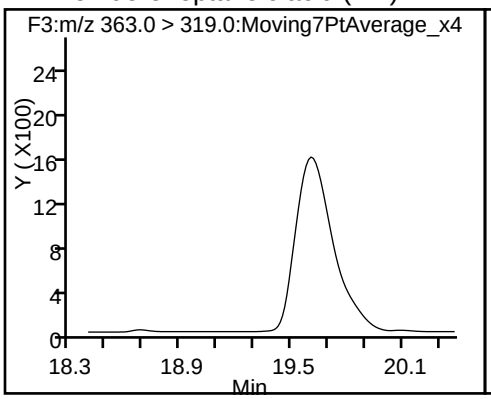
$ 2 13C2 PFHxA



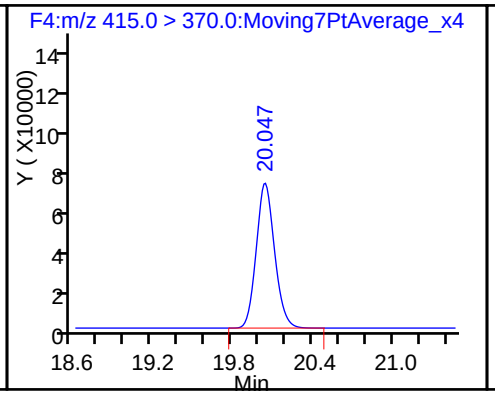
3 Perfluorohexanesulfonic acid (ND)



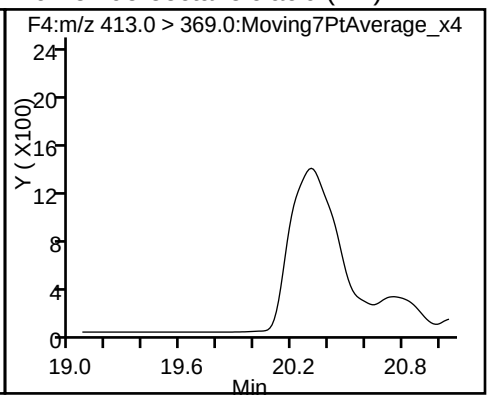
4 Perfluoroheptanoic acid (ND)



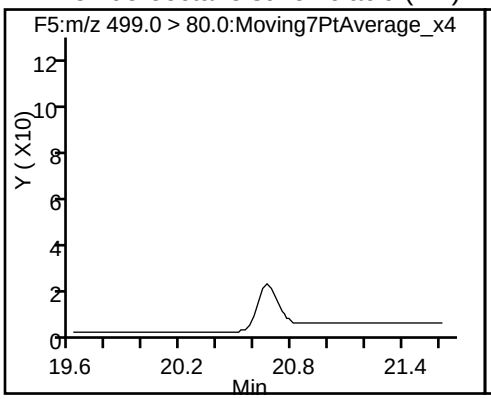
* 5 13C2-PFOA



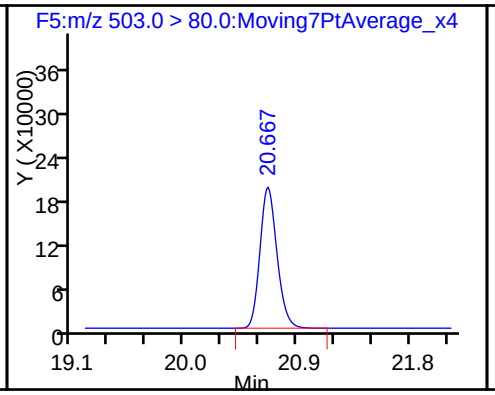
6 Perfluorooctanoic acid (ND)



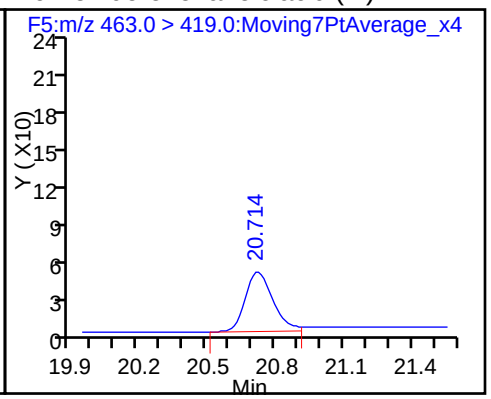
7 Perfluorooctane sulfonic acid (ND)



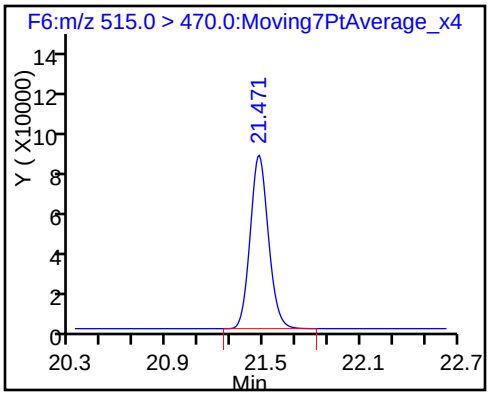
* 8 13C4 PFOS



9 Perfluorononanoic acid (M)



$ 10 13C2 PFDA



TestAmerica Sacramento
Recovery Report

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_102.d
Lims ID: 320-24069-A-10-A
Client ID: WI-CV-1FB17-1216
Sample Type: Client
Inject. Date: 13-Dec-2016 12:52:55 ALS Bottle#: 31 Worklist Smp#: 25
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 320-24069-a-10-a
Misc. Info.: Acquity BEH 1.7um, 3X150mm T=35*C
Operator ID: CBW Instrument ID: A6

Method: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\537__A6.m
Limit Group: LC 537 ICAL
Last Update: 13-Dec-2016 16:08:42 Calib Date: 05-Dec-2016 19:54:00
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d

Column 1 : Acquity BEH C18 (2.10 mm) Det: F1:MRM
Process Host: XAWRK022

First Level Reviewer: barnettj Date: 13-Dec-2016 15:20:12

Compound	Amount Added	Amount Recovered	% Rec.
$ 2 13C2 PFHxA	10.0	11.4	113.56
$ 10 13C2 PFDA	10.0	11.1	110.79

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Client Sample ID: WI-CV-3RW14-1216 Lab Sample ID: 320-24069-11

Matrix: Water Lab File ID: 11DEC2016A6A_103.d

Analysis Method: 537 Date Collected: 12/02/2016 14:31

Extraction Method: 537 Date Extracted: 12/08/2016 11:45

Sample wt/vol: 258(mL) Date Analyzed: 12/13/2016 13:22

Con. Extract Vol.: 1.0(mL) Dilution Factor: 1

Injection Volume: 10(uL) GC Column: Acquity ID: 2.1(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 141768 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	0.047	U	0.058	0.047	0.015
335-67-1	Perfluorooctanoic acid (PFOA)	0.023	U	0.029	0.023	0.0091
375-73-5	Perfluorobutanesulfonic acid (PFBS)	0.11	U	0.14	0.11	0.046

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00993	13C2 PFHxA	97		70-130
STL00996	13C2 PFDA	114		70-130

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_103.d
Lims ID: 320-24069-A-11-A
Client ID: WI-CV-3RW14-1216
Sample Type: Client
Inject. Date: 13-Dec-2016 13:22:32 ALS Bottle#: 32 Worklist Smp#: 26
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 320-24069-a-11-a
Misc. Info.: Acquity BEH 1.7um, 3X150mm T=35*C
Operator ID: CBW Instrument ID: A6

Method: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\537__A6.m
Limit Group: LC 537 ICAL
Last Update: 13-Dec-2016 16:08:42 Calib Date: 05-Dec-2016 19:54:00
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d

Column 1 : Acquity BEH C18 (2.10 mm) Det: F1:MRM
Process Host: XAWRK022

First Level Reviewer: barnettj Date: 13-Dec-2016 15:20:55

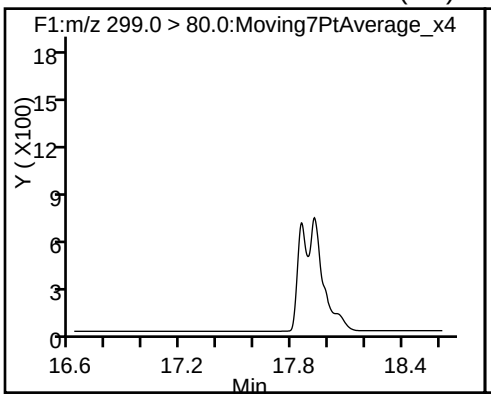
Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	S/N	Flags
$ 2 13C2 PFHxA								
315.0 > 270.0	18.594	18.603	-0.009	1.000	752697	9.65	24217	
* 5 13C2-PFOA								
415.0 > 370.0	20.047	20.047	0.0		668316	10.0	17384	
* 8 13C4 PFOS								
503.0 > 80.0	20.667	20.667	0.0		1719729	28.7	25723	
9 Perfluorononanoic acid								M
463.0 > 419.0	20.750	20.750	0.0	1.000	1035	0.0137	9.5	M
$ 10 13C2 PFDA								
515.0 > 470.0	21.471	21.480	-0.009	1.000	669480	11.4	21039	

QC Flag Legend

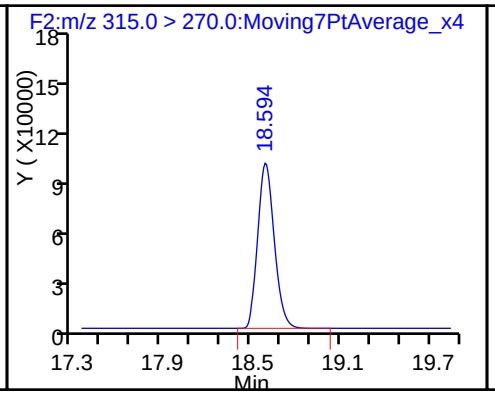
Review Flags
M - Manually Integrated

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_103.d
Injection Date: 13-Dec-2016 13:22:32 Instrument ID: A6
Lims ID: 320-24069-A-11-A Lab Sample ID: 320-24069-11
Client ID: WI-CV-3RW14-1216
Operator ID: CBW ALS Bottle#: 32 Worklist Smp#: 26
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 537__A6 Limit Group: LC 537 ICAL

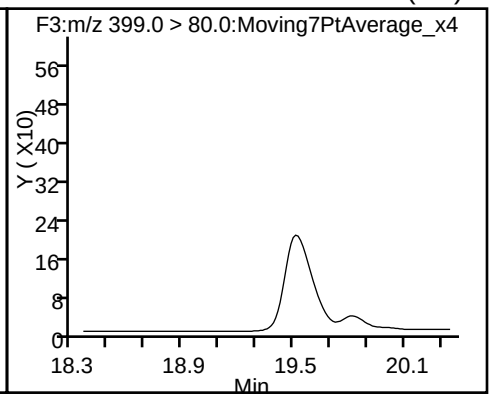
1 Perfluorobutanesulfonic acid (ND)



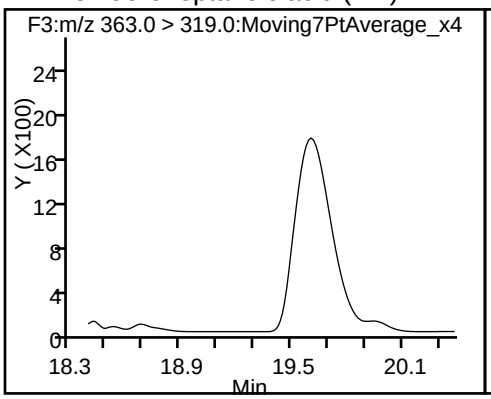
$ 2 13C2 PFHxA



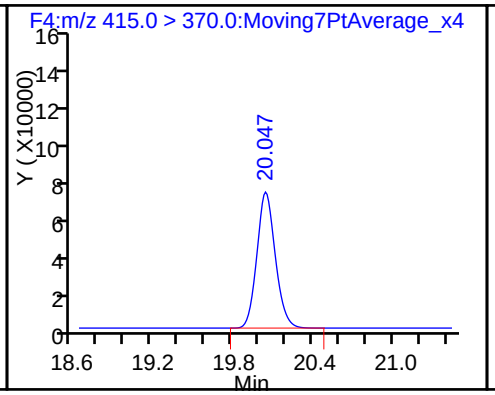
3 Perfluorohexanesulfonic acid (ND)



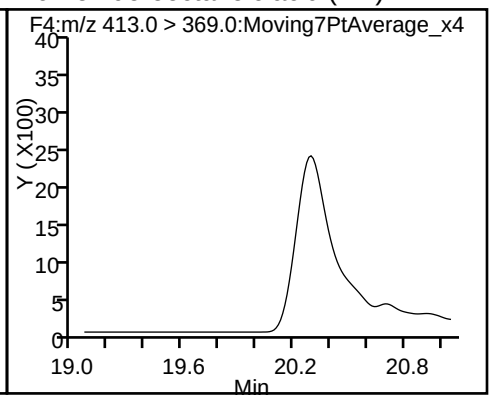
4 Perfluoroheptanoic acid (ND)



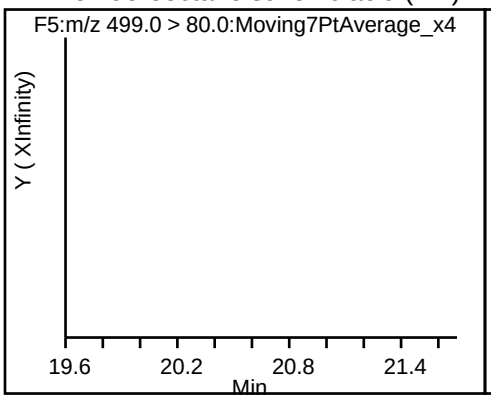
* 5 13C2-PFOA



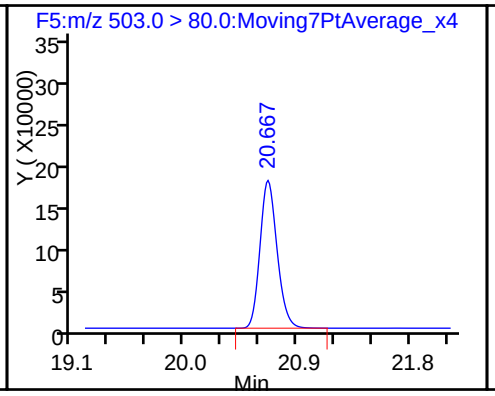
6 Perfluorooctanoic acid (ND)



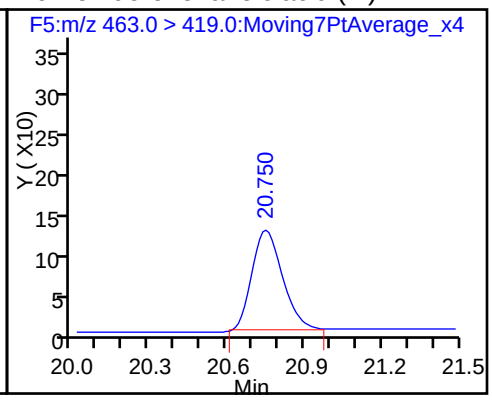
7 Perfluorooctane sulfonic acid (ND)



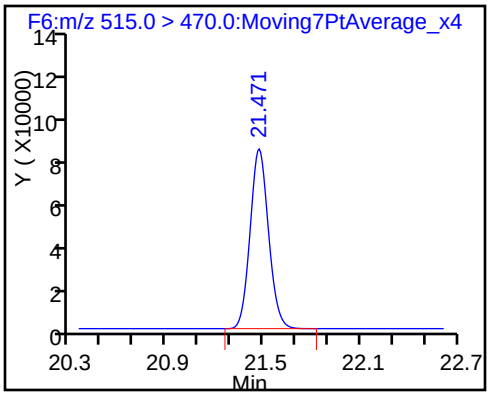
* 8 13C4 PFOS



9 Perfluorononanoic acid (M)



$ 10 13C2 PFDA



TestAmerica Sacramento
Recovery Report

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_103.d
Lims ID: 320-24069-A-11-A
Client ID: WI-CV-3RW14-1216
Sample Type: Client
Inject. Date: 13-Dec-2016 13:22:32 ALS Bottle#: 32 Worklist Smp#: 26
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 320-24069-a-11-a
Misc. Info.: Acquity BEH 1.7um, 3X150mm T=35*C
Operator ID: CBW Instrument ID: A6

Method: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\537__A6.m
Limit Group: LC 537 ICAL
Last Update: 13-Dec-2016 16:08:42 Calib Date: 05-Dec-2016 19:54:00
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d

Column 1 : Acquity BEH C18 (2.10 mm) Det: F1:MRM
Process Host: XAWRK022

First Level Reviewer: barnettj Date: 13-Dec-2016 15:20:55

Compound	Amount Added	Amount Recovered	% Rec.
$ 2 13C2 PFHxA	10.0	9.65	96.55
$ 10 13C2 PFDA	10.0	11.4	114.32

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento | Job No.: 320-24069-1

SDG No.:

Client Sample ID: WI-CV-3FB14-1216 | Lab Sample ID: 320-24069-12

Matrix: Water | Lab File ID: 11DEC2016A6A_107.d

Analysis Method: 537 | Date Collected: 12/02/2016 14:32

Extraction Method: 537 | Date Extracted: 12/08/2016 11:45

Sample wt/vol: 270.4(mL) | Date Analyzed: 12/13/2016 15:36

Con. Extract Vol.: 1.0(mL) | Dilution Factor: 1

Injection Volume: 10(uL) | GC Column: Acquity ID: 2.1(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 141769 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	0.044	U	0.055	0.044	0.014
335-67-1	Perfluorooctanoic acid (PFOA)	0.022	U	0.028	0.022	0.0087
375-73-5	Perfluorobutanesulfonic acid (PFBS)	0.10	U	0.13	0.10	0.044

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00993	13C2 PFHxA	114		70-130
STL00996	13C2 PFDA	122		70-130

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_107.d
Lims ID: 320-24069-A-12-A
Client ID: WI-CV-3FB14-1216
Sample Type: Client
Inject. Date: 13-Dec-2016 15:36:44 ALS Bottle#: 33 Worklist Smp#: 30
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 320-24069-a-12-a
Misc. Info.: Acquity BEH 1.7um, 3X150mm T=35*C
Operator ID: CBW Instrument ID: A6

Method: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\537__A6.m
Limit Group: LC 537 ICAL
Last Update: 14-Dec-2016 10:51:50 Calib Date: 05-Dec-2016 19:54:00
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d

Column 1 : Acquity BEH C18 (2.10 mm) Det: F1:MRM
Process Host: XAWRK017

First Level Reviewer: barnettj Date: 13-Dec-2016 16:51:32

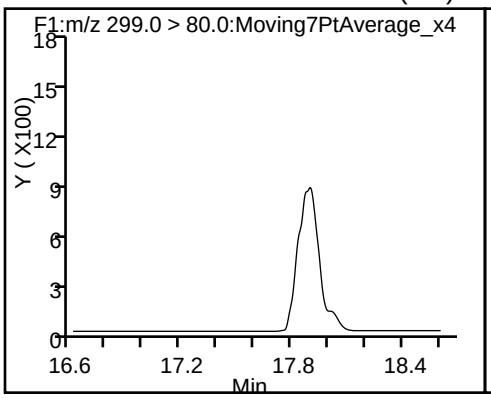
Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	S/N	Flags
$ 2 13C2 PFHxA								
315.0 > 270.0	18.585	18.585	0.0	1.000	907052	11.4	29448	
* 5 13C2-PFOA								
415.0 > 370.0	20.035	20.035	0.0		681160	10.0	17777	
* 8 13C4 PFOS								
503.0 > 80.0	20.667	20.667	0.0		1745778	28.7	45692	
9 Perfluorononanoic acid								M
463.0 > 419.0	20.750	20.738	0.012	1.000	2798	0.0362	81.3	M
$ 10 13C2 PFDA								
515.0 > 470.0	21.471	21.471	0.0	1.000	728278	12.2	23057	

QC Flag Legend

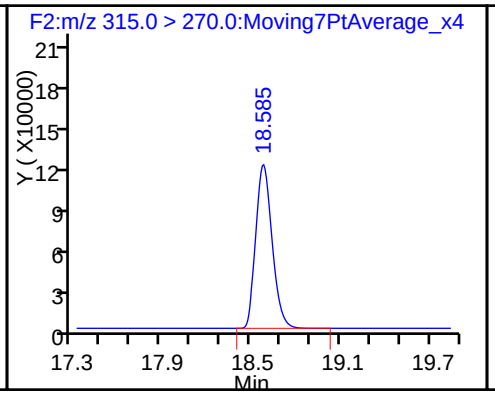
Review Flags
M - Manually Integrated

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_107.d
Injection Date: 13-Dec-2016 15:36:44 Instrument ID: A6
Lims ID: 320-24069-A-12-A Lab Sample ID: 320-24069-12
Client ID: WI-CV-3FB14-1216
Operator ID: CBW ALS Bottle#: 33 Worklist Smp#: 30
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 537__A6 Limit Group: LC 537 ICAL

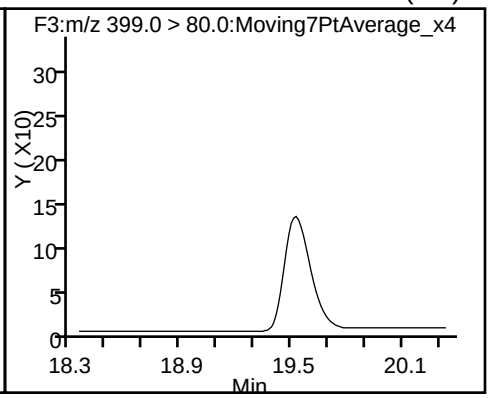
1 Perfluorobutanesulfonic acid (ND)



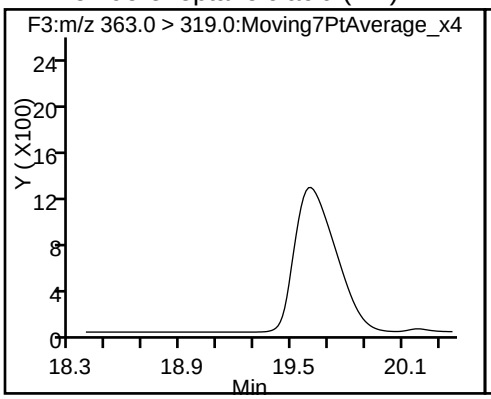
$ 2 13C2 PFHxA



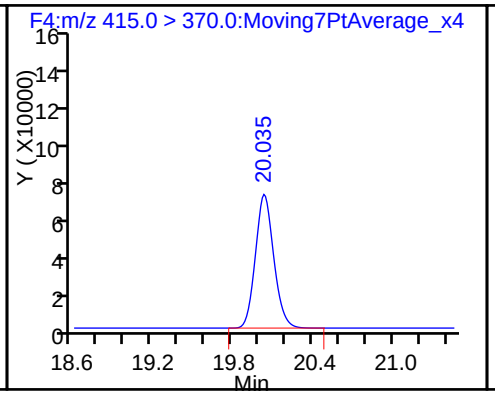
3 Perfluorohexanesulfonic acid (ND)



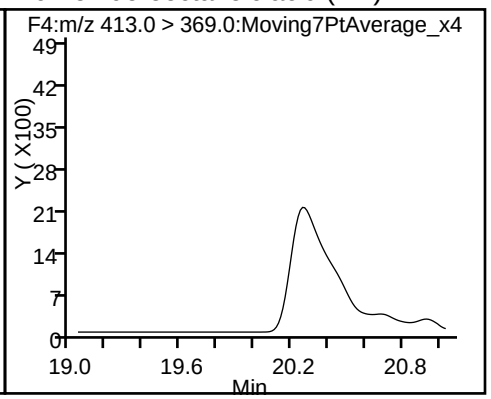
4 Perfluoroheptanoic acid (ND)



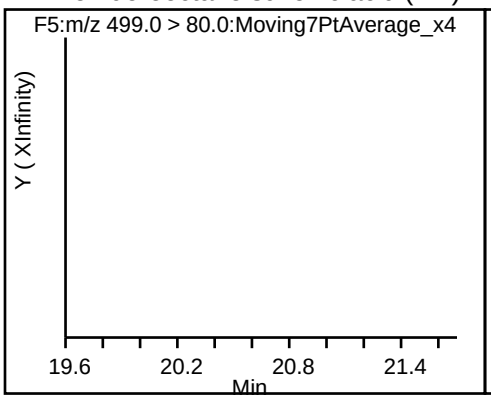
* 5 13C2-PFOA



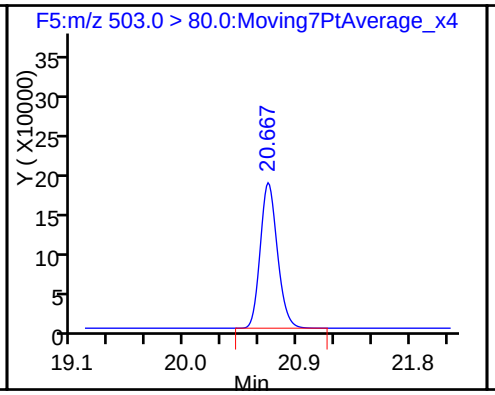
6 Perfluorooctanoic acid (ND)



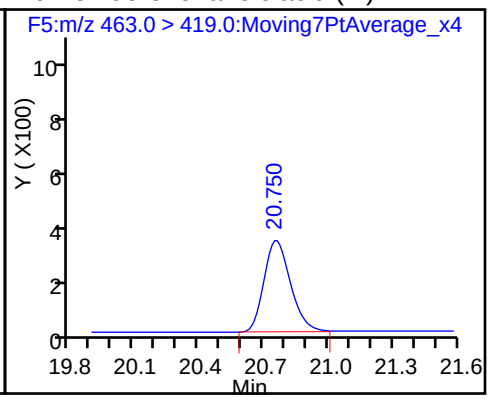
7 Perfluorooctane sulfonic acid (ND)



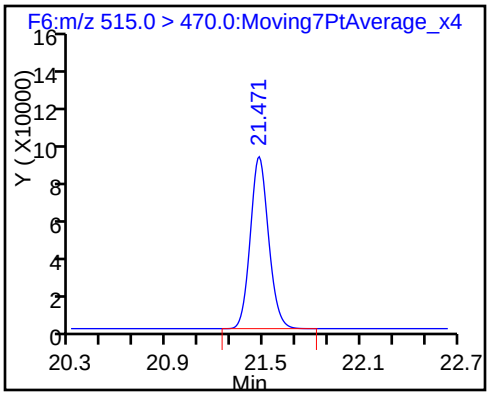
* 8 13C4 PFOS



9 Perfluorononanoic acid (M)



$ 10 13C2 PFDA



TestAmerica Sacramento
Recovery Report

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_107.d
Lims ID: 320-24069-A-12-A
Client ID: WI-CV-3FB14-1216
Sample Type: Client
Inject. Date: 13-Dec-2016 15:36:44 ALS Bottle#: 33 Worklist Smp#: 30
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 320-24069-a-12-a
Misc. Info.: Acquity BEH 1.7um, 3X150mm T=35*C
Operator ID: CBW Instrument ID: A6

Method: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\537__A6.m
Limit Group: LC 537 ICAL
Last Update: 14-Dec-2016 10:51:50 Calib Date: 05-Dec-2016 19:54:00
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d

Column 1 : Acquity BEH C18 (2.10 mm) Det: F1:MRM
Process Host: XAWRK017

First Level Reviewer: barnettj Date: 13-Dec-2016 16:51:32

Compound	Amount Added	Amount Recovered	% Rec.
$ 2 13C2 PFHxA	10.0	11.4	114.15
$ 10 13C2 PFDA	10.0	12.2	122.01

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento | Job No.: 320-24069-1

SDG No.:

Client Sample ID: WI-CV-3RW15-1216 | Lab Sample ID: 320-24069-13

Matrix: Water | Lab File ID: 11DEC2016A6A_108.d

Analysis Method: 537 | Date Collected: 12/02/2016 14:47

Extraction Method: 537 | Date Extracted: 12/08/2016 11:45

Sample wt/vol: 265.9(mL) | Date Analyzed: 12/13/2016 16:06

Con. Extract Vol.: 1.0(mL) | Dilution Factor: 1

Injection Volume: 10(uL) | GC Column: Acquity ID: 2.1(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 141769 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	0.045	U M	0.056	0.045	0.015
335-67-1	Perfluorooctanoic acid (PFOA)	0.023	U	0.028	0.023	0.0089
375-73-5	Perfluorobutanesulfonic acid (PFBS)	0.10	U	0.13	0.10	0.045

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00993	13C2 PFHxA	115		70-130
STL00996	13C2 PFDA	117		70-130

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_108.d
Lims ID: 320-24069-A-13-A
Client ID: WI-CV-3RW15-1216
Sample Type: Client
Inject. Date: 13-Dec-2016 16:06:21 ALS Bottle#: 34 Worklist Smp#: 31
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 320-24069-a-13-a
Misc. Info.: Acquity BEH 1.7um, 3X150mm T=35*C
Operator ID: CBW Instrument ID: A6

Method: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\537__A6.m
Limit Group: LC 537 ICAL
Last Update: 14-Dec-2016 10:51:50 Calib Date: 05-Dec-2016 19:54:00
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d

Column 1 : Acquity BEH C18 (2.10 mm) Det: F1:MRM
Process Host: XAWRK017

First Level Reviewer: barnettj Date: 13-Dec-2016 16:54:16

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	S/N	Flags
$ 2 13C2 PFHxA								
315.0 > 270.0	18.576	18.585	-0.009	1.000	872691	11.5	28199	
* 5 13C2-PFOA								
415.0 > 370.0	20.035	20.035	0.0		653207	10.0	17018	
7 Perfluorooctane sulfonic acid								M
499.0 > 80.0	20.667	20.619	0.048	1.000	674	0.0108	18.0	M
* 8 13C4 PFOS								
503.0 > 80.0	20.655	20.667	-0.012		1714966	28.7	25562	
9 Perfluorononanoic acid								M
463.0 > 419.0	20.738	20.738	0.0	1.000	2048	0.0276	7.6	M
$ 10 13C2 PFDA								
515.0 > 470.0	21.462	21.471	-0.009	1.000	668313	11.7	21140	

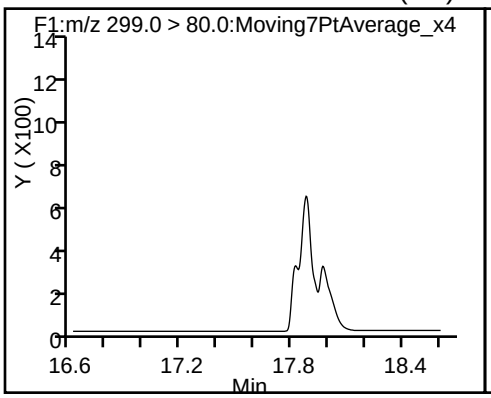
QC Flag Legend

Review Flags
M - Manually Integrated

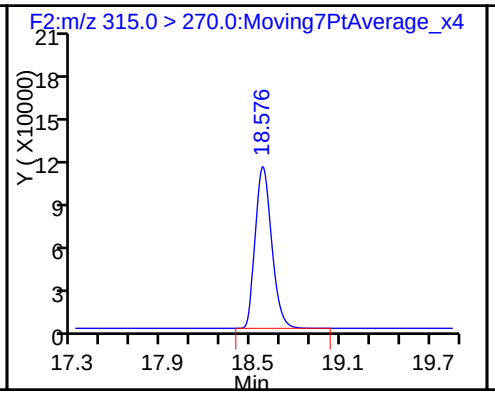
TestAmerica Sacramento

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_108.d
Injection Date: 13-Dec-2016 16:06:21 Instrument ID: A6
Lims ID: 320-24069-A-13-A Lab Sample ID: 320-24069-13
Client ID: WI-CV-3RW15-1216
Operator ID: CBW ALS Bottle#: 34 Worklist Smp#: 31
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 537__A6 Limit Group: LC 537 ICAL

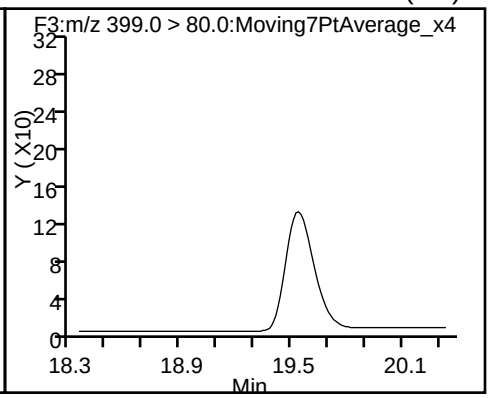
1 Perfluorobutanesulfonic acid (ND)



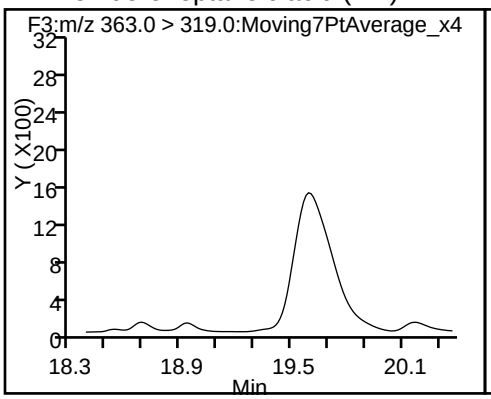
$ 2 13C2 PFHxA



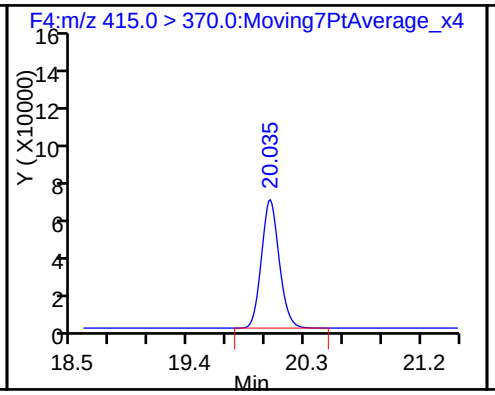
3 Perfluorohexanesulfonic acid (ND)



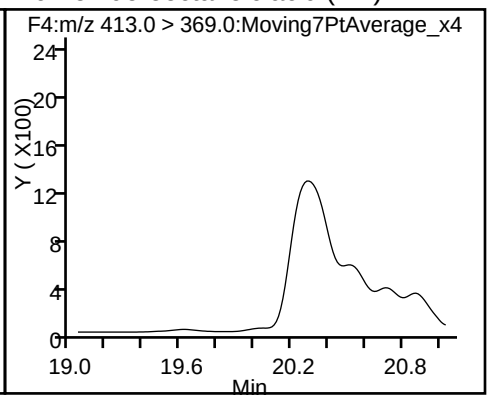
4 Perfluoroheptanoic acid (ND)



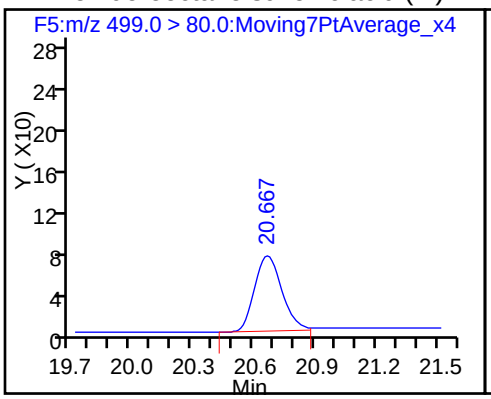
* 5 13C2-PFOA



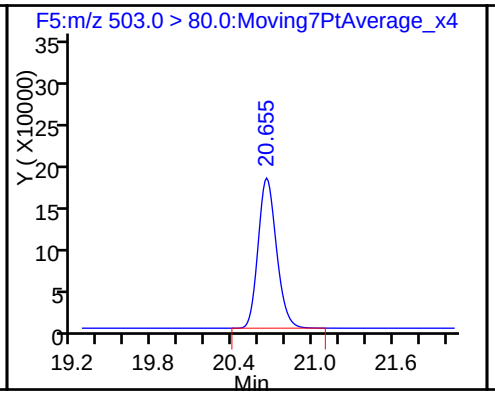
6 Perfluorooctanoic acid (ND)



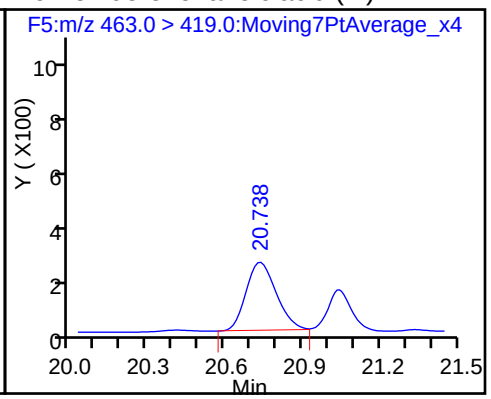
7 Perfluorooctane sulfonic acid (M)



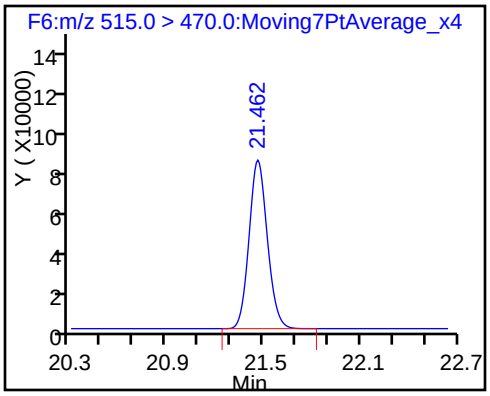
* 8 13C4 PFOS



9 Perfluorononanoic acid (M)



$ 10 13C2 PFDA



TestAmerica Sacramento
Recovery Report

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_108.d
Lims ID: 320-24069-A-13-A
Client ID: WI-CV-3RW15-1216
Sample Type: Client
Inject. Date: 13-Dec-2016 16:06:21 ALS Bottle#: 34 Worklist Smp#: 31
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 320-24069-a-13-a
Misc. Info.: Acquity BEH 1.7um, 3X150mm T=35*C
Operator ID: CBW Instrument ID: A6

Method: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\537__A6.m
Limit Group: LC 537 ICAL
Last Update: 14-Dec-2016 10:51:50 Calib Date: 05-Dec-2016 19:54:00
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d

Column 1 : Acquity BEH C18 (2.10 mm) Det: F1:MRM
Process Host: XAWRK017

First Level Reviewer: barnettj Date: 13-Dec-2016 16:54:16

Compound	Amount Added	Amount Recovered	% Rec.
$ 2 13C2 PFHxA	10.0	11.5	114.53
$ 10 13C2 PFDA	10.0	11.7	116.76

TestAmerica Sacramento

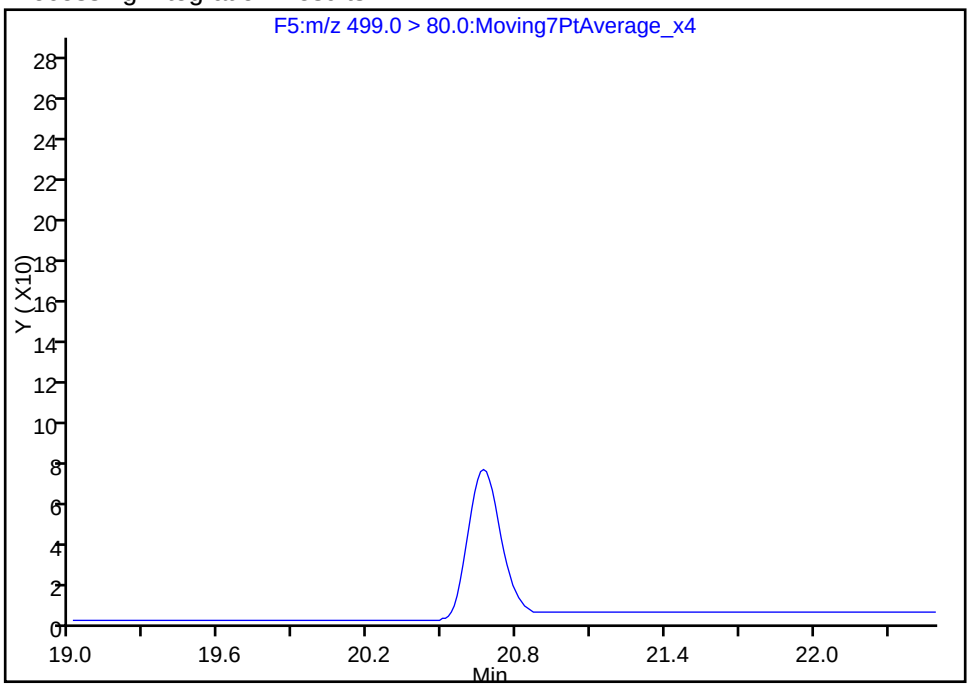
Data File:	\\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_108.d				
Injection Date:	13-Dec-2016 16:06:21	Instrument ID:	A6		
Lims ID:	320-24069-A-13-A	Lab Sample ID:	320-24069-13		
Client ID:	WI-CV-3RW15-1216				
Operator ID:	CBW	ALS Bottle#:	34	Worklist Smp#:	31
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	537__A6	Limit Group:	LC 537 ICAL		
Column:	Acquity BEH C18 (2.10 mm)	Detector	F5:MRM		

7 Perfluorooctane sulfonic acid, CAS: 1763-23-1

Signal: 1

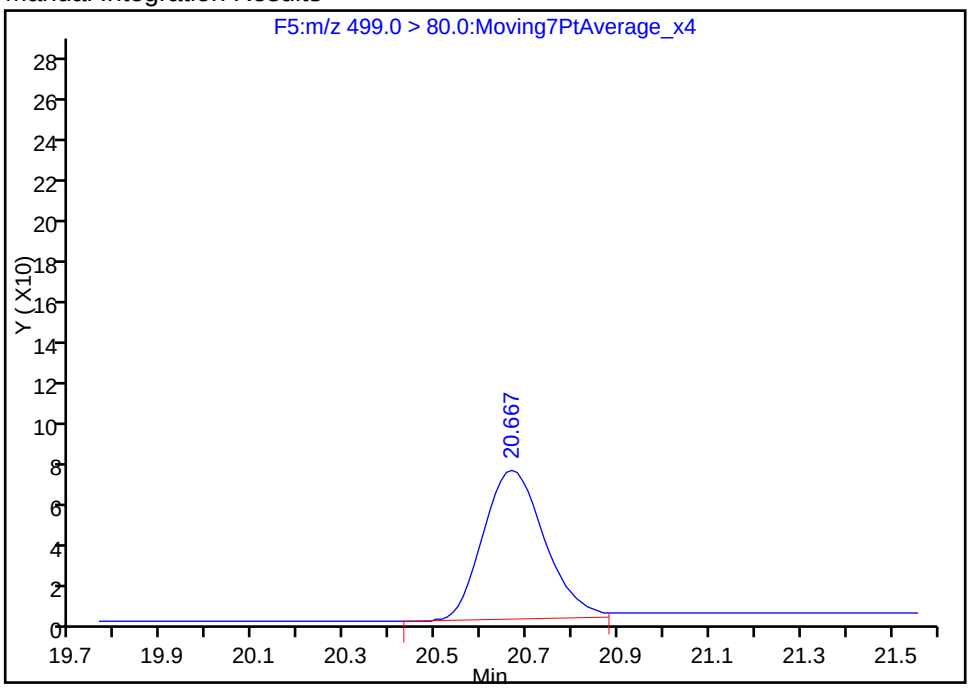
Not Detected
Expected RT: 20.62

Processing Integration Results



Manual Integration Results

RT: 20.67
Area: 674
Amount: 0.010797
Amount Units: ng/ml



Reviewer: barnettj, 13-Dec-2016 16:54:16
Audit Action: Manually Integrated Audit Reason: Missed Peak

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento | Job No.: 320-24069-1

SDG No.:

Client Sample ID: WI-CV-3FB15-1216 | Lab Sample ID: 320-24069-14

Matrix: Water | Lab File ID: 11DEC2016A6A_109.d

Analysis Method: 537 | Date Collected: 12/02/2016 14:48

Extraction Method: 537 | Date Extracted: 12/08/2016 11:45

Sample wt/vol: 255.1(mL) | Date Analyzed: 12/13/2016 16:35

Con. Extract Vol.: 1.0(mL) | Dilution Factor: 1

Injection Volume: 10(uL) | GC Column: Acquity ID: 2.1(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 141769 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	0.047	U	0.059	0.047	0.015
335-67-1	Perfluorooctanoic acid (PFOA)	0.024	U	0.029	0.024	0.0092
375-73-5	Perfluorobutanesulfonic acid (PFBS)	0.11	U	0.14	0.11	0.047

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00993	13C2 PFHxA	114		70-130
STL00996	13C2 PFDA	110		70-130

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_109.d
Lims ID: 320-24069-A-14-A
Client ID: WI-CV-3FB15-1216
Sample Type: Client
Inject. Date: 13-Dec-2016 16:35:55 ALS Bottle#: 35 Worklist Smp#: 32
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 320-24069-a-14-a
Misc. Info.: Acquity BEH 1.7um, 3X150mm T=35*C
Operator ID: CBW Instrument ID: A6

Method: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\537__A6.m
Limit Group: LC 537 ICAL
Last Update: 14-Dec-2016 10:51:50 Calib Date: 05-Dec-2016 19:54:00
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d

Column 1 : Acquity BEH C18 (2.10 mm) Det: F1:MRM
Process Host: XAWRK017

First Level Reviewer: barnettj Date: 13-Dec-2016 17:11:47

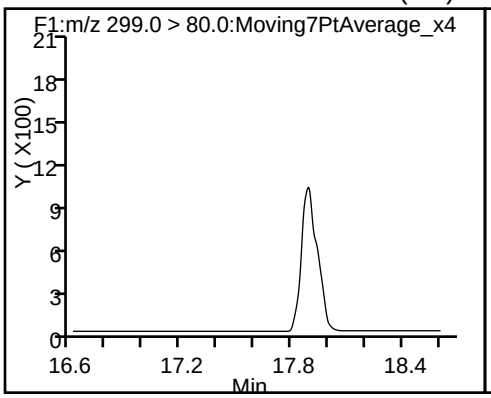
Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	S/N	Flags
$ 2 13C2 PFHxA								
315.0 > 270.0	18.594	18.585	0.009	1.000	947737	11.4	30589	
* 5 13C2-PFOA								
415.0 > 370.0	20.047	20.035	0.012		715253	10.0	18750	
* 8 13C4 PFOS								
503.0 > 80.0	20.667	20.667	0.0		1968331	28.7	51735	
9 Perfluorononanoic acid								M
463.0 > 419.0	20.750	20.738	0.012	1.000	2687	0.0331	78.0	M
$ 10 13C2 PFDA								
515.0 > 470.0	21.471	21.471	0.0	1.000	688522	11.0	21709	

QC Flag Legend

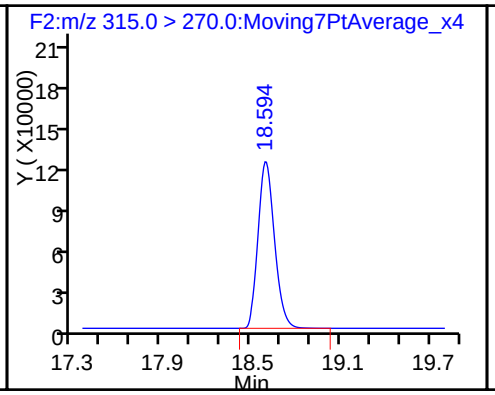
Review Flags
M - Manually Integrated

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_109.d
Injection Date: 13-Dec-2016 16:35:55 Instrument ID: A6
Lims ID: 320-24069-A-14-A Lab Sample ID: 320-24069-14
Client ID: WI-CV-3FB15-1216
Operator ID: CBW ALS Bottle#: 35 Worklist Smp#: 32
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 537__A6 Limit Group: LC 537 ICAL

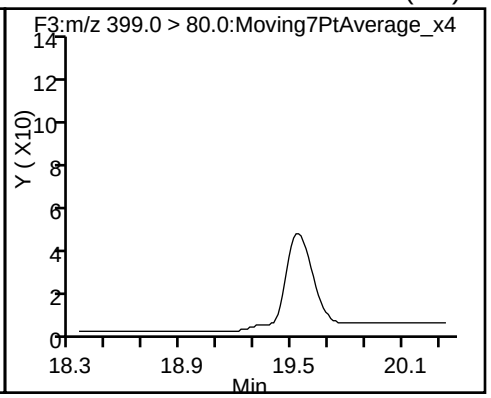
1 Perfluorobutanesulfonic acid (ND)



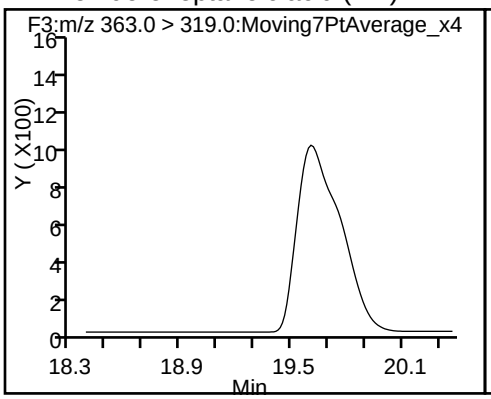
$ 2 13C2 PFHxA



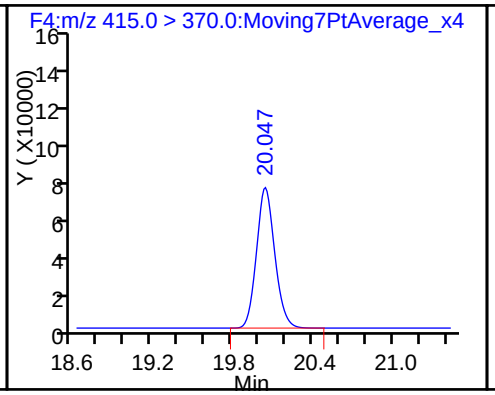
3 Perfluorohexanesulfonic acid (ND)



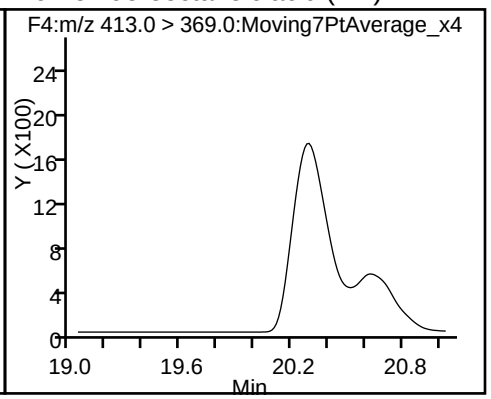
4 Perfluoroheptanoic acid (ND)



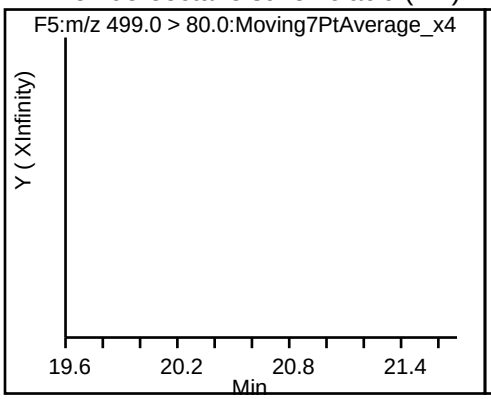
* 5 13C2-PFOA



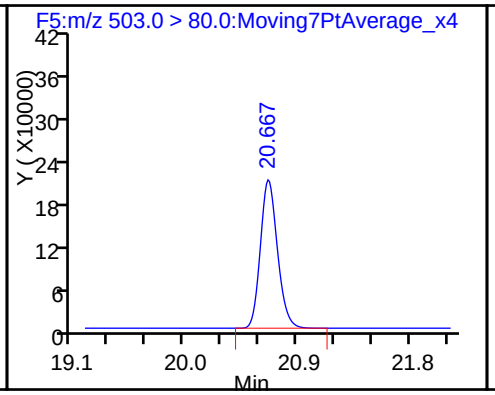
6 Perfluorooctanoic acid (ND)



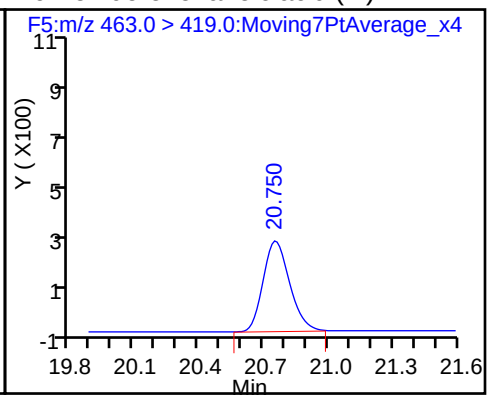
7 Perfluorooctane sulfonic acid (ND)



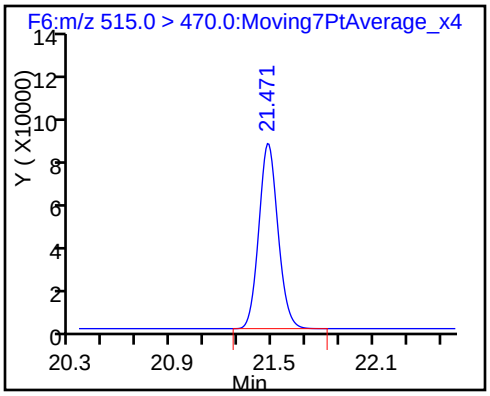
* 8 13C4 PFOS



9 Perfluorononanoic acid (M)



$ 10 13C2 PFDA



TestAmerica Sacramento
Recovery Report

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_109.d
Lims ID: 320-24069-A-14-A
Client ID: WI-CV-3FB15-1216
Sample Type: Client
Inject. Date: 13-Dec-2016 16:35:55 ALS Bottle#: 35 Worklist Smp#: 32
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 320-24069-a-14-a
Misc. Info.: Acquity BEH 1.7um, 3X150mm T=35*C
Operator ID: CBW Instrument ID: A6

Method: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\537__A6.m
Limit Group: LC 537 ICAL
Last Update: 14-Dec-2016 10:51:50 Calib Date: 05-Dec-2016 19:54:00
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d

Column 1 : Acquity BEH C18 (2.10 mm) Det: F1:MRM
Process Host: XAWRK017

First Level Reviewer: barnettj Date: 13-Dec-2016 17:11:47

Compound	Amount Added	Amount Recovered	% Rec.
$ 2 13C2 PFHxA	10.0	11.4	113.59
$ 10 13C2 PFDA	10.0	11.0	109.85

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Client Sample ID: WI-CV-3RW16-1216 Lab Sample ID: 320-24069-15

Matrix: Water Lab File ID: 11DEC2016A6A_110.d

Analysis Method: 537 Date Collected: 12/02/2016 17:25

Extraction Method: 537 Date Extracted: 12/08/2016 11:45

Sample wt/vol: 270.1(mL) Date Analyzed: 12/13/2016 17:05

Con. Extract Vol.: 1.0(mL) Dilution Factor: 1

Injection Volume: 10(uL) GC Column: Acquity ID: 2.1(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 141769 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	0.044	U	0.056	0.044	0.014
335-67-1	Perfluorooctanoic acid (PFOA)	0.022	U	0.028	0.022	0.0087
375-73-5	Perfluorobutanesulfonic acid (PFBS)	0.10	U	0.13	0.10	0.044

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00993	13C2 PFHxA	106		70-130
STL00996	13C2 PFDA	110		70-130

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_110.d
Lims ID: 320-24069-A-15-A
Client ID: WI-CV-3RW16-1216
Sample Type: Client
Inject. Date: 13-Dec-2016 17:05:31 ALS Bottle#: 36 Worklist Smp#: 33
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 320-24069-a-15-a
Misc. Info.: Acquity BEH 1.7um, 3X150mm T=35*C
Operator ID: CBW Instrument ID: A6

Method: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\537__A6.m
Limit Group: LC 537 ICAL
Last Update: 14-Dec-2016 10:51:50 Calib Date: 05-Dec-2016 19:54:00
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d

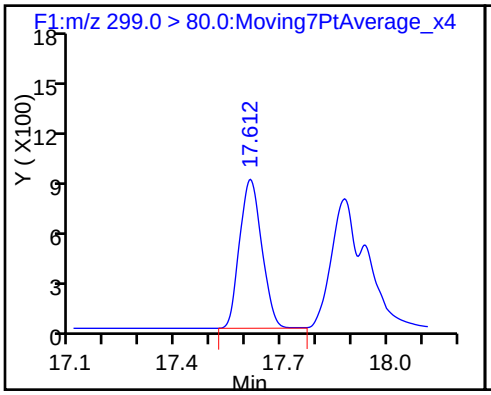
Column 1 : Acquity BEH C18 (2.10 mm) Det: F1:MRM
Process Host: XAWRK017

First Level Reviewer: barnettj Date: 14-Dec-2016 09:54:33

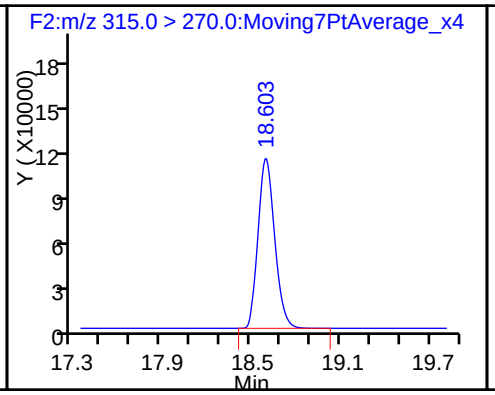
Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	S/N	Flags
1 Perfluorobutanesulfonic acid								
299.0 > 80.0	17.612	17.611	0.001	1.000	3879	0.0787	6.6	
$ 2 13C2 PFHxA								
315.0 > 270.0	18.603	18.585	0.018	1.000	873709	10.6	27948	
3 Perfluorohexanesulfonic acid								
399.0 > 80.0	19.356	19.344	0.012	1.000	24877	0.3941	1105	
* 5 13C2-PFOA								
415.0 > 370.0	20.047	20.035	0.012		706621	10.0	18475	
* 8 13C4 PFOS								
503.0 > 80.0	20.667	20.667	0.0		2016011	28.7	35132	
$ 10 13C2 PFDA								
515.0 > 470.0	21.471	21.471	0.0	1.000	682379	11.0	21474	

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_110.d
Injection Date: 13-Dec-2016 17:05:31 Instrument ID: A6
Lims ID: 320-24069-A-15-A Lab Sample ID: 320-24069-15
Client ID: WI-CV-3RW16-1216
Operator ID: CBW ALS Bottle#: 36 Worklist Smp#: 33
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 537__A6 Limit Group: LC 537 ICAL

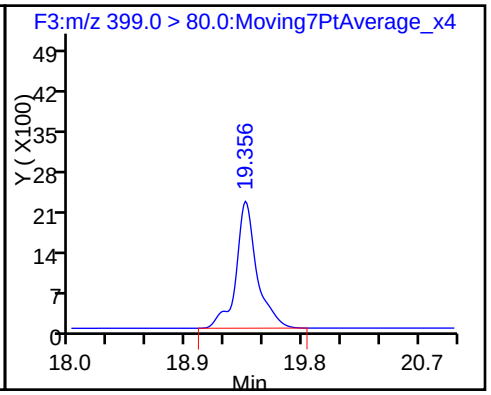
1 Perfluorobutanesulfonic acid



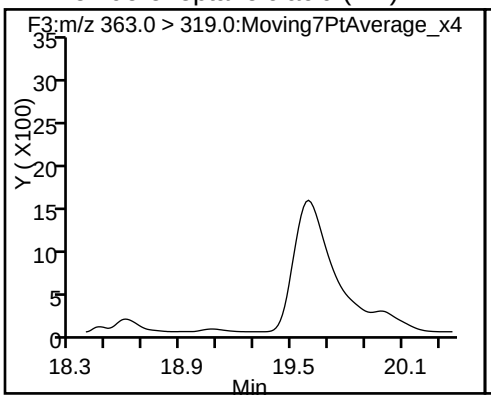
$ 2 13C2 PFHxA



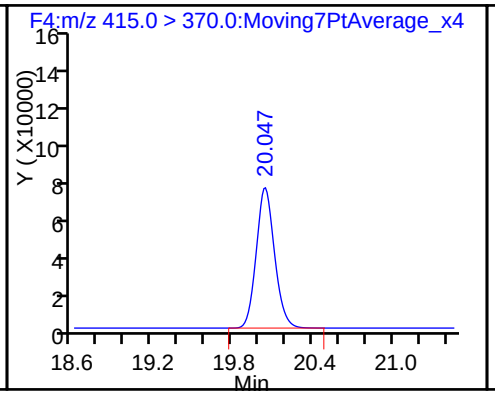
3 Perfluorohexanesulfonic acid



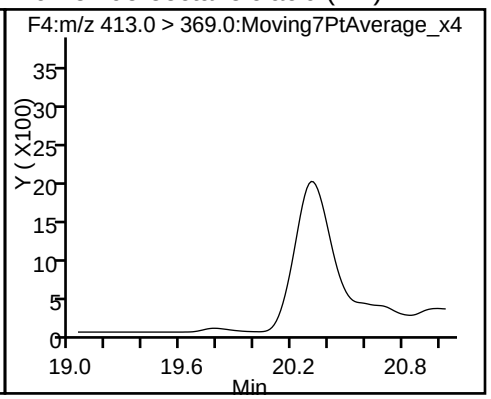
4 Perfluoroheptanoic acid (ND)



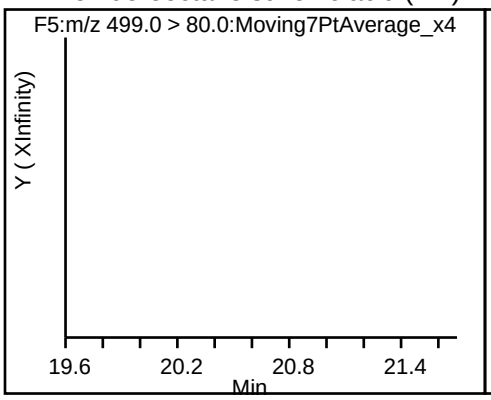
* 5 13C2-PFOA



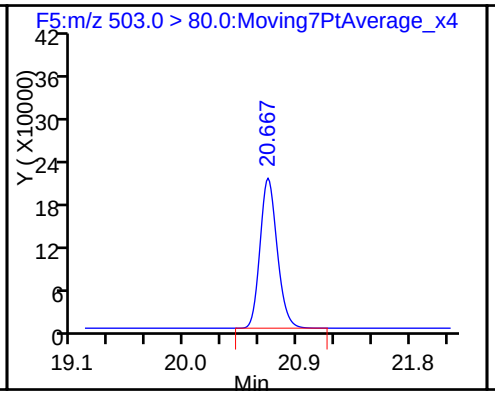
6 Perfluorooctanoic acid (ND)



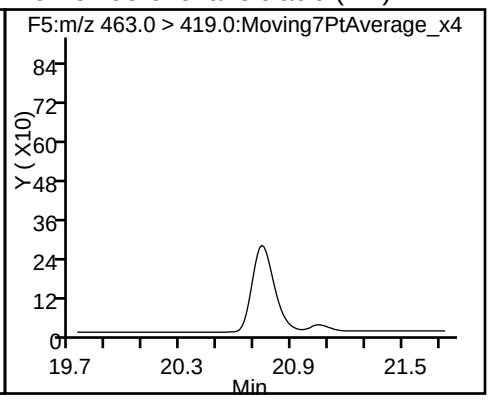
7 Perfluorooctane sulfonic acid (ND)



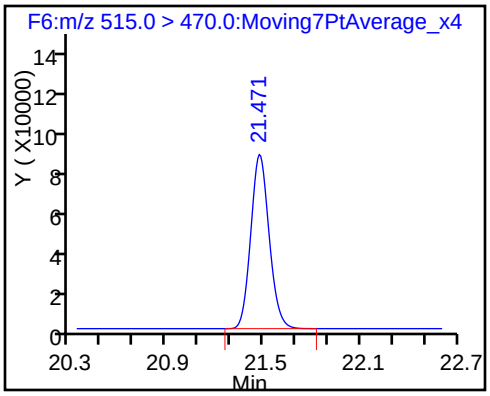
* 8 13C4 PFOS



9 Perfluorononanoic acid (ND)



$ 10 13C2 PFDA



TestAmerica Sacramento
Recovery Report

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_110.d
Lims ID: 320-24069-A-15-A
Client ID: WI-CV-3RW16-1216
Sample Type: Client
Inject. Date: 13-Dec-2016 17:05:31 ALS Bottle#: 36 Worklist Smp#: 33
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 320-24069-a-15-a
Misc. Info.: Acquity BEH 1.7um, 3X150mm T=35*C
Operator ID: CBW Instrument ID: A6

Method: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\537__A6.m
Limit Group: LC 537 ICAL
Last Update: 14-Dec-2016 10:51:50 Calib Date: 05-Dec-2016 19:54:00
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d

Column 1 : Acquity BEH C18 (2.10 mm) Det: F1:MRM
Process Host: XAWRK017

First Level Reviewer: barnettj Date: 14-Dec-2016 09:54:33

Compound	Amount Added	Amount Recovered	% Rec.
$ 2 13C2 PFHxA	10.0	10.6	106.00
$ 10 13C2 PFDA	10.0	11.0	110.20

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento | Job No.: 320-24069-1

SDG No.:

Client Sample ID: WI-CV-3FB16-1216 | Lab Sample ID: 320-24069-16

Matrix: Water | Lab File ID: 11DEC2016A6A_111.d

Analysis Method: 537 | Date Collected: 12/02/2016 17:26

Extraction Method: 537 | Date Extracted: 12/08/2016 11:45

Sample wt/vol: 266.2(mL) | Date Analyzed: 12/13/2016 17:35

Con. Extract Vol.: 1.0(mL) | Dilution Factor: 1

Injection Volume: 10(uL) | GC Column: Acquity ID: 2.1(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 141769 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	0.045	U	0.056	0.045	0.015
335-67-1	Perfluorooctanoic acid (PFOA)	0.023	U	0.028	0.023	0.0088
375-73-5	Perfluorobutanesulfonic acid (PFBS)	0.10	U	0.13	0.10	0.045

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00993	13C2 PFHxA	119		70-130
STL00996	13C2 PFDA	118		70-130

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_111.d
Lims ID: 320-24069-A-16-A
Client ID: WI-CV-3FB16-1216
Sample Type: Client
Inject. Date: 13-Dec-2016 17:35:07 ALS Bottle#: 37 Worklist Smp#: 34
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 320-24069-a-16-a
Misc. Info.: Acquity BEH 1.7um, 3X150mm T=35*C
Operator ID: CBW Instrument ID: A6

Method: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\537__A6.m
Limit Group: LC 537 ICAL
Last Update: 14-Dec-2016 10:51:50 Calib Date: 05-Dec-2016 19:54:00
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d

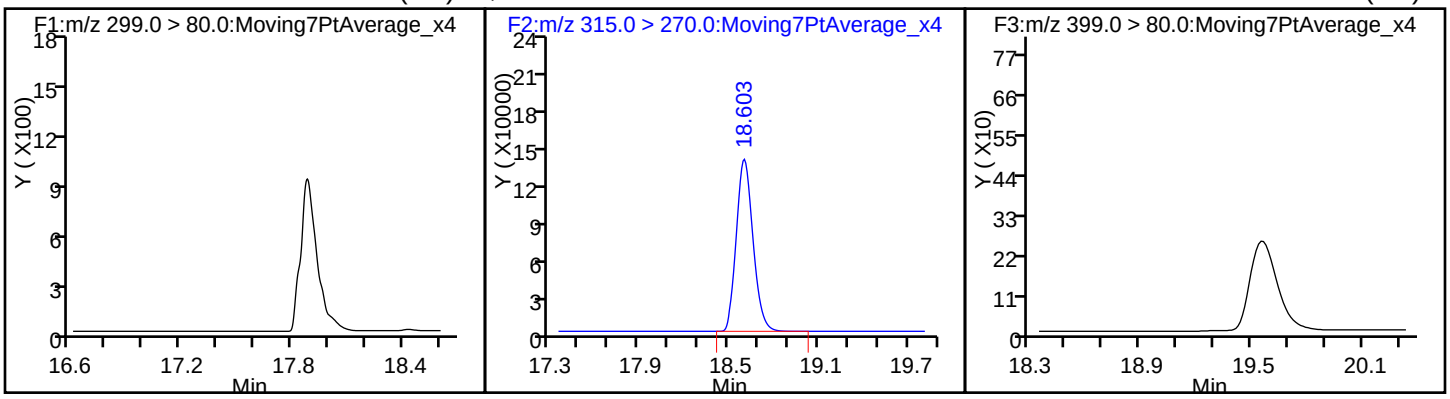
Column 1 : Acquity BEH C18 (2.10 mm) Det: F1:MRM
Process Host: XAWRK017

First Level Reviewer: barnettj Date: 14-Dec-2016 09:55:08

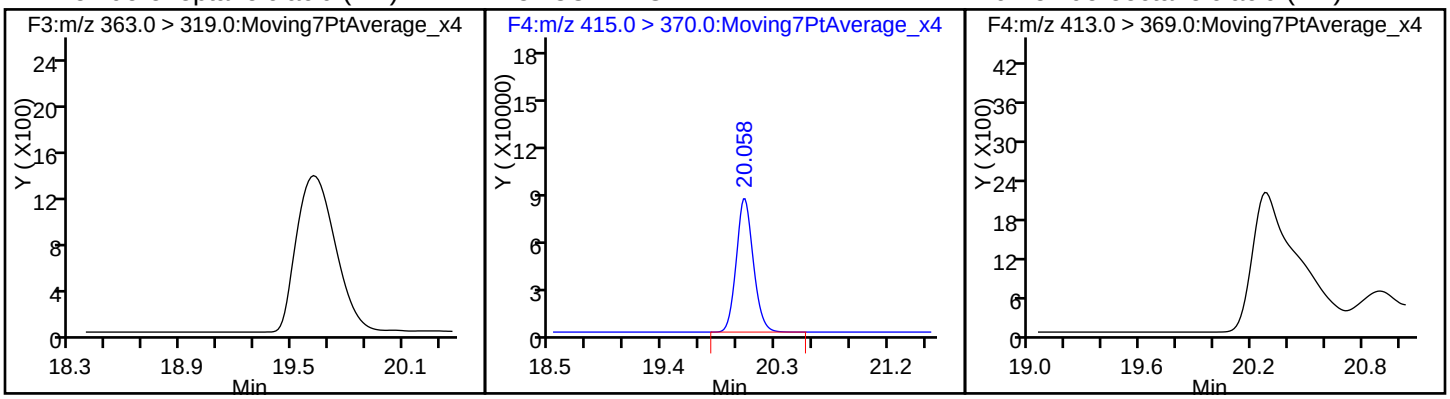
Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	S/N	Flags
$ 2 13C2 PFHxA								
315.0 > 270.0	18.603	18.585	0.018	1.000	1075322	11.9	34261	
* 5 13C2-PFOA								
415.0 > 370.0	20.058	20.035	0.023		777282	10.0	20408	
* 8 13C4 PFOS								
503.0 > 80.0	20.679	20.667	0.012		2094863	28.7	43660	
$ 10 13C2 PFDA								
515.0 > 470.0	21.480	21.471	0.009	1.000	800697	11.8	25303	

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_111.d
Injection Date: 13-Dec-2016 17:35:07 Instrument ID: A6
Lims ID: 320-24069-A-16-A Lab Sample ID: 320-24069-16
Client ID: WI-CV-3FB16-1216
Operator ID: CBW ALS Bottle#: 37 Worklist Smp#: 34
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 537__A6 Limit Group: LC 537 ICAL

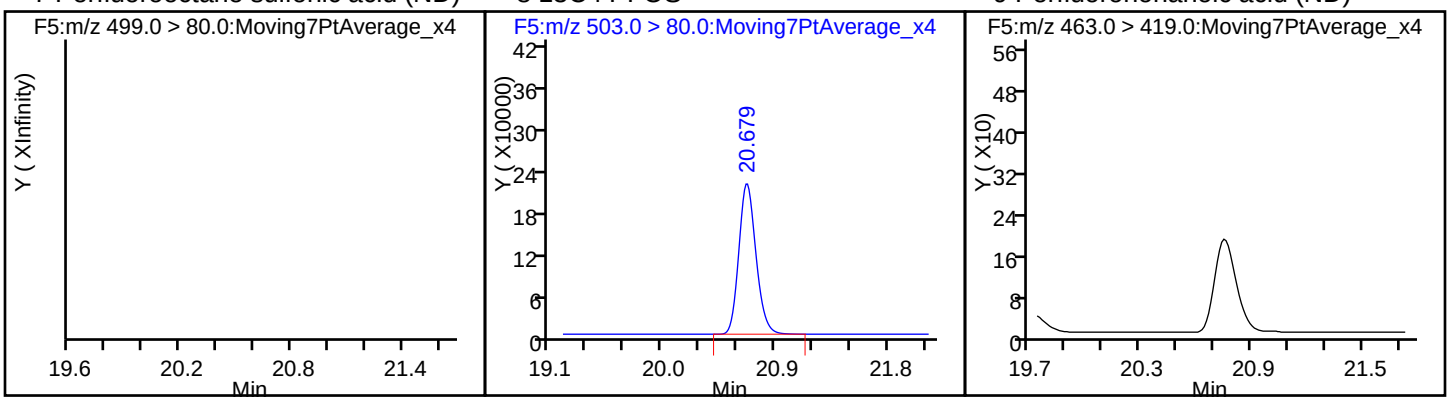
1 Perfluorobutanesulfonic acid (ND) $ 2 13C2 PFHxA 3 Perfluorohexanesulfonic acid (ND)



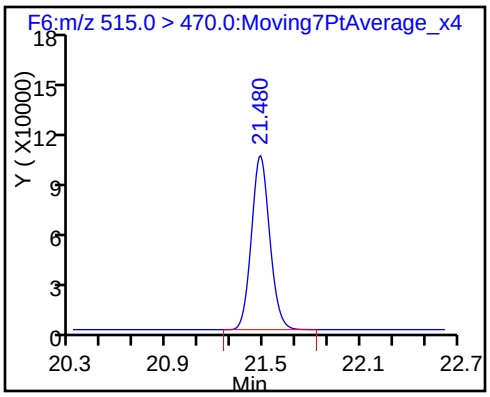
4 Perfluoroheptanoic acid (ND) * 5 13C2-PFOA 6 Perfluorooctanoic acid (ND)



7 Perfluorooctane sulfonic acid (ND) * 8 13C4 PFOS 9 Perfluorononanoic acid (ND)



$ 10 13C2 PFDA



TestAmerica Sacramento
Recovery Report

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_111.d
Lims ID: 320-24069-A-16-A
Client ID: WI-CV-3FB16-1216
Sample Type: Client
Inject. Date: 13-Dec-2016 17:35:07 ALS Bottle#: 37 Worklist Smp#: 34
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 320-24069-a-16-a
Misc. Info.: Acquity BEH 1.7um, 3X150mm T=35*C
Operator ID: CBW Instrument ID: A6

Method: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\537__A6.m
Limit Group: LC 537 ICAL
Last Update: 14-Dec-2016 10:51:50 Calib Date: 05-Dec-2016 19:54:00
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d

Column 1 : Acquity BEH C18 (2.10 mm) Det: F1:MRM
Process Host: XAWRK017

First Level Reviewer: barnettj Date: 14-Dec-2016 09:55:08

Compound	Amount Added	Amount Recovered	% Rec.
$ 2 13C2 PFHxA	10.0	11.9	118.59
$ 10 13C2 PFDA	10.0	11.8	117.56

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Client Sample ID: WI-CV-1RW18-1216 Lab Sample ID: 320-24069-17

Matrix: Water Lab File ID: 11DEC2016A6A_112.d

Analysis Method: 537 Date Collected: 12/03/2016 09:05

Extraction Method: 537 Date Extracted: 12/08/2016 11:45

Sample wt/vol: 267.5(mL) Date Analyzed: 12/13/2016 18:04

Con. Extract Vol.: 1.0(mL) Dilution Factor: 1

Injection Volume: 10(uL) GC Column: Acquity ID: 2.1(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 141769 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	0.045	U	0.056	0.045	0.014
335-67-1	Perfluorooctanoic acid (PFOA)	0.022	U	0.028	0.022	0.0088
375-73-5	Perfluorobutanesulfonic acid (PFBS)	0.10	U M	0.13	0.10	0.044

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00993	13C2 PFHxA	115		70-130
STL00996	13C2 PFDA	116		70-130

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_112.d
Lims ID: 320-24069-A-17-A
Client ID: WI-CV-1RW18-1216
Sample Type: Client
Inject. Date: 13-Dec-2016 18:04:46 ALS Bottle#: 38 Worklist Smp#: 35
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 320-24069-a-17-a
Misc. Info.: Acquity BEH 1.7um, 3X150mm T=35*C
Operator ID: CBW Instrument ID: A6

Method: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\537__A6.m
Limit Group: LC 537 ICAL
Last Update: 14-Dec-2016 10:51:50 Calib Date: 05-Dec-2016 19:54:00
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d

Column 1 : Acquity BEH C18 (2.10 mm) Det: F1:MRM
Process Host: XAWRK017

First Level Reviewer: barnettj Date: 14-Dec-2016 09:57:35

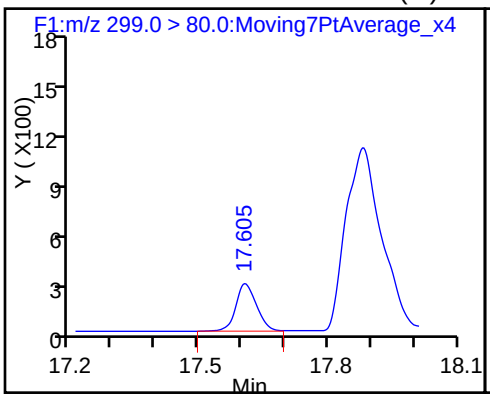
Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	S/N	Flags
1 Perfluorobutanesulfonic acid								M
299.0 > 80.0	17.605	17.611	-0.006	1.000	939	0.0212	4.7	M
$ 2 13C2 PFHxA								
315.0 > 270.0	18.585	18.585	0.0	1.000	948023	11.5	30473	
3 Perfluorohexanesulfonic acid								M
399.0 > 80.0	19.368	19.344	0.024	1.000	2408	0.0424	6.1	M
* 5 13C2-PFOA								
415.0 > 370.0	20.047	20.035	0.012		707735	10.0	18380	
* 8 13C4 PFOS								
503.0 > 80.0	20.667	20.667	0.0		1813088	28.7	47144	
$ 10 13C2 PFDA								
515.0 > 470.0	21.471	21.471	0.0	1.000	716642	11.6	22637	

QC Flag Legend

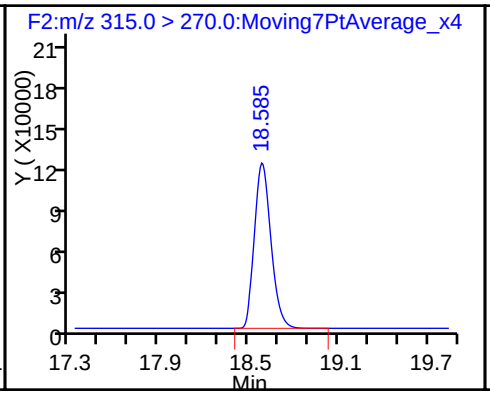
Review Flags
M - Manually Integrated

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_112.d
Injection Date: 13-Dec-2016 18:04:46 Instrument ID: A6
Lims ID: 320-24069-A-17-A Lab Sample ID: 320-24069-17
Client ID: WI-CV-1RW18-1216
Operator ID: CBW ALS Bottle#: 38 Worklist Smp#: 35
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 537__A6 Limit Group: LC 537 ICAL

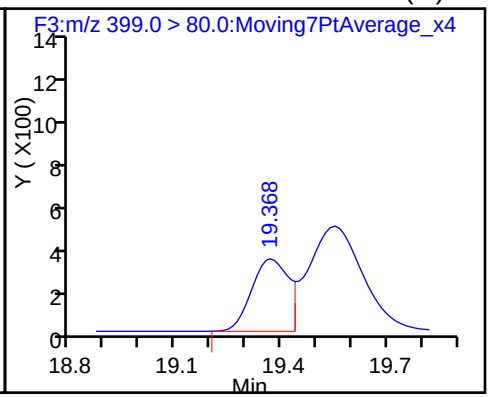
1 Perfluorobutanesulfonic acid (M)



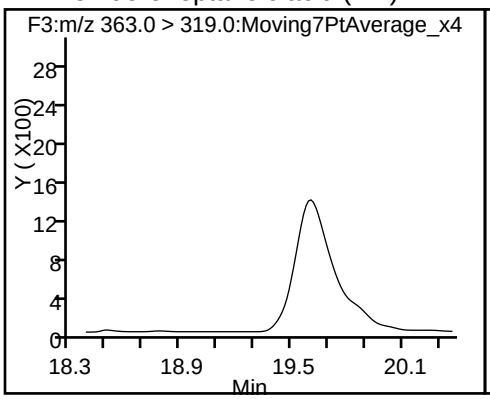
$ 2 13C2 PFHxA



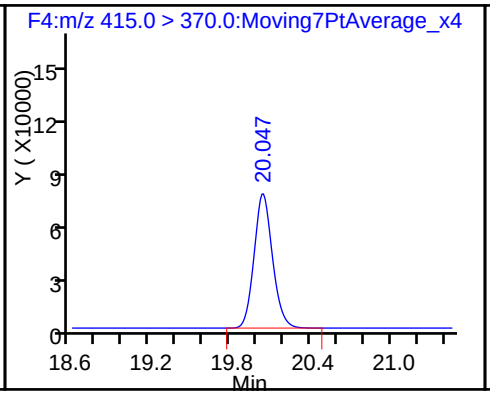
3 Perfluorohexanesulfonic acid (M)



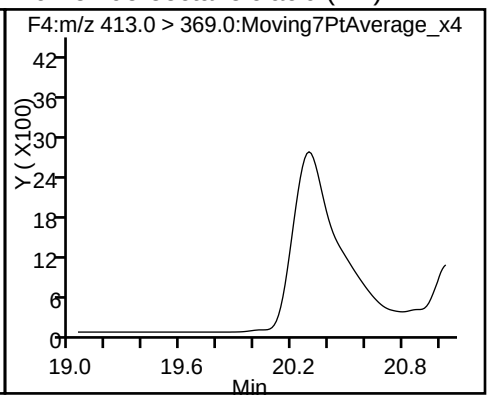
4 Perfluoroheptanoic acid (ND)



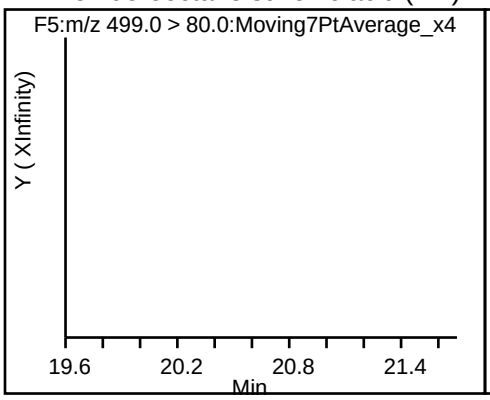
* 5 13C2-PFOA



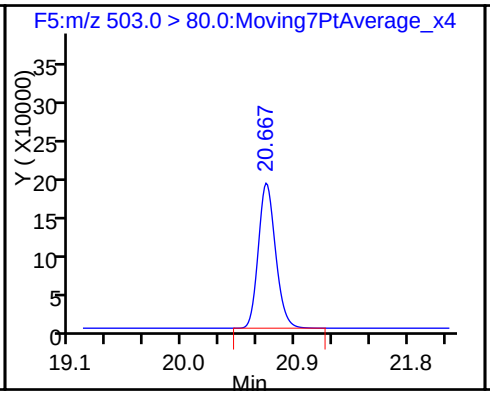
6 Perfluorooctanoic acid (ND)



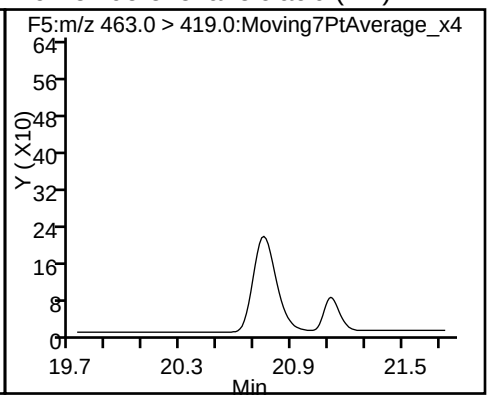
7 Perfluorooctane sulfonic acid (ND)



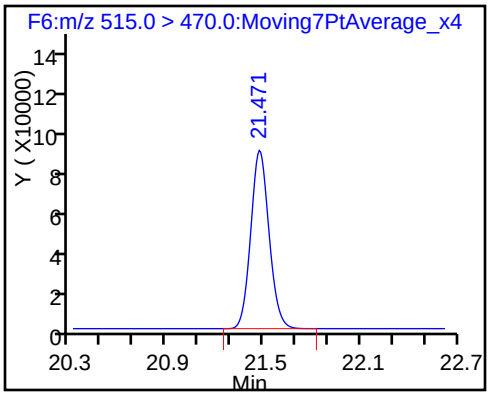
* 8 13C4 PFOS



9 Perfluorononanoic acid (ND)



$ 10 13C2 PFDA



TestAmerica Sacramento
Recovery Report

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_112.d
Lims ID: 320-24069-A-17-A
Client ID: WI-CV-1RW18-1216
Sample Type: Client
Inject. Date: 13-Dec-2016 18:04:46 ALS Bottle#: 38 Worklist Smp#: 35
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 320-24069-a-17-a
Misc. Info.: Acquity BEH 1.7um, 3X150mm T=35*C
Operator ID: CBW Instrument ID: A6

Method: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\537__A6.m
Limit Group: LC 537 ICAL
Last Update: 14-Dec-2016 10:51:50 Calib Date: 05-Dec-2016 19:54:00
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d

Column 1 : Acquity BEH C18 (2.10 mm) Det: F1:MRM
Process Host: XAWRK017

First Level Reviewer: barnettj Date: 14-Dec-2016 09:57:35

Compound	Amount Added	Amount Recovered	% Rec.
$ 2 13C2 PFHxA	10.0	11.5	114.83
$ 10 13C2 PFDA	10.0	11.6	115.56

Manual Integration/User Assign Peak Report

TestAmerica Sacramento

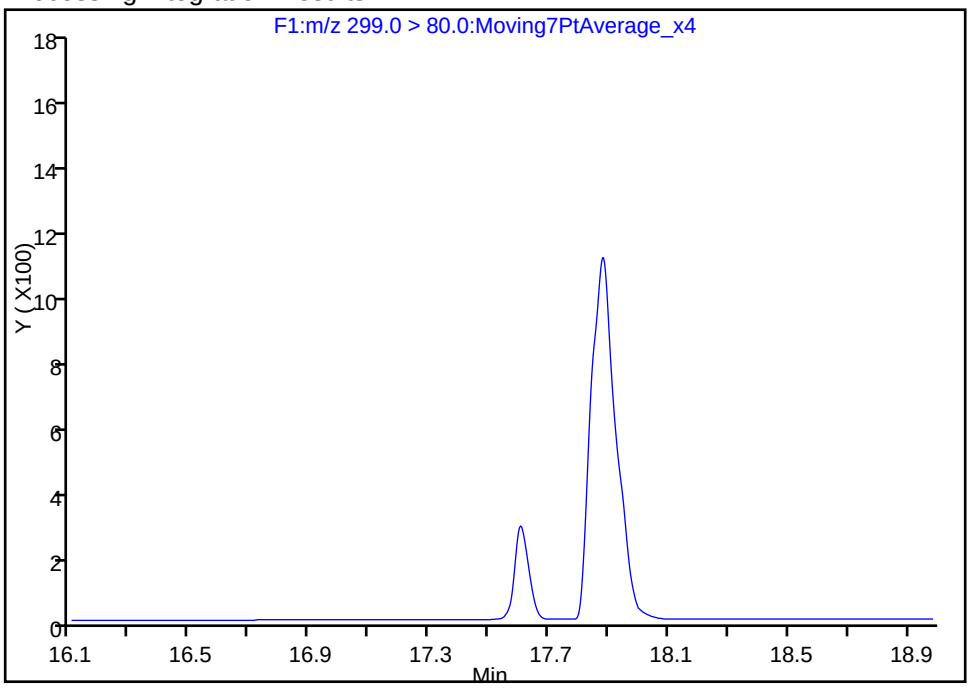
Data File:	\\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_112.d				
Injection Date:	13-Dec-2016 18:04:46	Instrument ID:	A6		
Lims ID:	320-24069-A-17-A	Lab Sample ID:	320-24069-17		
Client ID:	WI-CV-1RW18-1216				
Operator ID:	CBW	ALS Bottle#:	38	Worklist Smp#:	35
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	537__A6	Limit Group:	LC 537 ICAL		
Column:	Acquity BEH C18 (2.10 mm)	Detector	F1:MRM		

1 Perfluorobutanesulfonic acid, CAS: 375-73-5

Signal: 1

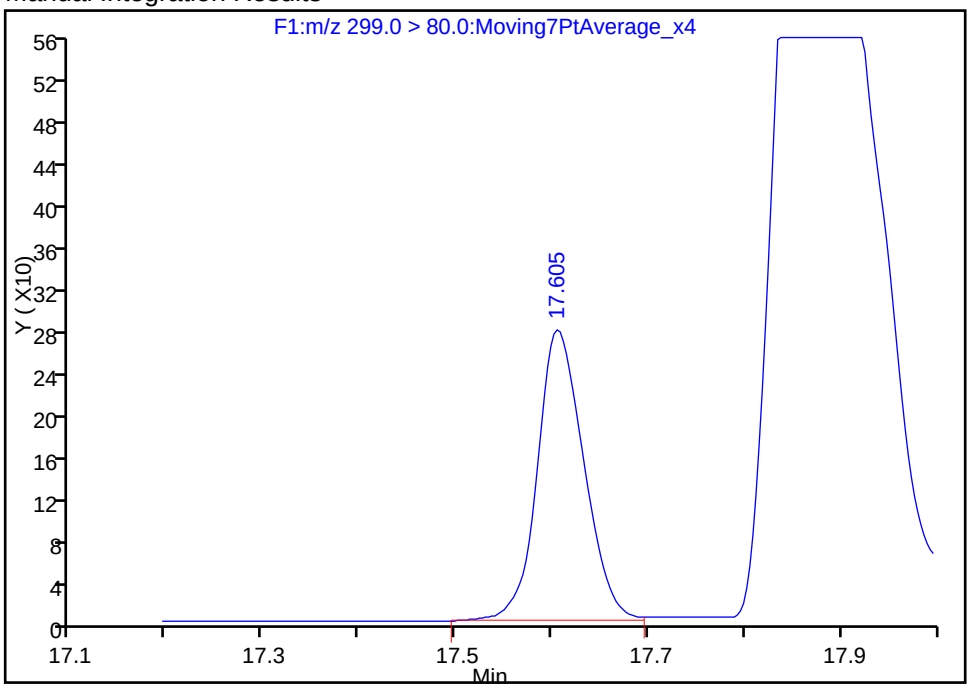
Not Detected
Expected RT: 17.61

Processing Integration Results



Manual Integration Results

RT: 17.61
Area: 939
Amount: 0.021174
Amount Units: ng/ml



Reviewer: barnettj, 14-Dec-2016 09:57:35
Audit Action: Manually Integrated Audit Reason: Missed Peak

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento | Job No.: 320-24069-1

SDG No.:

Client Sample ID: WI-CV-1FB18-1216 | Lab Sample ID: 320-24069-18

Matrix: Water | Lab File ID: 11DEC2016A6A_113.d

Analysis Method: 537 | Date Collected: 12/03/2016 09:04

Extraction Method: 537 | Date Extracted: 12/08/2016 11:45

Sample wt/vol: 267(mL) | Date Analyzed: 12/13/2016 18:34

Con. Extract Vol.: 1.0(mL) | Dilution Factor: 1

Injection Volume: 10(uL) | GC Column: Acquity ID: 2.1(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 141769 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	0.045	U	0.056	0.045	0.015
335-67-1	Perfluorooctanoic acid (PFOA)	0.022	U	0.028	0.022	0.0088
375-73-5	Perfluorobutanesulfonic acid (PFBS)	0.10	U	0.13	0.10	0.045

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00993	13C2 PFHxA	115		70-130
STL00996	13C2 PFDA	117		70-130

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_113.d
Lims ID: 320-24069-A-18-A
Client ID: WI-CV-1FB18-1216
Sample Type: Client
Inject. Date: 13-Dec-2016 18:34:17 ALS Bottle#: 39 Worklist Smp#: 36
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 320-24069-a-18-a
Misc. Info.: Acquity BEH 1.7um, 3X150mm T=35*C
Operator ID: CBW Instrument ID: A6

Method: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\537__A6.m
Limit Group: LC 537 ICAL
Last Update: 14-Dec-2016 10:51:50 Calib Date: 05-Dec-2016 19:54:00
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d

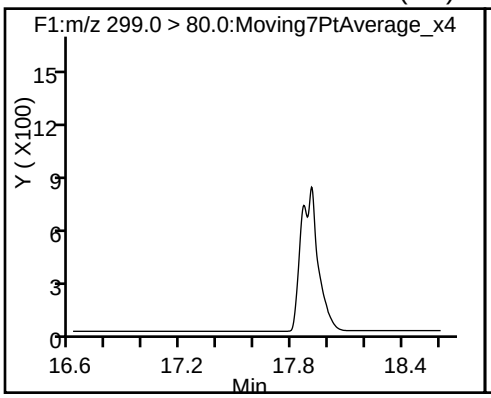
Column 1 : Acquity BEH C18 (2.10 mm) Det: F1:MRM
Process Host: XAWRK017

First Level Reviewer: barnettj Date: 14-Dec-2016 09:58:21

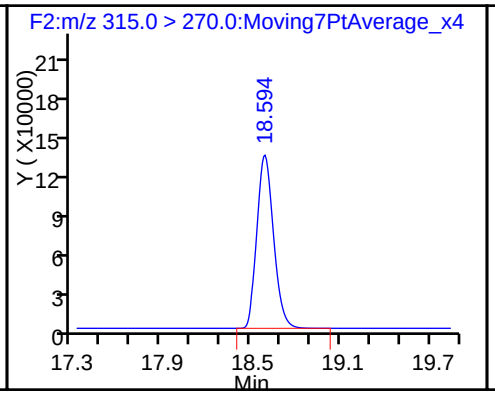
Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	S/N	Flags
$ 2 13C2 PFHxA								
315.0 > 270.0	18.594	18.585	0.009	1.000	1049833	11.5	33463	
* 5 13C2-PFOA								
415.0 > 370.0	20.047	20.035	0.012		780946	10.0	20230	
* 8 13C4 PFOS								
503.0 > 80.0	20.679	20.667	0.012		2017060	28.7	52120	
$ 10 13C2 PFDA								
515.0 > 470.0	21.480	21.471	0.009	1.000	798710	11.7	25117	

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_113.d
Injection Date: 13-Dec-2016 18:34:17 Instrument ID: A6
Lims ID: 320-24069-A-18-A Lab Sample ID: 320-24069-18
Client ID: WI-CV-1FB18-1216
Operator ID: CBW ALS Bottle#: 39 Worklist Smp#: 36
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 537__A6 Limit Group: LC 537 ICAL

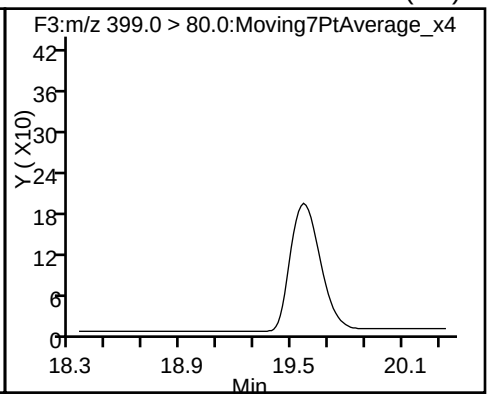
1 Perfluorobutanesulfonic acid (ND)



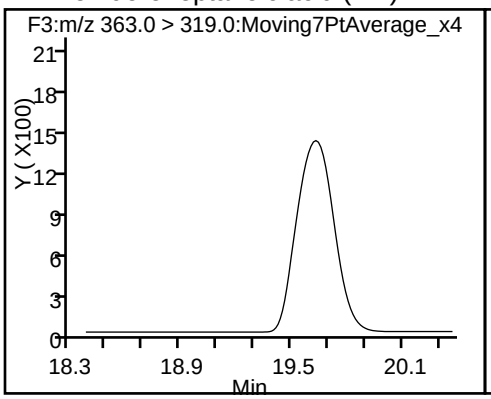
$ 2 13C2 PFHxA



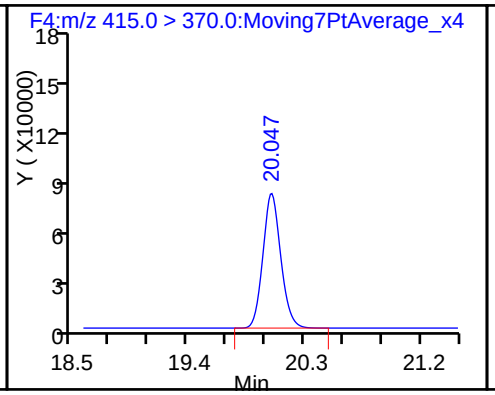
3 Perfluorohexanesulfonic acid (ND)



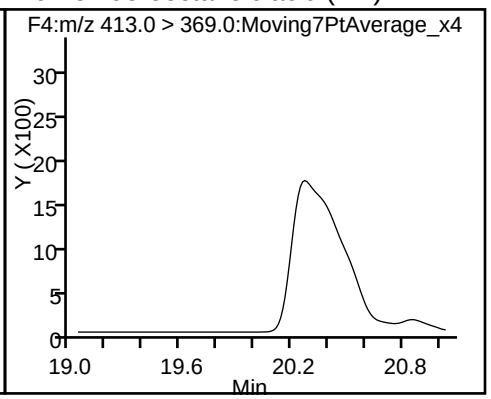
4 Perfluoroheptanoic acid (ND)



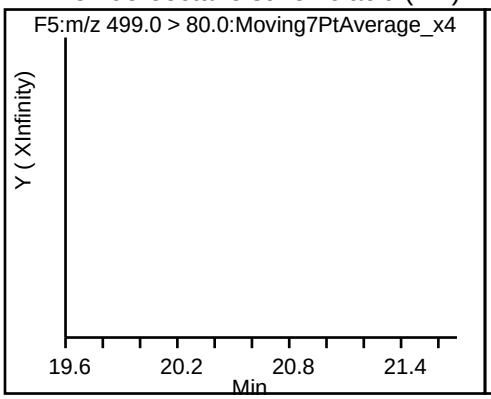
* 5 13C2-PFOA



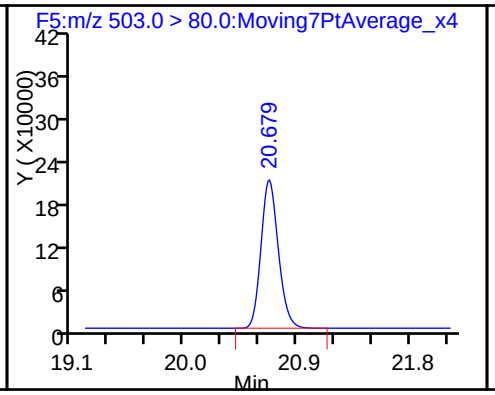
6 Perfluorooctanoic acid (ND)



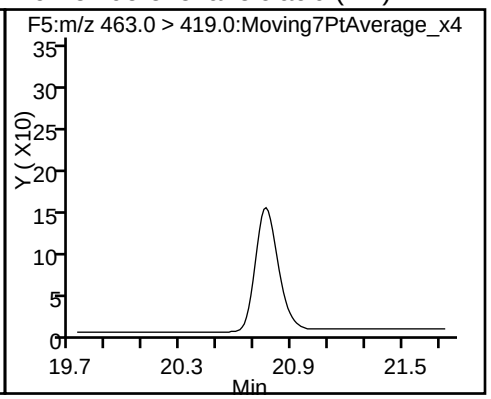
7 Perfluorooctane sulfonic acid (ND)



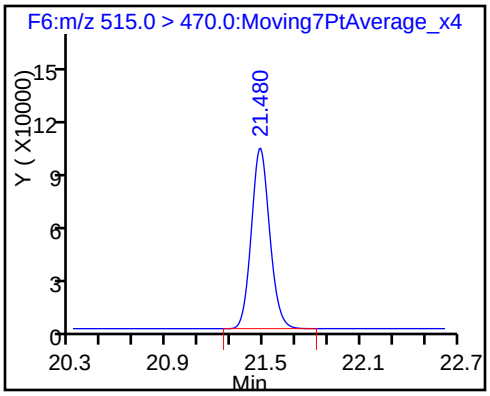
* 8 13C4 PFOS



9 Perfluorononanoic acid (ND)



$ 10 13C2 PFDA



TestAmerica Sacramento
Recovery Report

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_113.d
Lims ID: 320-24069-A-18-A
Client ID: WI-CV-1FB18-1216
Sample Type: Client
Inject. Date: 13-Dec-2016 18:34:17 ALS Bottle#: 39 Worklist Smp#: 36
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 320-24069-a-18-a
Misc. Info.: Acquity BEH 1.7um, 3X150mm T=35*C
Operator ID: CBW Instrument ID: A6

Method: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\537__A6.m
Limit Group: LC 537 ICAL
Last Update: 14-Dec-2016 10:51:50 Calib Date: 05-Dec-2016 19:54:00
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d

Column 1 : Acquity BEH C18 (2.10 mm) Det: F1:MRM
Process Host: XAWRK017

First Level Reviewer: barnettj Date: 14-Dec-2016 09:58:21

Compound	Amount Added	Amount Recovered	% Rec.
$ 2 13C2 PFHxA	10.0	11.5	115.24
$ 10 13C2 PFDA	10.0	11.7	116.72

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento | Job No.: 320-24069-1

SDG No.:

Client Sample ID: WI-CV-1RW19-1216 | Lab Sample ID: 320-24069-19

Matrix: Water | Lab File ID: 11DEC2016A6A_114.d

Analysis Method: 537 | Date Collected: 12/03/2016 10:05

Extraction Method: 537 | Date Extracted: 12/08/2016 11:45

Sample wt/vol: 268.3(mL) | Date Analyzed: 12/13/2016 19:03

Con. Extract Vol.: 1.0(mL) | Dilution Factor: 1

Injection Volume: 10(uL) | GC Column: Acquity ID: 2.1(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 141769 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	0.045	U	0.056	0.045	0.014
335-67-1	Perfluorooctanoic acid (PFOA)	0.022	U	0.028	0.022	0.0088
375-73-5	Perfluorobutanesulfonic acid (PFBS)	0.10	U	0.13	0.10	0.044

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00993	13C2 PFHxA	119		70-130
STL00996	13C2 PFDA	125		70-130

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_114.d
Lims ID: 320-24069-A-19-A
Client ID: WI-CV-1RW19-1216
Sample Type: Client
Inject. Date: 13-Dec-2016 19:03:54 ALS Bottle#: 40 Worklist Smp#: 37
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 320-24069-a-19-a
Misc. Info.: Acquity BEH 1.7um, 3X150mm T=35*C
Operator ID: CBW Instrument ID: A6

Method: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\537__A6.m
Limit Group: LC 537 ICAL
Last Update: 14-Dec-2016 10:51:50 Calib Date: 05-Dec-2016 19:54:00
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d

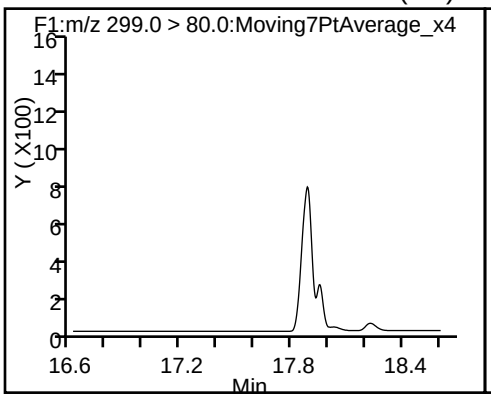
Column 1 : Acquity BEH C18 (2.10 mm) Det: F1:MRM
Process Host: XAWRK017

First Level Reviewer: barnettj Date: 14-Dec-2016 09:59:12

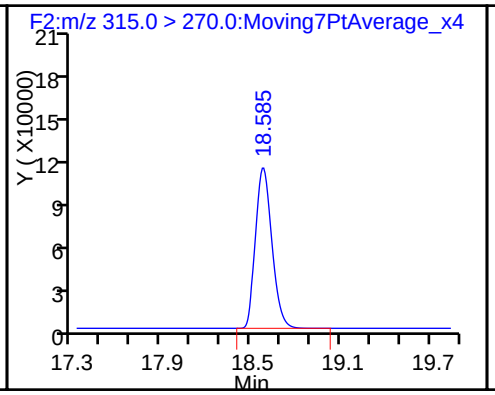
Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	S/N	Flags
$ 2 13C2 PFHxA								
315.0 > 270.0	18.585	18.585	0.0	1.000	863748	11.9	27964	
* 5 13C2-PFOA								
415.0 > 370.0	20.035	20.035	0.0		622007	10.0	16266	
* 8 13C4 PFOS								
503.0 > 80.0	20.667	20.667	0.0		1751844	28.7	46031	
$ 10 13C2 PFDA								
515.0 > 470.0	21.471	21.471	0.0	1.000	679005	12.5	21444	

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_114.d
Injection Date: 13-Dec-2016 19:03:54 Instrument ID: A6
Lims ID: 320-24069-A-19-A Lab Sample ID: 320-24069-19
Client ID: WI-CV-1RW19-1216
Operator ID: CBW ALS Bottle#: 40 Worklist Smp#: 37
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 537__A6 Limit Group: LC 537 ICAL

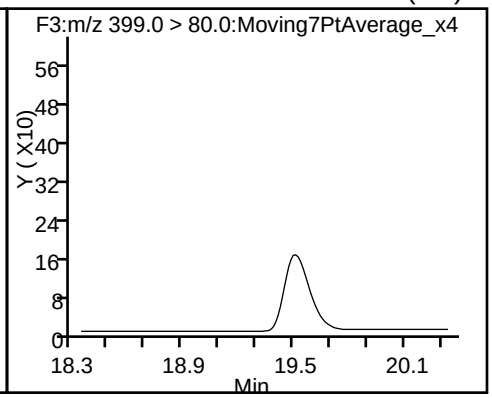
1 Perfluorobutanesulfonic acid (ND)



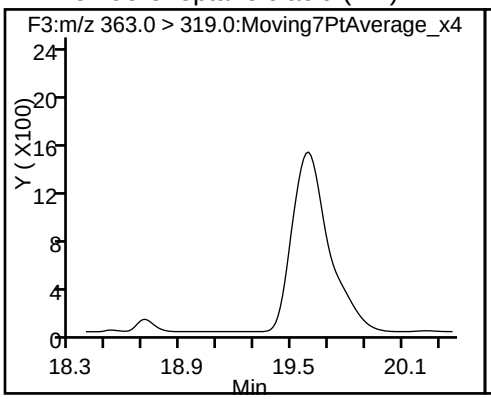
$ 2 13C2 PFHxA



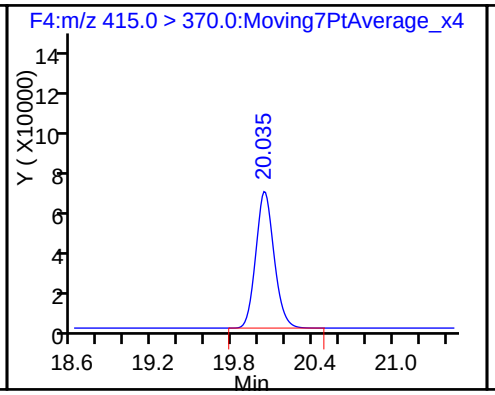
3 Perfluorohexanesulfonic acid (ND)



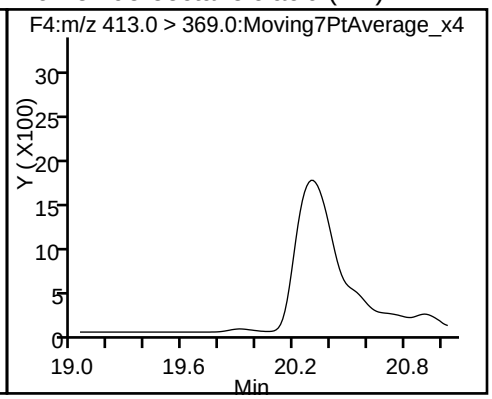
4 Perfluoroheptanoic acid (ND)



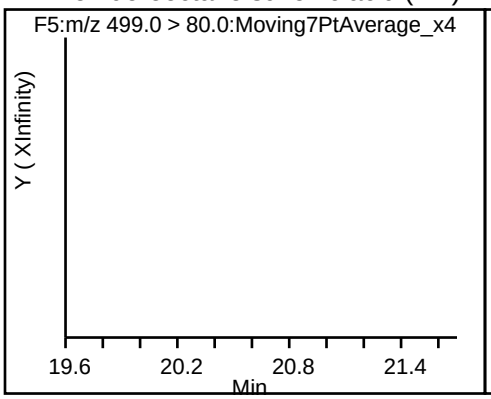
* 5 13C2-PFOA



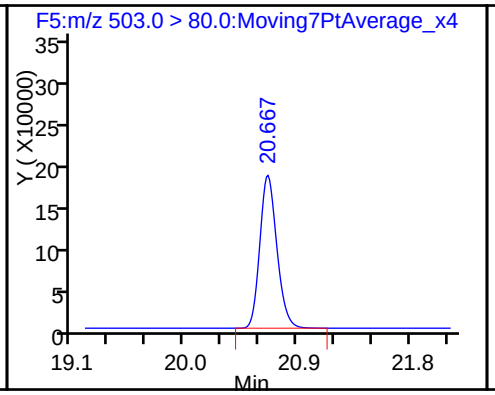
6 Perfluorooctanoic acid (ND)



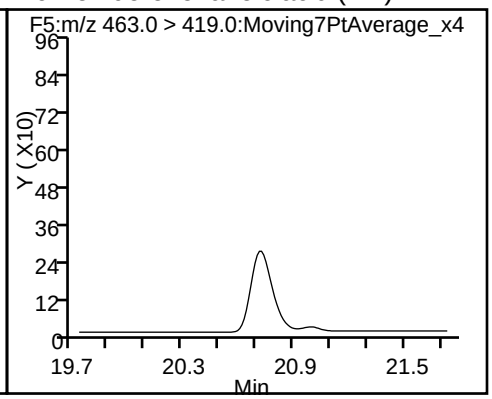
7 Perfluorooctane sulfonic acid (ND)



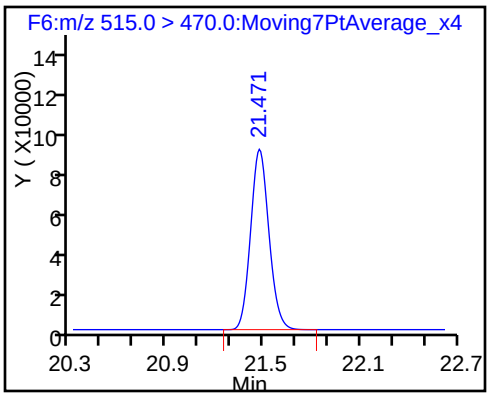
* 8 13C4 PFOS



9 Perfluorononanoic acid (ND)



$ 10 13C2 PFDA



TestAmerica Sacramento
Recovery Report

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_114.d
Lims ID: 320-24069-A-19-A
Client ID: WI-CV-1RW19-1216
Sample Type: Client
Inject. Date: 13-Dec-2016 19:03:54 ALS Bottle#: 40 Worklist Smp#: 37
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 320-24069-a-19-a
Misc. Info.: Acquity BEH 1.7um, 3X150mm T=35*C
Operator ID: CBW Instrument ID: A6

Method: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\537__A6.m
Limit Group: LC 537 ICAL
Last Update: 14-Dec-2016 10:51:50 Calib Date: 05-Dec-2016 19:54:00
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d

Column 1 : Acquity BEH C18 (2.10 mm) Det: F1:MRM
Process Host: XAWRK017

First Level Reviewer: barnettj Date: 14-Dec-2016 09:59:12

Compound	Amount Added	Amount Recovered	% Rec.
$ 2 13C2 PFHxA	10.0	11.9	119.04
$ 10 13C2 PFDA	10.0	12.5	124.58

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento | Job No.: 320-24069-1

SDG No.:

Client Sample ID: WI-CV-1FB19-1216 | Lab Sample ID: 320-24069-20

Matrix: Water | Lab File ID: 11DEC2016A6A_115.d

Analysis Method: 537 | Date Collected: 12/03/2016 10:04

Extraction Method: 537 | Date Extracted: 12/08/2016 11:45

Sample wt/vol: 259.5(mL) | Date Analyzed: 12/13/2016 19:33

Con. Extract Vol.: 1.0(mL) | Dilution Factor: 1

Injection Volume: 10(uL) | GC Column: Acquity ID: 2.1(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 141769 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	0.046	U	0.058	0.046	0.015
335-67-1	Perfluorooctanoic acid (PFOA)	0.023	U	0.029	0.023	0.0091
375-73-5	Perfluorobutanesulfonic acid (PFBS)	0.11	U	0.13	0.11	0.046

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00993	13C2 PFHxA	120		70-130
STL00996	13C2 PFDA	118		70-130

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_115.d
Lims ID: 320-24069-A-20-A
Client ID: WI-CV-1FB19-1216
Sample Type: Client
Inject. Date: 13-Dec-2016 19:33:34 ALS Bottle#: 41 Worklist Smp#: 38
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 320-24069-a-20-a
Misc. Info.: Acquity BEH 1.7um, 3X150mm T=35*C
Operator ID: CBW Instrument ID: A6

Method: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\537__A6.m
Limit Group: LC 537 ICAL
Last Update: 14-Dec-2016 10:51:50 Calib Date: 05-Dec-2016 19:54:00
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d

Column 1 : Acquity BEH C18 (2.10 mm) Det: F1:MRM
Process Host: XAWRK017

First Level Reviewer: barnettj Date: 14-Dec-2016 09:59:47

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	S/N	Flags
$ 2 13C2 PFHxA								
315.0 > 270.0	18.576	18.585	-0.009	1.000	974564	12.0	31279	
* 5 13C2-PFOA								
415.0 > 370.0	20.035	20.035	0.0		694184	10.0	17978	
* 8 13C4 PFOS								
503.0 > 80.0	20.667	20.667	0.0		1804008	28.7	27001	
$ 10 13C2 PFDA								
515.0 > 470.0	21.471	21.471	0.0	1.000	720060	11.8	22426	

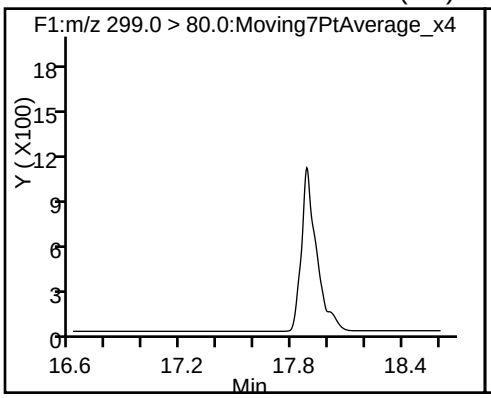
Report Date: 14-Dec-2016 10:52:23 Chrom Revision: 2.2 05-Dec-2016 12:37:22

TestAmerica Sacramento

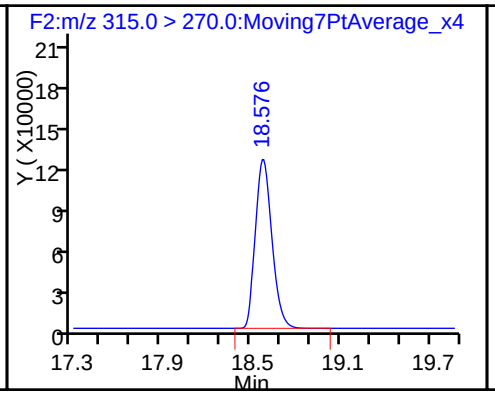
Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_115.d

Injection Date:	13-Dec-2016 19:33:34	Instrument ID:	A6		
Lims ID:	320-24069-A-20-A	Lab Sample ID:	320-24069-20		
Client ID:	WI-CV-1FB19-1216				
Operator ID:	CBW	ALS Bottle#:	41	Worklist Smp#:	38
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	537__A6	Limit Group:	LC 537 ICAL		

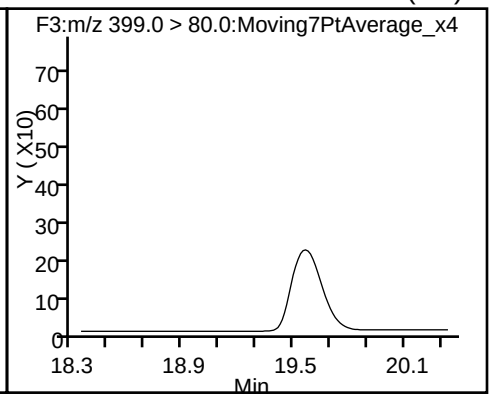
1 Perfluorobutanesulfonic acid (ND)



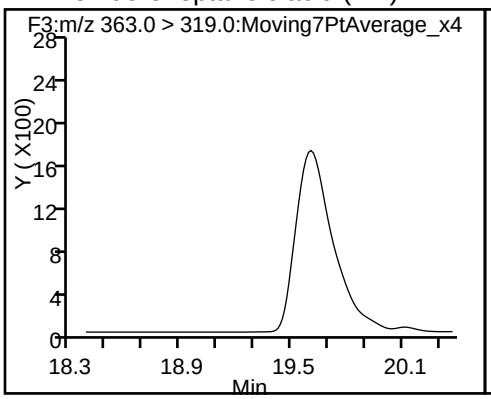
$ 2 13C2 PFHxA



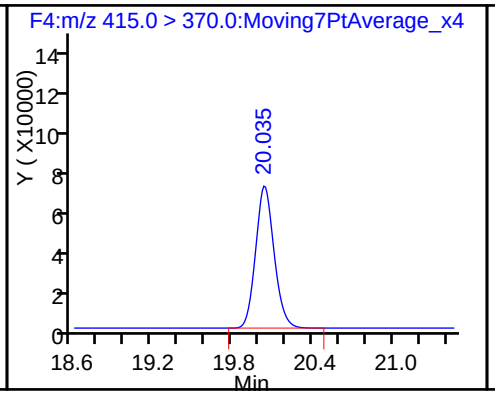
3 Perfluorohexanesulfonic acid (ND)



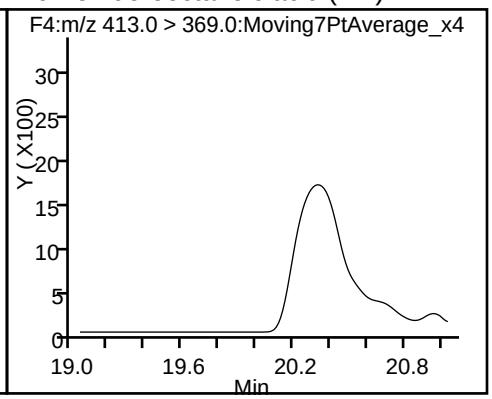
4 Perfluoroheptanoic acid (ND)



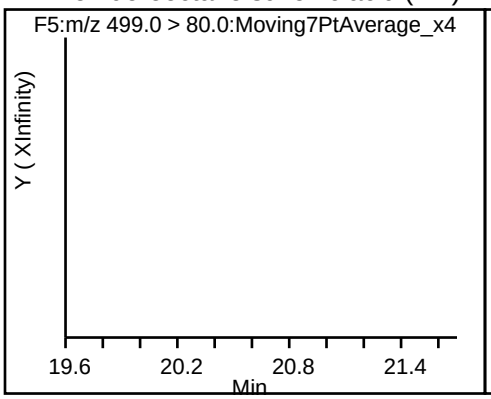
* 5 13C2-PFOA



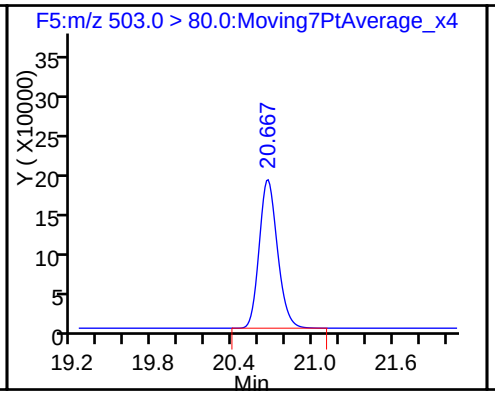
6 Perfluorooctanoic acid (ND)



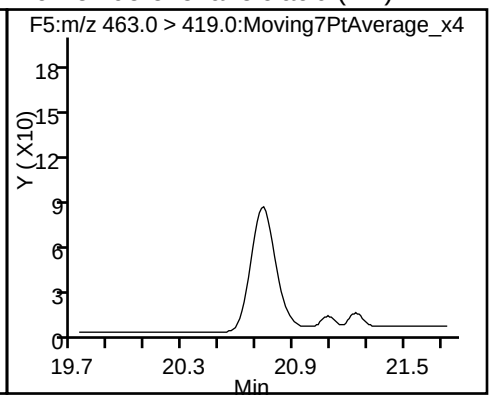
7 Perfluorooctane sulfonic acid (ND)



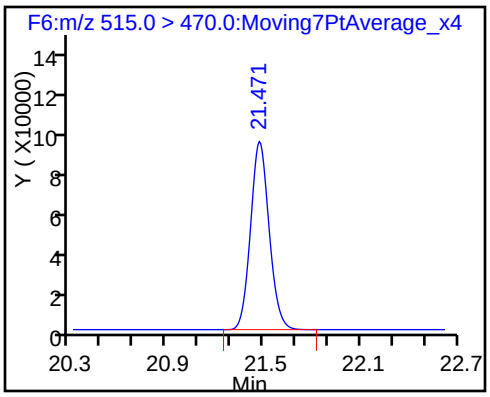
* 8 13C4 PFOS



9 Perfluorononanoic acid (ND)



$ 10 13C2 PFDA



TestAmerica Sacramento
Recovery Report

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_115.d
Lims ID: 320-24069-A-20-A
Client ID: WI-CV-1FB19-1216
Sample Type: Client
Inject. Date: 13-Dec-2016 19:33:34 ALS Bottle#: 41 Worklist Smp#: 38
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 320-24069-a-20-a
Misc. Info.: Acquity BEH 1.7um, 3X150mm T=35*C
Operator ID: CBW Instrument ID: A6

Method: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\537__A6.m
Limit Group: LC 537 ICAL
Last Update: 14-Dec-2016 10:51:50 Calib Date: 05-Dec-2016 19:54:00
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d

Column 1 : Acquity BEH C18 (2.10 mm) Det: F1:MRM
Process Host: XAWRK017

First Level Reviewer: barnettj Date: 14-Dec-2016 09:59:47

Compound	Amount Added	Amount Recovered	% Rec.
$ 2 13C2 PFHxA	10.0	12.0	120.35
$ 10 13C2 PFDA	10.0	11.8	118.37

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento | Job No.: 320-24069-1

SDG No.:

Client Sample ID: WI-CV-1RW20-1216 | Lab Sample ID: 320-24069-21

Matrix: Water | Lab File ID: 11DEC2016A6A_158.d

Analysis Method: 537 | Date Collected: 12/03/2016 10:46

Extraction Method: 537 | Date Extracted: 12/08/2016 18:21

Sample wt/vol: 274.2(mL) | Date Analyzed: 12/14/2016 16:46

Con. Extract Vol.: 1.00(mL) | Dilution Factor: 1

Injection Volume: 10(uL) | GC Column: Acquity ID: 2.1(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 141966 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	0.044	U M	0.055	0.044	0.014
335-67-1	Perfluorooctanoic acid (PFOA)	0.022	U M	0.027	0.022	0.0086
375-73-5	Perfluorobutanesulfonic acid (PFBS)	0.10	U	0.13	0.10	0.043

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00993	13C2 PFHxA	112		70-130
STL00996	13C2 PFDA	119		70-130

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNA\Sacramento\ChromData\A6\20161213-37801.b\11DEC2016A6A_158.d
Lims ID: 320-24069-A-21-A
Client ID: WI-CV-1RW20-1216
Sample Type: Client
Inject. Date: 14-Dec-2016 16:46:02 ALS Bottle#: 45 Worklist Smp#: 17
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 320-24069-a-21-a
Misc. Info.: Acquity BEH 1.7um, 3X150mm T=35*C
Operator ID: CBW Instrument ID: A6

Method: \\ChromNA\Sacramento\ChromData\A6\20161213-37801.b\537__A6.m
Limit Group: LC 537 ICAL
Last Update: 15-Dec-2016 09:59:55 Calib Date: 05-Dec-2016 19:54:00
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d

Column 1 : Acquity BEH C18 (2.10 mm) Det: F1:MRM
Process Host: XAWRK005

First Level Reviewer: barnettj Date: 15-Dec-2016 09:50:11

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	S/N	Flags
$ 2 13C2 PFHxA								
315.0 > 270.0	18.558	18.567	-0.009	1.000	778375	11.2	25539	
4 Perfluoroheptanoic acid								
363.0 > 319.0	19.344	19.356	-0.012	1.000	1068	0.0148	0.9	
* 5 13C2-PFOA								
415.0 > 370.0	20.011	20.023	-0.012		594902	10.0	15339	
6 Perfluorooctanoic acid								M
413.0 > 369.0	20.011	20.023	-0.012	1.000	727	0.0117	0.4	M
7 Perfluorooctane sulfonic acid								M
499.0 > 80.0	20.643	20.643	0.0	1.000	8076	0.1339	275	M
* 8 13C4 PFOS								
503.0 > 80.0	20.643	20.643	0.0		1657183	28.7	43264	
9 Perfluorononanoic acid								
463.0 > 419.0	20.714	20.726	-0.012	1.000	3141	0.0466	85.3	
$ 10 13C2 PFDA								
515.0 > 470.0	21.445	21.445	0.0	1.000	618613	11.9	19623	

QC Flag Legend

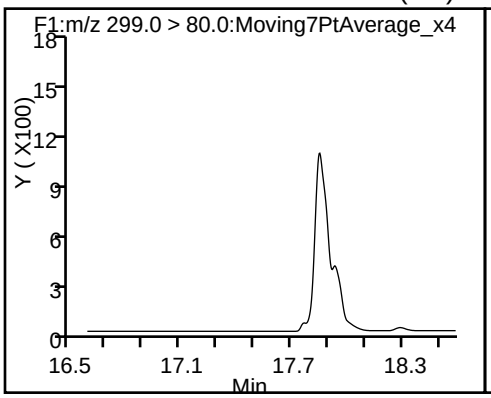
Review Flags
M - Manually Integrated

TestAmerica Sacramento

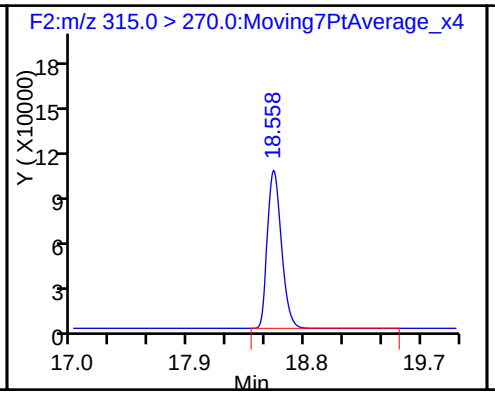
Data File: \\ChromNA\Sacramento\ChromData\A6\20161213-37801.b\11DEC2016A6A_158.d

Injection Date:	14-Dec-2016 16:46:02	Instrument ID:	A6		
Lims ID:	320-24069-A-21-A	Lab Sample ID:	320-24069-21		
Client ID:	WI-CV-1RW20-1216				
Operator ID:	CBW	ALS Bottle#:	45	Worklist Smp#:	17
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	537__A6	Limit Group:	LC 537 ICAL		

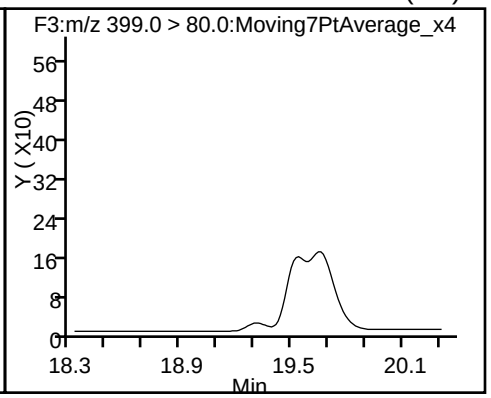
1 Perfluorobutanesulfonic acid (ND)



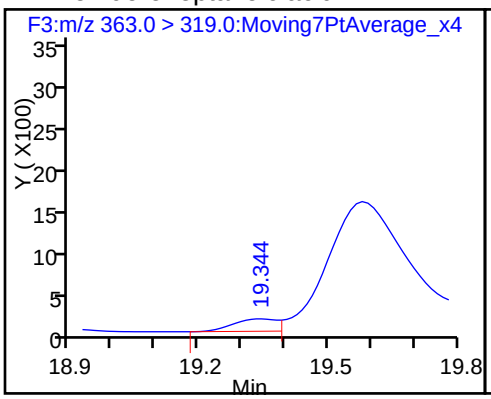
$ 2 13C2 PFHxA



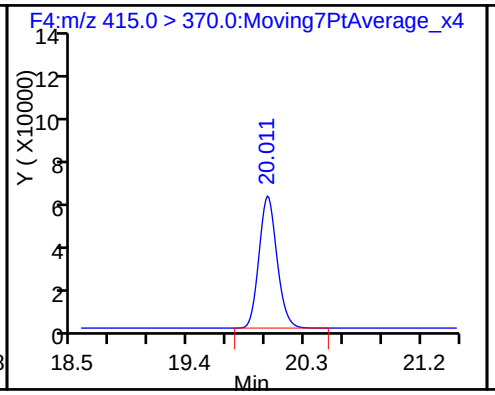
3 Perfluorohexanesulfonic acid (ND)



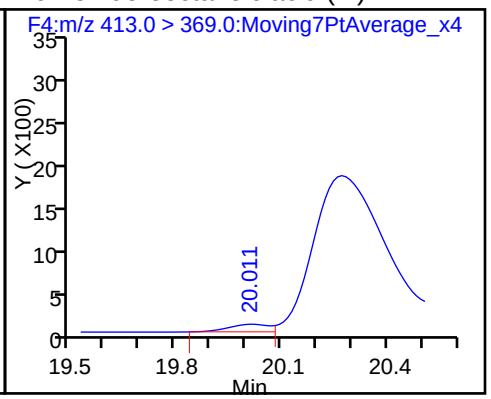
4 Perfluoroheptanoic acid



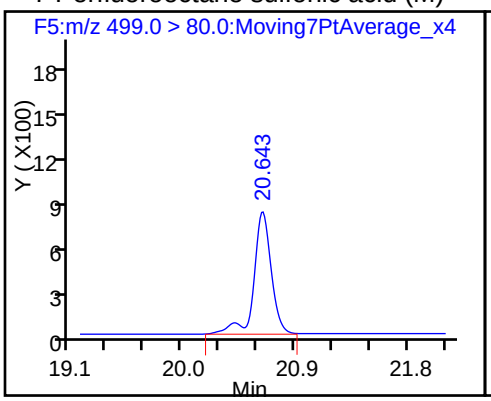
* 5 13C2-PFOA



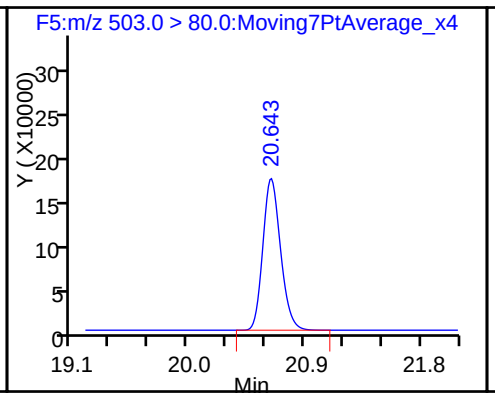
6 Perfluorooctanoic acid (M)



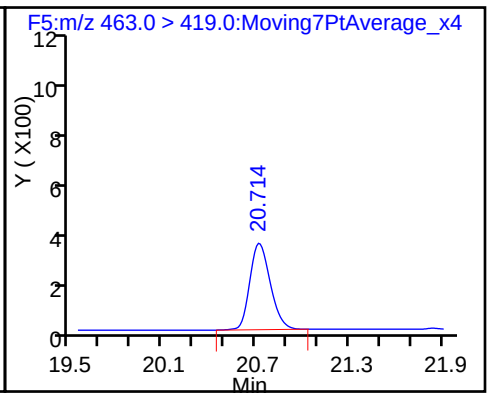
7 Perfluorooctane sulfonic acid (M)



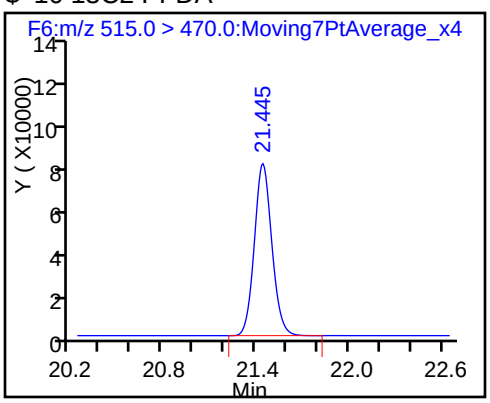
* 8 13C4 PFOS



9 Perfluorononanoic acid



$ 10 13C2 PFDA



TestAmerica Sacramento
Recovery Report

Data File: \\ChromNA\Sacramento\ChromData\A6\20161213-37801.b\11DEC2016A6A_158.d
Lims ID: 320-24069-A-21-A
Client ID: WI-CV-1RW20-1216
Sample Type: Client
Inject. Date: 14-Dec-2016 16:46:02 ALS Bottle#: 45 Worklist Smp#: 17
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 320-24069-a-21-a
Misc. Info.: Acquity BEH 1.7um, 3X150mm T=35*C
Operator ID: CBW Instrument ID: A6

Method: \\ChromNA\Sacramento\ChromData\A6\20161213-37801.b\537__A6.m
Limit Group: LC 537 ICAL
Last Update: 15-Dec-2016 09:59:55 Calib Date: 05-Dec-2016 19:54:00
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d

Column 1 : Acquity BEH C18 (2.10 mm) Det: F1:MRM
Process Host: XAWRK005

First Level Reviewer: barnettj Date: 15-Dec-2016 09:50:11

Compound	Amount Added	Amount Recovered	% Rec.
$ 2 13C2 PFHxA	10.0	11.2	112.16
$ 10 13C2 PFDA	10.0	11.9	118.67

Manual Integration/User Assign Peak Report

TestAmerica Sacramento

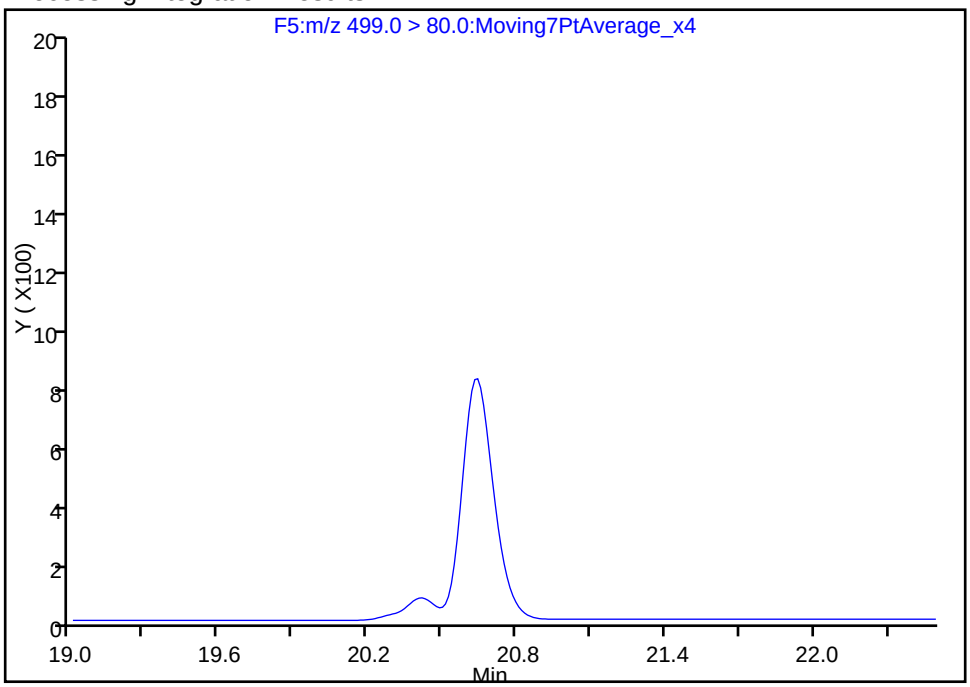
Data File:	\\ChromNA\Sacramento\ChromData\A6\20161213-37801.b\11DEC2016A6A_158.d				
Injection Date:	14-Dec-2016 16:46:02	Instrument ID:	A6		
Lims ID:	320-24069-A-21-A	Lab Sample ID:	320-24069-21		
Client ID:	WI-CV-1RW20-1216				
Operator ID:	CBW	ALS Bottle#:	45	Worklist Smp#:	17
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	537__A6	Limit Group:	LC 537 ICAL		
Column:	Acquity BEH C18 (2.10 mm)	Detector	F5:MRM		

7 Perfluorooctane sulfonic acid, CAS: 1763-23-1

Signal: 1

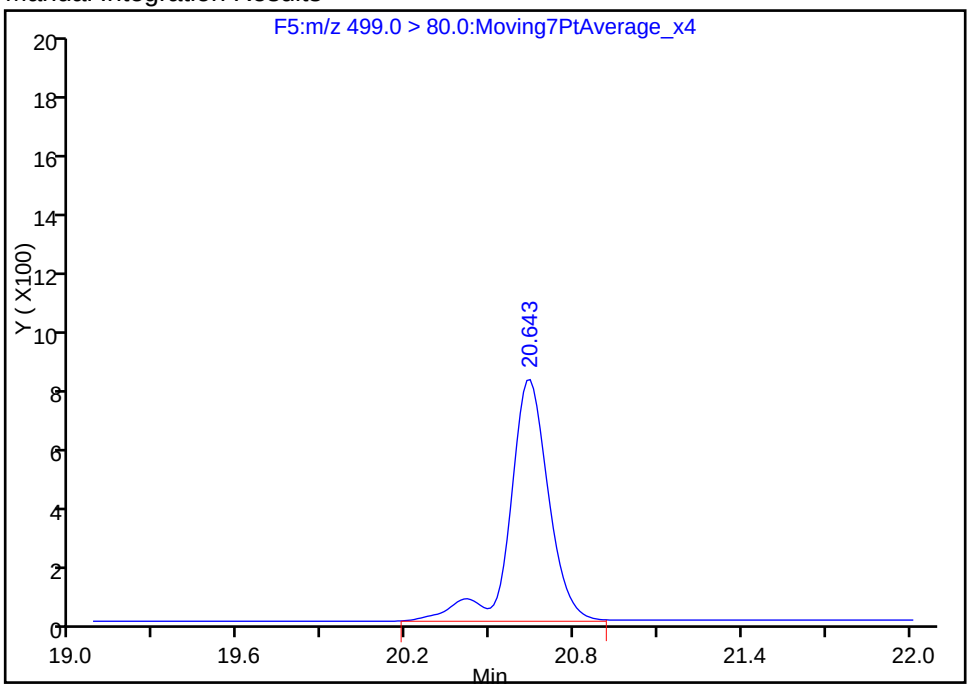
Not Detected
Expected RT: 20.64

Processing Integration Results



Manual Integration Results

RT: 20.64
Area: 8076
Amount: 0.133878
Amount Units: ng/ml



Reviewer: barnettj, 15-Dec-2016 09:50:11
Audit Action: Manually Integrated Audit Reason: Missed Peak

TestAmerica Sacramento

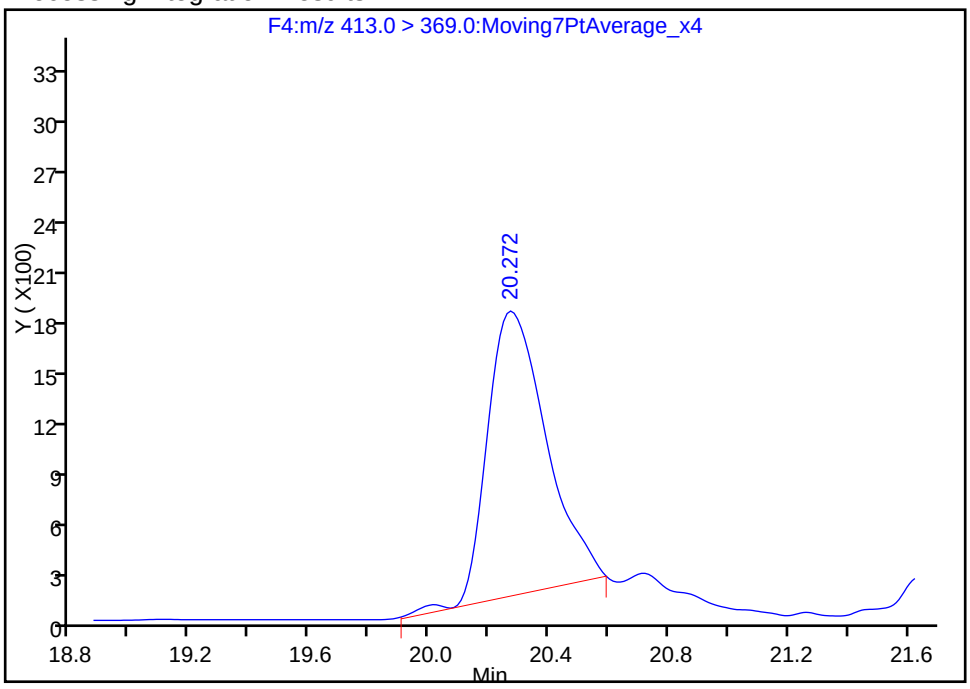
Data File: \\ChromNA\Sacramento\ChromData\A6\20161213-37801.b\11DEC2016A6A_158.d
Injection Date: 14-Dec-2016 16:46:02 Instrument ID: A6
Lims ID: 320-24069-A-21-A Lab Sample ID: 320-24069-21
Client ID: WI-CV-1RW20-1216
Operator ID: CBW ALS Bottle#: 45 Worklist Smp#: 17
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 537__A6 Limit Group: LC 537 ICAL
Column: Acquity BEH C18 (2.10 mm) Detector F4:MRM

6 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

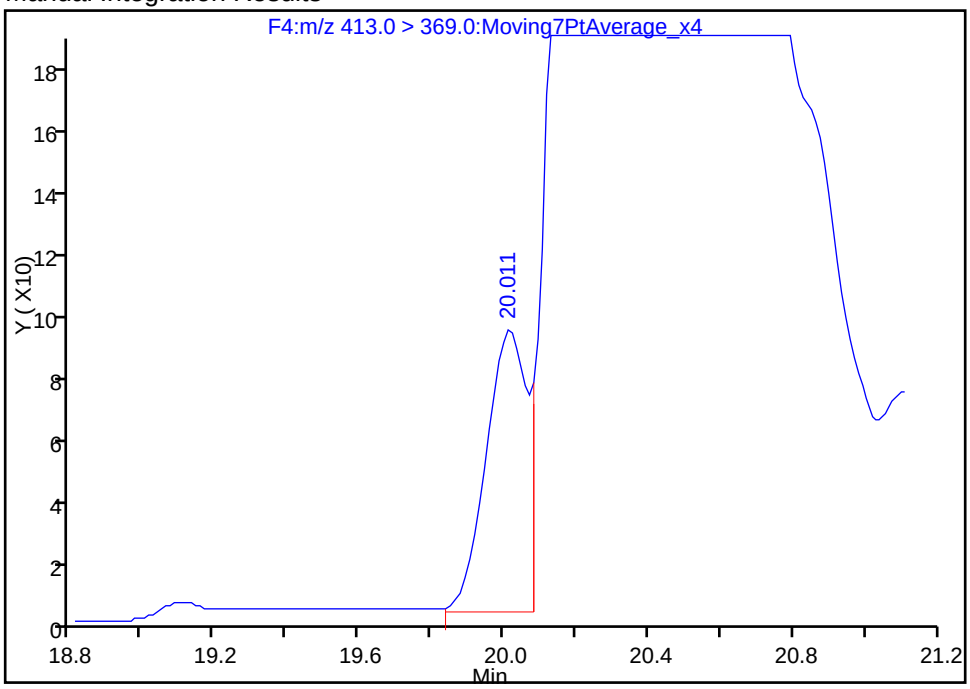
Processing Integration Results

RT: 20.27
Area: 23417
Amount: 0.378334
Amount Units: ng/ml



Manual Integration Results

RT: 20.01
Area: 727
Amount: 0.011746
Amount Units: ng/ml



Reviewer: barnettj, 15-Dec-2016 09:50:11
Audit Action: Manually Integrated Audit Reason: Split Peak

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento | Job No.: 320-24069-1

SDG No.:

Client Sample ID: WI-CV-1FB20-1216 | Lab Sample ID: 320-24069-22

Matrix: Water | Lab File ID: 11DEC2016A6A_159.d

Analysis Method: 537 | Date Collected: 12/03/2016 10:45

Extraction Method: 537 | Date Extracted: 12/08/2016 18:21

Sample wt/vol: 284.3(mL) | Date Analyzed: 12/14/2016 17:15

Con. Extract Vol.: 1.00(mL) | Dilution Factor: 1

Injection Volume: 10(uL) | GC Column: Acquity ID: 2.1(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 141966 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	0.042	U M	0.053	0.042	0.014
335-67-1	Perfluorooctanoic acid (PFOA)	0.021	U	0.026	0.021	0.0083
375-73-5	Perfluorobutanesulfonic acid (PFBS)	0.097	U	0.12	0.097	0.042

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00993	13C2 PFHxA	121		70-130
STL00996	13C2 PFDA	124		70-130

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNA\Sacramento\ChromData\A6\20161213-37801.b\11DEC2016A6A_159.d
Lims ID: 320-24069-A-22-A
Client ID: WI-CV-1FB20-1216
Sample Type: Client
Inject. Date: 14-Dec-2016 17:15:39 ALS Bottle#: 46 Worklist Smp#: 18
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 320-24069-a-22-a
Misc. Info.: Acquity BEH 1.7um, 3X150mm T=35*C
Operator ID: CBW Instrument ID: A6

Method: \\ChromNA\Sacramento\ChromData\A6\20161213-37801.b\537__A6.m
Limit Group: LC 537 ICAL
Last Update: 15-Dec-2016 09:59:55 Calib Date: 05-Dec-2016 19:54:00
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d

Column 1 : Acquity BEH C18 (2.10 mm) Det: F1:MRM
Process Host: XAWRK005

First Level Reviewer: barnettj Date: 15-Dec-2016 09:51:16

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	S/N	Flags
$ 2 13C2 PFHxA								
315.0 > 270.0	18.567	18.567	0.0	1.000	868532	12.1	28401	
4 Perfluoroheptanoic acid								
363.0 > 319.0	19.356	19.356	0.0	1.000	1402	0.0188	0.8	
* 5 13C2-PFOA								
415.0 > 370.0	20.011	20.023	-0.012		612927	10.0	15802	
6 Perfluorooctanoic acid								
413.0 > 369.0	20.011	20.023	-0.012	1.000	3868	0.0607	1.8	
7 Perfluorooctane sulfonic acid								M
499.0 > 80.0	20.643	20.643	0.0	1.000	18813	0.3048	351	M
* 8 13C4 PFOS								
503.0 > 80.0	20.643	20.643	0.0		1695405	28.7	35260	
$ 10 13C2 PFDA								
515.0 > 470.0	21.444	21.445	-0.001	1.000	663366	12.4	21054	

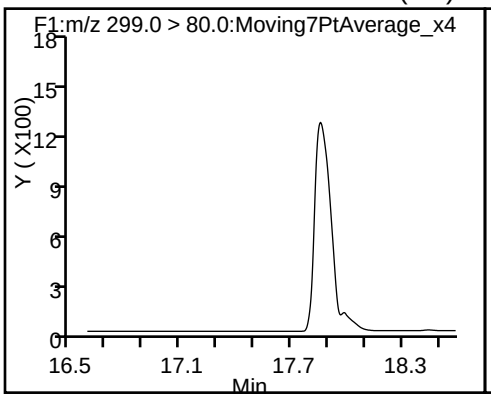
QC Flag Legend

Review Flags
M - Manually Integrated

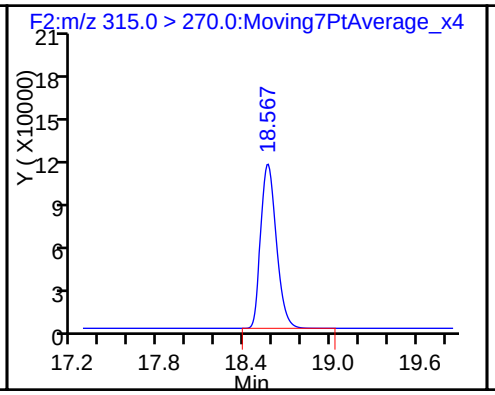
TestAmerica Sacramento

Data File: \\ChromNA\Sacramento\ChromData\A6\20161213-37801.b\11DEC2016A6A_159.d
Injection Date: 14-Dec-2016 17:15:39 Instrument ID: A6
Lims ID: 320-24069-A-22-A Lab Sample ID: 320-24069-22
Client ID: WI-CV-1FB20-1216
Operator ID: CBW ALS Bottle#: 46 Worklist Smp#: 18
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 537__A6 Limit Group: LC 537 ICAL

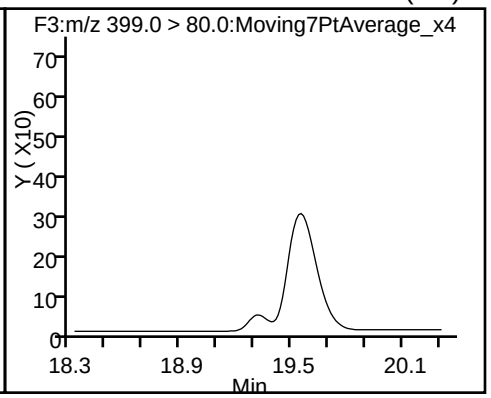
1 Perfluorobutanesulfonic acid (ND)



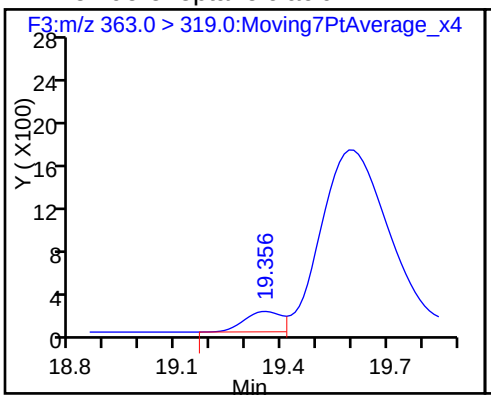
$ 2 13C2 PFHxA



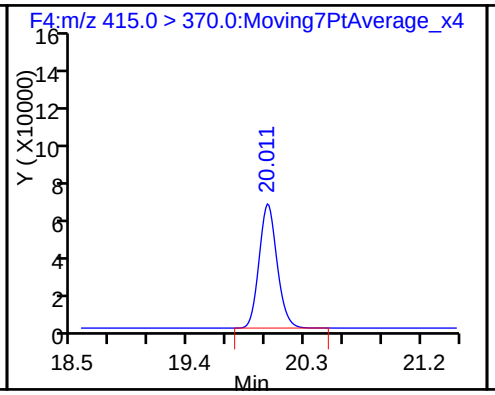
3 Perfluorohexanesulfonic acid (ND)



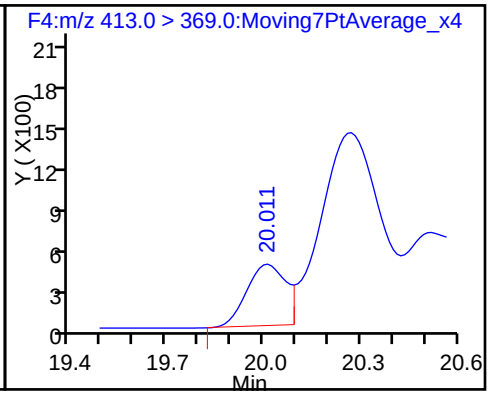
4 Perfluoroheptanoic acid



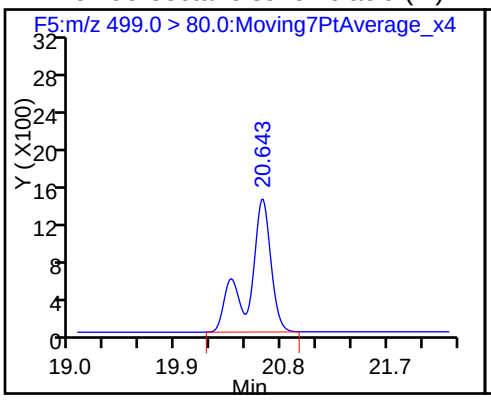
* 5 13C2-PFOA



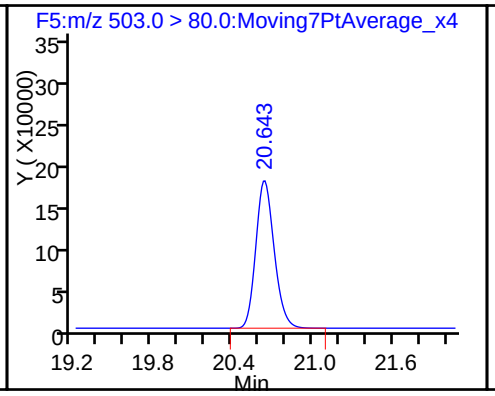
6 Perfluorooctanoic acid



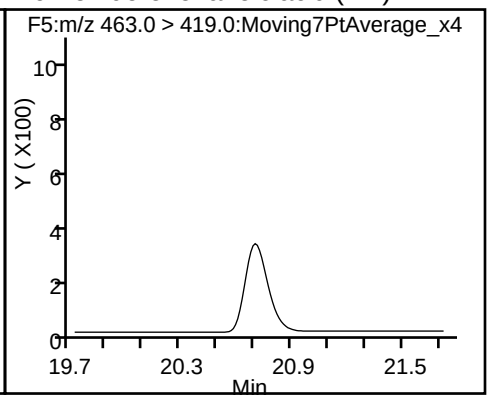
7 Perfluorooctane sulfonic acid (M)



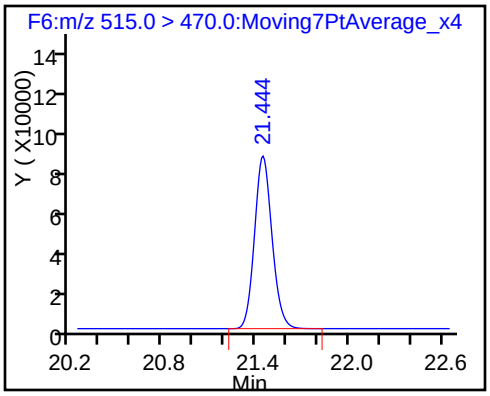
* 8 13C4 PFOS



9 Perfluorononanoic acid (ND)



$ 10 13C2 PFDA



TestAmerica Sacramento
Recovery Report

Data File: \\ChromNA\Sacramento\ChromData\A6\20161213-37801.b\11DEC2016A6A_159.d
Lims ID: 320-24069-A-22-A
Client ID: WI-CV-1FB20-1216
Sample Type: Client
Inject. Date: 14-Dec-2016 17:15:39 ALS Bottle#: 46 Worklist Smp#: 18
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 320-24069-a-22-a
Misc. Info.: Acquity BEH 1.7um, 3X150mm T=35*C
Operator ID: CBW Instrument ID: A6

Method: \\ChromNA\Sacramento\ChromData\A6\20161213-37801.b\537__A6.m
Limit Group: LC 537 ICAL
Last Update: 15-Dec-2016 09:59:55 Calib Date: 05-Dec-2016 19:54:00
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d

Column 1 : Acquity BEH C18 (2.10 mm) Det: F1:MRM
Process Host: XAWRK005

First Level Reviewer: barnettj Date: 15-Dec-2016 09:51:16

Compound	Amount Added	Amount Recovered	% Rec.
$ 2 13C2 PFHxA	10.0	12.1	121.47
$ 10 13C2 PFDA	10.0	12.4	123.51

Manual Integration/User Assign Peak Report

TestAmerica Sacramento

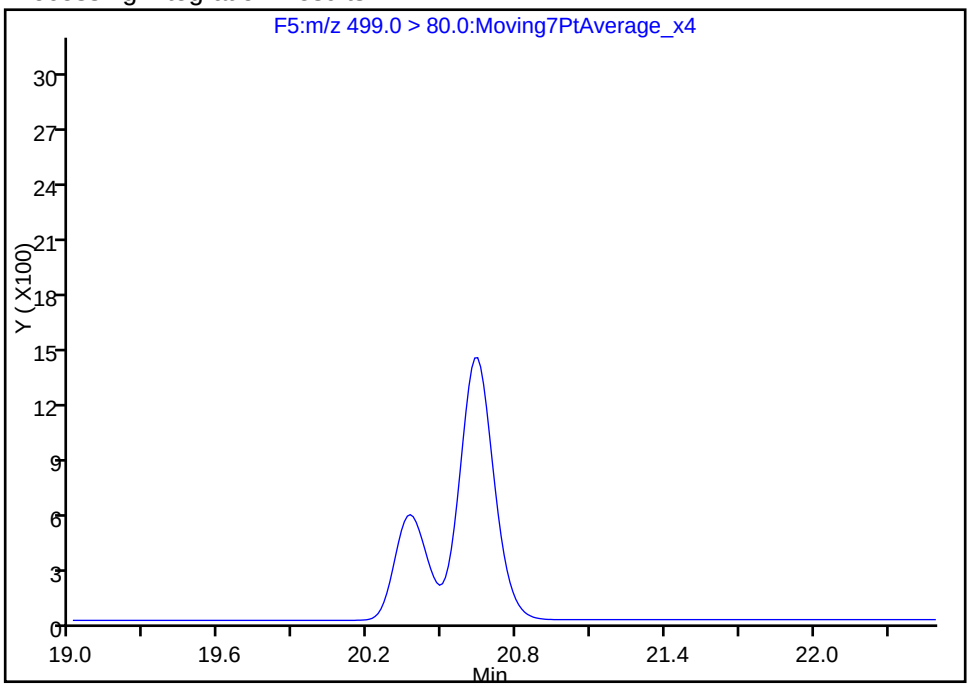
Data File:	\\ChromNA\Sacramento\ChromData\A6\20161213-37801.b\11DEC2016A6A_159.d				
Injection Date:	14-Dec-2016 17:15:39	Instrument ID:	A6		
Lims ID:	320-24069-A-22-A	Lab Sample ID:	320-24069-22		
Client ID:	WI-CV-1FB20-1216				
Operator ID:	CBW	ALS Bottle#:	46	Worklist Smp#:	18
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	537__A6	Limit Group:	LC 537 ICAL		
Column:	Acquity BEH C18 (2.10 mm)	Detector	F5:MRM		

7 Perfluorooctane sulfonic acid, CAS: 1763-23-1

Signal: 1

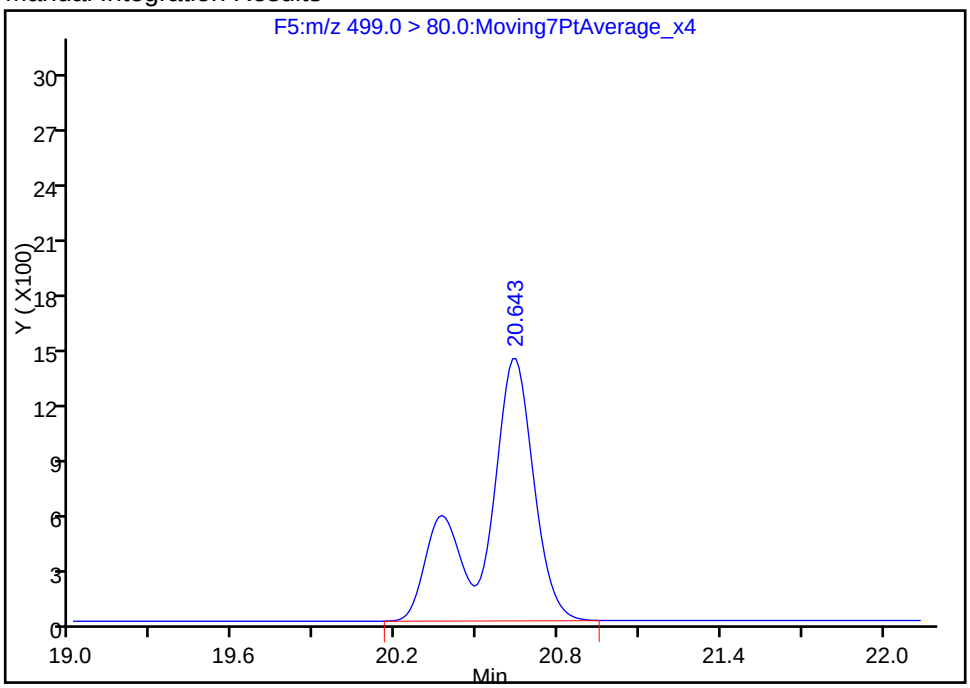
Not Detected
Expected RT: 20.64

Processing Integration Results



Manual Integration Results

RT: 20.64
Area: 18813
Amount: 0.304837
Amount Units: ng/ml



Reviewer: barnettj, 15-Dec-2016 09:51:16
Audit Action: Manually Integrated Audit Reason: Missed Peak

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento | Job No.: 320-24069-1

SDG No.:

Client Sample ID: WI-CV-1RW21-1216 | Lab Sample ID: 320-24069-23

Matrix: Water | Lab File ID: 11DEC2016A6A_160.d

Analysis Method: 537 | Date Collected: 12/03/2016 11:22

Extraction Method: 537 | Date Extracted: 12/08/2016 18:21

Sample wt/vol: 263.9(mL) | Date Analyzed: 12/14/2016 17:45

Con. Extract Vol.: 1.00(mL) | Dilution Factor: 1

Injection Volume: 10(uL) | GC Column: Acquity ID: 2.1(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 141966 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	0.045	U	0.057	0.045	0.015
335-67-1	Perfluorooctanoic acid (PFOA)	0.023	U	0.028	0.023	0.0089
375-73-5	Perfluorobutanesulfonic acid (PFBS)	0.10	U	0.13	0.10	0.045

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00993	13C2 PFHxA	108		70-130
STL00996	13C2 PFDA	113		70-130

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNA\Sacramento\ChromData\A6\20161213-37801.b\11DEC2016A6A_160.d
Lims ID: 320-24069-A-23-A
Client ID: WI-CV-1RW21-1216
Sample Type: Client
Inject. Date: 14-Dec-2016 17:45:15 ALS Bottle#: 47 Worklist Smp#: 19
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 320-24069-a-23-a
Misc. Info.: Acquity BEH 1.7um, 3X150mm T=35*C
Operator ID: CBW Instrument ID: A6

Method: \\ChromNA\Sacramento\ChromData\A6\20161213-37801.b\537__A6.m
Limit Group: LC 537 ICAL
Last Update: 15-Dec-2016 09:59:55 Calib Date: 05-Dec-2016 19:54:00
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d

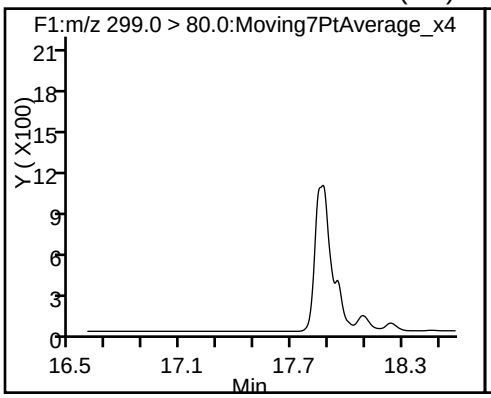
Column 1 : Acquity BEH C18 (2.10 mm) Det: F1:MRM
Process Host: XAWRK005

First Level Reviewer: barnettj Date: 15-Dec-2016 09:51:47

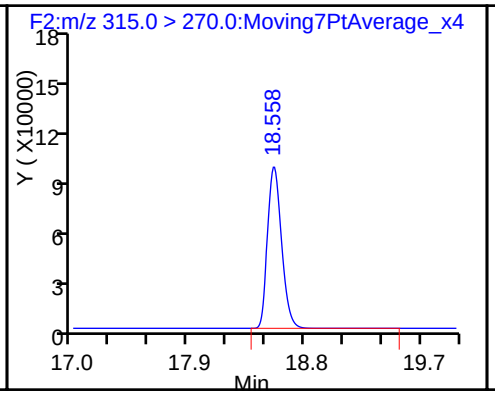
Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	S/N	Flags
$ 2 13C2 PFHxA								
315.0 > 270.0	18.558	18.567	-0.009	1.000	720528	10.8	23608	
* 5 13C2-PFOA								
415.0 > 370.0	20.011	20.023	-0.012		572824	10.0	14639	
* 8 13C4 PFOS								
503.0 > 80.0	20.643	20.643	0.0		1451600	28.7	37765	
$ 10 13C2 PFDA								
515.0 > 470.0	21.436	21.445	-0.009	1.000	564817	11.3	17639	

Data File: \\ChromNA\Sacramento\ChromData\A6\20161213-37801.b\11DEC2016A6A_160.d
Injection Date: 14-Dec-2016 17:45:15 Instrument ID: A6
Lims ID: 320-24069-A-23-A Lab Sample ID: 320-24069-23
Client ID: WI-CV-1RW21-1216
Operator ID: CBW ALS Bottle#: 47 Worklist Smp#: 19
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 537__A6 Limit Group: LC 537 ICAL

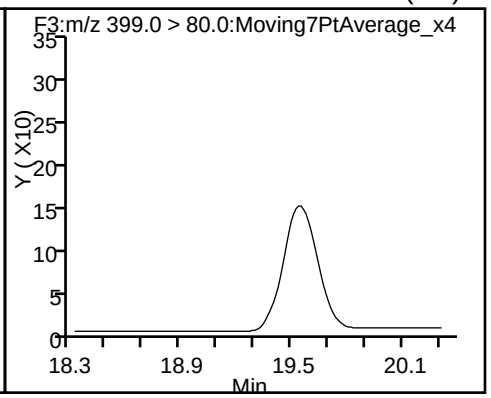
1 Perfluorobutanesulfonic acid (ND)



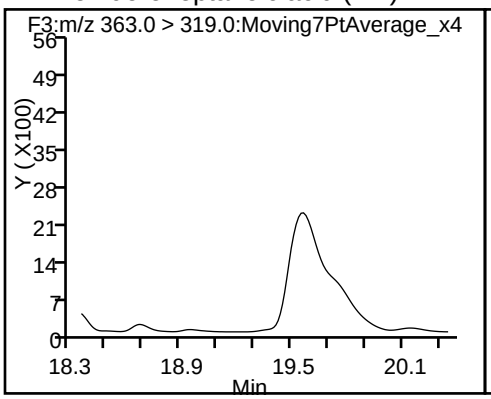
$ 2 13C2 PFHxA



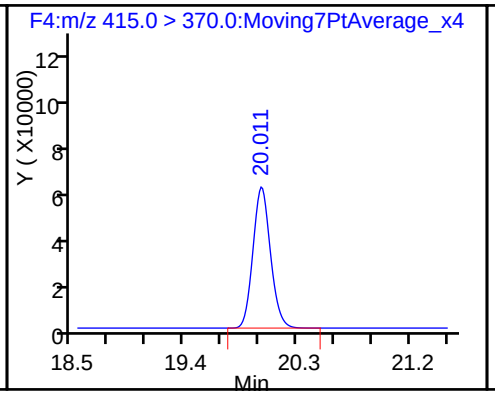
3 Perfluorohexanesulfonic acid (ND)



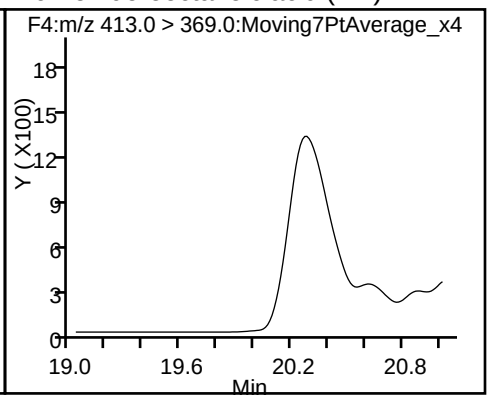
4 Perfluoroheptanoic acid (ND)



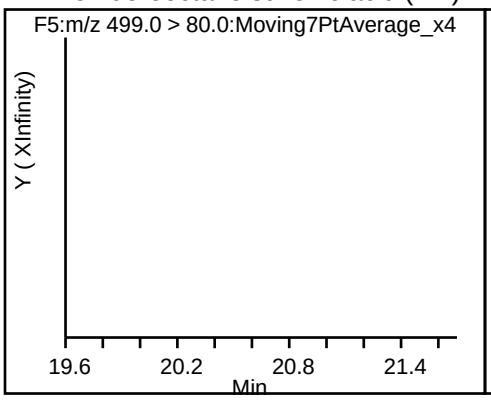
* 5 13C2-PFOA



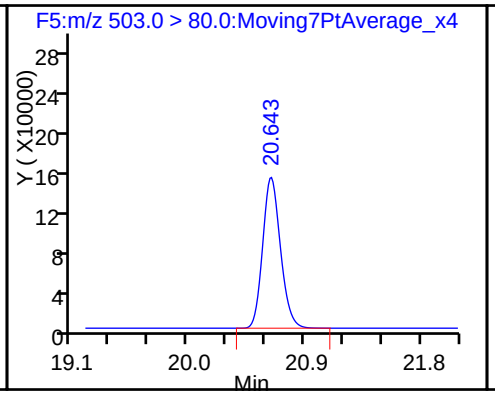
6 Perfluorooctanoic acid (ND)



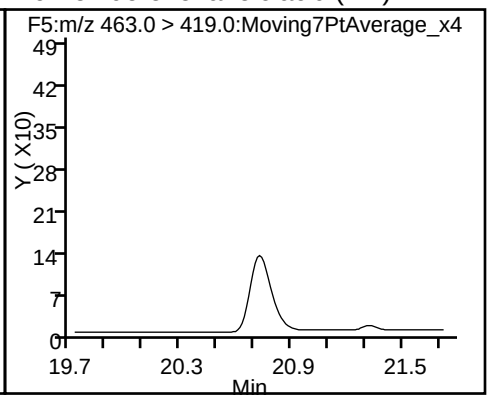
7 Perfluorooctane sulfonic acid (ND)



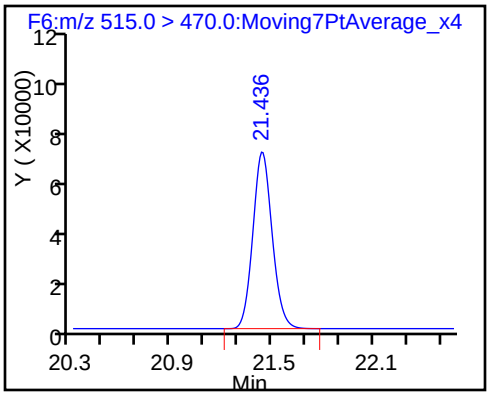
* 8 13C4 PFOS



9 Perfluorononanoic acid (ND)



$ 10 13C2 PFDA



TestAmerica Sacramento
Recovery Report

Data File: \\ChromNA\Sacramento\ChromData\A6\20161213-37801.b\11DEC2016A6A_160.d
Lims ID: 320-24069-A-23-A
Client ID: WI-CV-1RW21-1216
Sample Type: Client
Inject. Date: 14-Dec-2016 17:45:15 ALS Bottle#: 47 Worklist Smp#: 19
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 320-24069-a-23-a
Misc. Info.: Acquity BEH 1.7um, 3X150mm T=35*C
Operator ID: CBW Instrument ID: A6

Method: \\ChromNA\Sacramento\ChromData\A6\20161213-37801.b\537__A6.m
Limit Group: LC 537 ICAL
Last Update: 15-Dec-2016 09:59:55 Calib Date: 05-Dec-2016 19:54:00
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d

Column 1 : Acquity BEH C18 (2.10 mm) Det: F1:MRM
Process Host: XAWRK005

First Level Reviewer: barnettj Date: 15-Dec-2016 09:51:47

Compound	Amount Added	Amount Recovered	% Rec.
$ 2 13C2 PFHxA	10.0	10.8	107.83
$ 10 13C2 PFDA	10.0	11.3	112.52

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento | Job No.: 320-24069-1

SDG No.:

Client Sample ID: WI-CV-1FB21-1216 | Lab Sample ID: 320-24069-24

Matrix: Water | Lab File ID: 11DEC2016A6A_125.d

Analysis Method: 537 | Date Collected: 12/03/2016 11:21

Extraction Method: 537 | Date Extracted: 12/08/2016 18:21

Sample wt/vol: 278.9(mL) | Date Analyzed: 12/14/2016 00:29

Con. Extract Vol.: 1.00(mL) | Dilution Factor: 1

Injection Volume: 10(uL) | GC Column: Acquity ID: 2.1(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 141770 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	0.043	U M	0.054	0.043	0.014
335-67-1	Perfluorooctanoic acid (PFOA)	0.022	U	0.027	0.022	0.0084
375-73-5	Perfluorobutanesulfonic acid (PFBS)	0.099	U	0.13	0.099	0.043

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00993	13C2 PFHxA	114		70-130
STL00996	13C2 PFDA	114		70-130

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_125.d
Lims ID: 320-24069-A-24-A
Client ID: WI-CV-1FB21-1216
Sample Type: Client
Inject. Date: 14-Dec-2016 00:29:29 ALS Bottle#: 48 Worklist Smp#: 48
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 320-24069-a-24-a
Misc. Info.: Acquity BEH 1.7um, 3X150mm T=35*C
Operator ID: CBW Instrument ID: A6

Method: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\537__A6.m
Limit Group: LC 537 ICAL
Last Update: 14-Dec-2016 10:52:33 Calib Date: 05-Dec-2016 19:54:00
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d

Column 1 : Acquity BEH C18 (2.10 mm) Det: F1:MRM
Process Host: XAWRK017

First Level Reviewer: barnettj Date: 14-Dec-2016 10:09:10

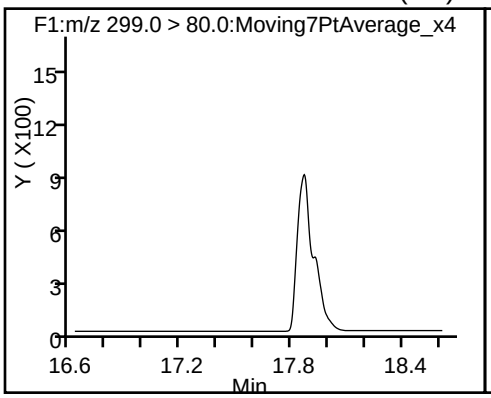
Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	S/N	Flags
$ 2 13C2 PFHxA								
315.0 > 270.0	18.585	18.604	-0.019	1.000	899796	11.4	29032	
* 5 13C2-PFOA								
415.0 > 370.0	20.035	20.047	-0.012		676775	10.0	17576	
7 Perfluorooctane sulfonic acid								M
499.0 > 80.0	20.691	20.620	0.071	1.000	3897	0.0554	102	M
* 8 13C4 PFOS								
503.0 > 80.0	20.679	20.679	0.0		1931558	28.7	49938	
$ 10 13C2 PFDA								
515.0 > 470.0	21.480	21.471	0.009	1.000	677289	11.4	21501	

QC Flag Legend

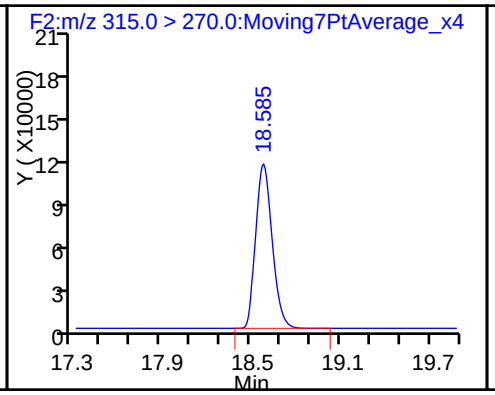
Review Flags
M - Manually Integrated

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_125.d
Injection Date: 14-Dec-2016 00:29:29 Instrument ID: A6
Lims ID: 320-24069-A-24-A Lab Sample ID: 320-24069-24
Client ID: WI-CV-1FB21-1216
Operator ID: CBW ALS Bottle#: 48 Worklist Smp#: 48
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 537__A6 Limit Group: LC 537 ICAL

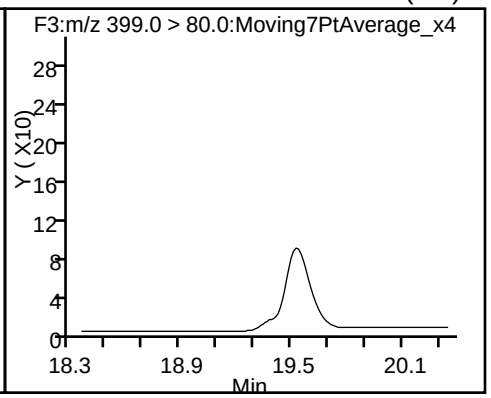
1 Perfluorobutanesulfonic acid (ND)



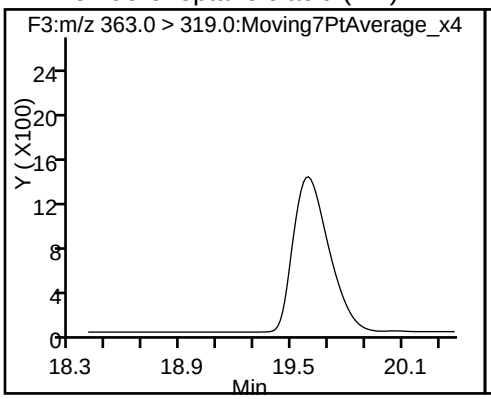
$ 2 13C2 PFHxA



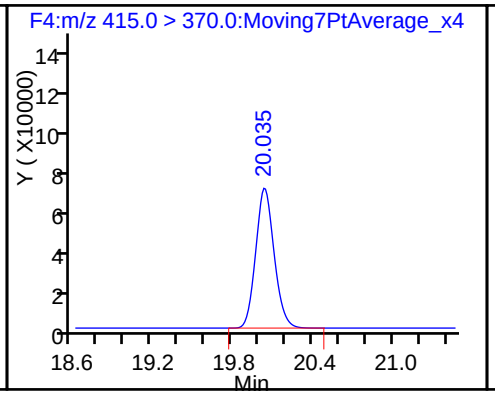
3 Perfluorohexanesulfonic acid (ND)



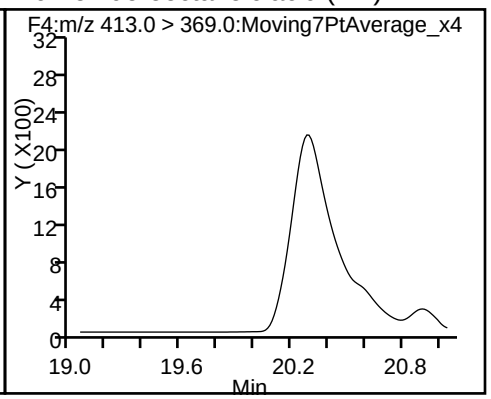
4 Perfluoroheptanoic acid (ND)



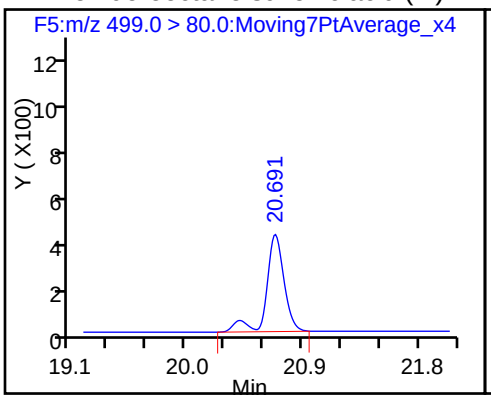
* 5 13C2-PFOA



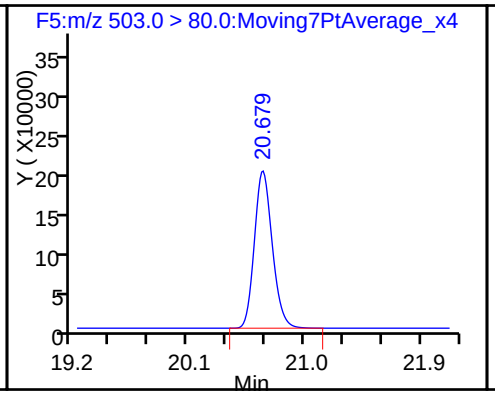
6 Perfluorooctanoic acid (ND)



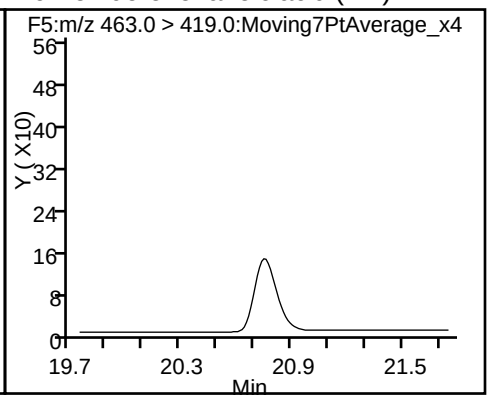
7 Perfluorooctane sulfonic acid (M)



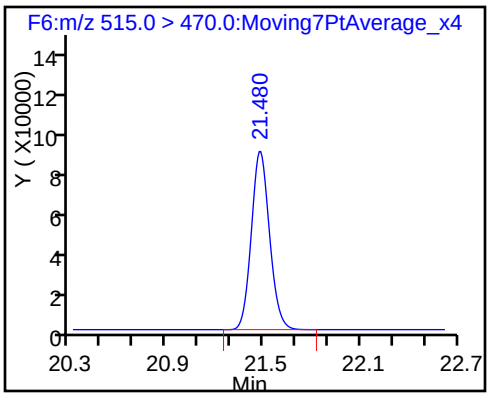
* 8 13C4 PFOS



9 Perfluorononanoic acid (ND)



$ 10 13C2 PFDA



TestAmerica Sacramento
Recovery Report

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_125.d
Lims ID: 320-24069-A-24-A
Client ID: WI-CV-1FB21-1216
Sample Type: Client
Inject. Date: 14-Dec-2016 00:29:29 ALS Bottle#: 48 Worklist Smp#: 48
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 320-24069-a-24-a
Misc. Info.: Acquity BEH 1.7um, 3X150mm T=35*C
Operator ID: CBW Instrument ID: A6

Method: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\537__A6.m
Limit Group: LC 537 ICAL
Last Update: 14-Dec-2016 10:52:33 Calib Date: 05-Dec-2016 19:54:00
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d

Column 1 : Acquity BEH C18 (2.10 mm) Det: F1:MRM
Process Host: XAWRK017

First Level Reviewer: barnettj Date: 14-Dec-2016 10:09:10

Compound	Amount Added	Amount Recovered	% Rec.
$ 2 13C2 PFHxA	10.0	11.4	113.97
$ 10 13C2 PFDA	10.0	11.4	114.21

Manual Integration/User Assign Peak Report

TestAmerica Sacramento

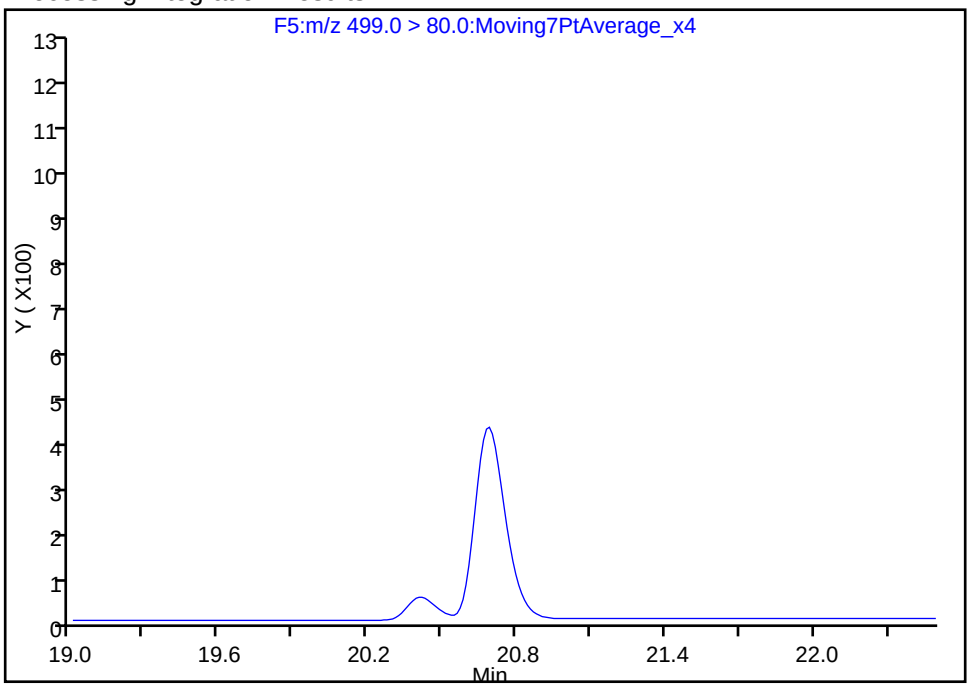
Data File:	\\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_125.d				
Injection Date:	14-Dec-2016 00:29:29	Instrument ID:	A6		
Lims ID:	320-24069-A-24-A	Lab Sample ID:	320-24069-24		
Client ID:	WI-CV-1FB21-1216				
Operator ID:	CBW	ALS Bottle#:	48	Worklist Smp#:	48
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	537__A6	Limit Group:	LC 537 ICAL		
Column:	Acquity BEH C18 (2.10 mm)	Detector	F5:MRM		

7 Perfluorooctane sulfonic acid, CAS: 1763-23-1

Signal: 1

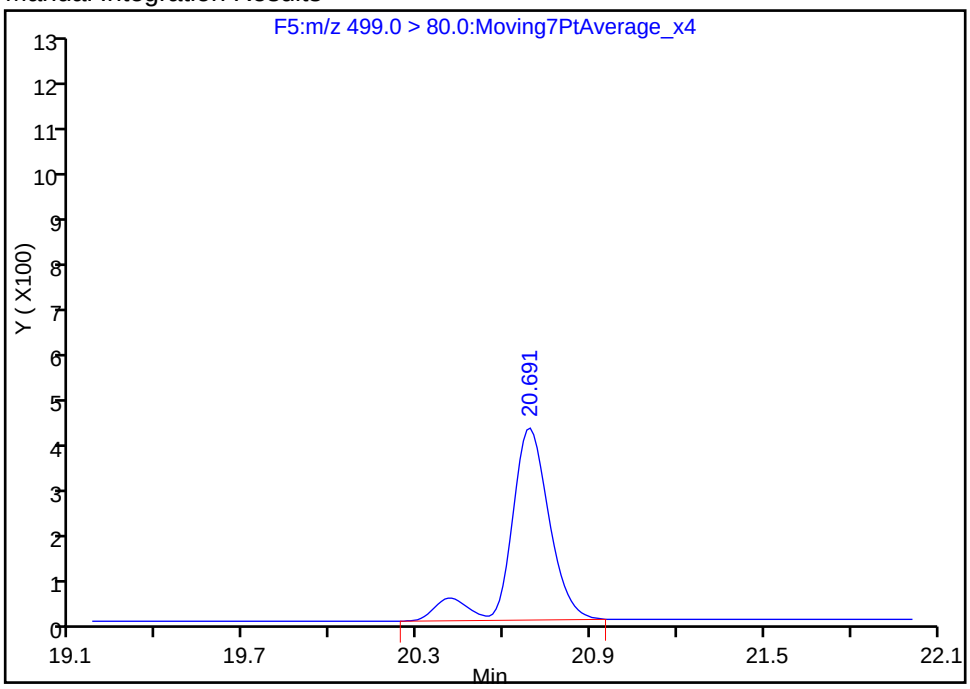
Not Detected
Expected RT: 20.62

Processing Integration Results



Manual Integration Results

RT: 20.69
Area: 3897
Amount: 0.055425
Amount Units: ng/ml



Reviewer: barnettj, 14-Dec-2016 10:09:10
Audit Action: Manually Integrated Audit Reason: Missed Peak

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento | Job No.: 320-24069-1

SDG No.:

Client Sample ID: WI-CV-1RW22-1216 | Lab Sample ID: 320-24069-25

Matrix: Water | Lab File ID: 11DEC2016A6A_126.d

Analysis Method: 537 | Date Collected: 12/03/2016 12:02

Extraction Method: 537 | Date Extracted: 12/08/2016 18:21

Sample wt/vol: 276.1(mL) | Date Analyzed: 12/14/2016 00:59

Con. Extract Vol.: 1.00(mL) | Dilution Factor: 1

Injection Volume: 10(uL) | GC Column: Acquity ID: 2.1(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 141770 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	0.043	U	0.054	0.043	0.014
335-67-1	Perfluorooctanoic acid (PFOA)	0.022	U M	0.027	0.022	0.0085
375-73-5	Perfluorobutanesulfonic acid (PFBS)	0.10	U	0.13	0.10	0.043

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00993	13C2 PFHxA	110		70-130
STL00996	13C2 PFDA	105		70-130

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_126.d
Lims ID: 320-24069-A-25-A
Client ID: WI-CV-1RW22-1216
Sample Type: Client
Inject. Date: 14-Dec-2016 00:59:06 ALS Bottle#: 17 Worklist Smp#: 49
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 320-24069-a-25-a
Misc. Info.: Acquity BEH 1.7um, 3X150mm T=35*C
Operator ID: CBW Instrument ID: A6

Method: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\537__A6.m
Limit Group: LC 537 ICAL
Last Update: 14-Dec-2016 10:52:33 Calib Date: 05-Dec-2016 19:54:00
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d

Column 1 : Acquity BEH C18 (2.10 mm) Det: F1:MRM
Process Host: XAWRK017

First Level Reviewer: barnettj Date: 14-Dec-2016 10:10:11

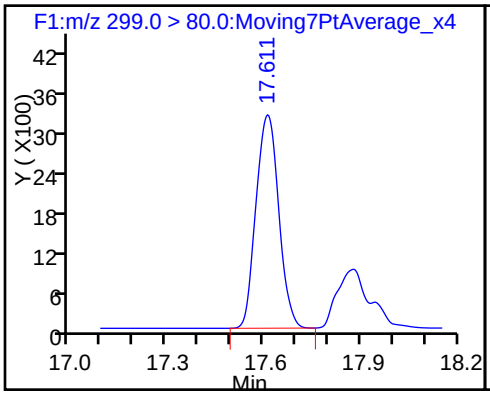
Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	S/N	Flags
1 Perfluorobutanesulfonic acid								
299.0 > 80.0	17.611	17.621	-0.010	1.000	15958	0.3817	20.7	
$ 2 13C2 PFHxA								
315.0 > 270.0	18.585	18.604	-0.019	1.000	763091	11.0	24611	
3 Perfluorohexanesulfonic acid								
399.0 > 80.0	19.356	19.356	0.0	1.000	32834	0.6134	620	
* 5 13C2-PFOA								
415.0 > 370.0	20.035	20.047	-0.012		593937	10.0	15455	
6 Perfluorooctanoic acid								M
413.0 > 369.0	20.023	20.047	-0.024	1.000	3781	0.0612	1.3	M
* 8 13C4 PFOS								
503.0 > 80.0	20.667	20.679	-0.012		1709450	28.7	25455	
$ 10 13C2 PFDA								
515.0 > 470.0	21.471	21.471	0.0	1.000	543928	10.5	8750	

QC Flag Legend

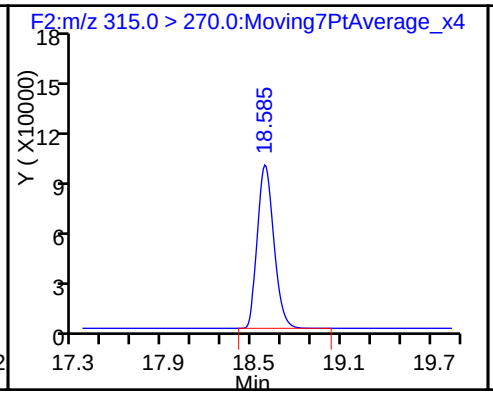
Review Flags
M - Manually Integrated

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_126.d
Injection Date: 14-Dec-2016 00:59:06 Instrument ID: A6
Lims ID: 320-24069-A-25-A Lab Sample ID: 320-24069-25
Client ID: WI-CV-1RW22-1216
Operator ID: CBW ALS Bottle#: 17 Worklist Smp#: 49
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 537__A6 Limit Group: LC 537 ICAL

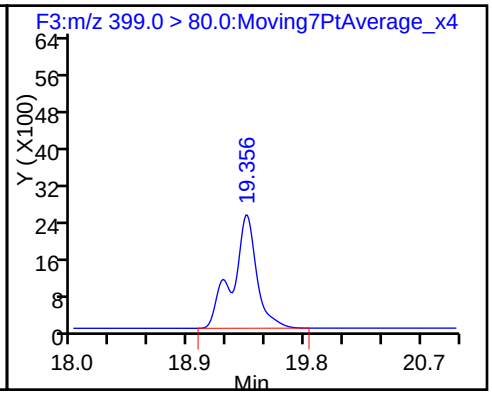
1 Perfluorobutanesulfonic acid



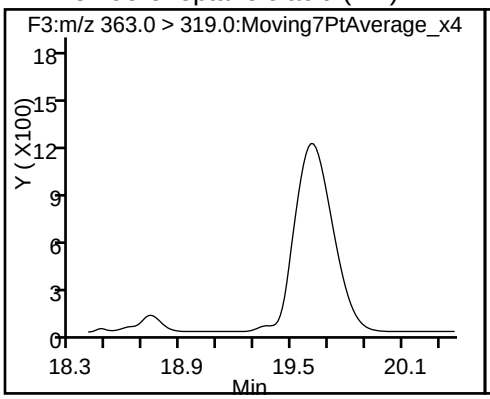
$ 2 13C2 PFHxA



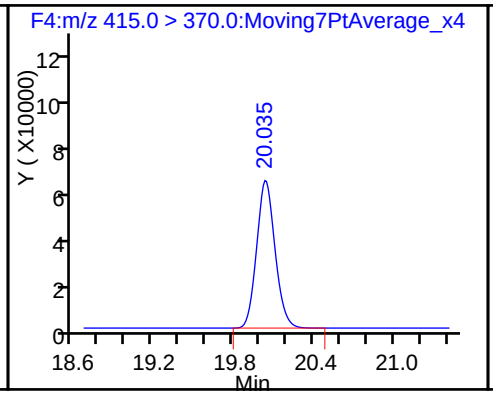
3 Perfluorohexanesulfonic acid



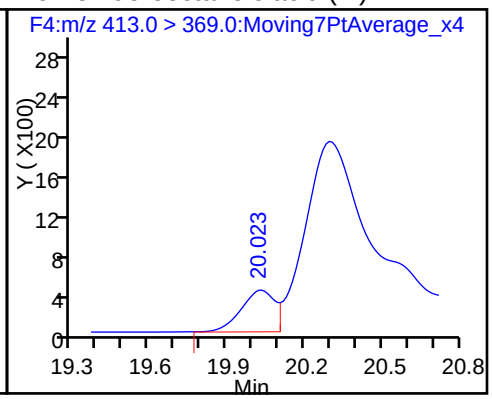
4 Perfluoroheptanoic acid (ND)



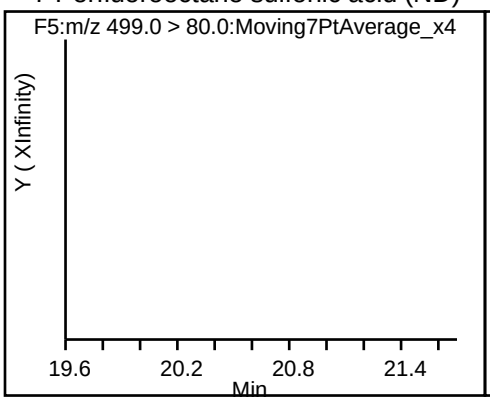
* 5 13C2-PFOA



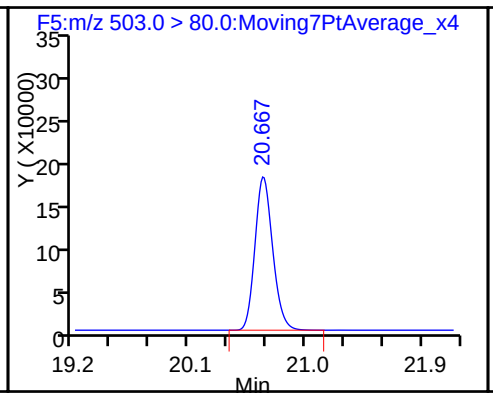
6 Perfluorooctanoic acid (M)



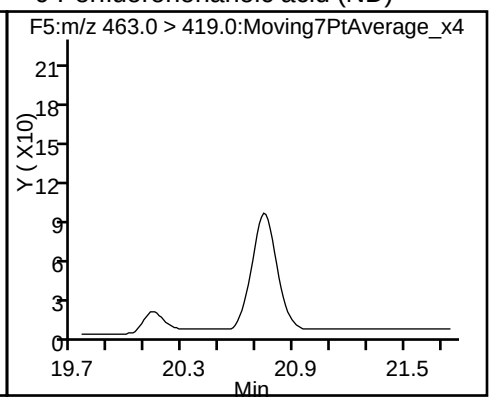
7 Perfluorooctane sulfonic acid (ND)



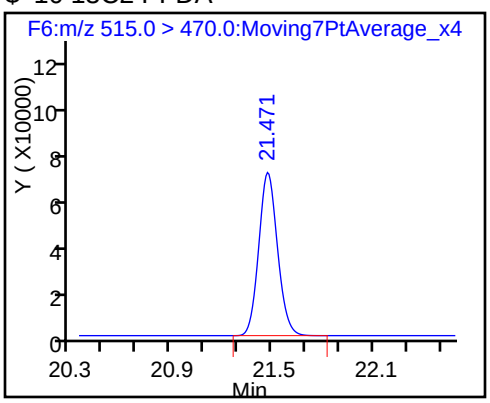
* 8 13C4 PFOS



9 Perfluorononanoic acid (ND)



$ 10 13C2 PFDA



TestAmerica Sacramento
Recovery Report

Data File:	\\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_126.d				
Lims ID:	320-24069-A-25-A				
Client ID:	WI-CV-1RW22-1216				
Sample Type:	Client				
Inject. Date:	14-Dec-2016 00:59:06	ALS Bottle#:	17	Worklist Smp#:	49
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Sample Info:	320-24069-a-25-a				
Misc. Info.:	Acquity BEH 1.7um, 3X150mm T=35*C				
Operator ID:	CBW	Instrument ID:	A6		
Method:	\\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\537__A6.m				
Limit Group:	LC 537 ICAL				
Last Update:	14-Dec-2016 10:52:33	Calib Date:	05-Dec-2016 19:54:00		
Integrator:	Picker				
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d				
Column 1 :	Acquity BEH C18 (2.10 mm)		Det: F1:MRM		
Process Host:	XAWRK017				
First Level Reviewer: barnettj		Date:	14-Dec-2016 10:10:11		

Compound	Amount Added	Amount Recovered	% Rec.
$ 2 13C2 PFHxA	10.0	11.0	110.14
$ 10 13C2 PFDA	10.0	10.5	104.51

Manual Integration/User Assign Peak Report

TestAmerica Sacramento

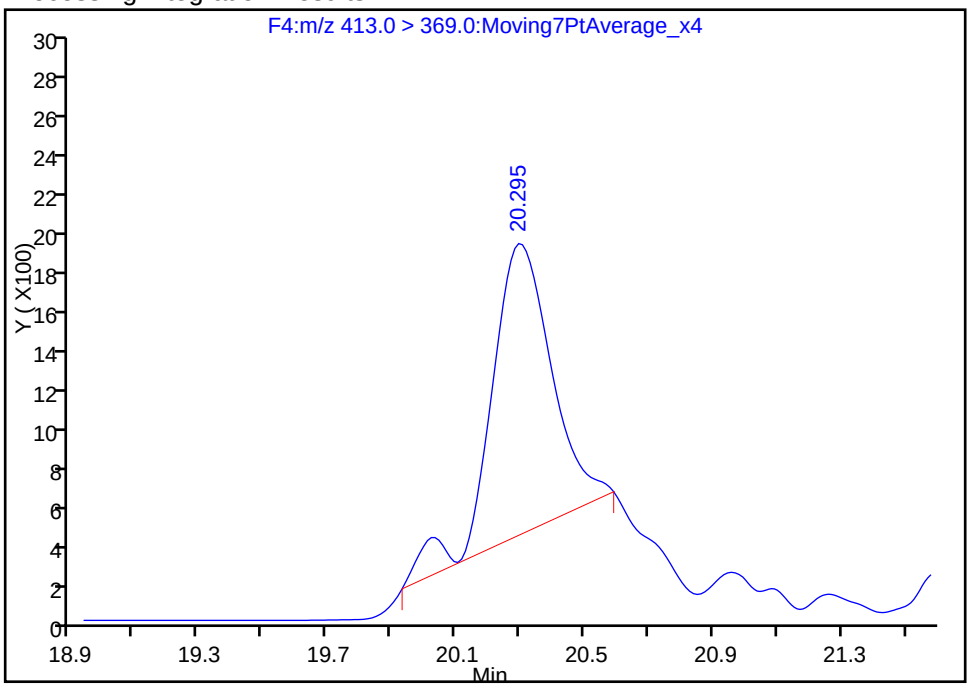
Data File:	\\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_126.d				
Injection Date:	14-Dec-2016 00:59:06	Instrument ID:	A6		
Lims ID:	320-24069-A-25-A	Lab Sample ID:	320-24069-25		
Client ID:	WI-CV-1RW22-1216				
Operator ID:	CBW	ALS Bottle#:	17	Worklist Smp#:	49
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	537__A6	Limit Group:	LC 537 ICAL		
Column:	Acquity BEH C18 (2.10 mm)	Detector	F4:MRM		

6 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

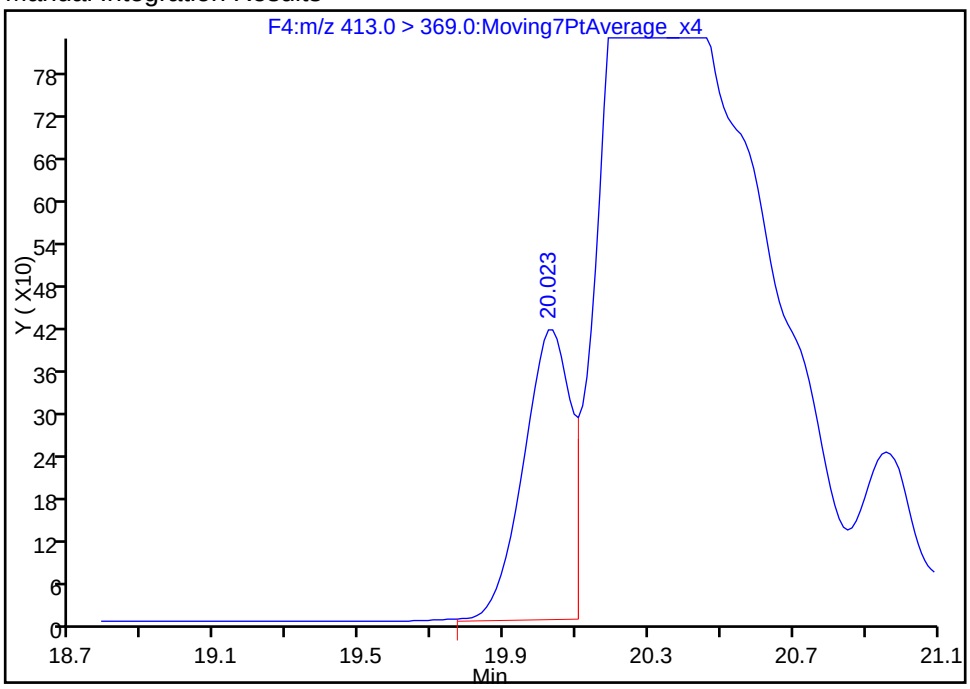
Processing Integration Results

RT: 20.30
Area: 19236
Amount: 0.311289
Amount Units: ng/ml



Manual Integration Results

RT: 20.02
Area: 3781
Amount: 0.061186
Amount Units: ng/ml



Reviewer: barnettj, 14-Dec-2016 10:10:11

Audit Action: Manually Integrated Audit Reason: Split Peak

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento | Job No.: 320-24069-1

SDG No.:

Client Sample ID: WI-CV-1FB22-1216 | Lab Sample ID: 320-24069-26

Matrix: Water | Lab File ID: 11DEC2016A6A_161.d

Analysis Method: 537 | Date Collected: 12/03/2016 12:01

Extraction Method: 537 | Date Extracted: 12/08/2016 18:21

Sample wt/vol: 285.4(mL) | Date Analyzed: 12/14/2016 18:14

Con. Extract Vol.: 1.00(mL) | Dilution Factor: 1

Injection Volume: 10(uL) | GC Column: Acquity ID: 2.1(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 141966 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	0.042	U	0.053	0.042	0.014
335-67-1	Perfluorooctanoic acid (PFOA)	0.021	U	0.026	0.021	0.0083
375-73-5	Perfluorobutanesulfonic acid (PFBS)	0.096	U	0.12	0.096	0.042

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00993	13C2 PFHxA	113		70-130
STL00996	13C2 PFDA	118		70-130

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNA\Sacramento\ChromData\A6\20161213-37801.b\11DEC2016A6A_161.d
Lims ID: 320-24069-A-26-A
Client ID: WI-CV-1FB22-1216
Sample Type: Client
Inject. Date: 14-Dec-2016 18:14:51 ALS Bottle#: 18 Worklist Smp#: 20
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 320-24069-a-26-a
Misc. Info.: Acquity BEH 1.7um, 3X150mm T=35*C
Operator ID: CBW Instrument ID: A6

Method: \\ChromNA\Sacramento\ChromData\A6\20161213-37801.b\537__A6.m
Limit Group: LC 537 ICAL
Last Update: 15-Dec-2016 09:59:55 Calib Date: 05-Dec-2016 19:54:00
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d

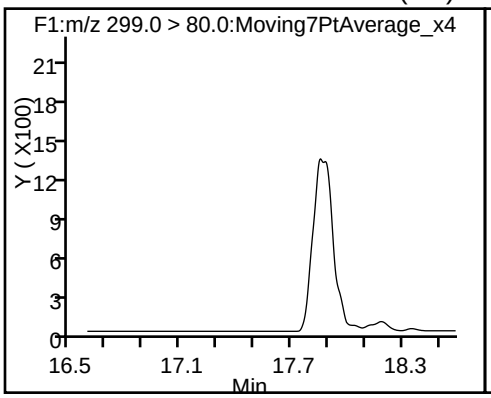
Column 1 : Acquity BEH C18 (2.10 mm) Det: F1:MRM
Process Host: XAWRK005

First Level Reviewer: barnettj Date: 15-Dec-2016 09:52:07

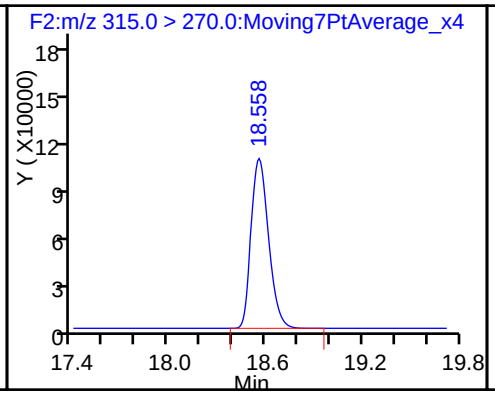
Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	S/N	Flags
$ 2 13C2 PFHxA								
315.0 > 270.0	18.558	18.567	-0.009	1.000	821120	11.3	27094	
* 5 13C2-PFOA								
415.0 > 370.0	20.011	20.023	-0.012		620541	10.0	15914	
* 8 13C4 PFOS								
503.0 > 80.0	20.631	20.643	-0.012		1675607	28.7	43770	
$ 10 13C2 PFDA								
515.0 > 470.0	21.444	21.445	-0.001	1.000	639798	11.8	20224	

Data File: \\ChromNA\Sacramento\ChromData\A6\20161213-37801.b\11DEC2016A6A_161.d
Injection Date: 14-Dec-2016 18:14:51 Instrument ID: A6
Lims ID: 320-24069-A-26-A Lab Sample ID: 320-24069-26
Client ID: WI-CV-1FB22-1216
Operator ID: CBW ALS Bottle#: 18 Worklist Smp#: 20
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 537__A6 Limit Group: LC 537 ICAL

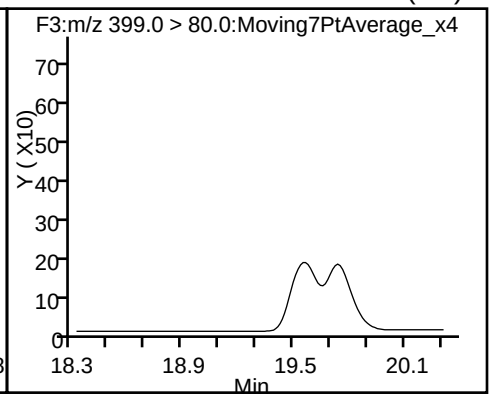
1 Perfluorobutanesulfonic acid (ND)



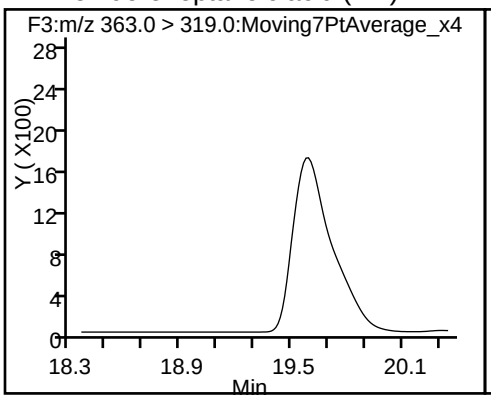
$ 2 13C2 PFHxA



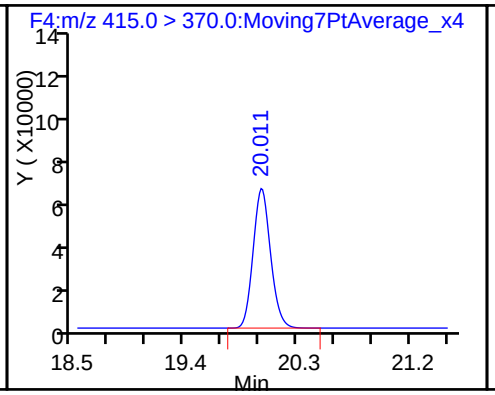
3 Perfluorohexanesulfonic acid (ND)



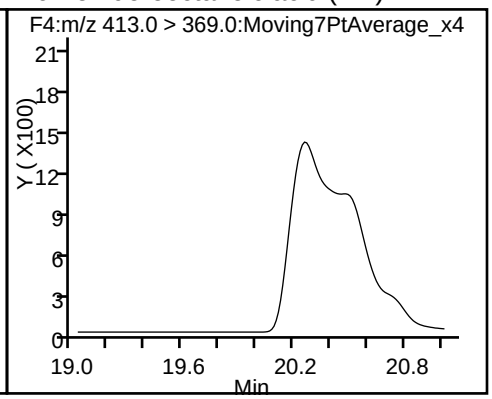
4 Perfluoroheptanoic acid (ND)



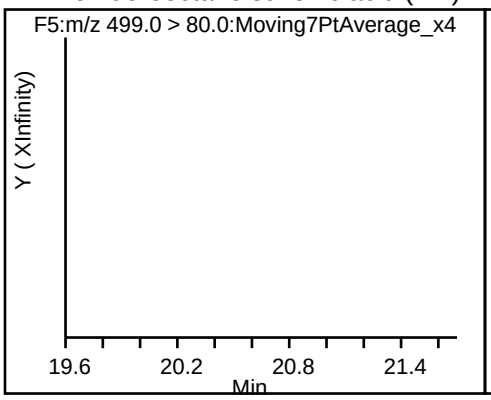
* 5 13C2-PFOA



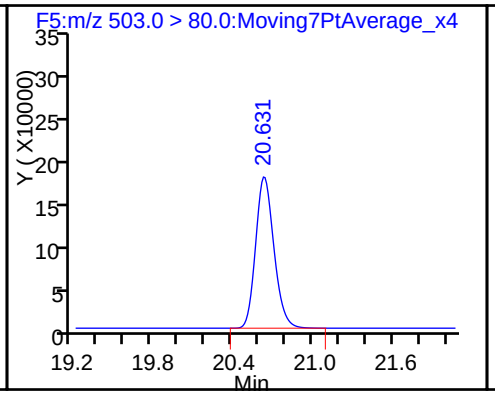
6 Perfluorooctanoic acid (ND)



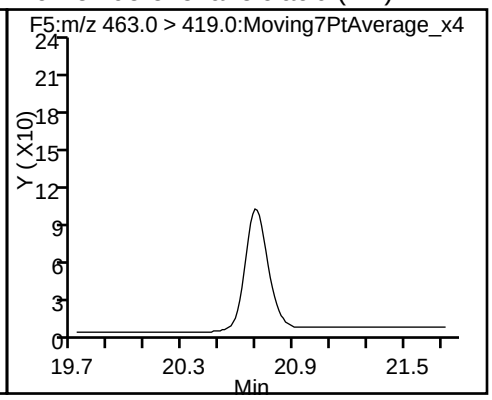
7 Perfluorooctane sulfonic acid (ND)



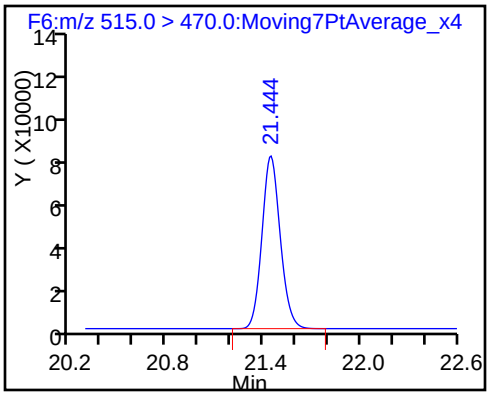
* 8 13C4 PFOS



9 Perfluorononanoic acid (ND)



$ 10 13C2 PFDA



TestAmerica Sacramento
Recovery Report

Data File: \\ChromNA\Sacramento\ChromData\A6\20161213-37801.b\11DEC2016A6A_161.d
Lims ID: 320-24069-A-26-A
Client ID: WI-CV-1FB22-1216
Sample Type: Client
Inject. Date: 14-Dec-2016 18:14:51 ALS Bottle#: 18 Worklist Smp#: 20
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 320-24069-a-26-a
Misc. Info.: Acquity BEH 1.7um, 3X150mm T=35*C
Operator ID: CBW Instrument ID: A6

Method: \\ChromNA\Sacramento\ChromData\A6\20161213-37801.b\537__A6.m
Limit Group: LC 537 ICAL
Last Update: 15-Dec-2016 09:59:55 Calib Date: 05-Dec-2016 19:54:00
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d

Column 1 : Acquity BEH C18 (2.10 mm) Det: F1:MRM
Process Host: XAWRK005

First Level Reviewer: barnettj Date: 15-Dec-2016 09:52:07

Compound	Amount Added	Amount Recovered	% Rec.
$ 2 13C2 PFHxA	10.0	11.3	113.43
$ 10 13C2 PFDA	10.0	11.8	117.66

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento | Job No.: 320-24069-1

SDG No.:

Client Sample ID: WI-CV-3RW17-1216 | Lab Sample ID: 320-24069-27

Matrix: Water | Lab File ID: 11DEC2016A6A_128.d

Analysis Method: 537 | Date Collected: 12/03/2016 09:13

Extraction Method: 537 | Date Extracted: 12/08/2016 18:21

Sample wt/vol: 271.3(mL) | Date Analyzed: 12/14/2016 01:58

Con. Extract Vol.: 1.00(mL) | Dilution Factor: 1

Injection Volume: 10(uL) | GC Column: Acquity ID: 2.1(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 141770 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	0.044	U M	0.055	0.044	0.014
335-67-1	Perfluorooctanoic acid (PFOA)	0.022	U M	0.028	0.022	0.0087
375-73-5	Perfluorobutanesulfonic acid (PFBS)	0.10	U	0.13	0.10	0.044

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00993	13C2 PFHxA	110		70-130
STL00996	13C2 PFDA	100		70-130

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_128.d
Lims ID: 320-24069-A-27-A
Client ID: WI-CV-3RW17-1216
Sample Type: Client
Inject. Date: 14-Dec-2016 01:58:16 ALS Bottle#: 19 Worklist Smp#: 51
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 320-24069-a-27-a
Misc. Info.: Acquity BEH 1.7um, 3X150mm T=35*C
Operator ID: CBW Instrument ID: A6

Method: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\537__A6.m
Limit Group: LC 537 ICAL
Last Update: 14-Dec-2016 10:52:33 Calib Date: 05-Dec-2016 19:54:00
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d

Column 1 : Acquity BEH C18 (2.10 mm) Det: F1:MRM
Process Host: XAWRK017

First Level Reviewer: barnettj Date: 14-Dec-2016 10:12:55

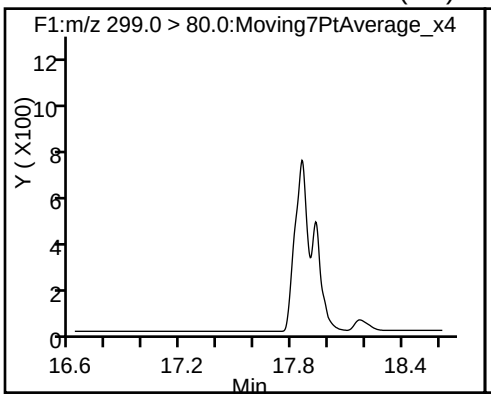
Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	S/N	Flags
$ 2 13C2 PFHxA								
315.0 > 270.0	18.576	18.604	-0.028	1.000	788954	11.0	25511	
4 Perfluoroheptanoic acid								
363.0 > 319.0	19.380	19.392	-0.012	1.000	2946	0.0393	1.9	
* 5 13C2-PFOA								
415.0 > 370.0	20.023	20.047	-0.024		617492	10.0	21240	
6 Perfluorooctanoic acid								M
413.0 > 369.0	20.059	20.047	0.012	1.000	563	0.008763	0.3	M
7 Perfluorooctane sulfonic acid								M
499.0 > 80.0	20.655	20.620	0.035	1.000	380	0.006447	9.3	M
* 8 13C4 PFOS								
503.0 > 80.0	20.655	20.679	-0.024		1619333	28.7	33731	
$ 10 13C2 PFDA								
515.0 > 470.0	21.462	21.471	-0.009	1.000	543084	10.0	17182	

QC Flag Legend

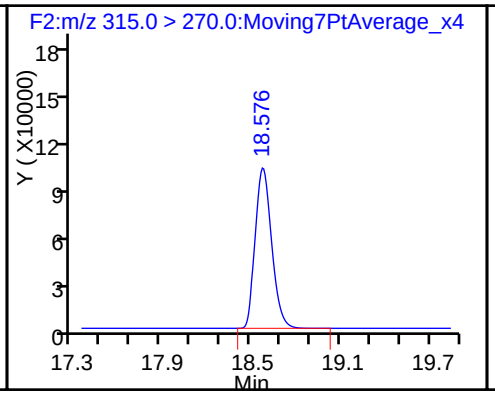
Review Flags
M - Manually Integrated

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_128.d
Injection Date: 14-Dec-2016 01:58:16 Instrument ID: A6
Lims ID: 320-24069-A-27-A Lab Sample ID: 320-24069-27
Client ID: WI-CV-3RW17-1216
Operator ID: CBW ALS Bottle#: 19 Worklist Smp#: 51
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 537__A6 Limit Group: LC 537 ICAL

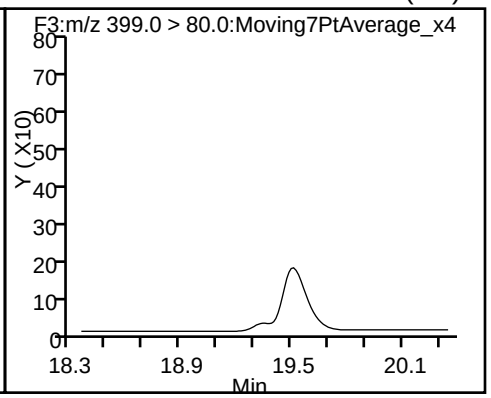
1 Perfluorobutanesulfonic acid (ND)



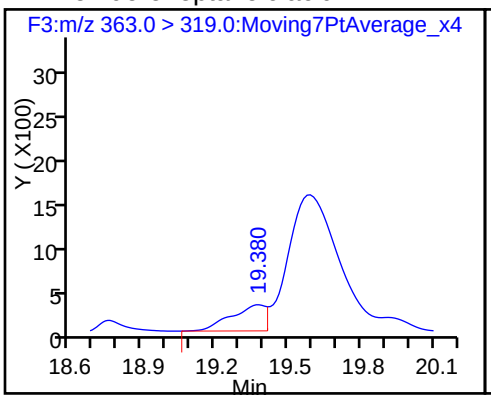
$ 2 13C2 PFHxA



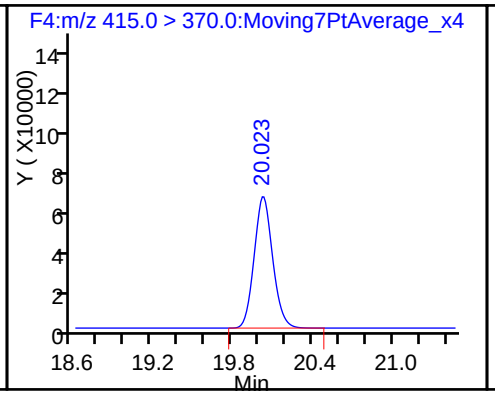
3 Perfluorohexanesulfonic acid (ND)



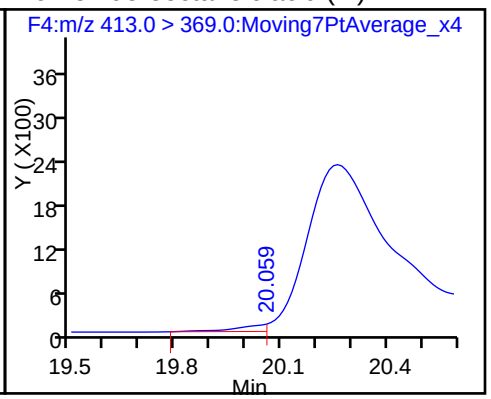
4 Perfluoroheptanoic acid



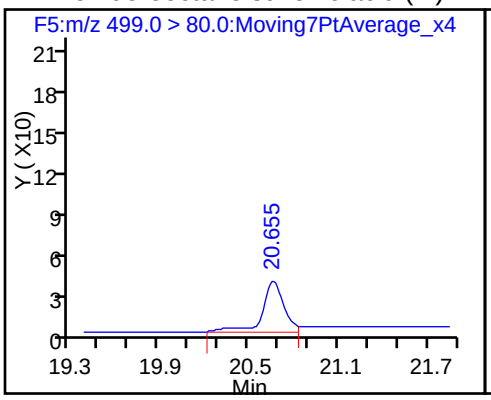
* 5 13C2-PFOA



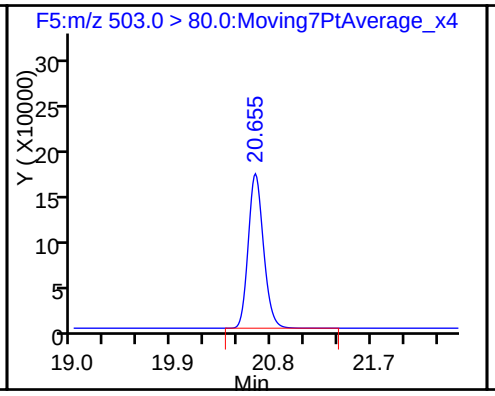
6 Perfluorooctanoic acid (M)



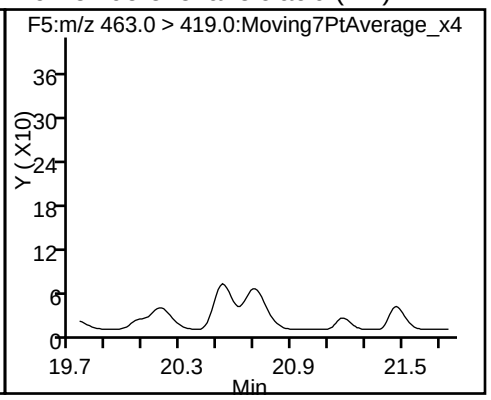
7 Perfluorooctane sulfonic acid (M)



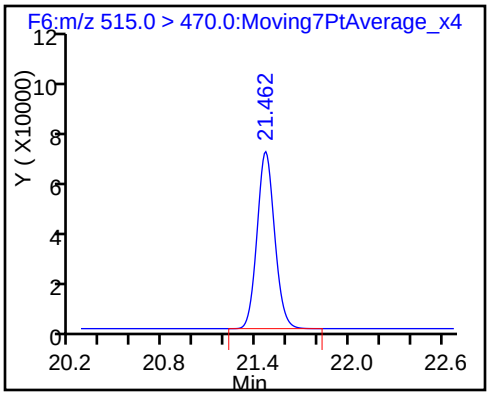
* 8 13C4 PFOS



9 Perfluorononanoic acid (ND)



$ 10 13C2 PFDA



TestAmerica Sacramento
Recovery Report

Data File:	\\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_128.d				
Lims ID:	320-24069-A-27-A				
Client ID:	WI-CV-3RW17-1216				
Sample Type:	Client				
Inject. Date:	14-Dec-2016 01:58:16	ALS Bottle#:	19	Worklist Smp#:	51
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Sample Info:	320-24069-a-27-a				
Misc. Info.:	Acquity BEH 1.7um, 3X150mm T=35*C				
Operator ID:	CBW	Instrument ID:	A6		
Method:	\\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\537__A6.m				
Limit Group:	LC 537 ICAL				
Last Update:	14-Dec-2016 10:52:33	Calib Date:	05-Dec-2016 19:54:00		
Integrator:	Picker				
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d				
Column 1 :	Acquity BEH C18 (2.10 mm)		Det: F1:MRM		
Process Host:	XAWRK017				
First Level Reviewer: barnettj		Date:	14-Dec-2016 10:12:55		

Compound	Amount Added	Amount Recovered	% Rec.
$ 2 13C2 PFHxA	10.0	11.0	109.53
$ 10 13C2 PFDA	10.0	10.0	100.37

Manual Integration/User Assign Peak Report

TestAmerica Sacramento

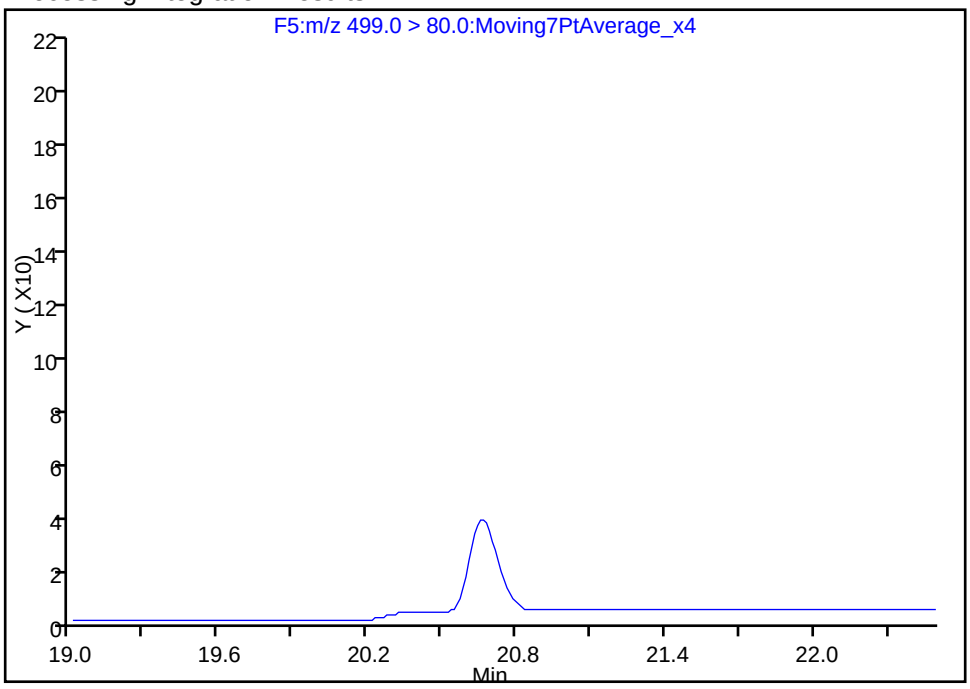
Data File:	\\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_128.d				
Injection Date:	14-Dec-2016 01:58:16	Instrument ID:	A6		
Lims ID:	320-24069-A-27-A	Lab Sample ID:	320-24069-27		
Client ID:	WI-CV-3RW17-1216				
Operator ID:	CBW	ALS Bottle#:	19	Worklist Smp#:	51
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	537__A6	Limit Group:	LC 537 ICAL		
Column:	Acquity BEH C18 (2.10 mm)	Detector	F5:MRM		

7 Perfluorooctane sulfonic acid, CAS: 1763-23-1

Signal: 1

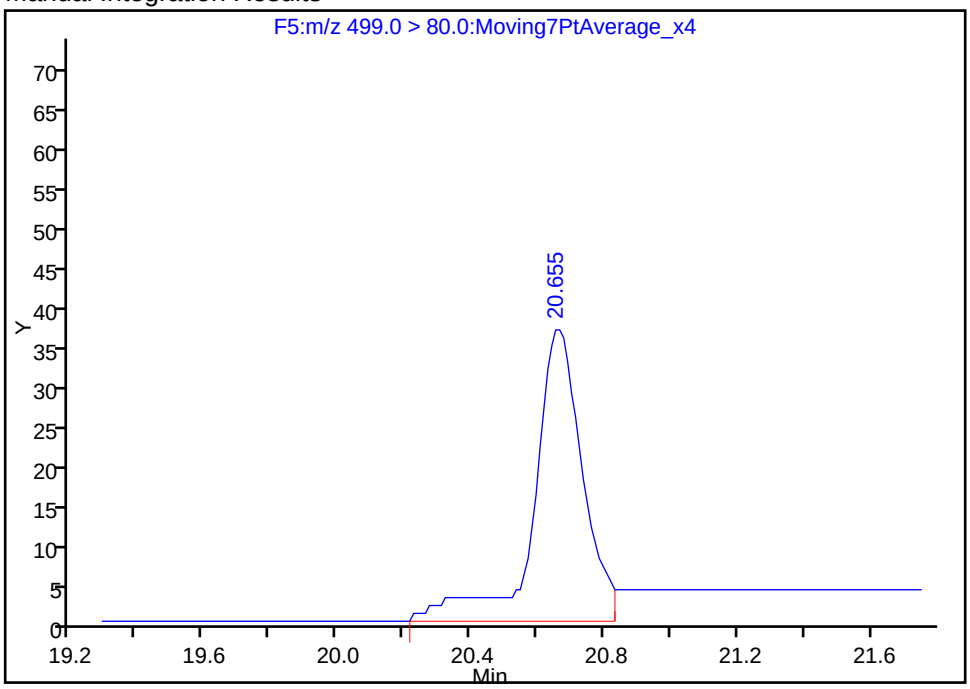
Not Detected
Expected RT: 20.62

Processing Integration Results



Manual Integration Results

RT: 20.65
Area: 380
Amount: 0.006447
Amount Units: ng/ml



Reviewer: barnettj, 14-Dec-2016 10:12:55
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

TestAmerica Sacramento

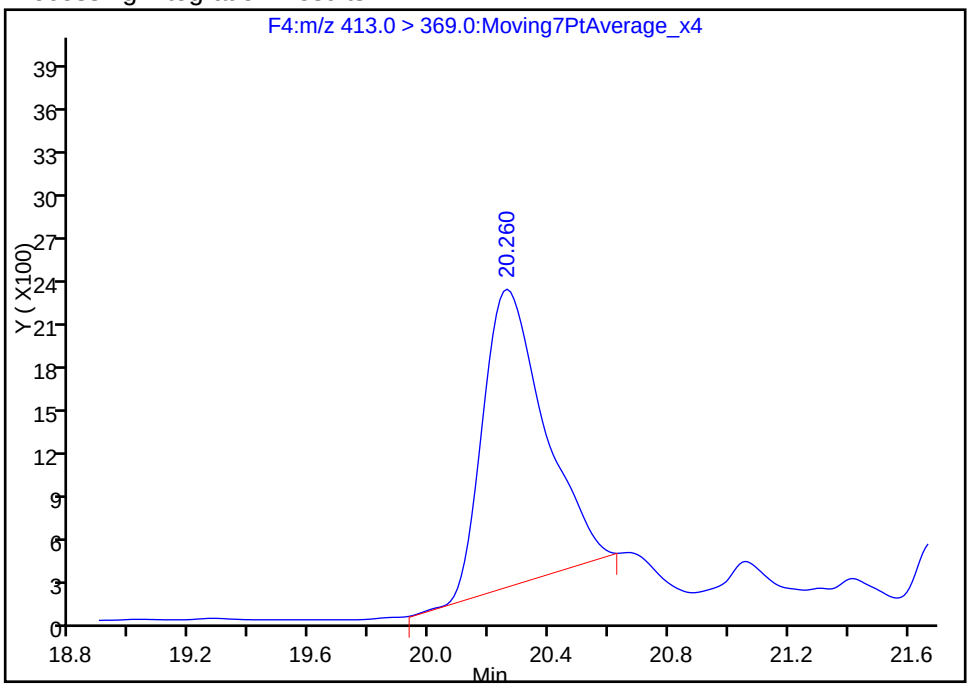
Data File:	\\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_128.d				
Injection Date:	14-Dec-2016 01:58:16	Instrument ID:	A6		
Lims ID:	320-24069-A-27-A	Lab Sample ID:	320-24069-27		
Client ID:	WI-CV-3RW17-1216				
Operator ID:	CBW	ALS Bottle#:	19	Worklist Smp#:	51
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	537__A6	Limit Group:	LC 537 ICAL		
Column:	Acquity BEH C18 (2.10 mm)	Detector	F4:MRM		

6 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

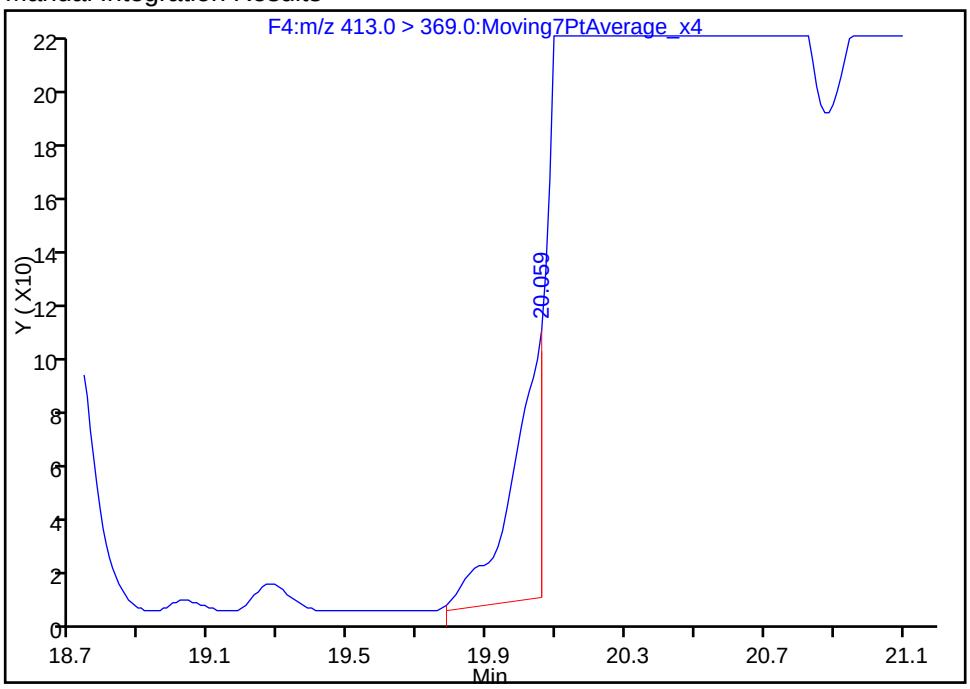
Processing Integration Results

RT: 20.26
Area: 29715
Amount: 0.462523
Amount Units: ng/ml



Manual Integration Results

RT: 20.06
Area: 563
Amount: 0.008763
Amount Units: ng/ml



Reviewer: barnettj, 14-Dec-2016 10:12:55

Audit Action: Manually Integrated Audit Reason: Split Peak

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento | Job No.: 320-24069-1

SDG No.:

Client Sample ID: WI-CV-3FB17-1216 | Lab Sample ID: 320-24069-28

Matrix: Water | Lab File ID: 11DEC2016A6A_132.d

Analysis Method: 537 | Date Collected: 12/03/2016 09:14

Extraction Method: 537 | Date Extracted: 12/08/2016 18:21

Sample wt/vol: 278.7(mL) | Date Analyzed: 12/14/2016 03:56

Con. Extract Vol.: 1.00(mL) | Dilution Factor: 1

Injection Volume: 10(uL) | GC Column: Acquity ID: 2.1(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 141771 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	0.043	U M	0.054	0.043	0.014
335-67-1	Perfluorooctanoic acid (PFOA)	0.022	U M	0.027	0.022	0.0084
375-73-5	Perfluorobutanesulfonic acid (PFBS)	0.099	U	0.13	0.099	0.043

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00993	13C2 PFHxA	106		70-130
STL00996	13C2 PFDA	110		70-130

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_132.d
Lims ID: 320-24069-A-28-A
Client ID: WI-CV-3FB17-1216
Sample Type: Client
Inject. Date: 14-Dec-2016 03:56:39 ALS Bottle#: 20 Worklist Smp#: 55
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 320-24069-a-28-a
Misc. Info.: Acquity BEH 1.7um, 3X150mm T=35*C
Operator ID: CBW Instrument ID: A6

Method: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\537__A6.m
Limit Group: LC 537 ICAL
Last Update: 14-Dec-2016 10:53:05 Calib Date: 05-Dec-2016 19:54:00
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d

Column 1 : Acquity BEH C18 (2.10 mm) Det: F1:MRM
Process Host: XAWRK017

First Level Reviewer: barnettj Date: 14-Dec-2016 10:15:15

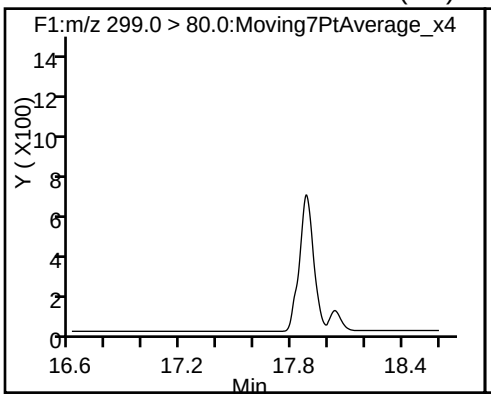
Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	S/N	Flags
$ 2 13C2 PFHxA								
315.0 > 270.0	18.585	18.585	0.0	1.000	760158	10.6	24649	
* 5 13C2-PFOA								
415.0 > 370.0	20.035	20.035	0.0		612207	10.0	16055	
6 Perfluorooctanoic acid								M
413.0 > 369.0	20.047	20.035	0.012	1.000	843	0.0132	0.6	M
7 Perfluorooctane sulfonic acid								M
499.0 > 80.0	20.667	20.619	0.048	1.000	1113	0.0187	33.8	M
* 8 13C4 PFOS								
503.0 > 80.0	20.655	20.667	-0.012		1637453	28.7	42539	
$ 10 13C2 PFDA								
515.0 > 470.0	21.471	21.471	0.0	1.000	591455	11.0	18914	

QC Flag Legend

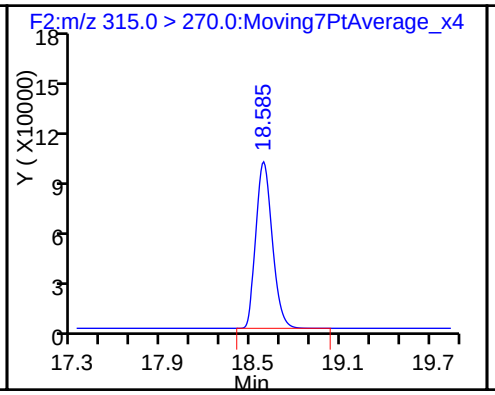
Review Flags
M - Manually Integrated

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_132.d
Injection Date: 14-Dec-2016 03:56:39 Instrument ID: A6
Lims ID: 320-24069-A-28-A Lab Sample ID: 320-24069-28
Client ID: WI-CV-3FB17-1216
Operator ID: CBW ALS Bottle#: 20 Worklist Smp#: 55
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 537__A6 Limit Group: LC 537 ICAL

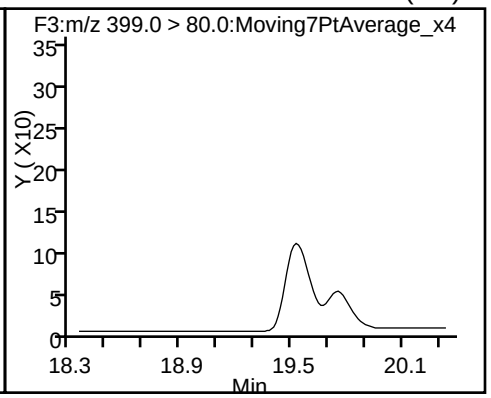
1 Perfluorobutanesulfonic acid (ND)



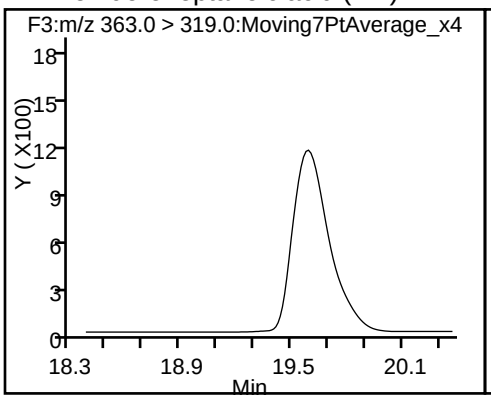
$ 2 13C2 PFHxA



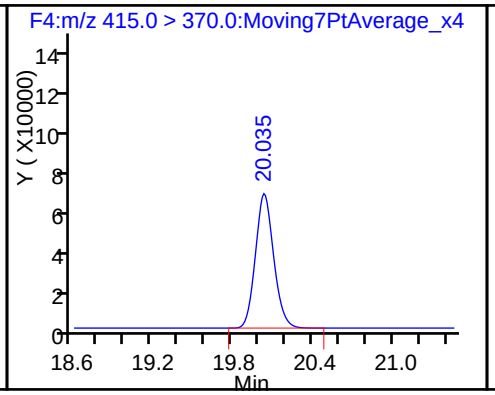
3 Perfluorohexanesulfonic acid (ND)



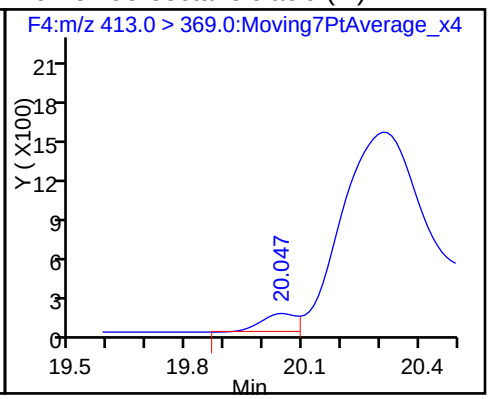
4 Perfluoroheptanoic acid (ND)



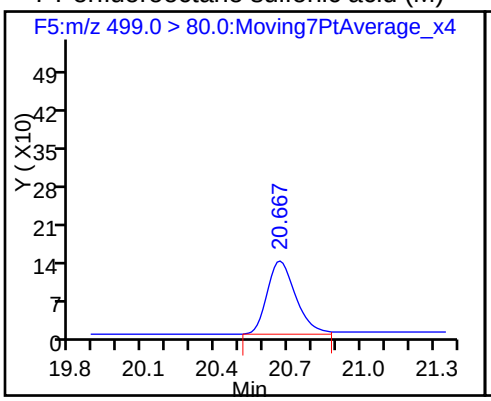
* 5 13C2-PFOA



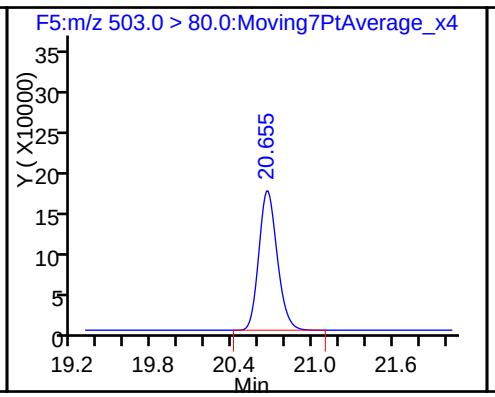
6 Perfluorooctanoic acid (M)



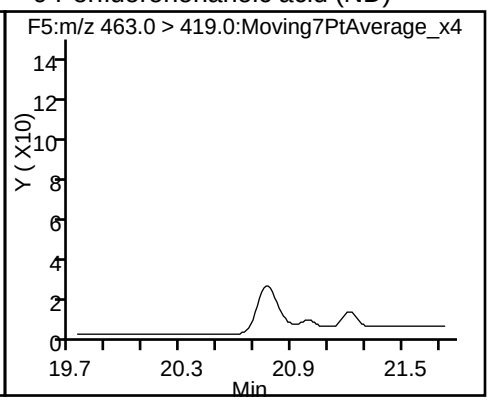
7 Perfluorooctane sulfonic acid (M)



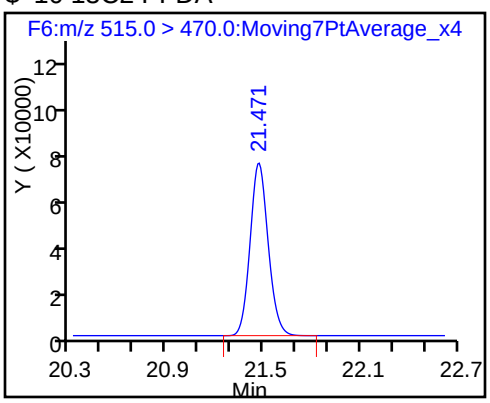
* 8 13C4 PFOS



9 Perfluorononanoic acid (ND)



$ 10 13C2 PFDA



TestAmerica Sacramento
Recovery Report

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_132.d
Lims ID: 320-24069-A-28-A
Client ID: WI-CV-3FB17-1216
Sample Type: Client
Inject. Date: 14-Dec-2016 03:56:39 ALS Bottle#: 20 Worklist Smp#: 55
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 320-24069-a-28-a
Misc. Info.: Acquity BEH 1.7um, 3X150mm T=35*C
Operator ID: CBW Instrument ID: A6

Method: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\537__A6.m
Limit Group: LC 537 ICAL
Last Update: 14-Dec-2016 10:53:05 Calib Date: 05-Dec-2016 19:54:00
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d

Column 1 : Acquity BEH C18 (2.10 mm) Det: F1:MRM
Process Host: XAWRK017

First Level Reviewer: barnettj Date: 14-Dec-2016 10:15:15

Compound	Amount Added	Amount Recovered	% Rec.
$ 2 13C2 PFHxA	10.0	10.6	106.44
$ 10 13C2 PFDA	10.0	11.0	110.25

Manual Integration/User Assign Peak Report

TestAmerica Sacramento

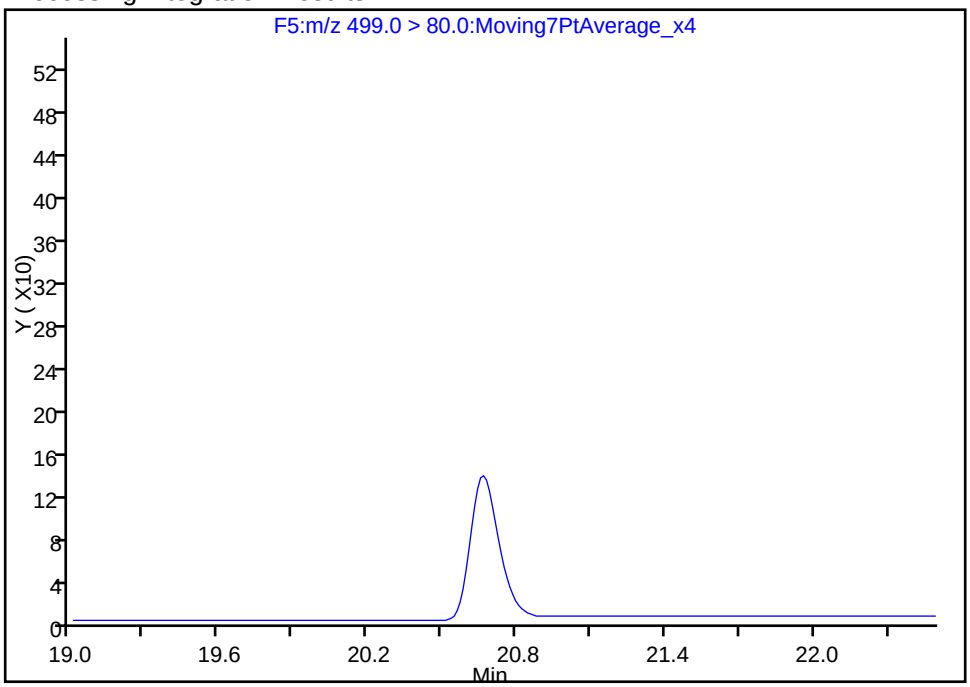
Data File:	\\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_132.d				
Injection Date:	14-Dec-2016 03:56:39	Instrument ID:	A6		
Lims ID:	320-24069-A-28-A	Lab Sample ID:	320-24069-28		
Client ID:	WI-CV-3FB17-1216				
Operator ID:	CBW	ALS Bottle#:	20	Worklist Smp#:	55
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	537__A6	Limit Group:	LC 537 ICAL		
Column:	Acquity BEH C18 (2.10 mm)	Detector	F5:MRM		

7 Perfluorooctane sulfonic acid, CAS: 1763-23-1

Signal: 1

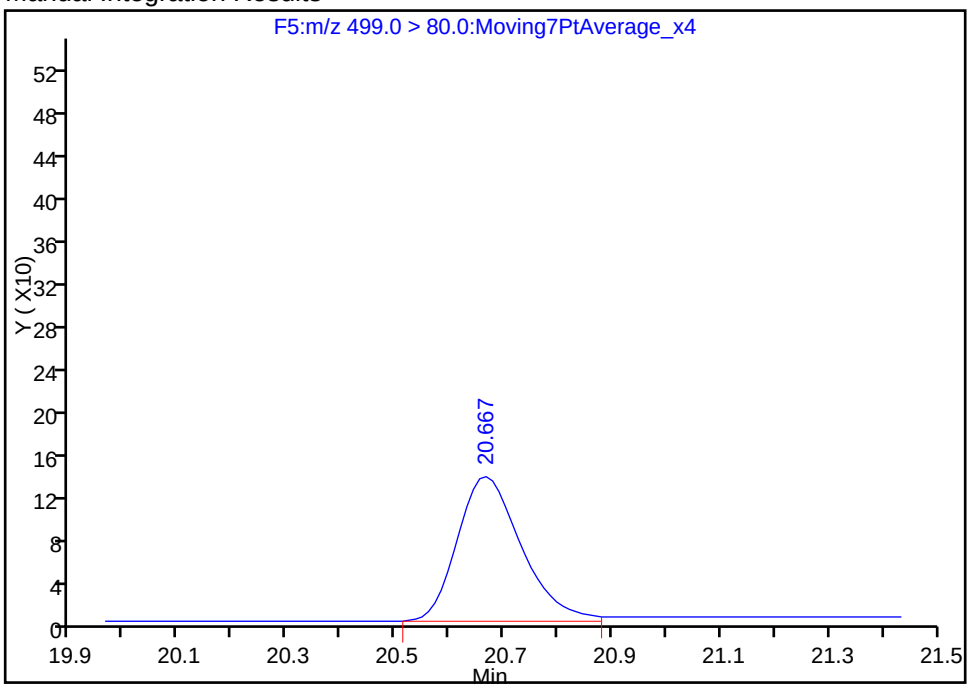
Processing Integration Results

Not Detected
Expected RT: 20.62



Manual Integration Results

RT: 20.67
Area: 1113
Amount: 0.018673
Amount Units: ng/ml



Reviewer: barnettj, 14-Dec-2016 10:15:15
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

TestAmerica Sacramento

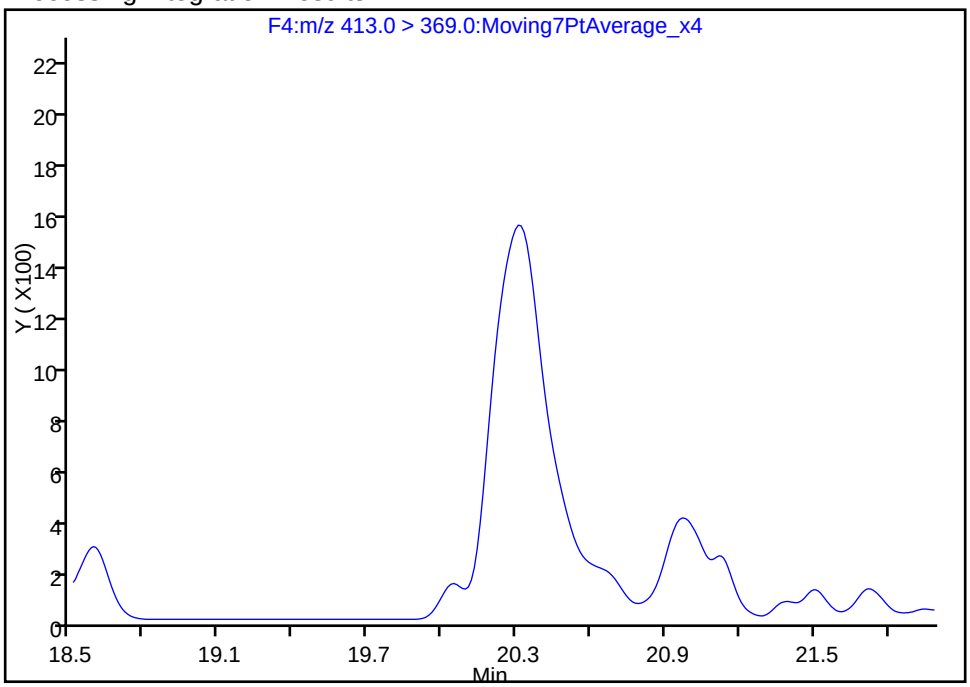
Data File:	\\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_132.d				
Injection Date:	14-Dec-2016 03:56:39	Instrument ID:	A6		
Lims ID:	320-24069-A-28-A	Lab Sample ID:	320-24069-28		
Client ID:	WI-CV-3FB17-1216				
Operator ID:	CBW	ALS Bottle#:	20	Worklist Smp#:	55
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Method:	537__A6	Limit Group:	LC 537 ICAL		
Column:	Acquity BEH C18 (2.10 mm)	Detector	F4:MRM		

6 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

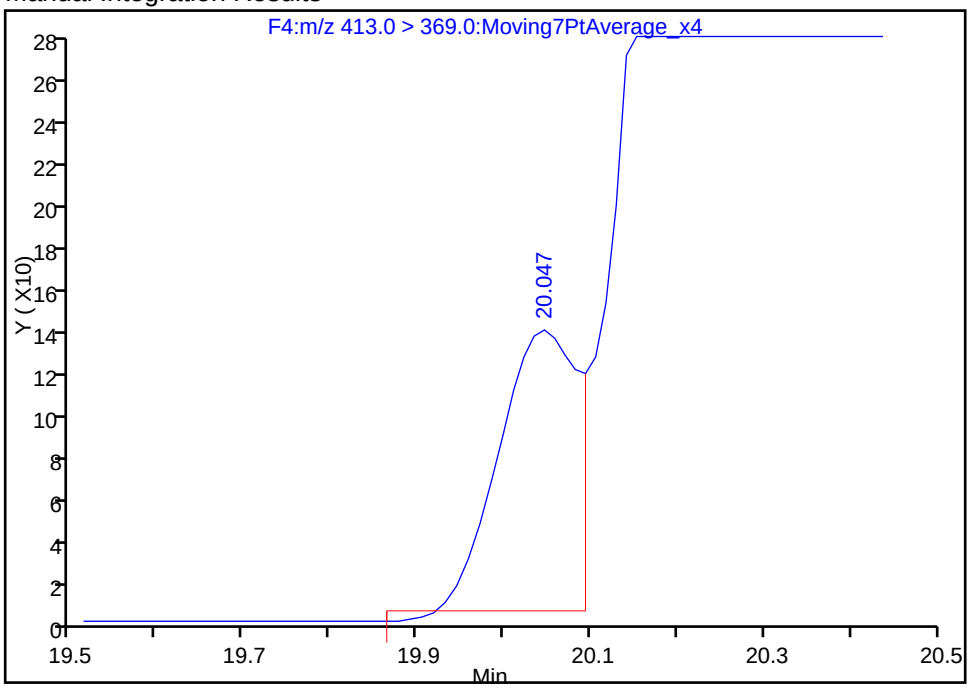
Not Detected
Expected RT: 20.03

Processing Integration Results



Manual Integration Results

RT: 20.05
Area: 843
Amount: 0.013235
Amount Units: ng/ml



Reviewer: barnettj, 14-Dec-2016 10:15:15
Audit Action: Manually Integrated Audit Reason: Missed Peak

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento | Job No.: 320-24069-1

SDG No.:

Client Sample ID: WI-CV-3RW18-1216 | Lab Sample ID: 320-24069-29

Matrix: Water | Lab File ID: 11DEC2016A6A_133.d

Analysis Method: 537 | Date Collected: 12/03/2016 12:08

Extraction Method: 537 | Date Extracted: 12/08/2016 18:21

Sample wt/vol: 273.4(mL) | Date Analyzed: 12/14/2016 04:26

Con. Extract Vol.: 1.00(mL) | Dilution Factor: 1

Injection Volume: 10(uL) | GC Column: Acquity ID: 2.1(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 141771 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	0.044	U	0.055	0.044	0.014
335-67-1	Perfluorooctanoic acid (PFOA)	0.022	U	0.027	0.022	0.0086
375-73-5	Perfluorobutanesulfonic acid (PFBS)	0.10	U	0.13	0.10	0.044

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00993	13C2 PFHxA	115		70-130
STL00996	13C2 PFDA	113		70-130

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_133.d
Lims ID: 320-24069-A-29-A
Client ID: WI-CV-3RW18-1216
Sample Type: Client
Inject. Date: 14-Dec-2016 04:26:15 ALS Bottle#: 21 Worklist Smp#: 56
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 320-24069-a-29-a
Misc. Info.: Acquity BEH 1.7um, 3X150mm T=35*C
Operator ID: CBW Instrument ID: A6

Method: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\537__A6.m
Limit Group: LC 537 ICAL
Last Update: 14-Dec-2016 10:53:05 Calib Date: 05-Dec-2016 19:54:00
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d

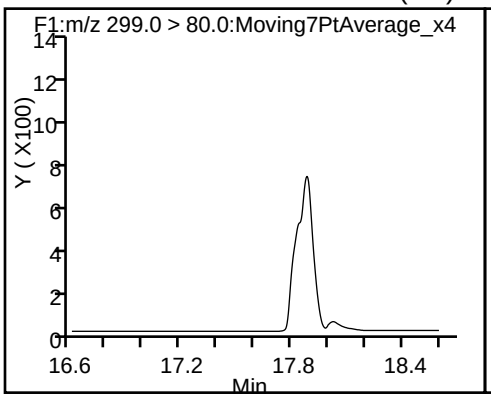
Column 1 : Acquity BEH C18 (2.10 mm) Det: F1:MRM
Process Host: XAWRK017

First Level Reviewer: barnettj Date: 14-Dec-2016 10:15:51

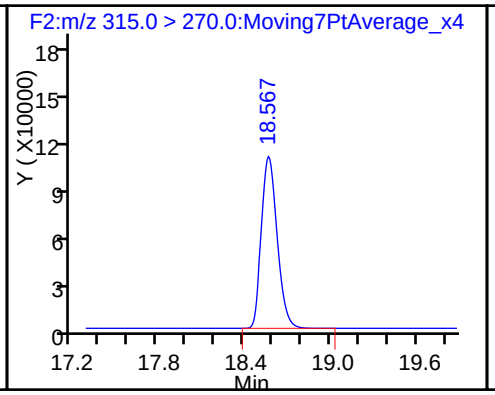
Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	S/N	Flags
$ 2 13C2 PFHxA								
315.0 > 270.0	18.567	18.585	-0.018	1.000	812860	11.5	26364	
* 5 13C2-PFOA								
415.0 > 370.0	20.023	20.035	-0.012		608502	10.0	15872	
* 8 13C4 PFOS								
503.0 > 80.0	20.643	20.667	-0.024		1667316	28.7	29098	
$ 10 13C2 PFDA								
515.0 > 470.0	21.444	21.471	-0.027	1.000	603957	11.3	18831	

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_133.d
Injection Date: 14-Dec-2016 04:26:15 Instrument ID: A6
Lims ID: 320-24069-A-29-A Lab Sample ID: 320-24069-29
Client ID: WI-CV-3RW18-1216
Operator ID: CBW ALS Bottle#: 21 Worklist Smp#: 56
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 537__A6 Limit Group: LC 537 ICAL

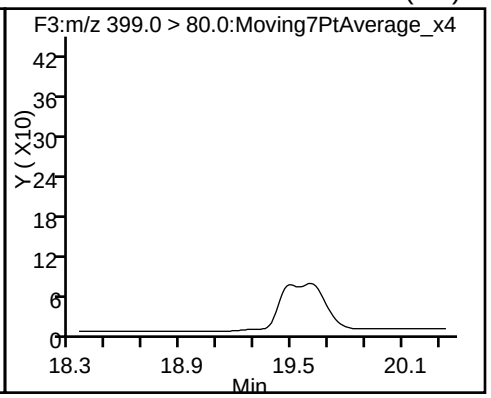
1 Perfluorobutanesulfonic acid (ND)



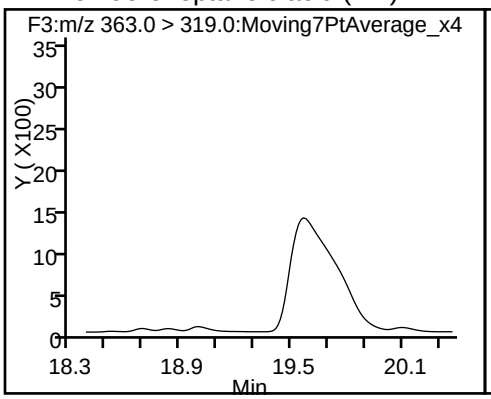
$ 2 13C2 PFHxA



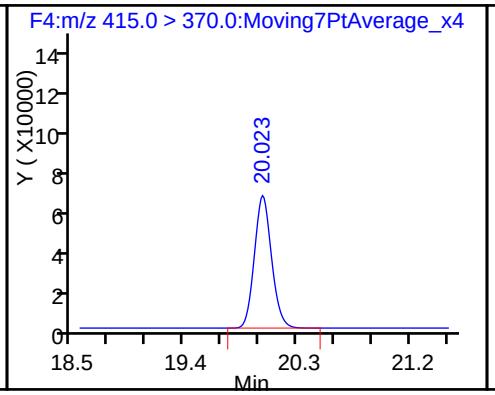
3 Perfluorohexanesulfonic acid (ND)



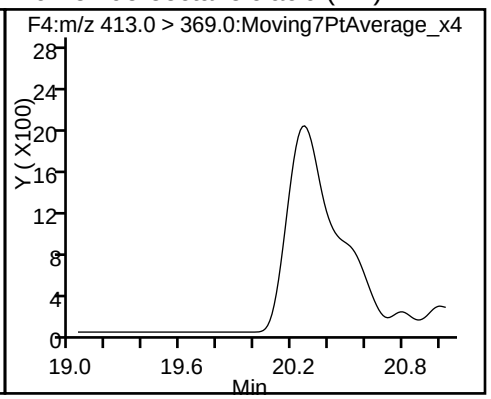
4 Perfluoroheptanoic acid (ND)



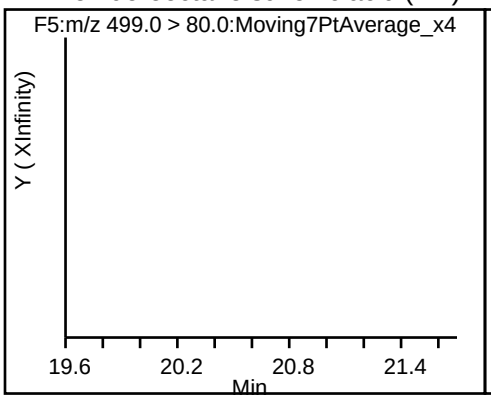
* 5 13C2-PFOA



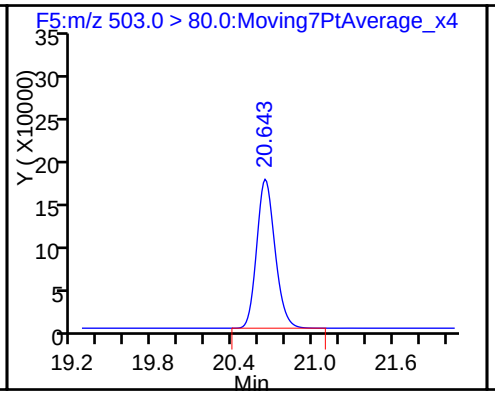
6 Perfluorooctanoic acid (ND)



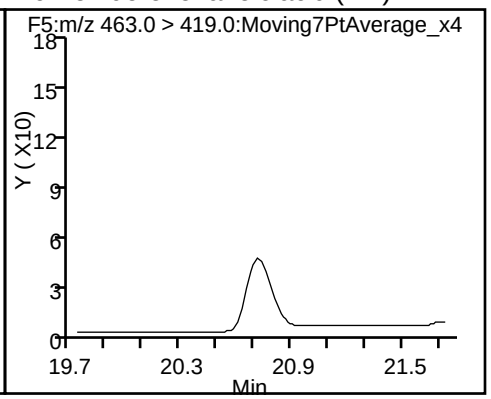
7 Perfluorooctane sulfonic acid (ND)



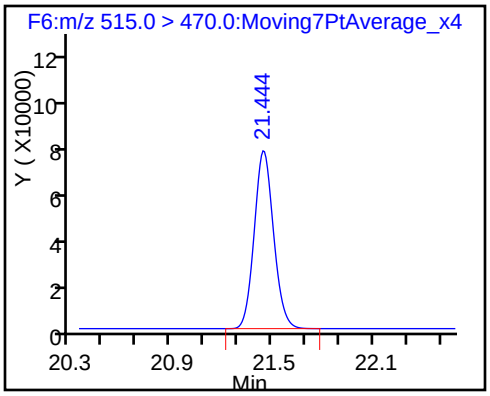
* 8 13C4 PFOS



9 Perfluorononanoic acid (ND)



$ 10 13C2 PFDA



TestAmerica Sacramento
Recovery Report

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_133.d
Lims ID: 320-24069-A-29-A
Client ID: WI-CV-3RW18-1216
Sample Type: Client
Inject. Date: 14-Dec-2016 04:26:15 ALS Bottle#: 21 Worklist Smp#: 56
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 320-24069-a-29-a
Misc. Info.: Acquity BEH 1.7um, 3X150mm T=35*C
Operator ID: CBW Instrument ID: A6

Method: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\537__A6.m
Limit Group: LC 537 ICAL
Last Update: 14-Dec-2016 10:53:05 Calib Date: 05-Dec-2016 19:54:00
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d

Column 1 : Acquity BEH C18 (2.10 mm) Det: F1:MRM
Process Host: XAWRK017

First Level Reviewer: barnettj Date: 14-Dec-2016 10:15:51

Compound	Amount Added	Amount Recovered	% Rec.
$ 2 13C2 PFHxA	10.0	11.5	114.51
$ 10 13C2 PFDA	10.0	11.3	113.27

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento | Job No.: 320-24069-1

SDG No.:

Client Sample ID: WI-CV-3FB18-1216 | Lab Sample ID: 320-24069-30

Matrix: Water | Lab File ID: 11DEC2016A6A_134.d

Analysis Method: 537 | Date Collected: 12/03/2016 12:09

Extraction Method: 537 | Date Extracted: 12/08/2016 18:21

Sample wt/vol: 281.6(mL) | Date Analyzed: 12/14/2016 04:55

Con. Extract Vol.: 1.00(mL) | Dilution Factor: 1

Injection Volume: 10(uL) | GC Column: Acquity ID: 2.1(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 141771 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	0.043	U	0.053	0.043	0.014
335-67-1	Perfluorooctanoic acid (PFOA)	0.021	U	0.027	0.021	0.0084
375-73-5	Perfluorobutanesulfonic acid (PFBS)	0.098	U	0.12	0.098	0.042

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00993	13C2 PFHxA	102		70-130
STL00996	13C2 PFDA	108		70-130

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_134.d
Lims ID: 320-24069-A-30-A
Client ID: WI-CV-3FB18-1216
Sample Type: Client
Inject. Date: 14-Dec-2016 04:55:50 ALS Bottle#: 22 Worklist Smp#: 57
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 320-24069-a-30-a
Misc. Info.: Acquity BEH 1.7um, 3X150mm T=35*C
Operator ID: CBW Instrument ID: A6

Method: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\537__A6.m
Limit Group: LC 537 ICAL
Last Update: 14-Dec-2016 10:53:05 Calib Date: 05-Dec-2016 19:54:00
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d

Column 1 : Acquity BEH C18 (2.10 mm) Det: F1:MRM
Process Host: XAWRK017

First Level Reviewer: barnettj Date: 14-Dec-2016 10:23:47

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	S/N	Flags
$ 2 13C2 PFHxA								
315.0 > 270.0	18.576	18.585	-0.009	1.000	776917	10.2	25162	
* 5 13C2-PFOA								
415.0 > 370.0	20.035	20.035	0.0		650767	10.0	16903	
* 8 13C4 PFOS								
503.0 > 80.0	20.655	20.667	-0.012		1798362	28.7	94571	
$ 10 13C2 PFDA								
515.0 > 470.0	21.462	21.471	-0.009	1.000	616722	10.8	19730	

TestAmerica Sacramento

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_134.d

Injection Date: 14-Dec-2016 04:55:50 Instrument ID: A6

Lims ID: 320-24069-A-30-A Lab Sample ID: 320-24069-30

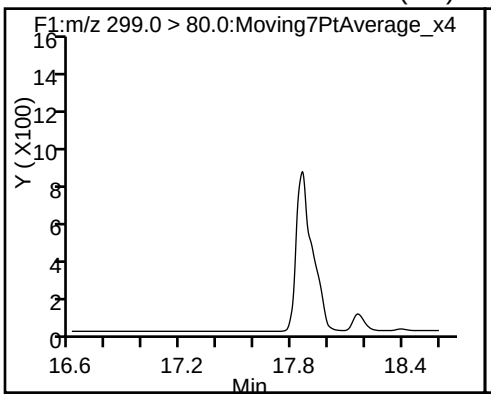
Client ID: WI-CV-3FB18-1216

Operator ID: CBW ALS Bottle#: 22 Worklist Smp#: 57

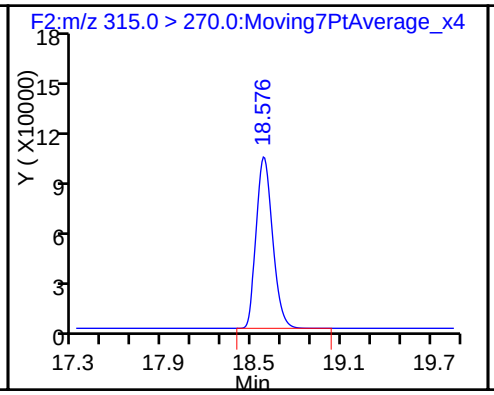
Injection Vol: 10.0 ul Dil. Factor: 1.0000

Method: 537__A6 Limit Group: LC 537 ICAL

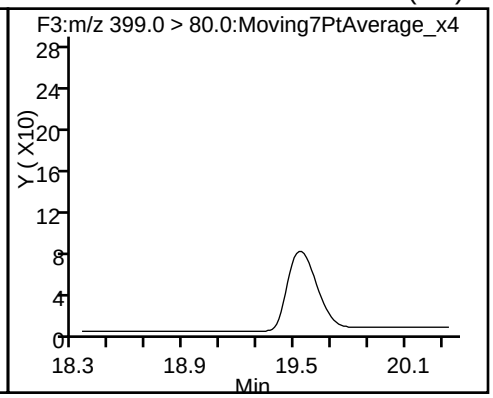
1 Perfluorobutanesulfonic acid (ND)



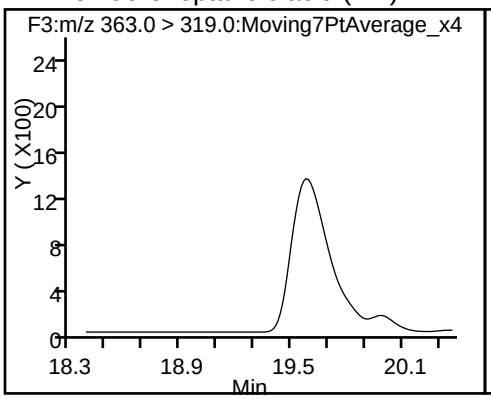
$ 2 13C2 PFHxA



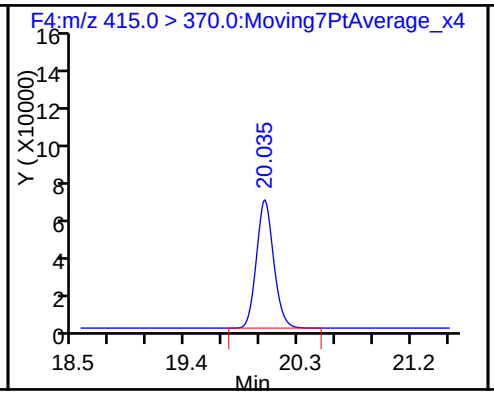
3 Perfluorohexanesulfonic acid (ND)



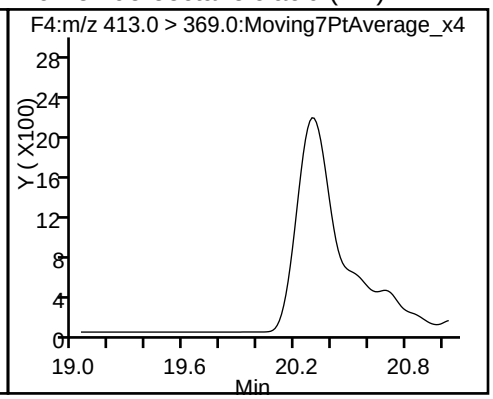
4 Perfluoroheptanoic acid (ND)



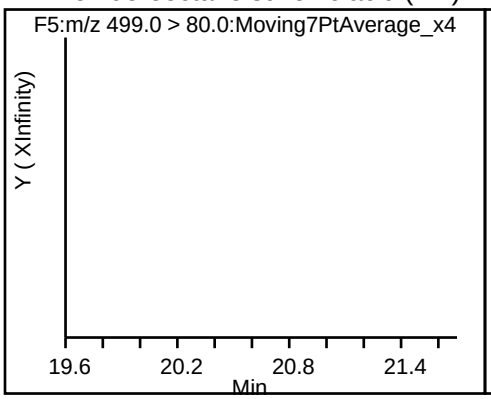
* 5 13C2-PFOA



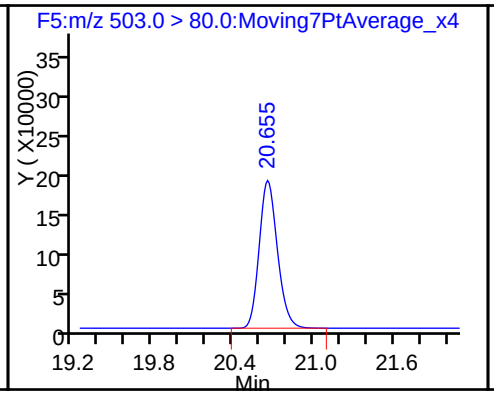
6 Perfluorooctanoic acid (ND)



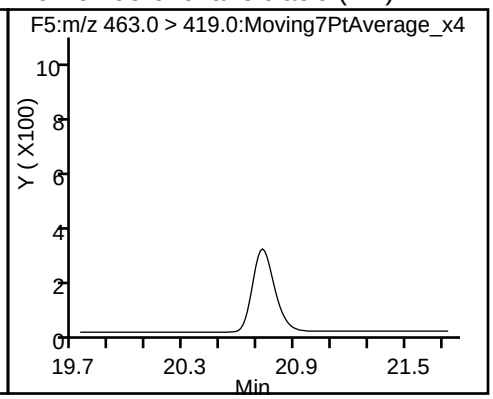
7 Perfluorooctane sulfonic acid (ND)



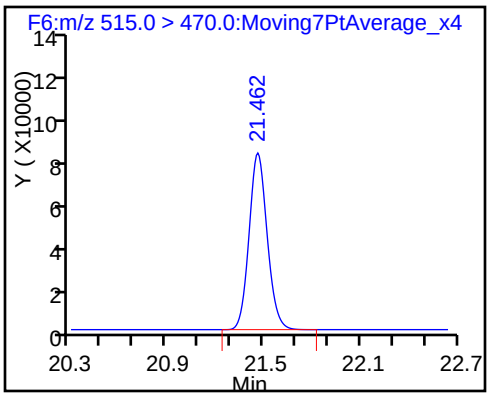
* 8 13C4 PFOS



9 Perfluorononanoic acid (ND)



$ 10 13C2 PFDA



TestAmerica Sacramento
Recovery Report

Data File:	\\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_134.d				
Lims ID:	320-24069-A-30-A				
Client ID:	WI-CV-3FB18-1216				
Sample Type:	Client				
Inject. Date:	14-Dec-2016 04:55:50	ALS Bottle#:	22	Worklist Smp#:	57
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Sample Info:	320-24069-a-30-a				
Misc. Info.:	Acquity BEH 1.7um, 3X150mm T=35*C				
Operator ID:	CBW	Instrument ID:	A6		
Method:	\\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\537__A6.m				
Limit Group:	LC 537 ICAL				
Last Update:	14-Dec-2016 10:53:05	Calib Date:	05-Dec-2016 19:54:00		
Integrator:	Picker				
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d				
Column 1 :	Acquity BEH C18 (2.10 mm)		Det: F1:MRM		
Process Host:	XAWRK017				
First Level Reviewer: barnettj		Date:	14-Dec-2016 10:23:47		

Compound	Amount Added	Amount Recovered	% Rec.
$ 2 13C2 PFHxA	10.0	10.2	102.34
$ 10 13C2 PFDA	10.0	10.8	108.15

FORM VI
LCMS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1 Analy Batch No.: 140688

SDG No.:

Instrument ID: A6 GC Column: Acquity ID: 2.1(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/05/2016 17:26 Calibration End Date: 12/05/2016 19:54 Calibration ID: 26888

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD 320-140688/2	05DEC2016A6A_004.d
Level 2	STD 320-140688/3	05DEC2016A6A_005.d
Level 3	STD 320-140688/4	05DEC2016A6A_006.d
Level 4	STD 320-140688/5	05DEC2016A6A_007.d
Level 5	STD 320-140688/6	05DEC2016A6A_008.d
Level 6	STD 320-140688/7	05DEC2016A6A_009.d

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Perfluorobutanesulfonic acid (PFBS)	0.7247 0.6563	0.6525	0.7178	0.7256	0.7321	Ave		0.7015				5.2		30.0			
Perfluorohexanesulfonic acid	0.8344 0.8930	0.7757	0.9290	0.9478	1.0082	Ave		0.8980				9.3		30.0			
Perfluoroheptanoic acid	1.4137 1.1078	1.1891	1.2161	1.1975	1.1665	Ave		1.2151				8.6		30.0			
Perfluorooctanoic acid (PFOA)	0.9720 1.0610	0.9049	1.0674	1.1235	1.1136	Ave		1.0404				8.2		30.0			
Perfluorooctanesulfonic acid (PFOS)	0.8855 1.0951	0.9020	1.0711	1.0966	1.2136	Ave		1.0440				12.1		30.0			
Perfluorononanoic acid	0.9735 1.1655	0.9961	1.1929	1.2321	1.2453	Ave		1.1342				10.5		30.0			
13C2 PFHxA	1.0366 1.2091	1.0515	1.1929	1.2298	1.2791	Ave		1.1665				8.5		30.0			
13C2 PFDA	0.8084 0.9456	0.7439	0.8674	0.9054	0.9868	Ave		0.8763				10.2		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
LCMS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1 Analy Batch No.: 140688

SDG No.:

Instrument ID: A6 GC Column: Acquity ID: 2.1(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/05/2016 17:26 Calibration End Date: 12/05/2016 19:54 Calibration ID: 26888

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD 320-140688/2	05DEC2016A6A_004.d
Level 2	STD 320-140688/3	05DEC2016A6A_005.d
Level 3	STD 320-140688/4	05DEC2016A6A_006.d
Level 4	STD 320-140688/5	05DEC2016A6A_007.d
Level 5	STD 320-140688/6	05DEC2016A6A_008.d
Level 6	STD 320-140688/7	05DEC2016A6A_009.d

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Perfluorobutanesulfonic acid (PFBS)	PFOS	Ave	437563 7753569	1227165	2489398	4401661	6630132	8.76 178	22.9	45.1	90.9	135
Perfluorohexanesulfonic acid	PFOS	Ave	169827 3556638	491809	1086082	1938237	3077974	2.95 60.1	7.72	15.2	30.6	45.4
Perfluoroheptanoic acid	13PFOA	Ave	126557 2032288	324913	658044	1121930	1727957	0.994 20.2	2.60	5.12	10.3	15.3
Perfluorooctanoic acid (PFOA)	13PFOA	Ave	173304 3876381	492431	1150281	2096404	3285195	1.98 40.3	5.17	10.2	20.5	30.4
Perfluorooctanesulfonic acid (PFOS)	PFOS	Ave	238662 5775285	757269	1658139	2969550	4906017	3.91 79.6	10.2	20.1	40.6	60.1
Perfluorononanoic acid	13PFOA	Ave	168128 4124664	525061	1245341	2227031	3558831	1.92 39.0	5.01	9.87	19.9	29.5
13C2 PFHxA	13PFOA	Ave	933751 1095977	1106485	1261522	1117585	1240474	10.0 10.0	10.0	10.0	10.0	10.0
13C2 PFDA	13PFOA	Ave	728204 857144	782778	917302	822787	957025	10.0 10.0	10.0	10.0	10.0	10.0

Curve Type Legend:
Ave = Average ISTD

FORM VI
LCMS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1 Analy Batch No.: 140688

SDG No.:

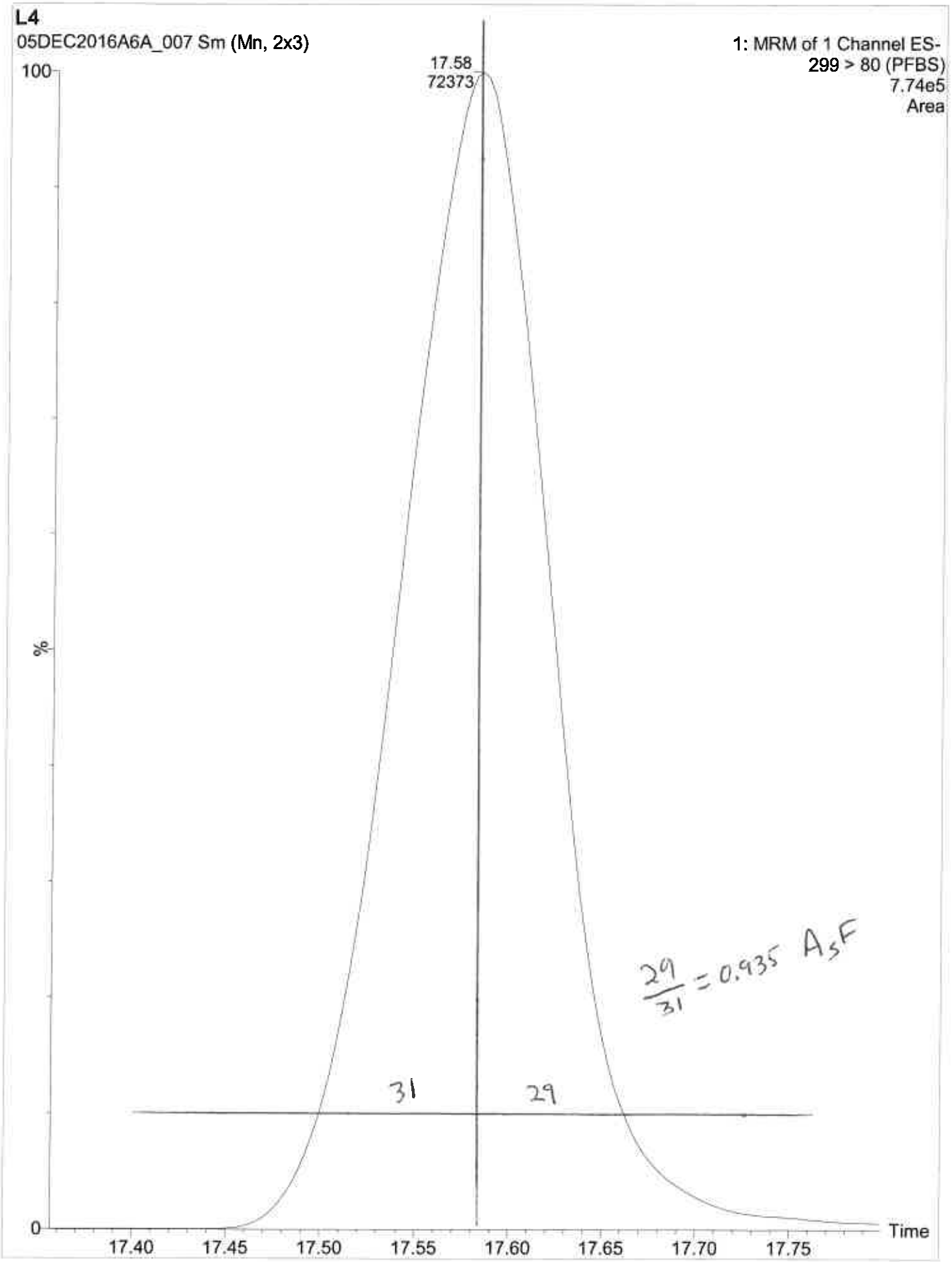
Instrument ID: A6 GC Column: Acquity ID: 2.1(mm) Heated Purge: (Y/N) N

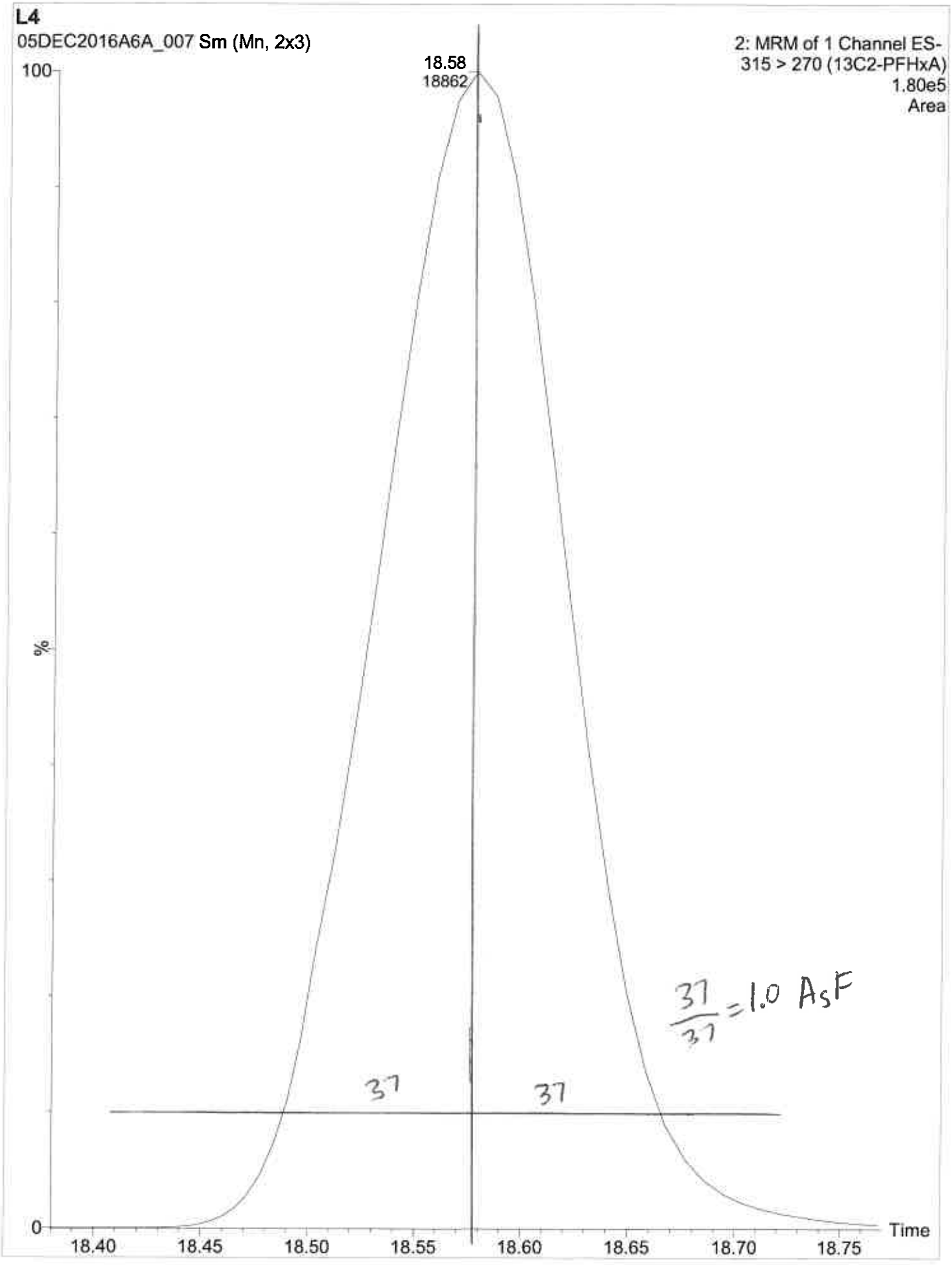
Calibration Start Date: 12/05/2016 17:26 Calibration End Date: 12/05/2016 19:54 Calibration ID: 26888

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD 320-140688/2	05DEC2016A6A_004.d
Level 2	STD 320-140688/3	05DEC2016A6A_005.d
Level 3	STD 320-140688/4	05DEC2016A6A_006.d
Level 4	STD 320-140688/5	05DEC2016A6A_007.d
Level 5	STD 320-140688/6	05DEC2016A6A_008.d
Level 6	STD 320-140688/7	05DEC2016A6A_009.d

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
Perfluorobutanesulfonic acid (PFBS)	3.3	-7.0	2.3	3.4	4.4	-6.4	50	50	50	50	50	50
Perfluorohexanesulfonic acid	-7.1	-13.6	3.4	5.5	12.3	-0.6	50	50	50	50	50	50
Perfluoroheptanoic acid	16.3	-2.1	0.1	-1.5	-4.0	-8.8	50	50	50	50	50	50
Perfluorooctanoic acid (PFOA)	-6.6	-13.0	2.6	8.0	7.0	2.0	50	50	50	50	50	50
Perfluorooctanesulfonic acid (PFOS)	-15.2	-13.6	2.6	5.0	16.2	4.9	50	50	50	50	50	50
Perfluorononanoic acid	-14.2	-12.2	5.2	8.6	9.8	2.8	50	50	50	50	50	50
13C2 PFHxA	-11.1	-9.9	2.3	5.4	9.7	3.7	30	30	30	30	30	30
13C2 PFDA	-7.7	-15.1	-1.0	3.3	12.6	7.9	30	30	30	30	30	30


L4
05DEC2016A6A_007 Sm (Mn, 2x3)
1: MRM of 1 Channel ES-
299 > 80 (PFBS)
7.74e5
Area
17.58
72373
100
%
0
31
29
$\frac{29}{31} = 0.935$ A$_5$F
17.40
17.45
17.50
17.55
17.60
17.65
17.70
17.75
Time


L4
05DEC2016A6A_007 Sm (Mn, 2x3)
2: MRM of 1 Channel ES-
315 > 270 (13C2-PFHxA)
1.80e5
Area
18.58
18862
100
%
0
18.40
18.45
18.50
18.55
18.60
18.65
18.70
18.75
Time
37
37
37/37 = 1.0 AsF

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_004.d
Lims ID: STD L1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 05-Dec-2016 17:26:03 ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: STD L1 L1
Misc. Info.: Acquity BEH 1.7um, 3X150mm T=35*C
Operator ID: CBW Instrument ID: A6
Sublist: chrom-537__A6*sub3

Method: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\537__A6.m
Limit Group: LC 537 ICAL
Last Update: 06-Dec-2016 16:35:34 Calib Date: 05-Dec-2016 19:54:00
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d

Column 1 : Acquity BEH C18 (2.10 mm) Det: F1:MRM
Process Host: XAWRK024

First Level Reviewer: barnettj Date: 06-Dec-2016 10:00:02

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	S/N	Flags
1 Perfluorobutanesulfonic acid								
299.0 > 80.0	17.576	17.581	-0.005	1.000	437563	9.05	466	
$ 2 13C2 PFHxA								
315.0 > 270.0	18.567	18.567	0.0	1.000	933751	8.89	30467	
3 Perfluorohexanesulfonic acid								
399.0 > 80.0	19.332	19.342	-0.010	1.000	169827	2.74	4140	
4 Perfluoroheptanoic acid								M
363.0 > 319.0	19.368	19.378	-0.010	1.000	126557	1.16	45.1	M
* 5 13C2-PFOA								
415.0 > 370.0	20.047	20.047	0.0		900764	10.0	23392	
6 Perfluorooctanoic acid								M
413.0 > 369.0	20.047	20.047	0.0	1.000	173304	1.85	35.0	M
7 Perfluorooctane sulfonic acid								
499.0 > 80.0	20.619	20.619	0.0	1.000	238662	3.32	2941	
* 8 13C4 PFOS								
503.0 > 80.0	20.667	20.669	-0.002		1976615	28.7	40886	
9 Perfluorononanoic acid								
463.0 > 419.0	20.738	20.748	-0.010	1.000	168128	1.65	6043	
$ 10 13C2 PFDA								
515.0 > 470.0	21.471	21.474	-0.003	1.000	728204	9.23	22953	

QC Flag Legend

Review Flags

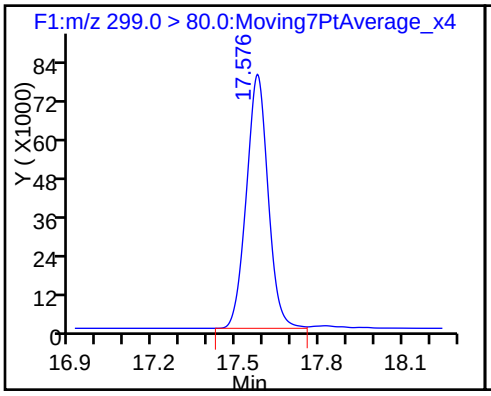
M - Manually Integrated

Reagents:

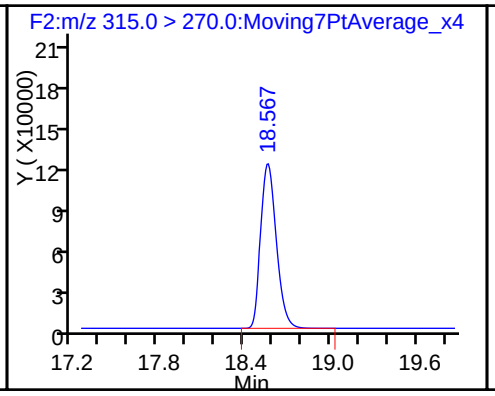
LC537-L1_00015 Amount Added: 1.00 Units: mL

Data File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_004.d
Injection Date: 05-Dec-2016 17:26:03 Instrument ID: A6
Lims ID: STD L1
Client ID:
Operator ID: CBW ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 537__A6 Limit Group: LC 537 ICAL

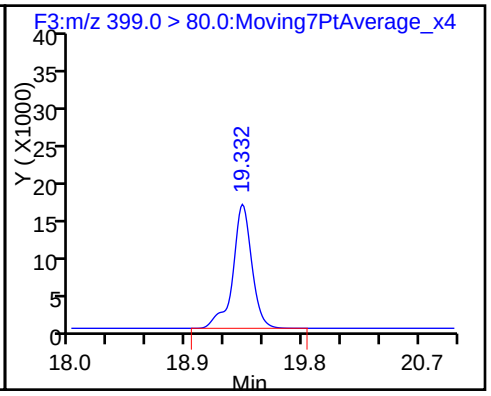
1 Perfluorobutanesulfonic acid



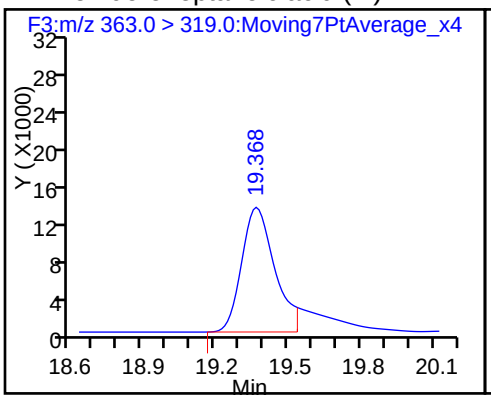
$ 2 13C2 PFHxA



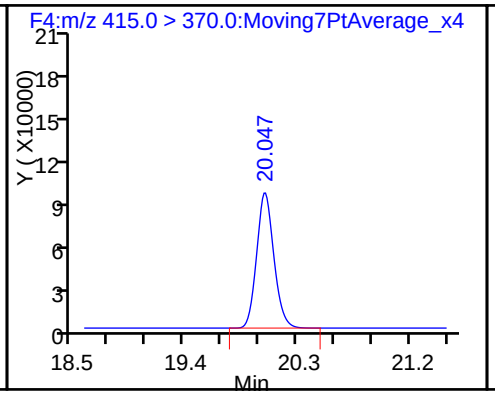
3 Perfluorohexanesulfonic acid



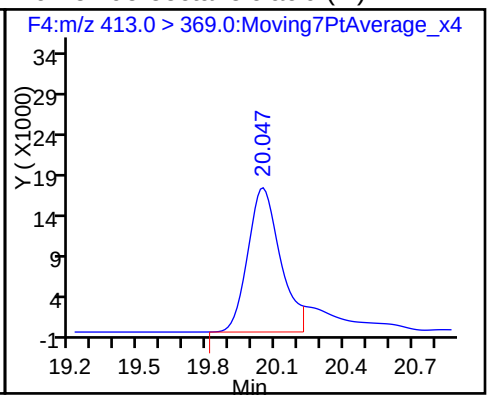
4 Perfluoroheptanoic acid (M)



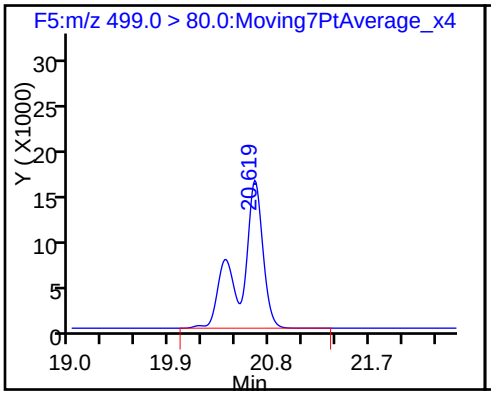
* 5 13C2-PFOA



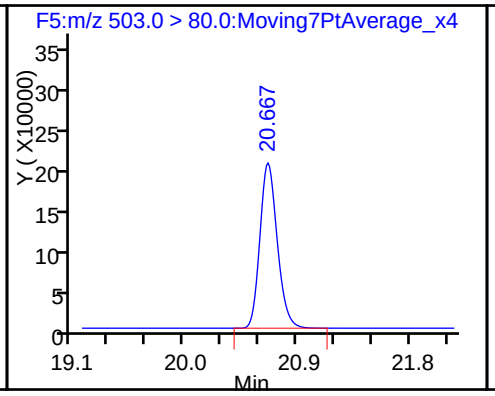
6 Perfluorooctanoic acid (M)



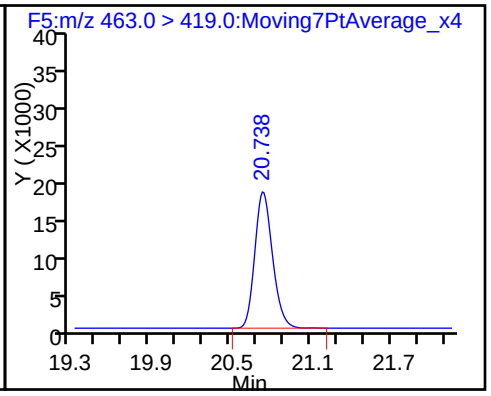
7 Perfluorooctane sulfonic acid



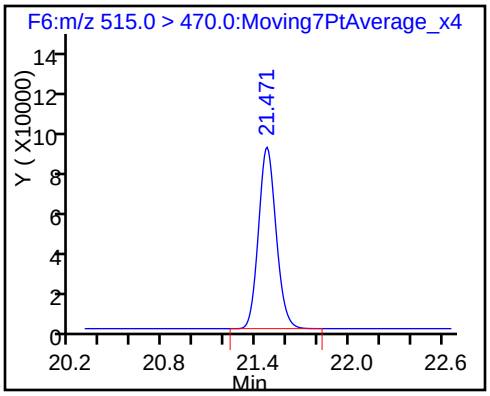
* 8 13C4 PFOS



9 Perfluorononanoic acid



$ 10 13C2 PFDA



Manual Integration/User Assign Peak Report

TestAmerica Sacramento

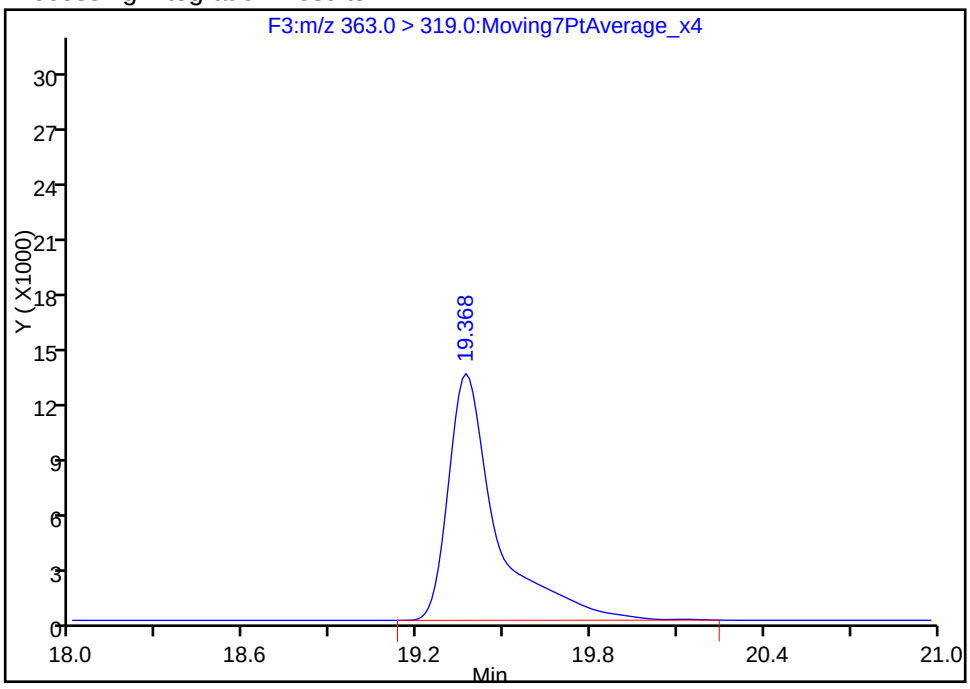
Data File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_004.d
Injection Date: 05-Dec-2016 17:26:03 Instrument ID: A6
Lims ID: STD L1
Client ID:
Operator ID: CBW ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 537__A6 Limit Group: LC 537 ICAL
Column: Acquity BEH C18 (2.10 mm) Detector F3:MRM

4 Perfluoroheptanoic acid, CAS: 375-85-9

Signal: 1

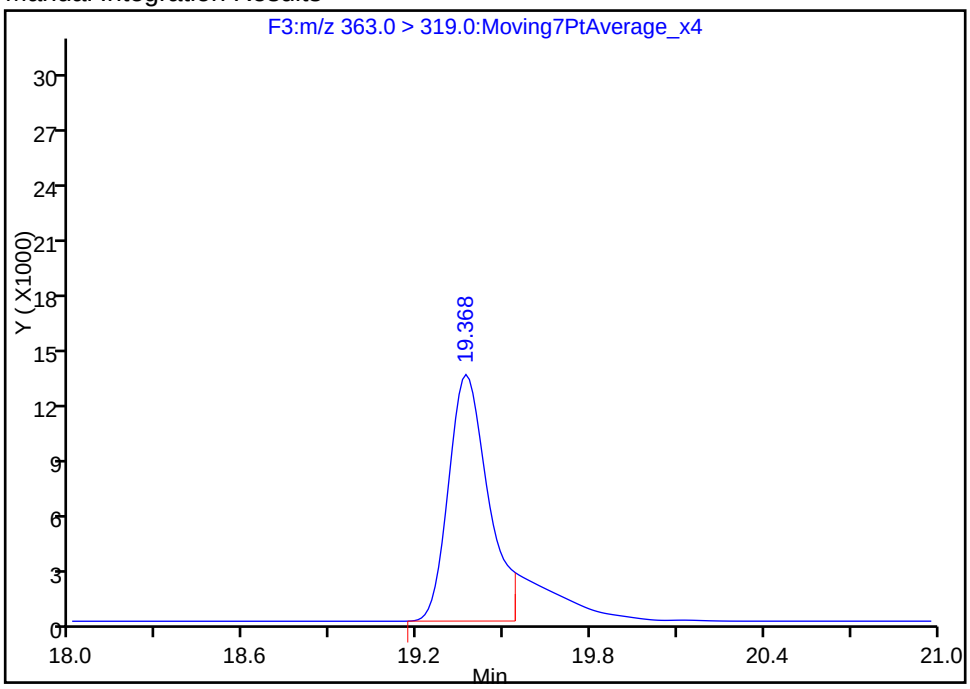
Processing Integration Results

RT: 19.37
Area: 155591
Amount: 1.476072
Amount Units: ng/ml



Manual Integration Results

RT: 19.37
Area: 126557
Amount: 1.156251
Amount Units: ng/ml



Reviewer: barnettj, 06-Dec-2016 10:00:02
Audit Action: Manually Integrated Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

TestAmerica Sacramento

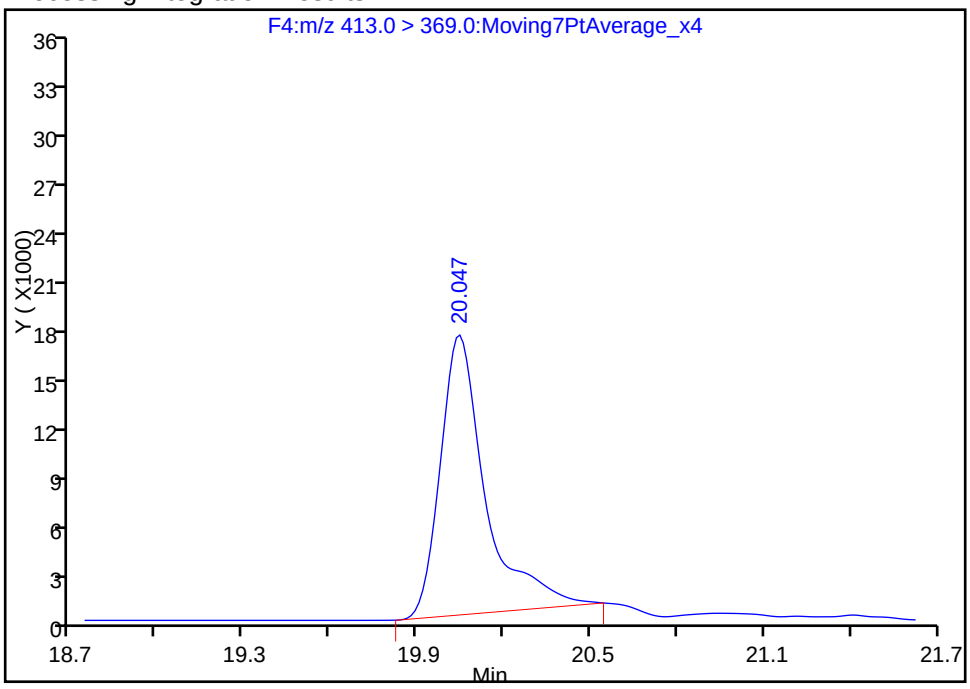
Data File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_004.d
Injection Date: 05-Dec-2016 17:26:03 Instrument ID: A6
Lims ID: STD L1
Client ID:
Operator ID: CBW ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 537__A6 Limit Group: LC 537 ICAL
Column: Acquity BEH C18 (2.10 mm) Detector F4:MRM

6 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

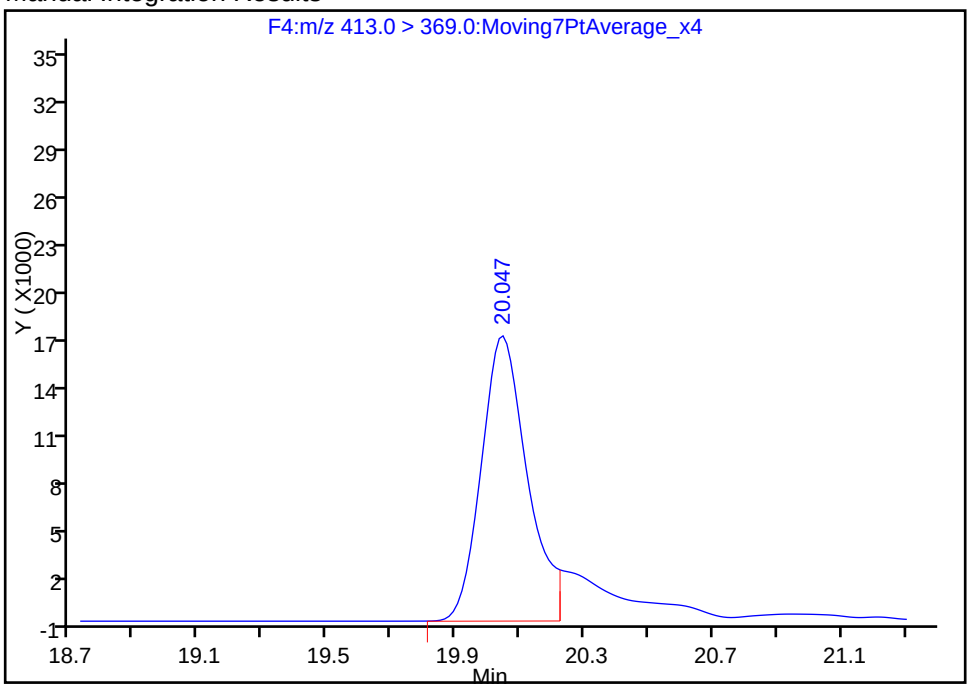
Processing Integration Results

RT: 20.05
Area: 186490
Amount: 1.959453
Amount Units: ng/ml



Manual Integration Results

RT: 20.05
Area: 173304
Amount: 1.849212
Amount Units: ng/ml



Reviewer: barnettj, 06-Dec-2016 10:00:02
Audit Action: Manually Integrated Audit Reason: Split Peak

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_005.d
Lims ID: STD L2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 05-Dec-2016 17:55:38 ALS Bottle#: 2 Worklist Smp#: 3
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: STD L2 L2
Misc. Info.: Acquity BEH 1.7um, 3X150mm T=35*C
Operator ID: CBW Instrument ID: A6
Sublist: chrom-537__A6*sub3

Method: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\537__A6.m
Limit Group: LC 537 ICAL
Last Update: 06-Dec-2016 16:35:35 Calib Date: 05-Dec-2016 19:54:00
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d

Column 1 : Acquity BEH C18 (2.10 mm) Det: F1:MRM
Process Host: XAWRK024

First Level Reviewer: barnettj Date: 06-Dec-2016 09:58:24

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	S/N	Flags
1 Perfluorobutanesulfonic acid								
299.0 > 80.0	17.582	17.581	0.001	1.000	1227165	21.3	5055	
$ 2 13C2 PFHxA								
315.0 > 270.0	18.567	18.567	0.0	1.000	1106485	9.01	35678	
3 Perfluorohexanesulfonic acid								
399.0 > 80.0	19.344	19.342	0.002	1.000	491809	6.67	11495	
4 Perfluoroheptanoic acid								M
363.0 > 319.0	19.380	19.378	0.002	1.000	324913	2.54	155	M
* 5 13C2-PFOA								
415.0 > 370.0	20.047	20.047	0.0		1052273	10.0	27645	
6 Perfluorooctanoic acid								M
413.0 > 369.0	20.047	20.047	0.0	1.000	492431	4.50	100	M
7 Perfluorooctane sulfonic acid								
499.0 > 80.0	20.619	20.619	0.0	1.000	757269	8.83	8449	
* 8 13C4 PFOS								
503.0 > 80.0	20.667	20.669	-0.002		2356620	28.7	30757	
9 Perfluorononanoic acid								
463.0 > 419.0	20.750	20.748	0.002	1.000	525061	4.40	13911	
$ 10 13C2 PFDA								
515.0 > 470.0	21.480	21.474	0.006	1.000	782778	8.49	24678	

QC Flag Legend

Review Flags

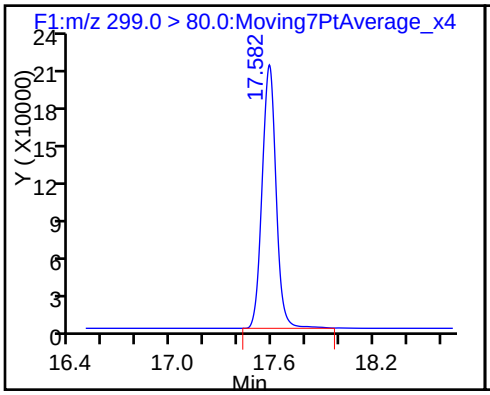
M - Manually Integrated

Reagents:

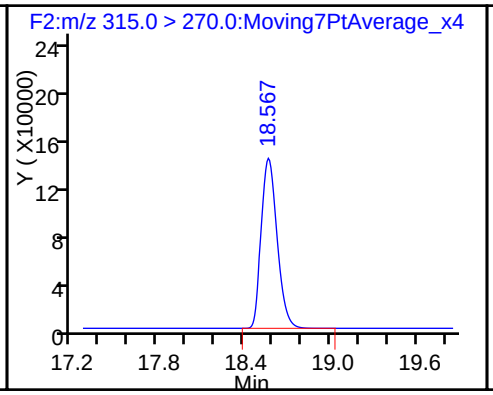
LC537-L2_00014 Amount Added: 1.00 Units: mL

Data File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_005.d
Injection Date: 05-Dec-2016 17:55:38 Instrument ID: A6
Lims ID: STD L2
Client ID:
Operator ID: CBW ALS Bottle#: 2 Worklist Smp#: 3
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 537__A6 Limit Group: LC 537 ICAL

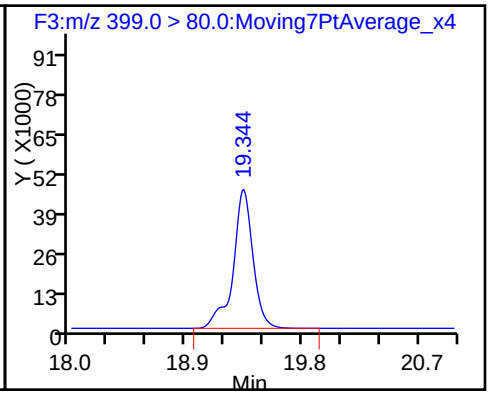
1 Perfluorobutanesulfonic acid



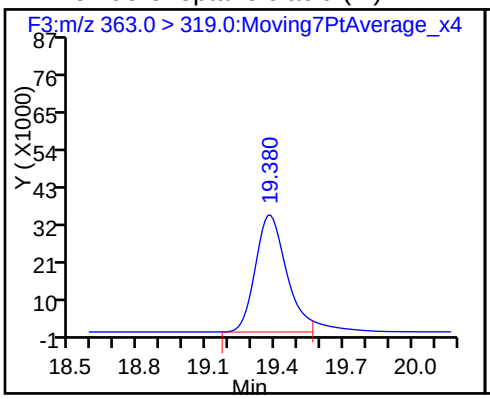
$ 2 13C2 PFHxA



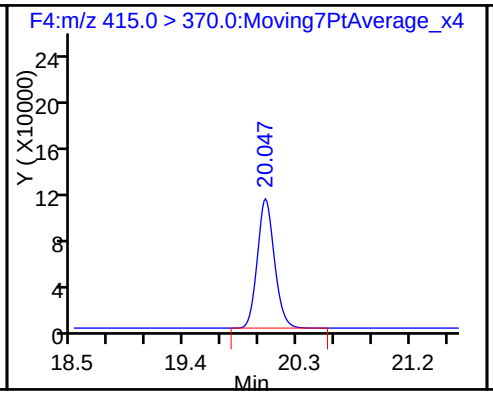
3 Perfluorohexanesulfonic acid



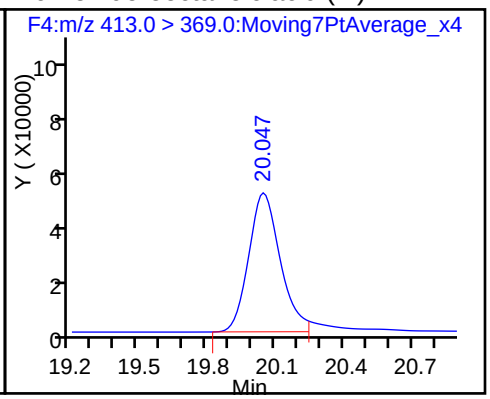
4 Perfluoroheptanoic acid (M)



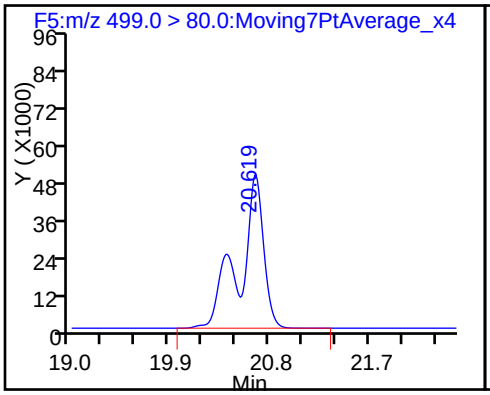
* 5 13C2-PFOA



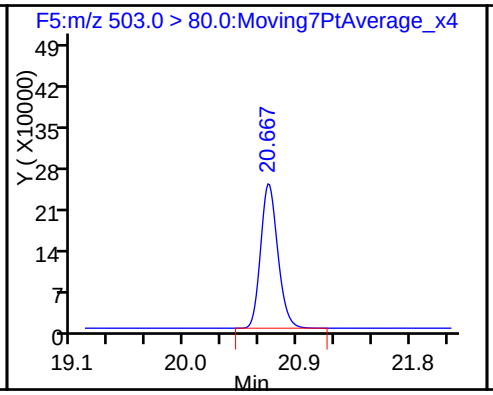
6 Perfluorooctanoic acid (M)



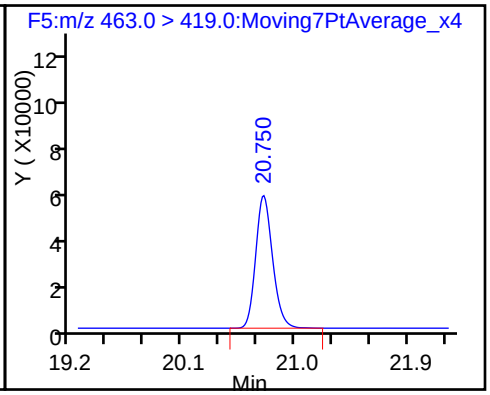
7 Perfluorooctane sulfonic acid



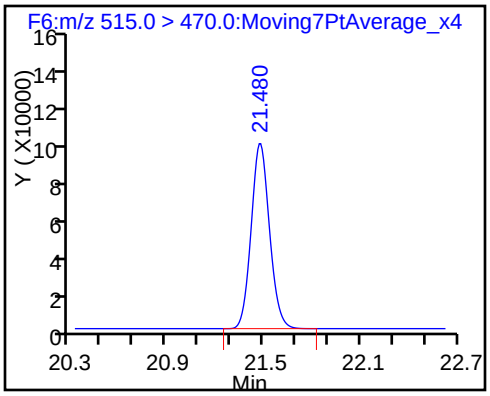
* 8 13C4 PFOS



9 Perfluorononanoic acid



$ 10 13C2 PFDA



Manual Integration/User Assign Peak Report

TestAmerica Sacramento

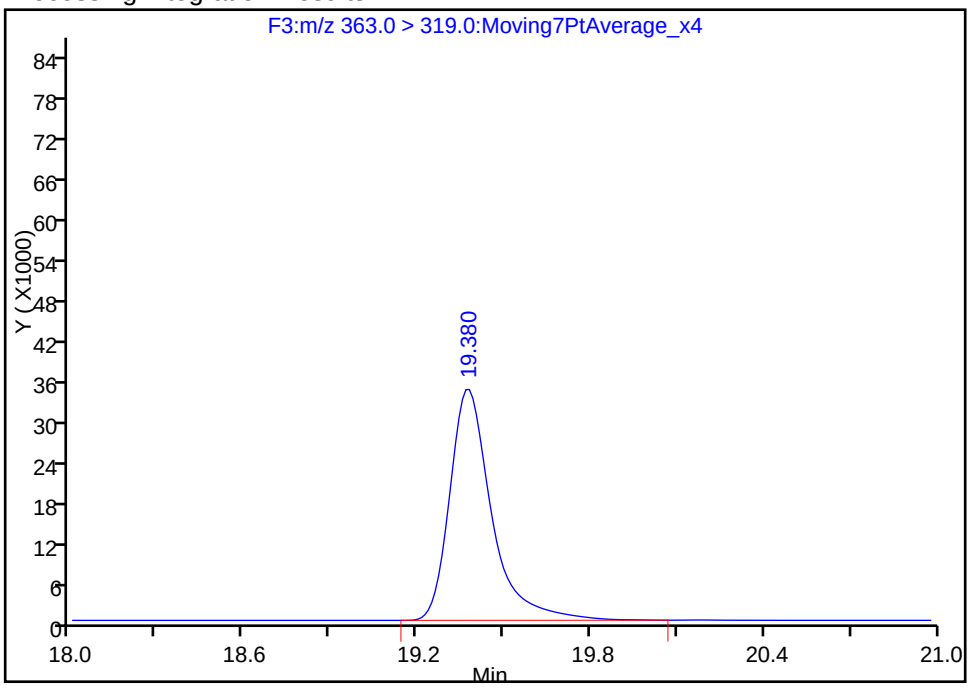
Data File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_005.d
Injection Date: 05-Dec-2016 17:55:38 Instrument ID: A6
Lims ID: STD L2
Client ID:
Operator ID: CBW ALS Bottle#: 2 Worklist Smp#: 3
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 537__A6 Limit Group: LC 537 ICAL
Column: Acquity BEH C18 (2.10 mm) Detector F3:MRM

4 Perfluoroheptanoic acid, CAS: 375-85-9

Signal: 1

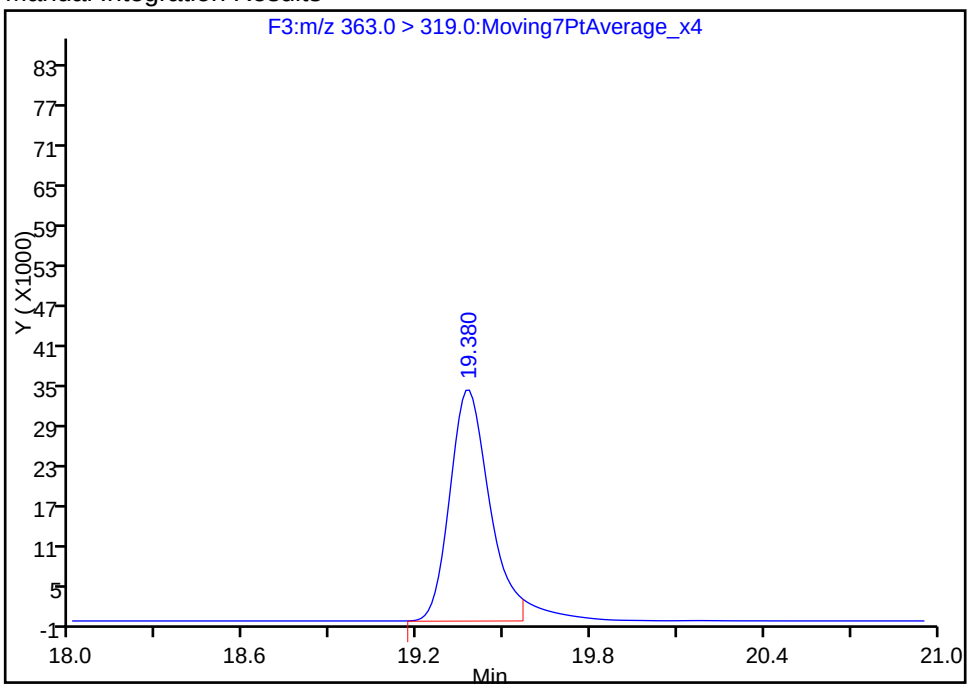
Processing Integration Results

RT: 19.38
Area: 344811
Amount: 2.670013
Amount Units: ng/ml



Manual Integration Results

RT: 19.38
Area: 324913
Amount: 2.541065
Amount Units: ng/ml



Reviewer: barnettj, 06-Dec-2016 10:03:30
Audit Action: Manually Integrated Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

TestAmerica Sacramento

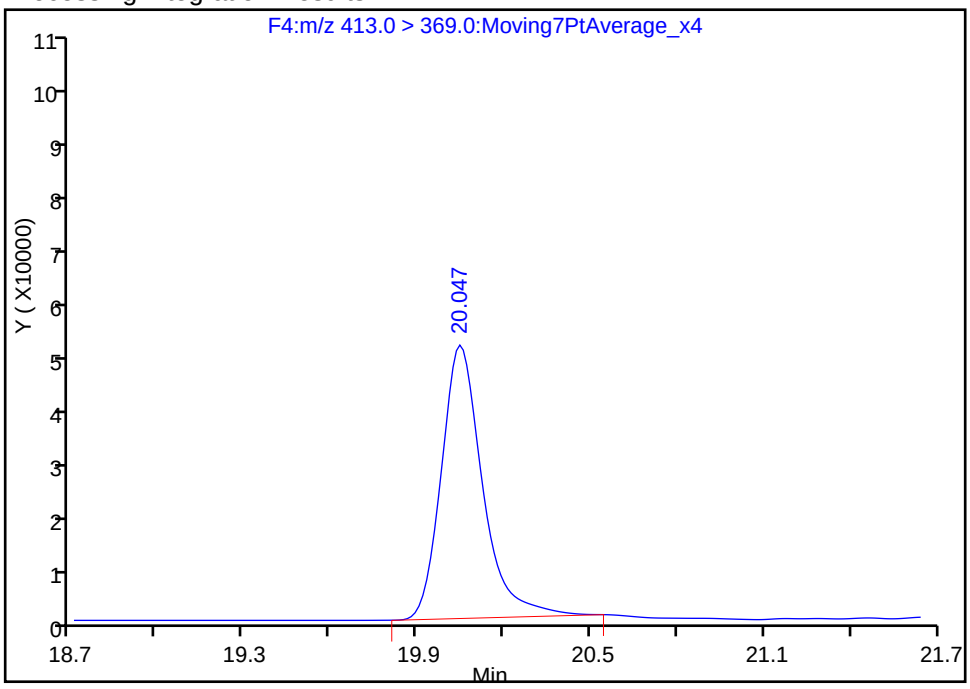
Data File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_005.d
Injection Date: 05-Dec-2016 17:55:38 Instrument ID: A6
Lims ID: STD L2
Client ID:
Operator ID: CBW ALS Bottle#: 2 Worklist Smp#: 3
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 537__A6 Limit Group: LC 537 ICAL
Column: Acquity BEH C18 (2.10 mm) Detector F4:MRM

6 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

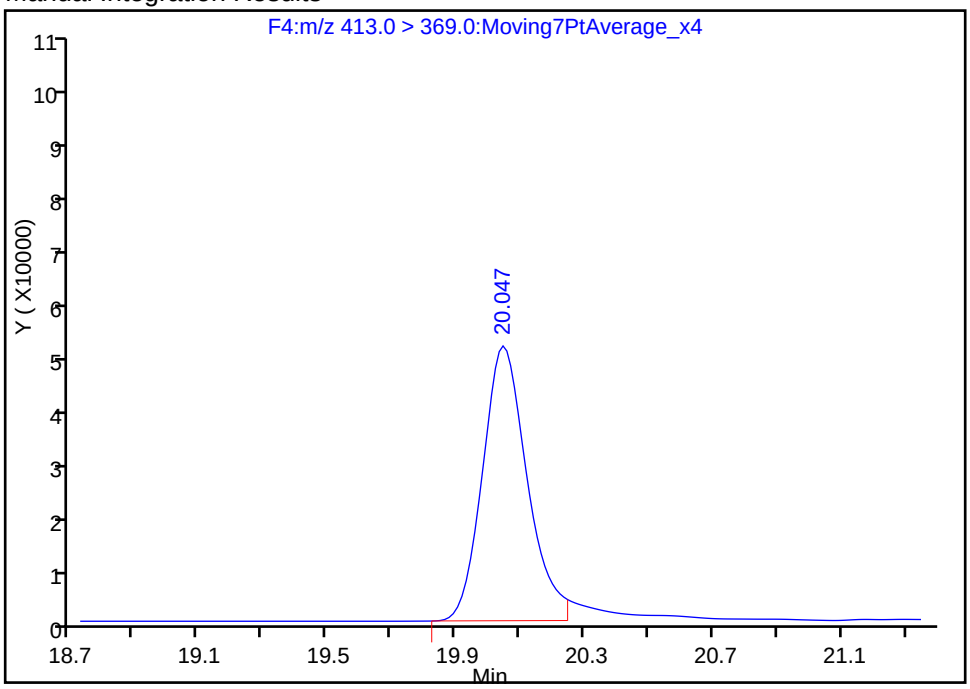
Processing Integration Results

RT: 20.05
Area: 504990
Amount: 4.595586
Amount Units: ng/ml



Manual Integration Results

RT: 20.05
Area: 492431
Amount: 4.497863
Amount Units: ng/ml



Reviewer: barnettj, 06-Dec-2016 10:03:30
Audit Action: Manually Integrated Audit Reason: Split Peak

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_006.d
Lims ID: STD L3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 05-Dec-2016 18:25:13 ALS Bottle#: 3 Worklist Smp#: 4
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: STD L3 L3
Misc. Info.: Acquity BEH 1.7um, 3X150mm T=35*C
Operator ID: CBW Instrument ID: A6
Sublist: chrom-537__A6*sub3

Method: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\537__A6.m
Limit Group: LC 537 ICAL
Last Update: 06-Dec-2016 16:35:36 Calib Date: 05-Dec-2016 19:54:00
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d

Column 1 : Acquity BEH C18 (2.10 mm) Det: F1:MRM
Process Host: XAWRK024

First Level Reviewer: barnettj Date: 06-Dec-2016 09:58:05

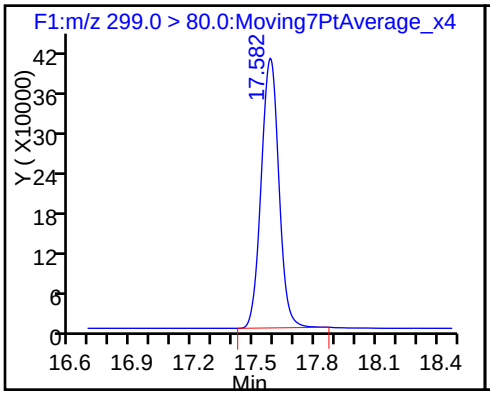
Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	S/N	Flags
1 Perfluorobutanesulfonic acid								
299.0 > 80.0	17.582	17.581	0.001	1.000	2489398	46.2	1804	
$ 2 13C2 PFHxA								
315.0 > 270.0	18.567	18.567	0.0	1.000	1261522	10.2	40506	
3 Perfluorohexanesulfonic acid								
399.0 > 80.0	19.344	19.342	0.002	1.000	1086082	15.7	25400	
4 Perfluoroheptanoic acid								
363.0 > 319.0	19.380	19.378	0.002	1.000	658044	5.12	4774	
* 5 13C2-PFOA								
415.0 > 370.0	20.047	20.047	0.0		1057506	10.0	27287	
6 Perfluorooctanoic acid								
413.0 > 369.0	20.047	20.047	0.0	1.000	1150281	10.5	429	
7 Perfluorooctane sulfonic acid								
499.0 > 80.0	20.619	20.619	0.0	1.000	1658139	20.7	19019	
* 8 13C4 PFOS								
503.0 > 80.0	20.667	20.669	-0.002		2205243	28.7	57142	
9 Perfluorononanoic acid								
463.0 > 419.0	20.750	20.748	0.002	1.000	1245341	10.4	13210	
$ 10 13C2 PFDA								
515.0 > 470.0	21.471	21.474	-0.003	1.000	917302	9.90	28753	

Reagents:

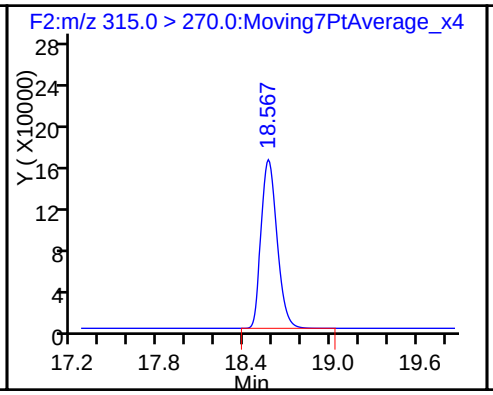
LC537-L3_00016 Amount Added: 1.00 Units: mL

Data File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_006.d
Injection Date: 05-Dec-2016 18:25:13 Instrument ID: A6
Lims ID: STD L3
Client ID:
Operator ID: CBW ALS Bottle#: 3 Worklist Smp#: 4
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 537__A6 Limit Group: LC 537 ICAL

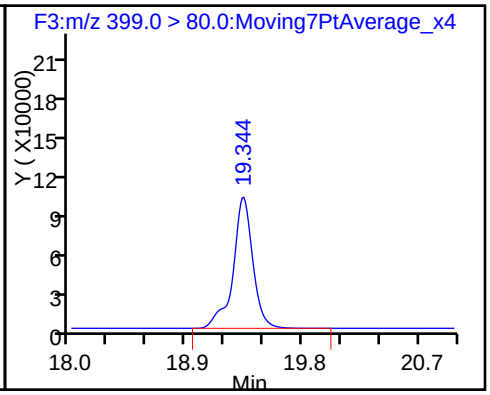
1 Perfluorobutanesulfonic acid



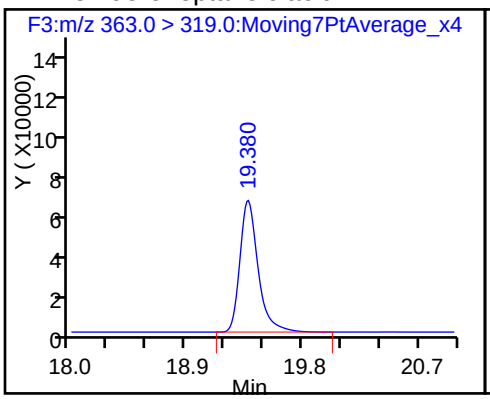
$ 2 13C2 PFHxA



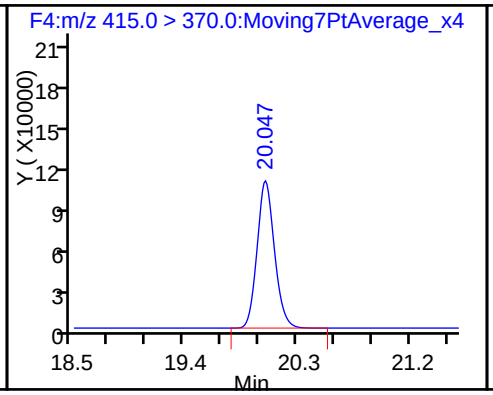
3 Perfluorohexanesulfonic acid



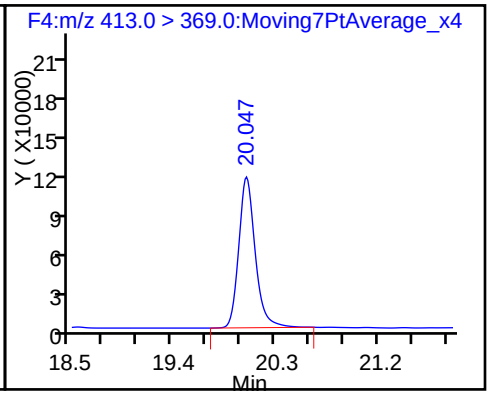
4 Perfluoroheptanoic acid



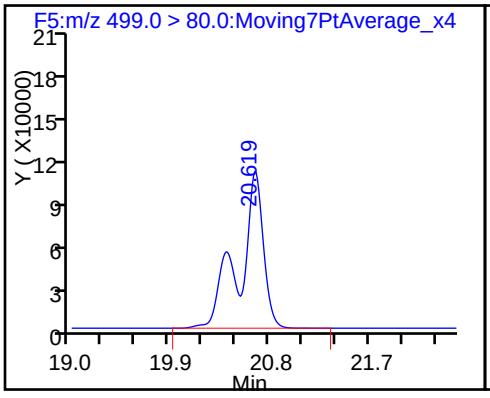
* 5 13C2-PFOA



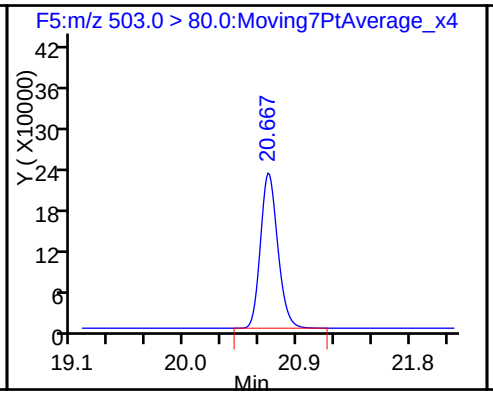
6 Perfluorooctanoic acid



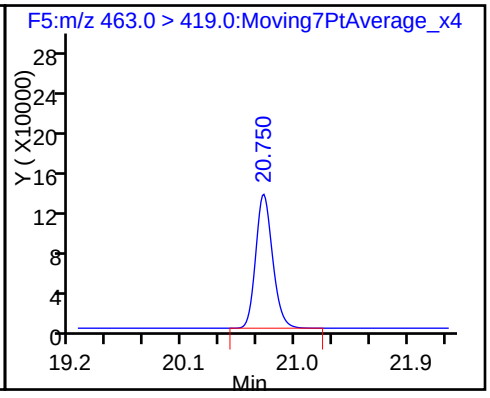
7 Perfluorooctane sulfonic acid



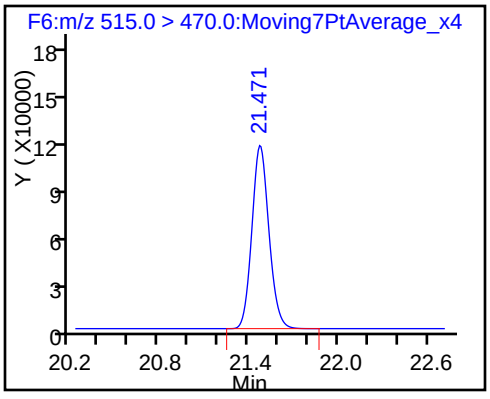
* 8 13C4 PFOS



9 Perfluorononanoic acid



$ 10 13C2 PFDA



TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_007.d
Lims ID: STD L4
Client ID:
Sample Type: ICISAV Calib Level: 4
Inject. Date: 05-Dec-2016 18:54:48 ALS Bottle#: 4 Worklist Smp#: 5
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: STD L4 L4
Misc. Info.: Acquity BEH 1.7um, 3X150mm T=35*C
Operator ID: CBW Instrument ID: A6
Sublist: chrom-537__A6*sub3

Method: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\537__A6.m
Limit Group: LC 537 ICAL
Last Update: 06-Dec-2016 16:35:37 Calib Date: 05-Dec-2016 19:54:00
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d

Column 1 : Acquity BEH C18 (2.10 mm) Det: F1:MRM
Process Host: XAWRK024

First Level Reviewer: barnettj Date: 06-Dec-2016 13:43:03

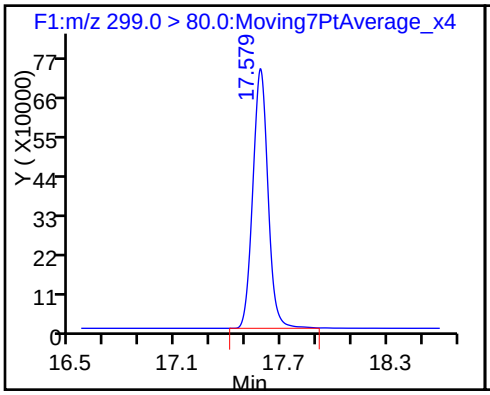
Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	S/N	Flags
1 Perfluorobutanesulfonic acid								
299.0 > 80.0	17.579	17.581	-0.002	1.000	4401661	94.0	2768	
$ 2 13C2 PFHxA								
315.0 > 270.0	18.567	18.567	0.0	1.000	1117585	10.5	28676	
3 Perfluorohexanesulfonic acid								
399.0 > 80.0	19.344	19.342	0.002	1.000	1938237	32.3	25196	
4 Perfluoroheptanoic acid								
363.0 > 319.0	19.380	19.378	0.002	1.000	1121930	10.2	12796	
* 5 13C2-PFOA								
415.0 > 370.0	20.047	20.047	0.0		908727	10.0	23744	
6 Perfluorooctanoic acid								
413.0 > 369.0	20.047	20.047	0.0	1.000	2096404	22.2	516	
7 Perfluorooctane sulfonic acid								
499.0 > 80.0	20.619	20.619	0.0	1.000	2969550	42.6	9704	
* 8 13C4 PFOS								
503.0 > 80.0	20.667	20.669	-0.002		1914415	28.7	28032	
9 Perfluorononanoic acid								
463.0 > 419.0	20.750	20.748	0.002	1.000	2227031	21.6	23494	
$ 10 13C2 PFDA								
515.0 > 470.0	21.471	21.474	-0.003	1.000	822787	10.3	25796	

Reagents:

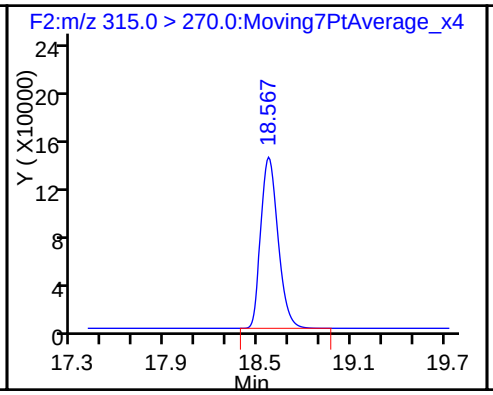
LC537-L4_00015 Amount Added: 1.00 Units: mL

Data File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_007.d
Injection Date: 05-Dec-2016 18:54:48 Instrument ID: A6
Lims ID: STD L4
Client ID:
Operator ID: CBW ALS Bottle#: 4 Worklist Smp#: 5
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 537__A6 Limit Group: LC 537 ICAL

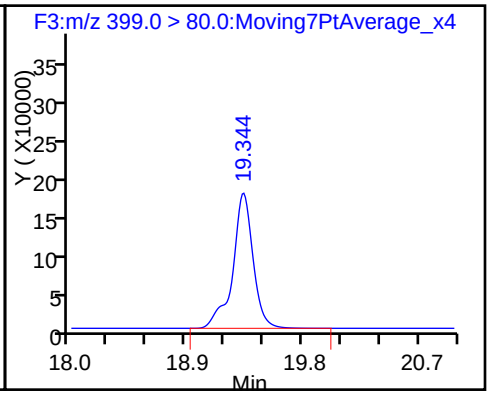
1 Perfluorobutanesulfonic acid



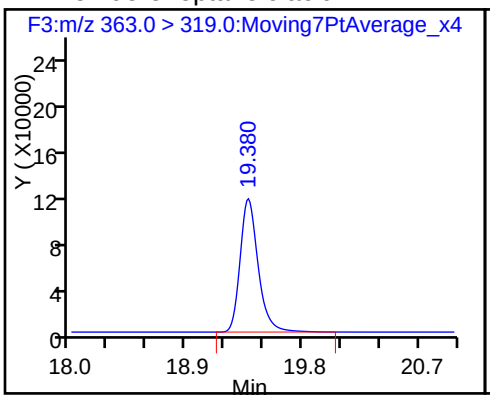
$ 2 13C2 PFHxA



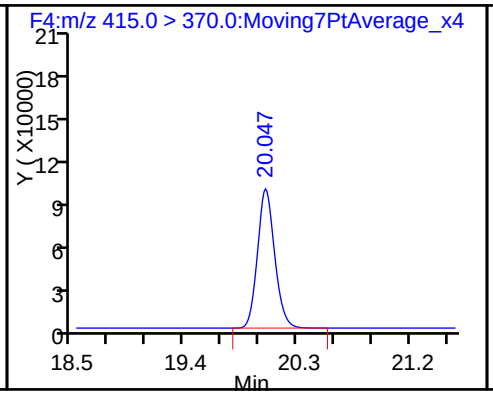
3 Perfluorohexanesulfonic acid



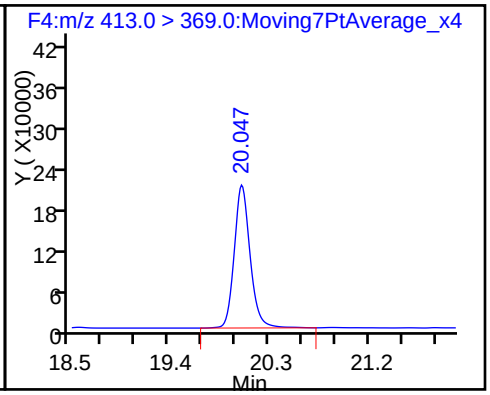
4 Perfluoroheptanoic acid



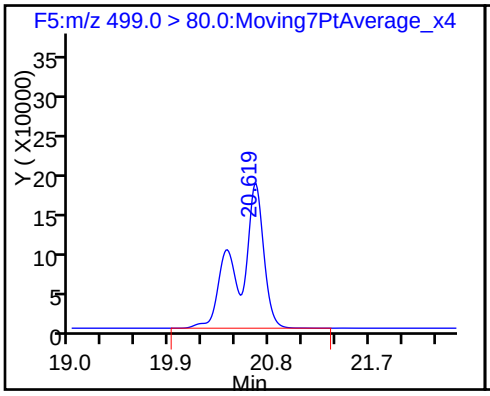
* 5 13C2-PFOA



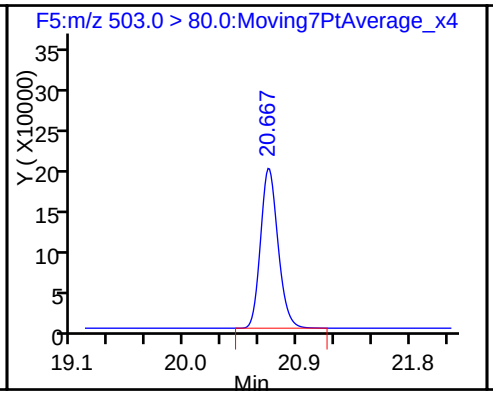
6 Perfluorooctanoic acid



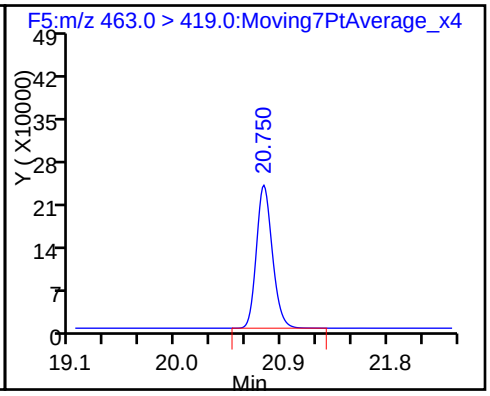
7 Perfluorooctane sulfonic acid



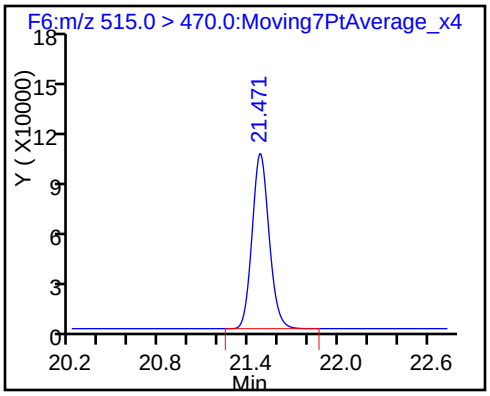
* 8 13C4 PFOS



9 Perfluorononanoic acid



$ 10 13C2 PFDA



TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_008.d
Lims ID: STD L5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 05-Dec-2016 19:24:23 ALS Bottle#: 5 Worklist Smp#: 6
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: STD L5 L5
Misc. Info.: Acquity BEH 1.7um, 3X150mm T=35*C
Operator ID: CBW Instrument ID: A6
Sublist: chrom-537__A6*sub3

Method: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\537__A6.m
Limit Group: LC 537 ICAL
Last Update: 06-Dec-2016 16:35:38 Calib Date: 05-Dec-2016 19:54:00
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d

Column 1 : Acquity BEH C18 (2.10 mm) Det: F1:MRM
Process Host: XAWRK024

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	S/N	Flags
1 Perfluorobutanesulfonic acid								
299.0 > 80.0	17.582	17.581	0.001	1.000	6630132	140.5	3208	
$ 2 13C2 PFHxA								
315.0 > 270.0	18.567	18.567	0.0	1.000	1240474	11.0	39454	
3 Perfluorohexanesulfonic acid								
399.0 > 80.0	19.344	19.342	0.002	1.000	3077974	51.0	14553	
4 Perfluoroheptanoic acid								
363.0 > 319.0	19.380	19.378	0.002	1.000	1727957	14.7	6886	
* 5 13C2-PFOA								
415.0 > 370.0	20.047	20.047	0.0		969779	10.0	24964	
6 Perfluorooctanoic acid								
413.0 > 369.0	20.047	20.047	0.0	1.000	3285195	32.6	1114	
7 Perfluorooctane sulfonic acid								
499.0 > 80.0	20.620	20.619	0.001	1.000	4906017	69.9	10146	
* 8 13C4 PFOS								
503.0 > 80.0	20.679	20.669	0.010		1929192	28.7	32805	
9 Perfluorononanoic acid								
463.0 > 419.0	20.750	20.748	0.002	1.000	3558831	32.4	16307	
$ 10 13C2 PFDA								
515.0 > 470.0	21.480	21.474	0.006	1.000	957025	11.3	30231	

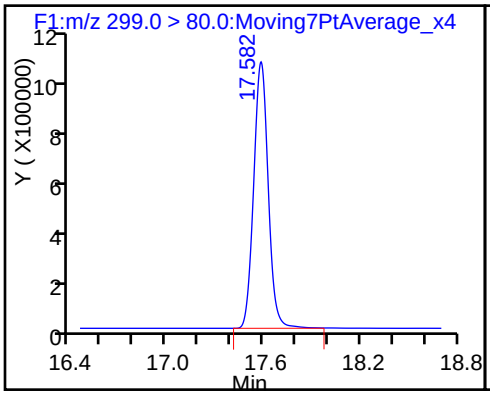
Reagents:

LC537-L5_00017 Amount Added: 1.00 Units: mL

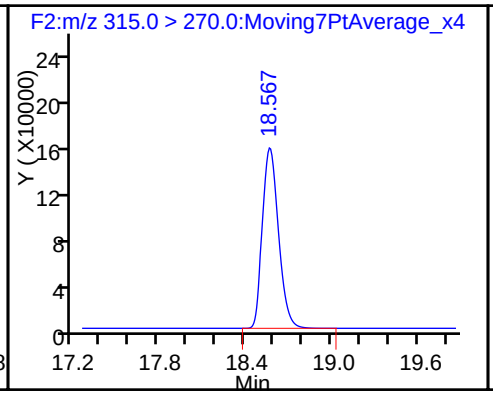
TestAmerica Sacramento

Data File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_008.d
Injection Date: 05-Dec-2016 19:24:23 Instrument ID: A6
Lims ID: STD L5
Client ID:
Operator ID: CBW ALS Bottle#: 5 Worklist Smp#: 6
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 537__A6 Limit Group: LC 537 ICAL

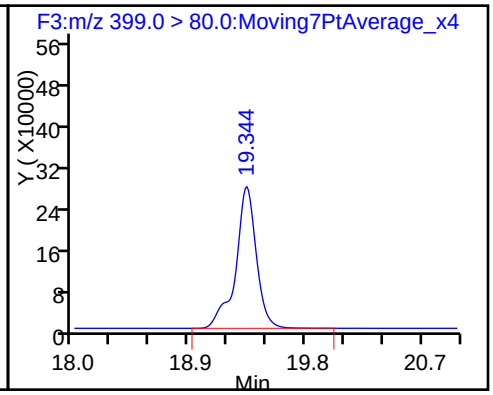
1 Perfluorobutanesulfonic acid



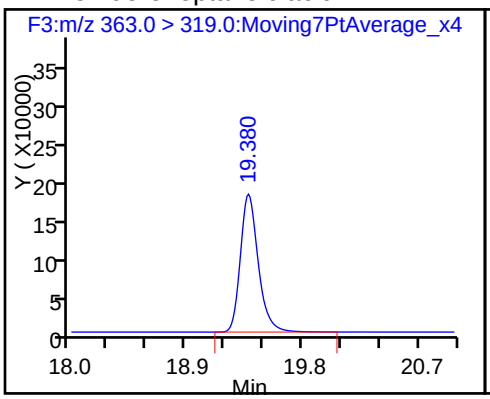
$ 2 13C2 PFHxA



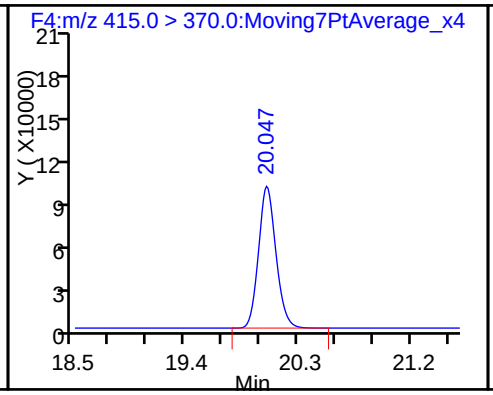
3 Perfluorohexanesulfonic acid



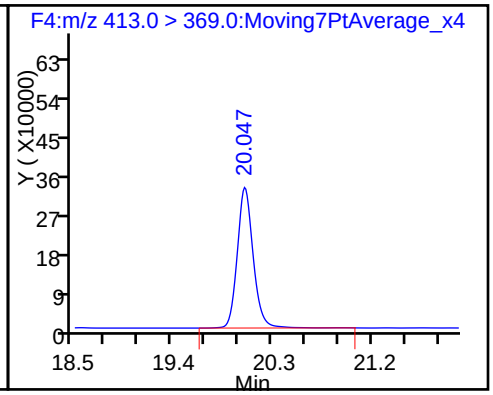
4 Perfluoroheptanoic acid



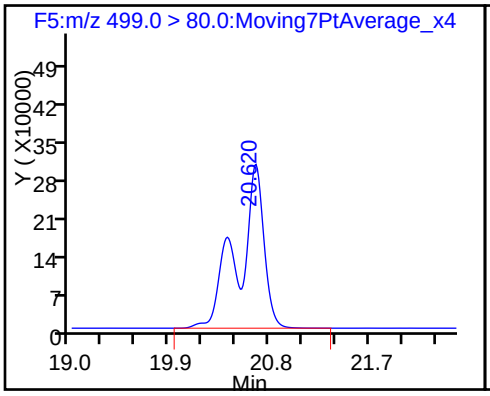
* 5 13C2-PFOA



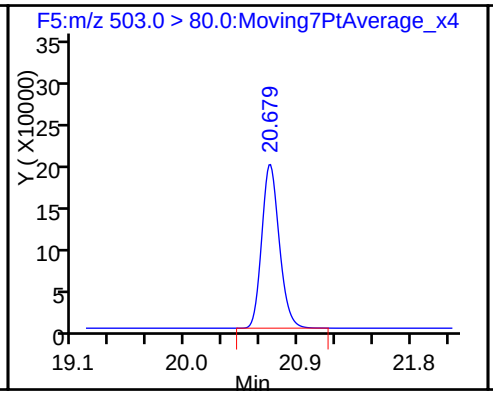
6 Perfluorooctanoic acid



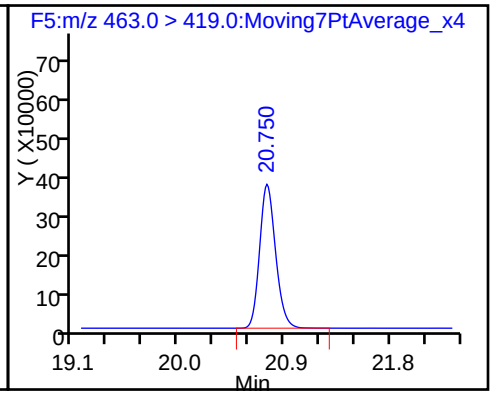
7 Perfluorooctane sulfonic acid



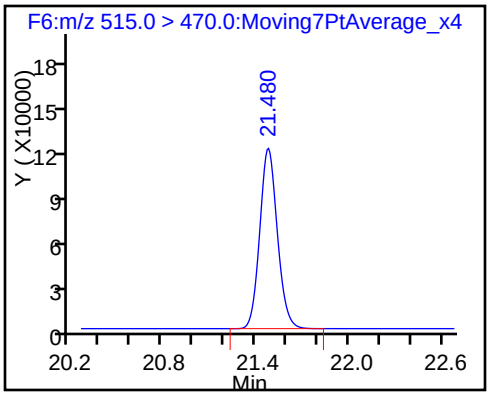
* 8 13C4 PFOS



9 Perfluorononanoic acid



$ 10 13C2 PFDA



TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d
Lims ID: STD L6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 05-Dec-2016 19:54:00 ALS Bottle#: 6 Worklist Smp#: 7
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: STD L6 L6
Misc. Info.: Acquity BEH 1.7um, 3X150mm T=35*C
Operator ID: CBW Instrument ID: A6
Sublist: chrom-537__A6*sub3

Method: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\537__A6.m
Limit Group: LC 537 ICAL
Last Update: 06-Dec-2016 16:35:39 Calib Date: 05-Dec-2016 19:54:00
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d

Column 1 : Acquity BEH C18 (2.10 mm) Det: F1:MRM
Process Host: XAWRK024

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	S/N	Flags
1 Perfluorobutanesulfonic acid								
299.0 > 80.0	17.582	17.581	0.001	1.000	7753569	166.9	8570	
$ 2 13C2 PFHxA								
315.0 > 270.0	18.567	18.567	0.0	1.000	1095977	10.4	34796	
3 Perfluorohexanesulfonic acid								
399.0 > 80.0	19.344	19.342	0.002	1.000	3556638	59.8	31299	
4 Perfluoroheptanoic acid								
363.0 > 319.0	19.380	19.378	0.002	1.000	2032288	18.5	6367	
* 5 13C2-PFOA								
415.0 > 370.0	20.047	20.047	0.0		906416	10.0	23083	
6 Perfluorooctanoic acid								
413.0 > 369.0	20.047	20.047	0.0	1.000	3876381	41.1	917	
7 Perfluorooctane sulfonic acid								
499.0 > 80.0	20.619	20.619	0.0	1.000	5775285	83.5	12991	
* 8 13C4 PFOS								
503.0 > 80.0	20.667	20.669	-0.002		1899408	28.7	17628	
9 Perfluorononanoic acid								
463.0 > 419.0	20.750	20.748	0.002	1.000	4124664	40.1	17939	
$ 10 13C2 PFDA								
515.0 > 470.0	21.471	21.474	-0.003	1.000	857144	10.8	26862	

Reagents:

LC537-L6_00014 Amount Added: 1.00 Units: mL

Report Date: 06-Dec-2016 16:35:40 Chrom Revision: 2.2 05-Dec-2016 12:37:22

TestAmerica Sacramento

Data File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d

Injection Date: 05-Dec-2016 19:54:00 Instrument ID: A6

Lims ID: STD L6

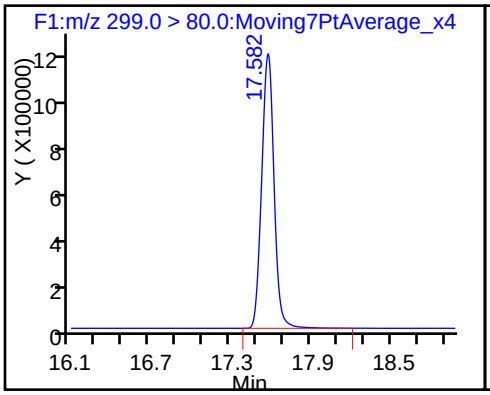
Client ID:

Operator ID: CBW ALS Bottle#: 6 Worklist Smp#: 7

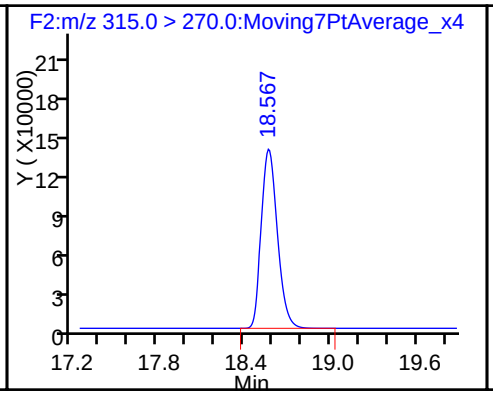
Injection Vol: 10.0 ul Dil. Factor: 1.0000

Method: 537__A6 Limit Group: LC 537 ICAL

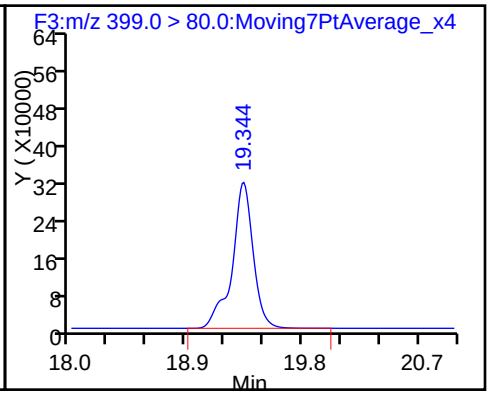
1 Perfluorobutanesulfonic acid



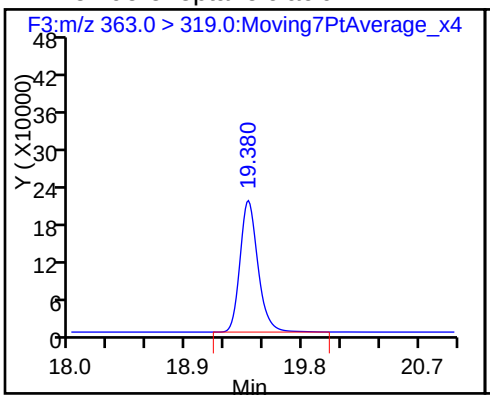
$ 2 13C2 PFHxA



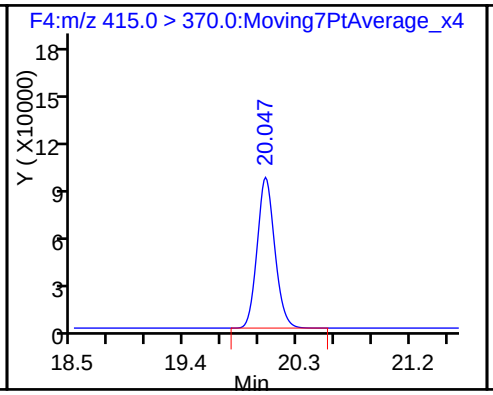
3 Perfluorohexanesulfonic acid



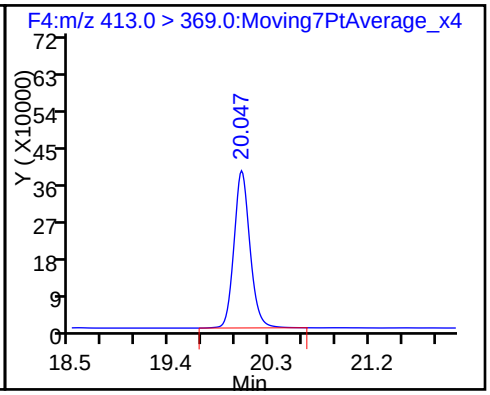
4 Perfluoroheptanoic acid



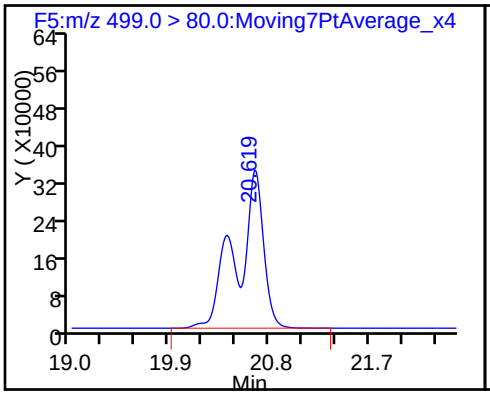
* 5 13C2-PFOA



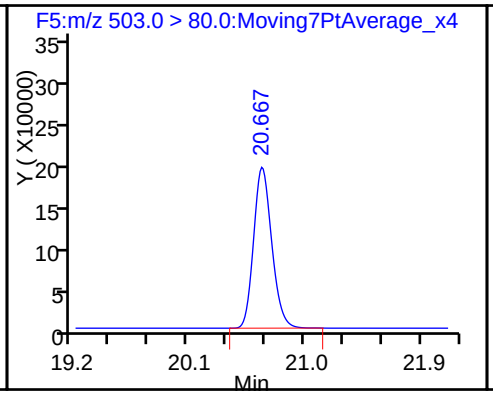
6 Perfluorooctanoic acid



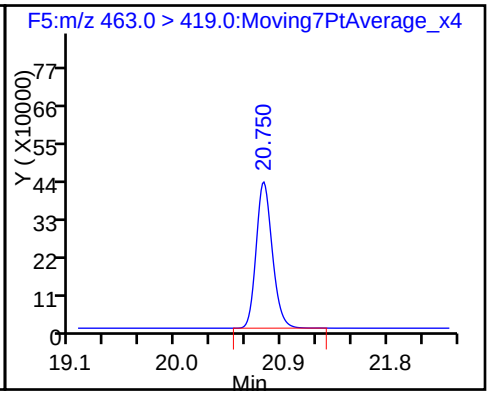
7 Perfluorooctane sulfonic acid



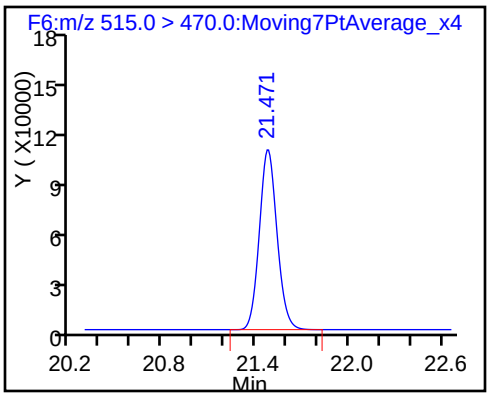
* 8 13C4 PFOS



9 Perfluorononanoic acid



$ 10 13C2 PFDA



FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Lab Sample ID: CCV 320-140688/9 Calibration Date: 12/05/2016 20:53

Instrument ID: A6 Calib Start Date: 12/05/2016 17:26

GC Column: Acquity ID: 2.10(mm) Calib End Date: 12/05/2016 19:54

Lab File ID: 05DEC2016A6A_011.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorobutanesulfonic acid (PFBS)	Ave	0.7015	0.6306		20.6	22.9	-10.1	50.0
Perfluorohexanesulfonic acid	Ave	0.8980	0.7822		6.72	7.72	-12.9	50.0
Perfluoroheptanoic acid	Ave	1.215	1.239		2.65	2.60	1.9	50.0
Perfluorooctanoic acid (PFOA)	Ave	1.040	0.9133		4.54	5.17	-12.2	50.0
Perfluorooctanesulfonic acid (PFOS)	Ave	1.044	0.8902		8.71	10.2	-14.7	50.0
Perfluorononanoic acid	Ave	1.134	1.093		4.83	5.01	-3.6	50.0
13C2 PFHxA	Ave	1.167	1.081		9.27	10.0	-7.3	30.0
13C2 PFDA	Ave	0.8763	0.8211		9.37	10.0	-6.3	30.0

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_011.d
Lims ID: CCV L2
Client ID:
Sample Type: CCVL
Inject. Date: 05-Dec-2016 20:53:12 ALS Bottle#: 2 Worklist Smp#: 9
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: CCV L2 CCV L2
Misc. Info.: Acquity BEH 1.7um, 3X150mm T=35*C
Operator ID: CBW Instrument ID: A6
Sublist: chrom-537__A6*sub3

Method: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\537__A6.m
Limit Group: LC 537 ICAL
Last Update: 06-Dec-2016 16:35:40 Calib Date: 05-Dec-2016 19:54:00
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d

Column 1 : Acquity BEH C18 (2.10 mm) Det: F1:MRM
Process Host: XAWRK024

First Level Reviewer: barnettj Date: 06-Dec-2016 10:08:33

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	S/N	Flags
1 Perfluorobutanesulfonic acid								
299.0 > 80.0	17.586	17.581	0.005	1.000	1186753	20.6	693	
$ 2 13C2 PFHxA								
315.0 > 270.0	18.567	18.567	0.0	1.000	1108698	9.27	35970	
3 Perfluorohexanesulfonic acid								
399.0 > 80.0	19.344	19.342	0.002	1.000	496197	6.72	11535	
4 Perfluoroheptanoic acid								M
363.0 > 319.0	19.380	19.378	0.002	1.000	329772	2.65	166	M
* 5 13C2-PFOA								
415.0 > 370.0	20.047	20.047	0.0		1025187	10.0	21492	
6 Perfluorooctanoic acid								M
413.0 > 369.0	20.047	20.047	0.0	1.000	484196	4.54	93.2	M
7 Perfluorooctane sulfonic acid								
499.0 > 80.0	20.619	20.619	0.0	1.000	747766	8.71	8549	
* 8 13C4 PFOS								
503.0 > 80.0	20.667	20.669	-0.002		2358079	28.7	20478	
9 Perfluorononanoic acid								
463.0 > 419.0	20.750	20.748	0.002	1.000	561371	4.83	15032	
$ 10 13C2 PFDA								
515.0 > 470.0	21.471	21.474	-0.003	1.000	841818	9.37	26813	

QC Flag Legend

Review Flags

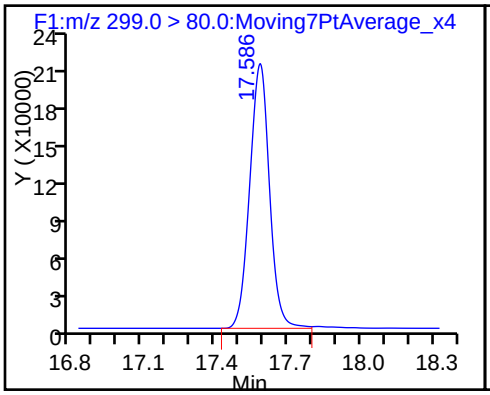
M - Manually Integrated

Reagents:

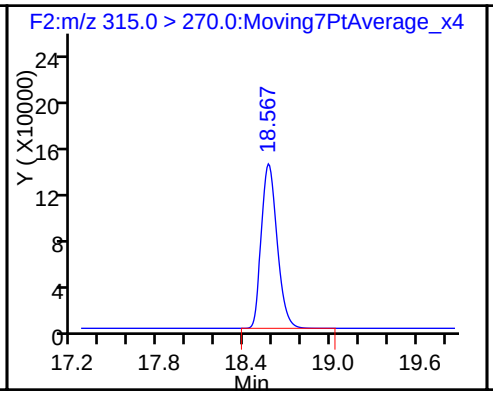
LC537-L2_00014 Amount Added: 1.00 Units: mL

Data File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_011.d
Injection Date: 05-Dec-2016 20:53:12 Instrument ID: A6
Lims ID: CCV L2
Client ID:
Operator ID: CBW ALS Bottle#: 2 Worklist Smp#: 9
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 537__A6 Limit Group: LC 537 ICAL

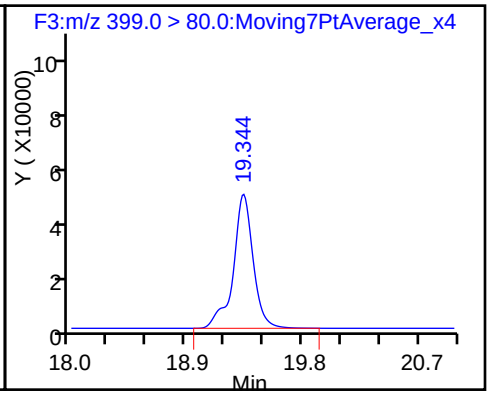
1 Perfluorobutanesulfonic acid



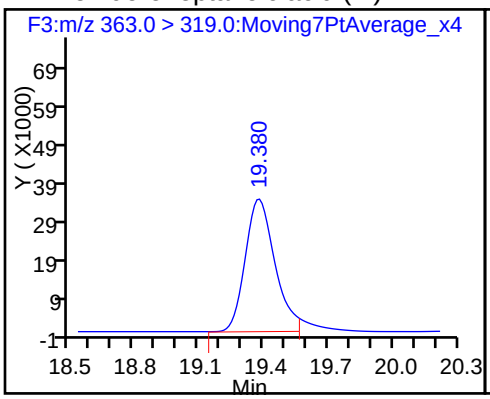
$ 2 13C2 PFHxA



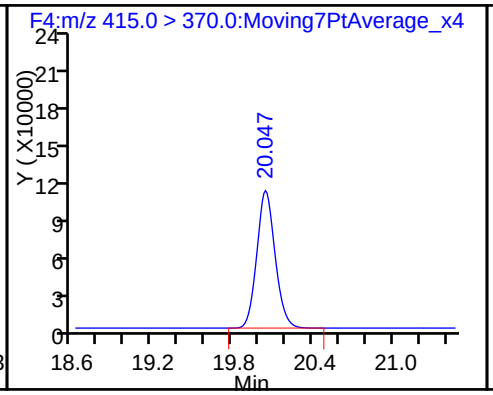
3 Perfluorohexanesulfonic acid



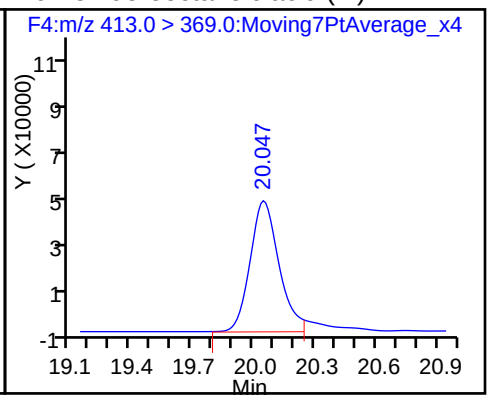
4 Perfluoroheptanoic acid (M)



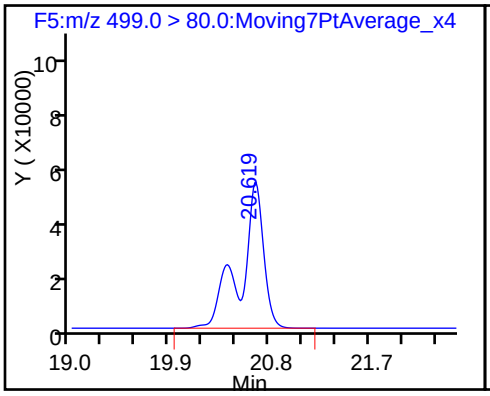
* 5 13C2-PFOA



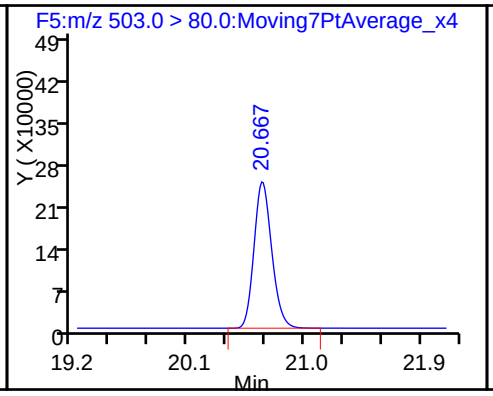
6 Perfluorooctanoic acid (M)



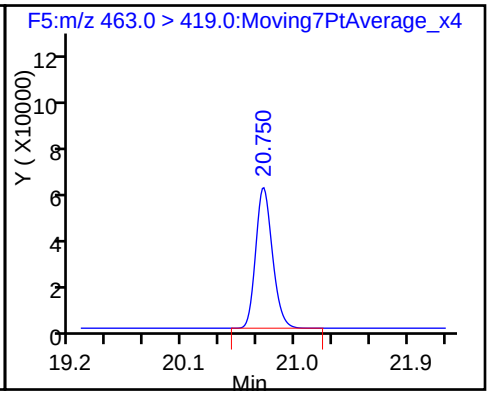
7 Perfluorooctane sulfonic acid



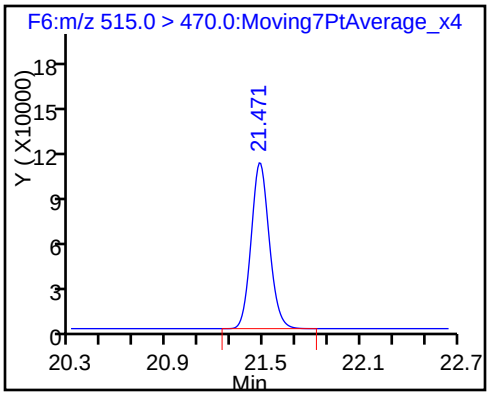
* 8 13C4 PFOS



9 Perfluorononanoic acid



$ 10 13C2 PFDA



Manual Integration/User Assign Peak Report

TestAmerica Sacramento

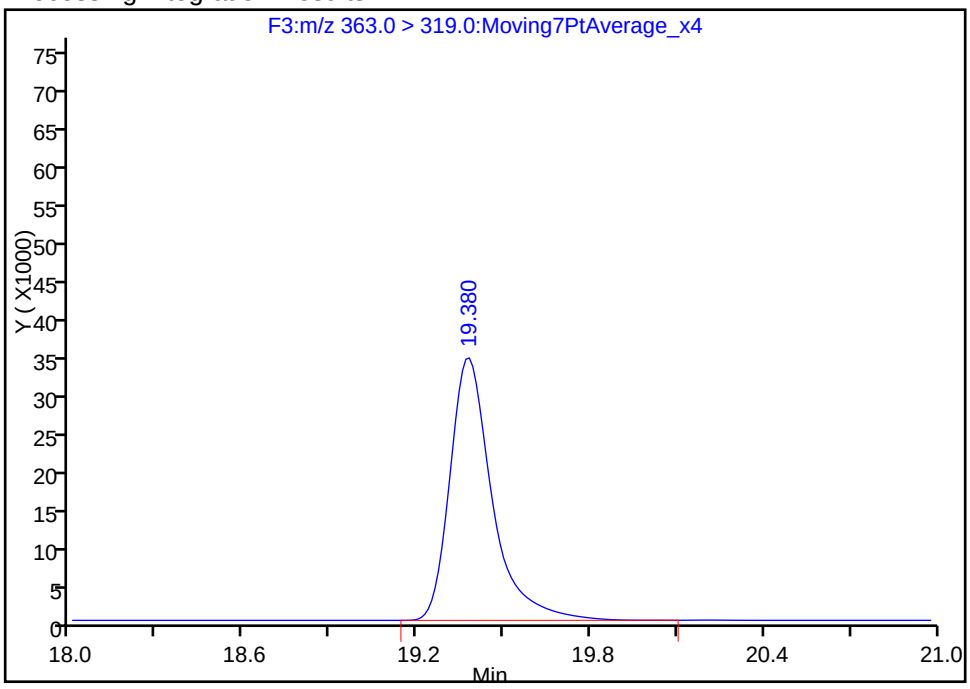
Data File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_011.d
Injection Date: 05-Dec-2016 20:53:12 Instrument ID: A6
Lims ID: CCV L2
Client ID:
Operator ID: CBW ALS Bottle#: 2 Worklist Smp#: 9
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 537__A6 Limit Group: LC 537 ICAL
Column: Acquity BEH C18 (2.10 mm) Detector F3:MRM

4 Perfluoroheptanoic acid, CAS: 375-85-9

Signal: 1

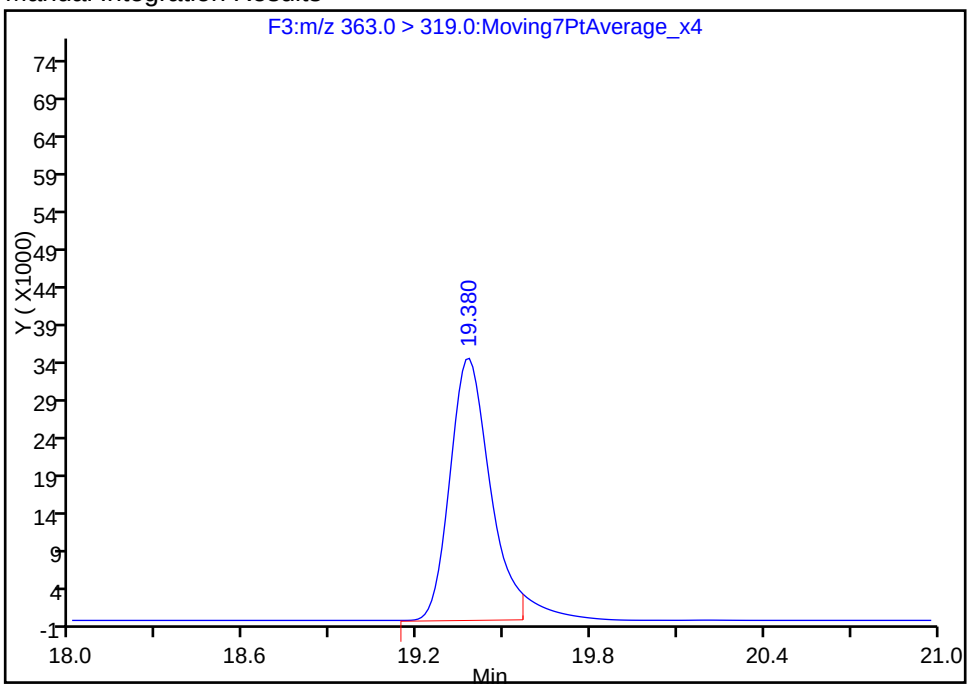
Processing Integration Results

RT: 19.38
Area: 349162
Amount: 2.802857
Amount Units: ng/ml



Manual Integration Results

RT: 19.38
Area: 329772
Amount: 2.647206
Amount Units: ng/ml



Reviewer: barnettj, 06-Dec-2016 10:08:33
Audit Action: Manually Integrated Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

TestAmerica Sacramento

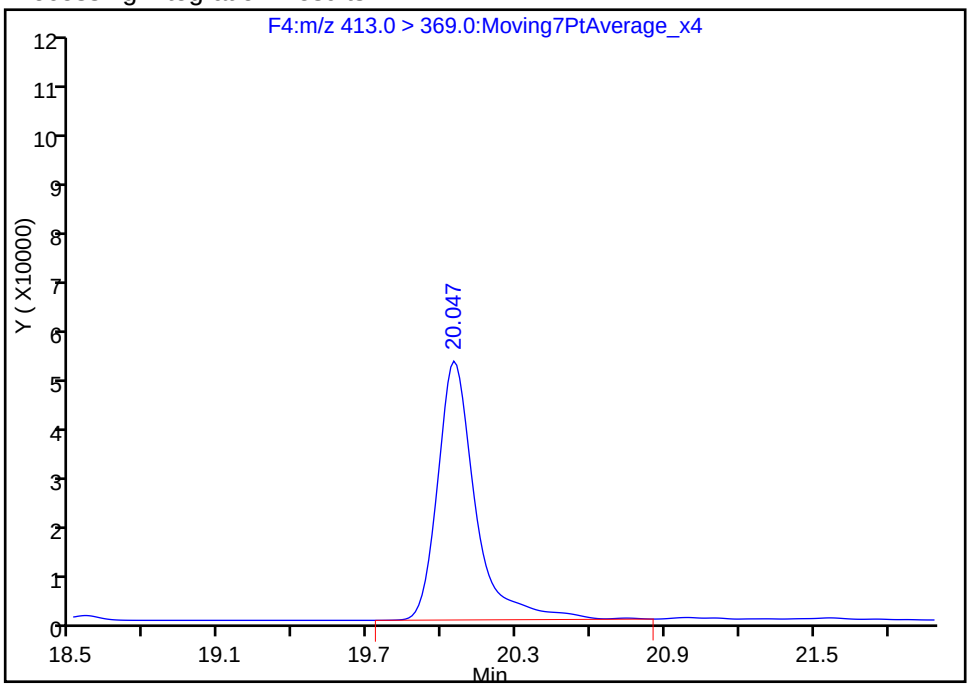
Data File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_011.d
Injection Date: 05-Dec-2016 20:53:12 Instrument ID: A6
Lims ID: CCV L2
Client ID:
Operator ID: CBW ALS Bottle#: 2 Worklist Smp#: 9
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 537__A6 Limit Group: LC 537 ICAL
Column: Acquity BEH C18 (2.10 mm) Detector F4:MRM

6 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

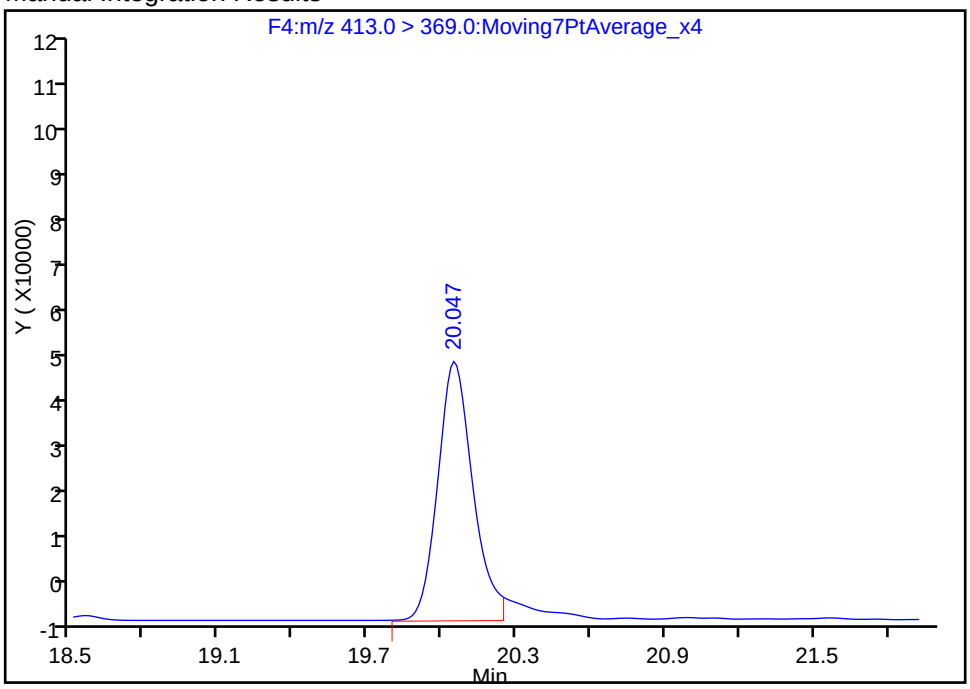
Processing Integration Results

RT: 20.05
Area: 520603
Amount: 4.880820
Amount Units: ng/ml



Manual Integration Results

RT: 20.05
Area: 484196
Amount: 4.539493
Amount Units: ng/ml



Reviewer: barnettj, 06-Dec-2016 10:08:33
Audit Action: Manually Integrated Audit Reason: Split Peak

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Lab Sample ID: ICV 320-140688/11 Calibration Date: 12/05/2016 21:52

Instrument ID: A6 Calib Start Date: 12/05/2016 17:26

GC Column: Acquity ID: 2.10(mm) Calib End Date: 12/05/2016 19:54

Lab File ID: 05DEC2016A6A_013.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorobutanesulfonic acid (PFBS)	Ave	0.7015	0.5756		94.2	115	-18.0	30.0
Perfluorohexanesulfonic acid	Ave	0.8980	0.6976		20.6	26.5	-22.3	30.0
Perfluoroheptanoic acid	Ave	1.215	1.155		11.9	12.5	-4.9	30.0
Perfluorooctanoic acid (PFOA)	Ave	1.040	0.9604		23.2	25.1	-7.7	30.0
Perfluorooctanesulfonic acid (PFOS)	Ave	1.044	0.8424		22.0	27.2	-19.3	30.0
Perfluorononanoic acid	Ave	1.134	0.9316		20.6	25.1	-17.9	30.0
13C2 PFHxA	Ave	1.167	1.079		9.25	10.0	-7.5	30.0
13C2 PFDA	Ave	0.8763	0.8628		9.85	10.0	-1.5	30.0

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_013.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 05-Dec-2016 21:52:24 ALS Bottle#: 7 Worklist Smp#: 11
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: ICV ICV
Misc. Info.: Acquity BEH 1.7um, 3X150mm T=35*C
Operator ID: CBW Instrument ID: A6
Sublist:

Method: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\537__A6.m
Limit Group: LC 537 ICAL
Last Update: 06-Dec-2016 16:53:23 Calib Date: 05-Dec-2016 19:54:00
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d

Column 1 : Acquity BEH C18 (2.10 mm) Det: F1:MRM
Process Host: XAWRK024

First Level Reviewer: barnettj Date: 06-Dec-2016 16:34:53

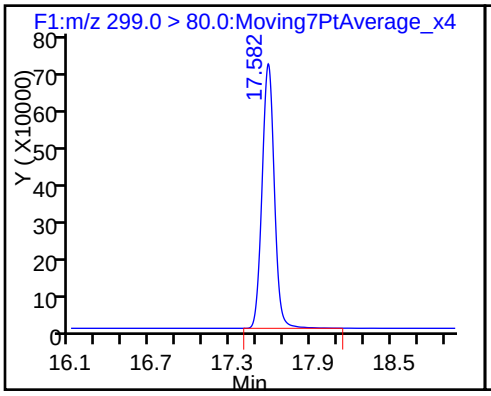
Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	S/N	Flags
1 Perfluorobutanesulfonic acid								
299.0 > 80.0	17.582	17.581	0.001	1.000	4641388	94.2	8629	
$ 2 13C2 PFHxA								
315.0 > 270.0	18.567	18.567	0.0	1.000	946677	9.25	29673	
3 Perfluorohexanesulfonic acid								
399.0 > 80.0	19.344	19.342	0.002	1.000	1298107	20.6	29738	
4 Perfluoroheptanoic acid								
363.0 > 319.0	19.380	19.378	0.002	1.000	1267011	11.9	9991	
* 5 13C2-PFOA								
415.0 > 370.0	20.047	20.047	0.0		877210	10.0	22431	
6 Perfluorooctanoic acid								
413.0 > 369.0	20.047	20.047	0.0	1.000	2114272	23.2	647	
7 Perfluorooctane sulfonic acid								
499.0 > 80.0	20.619	20.619	0.0	1.000	1612191	22.0	13496	
* 8 13C4 PFOS								
503.0 > 80.0	20.667	20.669	-0.002		2015178	28.7	51574	
9 Perfluorononanoic acid								
463.0 > 419.0	20.750	20.748	0.002	1.000	2051048	20.6	7161	
$ 10 13C2 PFDA								
515.0 > 470.0	21.480	21.474	0.006	1.000	756809	9.85	23714	

Reagents:

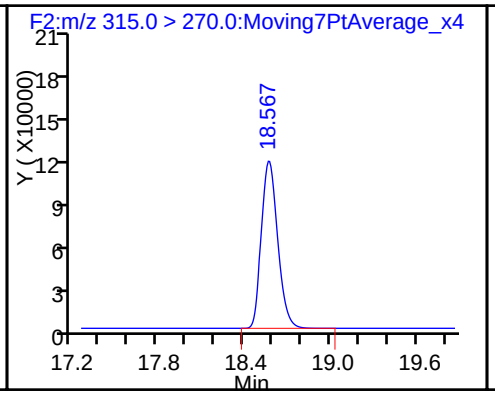
LC537-ICV_00017 Amount Added: 1.00 Units: mL

Data File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_013.d
Injection Date: 05-Dec-2016 21:52:24 Instrument ID: A6
Lims ID: ICV
Client ID:
Operator ID: CBW ALS Bottle#: 7 Worklist Smp#: 11
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 537__A6 Limit Group: LC 537 ICAL

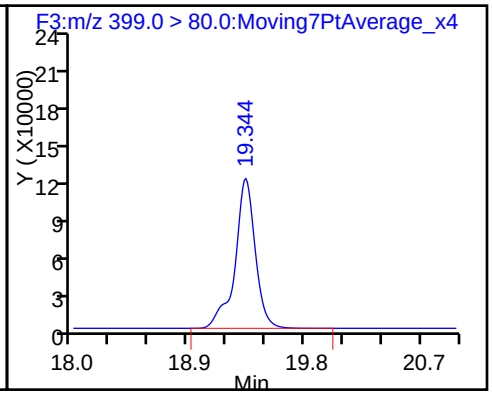
1 Perfluorobutanesulfonic acid



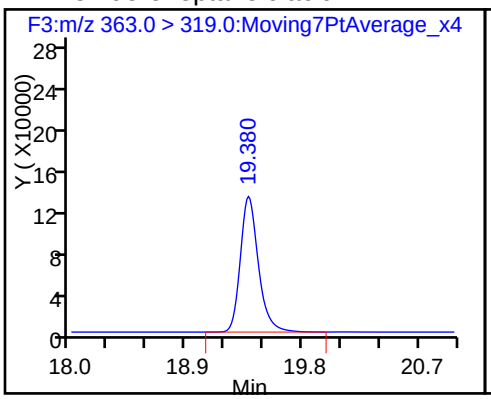
$ 2 13C2 PFHxA



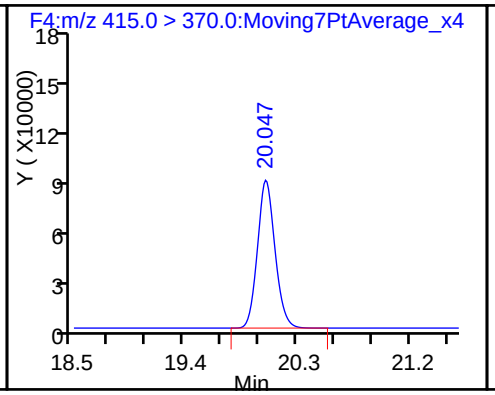
3 Perfluorohexanesulfonic acid



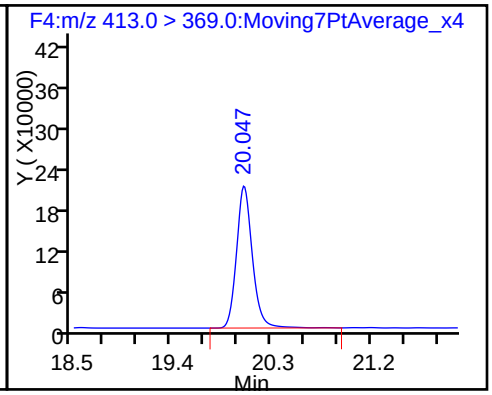
4 Perfluoroheptanoic acid



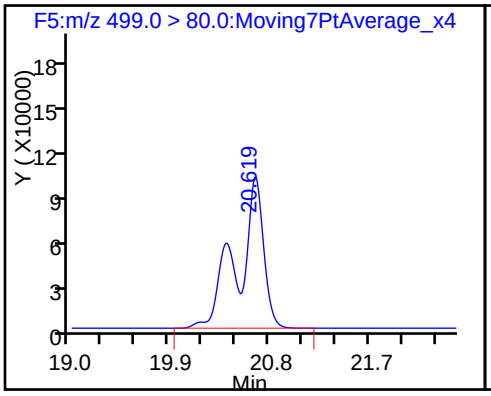
* 5 13C2-PFOA



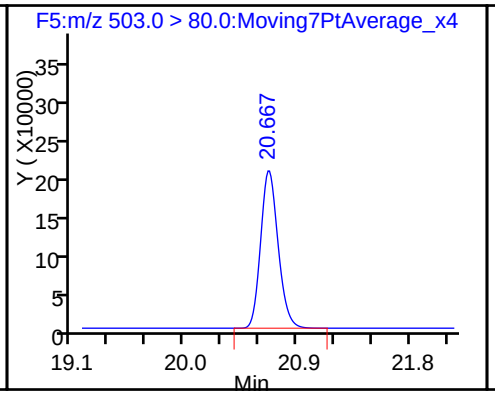
6 Perfluorooctanoic acid



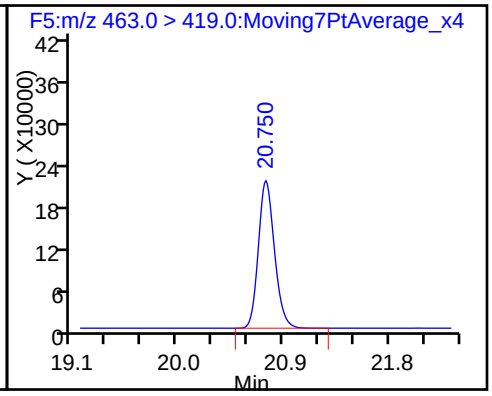
7 Perfluorooctane sulfonic acid



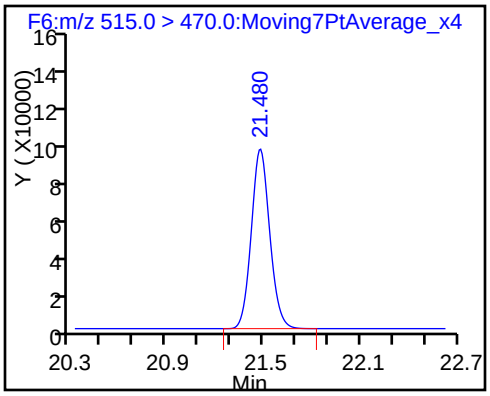
* 8 13C4 PFOS



9 Perfluorononanoic acid



$ 10 13C2 PFDA



FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Lab Sample ID: CCV 320-141573/3 Calibration Date: 12/11/2016 12:02

Instrument ID: A6 Calib Start Date: 12/05/2016 17:26

GC Column: Acquity ID: 2.10(mm) Calib End Date: 12/05/2016 19:54

Lab File ID: 11DEC2016A6A_003.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorobutanesulfonic acid (PFBS)	Ave	0.7015	0.6477		21.1	22.9	-7.7	50.0
Perfluorohexanesulfonic acid	Ave	0.8980	0.7642		6.57	7.72	-14.9	50.0
Perfluoroheptanoic acid	Ave	1.215	1.413		3.02	2.60	16.3	50.0
Perfluorooctanoic acid (PFOA)	Ave	1.040	1.044		5.19	5.17	0.3	50.0
Perfluorooctanesulfonic acid (PFOS)	Ave	1.044	0.8884		8.69	10.2	-14.9	50.0
Perfluorononanoic acid	Ave	1.134	1.098		4.85	5.01	-3.2	50.0
13C2 PFHxA	Ave	1.167	1.108		9.50	10.0	-5.0	30.0
13C2 PFDA	Ave	0.8763	0.7903		9.02	10.0	-9.8	30.0

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNA\Sacramento\ChromData\A6\20161211-37708.b\11DEC2016A6A_003.d
Lims ID: CCV L2
Client ID:
Sample Type: CCVL
Inject. Date: 11-Dec-2016 12:02:56 ALS Bottle#: 2 Worklist Smp#: 3
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: CCV L2 CCV L2
Misc. Info.: Acquity BEH 1.7um, 3X150mm T=35*C
Operator ID: CBW Instrument ID: A6
Sublist: chrom-537__A6*sub3

Method: \\ChromNA\Sacramento\ChromData\A6\20161211-37708.b\537__A6.m
Limit Group: LC 537 ICAL
Last Update: 12-Dec-2016 15:39:28 Calib Date: 05-Dec-2016 19:54:00
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d

Column 1 : Acquity BEH C18 (2.10 mm) Det: F1:MRM
Process Host: XAWRK002

First Level Reviewer: westendorfc Date: 11-Dec-2016 12:36:03

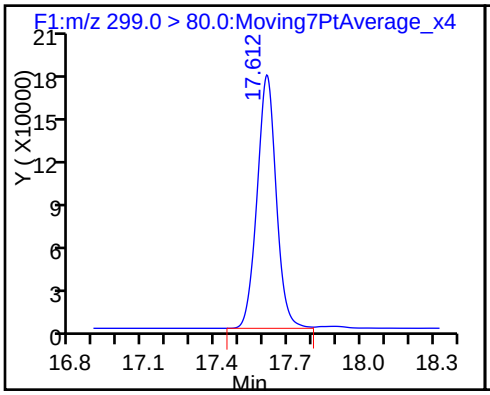
Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	S/N	Flags
1 Perfluorobutanesulfonic acid								
299.0 > 80.0	17.612	17.612	0.0	1.000	949190	21.1	569	
$ 2 13C2 PFHxA								
315.0 > 270.0	18.585	18.585	0.0	1.000	889175	9.50	27996	
3 Perfluorohexanesulfonic acid								
399.0 > 80.0	19.356	19.356	0.0	1.000	377563	6.57	8685	
4 Perfluoroheptanoic acid								
363.0 > 319.0	19.391	19.391	0.0	1.000	294373	3.02	4026	
* 5 13C2-PFOA								
415.0 > 370.0	20.058	20.058	0.0		802153	10.0	20748	
6 Perfluorooctanoic acid								
413.0 > 369.0	20.058	20.058	0.0	1.000	432862	5.19	181	
7 Perfluorooctane sulfonic acid								
499.0 > 80.0	20.619	20.619	0.0	1.000	581183	8.69	5853	
* 8 13C4 PFOS								
503.0 > 80.0	20.679	20.679	0.0		1836390	28.7	27361	
9 Perfluorononanoic acid								
463.0 > 419.0	20.750	20.750	0.0	1.000	441361	4.85	3888	
$ 10 13C2 PFDA								
515.0 > 470.0	21.480	21.480	0.0	1.000	633909	9.02	19884	

Reagents:

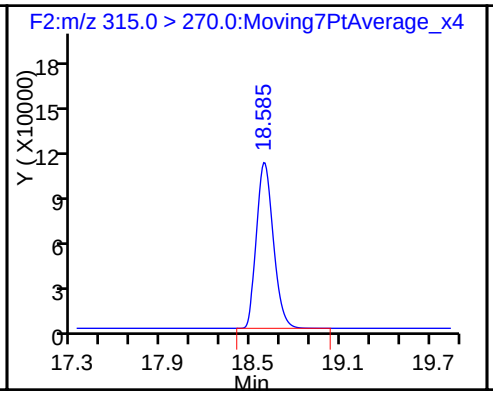
LC537-L2_00014 Amount Added: 1.00 Units: mL

Data File: \\ChromNA\Sacramento\ChromData\A6\20161211-37708.b\11DEC2016A6A_003.d
Injection Date: 11-Dec-2016 12:02:56 Instrument ID: A6
Lims ID: CCV L2
Client ID:
Operator ID: CBW ALS Bottle#: 2 Worklist Smp#: 3
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 537__A6 Limit Group: LC 537 ICAL

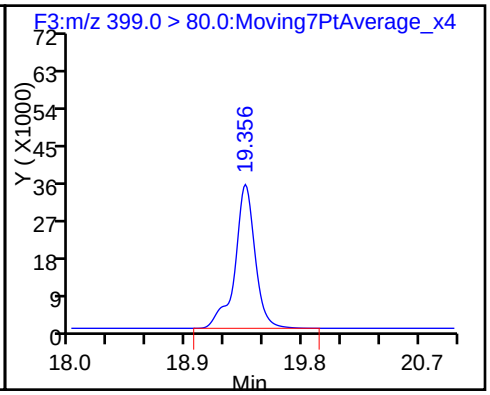
1 Perfluorobutanesulfonic acid



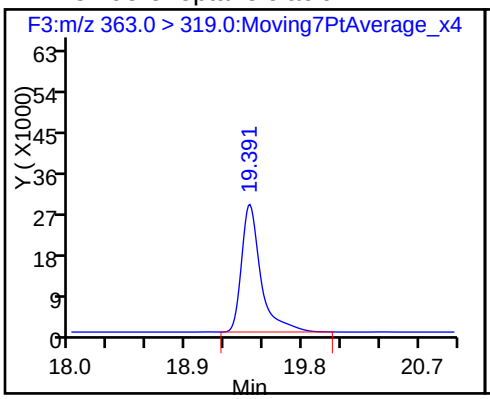
$ 2 13C2 PFHxA



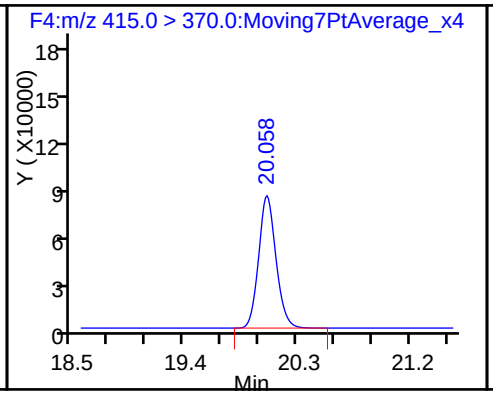
3 Perfluorohexanesulfonic acid



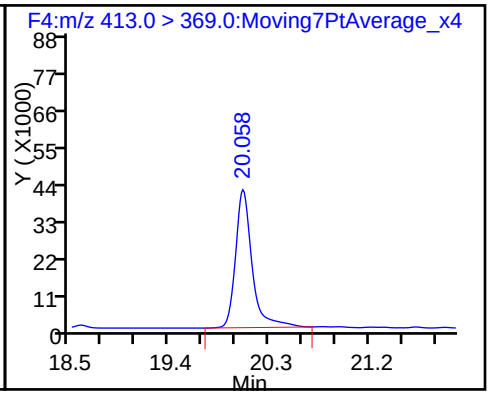
4 Perfluoroheptanoic acid



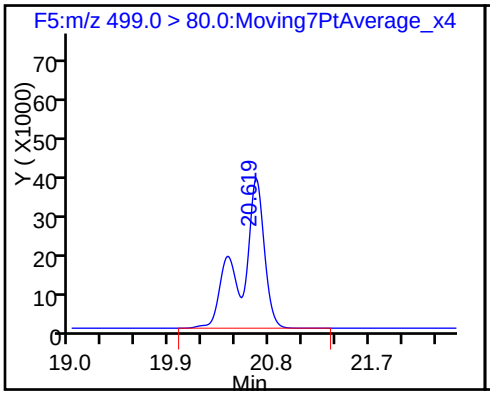
* 5 13C2-PFOA



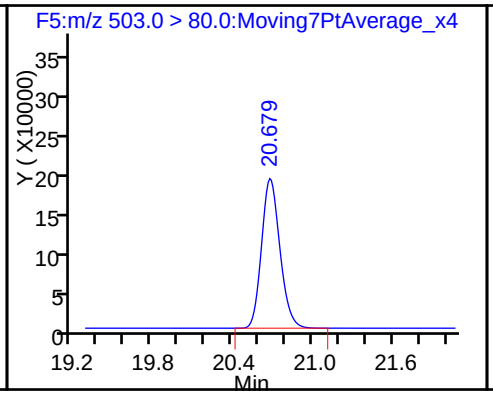
6 Perfluorooctanoic acid



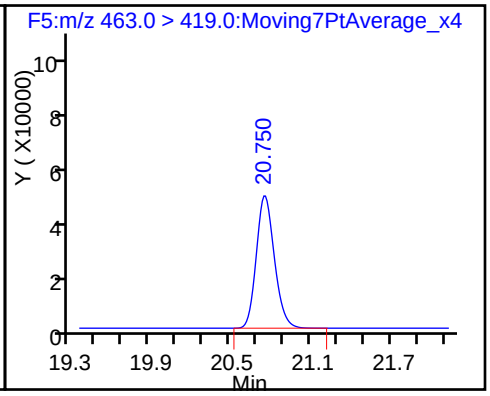
7 Perfluorooctane sulfonic acid



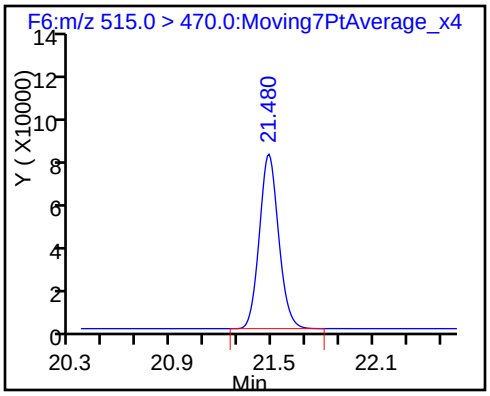
* 8 13C4 PFOS



9 Perfluorononanoic acid



$ 10 13C2 PFDA



FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Lab Sample ID: CCV 320-141767/2 Calibration Date: 12/13/2016 01:32

Instrument ID: A6 Calib Start Date: 12/05/2016 17:26

GC Column: Acquity ID: 2.10(mm) Calib End Date: 12/05/2016 19:54

Lab File ID: 11DEC2016A6A_079.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorobutanesulfonic acid (PFBS)	Ave	0.7015	0.7440		47.8	45.1	6.1	30.0
Perfluorohexanesulfonic acid	Ave	0.8980	0.9632		16.3	15.2	7.3	30.0
Perfluoroheptanoic acid	Ave	1.215	1.277		5.38	5.12	5.1	30.0
Perfluorooctanoic acid (PFOA)	Ave	1.040	1.051		10.3	10.2	1.0	30.0
Perfluorooctanesulfonic acid (PFOS)	Ave	1.044	1.101		21.2	20.1	5.5	30.0
Perfluorononanoic acid	Ave	1.134	1.191		10.4	9.87	5.0	30.0
13C2 PFHxA	Ave	1.167	1.198		10.3	10.0	2.7	30.0
13C2 PFDA	Ave	0.8763	0.8822		10.1	10.0	0.7	30.0

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_079.d
Lims ID: CCV L3
Client ID:
Sample Type: CCVIS
Inject. Date: 13-Dec-2016 01:32:10 ALS Bottle#: 3 Worklist Smp#: 2
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: CCV L3 CCV L3
Misc. Info.: Acquity BEH 1.7um, 3X150mm T=35*C
Operator ID: CBW Instrument ID: A6
Sublist: chrom-537__A6*sub3

Method: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\537__A6.m
Limit Group: LC 537 ICAL
Last Update: 13-Dec-2016 14:22:59 Calib Date: 05-Dec-2016 19:54:00
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d

Column 1 : Acquity BEH C18 (2.10 mm) Det: F1:MRM
Process Host: XAWRK022

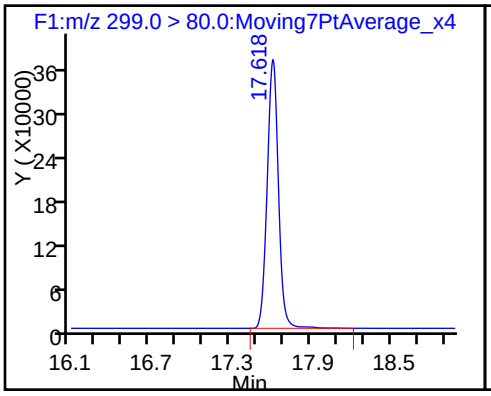
Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	S/N	Flags
1 Perfluorobutanesulfonic acid								
299.0 > 80.0	17.618	17.618	0.0	1.000	2171244	47.8	30747	
$ 2 13C2 PFHxA								
315.0 > 270.0	18.613	18.613	0.0	1.000	1026489	10.3	32661	
3 Perfluorohexanesulfonic acid								
399.0 > 80.0	19.356	19.356	0.0	1.000	947591	16.3	21802	
4 Perfluoroheptanoic acid								
363.0 > 319.0	19.392	19.392	0.0	1.000	559602	5.38	5710	
* 5 13C2-PFOA								
415.0 > 370.0	20.047	20.047	0.0		856689	10.0	22220	
6 Perfluorooctanoic acid								
413.0 > 369.0	20.047	20.047	0.0	1.000	917724	10.3	554	
7 Perfluorooctane sulfonic acid								
499.0 > 80.0	20.619	20.619	0.0	1.000	1434242	21.2	15976	
* 8 13C4 PFOS								
503.0 > 80.0	20.667	20.667	0.0		1855712	28.7	32100	
9 Perfluorononanoic acid								
463.0 > 419.0	20.750	20.750	0.0	1.000	1007183	10.4	21414	
$ 10 13C2 PFDA								
515.0 > 470.0	21.471	21.471	0.0	1.000	755726	10.1	23807	

Reagents:

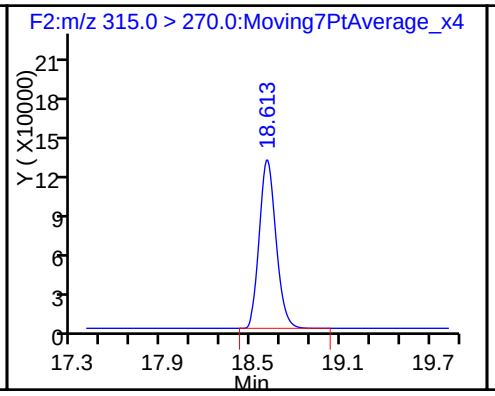
LC537-L3_00016 Amount Added: 1.00 Units: mL

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_079.d
Injection Date: 13-Dec-2016 01:32:10 Instrument ID: A6
Lims ID: CCV L3
Client ID:
Operator ID: CBW ALS Bottle#: 3 Worklist Smp#: 2
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 537__A6 Limit Group: LC 537 ICAL

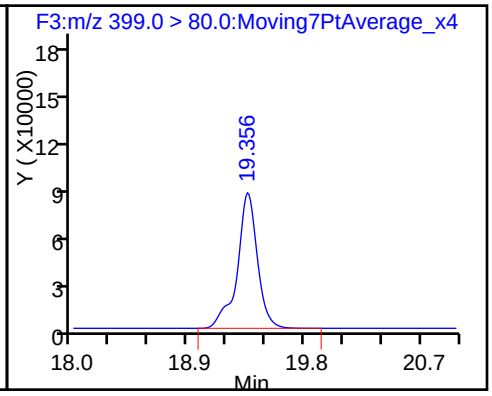
1 Perfluorobutanesulfonic acid



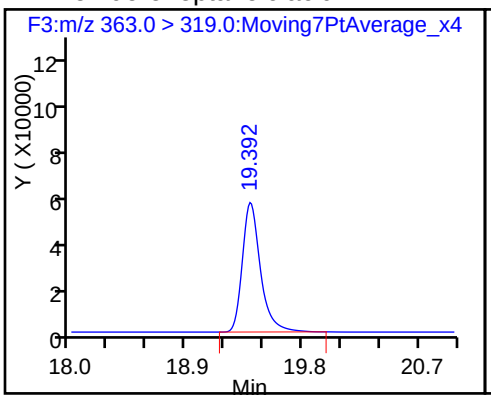
$ 2 13C2 PFHxA



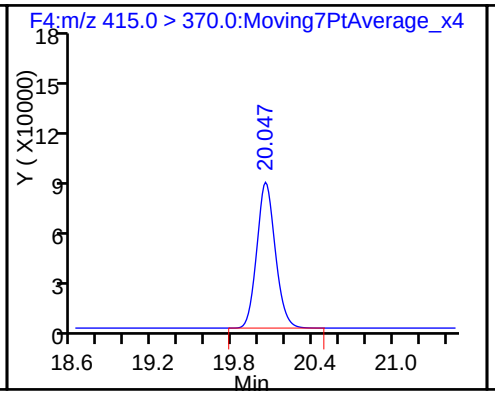
3 Perfluorohexanesulfonic acid



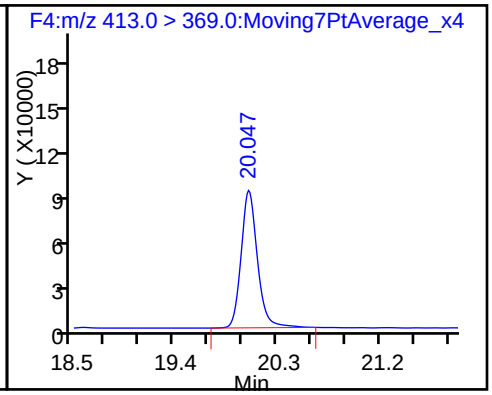
4 Perfluoroheptanoic acid



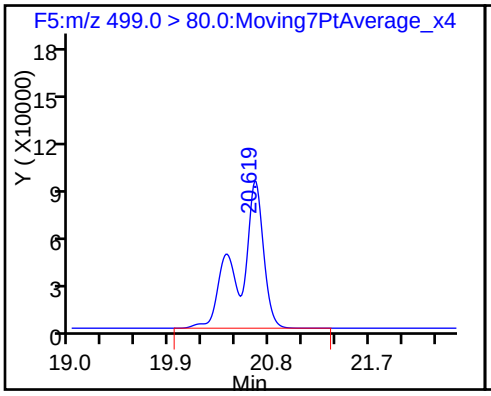
* 5 13C2-PFOA



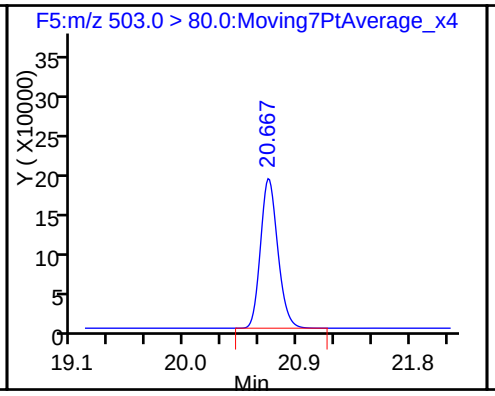
6 Perfluorooctanoic acid



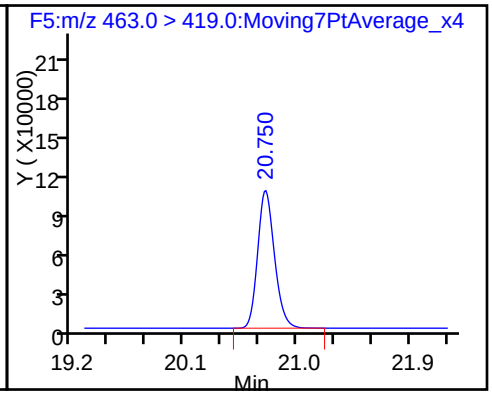
7 Perfluorooctane sulfonic acid



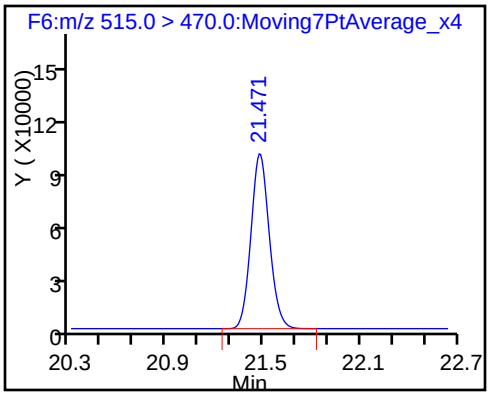
* 8 13C4 PFOS



9 Perfluorononanoic acid



$ 10 13C2 PFDA



FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Lab Sample ID: CCV 320-141767/15 Calibration Date: 12/13/2016 07:56

Instrument ID: A6 Calib Start Date: 12/05/2016 17:26

GC Column: Acquity ID: 2.10(mm) Calib End Date: 12/05/2016 19:54

Lab File ID: 11DEC2016A6A_092.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorobutanesulfonic acid (PFBS)	Ave	0.7015	0.7593		146	135	8.2	30.0
Perfluorohexanesulfonic acid	Ave	0.8980	1.090		55.1	45.4	21.4	30.0
Perfluoroheptanoic acid	Ave	1.215	1.228		15.4	15.3	1.1	30.0
Perfluorooctanoic acid (PFOA)	Ave	1.040	1.135		33.2	30.4	9.1	30.0
Perfluorooctanesulfonic acid (PFOS)	Ave	1.044	1.256		72.3	60.1	20.3	30.0
Perfluorononanoic acid	Ave	1.134	1.238		32.2	29.5	9.2	30.0
13C2 PFHxA	Ave	1.167	1.342		11.5	10.0	15.0	30.0
13C2 PFDA	Ave	0.8763	1.006		11.5	10.0	14.8	30.0

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Lab Sample ID: CCV 320-141768/15 Calibration Date: 12/13/2016 07:56

Instrument ID: A6 Calib Start Date: 12/05/2016 17:26

GC Column: Acquity ID: 2.10(mm) Calib End Date: 12/05/2016 19:54

Lab File ID: 11DEC2016A6A_092.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorobutanesulfonic acid (PFBS)	Ave	0.7015	0.7593		146	135	8.2	30.0
Perfluorohexanesulfonic acid	Ave	0.8980	1.090		55.1	45.4	21.4	30.0
Perfluoroheptanoic acid	Ave	1.215	1.228		15.4	15.3	1.1	30.0
Perfluorooctanoic acid (PFOA)	Ave	1.040	1.135		33.2	30.4	9.1	30.0
Perfluorooctanesulfonic acid (PFOS)	Ave	1.044	1.256		72.3	60.1	20.3	30.0
Perfluorononanoic acid	Ave	1.134	1.238		32.2	29.5	9.2	30.0
13C2 PFHxA	Ave	1.167	1.342		11.5	10.0	15.0	30.0
13C2 PFDA	Ave	0.8763	1.006		11.5	10.0	14.8	30.0

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_092.d
Lims ID: CCV L5
Client ID:
Sample Type: CCVIS
Inject. Date: 13-Dec-2016 07:56:58 ALS Bottle#: 5 Worklist Smp#: 15
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: CCV L5 CCV L5
Misc. Info.: Acquity BEH 1.7um, 3X150mm T=35*C
Operator ID: CBW Instrument ID: A6
Sublist: chrom-537__A6*sub3

Method: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\537__A6.m
Limit Group: LC 537 ICAL
Last Update: 13-Dec-2016 14:23:12 Calib Date: 05-Dec-2016 19:54:00
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d

Column 1 : Acquity BEH C18 (2.10 mm) Det: F1:MRM
Process Host: XAWRK022

First Level Reviewer: barnettj Date: 13-Dec-2016 14:11:39

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	S/N	Flags
1 Perfluorobutanesulfonic acid								
299.0 > 80.0	17.618	17.618	0.0	1.000	6590043	145.7	9325	
$ 2 13C2 PFHxA								
315.0 > 270.0	18.603	18.603	0.0	1.000	1231521	11.5	38892	
3 Perfluorohexanesulfonic acid								
399.0 > 80.0	19.356	19.356	0.0	1.000	3190108	55.1	15865	
4 Perfluoroheptanoic acid								
363.0 > 319.0	19.391	19.391	0.0	1.000	1721245	15.4	16143	
* 5 13C2-PFOA								
415.0 > 370.0	20.047	20.047	0.0		917652	10.0	23705	
6 Perfluorooctanoic acid								
413.0 > 369.0	20.058	20.058	0.0	1.000	3167647	33.2	1077	
7 Perfluorooctane sulfonic acid								
499.0 > 80.0	20.620	20.620	0.0	1.000	4864785	72.3	25548	
* 8 13C4 PFOS								
503.0 > 80.0	20.667	20.667	0.0		1848738	28.7	23634	
9 Perfluorononanoic acid								
463.0 > 419.0	20.750	20.750	0.0	1.000	3348564	32.2	22005	
$ 10 13C2 PFDA								
515.0 > 470.0	21.480	21.480	0.0	1.000	922883	11.5	28889	

Reagents:

LC537-L5_00017 Amount Added: 1.00 Units: mL

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_092.d
Lims ID: CCV L5
Client ID:
Sample Type: CCVIS
Inject. Date: 13-Dec-2016 07:56:58 ALS Bottle#: 5 Worklist Smp#: 15
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: CCV L5 CCV L5
Misc. Info.: Acquity BEH 1.7um, 3X150mm T=35*C
Operator ID: CBW Instrument ID: A6
Sublist: chrom-537__A6*sub3

Method: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\537__A6.m
Limit Group: LC 537 ICAL
Last Update: 13-Dec-2016 14:23:12 Calib Date: 05-Dec-2016 19:54:00
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d

Column 1 : Acquity BEH C18 (2.10 mm) Det: F1:MRM
Process Host: XAWRK022

First Level Reviewer: barnettj Date: 13-Dec-2016 14:11:39

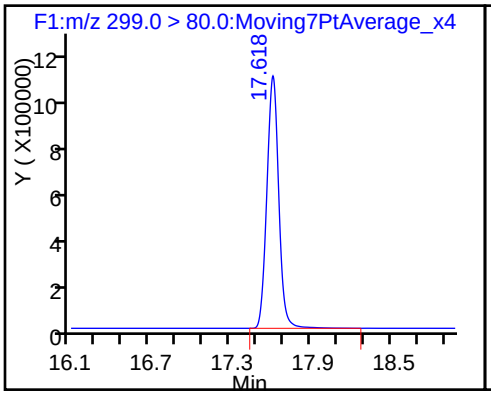
Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	S/N	Flags
1 Perfluorobutanesulfonic acid								
299.0 > 80.0	17.618	17.618	0.0	1.000	6590043	145.7	9325	
$ 2 13C2 PFHxA								
315.0 > 270.0	18.603	18.603	0.0	1.000	1231521	11.5	38892	
3 Perfluorohexanesulfonic acid								
399.0 > 80.0	19.356	19.356	0.0	1.000	3190108	55.1	15865	
4 Perfluoroheptanoic acid								
363.0 > 319.0	19.391	19.391	0.0	1.000	1721245	15.4	16143	
* 5 13C2-PFOA								
415.0 > 370.0	20.047	20.047	0.0		917652	10.0	23705	
6 Perfluorooctanoic acid								
413.0 > 369.0	20.058	20.058	0.0	1.000	3167647	33.2	1077	
7 Perfluorooctane sulfonic acid								
499.0 > 80.0	20.620	20.620	0.0	1.000	4864785	72.3	25548	
* 8 13C4 PFOS								
503.0 > 80.0	20.667	20.667	0.0		1848738	28.7	23634	
9 Perfluorononanoic acid								
463.0 > 419.0	20.750	20.750	0.0	1.000	3348564	32.2	22005	
$ 10 13C2 PFDA								
515.0 > 470.0	21.480	21.480	0.0	1.000	922883	11.5	28889	

Reagents:

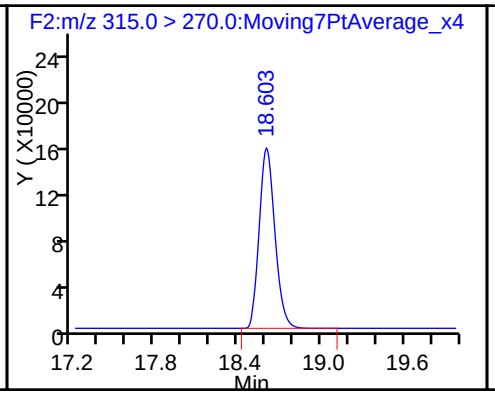
LC537-L5_00017 Amount Added: 1.00 Units: mL

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_092.d
Injection Date: 13-Dec-2016 07:56:58 Instrument ID: A6
Lims ID: CCV L5
Client ID:
Operator ID: CBW ALS Bottle#: 5 Worklist Smp#: 15
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 537__A6 Limit Group: LC 537 ICAL

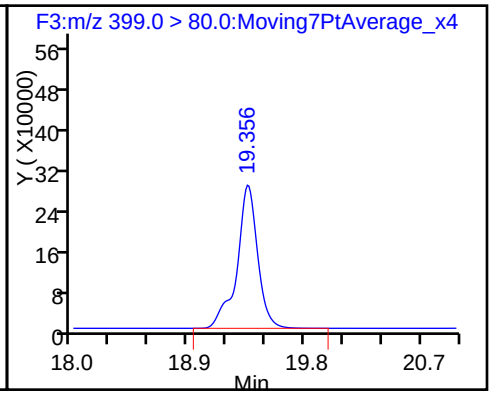
1 Perfluorobutanesulfonic acid



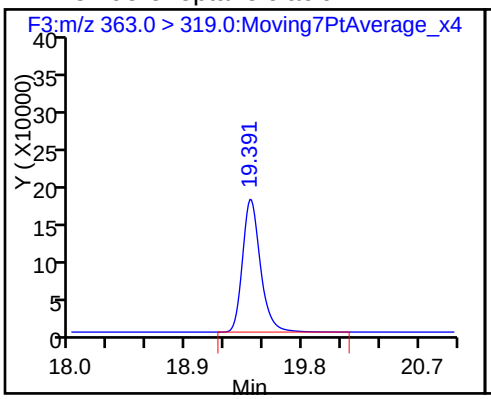
$ 2 13C2 PFHxA



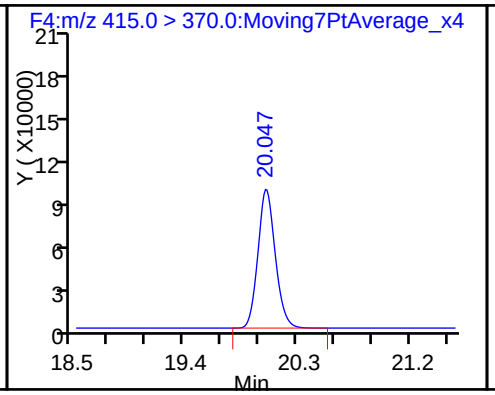
3 Perfluorohexanesulfonic acid



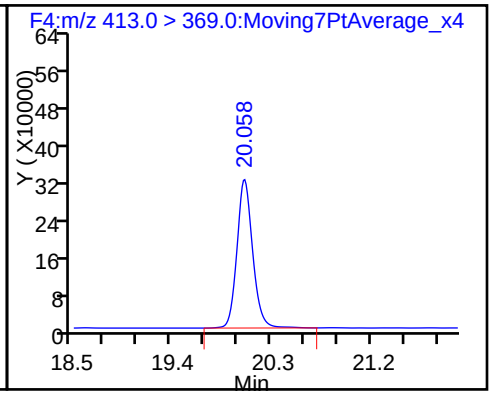
4 Perfluoroheptanoic acid



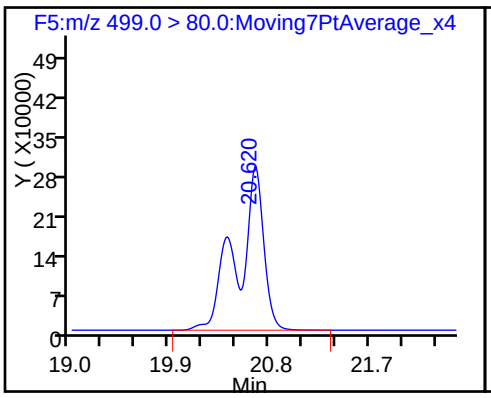
* 5 13C2-PFOA



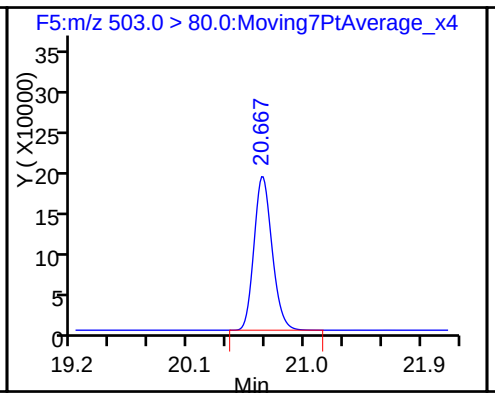
6 Perfluorooctanoic acid



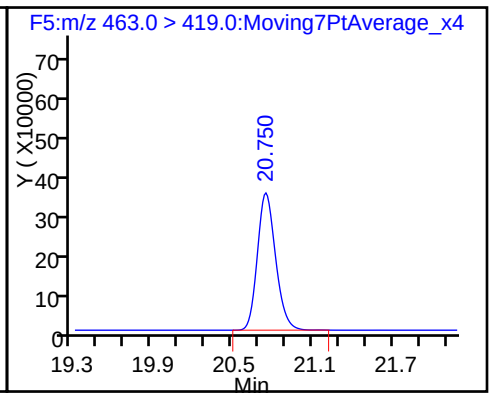
7 Perfluorooctane sulfonic acid



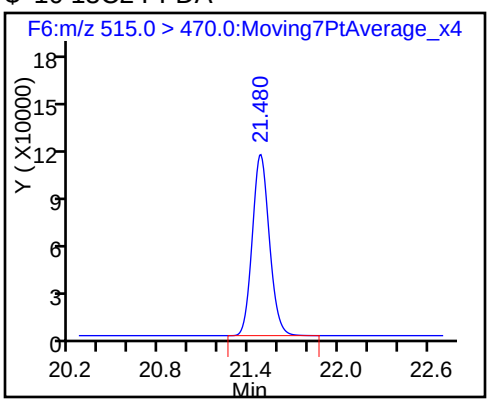
* 8 13C4 PFOS



9 Perfluorononanoic acid

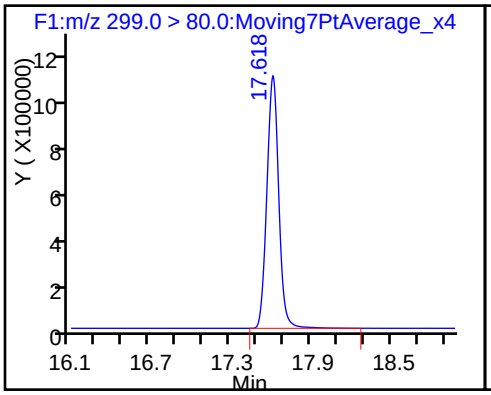


$ 10 13C2 PFDA

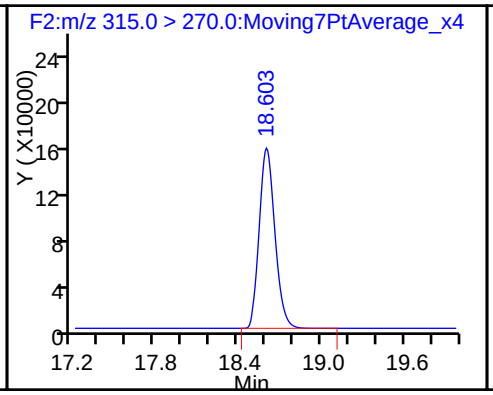


Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_092.d
Injection Date: 13-Dec-2016 07:56:58 Instrument ID: A6
Lims ID: CCV L5
Client ID:
Operator ID: CBW ALS Bottle#: 5 Worklist Smp#: 15
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 537__A6 Limit Group: LC 537 ICAL

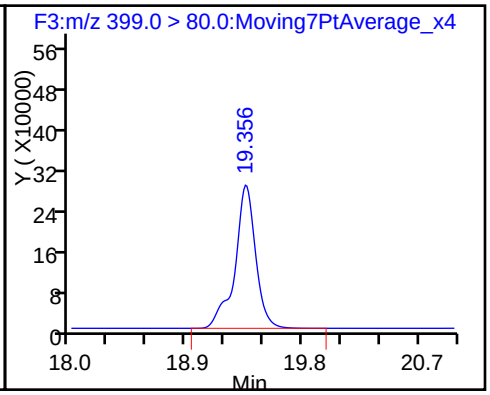
1 Perfluorobutanesulfonic acid



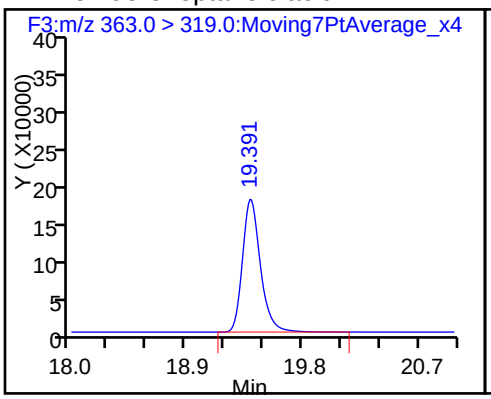
$ 2 13C2 PFHxA



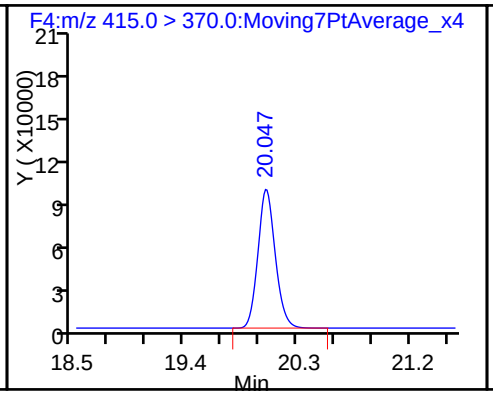
3 Perfluorohexanesulfonic acid



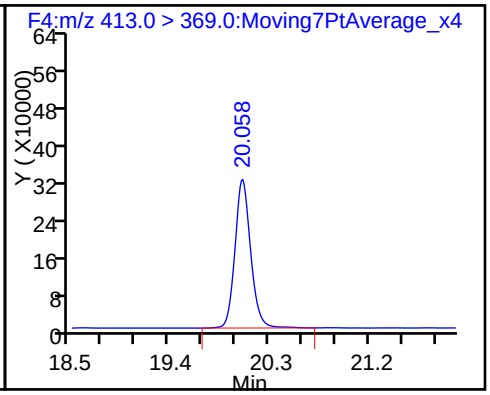
4 Perfluoroheptanoic acid



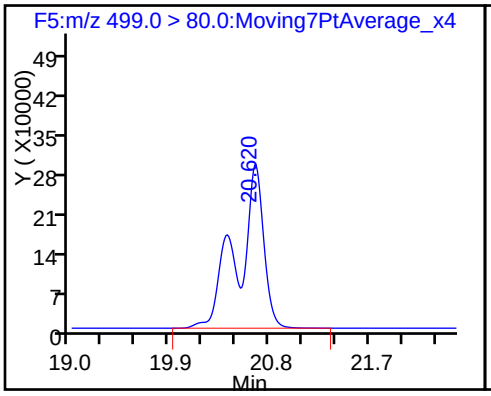
* 5 13C2-PFOA



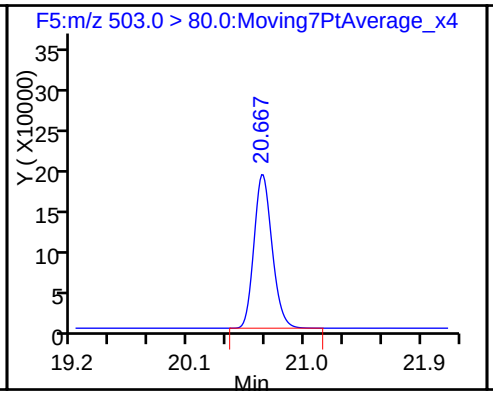
6 Perfluorooctanoic acid



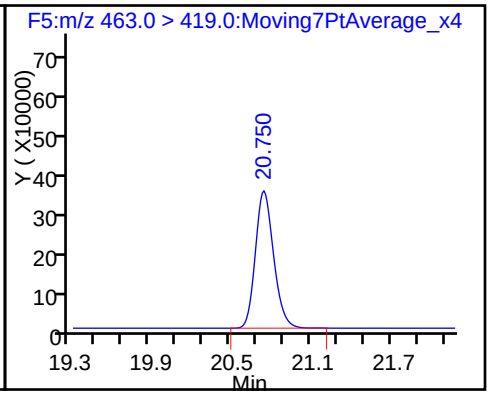
7 Perfluorooctane sulfonic acid



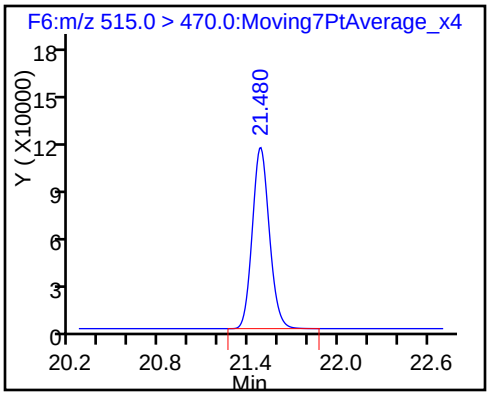
* 8 13C4 PFOS



9 Perfluorononanoic acid



$ 10 13C2 PFDA



FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Lab Sample ID: CCV 320-141768/28 Calibration Date: 12/13/2016 14:21

Instrument ID: A6 Calib Start Date: 12/05/2016 17:26

GC Column: Acquity ID: 2.10(mm) Calib End Date: 12/05/2016 19:54

Lab File ID: 11DEC2016A6A_105.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorobutanesulfonic acid (PFBS)	Ave	0.7015	0.7092		45.6	45.1	1.1	30.0
Perfluorohexanesulfonic acid	Ave	0.8980	0.9684		16.4	15.2	7.8	30.0
Perfluoroheptanoic acid	Ave	1.215	1.297		5.46	5.12	6.7	30.0
Perfluorooctanoic acid (PFOA)	Ave	1.040	1.006		9.85	10.2	-3.3	30.0
Perfluorooctanesulfonic acid (PFOS)	Ave	1.044	1.066		20.6	20.1	2.1	30.0
Perfluorononanoic acid	Ave	1.134	1.201		10.4	9.87	5.9	30.0
13C2 PFHxA	Ave	1.167	1.196		10.3	10.0	2.5	30.0
13C2 PFDA	Ave	0.8763	0.9148		10.4	10.0	4.4	30.0

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Lab Sample ID: CCV 320-141769/28 Calibration Date: 12/13/2016 14:21

Instrument ID: A6 Calib Start Date: 12/05/2016 17:26

GC Column: Acquity ID: 2.10(mm) Calib End Date: 12/05/2016 19:54

Lab File ID: 11DEC2016A6A_105.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorobutanesulfonic acid (PFBS)	Ave	0.7015	0.7092		45.6	45.1	1.1	30.0
Perfluorohexanesulfonic acid	Ave	0.8980	0.9684		16.4	15.2	7.8	30.0
Perfluoroheptanoic acid	Ave	1.215	1.297		5.46	5.12	6.7	30.0
Perfluorooctanoic acid (PFOA)	Ave	1.040	1.006		9.85	10.2	-3.3	30.0
Perfluorooctanesulfonic acid (PFOS)	Ave	1.044	1.066		20.6	20.1	2.1	30.0
Perfluorononanoic acid	Ave	1.134	1.201		10.4	9.87	5.9	30.0
13C2 PFHxA	Ave	1.167	1.196		10.3	10.0	2.5	30.0
13C2 PFDA	Ave	0.8763	0.9148		10.4	10.0	4.4	30.0

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_105.d
Lims ID: CCV L3
Client ID:
Sample Type: CCVIS
Inject. Date: 13-Dec-2016 14:21:45 ALS Bottle#: 3 Worklist Smp#: 28
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: CCV L3 CCV L3
Misc. Info.: Acquity BEH 1.7um, 3X150mm T=35*C
Operator ID: CBW Instrument ID: A6
Sublist: chrom-537__A6*sub3

Method: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\537__A6.m
Limit Group: LC 537 ICAL
Last Update: 13-Dec-2016 16:09:07 Calib Date: 05-Dec-2016 19:54:00
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d

Column 1 : Acquity BEH C18 (2.10 mm) Det: F1:MRM
Process Host: XAWRK022

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	S/N	Flags
1 Perfluorobutanesulfonic acid								
299.0 > 80.0	17.611	17.611	0.0	1.000	1880644	45.6	1085	
$ 2 13C2 PFHxA								
315.0 > 270.0	18.585	18.585	0.0	1.000	947759	10.3	30281	
3 Perfluorohexanesulfonic acid								
399.0 > 80.0	19.344	19.344	0.0	1.000	865739	16.4	20228	
4 Perfluoroheptanoic acid								
363.0 > 319.0	19.380	19.380	0.0	1.000	525924	5.46	13494	
* 5 13C2-PFOA								
415.0 > 370.0	20.035	20.035	0.0		792414	10.0	20364	
6 Perfluorooctanoic acid								
413.0 > 369.0	20.035	20.035	0.0	1.000	812486	9.85	553	
7 Perfluorooctane sulfonic acid								
499.0 > 80.0	20.619	20.619	0.0	1.000	1262334	20.6	15135	
* 8 13C4 PFOS								
503.0 > 80.0	20.667	20.667	0.0		1686222	28.7	25026	
9 Perfluorononanoic acid								
463.0 > 419.0	20.738	20.738	0.0	1.000	939213	10.4	24904	
$ 10 13C2 PFDA								
515.0 > 470.0	21.471	21.471	0.0	1.000	724891	10.4	22891	

Reagents:

LC537-L3_00016 Amount Added: 1.00 Units: mL

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_105.d
Lims ID: CCV L3
Client ID:
Sample Type: CCVIS
Inject. Date: 13-Dec-2016 14:21:45 ALS Bottle#: 3 Worklist Smp#: 28
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: CCV L3 CCV L3
Misc. Info.: Acquity BEH 1.7um, 3X150mm T=35*C
Operator ID: CBW Instrument ID: A6
Sublist: chrom-537__A6*sub3

Method: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\537__A6.m
Limit Group: LC 537 ICAL
Last Update: 13-Dec-2016 16:09:07 Calib Date: 05-Dec-2016 19:54:00
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d

Column 1 : Acquity BEH C18 (2.10 mm) Det: F1:MRM
Process Host: XAWRK022

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	S/N	Flags
1 Perfluorobutanesulfonic acid								
299.0 > 80.0	17.611	17.611	0.0	1.000	1880644	45.6	1085	
$ 2 13C2 PFHxA								
315.0 > 270.0	18.585	18.585	0.0	1.000	947759	10.3	30281	
3 Perfluorohexanesulfonic acid								
399.0 > 80.0	19.344	19.344	0.0	1.000	865739	16.4	20228	
4 Perfluoroheptanoic acid								
363.0 > 319.0	19.380	19.380	0.0	1.000	525924	5.46	13494	
* 5 13C2-PFOA								
415.0 > 370.0	20.035	20.035	0.0		792414	10.0	20364	
6 Perfluorooctanoic acid								
413.0 > 369.0	20.035	20.035	0.0	1.000	812486	9.85	553	
7 Perfluorooctane sulfonic acid								
499.0 > 80.0	20.619	20.619	0.0	1.000	1262334	20.6	15135	
* 8 13C4 PFOS								
503.0 > 80.0	20.667	20.667	0.0		1686222	28.7	25026	
9 Perfluorononanoic acid								
463.0 > 419.0	20.738	20.738	0.0	1.000	939213	10.4	24904	
$ 10 13C2 PFDA								
515.0 > 470.0	21.471	21.471	0.0	1.000	724891	10.4	22891	

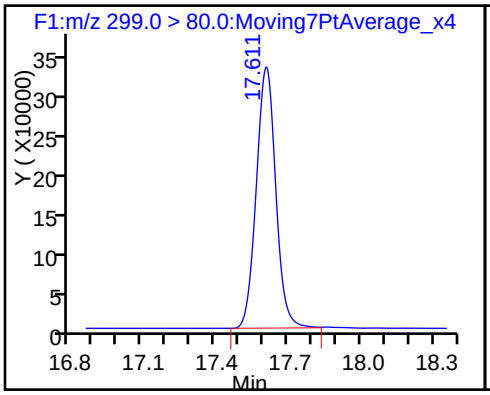
Reagents:

LC537-L3_00016 Amount Added: 1.00 Units: mL

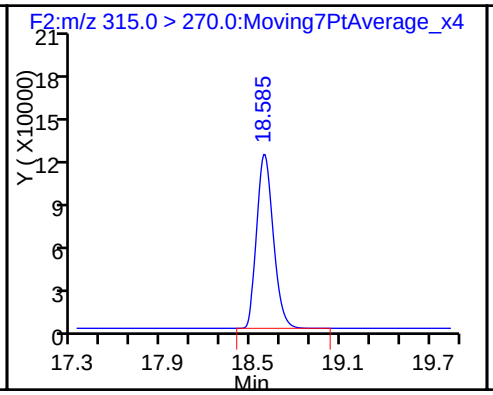
TestAmerica Sacramento

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_105.d
Injection Date: 13-Dec-2016 14:21:45 Instrument ID: A6
Lims ID: CCV L3
Client ID:
Operator ID: CBW ALS Bottle#: 3 Worklist Smp#: 28
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 537__A6 Limit Group: LC 537 ICAL

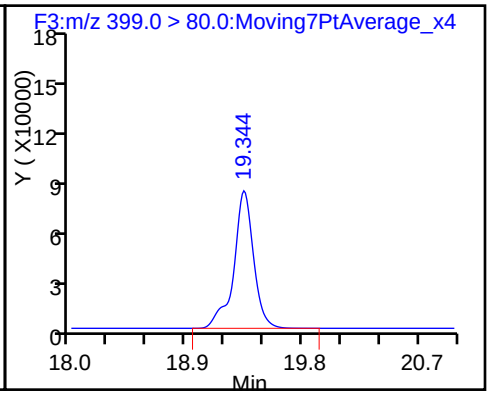
1 Perfluorobutanesulfonic acid



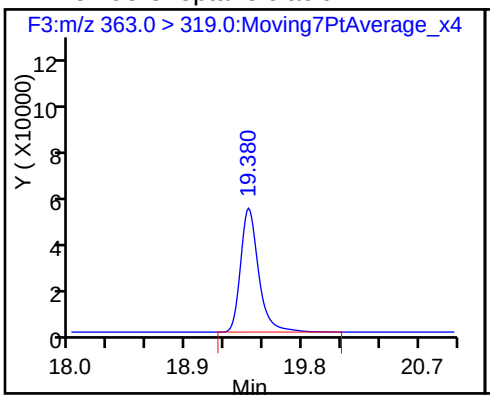
$ 2 13C2 PFHxA



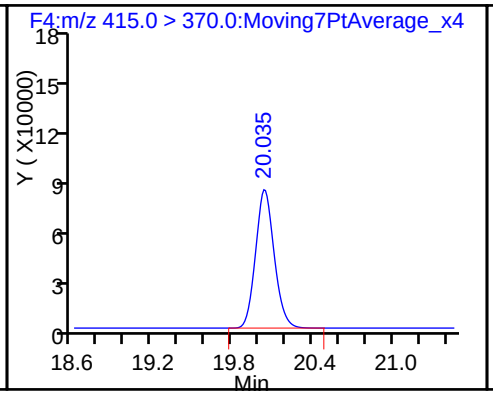
3 Perfluorohexanesulfonic acid



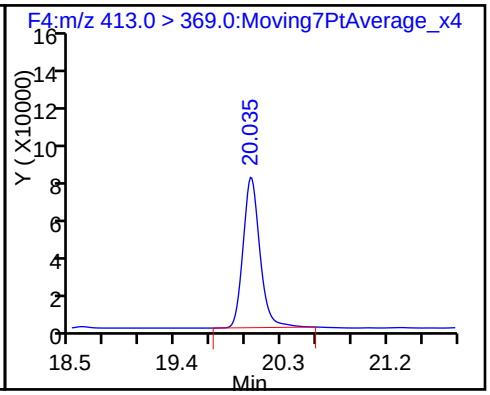
4 Perfluoroheptanoic acid



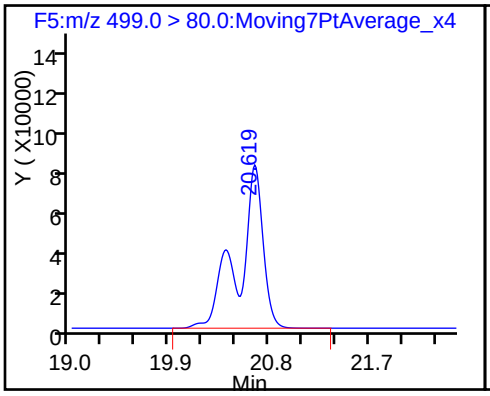
* 5 13C2-PFOA



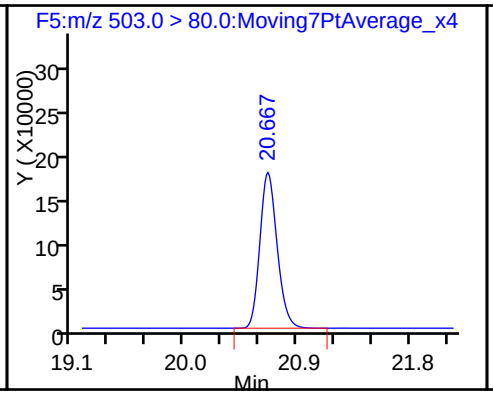
6 Perfluorooctanoic acid



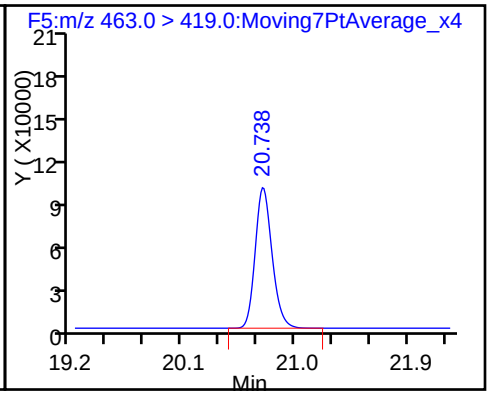
7 Perfluorooctane sulfonic acid



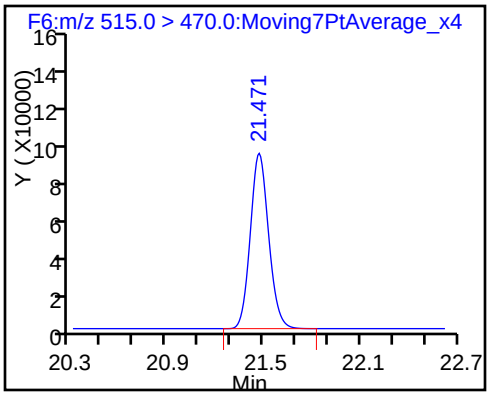
* 8 13C4 PFOS



9 Perfluorononanoic acid

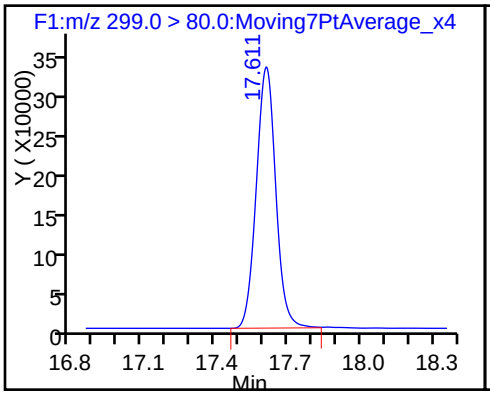


$ 10 13C2 PFDA

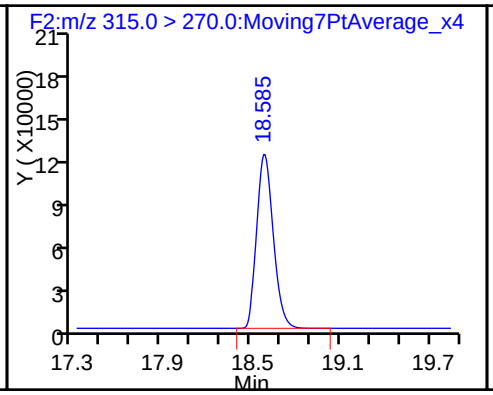


Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_105.d
Injection Date: 13-Dec-2016 14:21:45 Instrument ID: A6
Lims ID: CCV L3
Client ID:
Operator ID: CBW ALS Bottle#: 3 Worklist Smp#: 28
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 537__A6 Limit Group: LC 537 ICAL

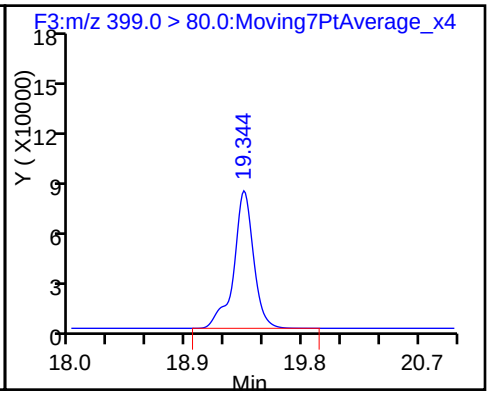
1 Perfluorobutanesulfonic acid



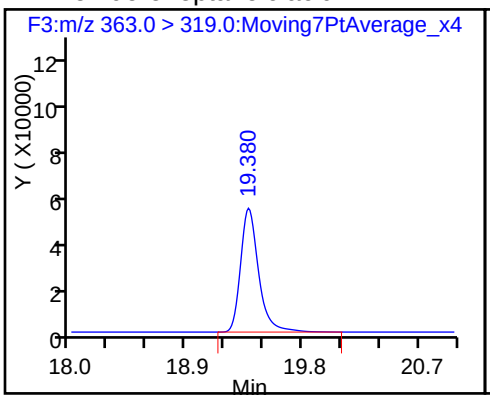
$ 2 13C2 PFHxA



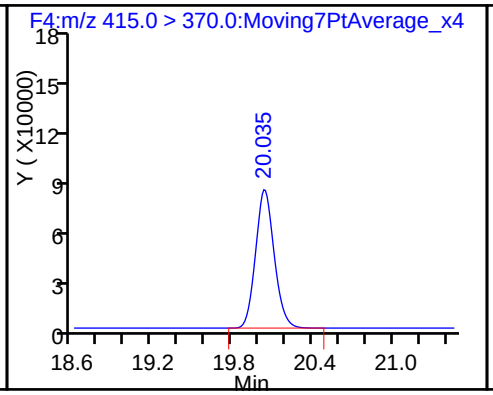
3 Perfluorohexanesulfonic acid



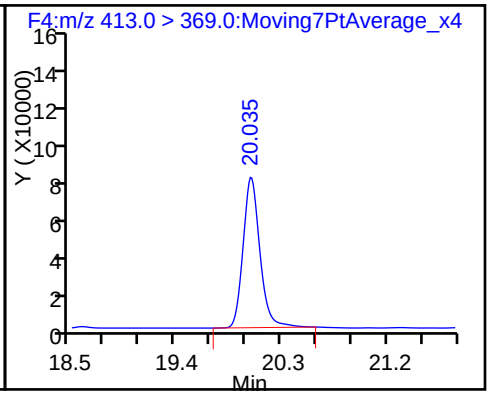
4 Perfluoroheptanoic acid



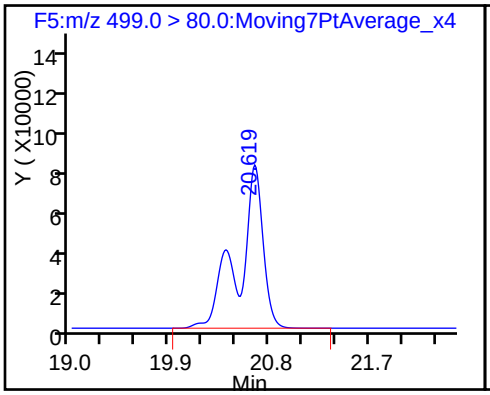
* 5 13C2-PFOA



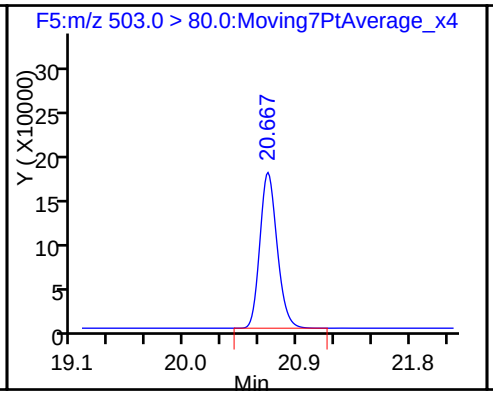
6 Perfluorooctanoic acid



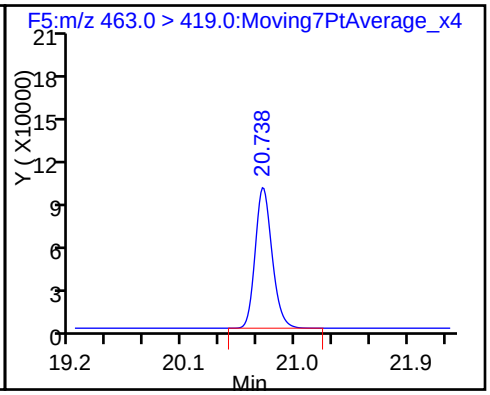
7 Perfluorooctane sulfonic acid



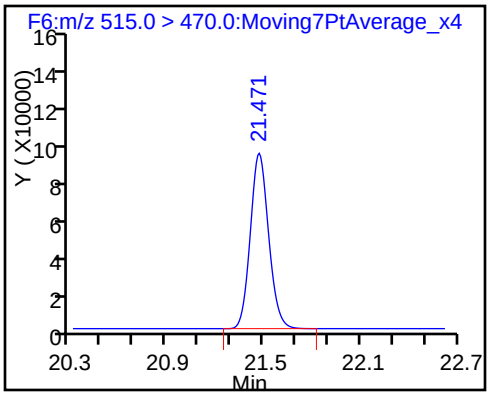
* 8 13C4 PFOS



9 Perfluorononanoic acid



$ 10 13C2 PFDA



FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Lab Sample ID: CCV 320-141769/40 Calibration Date: 12/13/2016 20:32

Instrument ID: A6 Calib Start Date: 12/05/2016 17:26

GC Column: Acquity ID: 2.10(mm) Calib End Date: 12/05/2016 19:54

Lab File ID: 11DEC2016A6A_117.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorobutanesulfonic acid (PFBS)	Ave	0.7015	0.7025		135	135	0.1	30.0
Perfluorohexanesulfonic acid	Ave	0.8980	1.024		51.7	45.4	14.0	30.0
Perfluoroheptanoic acid	Ave	1.215	1.224		15.4	15.3	0.7	30.0
Perfluorooctanoic acid (PFOA)	Ave	1.040	1.141		33.4	30.4	9.6	30.0
Perfluorooctanesulfonic acid (PFOS)	Ave	1.044	1.208		69.6	60.1	15.7	30.0
Perfluorononanoic acid	Ave	1.134	1.228		31.9	29.5	8.3	30.0
13C2 PFHxA	Ave	1.167	1.299		11.1	10.0	11.4	30.0
13C2 PFDA	Ave	0.8763	1.036		11.8	10.0	18.2	30.0

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Lab Sample ID: CCV 320-141770/40 Calibration Date: 12/13/2016 20:32

Instrument ID: A6 Calib Start Date: 12/05/2016 17:26

GC Column: Acquity ID: 2.10(mm) Calib End Date: 12/05/2016 19:54

Lab File ID: 11DEC2016A6A_117.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorobutanesulfonic acid (PFBS)	Ave	0.7015	0.7025		135	135	0.1	30.0
Perfluorohexanesulfonic acid	Ave	0.8980	1.024		51.7	45.4	14.0	30.0
Perfluoroheptanoic acid	Ave	1.215	1.224		15.4	15.3	0.7	30.0
Perfluorooctanoic acid (PFOA)	Ave	1.040	1.141		33.4	30.4	9.6	30.0
Perfluorooctanesulfonic acid (PFOS)	Ave	1.044	1.208		69.6	60.1	15.7	30.0
Perfluorononanoic acid	Ave	1.134	1.228		31.9	29.5	8.3	30.0
13C2 PFHxA	Ave	1.167	1.299		11.1	10.0	11.4	30.0
13C2 PFDA	Ave	0.8763	1.036		11.8	10.0	18.2	30.0

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_117.d
Lims ID: CCV L5
Client ID:
Sample Type: CCVIS
Inject. Date: 13-Dec-2016 20:32:45 ALS Bottle#: 5 Worklist Smp#: 40
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: CCV L5 CCV L5
Misc. Info.: Acquity BEH 1.7um, 3X150mm T=35*C
Operator ID: CBW Instrument ID: A6
Sublist: chrom-537__A6*sub3

Method: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\537__A6.m
Limit Group: LC 537 ICAL
Last Update: 14-Dec-2016 10:52:25 Calib Date: 05-Dec-2016 19:54:00
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d

Column 1 : Acquity BEH C18 (2.10 mm) Det: F1:MRM
Process Host: XAWRK017

First Level Reviewer: barnettj Date: 14-Dec-2016 09:52:41

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	S/N	Flags
1 Perfluorobutanesulfonic acid								
299.0 > 80.0	17.621	17.621	0.0	1.000	5770997	134.8	11922	
$ 2 13C2 PFHxA								
315.0 > 270.0	18.604	18.604	0.0	1.000	1086007	11.1	35113	
3 Perfluorohexanesulfonic acid								
399.0 > 80.0	19.356	19.356	0.0	1.000	2835046	51.7	42965	
4 Perfluoroheptanoic acid								
363.0 > 319.0	19.392	19.392	0.0	1.000	1562109	15.4	18047	
* 5 13C2-PFOA								
415.0 > 370.0	20.047	20.047	0.0		835720	10.0	21592	
6 Perfluorooctanoic acid								
413.0 > 369.0	20.047	20.047	0.0	1.000	2900224	33.4	1164	
7 Perfluorooctane sulfonic acid								
499.0 > 80.0	20.620	20.620	0.0	1.000	4430729	69.6	23702	
* 8 13C4 PFOS								
503.0 > 80.0	20.679	20.679	0.0		1749819	28.7	45108	
9 Perfluorononanoic acid								
463.0 > 419.0	20.750	20.750	0.0	1.000	3024382	31.9	79822	
$ 10 13C2 PFDA								
515.0 > 470.0	21.471	21.471	0.0	1.000	865428	11.8	27371	

Reagents:

LC537-L5_00017 Amount Added: 1.00 Units: mL

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_117.d
Lims ID: CCV L5
Client ID:
Sample Type: CCVIS
Inject. Date: 13-Dec-2016 20:32:45 ALS Bottle#: 5 Worklist Smp#: 40
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: CCV L5 CCV L5
Misc. Info.: Acquity BEH 1.7um, 3X150mm T=35*C
Operator ID: CBW Instrument ID: A6
Sublist: chrom-537__A6*sub3

Method: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\537__A6.m
Limit Group: LC 537 ICAL
Last Update: 14-Dec-2016 10:52:25 Calib Date: 05-Dec-2016 19:54:00
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d

Column 1 : Acquity BEH C18 (2.10 mm) Det: F1:MRM
Process Host: XAWRK017

First Level Reviewer: barnettj Date: 14-Dec-2016 09:52:41

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	S/N	Flags
1 Perfluorobutanesulfonic acid								
299.0 > 80.0	17.621	17.621	0.0	1.000	5770997	134.8	11922	
$ 2 13C2 PFHxA								
315.0 > 270.0	18.604	18.604	0.0	1.000	1086007	11.1	35113	
3 Perfluorohexanesulfonic acid								
399.0 > 80.0	19.356	19.356	0.0	1.000	2835046	51.7	42965	
4 Perfluoroheptanoic acid								
363.0 > 319.0	19.392	19.392	0.0	1.000	1562109	15.4	18047	
* 5 13C2-PFOA								
415.0 > 370.0	20.047	20.047	0.0		835720	10.0	21592	
6 Perfluorooctanoic acid								
413.0 > 369.0	20.047	20.047	0.0	1.000	2900224	33.4	1164	
7 Perfluorooctane sulfonic acid								
499.0 > 80.0	20.620	20.620	0.0	1.000	4430729	69.6	23702	
* 8 13C4 PFOS								
503.0 > 80.0	20.679	20.679	0.0		1749819	28.7	45108	
9 Perfluorononanoic acid								
463.0 > 419.0	20.750	20.750	0.0	1.000	3024382	31.9	79822	
$ 10 13C2 PFDA								
515.0 > 470.0	21.471	21.471	0.0	1.000	865428	11.8	27371	

Reagents:

LC537-L5_00017 Amount Added: 1.00 Units: mL

Report Date: 14-Dec-2016 10:52:25 Chrom Revision: 2.2 05-Dec-2016 12:37:22

TestAmerica Sacramento

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_117.d

Injection Date: 13-Dec-2016 20:32:45 Instrument ID: A6

Lims ID: CCV L5

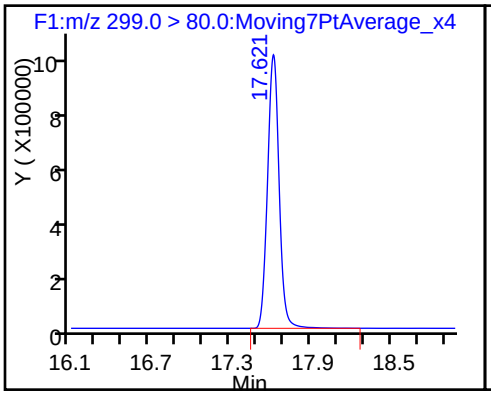
Client ID:

Operator ID: CBW ALS Bottle#: 5 Worklist Smp#: 40

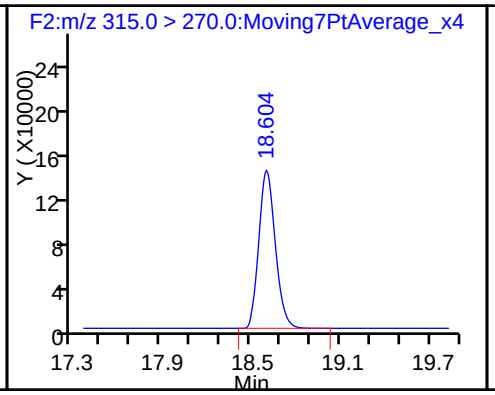
Injection Vol: 10.0 ul Dil. Factor: 1.0000

Method: 537__A6 Limit Group: LC 537 ICAL

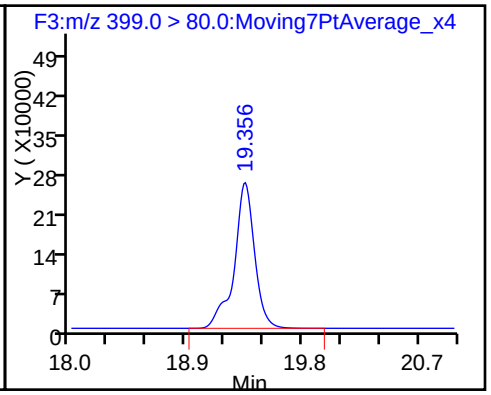
1 Perfluorobutanesulfonic acid



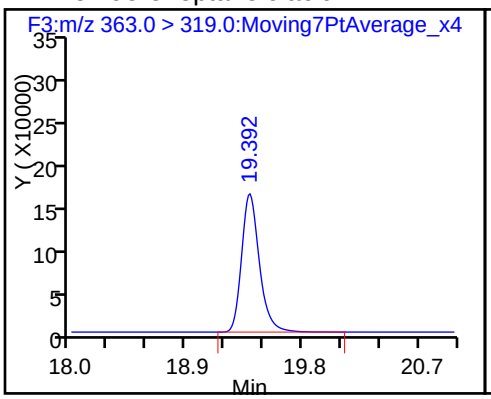
$ 2 13C2 PFHxA



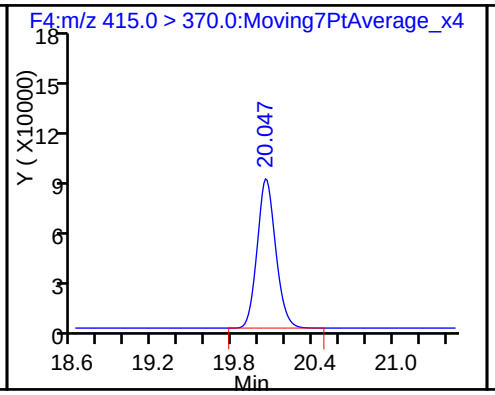
3 Perfluorohexanesulfonic acid



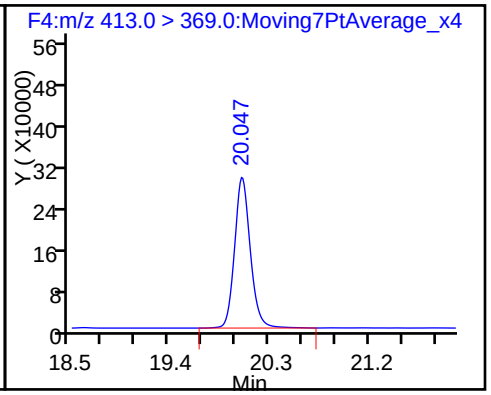
4 Perfluoroheptanoic acid



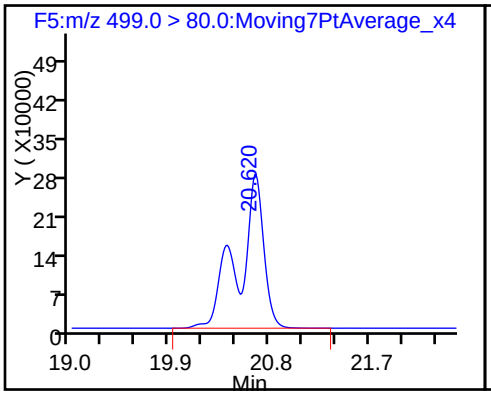
* 5 13C2-PFOA



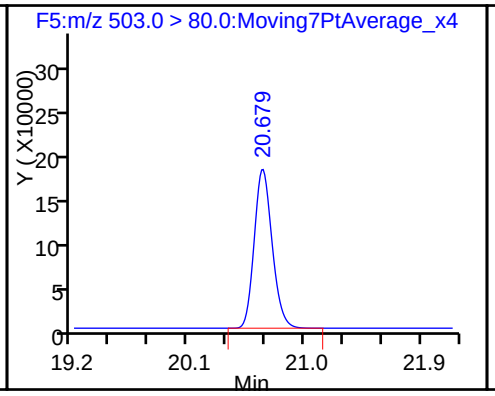
6 Perfluorooctanoic acid



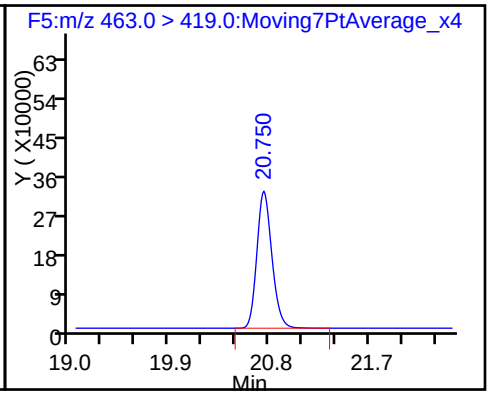
7 Perfluorooctane sulfonic acid



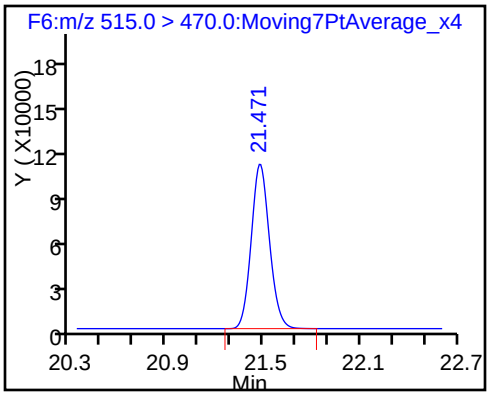
* 8 13C4 PFOS



9 Perfluorononanoic acid

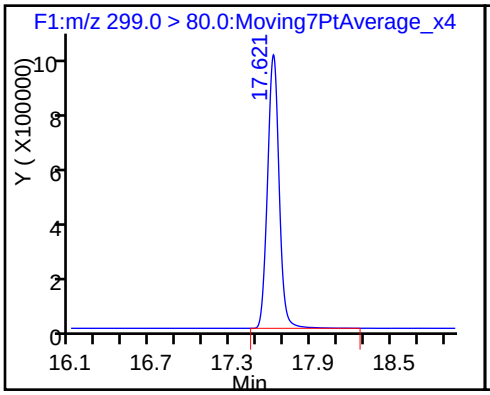


$ 10 13C2 PFDA

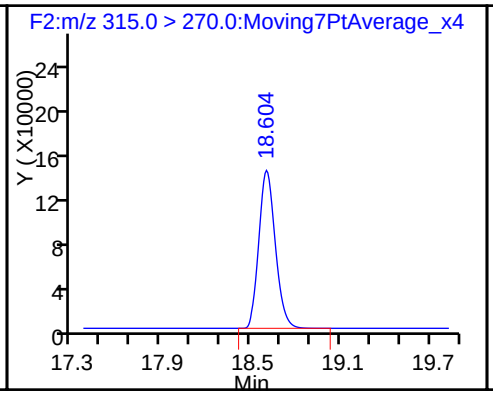


Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_117.d
Injection Date: 13-Dec-2016 20:32:45 Instrument ID: A6
Lims ID: CCV L5
Client ID:
Operator ID: CBW ALS Bottle#: 5 Worklist Smp#: 40
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 537__A6 Limit Group: LC 537 ICAL

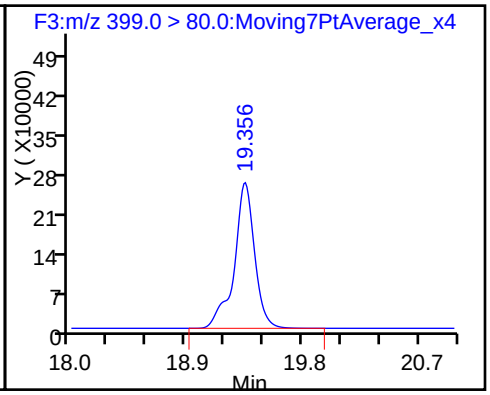
1 Perfluorobutanesulfonic acid



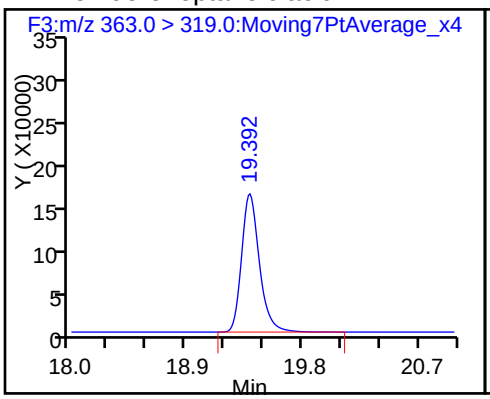
$ 2 13C2 PFHxA



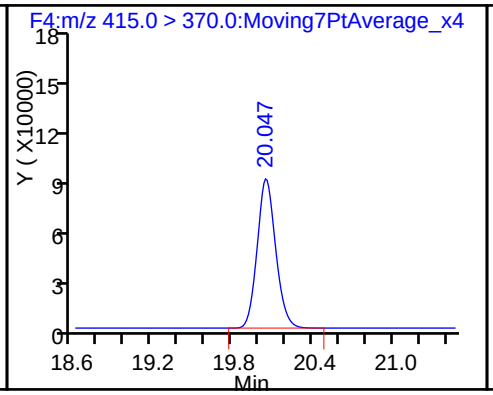
3 Perfluorohexanesulfonic acid



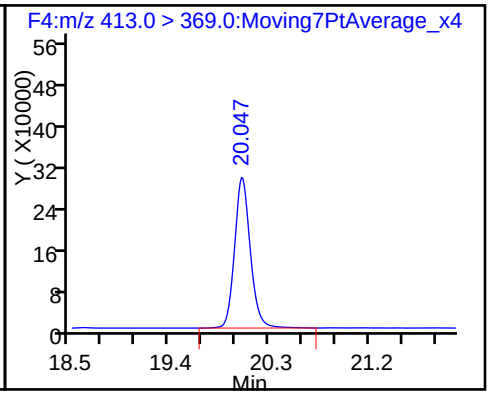
4 Perfluoroheptanoic acid



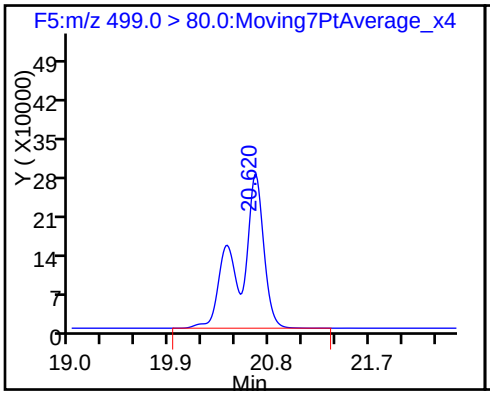
* 5 13C2-PFOA



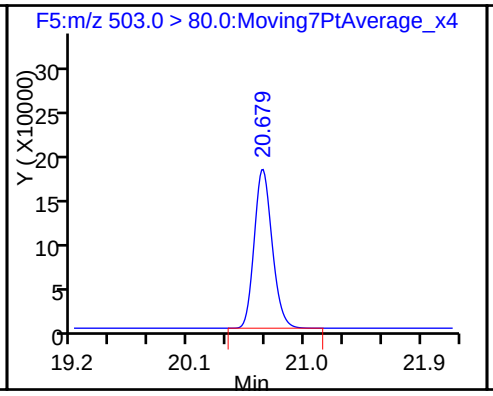
6 Perfluorooctanoic acid



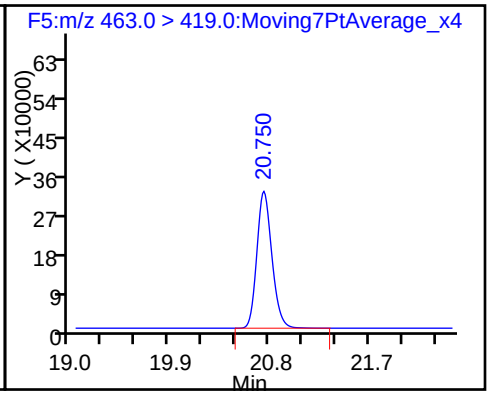
7 Perfluorooctane sulfonic acid



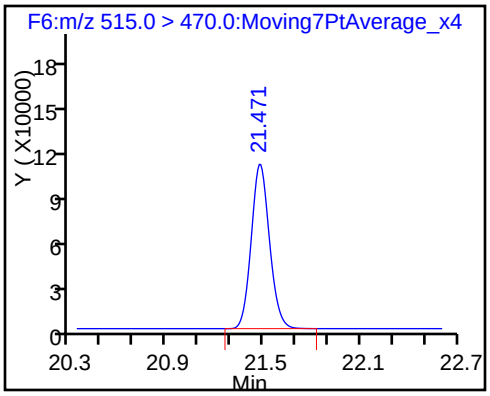
* 8 13C4 PFOS



9 Perfluorononanoic acid



$ 10 13C2 PFDA



FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Lab Sample ID: CCV 320-141770/53 Calibration Date: 12/14/2016 02:57

Instrument ID: A6 Calib Start Date: 12/05/2016 17:26

GC Column: Acquity ID: 2.10(mm) Calib End Date: 12/05/2016 19:54

Lab File ID: 11DEC2016A6A_130.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorobutanesulfonic acid (PFBS)	Ave	0.7015	0.7548		48.5	45.1	7.6	30.0
Perfluorohexanesulfonic acid	Ave	0.8980	0.9288		15.7	15.2	3.4	30.0
Perfluoroheptanoic acid	Ave	1.215	1.357		5.72	5.12	11.7	30.0
Perfluorooctanoic acid (PFOA)	Ave	1.040	1.064		10.4	10.2	2.3	30.0
Perfluorooctanesulfonic acid (PFOS)	Ave	1.044	1.071		20.7	20.1	2.6	30.0
Perfluorononanoic acid	Ave	1.134	1.234		10.7	9.87	8.8	30.0
13C2 PFHxA	Ave	1.167	1.223		10.5	10.0	4.9	30.0
13C2 PFDA	Ave	0.8763	0.9179		10.5	10.0	4.7	30.0

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Lab Sample ID: CCV 320-141771/53 Calibration Date: 12/14/2016 02:57

Instrument ID: A6 Calib Start Date: 12/05/2016 17:26

GC Column: Acquity ID: 2.10(mm) Calib End Date: 12/05/2016 19:54

Lab File ID: 11DEC2016A6A_130.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorobutanesulfonic acid (PFBS)	Ave	0.7015	0.7548		48.5	45.1	7.6	30.0
Perfluorohexanesulfonic acid	Ave	0.8980	0.9288		15.7	15.2	3.4	30.0
Perfluoroheptanoic acid	Ave	1.215	1.357		5.72	5.12	11.7	30.0
Perfluorooctanoic acid (PFOA)	Ave	1.040	1.064		10.4	10.2	2.3	30.0
Perfluorooctanesulfonic acid (PFOS)	Ave	1.044	1.071		20.7	20.1	2.6	30.0
Perfluorononanoic acid	Ave	1.134	1.234		10.7	9.87	8.8	30.0
13C2 PFHxA	Ave	1.167	1.223		10.5	10.0	4.9	30.0
13C2 PFDA	Ave	0.8763	0.9179		10.5	10.0	4.7	30.0

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_130.d
Lims ID: CCV L3
Client ID:
Sample Type: CCVIS
Inject. Date: 14-Dec-2016 02:57:28 ALS Bottle#: 3 Worklist Smp#: 53
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: CCV L3 CCV L3
Misc. Info.: Acquity BEH 1.7um, 3X150mm T=35*C
Operator ID: CBW Instrument ID: A6
Sublist: chrom-537__A6*sub3

Method: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\537__A6.m
Limit Group: LC 537 ICAL
Last Update: 14-Dec-2016 10:52:53 Calib Date: 05-Dec-2016 19:54:00
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d

Column 1 : Acquity BEH C18 (2.10 mm) Det: F1:MRM
Process Host: XAWRK017

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	S/N	Flags
1 Perfluorobutanesulfonic acid								
299.0 > 80.0	17.605	17.605	0.0	1.000	2129950	48.5	2412	
$ 2 13C2 PFHxA								
315.0 > 270.0	18.585	18.585	0.0	1.000	873144	10.5	27910	
3 Perfluorohexanesulfonic acid								
399.0 > 80.0	19.344	19.344	0.0	1.000	883569	15.7	20672	
4 Perfluoroheptanoic acid								
363.0 > 319.0	19.380	19.380	0.0	1.000	495707	5.72	3890	
* 5 13C2-PFOA								
415.0 > 370.0	20.035	20.035	0.0		713785	10.0	18688	
6 Perfluorooctanoic acid								
413.0 > 369.0	20.035	20.035	0.0	1.000	774072	10.4	613	
7 Perfluorooctane sulfonic acid								
499.0 > 80.0	20.619	20.619	0.0	1.000	1349403	20.7	16603	
* 8 13C4 PFOS								
503.0 > 80.0	20.667	20.667	0.0		1794330	28.7	30847	
9 Perfluorononanoic acid								
463.0 > 419.0	20.738	20.738	0.0	1.000	869687	10.7	22878	
$ 10 13C2 PFDA								
515.0 > 470.0	21.471	21.471	0.0	1.000	655154	10.5	20698	

Reagents:

LC537-L3_00016 Amount Added: 1.00 Units: mL

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_130.d
Lims ID: CCV L3
Client ID:
Sample Type: CCVIS
Inject. Date: 14-Dec-2016 02:57:28 ALS Bottle#: 3 Worklist Smp#: 53
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: CCV L3 CCV L3
Misc. Info.: Acquity BEH 1.7um, 3X150mm T=35*C
Operator ID: CBW Instrument ID: A6
Sublist: chrom-537__A6*sub3

Method: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\537__A6.m
Limit Group: LC 537 ICAL
Last Update: 14-Dec-2016 10:52:53 Calib Date: 05-Dec-2016 19:54:00
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d

Column 1 : Acquity BEH C18 (2.10 mm) Det: F1:MRM
Process Host: XAWRK017

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	S/N	Flags
1 Perfluorobutanesulfonic acid								
299.0 > 80.0	17.605	17.605	0.0	1.000	2129950	48.5	2412	
$ 2 13C2 PFHxA								
315.0 > 270.0	18.585	18.585	0.0	1.000	873144	10.5	27910	
3 Perfluorohexanesulfonic acid								
399.0 > 80.0	19.344	19.344	0.0	1.000	883569	15.7	20672	
4 Perfluoroheptanoic acid								
363.0 > 319.0	19.380	19.380	0.0	1.000	495707	5.72	3890	
* 5 13C2-PFOA								
415.0 > 370.0	20.035	20.035	0.0		713785	10.0	18688	
6 Perfluorooctanoic acid								
413.0 > 369.0	20.035	20.035	0.0	1.000	774072	10.4	613	
7 Perfluorooctane sulfonic acid								
499.0 > 80.0	20.619	20.619	0.0	1.000	1349403	20.7	16603	
* 8 13C4 PFOS								
503.0 > 80.0	20.667	20.667	0.0		1794330	28.7	30847	
9 Perfluorononanoic acid								
463.0 > 419.0	20.738	20.738	0.0	1.000	869687	10.7	22878	
$ 10 13C2 PFDA								
515.0 > 470.0	21.471	21.471	0.0	1.000	655154	10.5	20698	

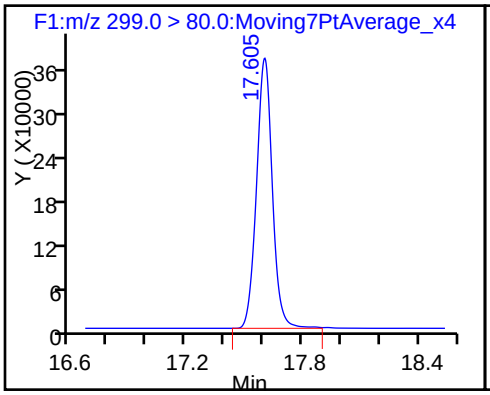
Reagents:

LC537-L3_00016 Amount Added: 1.00 Units: mL

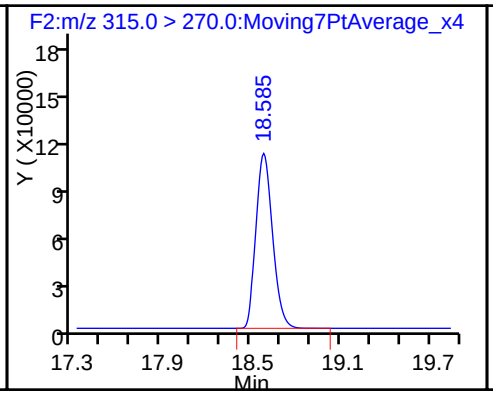
TestAmerica Sacramento

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_130.d
Injection Date: 14-Dec-2016 02:57:28 Instrument ID: A6
Lims ID: CCV L3
Client ID:
Operator ID: CBW ALS Bottle#: 3 Worklist Smp#: 53
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 537__A6 Limit Group: LC 537 ICAL

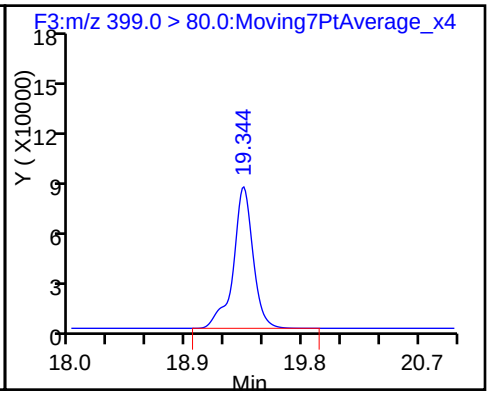
1 Perfluorobutanesulfonic acid



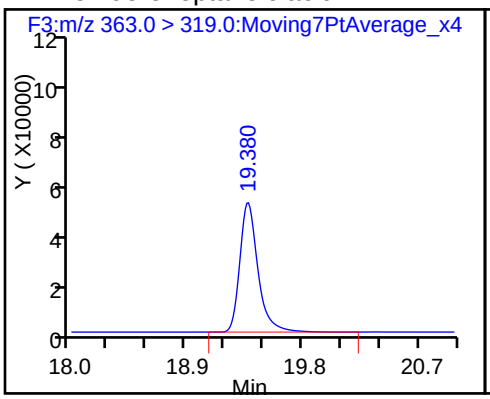
$ 2 13C2 PFHxA



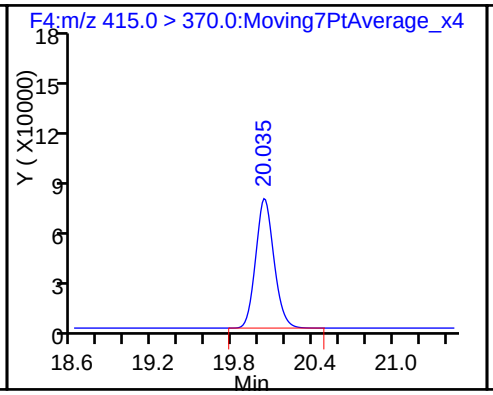
3 Perfluorohexanesulfonic acid



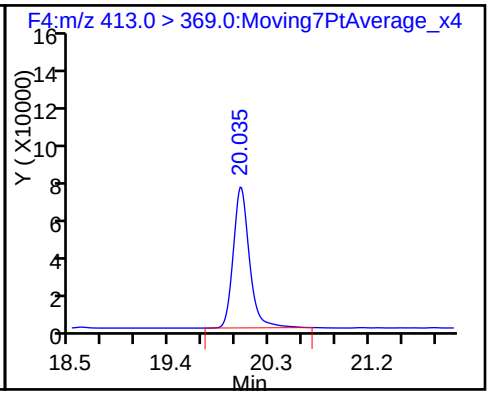
4 Perfluoroheptanoic acid



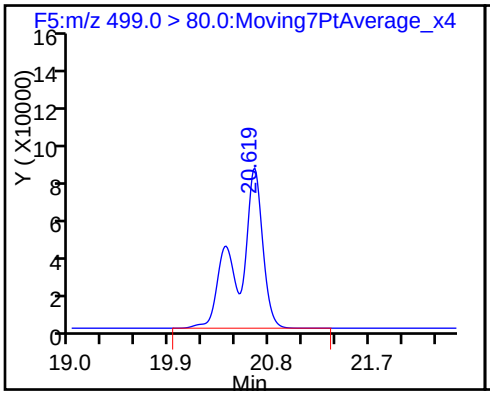
* 5 13C2-PFOA



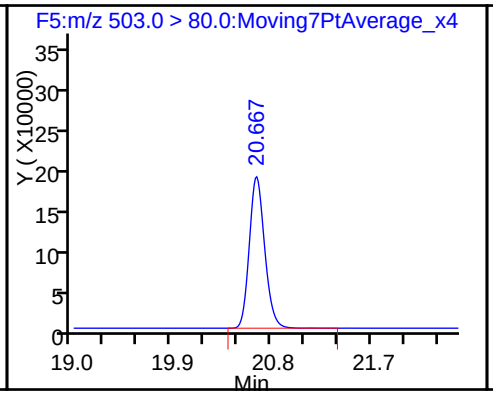
6 Perfluorooctanoic acid



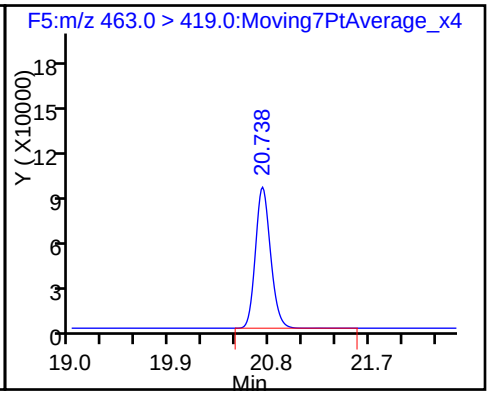
7 Perfluorooctane sulfonic acid



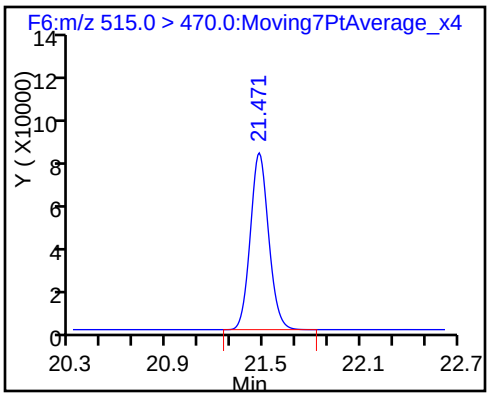
* 8 13C4 PFOS



9 Perfluorononanoic acid



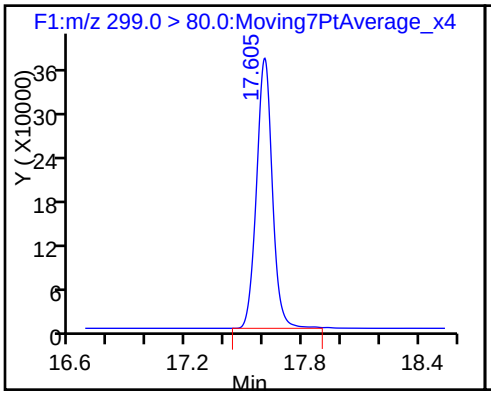
$ 10 13C2 PFDA



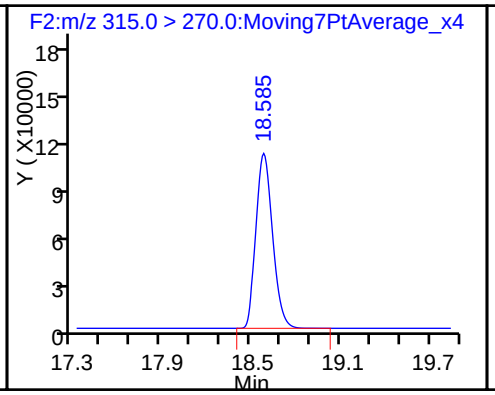
TestAmerica Sacramento

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_130.d
Injection Date: 14-Dec-2016 02:57:28 Instrument ID: A6
Lims ID: CCV L3
Client ID:
Operator ID: CBW ALS Bottle#: 3 Worklist Smp#: 53
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 537__A6 Limit Group: LC 537 ICAL

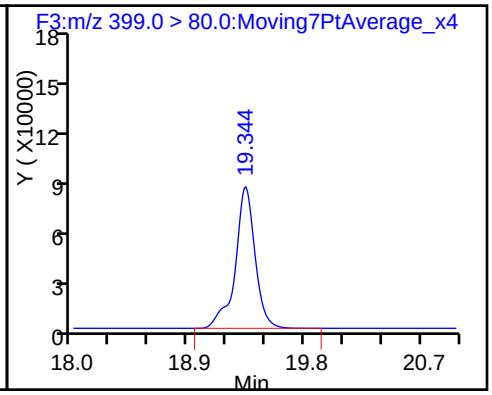
1 Perfluorobutanesulfonic acid



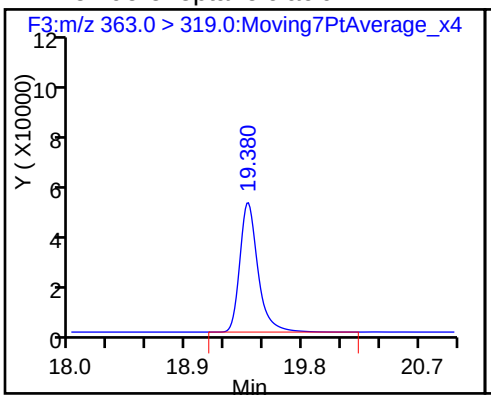
$ 2 13C2 PFHxA



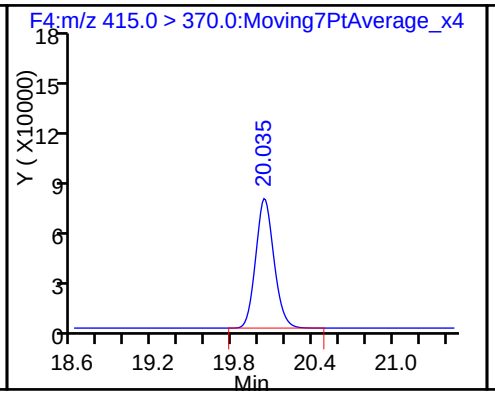
3 Perfluorohexanesulfonic acid



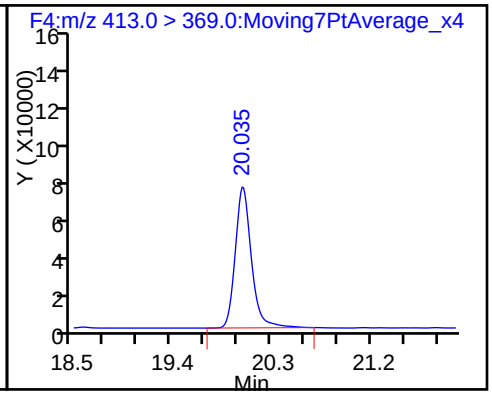
4 Perfluoroheptanoic acid



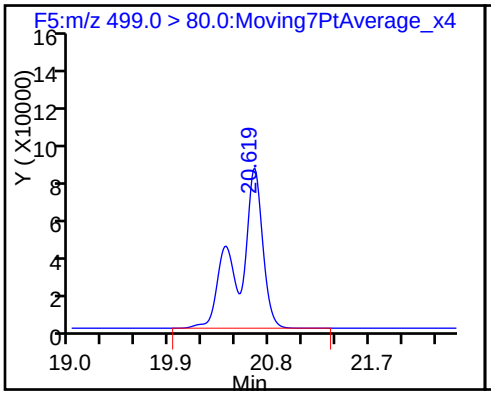
* 5 13C2-PFOA



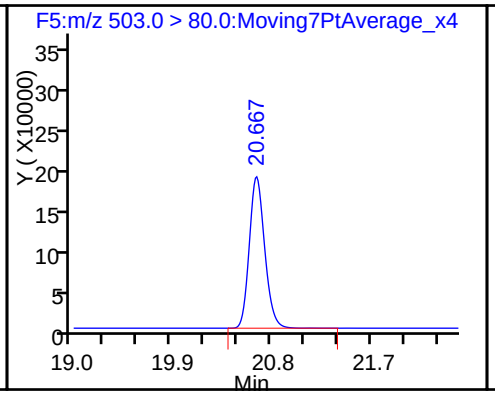
6 Perfluorooctanoic acid



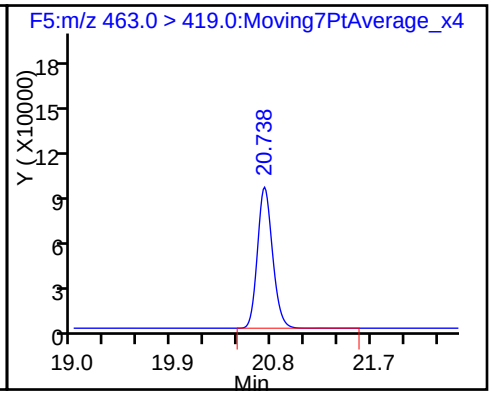
7 Perfluorooctane sulfonic acid



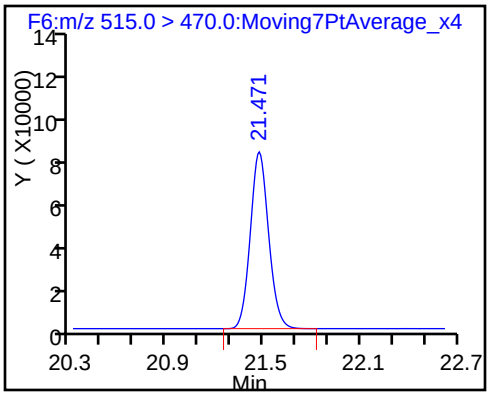
* 8 13C4 PFOS



9 Perfluorononanoic acid



$ 10 13C2 PFDA



FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Lab Sample ID: CCV 320-141771/59 Calibration Date: 12/14/2016 09:22

Instrument ID: A6 Calib Start Date: 12/05/2016 17:26

GC Column: Acquity ID: 2.10(mm) Calib End Date: 12/05/2016 19:54

Lab File ID: 11DEC2016A6A_143.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorobutanesulfonic acid (PFBS)	Ave	0.7015	0.7209		138	135	2.8	30.0
Perfluorohexanesulfonic acid	Ave	0.8980	1.023		51.7	45.4	13.9	30.0
Perfluoroheptanoic acid	Ave	1.215	1.209		15.2	15.3	-0.5	30.0
Perfluorooctanoic acid (PFOA)	Ave	1.040	1.129		33.0	30.4	8.5	30.0
Perfluorooctanesulfonic acid (PFOS)	Ave	1.044	1.243		71.5	60.1	19.0	30.0
Perfluorononanoic acid	Ave	1.134	1.239		32.2	29.5	9.2	30.0
13C2 PFHxA	Ave	1.167	1.292		11.1	10.0	10.7	30.0
13C2 PFDA	Ave	0.8763	0.9736		11.1	10.0	11.1	30.0

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_143.d
Lims ID: CCV L5
Client ID:
Sample Type: CCVIS
Inject. Date: 14-Dec-2016 09:22:15 ALS Bottle#: 5 Worklist Smp#: 59
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: CCV L5 CCV L5
Misc. Info.: Acquity BEH 1.7um, 3X150mm T=35*C
Operator ID: CBW Instrument ID: A6
Sublist: chrom-537__A6*sub3

Method: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\537__A6.m
Limit Group: LC 537 ICAL
Last Update: 14-Dec-2016 10:53:19 Calib Date: 05-Dec-2016 19:54:00
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d

Column 1 : Acquity BEH C18 (2.10 mm) Det: F1:MRM
Process Host: XAWRK017

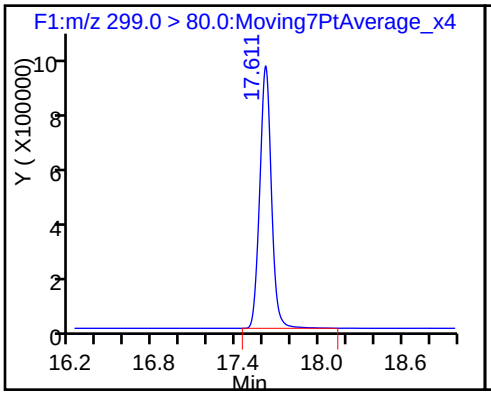
Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	S/N	Flags
1 Perfluorobutanesulfonic acid								
299.0 > 80.0	17.611	17.611	0.0	1.000	5713841	138.4	10350	
$ 2 13C2 PFHxA								
315.0 > 270.0	18.594	18.594	0.0	1.000	1013219	11.1	32646	
3 Perfluorohexanesulfonic acid								
399.0 > 80.0	19.344	19.344	0.0	1.000	2733780	51.7	61035	
4 Perfluoroheptanoic acid								
363.0 > 319.0	19.380	19.380	0.0	1.000	1448345	15.2	37767	
* 5 13C2-PFOA								
415.0 > 370.0	20.035	20.035	0.0		784308	10.0	19916	
6 Perfluorooctanoic acid								
413.0 > 369.0	20.047	20.047	0.0	1.000	2693666	33.0	1828	
7 Perfluorooctane sulfonic acid								
499.0 > 80.0	20.619	20.619	0.0	1.000	4396527	71.5	17924	
* 8 13C4 PFOS								
503.0 > 80.0	20.667	20.667	0.0		1688354	28.7	43001	
9 Perfluorononanoic acid								
463.0 > 419.0	20.738	20.738	0.0	1.000	2863532	32.2	25193	
$ 10 13C2 PFDA								
515.0 > 470.0	21.480	21.480	0.0	1.000	763620	11.1	24041	

Reagents:

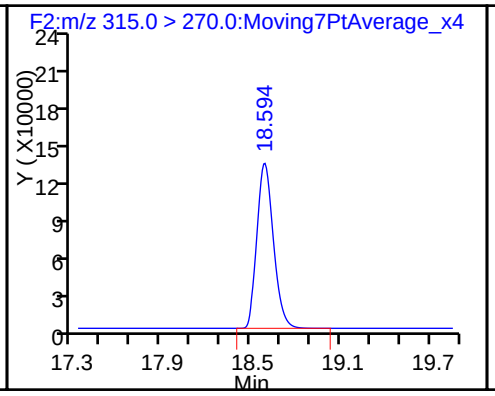
LC537-L5_00017 Amount Added: 1.00 Units: mL

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_143.d
Injection Date: 14-Dec-2016 09:22:15 Instrument ID: A6
Lims ID: CCV L5
Client ID:
Operator ID: CBW ALS Bottle#: 5 Worklist Smp#: 59
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 537__A6 Limit Group: LC 537 ICAL

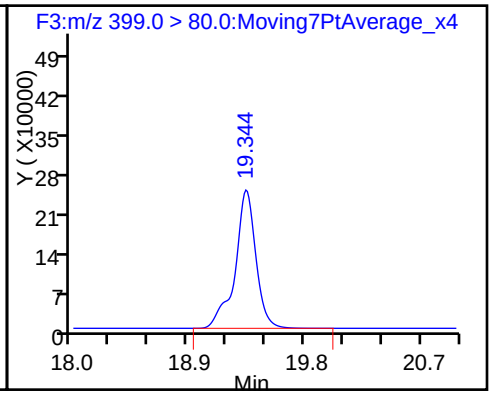
1 Perfluorobutanesulfonic acid



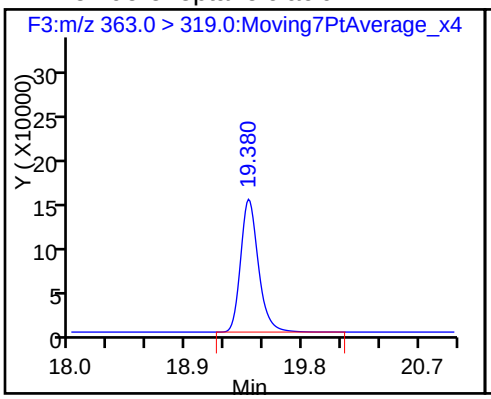
$ 2 13C2 PFHxA



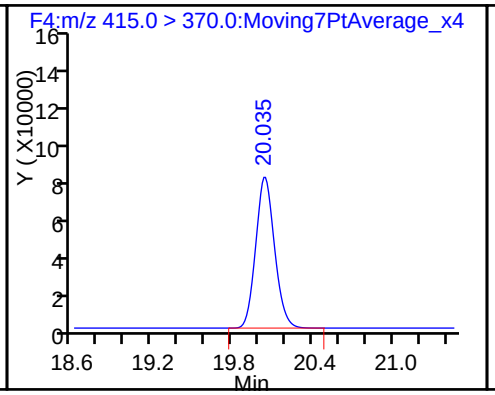
3 Perfluorohexanesulfonic acid



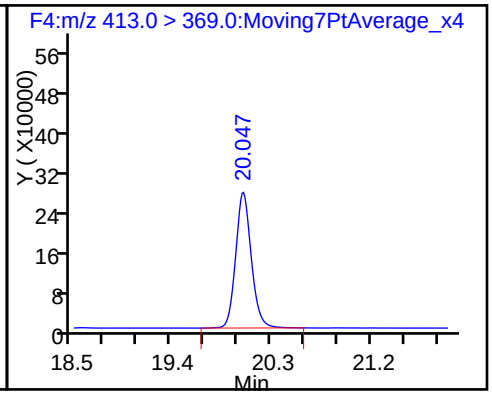
4 Perfluoroheptanoic acid



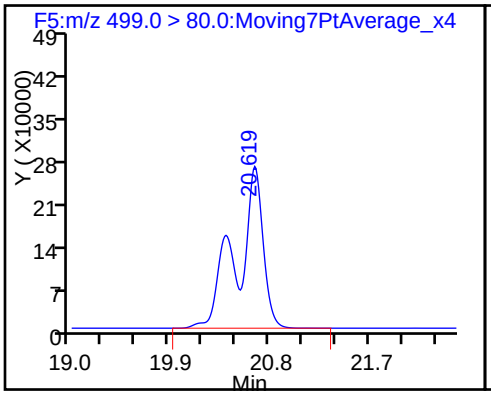
* 5 13C2-PFOA



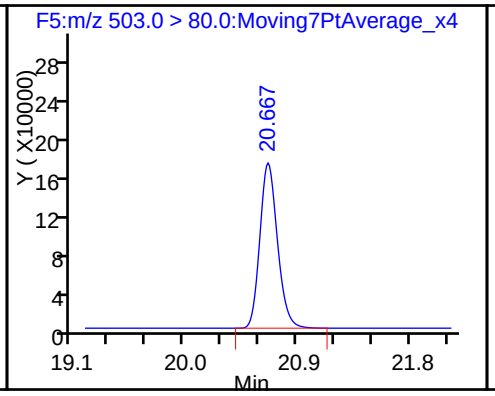
6 Perfluorooctanoic acid



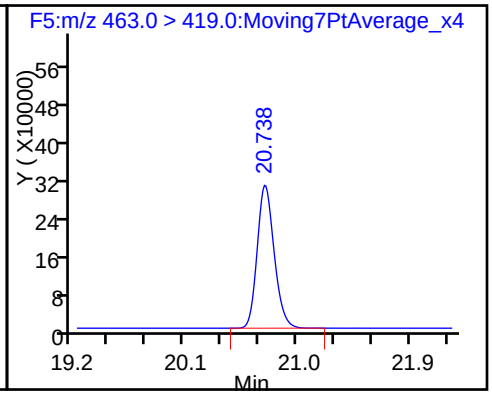
7 Perfluorooctane sulfonic acid



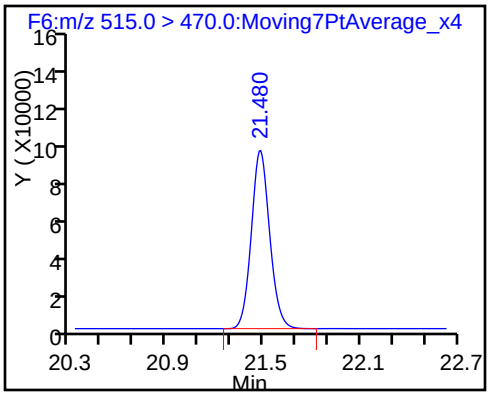
* 8 13C4 PFOS



9 Perfluorononanoic acid



$ 10 13C2 PFDA



FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Lab Sample ID: CCV 320-141966/15 Calibration Date: 12/14/2016 15:44

Instrument ID: A6 Calib Start Date: 12/05/2016 17:26

GC Column: Acquity ID: 2.10(mm) Calib End Date: 12/05/2016 19:54

Lab File ID: 11DEC2016A6A_156.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorobutanesulfonic acid (PFBS)	Ave	0.7015	0.7066		45.4	45.1	0.7	30.0
Perfluorohexanesulfonic acid	Ave	0.8980	0.9241		15.6	15.2	2.9	30.0
Perfluoroheptanoic acid	Ave	1.215	1.340		5.64	5.12	10.2	30.0
Perfluorooctanoic acid (PFOA)	Ave	1.040	1.102		10.8	10.2	5.9	30.0
Perfluorooctanesulfonic acid (PFOS)	Ave	1.044	1.071		20.7	20.1	2.6	30.0
Perfluorononanoic acid	Ave	1.134	1.248		10.9	9.87	10.1	30.0
13C2 PFHxA	Ave	1.167	1.255		10.8	10.0	7.6	30.0
13C2 PFDA	Ave	0.8763	0.9364		10.7	10.0	6.9	30.0

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNA\Sacramento\ChromData\A6\20161213-37801.b\11DEC2016A6A_156.d
Lims ID: CCV L3
Client ID:
Sample Type: CCVIS
Inject. Date: 14-Dec-2016 15:44:28 ALS Bottle#: 3 Worklist Smp#: 15
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: CCV L3 CCV L3
Misc. Info.: Acquity BEH 1.7um, 3X150mm T=35*C
Operator ID: CBW Instrument ID: A6
Sublist: chrom-537__A6*sub3

Method: \\ChromNA\Sacramento\ChromData\A6\20161213-37801.b\537__A6.m
Limit Group: LC 537 ICAL
Last Update: 15-Dec-2016 09:59:55 Calib Date: 05-Dec-2016 19:54:00
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d

Column 1 : Acquity BEH C18 (2.10 mm) Det: F1:MRM
Process Host: XAWRK005

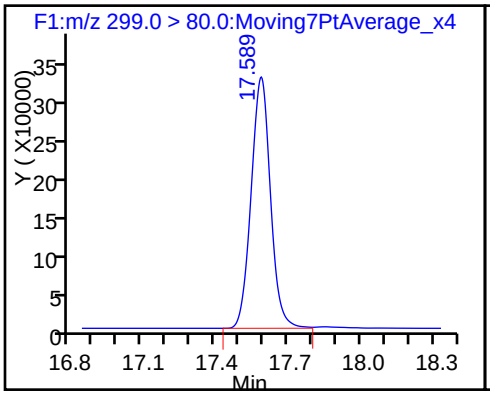
Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	S/N	Flags
1 Perfluorobutanesulfonic acid								
299.0 > 80.0	17.589	17.589	0.0	1.000	1823490	45.4	718	
$ 2 13C2 PFHxA								
315.0 > 270.0	18.567	18.567	0.0	1.000	905957	10.8	29438	
3 Perfluorohexanesulfonic acid								
399.0 > 80.0	19.320	19.320	0.0	1.000	803861	15.6	18903	
4 Perfluoroheptanoic acid								
363.0 > 319.0	19.356	19.356	0.0	1.000	494895	5.64	10040	
* 5 13C2-PFOA								
415.0 > 370.0	20.023	20.023	0.0		721956	10.0	18677	
6 Perfluorooctanoic acid								
413.0 > 369.0	20.023	20.023	0.0	1.000	810871	10.8	772	
7 Perfluorooctane sulfonic acid								
499.0 > 80.0	20.643	20.643	0.0	1.000	1234014	20.7	19960	
* 8 13C4 PFOS								
503.0 > 80.0	20.643	20.643	0.0		1640855	28.7	42509	
9 Perfluorononanoic acid								
463.0 > 419.0	20.726	20.726	0.0	1.000	889691	10.9	23785	
$ 10 13C2 PFDA								
515.0 > 470.0	21.445	21.445	0.0	1.000	676023	10.7	21327	

Reagents:

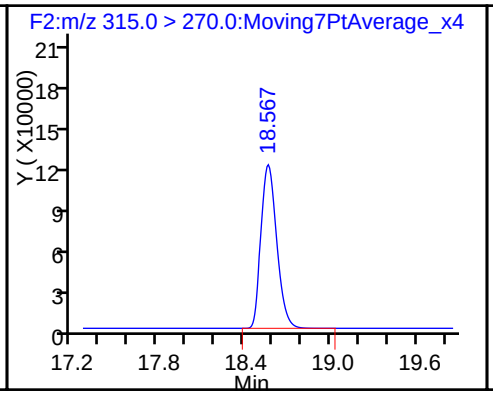
LC537-L3_00016 Amount Added: 1.00 Units: mL

Data File: \\ChromNA\Sacramento\ChromData\A6\20161213-37801.b\11DEC2016A6A_156.d
Injection Date: 14-Dec-2016 15:44:28 Instrument ID: A6
Lims ID: CCV L3
Client ID:
Operator ID: CBW ALS Bottle#: 3 Worklist Smp#: 15
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 537__A6 Limit Group: LC 537 ICAL

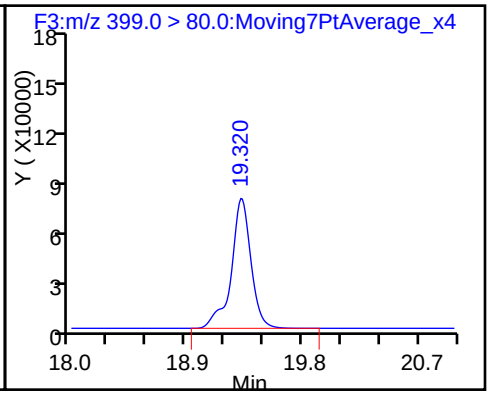
1 Perfluorobutanesulfonic acid



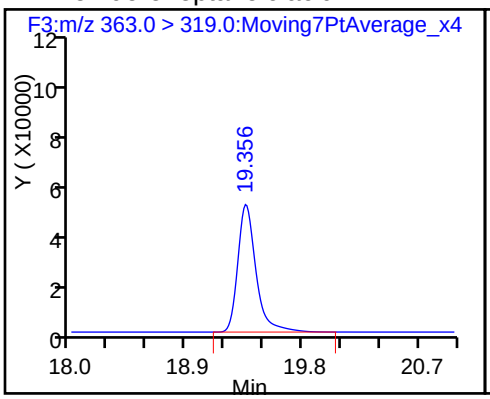
$ 2 13C2 PFHxA



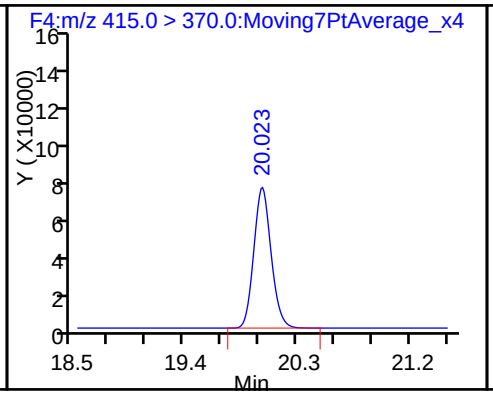
3 Perfluorohexanesulfonic acid



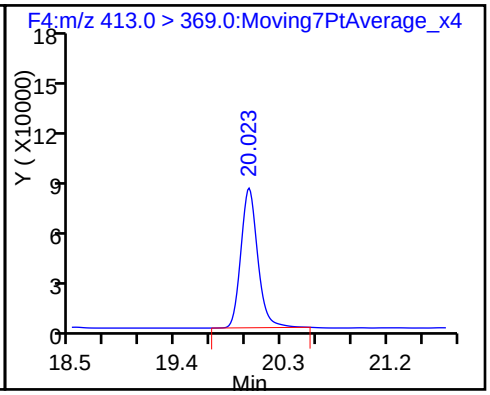
4 Perfluoroheptanoic acid



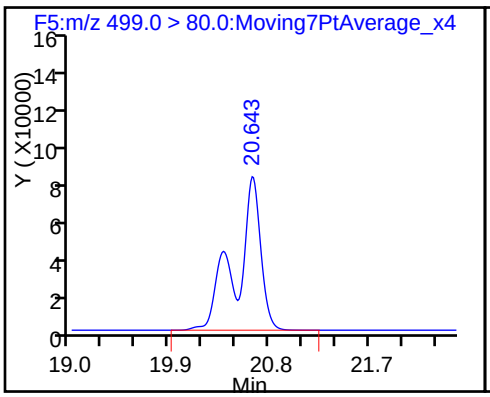
* 5 13C2-PFOA



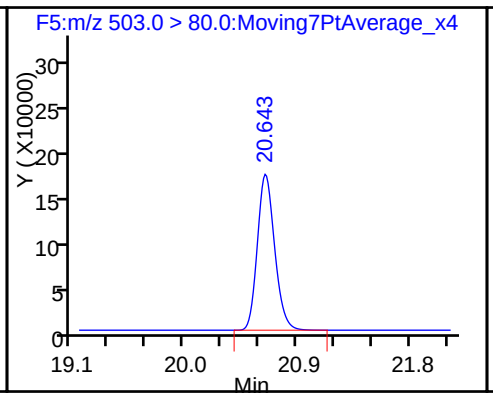
6 Perfluorooctanoic acid



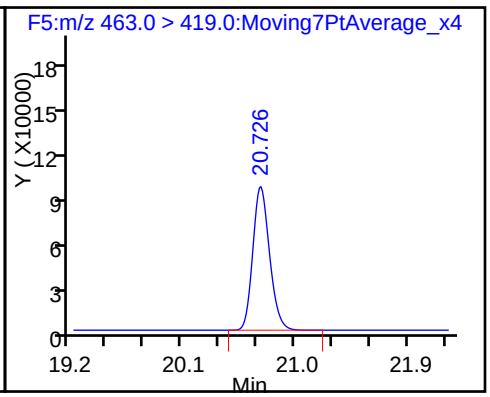
7 Perfluorooctane sulfonic acid



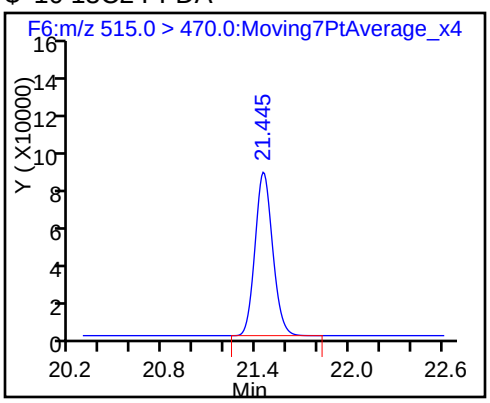
* 8 13C4 PFOS



9 Perfluorononanoic acid



$ 10 13C2 PFDA



FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Lab Sample ID: CCV 320-141966/25 Calibration Date: 12/14/2016 20:42

Instrument ID: A6 Calib Start Date: 12/05/2016 17:26

GC Column: Acquity ID: 2.10(mm) Calib End Date: 12/05/2016 19:54

Lab File ID: 11DEC2016A6A_166.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorobutanesulfonic acid (PFBS)	Ave	0.7015	0.7524		48.4	45.1	7.3	30.0
Perfluorohexanesulfonic acid	Ave	0.8980	0.9219		15.6	15.2	2.7	30.0
Perfluoroheptanoic acid	Ave	1.215	1.259		5.30	5.12	3.6	30.0
Perfluorooctanoic acid (PFOA)	Ave	1.040	1.074		10.5	10.2	3.2	30.0
Perfluorooctanesulfonic acid (PFOS)	Ave	1.044	1.096		21.1	20.1	5.0	30.0
Perfluorononanoic acid	Ave	1.134	1.179		10.3	9.87	3.9	30.0
13C2 PFHxA	Ave	1.167	1.218		10.4	10.0	4.4	30.0
13C2 PFDA	Ave	0.8763	0.9217		10.5	10.0	5.2	30.0

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNA\Sacramento\ChromData\A6\20161213-37801.b\11DEC2016A6A_166.d
Lims ID: CCV L3
Client ID:
Sample Type: CCVIS
Inject. Date: 14-Dec-2016 20:42:52 ALS Bottle#: 3 Worklist Smp#: 25
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: CCV L3 CCV L3
Misc. Info.: Acquity BEH 1.7um, 3X150mm T=35*C
Operator ID: CBW Instrument ID: A6
Sublist: chrom-537__A6*sub3

Method: \\ChromNA\Sacramento\ChromData\A6\20161213-37801.b\537__A6.m
Limit Group: LC 537 ICAL
Last Update: 15-Dec-2016 10:00:09 Calib Date: 05-Dec-2016 19:54:00
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d

Column 1 : Acquity BEH C18 (2.10 mm) Det: F1:MRM
Process Host: XAWRK005

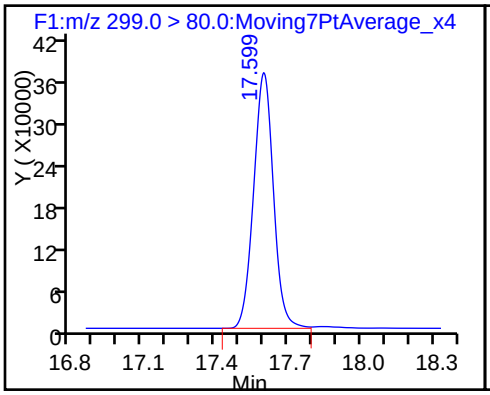
Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	S/N	Flags
1 Perfluorobutanesulfonic acid								
299.0 > 80.0	17.599	17.599	0.0	1.000	2089049	48.4	657	
$ 2 13C2 PFHxA								
315.0 > 270.0	18.585	18.585	0.0	1.000	952195	10.4	30389	
3 Perfluorohexanesulfonic acid								
399.0 > 80.0	19.344	19.344	0.0	1.000	862912	15.6	19605	
4 Perfluoroheptanoic acid								
363.0 > 319.0	19.380	19.380	0.0	1.000	503876	5.30	2428	
* 5 13C2-PFOA								
415.0 > 370.0	20.035	20.035	0.0		782016	10.0	20265	
6 Perfluorooctanoic acid								
413.0 > 369.0	20.035	20.035	0.0	1.000	855738	10.5	281	
7 Perfluorooctane sulfonic acid								
499.0 > 80.0	20.619	20.619	0.0	1.000	1358842	21.1	18606	
* 8 13C4 PFOS								
503.0 > 80.0	20.655	20.655	0.0		1765509	28.7	26049	
9 Perfluorononanoic acid								
463.0 > 419.0	20.726	20.726	0.0	1.000	910104	10.3	10619	
$ 10 13C2 PFDA								
515.0 > 470.0	21.453	21.453	0.0	1.000	720770	10.5	22609	

Reagents:

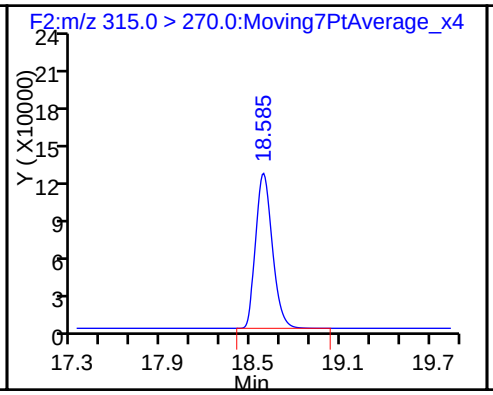
LC537-L3_00016 Amount Added: 1.00 Units: mL

Data File: \\ChromNA\Sacramento\ChromData\A6\20161213-37801.b\11DEC2016A6A_166.d
Injection Date: 14-Dec-2016 20:42:52 Instrument ID: A6
Lims ID: CCV L3
Client ID:
Operator ID: CBW ALS Bottle#: 3 Worklist Smp#: 25
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 537__A6 Limit Group: LC 537 ICAL

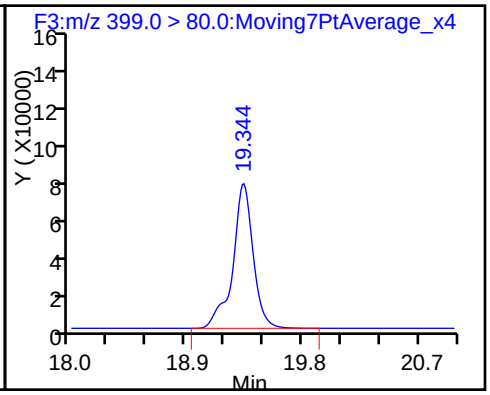
1 Perfluorobutanesulfonic acid



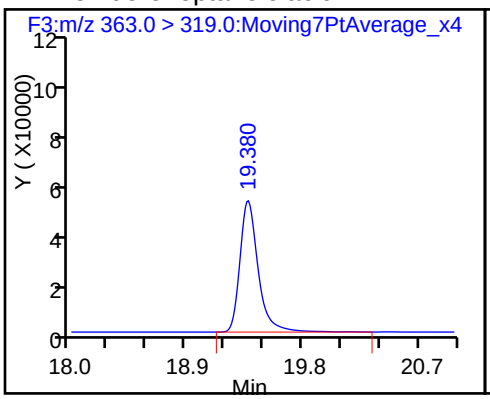
$ 2 13C2 PFHxA



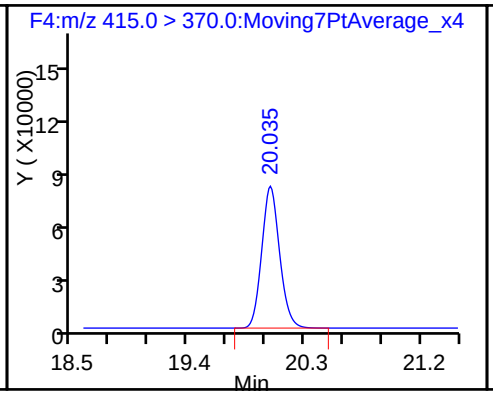
3 Perfluorohexanesulfonic acid



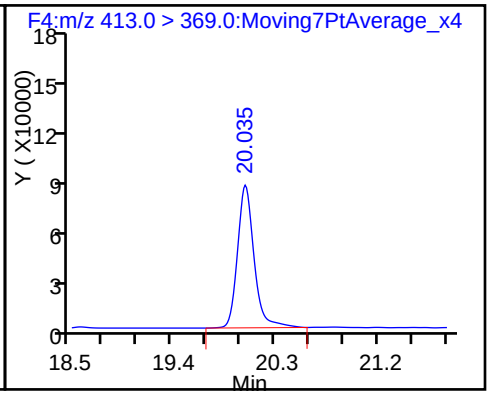
4 Perfluoroheptanoic acid



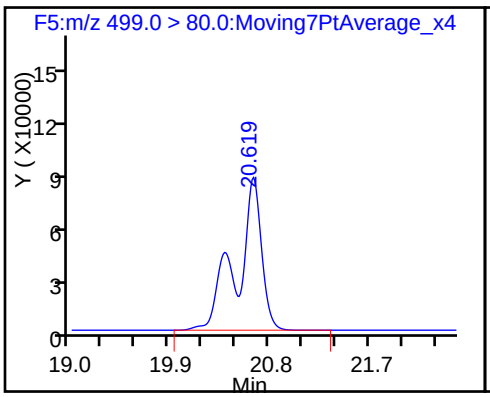
* 5 13C2-PFOA



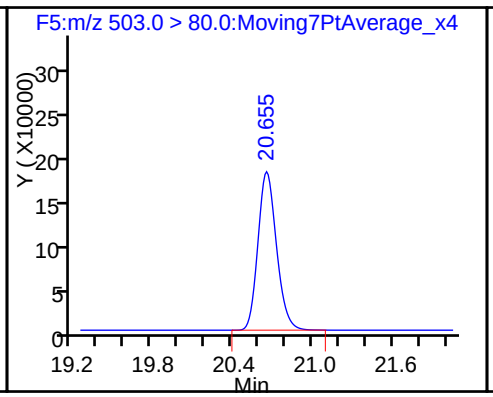
6 Perfluorooctanoic acid



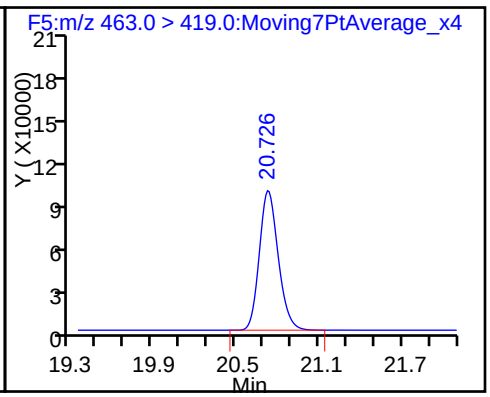
7 Perfluorooctane sulfonic acid



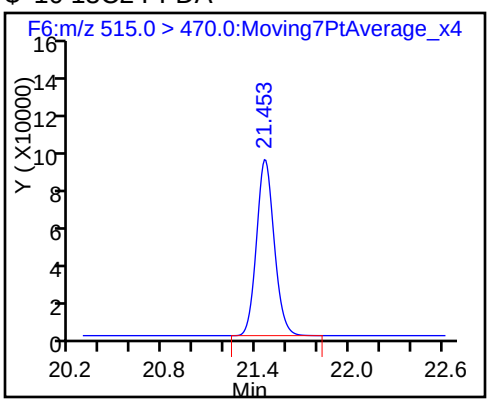
* 8 13C4 PFOS



9 Perfluorononanoic acid



$ 10 13C2 PFDA



FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento | Job No.: 320-24069-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 320-141212/1-A

Matrix: Water | Lab File ID: 11DEC2016A6A_087.d

Analysis Method: 537 | Date Collected:

Extraction Method: 537 | Date Extracted: 12/08/2016 11:45

Sample wt/vol: 250(mL) | Date Analyzed: 12/13/2016 05:28

Con. Extract Vol.: 1.0(mL) | Dilution Factor: 1

Injection Volume: 10(uL) | GC Column: Acquity ID: 2.1(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 141767 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	0.048	U	0.060	0.048	0.016
335-67-1	Perfluorooctanoic acid (PFOA)	0.024	U	0.030	0.024	0.0094
375-73-5	Perfluorobutanesulfonic acid (PFBS)	0.11	U	0.14	0.11	0.048

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00993	13C2 PFHxA	113		70-130
STL00996	13C2 PFDA	111		70-130

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_087.d
Lims ID: MB 320-141212/1-A
Client ID:
Sample Type: MB
Inject. Date: 13-Dec-2016 05:28:59 ALS Bottle#: 19 Worklist Smp#: 10
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: mb 320-141212/1-a BOX 21
Misc. Info.: Acquity BEH 1.7um, 3X150mm T=35*C
Operator ID: CBW Instrument ID: A6

Method: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\537__A6.m
Limit Group: LC 537 ICAL
Last Update: 13-Dec-2016 14:22:59 Calib Date: 05-Dec-2016 19:54:00
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d

Column 1 : Acquity BEH C18 (2.10 mm) Det: F1:MRM
Process Host: XAWRK022

First Level Reviewer: barnettj Date: 13-Dec-2016 14:19:47

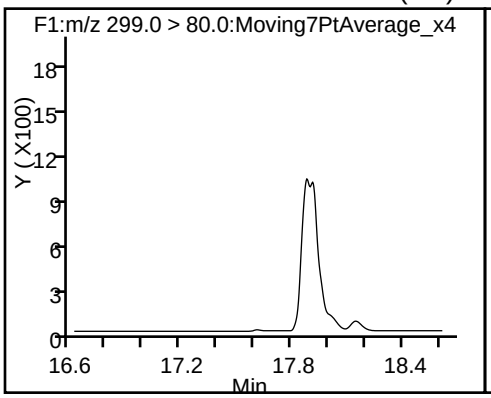
Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	S/N	Flags
$ 2 13C2 PFHxA								
315.0 > 270.0	18.603	18.613	-0.010	1.000	965580	11.3	30836	
* 5 13C2-PFOA								
415.0 > 370.0	20.059	20.047	0.012		732917	10.0	19163	
* 8 13C4 PFOS								
503.0 > 80.0	20.667	20.667	0.0		2037934	28.7	53375	
9 Perfluorononanoic acid								M
463.0 > 419.0	20.750	20.750	0.0	1.000	3661	0.0440	111	M
$ 10 13C2 PFDA								
515.0 > 470.0	21.471	21.471	0.0	1.000	710743	11.1	22523	

QC Flag Legend

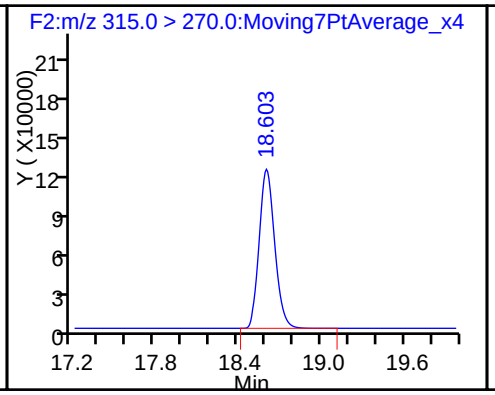
Review Flags
M - Manually Integrated

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_087.d
Injection Date: 13-Dec-2016 05:28:59 Instrument ID: A6
Lims ID: MB 320-141212/1-A
Client ID:
Operator ID: CBW ALS Bottle#: 19 Worklist Smp#: 10
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 537__A6 Limit Group: LC 537 ICAL

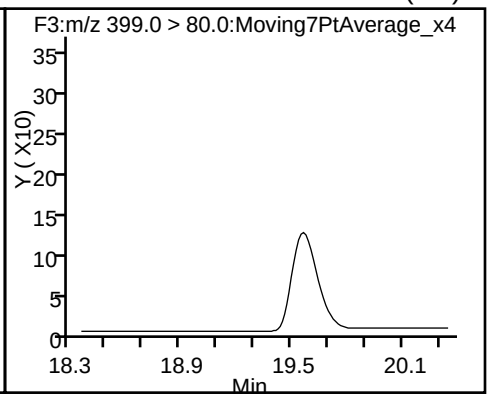
1 Perfluorobutanesulfonic acid (ND)



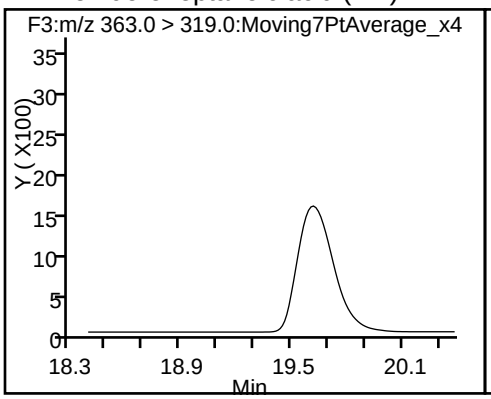
$ 2 13C2 PFHxA



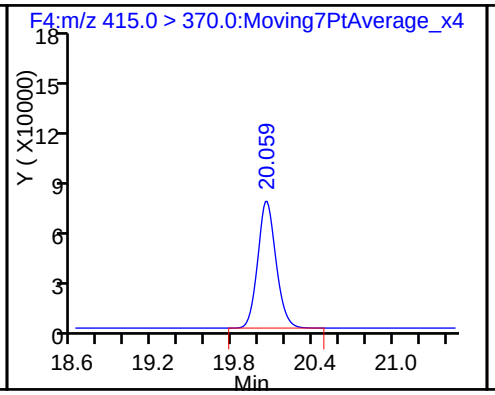
3 Perfluorohexanesulfonic acid (ND)



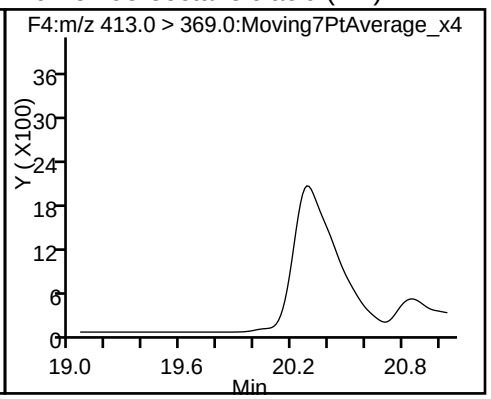
4 Perfluoroheptanoic acid (ND)



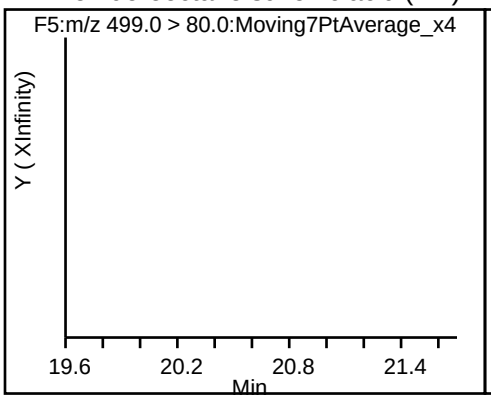
* 5 13C2-PFOA



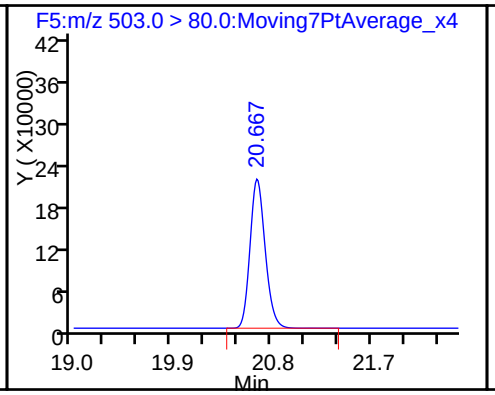
6 Perfluorooctanoic acid (ND)



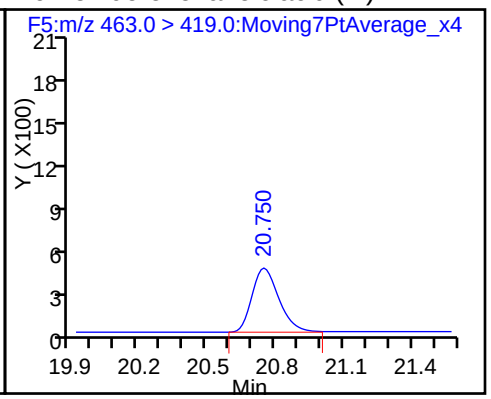
7 Perfluorooctane sulfonic acid (ND)



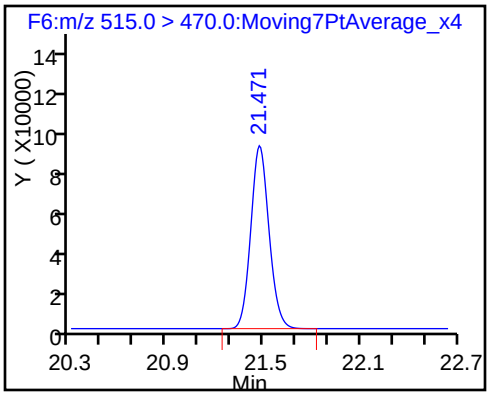
* 8 13C4 PFOS



9 Perfluorononanoic acid (M)



$ 10 13C2 PFDA



TestAmerica Sacramento
Recovery Report

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_087.d
Lims ID: MB 320-141212/1-A
Client ID:
Sample Type: MB
Inject. Date: 13-Dec-2016 05:28:59 ALS Bottle#: 19 Worklist Smp#: 10
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: mb 320-141212/1-a BOX 21
Misc. Info.: Acquity BEH 1.7um, 3X150mm T=35*C
Operator ID: CBW Instrument ID: A6

Method: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\537__A6.m
Limit Group: LC 537 ICAL
Last Update: 13-Dec-2016 14:22:59 Calib Date: 05-Dec-2016 19:54:00
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d

Column 1 : Acquity BEH C18 (2.10 mm) Det: F1:MRM
Process Host: XAWRK022

First Level Reviewer: barnettj Date: 13-Dec-2016 14:19:47

Compound	Amount Added	Amount Recovered	% Rec.
$ 2 13C2 PFHxA	10.0	11.3	112.94
$ 10 13C2 PFDA	10.0	11.1	110.67

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento | Job No.: 320-24069-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 320-141328/1-A

Matrix: Water | Lab File ID: 11DEC2016A6A_119.d

Analysis Method: 537 | Date Collected:

Extraction Method: 537 | Date Extracted: 12/08/2016 18:21

Sample wt/vol: 250.00(mL) | Date Analyzed: 12/13/2016 21:31

Con. Extract Vol.: 1.00(mL) | Dilution Factor: 1

Injection Volume: 10(uL) | GC Column: Acquity ID: 2.1(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 141770 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	0.048	U	0.060	0.048	0.016
335-67-1	Perfluorooctanoic acid (PFOA)	0.024	U	0.030	0.024	0.0094
375-73-5	Perfluorobutanesulfonic acid (PFBS)	0.11	U	0.14	0.11	0.048

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00993	13C2 PFHxA	121		70-130
STL00996	13C2 PFDA	120		70-130

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_119.d
Lims ID: MB 320-141328/1-A
Client ID:
Sample Type: MB
Inject. Date: 13-Dec-2016 21:31:56 ALS Bottle#: 42 Worklist Smp#: 42
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: mb 320-141328/1-a BOX 20
Misc. Info.: Acquity BEH 1.7um, 3X150mm T=35*C
Operator ID: CBW Instrument ID: A6

Method: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\537__A6.m
Limit Group: LC 537 ICAL
Last Update: 14-Dec-2016 10:52:33 Calib Date: 05-Dec-2016 19:54:00
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d

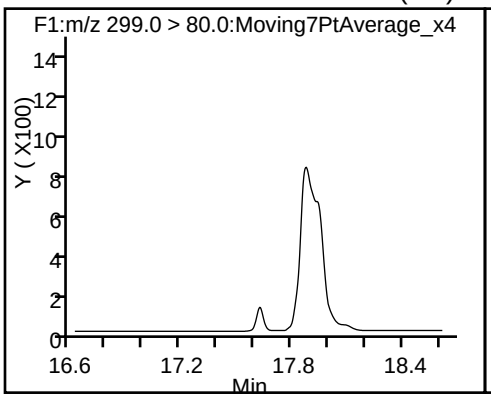
Column 1 : Acquity BEH C18 (2.10 mm) Det: F1:MRM
Process Host: XAWRK017

First Level Reviewer: barnettj Date: 14-Dec-2016 10:02:28

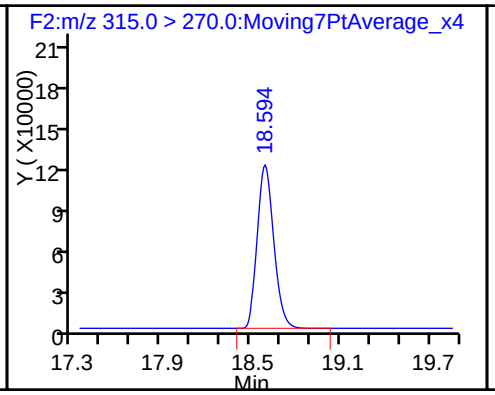
Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	S/N	Flags
$ 2 13C2 PFHxA								
315.0 > 270.0	18.594	18.604	-0.010	1.000	932208	12.1	29985	
* 5 13C2-PFOA								
415.0 > 370.0	20.047	20.047	0.0		662536	10.0	17453	
* 8 13C4 PFOS								
503.0 > 80.0	20.667	20.679	-0.012		1841720	28.7	38050	
$ 10 13C2 PFDA								
515.0 > 470.0	21.480	21.471	0.009	1.000	694609	12.0	21904	

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_119.d
Injection Date: 13-Dec-2016 21:31:56 Instrument ID: A6
Lims ID: MB 320-141328/1-A
Client ID:
Operator ID: CBW ALS Bottle#: 42 Worklist Smp#: 42
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 537__A6 Limit Group: LC 537 ICAL

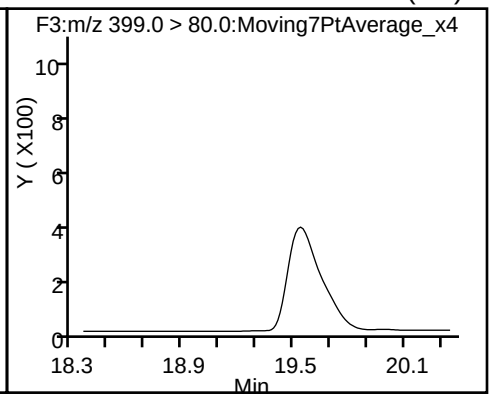
1 Perfluorobutanesulfonic acid (ND)



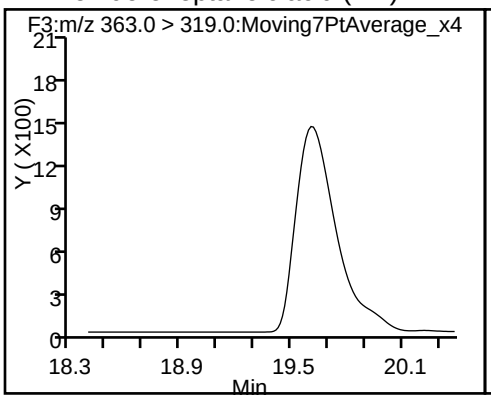
$ 2 13C2 PFHxA



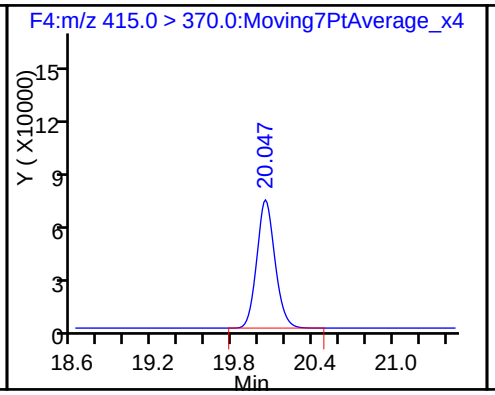
3 Perfluorohexanesulfonic acid (ND)



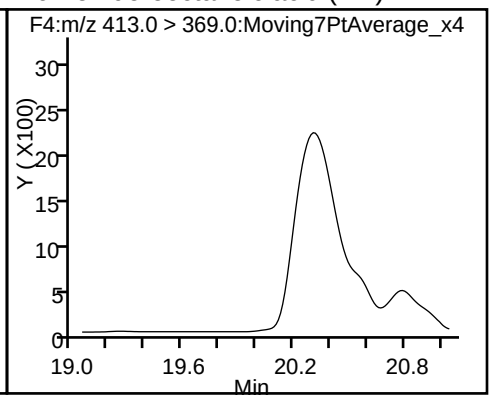
4 Perfluoroheptanoic acid (ND)



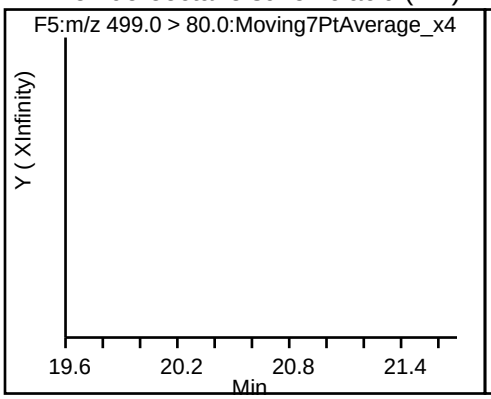
* 5 13C2-PFOA



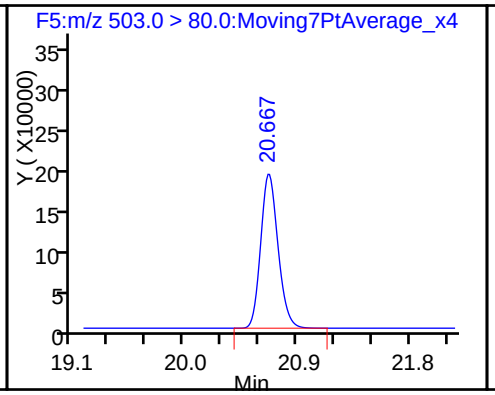
6 Perfluorooctanoic acid (ND)



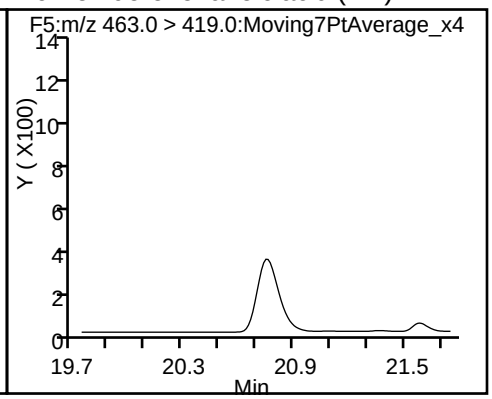
7 Perfluorooctane sulfonic acid (ND)



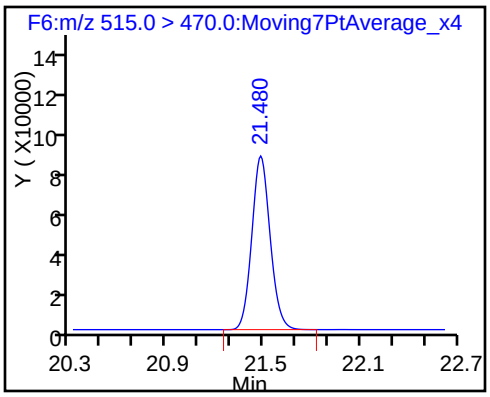
* 8 13C4 PFOS



9 Perfluorononanoic acid (ND)



$ 10 13C2 PFDA



TestAmerica Sacramento
Recovery Report

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_119.d
Lims ID: MB 320-141328/1-A
Client ID:
Sample Type: MB
Inject. Date: 13-Dec-2016 21:31:56 ALS Bottle#: 42 Worklist Smp#: 42
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: mb 320-141328/1-a BOX 20
Misc. Info.: Acquity BEH 1.7um, 3X150mm T=35*C
Operator ID: CBW Instrument ID: A6

Method: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\537__A6.m
Limit Group: LC 537 ICAL
Last Update: 14-Dec-2016 10:52:33 Calib Date: 05-Dec-2016 19:54:00
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d

Column 1 : Acquity BEH C18 (2.10 mm) Det: F1:MRM
Process Host: XAWRK017

First Level Reviewer: barnettj Date: 14-Dec-2016 10:02:28

Compound	Amount Added	Amount Recovered	% Rec.
$ 2 13C2 PFHxA	10.0	12.1	120.62
$ 10 13C2 PFDA	10.0	12.0	119.64

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 320-141212/2-A

Matrix: Water Lab File ID: 11DEC2016A6A_135.d

Analysis Method: 537 Date Collected:

Extraction Method: 537 Date Extracted: 12/08/2016 11:45

Sample wt/vol: 250(mL) Date Analyzed: 12/14/2016 05:25

Con. Extract Vol.: 1.0(mL) Dilution Factor: 1

Injection Volume: 10(uL) GC Column: Acquity ID: 2.1(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 141771 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	0.307		0.060	0.048	0.016
335-67-1	Perfluorooctanoic acid (PFOA)	0.155		0.030	0.024	0.0094
375-73-5	Perfluorobutanesulfonic acid (PFBS)	0.632		0.14	0.11	0.048

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00993	13C2 PFHxA	123		70-130
STL00996	13C2 PFDA	123		70-130

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_135.d
Lims ID: LCS 320-141212/2-A
Client ID:
Sample Type: LCS
Inject. Date: 14-Dec-2016 05:25:26 ALS Bottle#: 20 Worklist Smp#: 61
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: lcs 320-141212/2-a
Misc. Info.: Acquity BEH 1.7um, 3X150mm T=35*C
Operator ID: CBW Instrument ID: A6

Method: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\537__A6.m
Limit Group: LC 537 ICAL
Last Update: 14-Dec-2016 10:53:05 Calib Date: 05-Dec-2016 19:54:00
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d

Column 1 : Acquity BEH C18 (2.10 mm) Det: F1:MRM
Process Host: XAWRK017

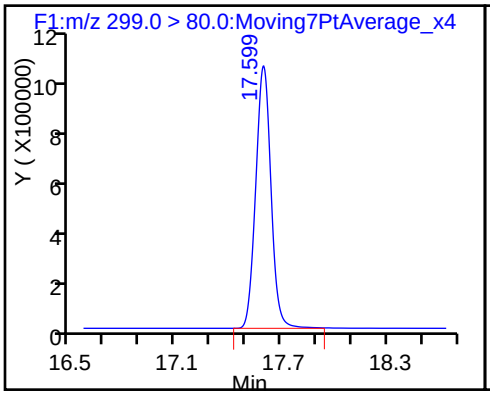
Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	S/N	Flags
1 Perfluorobutanesulfonic acid								
299.0 > 80.0	17.599	17.605	-0.006	1.000	6129414	158.0	2974	
$ 2 13C2 PFHxA								
315.0 > 270.0	18.576	18.585	-0.009	1.000	877662	12.3	28527	
3 Perfluorohexanesulfonic acid								
399.0 > 80.0	19.332	19.344	-0.012	1.000	2692099	54.2	60883	
4 Perfluoroheptanoic acid								E
363.0 > 319.0	19.368	19.380	-0.012	1.000	2055042	27.7	53943	E
* 5 13C2-PFOA								
415.0 > 370.0	20.035	20.035	0.0		609978	10.0	15825	
6 Perfluorooctanoic acid								
413.0 > 369.0	20.035	20.035	0.0	1.000	2461470	38.8	1369	
7 Perfluorooctane sulfonic acid								
499.0 > 80.0	20.619	20.619	0.0	1.000	4430840	76.7	22605	
* 8 13C4 PFOS								
503.0 > 80.0	20.655	20.667	-0.012		1586260	28.7	40805	
9 Perfluorononanoic acid								E
463.0 > 419.0	20.738	20.738	0.0	1.000	2885389	41.7	38160	E
$ 10 13C2 PFDA								
515.0 > 470.0	21.471	21.471	0.0	1.000	658218	12.3	20837	

QC Flag Legend

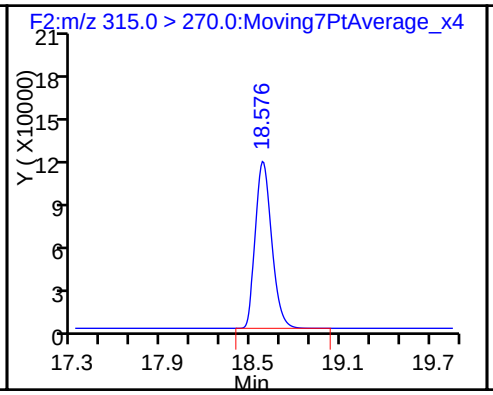
Processing Flags
E - Exceeded Maximum Amount

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_135.d
Injection Date: 14-Dec-2016 05:25:26 Instrument ID: A6
Lims ID: LCS 320-141212/2-A
Client ID:
Operator ID: CBW ALS Bottle#: 20 Worklist Smp#: 61
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 537__A6 Limit Group: LC 537 ICAL

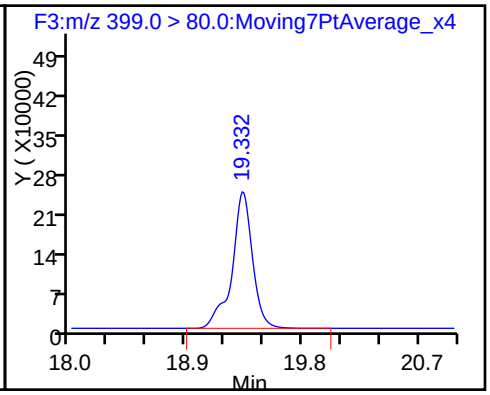
1 Perfluorobutanesulfonic acid



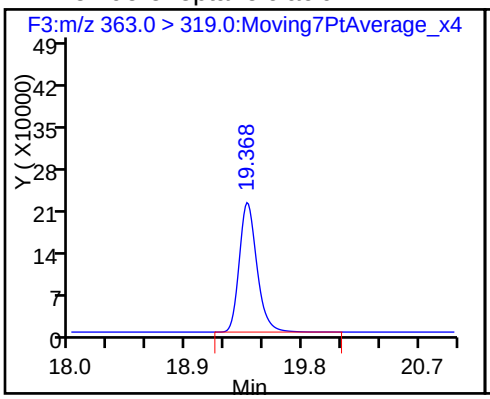
$ 2 13C2 PFHxA



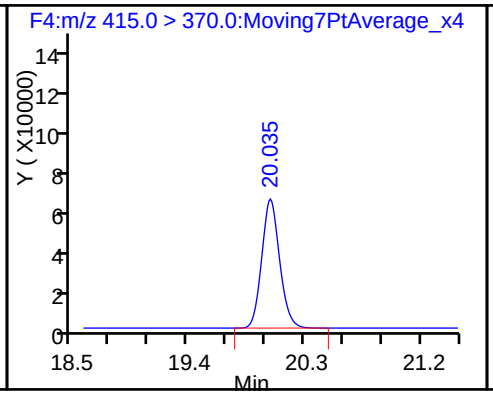
3 Perfluorohexanesulfonic acid



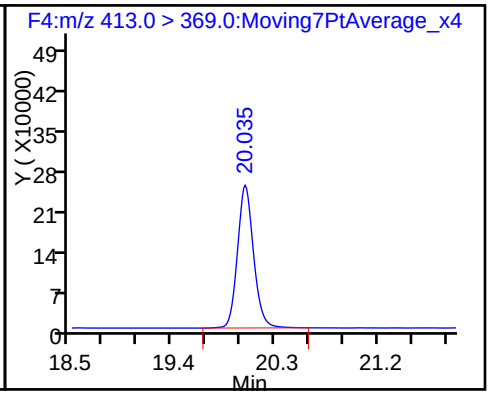
4 Perfluoroheptanoic acid



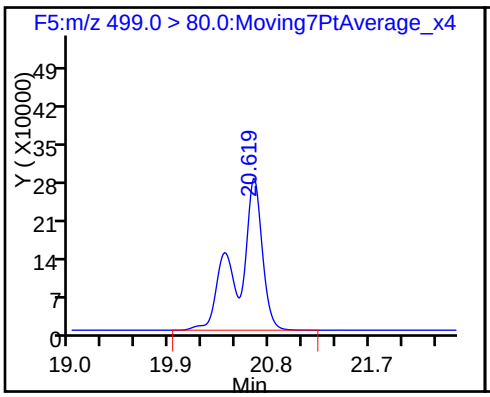
* 5 13C2-PFOA



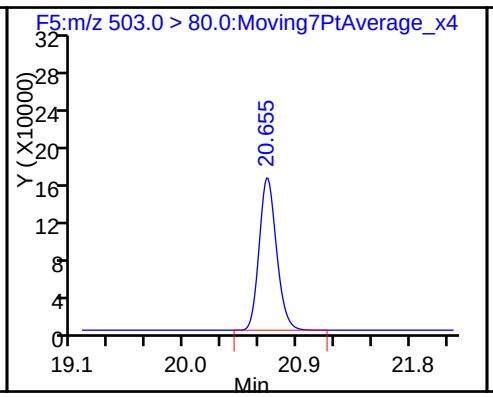
6 Perfluorooctanoic acid



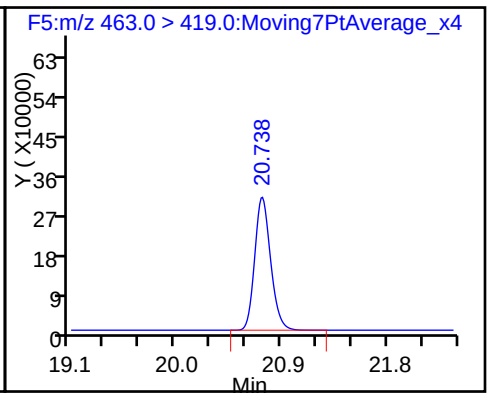
7 Perfluorooctane sulfonic acid



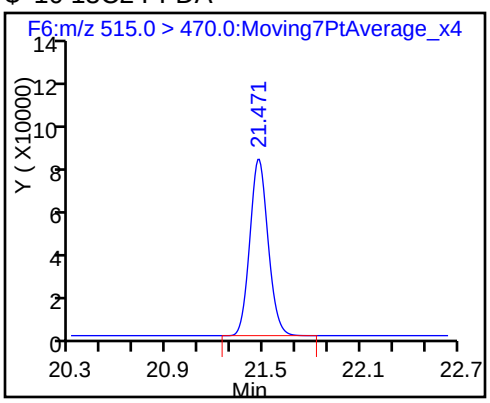
* 8 13C4 PFOS



9 Perfluorononanoic acid



$ 10 13C2 PFDA



TestAmerica Sacramento
Recovery Report

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_135.d
Lims ID: LCS 320-141212/2-A
Client ID:
Sample Type: LCS
Inject. Date: 14-Dec-2016 05:25:26 ALS Bottle#: 20 Worklist Smp#: 61
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: lcs 320-141212/2-a
Misc. Info.: Acquity BEH 1.7um, 3X150mm T=35*C
Operator ID: CBW Instrument ID: A6

Method: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\537__A6.m
Limit Group: LC 537 ICAL
Last Update: 14-Dec-2016 10:53:05 Calib Date: 05-Dec-2016 19:54:00
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d

Column 1 : Acquity BEH C18 (2.10 mm) Det: F1:MRM
Process Host: XAWRK017

Compound	Amount Added	Amount Recovered	% Rec.
$ 2 13C2 PFHxA	10.0	12.3	123.34
$ 10 13C2 PFDA	10.0	12.3	123.14

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Client Sample ID: Lab Sample ID: LCSD 320-141212/3-A

Matrix: Water Lab File ID: 11DEC2016A6A_136.d

Analysis Method: 537 Date Collected:

Extraction Method: 537 Date Extracted: 12/08/2016 11:45

Sample wt/vol: 250(mL) Date Analyzed: 12/14/2016 05:55

Con. Extract Vol.: 1.0(mL) Dilution Factor: 1

Injection Volume: 10(uL) GC Column: Acquity ID: 2.1(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 141771 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	0.292		0.060	0.048	0.016
335-67-1	Perfluorooctanoic acid (PFOA)	0.154		0.030	0.024	0.0094
375-73-5	Perfluorobutanesulfonic acid (PFBS)	0.620		0.14	0.11	0.048

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00993	13C2 PFHxA	126		70-130
STL00996	13C2 PFDA	131	Q	70-130

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_136.d
Lims ID: LCSD 320-141212/3-A
Client ID:
Sample Type: LCSD
Inject. Date: 14-Dec-2016 05:55:01 ALS Bottle#: 21 Worklist Smp#: 62
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: lcsd 320-141212/3-a
Misc. Info.: Acquity BEH 1.7um, 3X150mm T=35*C
Operator ID: CBW Instrument ID: A6

Method: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\537__A6.m
Limit Group: LC 537 ICAL
Last Update: 14-Dec-2016 10:53:05 Calib Date: 05-Dec-2016 19:54:00
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d

Column 1 : Acquity BEH C18 (2.10 mm) Det: F1:MRM
Process Host: XAWRK017

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	S/N	Flags
1 Perfluorobutanesulfonic acid								
299.0 > 80.0	17.602	17.605	-0.003	1.000	6104106	155.1	15999	
$ 2 13C2 PFHxA								
315.0 > 270.0	18.576	18.585	-0.009	1.000	890106	12.6	28575	
3 Perfluorohexanesulfonic acid								
399.0 > 80.0	19.332	19.344	-0.012	1.000	2713121	53.8	61239	
4 Perfluoroheptanoic acid								E
363.0 > 319.0	19.368	19.380	-0.012	1.000	2059539	27.9	43453	E
* 5 13C2-PFOA								
415.0 > 370.0	20.035	20.035	0.0		606413	10.0	15849	
6 Perfluorooctanoic acid								
413.0 > 369.0	20.035	20.035	0.0	1.000	2428597	38.5	1351	
7 Perfluorooctane sulfonic acid								
499.0 > 80.0	20.620	20.619	0.001	1.000	4269634	72.9	16566	
* 8 13C4 PFOS								
503.0 > 80.0	20.655	20.667	-0.012		1609248	28.7	41385	
9 Perfluorononanoic acid								E
463.0 > 419.0	20.738	20.738	0.0	1.000	2787593	40.5	58648	E
$ 10 13C2 PFDA								
515.0 > 470.0	21.471	21.471	0.0	1.000	693531	13.1	22093	

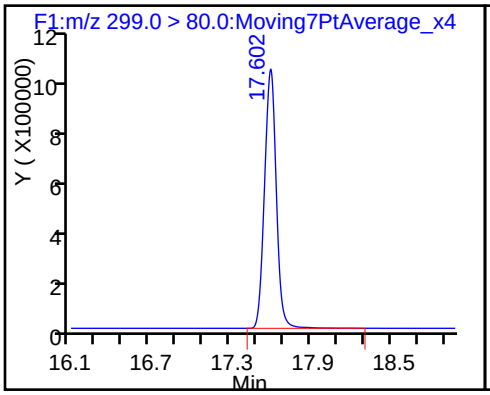
QC Flag Legend

Processing Flags
E - Exceeded Maximum Amount

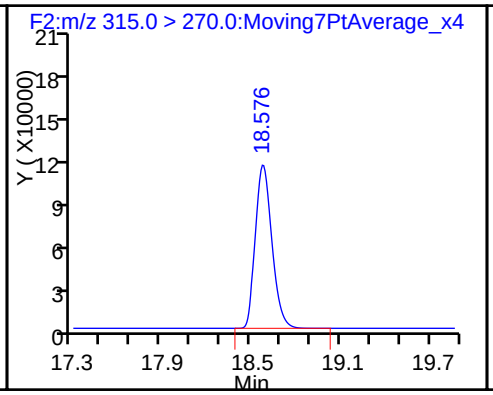
TestAmerica Sacramento

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_136.d
Injection Date: 14-Dec-2016 05:55:01 Instrument ID: A6
Lims ID: LCSD 320-141212/3-A
Client ID:
Operator ID: CBW ALS Bottle#: 21 Worklist Smp#: 62
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 537__A6 Limit Group: LC 537 ICAL

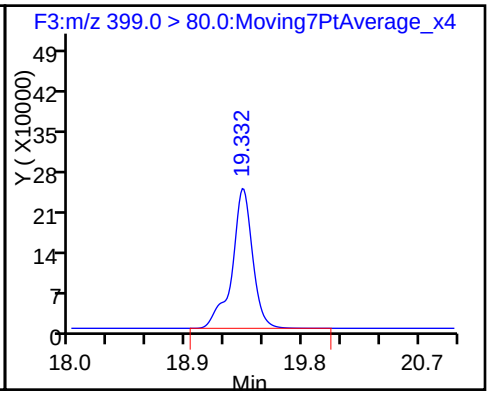
1 Perfluorobutanesulfonic acid



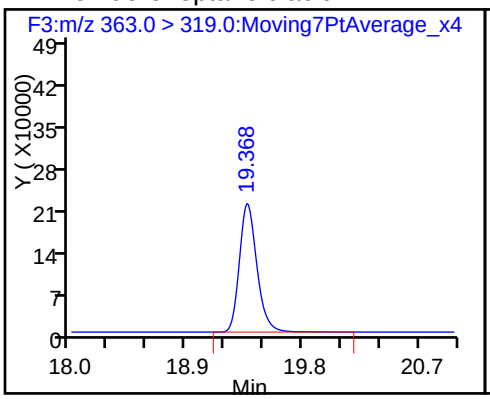
$ 2 13C2 PFHxA



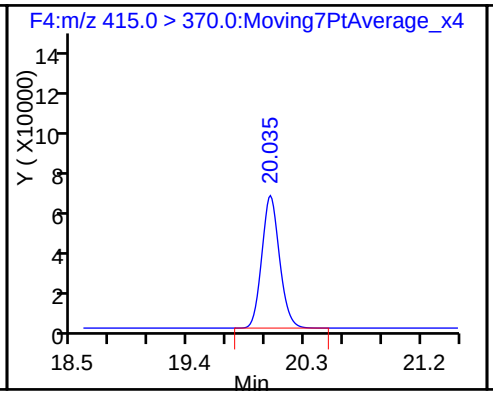
3 Perfluorohexanesulfonic acid



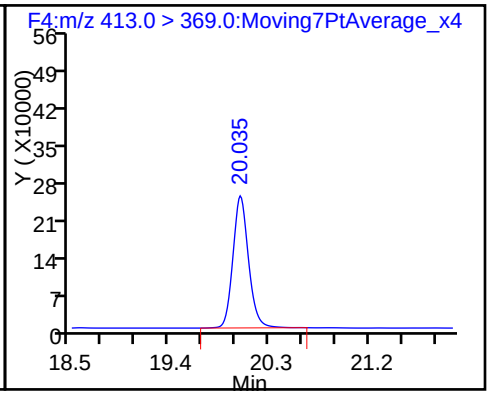
4 Perfluoroheptanoic acid



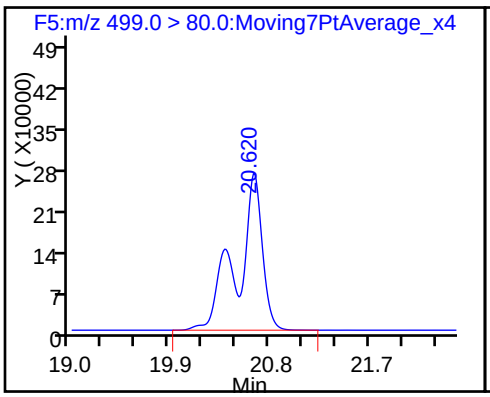
* 5 13C2-PFOA



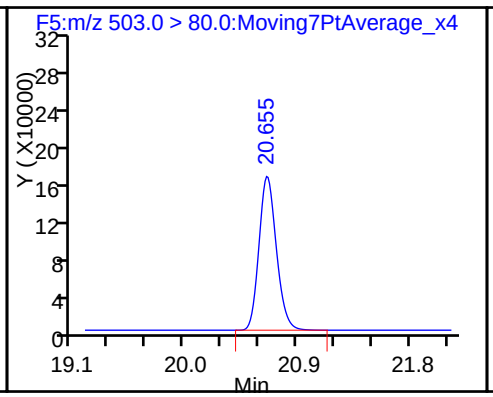
6 Perfluorooctanoic acid



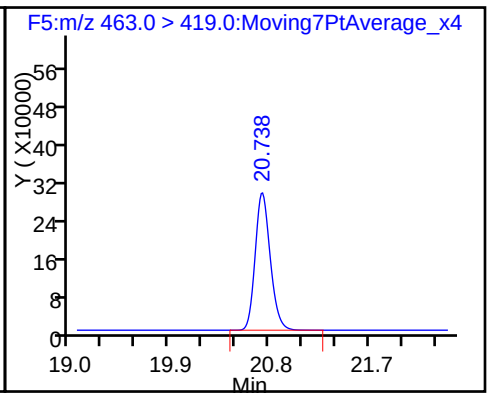
7 Perfluorooctane sulfonic acid



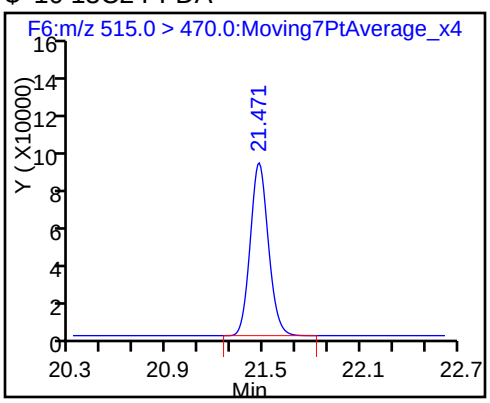
* 8 13C4 PFOS



9 Perfluorononanoic acid



$ 10 13C2 PFDA



TestAmerica Sacramento
Recovery Report

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_136.d
Lims ID: LCSD 320-141212/3-A
Client ID:
Sample Type: LCSD
Inject. Date: 14-Dec-2016 05:55:01 ALS Bottle#: 21 Worklist Smp#: 62
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: lcsd 320-141212/3-a
Misc. Info.: Acquity BEH 1.7um, 3X150mm T=35*C
Operator ID: CBW Instrument ID: A6

Method: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\537__A6.m
Limit Group: LC 537 ICAL
Last Update: 14-Dec-2016 10:53:05 Calib Date: 05-Dec-2016 19:54:00
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d

Column 1 : Acquity BEH C18 (2.10 mm) Det: F1:MRM
Process Host: XAWRK017

Compound	Amount Added	Amount Recovered	% Rec.
$ 2 13C2 PFHxA	10.0	12.6	125.83
$ 10 13C2 PFDA	10.0	13.1	130.51

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento | Job No.: 320-24069-1

SDG No.:

Client Sample ID: | Lab Sample ID: LLCS 320-141328/2-A

Matrix: Water | Lab File ID: 11DEC2016A6A_120.d

Analysis Method: 537 | Date Collected:

Extraction Method: 537 | Date Extracted: 12/08/2016 18:21

Sample wt/vol: 250.00(mL) | Date Analyzed: 12/13/2016 22:01

Con. Extract Vol.: 1.00(mL) | Dilution Factor: 1

Injection Volume: 10(uL) | GC Column: Acquity ID: 2.1(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 141770 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	0.0326	J	0.060	0.048	0.016
335-67-1	Perfluorooctanoic acid (PFOA)	0.0189	J M	0.030	0.024	0.0094
375-73-5	Perfluorobutanesulfonic acid (PFBS)	0.0838	J	0.14	0.11	0.048

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00993	13C2 PFHxA	124		70-130
STL00996	13C2 PFDA	129		70-130

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_120.d
Lims ID: LLCS 320-141328/2-A
Client ID:
Sample Type: LLCS
Inject. Date: 13-Dec-2016 22:01:31 ALS Bottle#: 43 Worklist Smp#: 43
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: llcs 320-141328/2-a
Misc. Info.: Acquity BEH 1.7um, 3X150mm T=35*C
Operator ID: CBW Instrument ID: A6

Method: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\537__A6.m
Limit Group: LC 537 ICAL
Last Update: 14-Dec-2016 10:52:33 Calib Date: 05-Dec-2016 19:54:00
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d

Column 1 : Acquity BEH C18 (2.10 mm) Det: F1:MRM
Process Host: XAWRK017

First Level Reviewer: barnettj Date: 14-Dec-2016 10:03:57

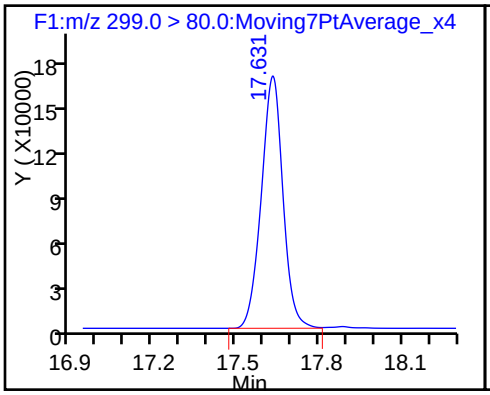
Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	S/N	Flags
1 Perfluorobutanesulfonic acid								
299.0 > 80.0	17.631	17.621	0.010	1.000	899535	21.0	942	
$ 2 13C2 PFHxA								
315.0 > 270.0	18.613	18.604	0.009	1.000	901146	12.4	28672	
3 Perfluorohexanesulfonic acid								
399.0 > 80.0	19.356	19.356	0.0	1.000	351882	6.40	8333	
4 Perfluoroheptanoic acid								M
363.0 > 319.0	19.392	19.392	0.0	1.000	217225	2.87	129	M
* 5 13C2-PFOA								
415.0 > 370.0	20.059	20.047	0.012		622346	10.0	16387	
6 Perfluorooctanoic acid								M
413.0 > 369.0	20.059	20.047	0.012	1.000	306023	4.73	125	M
7 Perfluorooctane sulfonic acid								
499.0 > 80.0	20.620	20.620	0.0	1.000	520416	8.15	5794	
* 8 13C4 PFOS								
503.0 > 80.0	20.679	20.679	0.0		1754986	28.7	45498	
9 Perfluorononanoic acid								
463.0 > 419.0	20.750	20.750	0.0	1.000	320649	4.54	8550	
$ 10 13C2 PFDA								
515.0 > 470.0	21.480	21.471	0.009	1.000	701021	12.9	21959	

QC Flag Legend

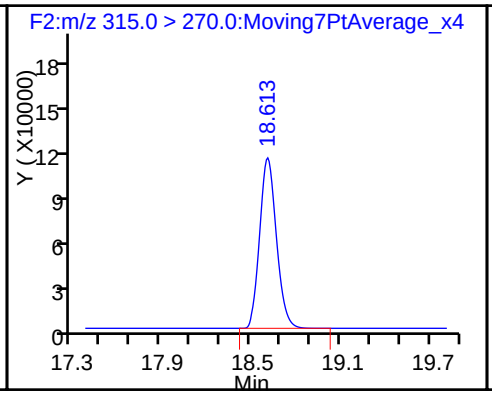
Review Flags
M - Manually Integrated

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_120.d
Injection Date: 13-Dec-2016 22:01:31 Instrument ID: A6
Lims ID: LLCS 320-141328/2-A
Client ID:
Operator ID: CBW ALS Bottle#: 43 Worklist Smp#: 43
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 537__A6 Limit Group: LC 537 ICAL

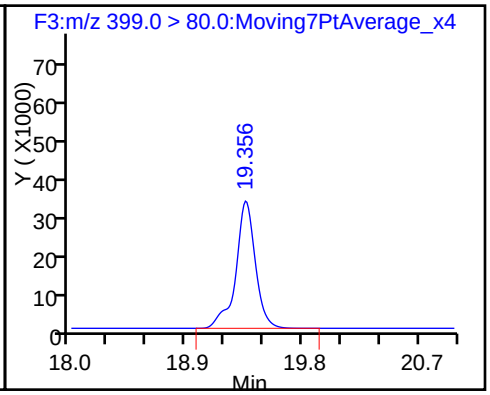
1 Perfluorobutanesulfonic acid



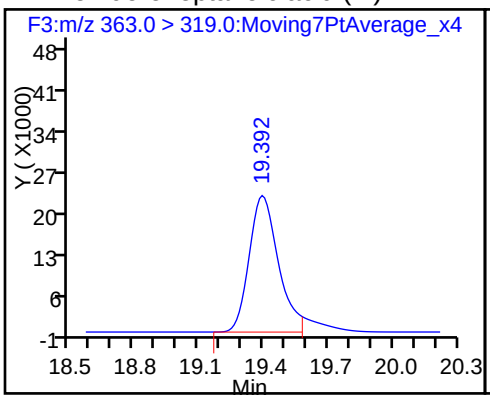
$ 2 13C2 PFHxA



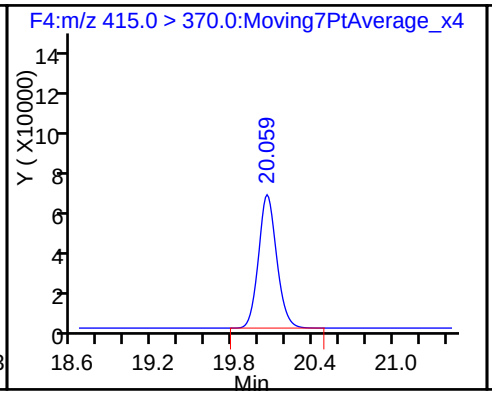
3 Perfluorohexanesulfonic acid



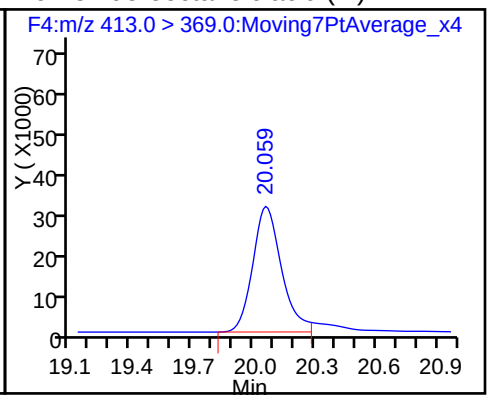
4 Perfluoroheptanoic acid (M)



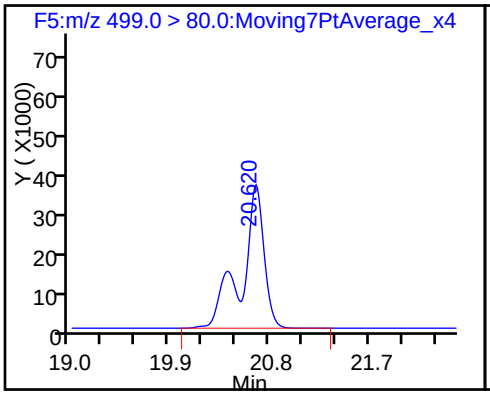
* 5 13C2-PFOA



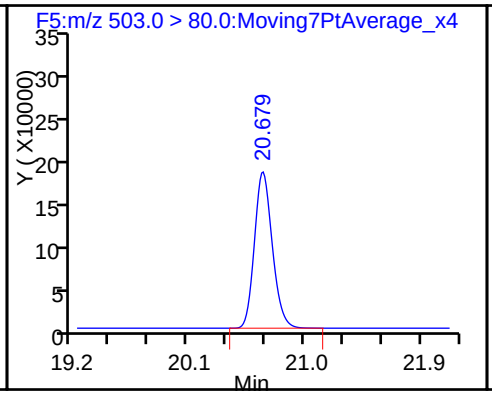
6 Perfluorooctanoic acid (M)



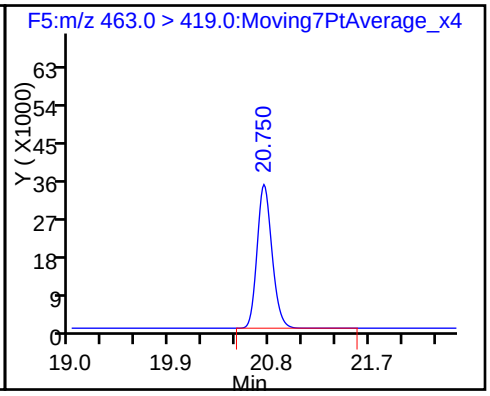
7 Perfluorooctane sulfonic acid



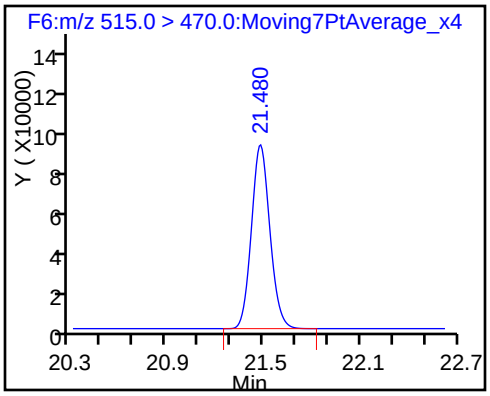
* 8 13C4 PFOS



9 Perfluorononanoic acid



$ 10 13C2 PFDA



TestAmerica Sacramento
Recovery Report

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_120.d
Lims ID: LLCS 320-141328/2-A
Client ID:
Sample Type: LLCS
Inject. Date: 13-Dec-2016 22:01:31 ALS Bottle#: 43 Worklist Smp#: 43
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: llcs 320-141328/2-a
Misc. Info.: Acquity BEH 1.7um, 3X150mm T=35*C
Operator ID: CBW Instrument ID: A6

Method: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\537__A6.m
Limit Group: LC 537 ICAL
Last Update: 14-Dec-2016 10:52:33 Calib Date: 05-Dec-2016 19:54:00
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d

Column 1 : Acquity BEH C18 (2.10 mm) Det: F1:MRM
Process Host: XAWRK017

First Level Reviewer: barnettj Date: 14-Dec-2016 10:03:57

Compound	Amount Added	Amount Recovered	% Rec.
$ 2 13C2 PFHxA	10.0	12.4	124.13
$ 10 13C2 PFDA	10.0	12.9	128.55

Manual Integration/User Assign Peak Report

TestAmerica Sacramento

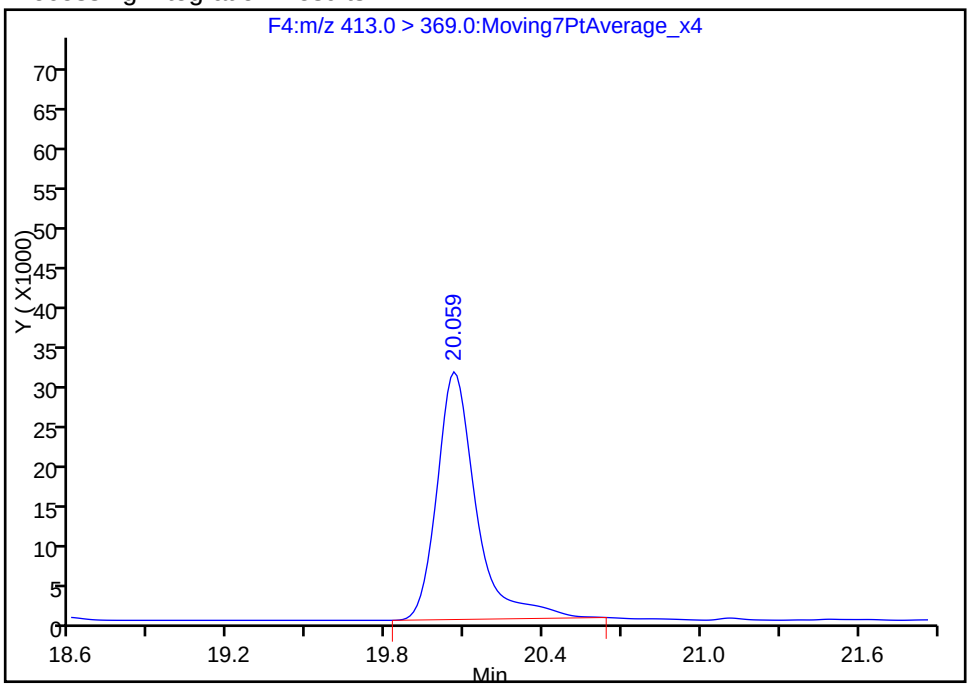
Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_120.d
Injection Date: 13-Dec-2016 22:01:31 Instrument ID: A6
Lims ID: LLCS 320-141328/2-A
Client ID:
Operator ID: CBW ALS Bottle#: 43 Worklist Smp#: 43
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 537__A6 Limit Group: LC 537 ICAL
Column: Acquity BEH C18 (2.10 mm) Detector F4:MRM

6 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

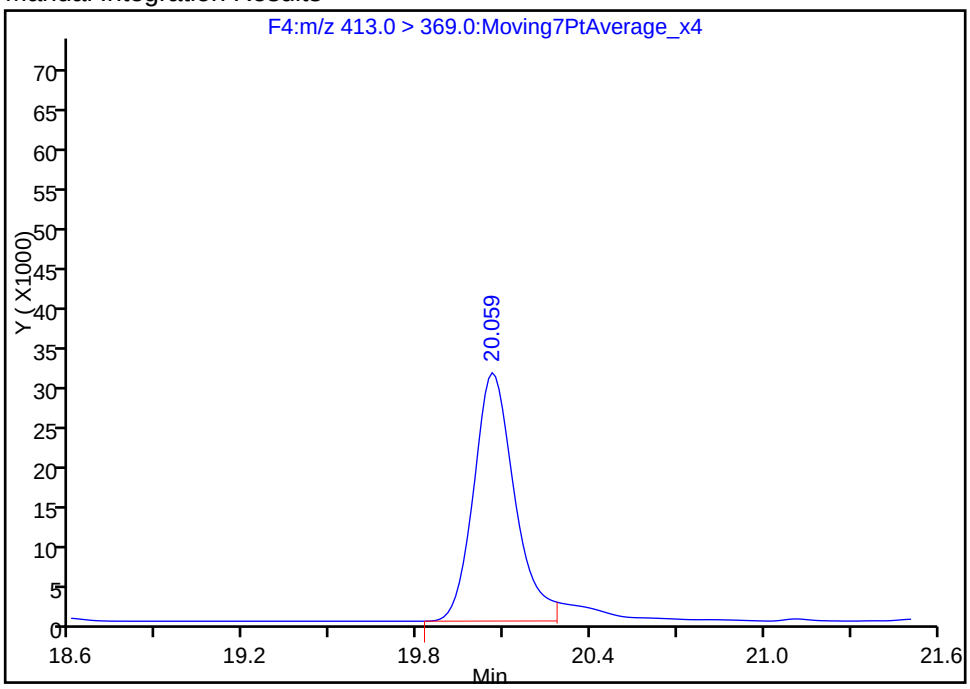
Processing Integration Results

RT: 20.06
Area: 322340
Amount: 4.978191
Amount Units: ng/ml



Manual Integration Results

RT: 20.06
Area: 306023
Amount: 4.726193
Amount Units: ng/ml



Reviewer: barnettj, 14-Dec-2016 10:03:57
Audit Action: Manually Integrated Audit Reason: Split Peak

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Client Sample ID: Lab Sample ID: LLCSD 320-141328/3-A

Matrix: Water Lab File ID: 11DEC2016A6A_121.d

Analysis Method: 537 Date Collected:

Extraction Method: 537 Date Extracted: 12/08/2016 18:21

Sample wt/vol: 250.00(mL) Date Analyzed: 12/13/2016 22:31

Con. Extract Vol.: 1.00(mL) Dilution Factor: 1

Injection Volume: 10(uL) GC Column: Acquity ID: 2.1(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 141770 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	0.0355	J	0.060	0.048	0.016
335-67-1	Perfluorooctanoic acid (PFOA)	0.0184	J M	0.030	0.024	0.0094
375-73-5	Perfluorobutanesulfonic acid (PFBS)	0.0876	J	0.14	0.11	0.048

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00993	13C2 PFHxA	119		70-130
STL00996	13C2 PFDA	116		70-130

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_121.d
Lims ID: LLCSD 320-141328/3-A
Client ID:
Sample Type: LLCSD
Inject. Date: 13-Dec-2016 22:31:07 ALS Bottle#: 44 Worklist Smp#: 44
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: llcsd 320-141328/3-a
Misc. Info.: Acquity BEH 1.7um, 3X150mm T=35*C
Operator ID: CBW Instrument ID: A6

Method: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\537__A6.m
Limit Group: LC 537 ICAL
Last Update: 14-Dec-2016 10:52:33 Calib Date: 05-Dec-2016 19:54:00
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d

Column 1 : Acquity BEH C18 (2.10 mm) Det: F1:MRM
Process Host: XAWRK017

First Level Reviewer: barnettj Date: 14-Dec-2016 10:04:49

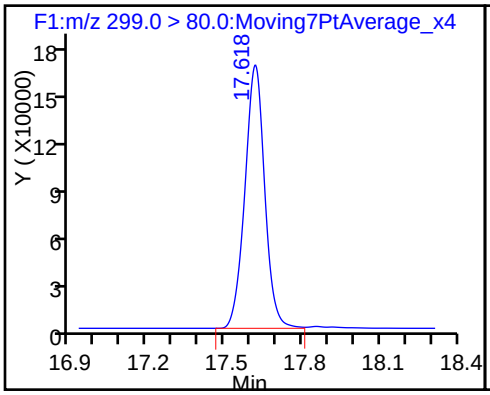
Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	S/N	Flags
1 Perfluorobutanesulfonic acid								
299.0 > 80.0	17.618	17.621	-0.003	1.000	883764	21.9	697	
$ 2 13C2 PFHxA								
315.0 > 270.0	18.594	18.604	-0.010	1.000	811953	11.9	26160	
3 Perfluorohexanesulfonic acid								
399.0 > 80.0	19.344	19.356	-0.012	1.000	337727	6.53	7927	
4 Perfluoroheptanoic acid								M
363.0 > 319.0	19.379	19.392	-0.013	1.000	185420	2.60	118	M
* 5 13C2-PFOA								
415.0 > 370.0	20.046	20.047	-0.001		586374	10.0	20519	
6 Perfluorooctanoic acid								M
413.0 > 369.0	20.046	20.047	-0.001	1.000	281224	4.61	116	M
7 Perfluorooctane sulfonic acid								
499.0 > 80.0	20.619	20.620	-0.001	1.000	533028	8.87	5820	
* 8 13C4 PFOS								
503.0 > 80.0	20.679	20.679	0.0		1650823	28.7	24337	
9 Perfluorononanoic acid								
463.0 > 419.0	20.750	20.750	0.0	1.000	274785	4.13	3645	
$ 10 13C2 PFDA								
515.0 > 470.0	21.480	21.471	0.009	1.000	595246	11.6	18742	

QC Flag Legend

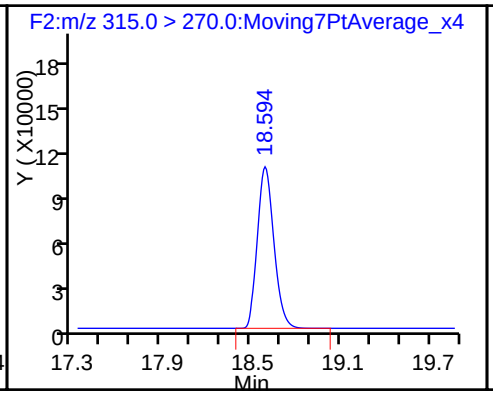
Review Flags
M - Manually Integrated

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_121.d
Injection Date: 13-Dec-2016 22:31:07 Instrument ID: A6
Lims ID: LLCSD 320-141328/3-A
Client ID:
Operator ID: CBW ALS Bottle#: 44 Worklist Smp#: 44
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 537__A6 Limit Group: LC 537 ICAL

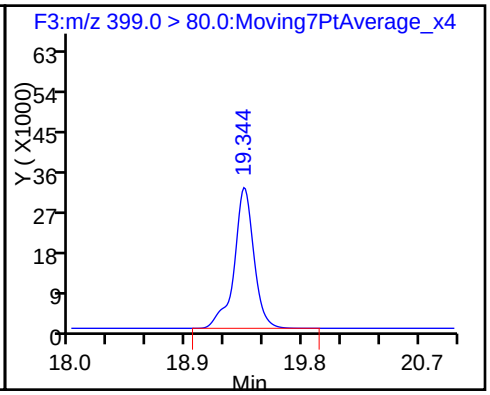
1 Perfluorobutanesulfonic acid



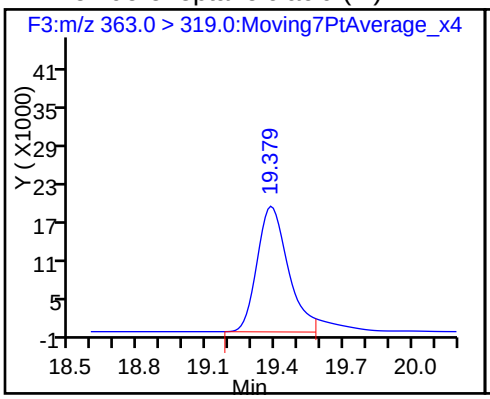
$ 2 13C2 PFHxA



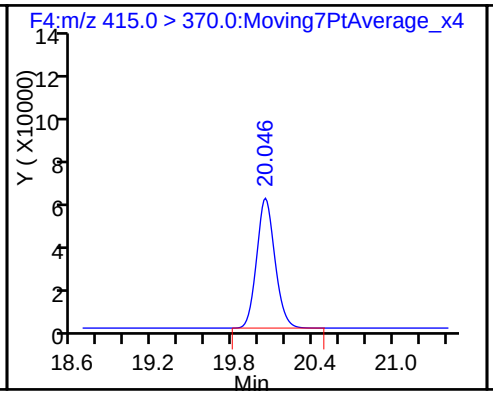
3 Perfluorohexanesulfonic acid



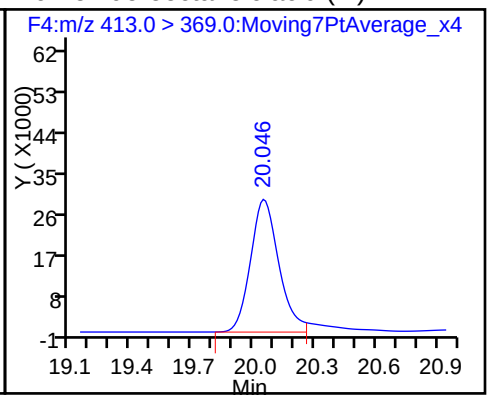
4 Perfluoroheptanoic acid (M)



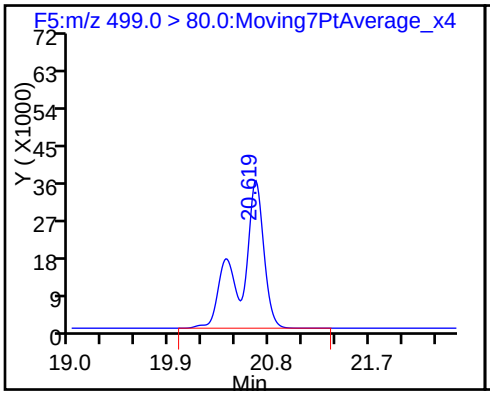
* 5 13C2-PFOA



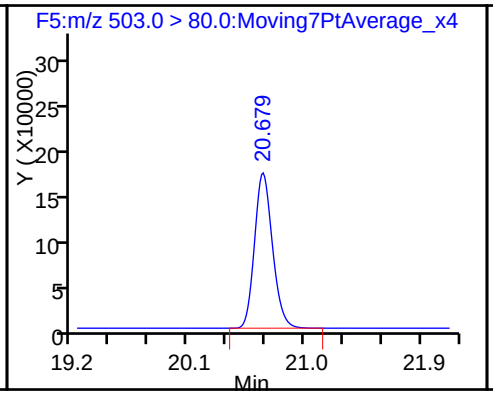
6 Perfluorooctanoic acid (M)



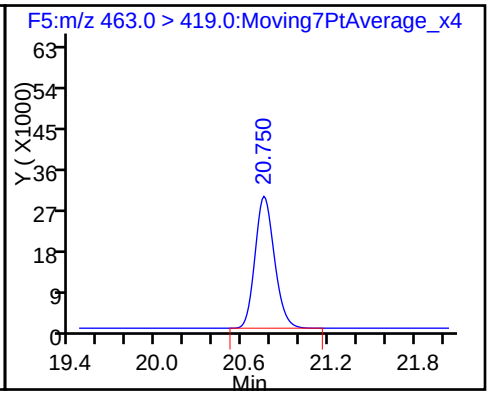
7 Perfluorooctane sulfonic acid



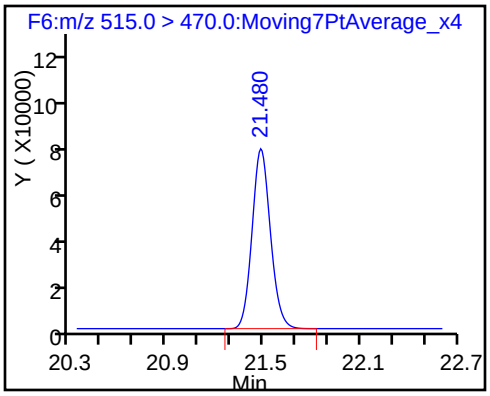
* 8 13C4 PFOS



9 Perfluorononanoic acid



$ 10 13C2 PFDA



TestAmerica Sacramento
Recovery Report

Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_121.d
Lims ID: LLCSD 320-141328/3-A
Client ID:
Sample Type: LLCSD
Inject. Date: 13-Dec-2016 22:31:07 ALS Bottle#: 44 Worklist Smp#: 44
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: llcsd 320-141328/3-a
Misc. Info.: Acquity BEH 1.7um, 3X150mm T=35*C
Operator ID: CBW Instrument ID: A6

Method: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\537__A6.m
Limit Group: LC 537 ICAL
Last Update: 14-Dec-2016 10:52:33 Calib Date: 05-Dec-2016 19:54:00
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A6\20161205-37524.b\05DEC2016A6A_009.d

Column 1 : Acquity BEH C18 (2.10 mm) Det: F1:MRM
Process Host: XAWRK017

First Level Reviewer: barnettj Date: 14-Dec-2016 10:04:49

Compound	Amount Added	Amount Recovered	% Rec.
$ 2 13C2 PFHxA	10.0	11.9	118.70
$ 10 13C2 PFDA	10.0	11.6	115.85

Manual Integration/User Assign Peak Report

TestAmerica Sacramento

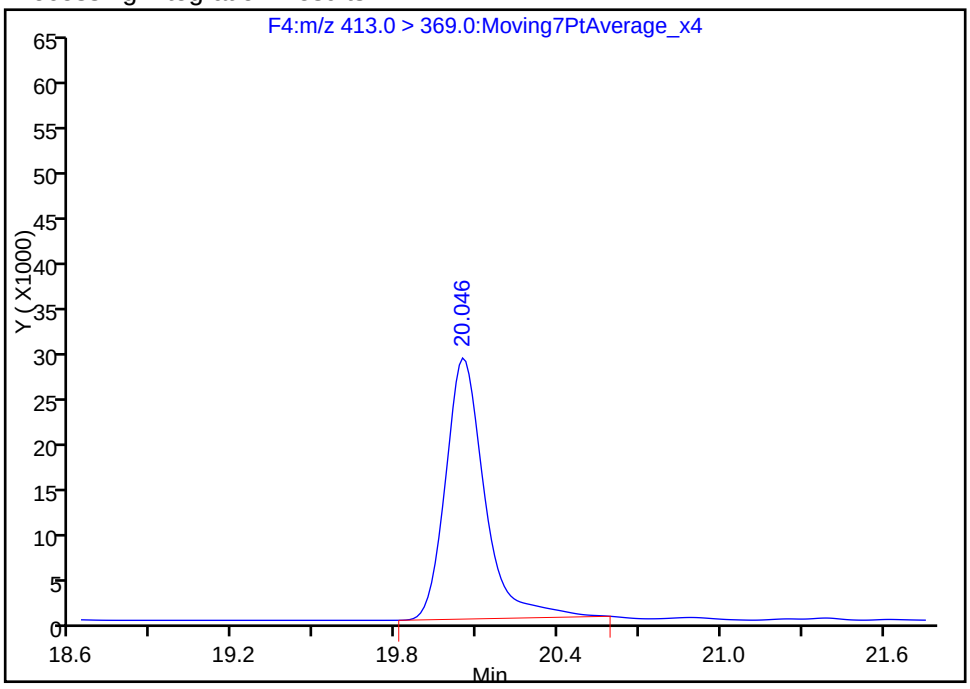
Data File: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b\11DEC2016A6A_121.d
Injection Date: 13-Dec-2016 22:31:07 Instrument ID: A6
Lims ID: LLCSD 320-141328/3-A
Client ID:
Operator ID: CBW ALS Bottle#: 44 Worklist Smp#: 44
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Method: 537__A6 Limit Group: LC 537 ICAL
Column: Acquity BEH C18 (2.10 mm) Detector F4:MRM

6 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

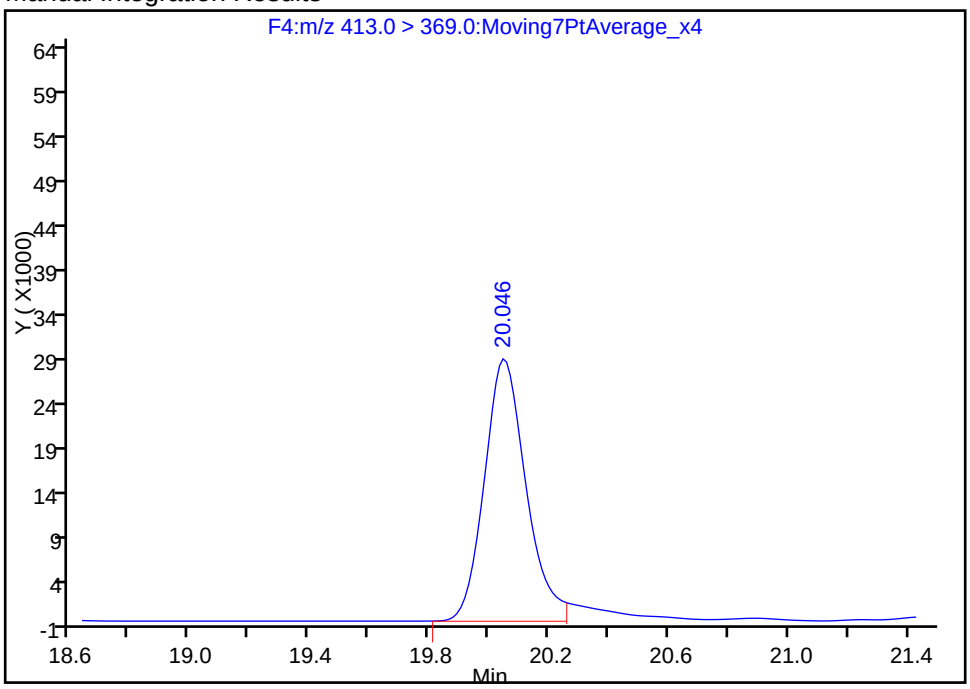
Processing Integration Results

RT: 20.05
Area: 291124
Amount: 4.771913
Amount Units: ng/ml



Manual Integration Results

RT: 20.05
Area: 281224
Amount: 4.609639
Amount Units: ng/ml



Reviewer: barnettj, 14-Dec-2016 10:04:49
Audit Action: Manually Integrated Audit Reason: Split Peak

LCMS ANALYSIS RUN LOG

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Instrument ID: A6 Start Date: 12/05/2016 17:26

Analysis Batch Number: 140688 End Date: 12/06/2016 02:48

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
STD 320-140688/2 IC		12/05/2016 17:26	1	05DEC2016A6A_004.d	Acquity 2.1(mm)
STD 320-140688/3 IC		12/05/2016 17:55	1	05DEC2016A6A_005.d	Acquity 2.1(mm)
STD 320-140688/4 IC		12/05/2016 18:25	1	05DEC2016A6A_006.d	Acquity 2.1(mm)
STD 320-140688/5 ICISAV		12/05/2016 18:54	1	05DEC2016A6A_007.d	Acquity 2.1(mm)
STD 320-140688/6 IC		12/05/2016 19:24	1	05DEC2016A6A_008.d	Acquity 2.1(mm)
STD 320-140688/7 IC		12/05/2016 19:54	1	05DEC2016A6A_009.d	Acquity 2.1(mm)
ZZZZZ		12/05/2016 20:23	1		Acquity 2.1(mm)
CCV 320-140688/9 CCVL		12/05/2016 20:53	1	05DEC2016A6A_011.d	Acquity 2.1(mm)
ZZZZZ		12/05/2016 21:22	1		Acquity 2.1(mm)
ICV 320-140688/11		12/05/2016 21:52	1	05DEC2016A6A_013.d	Acquity 2.1(mm)
ZZZZZ		12/05/2016 22:22	1		Acquity 2.1(mm)
ZZZZZ		12/05/2016 22:51	1		Acquity 2.1(mm)
ZZZZZ		12/05/2016 23:21	1		Acquity 2.1(mm)
ZZZZZ		12/05/2016 23:50	1		Acquity 2.1(mm)
ZZZZZ		12/06/2016 00:20	1		Acquity 2.1(mm)
ZZZZZ		12/06/2016 00:49	1		Acquity 2.1(mm)
ZZZZZ		12/06/2016 01:19	1		Acquity 2.1(mm)
ZZZZZ		12/06/2016 01:49	1		Acquity 2.1(mm)
ZZZZZ		12/06/2016 02:18	1		Acquity 2.1(mm)
CCV 320-140688/21 CCVIS		12/06/2016 02:48	1		Acquity 2.1(mm)

LCMS ANALYSIS RUN LOG

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Instrument ID: A6 Start Date: 12/11/2016 12:02

Analysis Batch Number: 141573 End Date: 12/11/2016 18:57

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 320-141573/3 CCVL		12/11/2016 12:02	1	11DEC2016A6A_003.d	Acquity 2.1(mm)
CCV 320-141573/4 CCVIS		12/11/2016 12:32	1		Acquity 2.1(mm)
ZZZZZ		12/11/2016 13:02	1		Acquity 2.1(mm)
ZZZZZ		12/11/2016 13:31	1		Acquity 2.1(mm)
ZZZZZ		12/11/2016 14:01	1		Acquity 2.1(mm)
ZZZZZ		12/11/2016 14:30	1		Acquity 2.1(mm)
ZZZZZ		12/11/2016 15:00	1		Acquity 2.1(mm)
ZZZZZ		12/11/2016 15:30	1		Acquity 2.1(mm)
ZZZZZ		12/11/2016 15:59	1		Acquity 2.1(mm)
ZZZZZ		12/11/2016 16:29	1		Acquity 2.1(mm)
ZZZZZ		12/11/2016 16:58	1		Acquity 2.1(mm)
ZZZZZ		12/11/2016 17:28	1		Acquity 2.1(mm)
ZZZZZ		12/11/2016 17:58	1		Acquity 2.1(mm)
CCV 320-141573/17 CCVIS		12/11/2016 18:57	1		Acquity 2.1(mm)

LCMS ANALYSIS RUN LOG

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Instrument ID: A6 Start Date: 12/13/2016 01:32

Analysis Batch Number: 141767 End Date: 12/13/2016 07:56

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 320-141767/2 CCVIS		12/13/2016 01:32	1	11DEC2016A6A_079.d	Acquity 2.1(mm)
ZZZZZ		12/13/2016 02:01	1		Acquity 2.1(mm)
ZZZZZ		12/13/2016 02:31	1		Acquity 2.1(mm)
ZZZZZ		12/13/2016 03:00	1		Acquity 2.1(mm)
ZZZZZ		12/13/2016 03:30	1		Acquity 2.1(mm)
ZZZZZ		12/13/2016 04:00	1		Acquity 2.1(mm)
ZZZZZ		12/13/2016 04:29	1		Acquity 2.1(mm)
ZZZZZ		12/13/2016 04:59	1		Acquity 2.1(mm)
MB 320-141212/1-A		12/13/2016 05:28	1	11DEC2016A6A_087.d	Acquity 2.1(mm)
ZZZZZ		12/13/2016 05:58	1		Acquity 2.1(mm)
ZZZZZ		12/13/2016 06:28	1		Acquity 2.1(mm)
ZZZZZ		12/13/2016 06:57	1		Acquity 2.1(mm)
CCV 320-141767/15 CCVIS		12/13/2016 07:56	1	11DEC2016A6A_092.d	Acquity 2.1(mm)

LCMS ANALYSIS RUN LOG

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Instrument ID: A6 Start Date: 12/13/2016 07:56

Analysis Batch Number: 141768 End Date: 12/13/2016 14:21

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 320-141768/15 CCVIS		12/13/2016 07:56	1	11DEC2016A6A_092.d	Acquity 2.1(mm)
ZZZZZ		12/13/2016 08:26	1		Acquity 2.1(mm)
320-24069-2		12/13/2016 08:56	1	11DEC2016A6A_094.d	Acquity 2.1(mm)
ZZZZZ		12/13/2016 09:25	1		Acquity 2.1(mm)
ZZZZZ		12/13/2016 09:55	1		Acquity 2.1(mm)
ZZZZZ		12/13/2016 10:24	1		Acquity 2.1(mm)
320-24069-6		12/13/2016 10:54	1	11DEC2016A6A_098.d	Acquity 2.1(mm)
320-24069-7		12/13/2016 11:24	1	11DEC2016A6A_099.d	Acquity 2.1(mm)
320-24069-8		12/13/2016 11:53	1	11DEC2016A6A_100.d	Acquity 2.1(mm)
320-24069-9		12/13/2016 12:23	1	11DEC2016A6A_101.d	Acquity 2.1(mm)
320-24069-10		12/13/2016 12:52	1	11DEC2016A6A_102.d	Acquity 2.1(mm)
320-24069-11		12/13/2016 13:22	1	11DEC2016A6A_103.d	Acquity 2.1(mm)
CCV 320-141768/28 CCVIS		12/13/2016 14:21	1	11DEC2016A6A_105.d	Acquity 2.1(mm)

LCMS ANALYSIS RUN LOG

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Instrument ID: A6 Start Date: 12/13/2016 14:21

Analysis Batch Number: 141769 End Date: 12/13/2016 20:32

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 320-141769/28 CCVIS		12/13/2016 14:21	1	11DEC2016A6A_105.d	Acquity 2.1(mm)
ZZZZZ		12/13/2016 15:05	1		Acquity 2.1(mm)
320-24069-12		12/13/2016 15:36	1	11DEC2016A6A_107.d	Acquity 2.1(mm)
320-24069-13		12/13/2016 16:06	1	11DEC2016A6A_108.d	Acquity 2.1(mm)
320-24069-14		12/13/2016 16:35	1	11DEC2016A6A_109.d	Acquity 2.1(mm)
320-24069-15		12/13/2016 17:05	1	11DEC2016A6A_110.d	Acquity 2.1(mm)
320-24069-16		12/13/2016 17:35	1	11DEC2016A6A_111.d	Acquity 2.1(mm)
320-24069-17		12/13/2016 18:04	1	11DEC2016A6A_112.d	Acquity 2.1(mm)
320-24069-18		12/13/2016 18:34	1	11DEC2016A6A_113.d	Acquity 2.1(mm)
320-24069-19		12/13/2016 19:03	1	11DEC2016A6A_114.d	Acquity 2.1(mm)
320-24069-20		12/13/2016 19:33	1	11DEC2016A6A_115.d	Acquity 2.1(mm)
CCV 320-141769/40 CCVIS		12/13/2016 20:32	1	11DEC2016A6A_117.d	Acquity 2.1(mm)

LCMS ANALYSIS RUN LOG

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Instrument ID: A6 Start Date: 12/13/2016 20:32

Analysis Batch Number: 141770 End Date: 12/14/2016 02:57

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 320-141770/40 CCVIS		12/13/2016 20:32	1	11DEC2016A6A_117.d	Acquity 2.1(mm)
ZZZZZ		12/13/2016 21:02	1		Acquity 2.1(mm)
MB 320-141328/1-A		12/13/2016 21:31	1	11DEC2016A6A_119.d	Acquity 2.1(mm)
LLCS 320-141328/2-A		12/13/2016 22:01	1	11DEC2016A6A_120.d	Acquity 2.1(mm)
LLCSD 320-141328/3-A		12/13/2016 22:31	1	11DEC2016A6A_121.d	Acquity 2.1(mm)
ZZZZZ		12/13/2016 23:00	1		Acquity 2.1(mm)
ZZZZZ		12/13/2016 23:30	1		Acquity 2.1(mm)
ZZZZZ		12/13/2016 23:59	1		Acquity 2.1(mm)
320-24069-24		12/14/2016 00:29	1	11DEC2016A6A_125.d	Acquity 2.1(mm)
320-24069-25		12/14/2016 00:59	1	11DEC2016A6A_126.d	Acquity 2.1(mm)
ZZZZZ		12/14/2016 01:28	1		Acquity 2.1(mm)
320-24069-27		12/14/2016 01:58	1	11DEC2016A6A_128.d	Acquity 2.1(mm)
CCV 320-141770/53 CCVIS		12/14/2016 02:57	1	11DEC2016A6A_130.d	Acquity 2.1(mm)

LCMS ANALYSIS RUN LOG

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Instrument ID: A6 Start Date: 12/14/2016 02:57

Analysis Batch Number: 141771 End Date: 12/14/2016 09:22

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 320-141771/53 CCVIS		12/14/2016 02:57	1	11DEC2016A6A_130.d	Acquity 2.1(mm)
ZZZZZ		12/14/2016 03:27	1		Acquity 2.1(mm)
320-24069-28		12/14/2016 03:56	1	11DEC2016A6A_132.d	Acquity 2.1(mm)
320-24069-29		12/14/2016 04:26	1	11DEC2016A6A_133.d	Acquity 2.1(mm)
320-24069-30		12/14/2016 04:55	1	11DEC2016A6A_134.d	Acquity 2.1(mm)
LCS 320-141212/2-A		12/14/2016 05:25	1	11DEC2016A6A_135.d	Acquity 2.1(mm)
LCSD 320-141212/3-A		12/14/2016 05:55	1	11DEC2016A6A_136.d	Acquity 2.1(mm)
320-24069-1		12/14/2016 06:24	1	11DEC2016A6A_137.d	Acquity 2.1(mm)
320-24069-3		12/14/2016 06:54	1	11DEC2016A6A_138.d	Acquity 2.1(mm)
320-24069-4		12/14/2016 07:23	1	11DEC2016A6A_139.d	Acquity 2.1(mm)
320-24069-5		12/14/2016 07:53	1	11DEC2016A6A_140.d	Acquity 2.1(mm)
320-24069-6 RA		12/14/2016 08:23	1	11DEC2016A6A_141.d	Acquity 2.1(mm)
CCV 320-141771/59 CCVIS		12/14/2016 09:22	1	11DEC2016A6A_143.d	Acquity 2.1(mm)

LCMS ANALYSIS RUN LOG

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Instrument ID: A6 Start Date: 12/14/2016 15:44

Analysis Batch Number: 141966 End Date: 12/14/2016 20:42

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 320-141966/15 CCVIS		12/14/2016 15:44	1	11DEC2016A6A_156.d	Acquity 2.1(mm)
ZZZZZ		12/14/2016 16:16	1		Acquity 2.1(mm)
320-24069-21		12/14/2016 16:46	1	11DEC2016A6A_158.d	Acquity 2.1(mm)
320-24069-22		12/14/2016 17:15	1	11DEC2016A6A_159.d	Acquity 2.1(mm)
320-24069-23		12/14/2016 17:45	1	11DEC2016A6A_160.d	Acquity 2.1(mm)
320-24069-26		12/14/2016 18:14	1	11DEC2016A6A_161.d	Acquity 2.1(mm)
ZZZZZ		12/14/2016 18:44	1		Acquity 2.1(mm)
CCV 320-141966/25 CCVIS		12/14/2016 20:42	1	11DEC2016A6A_166.d	Acquity 2.1(mm)

LCMS BATCH WORKSHEET

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Batch Number: 141212 Batch Start Date: 12/08/16 11:45 Batch Analyst: Marchenko, Veronika P

Batch Method: 537 Batch End Date: 12/09/16 16:40

Lab Sample ID	Client Sample ID	Method Chain	Basis	GrossWeight	TareWeight	InitialAmount	FinalAmount	ReceivedpH	LC537-HSP 00013
MB 320-141212/1		537, 537				250 mL	1.0 mL	7 SU	
LCS 320-141212/2		537, 537				250 mL	1.0 mL	7 SU	50 uL
LCSD 320-141212/3		537, 537				250 mL	1.0 mL	7 SU	50 uL
320-24069-A-1	WI-CV-1RW13-1216	537, 537	T	292.96 g	38.39 g	254.6 mL	1.0 mL	7 SU	
320-24069-A-2	WI-CV-1FB13-1216	537, 537	T	293.97 g	25.78 g	268.2 mL	1.0 mL	9 SU	
320-24069-A-3	WI-CV-1RW14-1216	537, 537	T	300.39 g	38.48 g	261.9 mL	1.0 mL	7 SU	
320-24069-A-4	WI-CV-1FB14-1216	537, 537	T	294.20 g	37.15 g	257.1 mL	1.0 mL	7 SU	
320-24069-A-5	WI-CV-1RW15-1216	537, 537	T	293.69 g	38.47 g	255.2 mL	1.0 mL	7 SU	
320-24069-A-6	WI-CV-1FB15-1216	537, 537	T	292.86 g	37.16 g	255.7 mL	1.0 mL	7 SU	
320-24069-A-7	WI-CV-1RW16-1216	537, 537	T	282.41 g	27.89 g	254.5 mL	1.0 mL	7 SU	
320-24069-A-8	WI-CV-1FB16-1216	537, 537	T	291.07 g	26.60 g	264.5 mL	1.0 mL	7 SU	
320-24069-A-9	WI-CV-1RW17-1216	537, 537	T	284.73 g	27.39 g	257.3 mL	1.0 mL	7 SU	
320-24069-A-10	WI-CV-1FB17-1216	537, 537	T	294.48 g	25.87 g	268.6 mL	1.0 mL	7 SU	
320-24069-A-11	WI-CV-3RW14-1216	537, 537	T	287.01 g	29.01 g	258 mL	1.0 mL	7 SU	
320-24069-A-12	WI-CV-3FB14-1216	537, 537	T	296.85 g	26.50 g	270.4 mL	1.0 mL	7 SU	
320-24069-A-13	WI-CV-3RW15-1216	537, 537	T	293.34 g	27.44 g	265.9 mL	1.0 mL	7 SU	
320-24069-A-14	WI-CV-3FB15-1216	537, 537	T	281.60 g	26.55 g	255.1 mL	1.0 mL	7 SU	
320-24069-A-15	WI-CV-3RW16-1216	537, 537	T	296.76 g	26.66 g	270.1 mL	1.0 mL	7 SU	
320-24069-A-16	WI-CV-3FB16-1216	537, 537	T	292.38 g	26.20 g	266.2 mL	1.0 mL	7 SU	
320-24069-A-17	WI-CV-1RW18-1216	537, 537	T	294.49 g	27.03 g	267.5 mL	1.0 mL	7 SU	
320-24069-A-18	WI-CV-1FB18-1216	537, 537	T	293.55 g	26.52 g	267 mL	1.0 mL	7 SU	
320-24069-A-19	WI-CV-1RW19-1216	537, 537	T	295.24 g	26.90 g	268.3 mL	1.0 mL	7 SU	
320-24069-A-20	WI-CV-1FB19-1216	537, 537	T	285.86 g	26.40 g	259.5 mL	1.0 mL	7 SU	

Lab Sample ID	Client Sample ID	Method Chain	Basis	LC537-IS 00026	LC537-SU 00024	AnalysisComment			
MB 320-141212/1		537, 537		20 uL	50 uL	Chlorine ND			
LCS 320-141212/2		537, 537		20 uL	50 uL	Chlorine ND			
LCSD 320-141212/3		537, 537		20 uL	50 uL	Chlorine ND			

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

LCMS BATCH WORKSHEET

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Batch Number: 141212 Batch Start Date: 12/08/16 11:45 Batch Analyst: Marchenko, Veronika P

Batch Method: 537 Batch End Date: 12/09/16 16:40

Lab Sample ID	Client Sample ID	Method Chain	Basis	LC537-IS 00026	LC537-SU 00024	AnalysisComment			
320-24069-A-1	WI-CV-1RW13-1216	537, 537	T	20 uL	50 uL	Chlorine ND			
320-24069-A-2	WI-CV-1FB13-1216	537, 537	T	20 uL	50 uL	Chlorine ND			
320-24069-A-3	WI-CV-1RW14-1216	537, 537	T	20 uL	50 uL	Chlorine ND			
320-24069-A-4	WI-CV-1FB14-1216	537, 537	T	20 uL	50 uL	Chlorine ND			
320-24069-A-5	WI-CV-1RW15-1216	537, 537	T	20 uL	50 uL	Chlorine ND			
320-24069-A-6	WI-CV-1FB15-1216	537, 537	T	20 uL	50 uL	Chlorine ND			
320-24069-A-7	WI-CV-1RW16-1216	537, 537	T	20 uL	50 uL	Chlorine ND			
320-24069-A-8	WI-CV-1FB16-1216	537, 537	T	20 uL	50 uL	Chlorine ND			
320-24069-A-9	WI-CV-1RW17-1216	537, 537	T	20 uL	50 uL	Chlorine ND			
320-24069-A-10	WI-CV-1FB17-1216	537, 537	T	20 uL	50 uL	Chlorine ND			
320-24069-A-11	WI-CV-3RW14-1216	537, 537	T	20 uL	50 uL	Chlorine ND			
320-24069-A-12	WI-CV-3FB14-1216	537, 537	T	20 uL	50 uL	Chlorine ND			
320-24069-A-13	WI-CV-3RW15-1216	537, 537	T	20 uL	50 uL	Chlorine ND			
320-24069-A-14	WI-CV-3FB15-1216	537, 537	T	20 uL	50 uL	Chlorine ND			
320-24069-A-15	WI-CV-3RW16-1216	537, 537	T	20 uL	50 uL	Chlorine ND			
320-24069-A-16	WI-CV-3FB16-1216	537, 537	T	20 uL	50 uL	Chlorine ND			
320-24069-A-17	WI-CV-1RW18-1216	537, 537	T	20 uL	50 uL	Chlorine ND			
320-24069-A-18	WI-CV-1FB18-1216	537, 537	T	20 uL	50 uL	Chlorine ND			
320-24069-A-19	WI-CV-1RW19-1216	537, 537	T	20 uL	50 uL	Chlorine ND			
320-24069-A-20	WI-CV-1FB19-1216	537, 537	T	20 uL	50 uL	Chlorine ND			

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

LCMS BATCH WORKSHEET

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Batch Number: 141212 Batch Start Date: 12/08/16 11:45 Batch Analyst: Marchenko, Veronika P

Batch Method: 537 Batch End Date: 12/09/16 16:40

Batch Notes	
Manifold ID	1,3
Methanol ID	789820
Pipette ID	MD05306/MG0455
Analyst ID - IS Reagent Drop	VPM
Analyst ID - IS Reagent Drop Witness	ERW
Analyst ID - SU Reagent Drop	VPM
Analyst ID - SU Reagent Drop Witness	NSH
Analyst ID - TA Reagent Drop	VPM
Analyst ID - TA Reagent Drop Witness	NSH
SPE Cartridge ID	6332578-03
Trizma ID	SLBN2122V
Reagent Water ID	12-08-16

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

LCMS BATCH WORKSHEET

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Batch Number: 141328 Batch Start Date: 12/08/16 18:21 Batch Analyst: Reed, Jonathan E

Batch Method: 537 Batch End Date: 12/09/16 16:50

Lab Sample ID	Client Sample ID	Method Chain	Basis	GrossWeight	TareWeight	InitialAmount	FinalAmount	ReceivedpH	LC537-IS 00026
MB 320-141328/1		537, 537				250.00 mL	1.00 mL	7 SU	20 uL
LLCS 320-141328/2		537, 537				250.00 mL	1.00 mL	7 SU	20 uL
LLCSD 320-141328/3		537, 537				250.00 mL	1.00 mL	7 SU	20 uL
320-24069-A-21	WI-CV-1RW20-1216	537, 537	T	302.25 g	28.01 g	274.2 mL	1.00 mL	7 SU	20 uL
320-24069-A-22	WI-CV-1FB20-1216	537, 537	T	311.48 g	27.21 g	284.3 mL	1.00 mL	7 SU	20 uL
320-24069-A-23	WI-CV-1RW21-1216	537, 537	T	292.12 g	28.19 g	263.9 mL	1.00 mL	7 SU	20 uL
320-24069-A-24	WI-CV-1FB21-1216	537, 537	T	306.25 g	27.33 g	278.9 mL	1.00 mL	7 SU	20 uL
320-24069-A-25	WI-CV-1RW22-1216	537, 537	T	304.28 g	28.23 g	276.1 mL	1.00 mL	7 SU	20 uL
320-24069-A-26	WI-CV-1FB22-1216	537, 537	T	312.67 g	27.32 g	285.4 mL	1.00 mL	7 SU	20 uL
320-24069-A-27	WI-CV-3RW17-1216	537, 537	T	298.86 g	27.58 g	271.3 mL	1.00 mL	7 SU	20 uL
320-24069-A-28	WI-CV-3FB17-1216	537, 537	T	305.56 g	26.87 g	278.7 mL	1.00 mL	7 SU	20 uL
320-24069-A-29	WI-CV-3RW18-1216	537, 537	T	301.58 g	28.18 g	273.4 mL	1.00 mL	7 SU	20 uL
320-24069-A-30	WI-CV-3FB18-1216	537, 537	T	308.60 g	27.05 g	281.6 mL	1.00 mL	7 SU	20 uL

Lab Sample ID	Client Sample ID	Method Chain	Basis	LC537-LSP 00016	LC537-SU 00024	AnalysisComment			
MB 320-141328/1		537, 537			50 uL	Free Chlorine: ND			
LLCS 320-141328/2		537, 537		50 uL	50 uL	Free Chlorine: ND			
LLCSD 320-141328/3		537, 537		50 uL	50 uL	Free Chlorine: ND			
320-24069-A-21	WI-CV-1RW20-1216	537, 537	T		50 uL	Free Chlorine: ND			
320-24069-A-22	WI-CV-1FB20-1216	537, 537	T		50 uL	Free Chlorine: ND			
320-24069-A-23	WI-CV-1RW21-1216	537, 537	T		50 uL	Free Chlorine: ND			
320-24069-A-24	WI-CV-1FB21-1216	537, 537	T		50 uL	Free Chlorine: ND			
320-24069-A-25	WI-CV-1RW22-1216	537, 537	T		50 uL	Free Chlorine: ND			
320-24069-A-26	WI-CV-1FB22-1216	537, 537	T		50 uL	Free Chlorine: ND			
320-24069-A-27	WI-CV-3RW17-1216	537, 537	T		50 uL	Free Chlorine: ND			

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

LCMS BATCH WORKSHEET

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Batch Number: 141328 Batch Start Date: 12/08/16 18:21 Batch Analyst: Reed, Jonathan E

Batch Method: 537 Batch End Date: 12/09/16 16:50

Lab Sample ID	Client Sample ID	Method Chain	Basis	LC537-LSP 00016	LC537-SU 00024	AnalysisComment			
320-24069-A-28	WI-CV-3FB17-1216	537, 537	T		50 uL	Free Chlorine: ND			
320-24069-A-29	WI-CV-3RW18-1216	537, 537	T		50 uL	Free Chlorine: ND			
320-24069-A-30	WI-CV-3FB18-1216	537, 537	T		50 uL	Free Chlorine: ND			

Batch Notes	
Manifold ID	5,6
Methanol ID	789820
Pipette ID	MD05306
Analyst ID - IS Reagent Drop	VPM
Analyst ID - IS Reagent Drop Witness	ERW
Analyst ID - SU Reagent Drop	JER
Analyst ID - SU Reagent Drop Witness	VPM
Analyst ID - TA Reagent Drop	JER
Analyst ID - TA Reagent Drop Witness	VPM
SPE Cartridge ID	6332578-03
Trizma ID	SLBN2122V
Reagent Water ID	12/08/16

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Sacramento

Method 537 CCV/Data Review Checklist

Job No: 24069 Instrument ID & Date: AL 12-13-16 ICAL Batch: 140688

Extraction Batch: 141212, 141328 Worklist #: 37756, 37801 TALS Batch: 141767, 141768, 141769, 141771, 141770 141966

Review Items	— Level 1 — Yes	No	N/A	Level 2
Initial Calibration				
1. Is ICAL verified and locked in Chrom & TALS?	✓			✓
2. Is ICV properly linked in TALS?	✓			✓
Continuing Calibration				
1. Low-range CCV injected at start of analytical run? CCV injected after every 10 samples and at the end of the analytical run and alternated between Low-range, Mid-range and High-range?	✓			✓
2. If sequence was not after an ICAL was a low and mid range CCV injected at the start of the analytical run?	✓			✓
3. Native compounds and surrogates in control? Low-range within ±50% of true value Mid and High-range within ±30% of true value	✓			✓
4. Internal Standard areas in control? Areas ≥ 50% of average area of the ICal and 70-140% of the most recent CCV.	✓			✓
Client Samples & QC Sample Results				
1. Were preparation and analysis done within holding times?	✓			✓
2. Are Chromatograms reviewed and spectra verified?	✓			✓
3. Are positive results within calibration range?	✓			✓
4. Dilutions due to target cpds? ____ Dilutions due to non-targets? ____			✓	
5. All target compounds in MB < 1/3 RL ? (Requires NCM If "no.")	✓			✓
6. Are target constituents in LCS/LCSD within method control limits?	✓			✓
7. Internal Standard areas in control for all samples and QC reported? ±50% from the average area of the ICAL and 70-140% of the most recent CCV NCM	✓			✓
8. Do results (e.g., dilutions/trip blanks) make sense?	✓			✓
9. Are MS/MSD recoveries and RPDs within method control limits?			✓	
10. Are all QC samples properly linked in TALS?	✓			✓
11. All manual integrations appropriate and completely documented?	✓			✓
12. Are nonconformances documented as NCMs?	✓			✓
13. Are all Chrom graphics uploaded?	✓			✓

1st Level Reviewer / Date: JRB 12-14-16 2nd Level Reviewer / Date: [signature] 12/14/2016

NCM # and Comments: 72863, 72865, 72866, 72869

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Sacramento

Method 537 ICAL Checklist

Instrument ID & Date: A6 12-5-16 Worklist#: 37524

ICAL Batch: 140688, 140689 Calibration ID number: 26888, 26889

Review Items	--- Level 1 --- Yes	No	N/A	Level 2
Initial Calibration				
1. Mass calibration, as needed, verified by full scan of PFC stock standard. All PFC ions used for quantitation are within 0.3 m/z of true mass?	✓			✓
2. Responses increase with increasing concentration?	✓			✓
3. Fit used (circle): (Average) Linear (1/x²)Linear Quadratic (6 points minimum)				
4. Meets fit criteria? Intercept ≤ ½ RL RSD ≤ 30% for Average R² ≥ 0.990 for Linear R² ≥ 0.990 for Quadratic NOTE: "Force through Zero" must be used and weighted if needed	✓			✓
5. If quadratic fit used the curve does not "bend over".			✓	
6. Feed calibration points into the calculated curve. Are points ≤MRL within ±50% of true value? Are points >MRL within ±30% of true value?	✓			✓
7. Any carryover from the high calibration point must be ≤ 1/3 RL	✓			✓
8. Asymmetry check meets criteria for the first two eluting peaks?.(0.8 - 1.5).	✓			✓
9. Is the asymmetry check scanned and linked in TALS to the calibration point?	✓			✓
10. Is ICV (2nd source) ± 30% of true value?	✓			✓
11. Is ICV (2nd source) internal standards ±50% of average area of the ICAL?	✓			✓
12. ICal locked in Chrom and uploaded to TALS?	✓			
13. ICal locked in TALS and scanned?				✓

1st Level Reviewer / Date: JRB 12-6-16 2nd Level Reviewer / Date: 12/7/16

NCM # and Comments:

TestAmerica Laboratories
Worklist QC Batch Report

Worklist Name: 12DEC2016A_A6 537 Worklist Number: 37756
Instrument Name: A6 Chrom Method: 537__A6
Data Directory: \\ChromNA\Sacramento\ChromData\A6\20161212-37756.b
QC Batching: Enabled Limit Group Batching: Enabled

QC Batch: 1	LC 537 ICAL Raw Batch: 141767
# 1 RB	# 1 RB
# 2 CCV L3	# 2 CCV L3
# 3 RB	# 3 RB
# 4 MB 320-141080/1-A	# 4 MB 320-141080/1-A
# 5 LCS 320-141080/2-A	# 5 LCS 320-141080/2-A
# 6 LCSD 320-141080/3-A	# 6 LCSD 320-141080/3-A
# 7 320-23989-A-1-A	# 7 320-23989-A-1-A
# 8 320-23989-B-2-A	# 8 320-23989-B-2-A
# 9 320-23989-A-3-A	# 9 320-23989-A-3-A
#10 MB 320-141212/1-A	#10 MB 320-141212/1-A
#11 LCS 320-141212/2-A	#11 LCS 320-141212/2-A
#12 LCSD 320-141212/3-A	#12 LCSD 320-141212/3-A
#13 320-24069-A-1-A	#13 320-24069-A-1-A
#14 RB	#14 RB
#15 CCV L5	#15 CCV L5

QC Batch: 2	LC 537 ICAL Raw Batch: 141768
#15 CCV L5	#15 CCV L5
#16 RB	#16 RB
#17 320-24069-A-2-A	#17 320-24069-A-2-A
#18 320-24069-A-3-A	#18 320-24069-A-3-A
#19 320-24069-A-4-A	#19 320-24069-A-4-A
#20 320-24069-A-5-A	#20 320-24069-A-5-A
#21 320-24069-A-6-A	#21 320-24069-A-6-A
#22 320-24069-A-7-A	#22 320-24069-A-7-A
#23 320-24069-A-8-A	#23 320-24069-A-8-A
#24 320-24069-A-9-A	#24 320-24069-A-9-A
#25 320-24069-A-10-A	#25 320-24069-A-10-A
#26 320-24069-A-11-A	#26 320-24069-A-11-A
#27 RB	#27 RB
#28 CCV L3	#28 CCV L3

QC Batch: 3	LC 537 ICAL Raw Batch: 141769
#28 CCV L3	#28 CCV L3
#29 RB	#29 RB
#30 320-24069-A-12-A	#30 320-24069-A-12-A
#31 320-24069-A-13-A	#31 320-24069-A-13-A
#32 320-24069-A-14-A	#32 320-24069-A-14-A
#33 320-24069-A-15-A	#33 320-24069-A-15-A
#34 320-24069-A-16-A	#34 320-24069-A-16-A
#35 320-24069-A-17-A	#35 320-24069-A-17-A
#36 320-24069-A-18-A	#36 320-24069-A-18-A
#37 320-24069-A-19-A	#37 320-24069-A-19-A
#38 320-24069-A-20-A	#38 320-24069-A-20-A
#39 RB	#39 RB
#40 CCV L5	#40 CCV L5

QC Batch: 4	LC 537 ICAL Raw Batch: 141770
#40 CCV L5	#40 CCV L5
#41 RB	#41 RB
#42 MB 320-141328/1-A	#42 MB 320-141328/1-A
#43 LLCS 320-141328/2-A	#43 LLCS 320-141328/2-A
#44 LLCSD 320-141328/3-A	#44 LLCSD 320-141328/3-A
#45 320-24069-A-21-A	#45 320-24069-A-21-A
#46 320-24069-A-22-A	#46 320-24069-A-22-A
#47 320-24069-A-23-A	#47 320-24069-A-23-A
#48 320-24069-A-24-A	#48 320-24069-A-24-A
#49 320-24069-A-25-A	#49 320-24069-A-25-A
#50 320-24069-A-26-A	#50 320-24069-A-26-A
#51 320-24069-A-27-A	#51 320-24069-A-27-A
#52 RB	#52 RB
#53 CCV L3	#53 CCV L3

I.S. out. Rerun in batch 141966 is good.

I.S. out

QC Batch: 5	LC 537 ICAL Raw Batch: 141771
#53 CCV L3	#53 CCV L3
#54 RB	#54 RB
#55 320-24069-A-28-A	#55 320-24069-A-28-A
#56 320-24069-A-29-A	#56 320-24069-A-29-A
#57 320-24069-A-30-A	#57 320-24069-A-30-A
#61 LCS 320-141212/2-A	#61 LCS 320-141212/2-A
#62 LCSD 320-141212/3-A	#62 LCSD 320-141212/3-A
#63 320-24069-A-1-A	#63 320-24069-A-1-A
#64 320-24069-A-3-A	#64 320-24069-A-3-A
#65 320-24069-A-4-A	#65 320-24069-A-4-A
#66 320-24069-A-5-A	#66 320-24069-A-5-A
#67 320-24069-A-6-A	#67 320-24069-A-6-A
#58 RB	#58 RB
#59 CCV L5	#59 CCV L5
#60 RB	#60 RB

TestAmerica Laboratories
Worklist QC Batch Report

Worklist Name: 14DEC2016A_A6 537 Worklist Number: 37801
Instrument Name: A6 Chrom Method: 537__A6
Data Directory: \\ChromNA\Sacramento\ChromData\A6\20161213-37801.b
QC Batching: Enabled Limit Group Batching: Enabled

QC Batch: 1	LC 537 ICAL Raw Batch: 141965
# 1 RB	# 1 RB
# 2 CCV L5	# 2 CCV L5
# 3 RB	# 3 RB
# 4 MB 320-141492/1-A	# 4 MB 320-141492/1-A
# 5 LCS 320-141492/2-A	# 5 LCS 320-141492/2-A
# 6 LCSD 320-141492/3-A	# 6 LCSD 320-141492/3-A
# 7 320-24190-A-1-A	# 7 320-24190-A-1-A
# 8 320-24190-A-2-A	# 8 320-24190-A-2-A
# 9 320-24190-A-3-A	# 9 320-24190-A-3-A
#10 320-24190-A-4-A	#10 320-24190-A-4-A
#11 320-24190-A-5-A	#11 320-24190-A-5-A
#12 320-24190-A-6-A	#12 320-24190-A-6-A
#13 320-24190-A-7-A	#13 320-24190-A-7-A
#14 RB	#14 RB
#15 CCV L3	#15 CCV L3

QC Batch: 2	LC 537 ICAL Raw Batch: 141966
#15 CCV L3	#15 CCV L3
#16 RB	#16 RB
#17 320-24069-A-21-A	#17 320-24069-A-21-A
#18 320-24069-A-22-A	#18 320-24069-A-22-A
#19 320-24069-A-23-A	#19 320-24069-A-23-A
#20 320-24069-A-26-A	#20 320-24069-A-26-A
#21 LCS 320-141492/2-A	#21 LCS 320-141492/2-A
#22 537 Cartridge QC MB	#22 537 Cartridge QC MB
#23 537 Cartridge QC LCS	#23 537 Cartridge QC LCS
#24 RB	#24 RB
#25 CCV L3	#25 CCV L3

QC Batch: 3	LC 537 ICAL Raw Batch: 142195
#25 CCV L3	#25 CCV L3
#26 RB	#26 RB
#27 MB 320-141157/1-A	#27 MB 320-141157/1-A
#28 LCS 320-141157/2-A	#28 LCS 320-141157/2-A
#29 LCSD 320-141157/3-A	#29 LCSD 320-141157/3-A
#30 320-24085-A-1-A	#30 320-24085-A-1-A
#31 320-24085-A-2-A	#31 320-24085-A-2-A
#32 320-24085-A-3-A	#32 320-24085-A-3-A
#33 320-24085-A-4-A	#33 320-24085-A-4-A
#34 320-24085-A-5-A	#34 320-24085-A-5-A
#35 320-24085-A-6-A	#35 320-24085-A-6-A
#36 320-24085-A-7-A	#36 320-24085-A-7-A
#37 RB	#37 RB
#38 CCV L5	#38 CCV L5

QC Batch: 4	LC 537 ICAL Raw Batch: 142196
#38 CCV L5	#38 CCV L5

QC Batch: 4	LC 537 ICAL Raw Batch: 142196
#39 RB	#39 RB
#40 320-24085-A-8-A	#40 320-24085-A-8-A
#41 320-24085-A-9-A	#41 320-24085-A-9-A
#42 320-24085-A-10-A	#42 320-24085-A-10-A
#43 320-24085-A-11-A	#43 320-24085-A-11-A
#44 320-24085-A-12-A	#44 320-24085-A-12-A
#45 320-24085-A-13-A	#45 320-24085-A-13-A
#46 320-24085-A-14-A	#46 320-24085-A-14-A
#47 RB	#47 RB
#48 CCV L3	#48 CCV L3
#49 RB	#49 RB

21 Rush

Aqueous Extraction Analysis Sheet

(To Accompany Samples to Instruments)

Batch Number: 320-141212

Method Code: 320-537_Prep-320

Analyst: Marchenko, Veronika P

Batch Open: 12/8/2016 11:45:00AM

Batch End: 12/09/16 16:40

Screened 12/11/16 AM

Extraction of Perfluorinated Alkyl Acids

	Input Sample Lab ID (Analytical Method)	SDG (Job #)	GrossWt TareWt	InitAmnt FinAmnt	PHs Rcvd	PHs Adj1	PHs Adj2	Due Date	Analytical TAT	Dlv Rank	Comments	Output Sample Lab ID
1	MB~320-141212/1 N/A	N/A		250 mL 1.0 mL	7			N/A	N/A	N/A	Chlorine ND	MB 320-141212/1-A
2	LCS~320-141212/2 N/A	N/A		250 mL 1.0 mL	7			N/A	N/A	N/A	Chlorine ND	LCS 320-141212/2-A
3	LCSD~320-141212/3 N/A	N/A		250 mL 1.0 mL	7			N/A	N/A	N/A	Chlorine ND	LCSD 320-141212/3-A
4	320-24069-A-1 (537_DOD5)	N/A (320-24069-1)	292.96 g 38.39 g	254.6 mL 1.0 mL	7			12/10/16	5_Days	4	Chlorine ND	320-24069-A-1-A
5	320-24069-A-2 (537_DOD5)	N/A (320-24069-1)	293.97 g 25.78 g	268.2 mL 1.0 mL	9			12/10/16	5_Days	4	Chlorine ND	320-24069-A-2-A
6	320-24069-A-3 (537_DOD5)	N/A (320-24069-1)	300.39 g 38.48 g	261.9 mL 1.0 mL	7			12/10/16	5_Days	4	Chlorine ND	320-24069-A-3-A
7	320-24069-A-4 (537_DOD5)	N/A (320-24069-1)	294.20 g 37.15 g	257.1 mL 1.0 mL	7			12/10/16	5_Days	4	Chlorine ND	320-24069-A-4-A
8	320-24069-A-5 (537_DOD5)	N/A (320-24069-1)	293.69 g 38.47 g	255.2 mL 1.0 mL	7			12/10/16	5_Days	4	Chlorine ND	320-24069-A-5-A
9	320-24069-A-6 (537_DOD5)	N/A (320-24069-1)	292.86 g 37.16 g	255.7 mL 1.0 mL	7			12/10/16	5_Days	4	Chlorine ND	320-24069-A-6-A
10	320-24069-A-7 (537_DOD5)	N/A (320-24069-1)	282.41 g 27.89 g	254.5 mL 1.0 mL	7			12/10/16	5_Days	4	Chlorine ND	320-24069-A-7-A

Aqueous Extraction Analysis Sheet

(To Accompany Samples to Instruments)

Batch Number: 320-141212 Analyst: Marchenko, Veronika P Batch Open: 12/8/2016 11:45:00AM

Method Code: 320-537_Prep-320 Batch End:

11	320-24069-A-8 (537_DOD5)	N/A (320-24069-1)	291.07 g 26.60 g	264.5 mL 1.0 mL	7			12/10/16	5_Days	4	Chlorine ND	
12	320-24069-A-9 (537_DOD5)	N/A (320-24069-1)	284.73 g 27.39 g	257.3 mL 1.0 mL	7			12/10/16	5_Days	4	Chlorine ND	
13	320-24069-A-10 (537_DOD5)	N/A (320-24069-1)	294.48 g 25.87 g	268.6 mL 1.0 mL	7			12/10/16	5_Days	4	Chlorine ND	
14	320-24069-A-11 (537_DOD5)	N/A (320-24069-1)	287.01 g 29.01 g	258 mL 1.0 mL	7			12/10/16	5_Days	4	Chlorine ND	
15	320-24069-A-12 (537_DOD5)	N/A (320-24069-1)	296.85 g 26.50 g	270.4 mL 1.0 mL	7			12/10/16	5_Days	4	Chlorine ND	
16	320-24069-A-13 (537_DOD5)	N/A (320-24069-1)	293.34 g 27.44 g	265.9 mL 1.0 mL	7			12/10/16	5_Days	4	Chlorine ND	
17	320-24069-A-14 (537_DOD5)	N/A (320-24069-1)	281.60 g 26.55 g	255.1 mL 1.0 mL	7			12/10/16	5_Days	4	Chlorine ND	
18	320-24069-A-15 (537_DOD5)	N/A (320-24069-1)	296.76 g 26.66 g	270.1 mL 1.0 mL	7			12/10/16	5_Days	4	Chlorine ND	
19	320-24069-A-16 (537_DOD5)	N/A (320-24069-1)	292.38 g 26.20 g	266.2 mL 1.0 mL	7			12/10/16	5_Days	4	Chlorine ND	
20	320-24069-A-17 (537_DOD5)	N/A (320-24069-1)	294.49 g 27.03 g	267.5 mL 1.0 mL	7			12/10/16	5_Days	4	Chlorine ND	
21	320-24069-A-18 (537_DOD5)	N/A (320-24069-1)	293.55 g 26.52 g	267 mL 1.0 mL	7			12/10/16	5_Days	4	Chlorine ND	
22	320-24069-A-19 (537_DOD5)	N/A (320-24069-1)	295.24 g 26.90 g	268.3 mL 1.0 mL	7			12/10/16	5_Days	4	Chlorine ND	

Aqueous Extraction Analysis Sheet

(To Accompany Samples to Instruments)

Batch Number: 320-141212

Analyst: Marchenko, Veronika P

Batch Open: 12/8/2016 11:45:00AM

Method Code: 320-537_Prep-320

Batch End:

23	320-24069-A-20 (537_DOD5)	N/A (320-24069-1)	285.86 g 26.40 g	259.5 mL 1.0 mL	7			12/10/16	5_Days	4	Chlorine ND	

Batch Notes

Manifold ID	1,3
Trizma ID	SLBN2122V
SPE Cartridge ID	6332578-03
Methanol ID	789820
Reagent Water ID	12-08-16
Pipette ID	MD05306/MG0455
Analyst ID - TA Reagent Drop	VPM
Analyst ID - TA Reagent Drop Witness	NSH
Analyst ID - SU Reagent Drop	VPM
Analyst ID - SU Reagent Drop Witness	NSH
Analyst ID - IS Reagent Drop	VPM (799828)
Analyst ID - IS Reagent Drop Witness	~~NSH~~ EPN
Batch Comment	

Comments

Aqueous Extraction Analysis Sheet

(To Accompany Samples to Instruments)

Batch Number: 320-141212

Analyst: Marchenko, Veronika P

Batch Open: 12/8/2016 11:45:00AM

Method Code: 320-537_Prep-320

Batch End:

Reagent Additions Worksheet

Lab ID	Reagent Code	Amount Added	Final Amount	By	Witness
MB 320-141212/1	LC537-SU_00024	50 uL	1.0 mL	VPM 12/08/16	NSH 12-8-16
LCS 320-141212/2	LC537-HSP_00013	50 uL	1.0 mL		
LCS 320-141212/2	LC537-SU_00024	50 uL	1.0 mL		
LCSD 320-141212/3	LC537-HSP_00013	50 uL	1.0 mL		
LCSD 320-141212/3	LC537-SU_00024	50 uL	1.0 mL		
320-24069-A-1	LC537-SU_00024	50 uL	1.0 mL		
320-24069-A-2	LC537-SU_00024	50 uL	1.0 mL		
320-24069-A-3	LC537-SU_00024	50 uL	1.0 mL		
320-24069-A-4	LC537-SU_00024	50 uL	1.0 mL		
320-24069-A-5	LC537-SU_00024	50 uL	1.0 mL		
320-24069-A-6	LC537-SU_00024	50 uL	1.0 mL		
320-24069-A-7	LC537-SU_00024	50 uL	1.0 mL		
320-24069-A-8	LC537-SU_00024	50 uL	1.0 mL		
320-24069-A-9	LC537-SU_00024	50 uL	1.0 mL		
320-24069-A-10	LC537-SU_00024	50 uL	1.0 mL		
320-24069-A-11	LC537-SU_00024	50 uL	1.0 mL		
320-24069-A-12	LC537-SU_00024	50 uL	1.0 mL		
320-24069-A-13	LC537-SU_00024	50 uL	1.0 mL		

Aqueous Extraction Analysis Sheet

(To Accompany Samples to Instruments)

Batch Number: 320-141212

Analyst: Marchenko, Veronika P

Batch Open: 12/8/2016 11:45:00AM

Method Code: 320-537_Prep-320

Batch End:

320-24069-A-14	LC537-SU_00024	50 uL	1.0 mL	VPM 12/08/16	NSH 12-8-16
320-24069-A-15	LC537-SU_00024	50 uL	1.0 mL		
320-24069-A-16	LC537-SU_00024	50 uL	1.0 mL		
320-24069-A-17	LC537-SU_00024	50 uL	1.0 mL		
320-24069-A-18	LC537-SU_00024	50 uL	1.0 mL		
320-24069-A-19	LC537-SU_00024	50 uL	1.0 mL		
320-24069-A-20	LC537-SU_00024	50 uL	1.0 mL		

Other Reagents:

Reagent	Amount/Units	Lot#:

TestAmerica
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Sacramento
Preparation Data Review Checklist

Preparation Batch Number(s): 141212 Test: 537-0005 Rush

Earliest Holding Time: 12/14/16

Sample List Tab	1st Level Reviewer	2nd Level Reviewer
Samples identified to the correct method	✓	✓
All necessary NCMs filed (including holding time)	✓	✓
Method/sample/login/QAS checked and correct	✓	✓
Worksheet Tab	**1st Level Reviewer**	**2nd Level Reviewer**
All samples properly preserved	✓	✓
Weights in anticipated range and not targeted	✓	✓
All additional test requirements performed, documented, and uploaded to TALS correctly (e.g. final amount, initial amount, turbidity, and CI Check)	✓	✓
The pH is transcribed correctly in TALS	✓	✓
All additional information transcribed into TALS is correct and raw data is attached	✓	✓
Comments are transcribed correctly in TALS	✓	✓
Reagents Tab	**1st Level Reviewer**	**2nd Level Reviewer**
All necessary reagents not expired and entered into TALS	✓	✓
All spike amounts correct and added to necessary samples and QC	✓	✓
Batch Information	**1st Level Reviewer**	**2nd Level Reviewer**
Date and time accurate and entered into TALS correctly	✓	✓
All necessary 'batch information' complete and entered into TALS correctly	✓	✓

1st Level Reviewer: VPM Date: 12/09/16

2nd Level Reviewer: [signature] Date: 12/09/16

Comments:

2° Rush

Aqueous Extraction Analysis Sheet

(To Accompany Samples to Instruments)

Batch Number: 320-141328

Method Code: 320-537_Prep-320

Analyst: Reed, Jonathan E

Batch Open: 12/8/2016 6:21:00PM

Batch End: 12/09/16 10:50

Screened A4 12/11/16

Extraction of Perfluorinated Alkyl Acids

	Input Sample Lab ID (Analytical Method)	SDG (Job #)	GrossWt TareWt	InitAmnt FinAmnt	PHs Rcvd	PHs Adj1	PHs Adj2	Due Date	Analytical TAT	Dlv Rank	Comments	Output Sample Lab ID
1	MB~320-141328/1 N/A	N/A		250.00 mL 1.00 mL	7			N/A	N/A	N/A	Free Chlorine: ND	MB 320-141328/1-A
2	LLCS~320-141328/2 N/A	N/A		250.00 mL 1.00 mL	7			N/A	N/A	N/A	Free Chlorine: ND	LLCS 320-141328/2-A
3	LLCSD~320-141328/3 N/A	N/A		250.00 mL 1.00 mL	7			N/A	N/A	N/A	Free Chlorine: ND	LLCSD 320-141328/3-A
4	320-24069-A-21 (537_DOD5)	N/A (320-24069-1)	302.25 g 28.01 g	274.2 mL 1.00 mL	7			12/10/16	5_Days	4	Free Chlorine: ND	320-24069-A-21-A
5	320-24069-A-22 (537_DOD5)	N/A (320-24069-1)	311.48 g 27.21 g	284.3 mL 1.00 mL	7			12/10/16	5_Days	4	Free Chlorine: ND	320-24069-A-22-A
6	320-24069-A-23 (537_DOD5)	N/A (320-24069-1)	292.12 g 28.19 g	263.9 mL 1.00 mL	7			12/10/16	5_Days	4	Free Chlorine: ND	320-24069-A-23-A
7	320-24069-A-24 (537_DOD5)	N/A (320-24069-1)	306.25 g 27.33 g	278.9 mL 1.00 mL	7			12/10/16	5_Days	4	Free Chlorine: ND	320-24069-A-24-A
8	320-24069-A-25 (537_DOD5)	N/A (320-24069-1)	304.28 g 28.23 g	276.1 mL 1.00 mL	7			12/10/16	5_Days	4	Free Chlorine: ND	320-24069-A-25-A
9	320-24069-A-26 (537_DOD5)	N/A (320-24069-1)	312.67 g 27.32 g	285.4 mL 1.00 mL	7			12/10/16	5_Days	4	Free Chlorine: ND	320-24069-A-26-A
10	320-24069-A-27 (537_DOD5)	N/A (320-24069-1)	298.86 g 27.58 g	271.3 mL 1.00 mL	7			12/10/16	5_Days	4	Free Chlorine: ND	320-24069-A-27-A

Aqueous Extraction Analysis Sheet

(To Accompany Samples to Instruments)

Batch Number: 320-141328 Analyst: Reed, Jonathan E Batch Open: 12/8/2016 6:21:00PM

Method Code: 320-537_Prep-320 Batch End:

11	320-24069-A-28 (537_DOD5)	N/A (320-24069-1)	305.56 g 26.87 g	278.7 mL 1.00 mL	7			12/10/16	5_Days	4	Free Chlorine: ND
12	320-24069-A-29 (537_DOD5)	N/A (320-24069-1)	301.58 g 28.18 g	273.4 mL 1.00 mL	7			12/10/16	5_Days	4	Free Chlorine: ND
13	320-24069-A-30 (537_DOD5)	N/A (320-24069-1)	308.60 g 27.05 g	281.6 mL 1.00 mL	7			12/10/16	5_Days	4	Free Chlorine: ND

Batch Notes

Manifold ID	5,6
Trizma ID	SLBN2122V
SPE Cartridge ID	6332578-03
Methanol ID	789820
Reagent Water ID	12/08/16
Pipette ID	MD05306
Analyst ID - TA Reagent Drop	JER
Analyst ID - TA Reagent Drop Witness	VPM
Analyst ID - SU Reagent Drop	JER
Analyst ID - SU Reagent Drop Witness	VPM
Analyst ID - IS Reagent Drop	VPM (799828)
Analyst ID - IS Reagent Drop Witness	~~NSH~~ ERW
Batch Comment	

Aqueous Extraction Analysis Sheet

(To Accompany Samples to Instruments)

Batch Number: 320-141328

Method Code: 320-537_Prep-320

Analyst: Reed, Jonathan E

Batch Open: 12/8/2016 6:21:00PM

Batch End:

Comments

Aqueous Extraction Analysis Sheet

(To Accompany Samples to Instruments)

Batch Number: 320-141328
Method Code: 320-537_Prep-320

Analyst: Reed, Jonathan E

Batch Open: 12/8/2016 6:21:00PM
Batch End:

Reagent Additions Worksheet

Lab ID	Reagent Code	Amount Added	Final Amount	By	Witness
MB 320-141328/1	LC537-SU_00024	50 uL	1.00 mL	12/08/16	VAM 12/08/16
LLCS 320-141328/2	LC537-LSP_00016	50 uL	1.00 mL		
LLCS 320-141328/2	LC537-SU_00024	50 uL	1.00 mL		
LLCSD 320-141328/3	LC537-LSP_00016	50 uL	1.00 mL		
LLCSD 320-141328/3	LC537-SU_00024	50 uL	1.00 mL		
320-24069-A-21	LC537-SU_00024	50 uL	1.00 mL		
320-24069-A-22	LC537-SU_00024	50 uL	1.00 mL		
320-24069-A-23	LC537-SU_00024	50 uL	1.00 mL		
320-24069-A-24	LC537-SU_00024	50 uL	1.00 mL		
320-24069-A-25	LC537-SU_00024	50 uL	1.00 mL		
320-24069-A-26	LC537-SU_00024	50 uL	1.00 mL		
320-24069-A-27	LC537-SU_00024	50 uL	1.00 mL		
320-24069-A-28	LC537-SU_00024	50 uL	1.00 mL		
320-24069-A-29	LC537-SU_00024	50 uL	1.00 mL		
320-24069-A-30	LC537-SU_00024	50 uL	1.00 mL		

Aqueous Extraction Analysis Sheet

(To Accompany Samples to Instruments)

Batch Number: 320-141328

Analyst: Reed, Jonathan E

Batch Open: 12/8/2016 6:21:00PM

Method Code: 320-537_Prep-320

Batch End:

Other Reagents:

Reagent	Amount/Units	Lot#:

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Sacramento
Preparation Data Review Checklist

Preparation Batch Number(s): 161328 Test: 537-DDD5 (RUSH)
Earliest Holding Time: 12/17/16

Sample List Tab	1st Level Reviewer	2nd Level Reviewer
Samples identified to the correct method	✓	✓
All necessary NCMs filed (including holding time)	✓	✓
Method/sample/login/QAS checked and correct	✓	✓
Worksheet Tab	**1st Level Reviewer**	**2nd Level Reviewer**
All samples properly preserved	✓	✓
Weights in anticipated range and not targeted	✓	✓
All additional test requirements performed, documented, and uploaded to TALS correctly (e.g. final amount, initial amount, turbidity, and CI Check)	✓	✓
The pH is transcribed correctly in TALS	✓	✓
All additional information transcribed into TALS is correct and raw data is attached	✓	✓
Comments are transcribed correctly in TALS	✓	✓
Reagents Tab	**1st Level Reviewer**	**2nd Level Reviewer**
All necessary reagents not expired and entered into TALS	✓	✓
All spike amounts correct and added to necessary samples and QC	✓	✓
Batch Information	**1st Level Reviewer**	**2nd Level Reviewer**
Date and time accurate and entered into TALS correctly	✓	✓
All necessary 'batch information' complete and entered into TALS correctly	✓	✓

1st Level Reviewer: [signature] Date: 12/09/16
2nd Level Reviewer: VPM Date: 12/09/16
Comments: _____

Shipping and Receiving Documents

TestAmerica Sacramento
880 Riverside Parkway

West Sacramento, CA 95605
phone 916.373.5600 fax

Chain of Custody Record

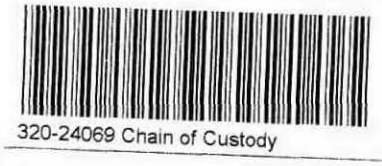
TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Regulatory Program: ☐DW ☐NPDES ☐RCRA ☐Other:

Client Contact	Project Manager: Katie Tippin	Site Contact: Eric Epple	Date: ~~11/~~12016~~6~~ 12/5/2016	COC No: 5
Tiffany Hill	Tel/Fax: (757) 671-6258	Lab Contact: Laura Turpen	Carrier: FedEx	1 of 3 COCs
Project Chemist	Analysis Turnaround Time			Sampler:
1100 NE Circle Blvd Ste 300 Corvallis, OR 97330	☑CALENDAR DAYS ☐WORKING DAYS			For Lab Use Only:
(541) 768-3109	TAT if different from Below _7-Day_____			Walk-in Client:
(541) 908-3794	☐ 2 weeks			Lab Sampling:
Project Name: CTO-08	☐ 1 week			
Site: OLF Coupeville	☐ 2 days			Job / SDG No.:
P O #: 100067106050 - 679580.09.FI.FS	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y / N)	Perform MS / MSD (Y / N)	USEPA Method 537 (PFOA, PFOS, and PFBS)	Sample Specific Notes:
WI-CV-1RW13-1216	12/2/16	9:09	G	DW	2	N	N	X	
WI-CV-1FB13-1216	12/2/16	9:08	G	DW	2	N	N	X	
WI-CV-1RW14-1216	12/2/16	9:53	G	DW	2	N	N	X	
WI-CV-1FB14-1216	12/2/16	9:52	G	DW	2	N	N	X	
WI-CV-1RW15-1216	12/2/16	11:25	G	DW	2	N	N	X	
WI-CV-1FB15-1216	12/2/16	11:24	G	DW	2	N	N	X	
WI-CV-1RW16-1216	12/2/16	14:09	G	DW	2	N	N	X	
WI-CV-1FB16-1216	12/2/16	14:08	G	DW	2	N	N	X	
WI-CV-1RW17-1216	12/2/16	14:17	G	DW	2	N	N	X	
WI-CV-1FB17-1216	12/2/16	14:16	G	DW	2	N	N	X	
WI-CV-3RW14-1216	12/2/16	14:31	G	DW	2	N	N	X	
WI-CV-3FB14-1216	12/2/16	14:32	G	DW	2	N	N	X	



Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☑Non-Hazard ☐Flammable ☐Skin Irritant ☐Poison B ☐Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐Return to Client ☑Disposal by Lab ☐Archive for_____ Months

Special Instructions/QC Requirements & Comments:

1.3 0.4 12

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: 1.1 Corr'd: 0.2 | Therm ID No.: 12

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Eric Epple /	CH2M	12-5-16/1600		TAWS	12/6/16 1030
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

Form No. CA-C-WI-002, Rev. 4.3, dated 12/05/2013

TestAmerica Sacramento
880 Riverside Parkway

West Sacramento, CA 95605
phone 916.373.5600 fax

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Regulatory Program: ☐DW ☐NPDES ☐RCRA ☐Other:

Client Contact	Project Manager: Katie Tippin	Site Contact: Eric Epple	Date: ~~11/ 12016~~ 12/5/2016	COC No: 5
Tiffany Hill	Tel/Fax: (757) 671-6258	Lab Contact: Laura Turpen	Carrier: FedEx	2 of 3 COCs
Project Chemist	**Analysis Turnaround Time**			Sampler:
1100 NE Circle Blvd Ste 300 Corvallis, OR 97330	☑CALENDAR DAYS ☐WORKING DAYS			**For Lab Use Only:**
(541) 768-3109	TAT if different from Below _7-Day_____			Walk-in Client:
(541) 908-3794	☐ 2 weeks			Lab Sampling:
Project Name: CTO-08	☐ 1 week			
Site: OLF Coupeville	☐ 2 days			Job / SDG No.:
P O #: 100067106050 - 679580.09.FI.FS	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y / N)	Perform MS / MSD (Y / N)	USEPA Method 537 (PFOA, PFOS, and PFBS)	Sample Specific Notes:
WI-CV-3RW15-1216	12/2/16	14:47	G	DW	2	N	N	X	
WI-CV-3FB15-1216	12/2/16	14:48	G	DW	2	N	N	X	
WI-CV-3RW16-1216	12/2/16	17:25	G	DW	2	N	N	X	
WI-CV-3FB16-1216	12/2/16	17:26	G	DW	2	N	N	X	
WI-CV-1RW18-1216	12/3/16	9:05	G	DW	1	N	N	X	
WI-CV-1FB18-1216	12/3/16	9:04	G	DW	1	N	N	X	
WI-CV-1RW19-1216	12/3/16	10:05	G	DW	2	N	N	X	
WI-CV-1FB19-1216	12/3/16	10:04	G	DW	2	N	N	X	
WI-CV-1RW20-1216	12/3/16	10:46	G	DW	2	N	N	X	
WI-CV-1FB20-1216	12/3/16	10:45	G	DW	2	N	N	X	
WI-CV-1RW21-1216	12/3/16	11:22	G	DW	1	N	N	X	
WI-CV-1FB21-1216	12/3/16	11:21	G	DW	1	N	N	X	

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☑Non-Hazard ☐Flammable ☐Skin Irritant ☐Poison B ☐Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐Return to Client ☑Disposal by Lab ☐Archive for_____ Months

Special Instructions/QC Requirements & Comments:

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:		Cooler Temp. (°C): Obs'd: 1.1 Corr'd: 0.2 Therm ID No.: 12		
Relinquished by: Eric Epple	Company: CH2M	Date/Time: 12-5-16/1600	Received by:	Company: TAMS	Date/Time: 12/6/16 1030
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

Form No. CA-C-WI-002, Rev. 4.3, dated 12/05/2013

12/15/2016

TestAmerica Sacramento
880 Riverside Parkway

West Sacramento, CA 95605
phone 916.373.5600 fax

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Regulatory Program: ☐DW ☐NPDES ☐RCRA ☐Other:

Client Contact	Project Manager: Katie Tippin	Site Contact: Eric Epple	Date: ~~11/ 12016~~ 12/5/2016	COC No: 5
Tiffany Hill	Tel/Fax: (757) 671-6258	Lab Contact: Laura Turpen	Carrier: FedEx	3 of 3 COCs
Project Chemist	**Analysis Turnaround Time**			Sampler:
1100 NE Circle Blvd Ste 300 Corvallis, OR 97330	☑CALENDAR DAYS ☐WORKING DAYS			**For Lab Use Only:**
(541) 768-3109	TAT if different from Below _7-Day_____			Walk-in Client:
(541) 908-3794	☐ 2 weeks			Lab Sampling:
Project Name: CTO-08	☐ 1 week			
Site: OLF Coupeville	☐ 2 days			Job / SDG No.:
P O #: 100067106050 - 679580.09.FI.FS	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y / N)	Perform MS / MSD (Y / N)	USEPA Method 537 (PFOA, PFOS, and PFBS)	Sample Specific Notes:
WI-CV-1RW22-1216	12/3/16	12:02	G	DW	1	N	N	X	
WI-CV-1FB22-1216	12/3/16	12:01	G	DW	1	N	N	X	
WI-CV-3RW17-1216	12/3/16	9:13	G	DW	2	N	N	X	
WI-CV-3FB17-1216	12/3/16	9:14	G	DW	2	N	N	X	
WI-CV-3RW18-1216	12/3/16	12:08	G	DW	2	N	N	X	
WI-CV-3FB18-1216	12/3/16	12:09	G	DW	2	N	N	X	

Preservation Used: 1= Ice, 2= HCl; 3= H_2SO_4; 4=HNO_3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☑Non-Hazard ☐Flammable ☐Skin Irritant ☐Poison B ☐Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐Return to Client ☑Disposal by Lab ☐Archive for_____ Months

Special Instructions/QC Requirements & Comments:

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:		Cooler Temp. (°C): Obs'd: 1.1 Corr'd: 0.2		Therm ID No.: 12
Relinquished by: Eric Epple	Company: CH2M	Date/Time: 12-5-16/1600	Received by:	Company: FAWS	Date/Time: 12/6/16 1630
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

Form No. CA-C-WI-002, Rev. 4.3, dated 12/05/2013

12/15/2016

Login Sample Receipt Checklist

Client: CH2M Hill Constructors, Inc.

Job Number: 320-24069-1

Login Number: 24069
List Number: 1
Creator: Nelson, Kym D

List Source: TestAmerica Sacramento

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Contract_ID	DO_CTO_Number	Phase	Installation_ID	Sample_Name	CH2M_Code	Analysis_Group	Analytical_ Method	PRC_Code	Lab_Code	Lab_Name	Leachate_Method	Sample_Basis	Extraction_Method	Result_Type	Lab_QC_Type	Sample_Medium	QC_Level
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW13-1216	NONE		537	ORG	TAMER	Test America	NONE	NA	METHOD	000	REG	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW13-1216	NONE		537	ORG	TAMER	Test America	NONE	NA	METHOD	000	REG	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW13-1216	NONE		537	ORG	TAMER	Test America	NONE	NA	METHOD	000	REG	W	4
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Contract_ID	DO_CTO_Number	Phase	Installation_ID	Sample_Name	CH2M_Code	Analysis_Group	Analytical_ Method	PRC_Code	Lab_Code	Lab_Name	Leachate_Method	Sample_Basis	Extraction_Method	Result_Type	Lab_QC_Type	Sample_Medium	QC_Level
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N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW20-1216	NONE		537	ORG	TAMER	Test America	NONE	NA	METHOD	000	REG	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB20-1216	NONE		537	ORG	TAMER	Test America	NONE	NA	METHOD	000	REG	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB20-1216	NONE		537	ORG	TAMER	Test America	NONE	NA	METHOD	000	REG	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB20-1216	NONE		537	ORG	TAMER	Test America	NONE	NA	METHOD	000	REG	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB20-1216	NONE		537	ORG	TAMER	Test America	NONE	NA	METHOD	000	REG	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB20-1216	NONE		537	ORG	TAMER	Test America	NONE	NA	METHOD	000	REG	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW21-1216	NONE		537	ORG	TAMER	Test America	NONE	NA	METHOD	000	REG	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW21-1216	NONE		537	ORG	TAMER	Test America	NONE	NA	METHOD	000	REG	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW21-1216	NONE		537	ORG	TAMER	Test America	NONE	NA	METHOD	000	REG	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW21-1216	NONE		537	ORG	TAMER	Test America	NONE	NA	METHOD	000	REG	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW21-1216	NONE		537	ORG	TAMER	Test America	NONE	NA	METHOD	000	REG	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB21-1216	NONE		537	ORG	TAMER	Test America	NONE	NA	METHOD	000	REG	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB21-1216	NONE		537	ORG	TAMER	Test America	NONE	NA	METHOD	000	REG	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB21-1216	NONE		537	ORG	TAMER	Test America	NONE	NA	METHOD	000	REG	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB21-1216	NONE		537	ORG	TAMER	Test America	NONE	NA	METHOD	000	REG	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB21-1216	NONE		537	ORG	TAMER	Test America	NONE	NA	METHOD	000	REG	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW22-1216	NONE		537	ORG	TAMER	Test America	NONE	NA	METHOD	000	REG	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW22-1216	NONE		537	ORG	TAMER	Test America	NONE	NA	METHOD	000	REG	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW22-1216	NONE		537	ORG	TAMER	Test America	NONE	NA	METHOD	000	REG	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW22-1216	NONE		537	ORG	TAMER	Test America	NONE	NA	METHOD	000	REG	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW22-1216	NONE		537	ORG	TAMER	Test America	NONE	NA	METHOD	000	REG	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB22-1216	NONE		537	ORG	TAMER	Test America	NONE	NA	METHOD	000	REG	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB22-1216	NONE		537	ORG	TAMER	Test America	NONE	NA	METHOD	000	REG	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB22-1216	NONE		537	ORG	TAMER	Test America	NONE	NA	METHOD	000	REG	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB22-1216	NONE		537	ORG	TAMER	Test America	NONE	NA	METHOD	000	REG	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB22-1216	NONE		537	ORG	TAMER	Test America	NONE	NA	METHOD	000	REG	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3RW17-1216	NONE		537	ORG	TAMER	Test America	NONE	NA	METHOD	000	REG	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3RW17-1216	NONE		537	ORG	TAMER	Test America	NONE	NA	METHOD	000	REG	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3RW17-1216	NONE		537	ORG	TAMER	Test America	NONE	NA	METHOD	000	REG	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3RW17-1216	NONE		537	ORG	TAMER	Test America	NONE	NA	METHOD	000	REG	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3RW17-1216	NONE		537	ORG	TAMER	Test America	NONE	NA	METHOD	000	REG	W	4

Contract_ID	DO_CTO_Number	Phase	Installation_ID	Sample_Name	CH2M_Code	Analysis_Group	Analytical_ Method	PRC_Code	Lab_Code	Lab_Name	Leachate_Method	Sample_Basis	Extraction_Method	Result_Type	Lab_QC_Type	Sample_Medium	QC_Level
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3FB17-1216	NONE		537	ORG	TAMER	Test America	NONE	NA	METHOD	000	REG	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3FB17-1216	NONE		537	ORG	TAMER	Test America	NONE	NA	METHOD	000	REG	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3FB17-1216	NONE		537	ORG	TAMER	Test America	NONE	NA	METHOD	000	REG	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3FB17-1216	NONE		537	ORG	TAMER	Test America	NONE	NA	METHOD	000	REG	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3FB17-1216	NONE		537	ORG	TAMER	Test America	NONE	NA	METHOD	000	REG	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3RW18-1216	NONE		537	ORG	TAMER	Test America	NONE	NA	METHOD	000	REG	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3RW18-1216	NONE		537	ORG	TAMER	Test America	NONE	NA	METHOD	000	REG	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3RW18-1216	NONE		537	ORG	TAMER	Test America	NONE	NA	METHOD	000	REG	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3RW18-1216	NONE		537	ORG	TAMER	Test America	NONE	NA	METHOD	000	REG	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3RW18-1216	NONE		537	ORG	TAMER	Test America	NONE	NA	METHOD	000	REG	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3FB18-1216	NONE		537	ORG	TAMER	Test America	NONE	NA	METHOD	000	REG	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3FB18-1216	NONE		537	ORG	TAMER	Test America	NONE	NA	METHOD	000	REG	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3FB18-1216	NONE		537	ORG	TAMER	Test America	NONE	NA	METHOD	000	REG	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3FB18-1216	NONE		537	ORG	TAMER	Test America	NONE	NA	METHOD	000	REG	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3FB18-1216	NONE		537	ORG	TAMER	Test America	NONE	NA	METHOD	000	REG	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS 320-141212/2-A	NONE		537	ORG	TAMER	Test America	NONE	NA	METHOD	000	BS	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS 320-141212/2-A	NONE		537	ORG	TAMER	Test America	NONE	NA	METHOD	000	BS	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS 320-141212/2-A	NONE		537	ORG	TAMER	Test America	NONE	NA	METHOD	000	BS	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS 320-141212/2-A	NONE		537	ORG	TAMER	Test America	NONE	NA	METHOD	000	BS	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS 320-141212/2-A	NONE		537	ORG	TAMER	Test America	NONE	NA	METHOD	000	BS	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCSD 320-141212/3-A	NONE		537	ORG	TAMER	Test America	NONE	NA	METHOD	000	BSD	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCSD 320-141212/3-A	NONE		537	ORG	TAMER	Test America	NONE	NA	METHOD	000	BSD	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCSD 320-141212/3-A	NONE		537	ORG	TAMER	Test America	NONE	NA	METHOD	000	BSD	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCSD 320-141212/3-A	NONE		537	ORG	TAMER	Test America	NONE	NA	METHOD	000	BSD	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCSD 320-141212/3-A	NONE		537	ORG	TAMER	Test America	NONE	NA	METHOD	000	BSD	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LLCS 320-141328/2-A	NONE		537	ORG	TAMER	Test America	NONE	NA	METHOD	000	BS	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LLCS 320-141328/2-A	NONE		537	ORG	TAMER	Test America	NONE	NA	METHOD	000	BS	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LLCS 320-141328/2-A	NONE		537	ORG	TAMER	Test America	NONE	NA	METHOD	000	BS	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LLCS 320-141328/2-A	NONE		537	ORG	TAMER	Test America	NONE	NA	METHOD	000	BS	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LLCS 320-141328/2-A	NONE		537	ORG	TAMER	Test America	NONE	NA	METHOD	000	BS	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LLCSD 320-141328/3-A	NONE		537	ORG	TAMER	Test America	NONE	NA	METHOD	000	BSD	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LLCSD 320-141328/3-A	NONE		537	ORG	TAMER	Test America	NONE	NA	METHOD	000	BSD	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LLCSD 320-141328/3-A	NONE		537	ORG	TAMER	Test America	NONE	NA	METHOD	000	BSD	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LLCSD 320-141328/3-A	NONE		537	ORG	TAMER	Test America	NONE	NA	METHOD	000	BSD	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LLCSD 320-141328/3-A	NONE		537	ORG	TAMER	Test America	NONE	NA	METHOD	000	BSD	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	MB 320-141212/1-A	NONE		537	ORG	TAMER	Test America	NONE	NA	METHOD	000	LB1	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	MB 320-141212/1-A	NONE		537	ORG	TAMER	Test America	NONE	NA	METHOD	000	LB1	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	MB 320-141212/1-A	NONE		537	ORG	TAMER	Test America	NONE	NA	METHOD	000	LB1	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	MB 320-141212/1-A	NONE		537	ORG	TAMER	Test America	NONE	NA	METHOD	000	LB1	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	MB 320-141212/1-A	NONE		537	ORG	TAMER	Test America	NONE	NA	METHOD	000	LB1	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	MB 320-141328/1-A	NONE		537	ORG	TAMER	Test America	NONE	NA	METHOD	000	LB1	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	MB 320-141328/1-A	NONE		537	ORG	TAMER	Test America	NONE	NA	METHOD	000	LB1	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	MB 320-141328/1-A	NONE		537	ORG	TAMER	Test America	NONE	NA	METHOD	000	LB1	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	MB 320-141328/1-A	NONE		537	ORG	TAMER	Test America	NONE	NA	METHOD	000	LB1	W	4
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	MB 320-141328/1-A	NONE		537	ORG	TAMER	Test America	NONE	NA	METHOD	000	LB1	W	4

Contract_ID	DO_CTO_Number	Phase	Installation_ID	Sample_Name	DateTime_Collected	Date_Received	Leachate_Date	Leachate_Time	Extraction_Date	Extraction_Time	Analysis_Date	Analysis_Time	Lab_Sample_ID	Dilution	Run_Number	Percent_Moisture
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW13-1216	12/02/2016 09:09	12/06/2016			20161208	11:45:00	20161214	06:24:00	320-24069-1	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW13-1216	12/02/2016 09:09	12/06/2016			20161208	11:45:00	20161214	06:24:00	320-24069-1	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW13-1216	12/02/2016 09:09	12/06/2016			20161208	11:45:00	20161214	06:24:00	320-24069-1	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW13-1216	12/02/2016 09:09	12/06/2016			20161208	11:45:00	20161214	06:24:00	320-24069-1	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW13-1216	12/02/2016 09:09	12/06/2016			20161208	11:45:00	20161214	06:24:00	320-24069-1	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB13-1216	12/02/2016 09:08	12/06/2016			20161208	11:45:00	20161213	08:56:00	320-24069-2	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB13-1216	12/02/2016 09:08	12/06/2016			20161208	11:45:00	20161213	08:56:00	320-24069-2	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB13-1216	12/02/2016 09:08	12/06/2016			20161208	11:45:00	20161213	08:56:00	320-24069-2	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB13-1216	12/02/2016 09:08	12/06/2016			20161208	11:45:00	20161213	08:56:00	320-24069-2	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB13-1216	12/02/2016 09:08	12/06/2016			20161208	11:45:00	20161213	08:56:00	320-24069-2	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW14-1216	12/02/2016 09:53	12/06/2016			20161208	11:45:00	20161214	06:54:00	320-24069-3	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW14-1216	12/02/2016 09:53	12/06/2016			20161208	11:45:00	20161214	06:54:00	320-24069-3	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW14-1216	12/02/2016 09:53	12/06/2016			20161208	11:45:00	20161214	06:54:00	320-24069-3	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW14-1216	12/02/2016 09:53	12/06/2016			20161208	11:45:00	20161214	06:54:00	320-24069-3	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW14-1216	12/02/2016 09:53	12/06/2016			20161208	11:45:00	20161214	06:54:00	320-24069-3	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB14-1216	12/02/2016 09:52	12/06/2016			20161208	11:45:00	20161214	07:23:00	320-24069-4	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB14-1216	12/02/2016 09:52	12/06/2016			20161208	11:45:00	20161214	07:23:00	320-24069-4	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB14-1216	12/02/2016 09:52	12/06/2016			20161208	11:45:00	20161214	07:23:00	320-24069-4	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB14-1216	12/02/2016 09:52	12/06/2016			20161208	11:45:00	20161214	07:23:00	320-24069-4	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB14-1216	12/02/2016 09:52	12/06/2016			20161208	11:45:00	20161214	07:23:00	320-24069-4	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW15-1216	12/02/2016 11:25	12/06/2016			20161208	11:45:00	20161214	07:53:00	320-24069-5	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW15-1216	12/02/2016 11:25	12/06/2016			20161208	11:45:00	20161214	07:53:00	320-24069-5	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW15-1216	12/02/2016 11:25	12/06/2016			20161208	11:45:00	20161214	07:53:00	320-24069-5	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW15-1216	12/02/2016 11:25	12/06/2016			20161208	11:45:00	20161214	07:53:00	320-24069-5	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW15-1216	12/02/2016 11:25	12/06/2016			20161208	11:45:00	20161214	07:53:00	320-24069-5	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB15-1216	12/02/2016 11:24	12/06/2016			20161208	11:45:00	20161213	10:54:00	320-24069-6	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB15-1216	12/02/2016 11:24	12/06/2016			20161208	11:45:00	20161213	10:54:00	320-24069-6	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB15-1216	12/02/2016 11:24	12/06/2016			20161208	11:45:00	20161213	10:54:00	320-24069-6	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB15-1216	12/02/2016 11:24	12/06/2016			20161208	11:45:00	20161213	10:54:00	320-24069-6	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB15-1216	12/02/2016 11:24	12/06/2016			20161208	11:45:00	20161213	10:54:00	320-24069-6	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB15-1216	12/02/2016 11:24	12/06/2016			20161208	11:45:00	20161214	08:23:00	320-24069-6	1	2	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB15-1216	12/02/2016 11:24	12/06/2016			20161208	11:45:00	20161214	08:23:00	320-24069-6	1	2	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB15-1216	12/02/2016 11:24	12/06/2016			20161208	11:45:00	20161214	08:23:00	320-24069-6	1	2	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB15-1216	12/02/2016 11:24	12/06/2016			20161208	11:45:00	20161214	08:23:00	320-24069-6	1	2	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB15-1216	12/02/2016 11:24	12/06/2016			20161208	11:45:00	20161214	08:23:00	320-24069-6	1	2	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW16-1216	12/02/2016 14:09	12/06/2016			20161208	11:45:00	20161213	11:24:00	320-24069-7	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW16-1216	12/02/2016 14:09	12/06/2016			20161208	11:45:00	20161213	11:24:00	320-24069-7	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW16-1216	12/02/2016 14:09	12/06/2016			20161208	11:45:00	20161213	11:24:00	320-24069-7	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW16-1216	12/02/2016 14:09	12/06/2016			20161208	11:45:00	20161213	11:24:00	320-24069-7	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW16-1216	12/02/2016 14:09	12/06/2016			20161208	11:45:00	20161213	11:24:00	320-24069-7	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB16-1216	12/02/2016 14:08	12/06/2016			20161208	11:45:00	20161213	11:53:00	320-24069-8	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB16-1216	12/02/2016 14:08	12/06/2016			20161208	11:45:00	20161213	11:53:00	320-24069-8	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB16-1216	12/02/2016 14:08	12/06/2016			20161208	11:45:00	20161213	11:53:00	320-24069-8	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB16-1216	12/02/2016 14:08	12/06/2016			20161208	11:45:00	20161213	11:53:00	320-24069-8	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB16-1216	12/02/2016 14:08	12/06/2016			20161208	11:45:00	20161213	11:53:00	320-24069-8	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW17-1216	12/02/2016 14:17	12/06/2016			20161208	11:45:00	20161213	12:23:00	320-24069-9	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW17-1216	12/02/2016 14:17	12/06/2016			20161208	11:45:00	20161213	12:23:00	320-24069-9	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW17-1216	12/02/2016 14:17	12/06/2016			20161208	11:45:00	20161213	12:23:00	320-24069-9	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW17-1216	12/02/2016 14:17	12/06/2016			20161208	11:45:00	20161213	12:23:00	320-24069-9	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW17-1216	12/02/2016 14:17	12/06/2016			20161208	11:45:00	20161213	12:23:00	320-24069-9	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB17-1216	12/02/2016 14:16	12/06/2016			20161208	11:45:00	20161213	12:52:00	320-24069-10	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB17-1216	12/02/2016 14:16	12/06/2016			20161208	11:45:00	20161213	12:52:00	320-24069-10	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB17-1216	12/02/2016 14:16	12/06/2016			20161208	11:45:00	20161213	12:52:00	320-24069-10	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB17-1216	12/02/2016 14:16	12/06/2016			20161208	11:45:00	20161213	12:52:00	320-24069-10	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB17-1216	12/02/2016 14:16	12/06/2016			20161208	11:45:00	20161213	12:52:00	320-24069-10	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3RW14-1216	12/02/2016 14:31	12/06/2016			20161208	11:45:00	20161213	13:22:00	320-24069-11	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3RW14-1216	12/02/2016 14:31	12/06/2016			20161208	11:45:00	20161213	13:22:00	320-24069-11	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3RW14-1216	12/02/2016 14:31	12/06/2016			20161208	11:45:00	20161213	13:22:00	320-24069-11	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3RW14-1216	12/02/2016 14:31	12/06/2016			20161208	11:45:00	20161213	13:22:00	320-24069-11	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3RW14-1216	12/02/2016 14:31	12/06/2016			20161208	11:45:00	20161213	13:22:00	320-24069-11	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3FB14-1216	12/02/2016 14:32	12/06/2016			20161208	11:45:00	20161213	15:36:00	320-24069-12	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3FB14-1216	12/02/2016 14:32	12/06/2016			20161208	11:45:00	20161213	15:36:00	320-24069-12	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3FB14-1216	12/02/2016 14:32	12/06/2016			20161208	11:45:00	20161213	15:36:00	320-24069-12	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3FB14-1216	12/02/2016 14:32	12/06/2016			20161208	11:45:00	20161213	15:36:00	320-24069-12	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3FB14-1216	12/02/2016 14:32	12/06/2016			20161208	11:45:00	20161213	15:36:00	320-24069-12	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3RW15-1216	12/02/2016 14:47	12/06/2016			20161208	11:45:00	20161213	16:06:00	320-24069-13	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3RW15-1216	12/02/2016 14:47	12/06/2016			20161208	11:45:00	20161213	16:06:00	320-24069-13	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3RW15-1216	12/02/2016 14:47	12/06/2016			20161208	11:45:00	20161213	16:06:00	320-24069-13	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3RW15-1216	12/02/2016 14:47	12/06/2016			20161208	11:45:00	20161213	16:06:00	320-24069-13	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3RW15-1216	12/02/2016 14:47	12/06/2016			20161208	11:45:00	20161213	16:06:00	320-24069-13	1	1	

Contract_ID	DO_CTO_Number	Phase	Installation_ID	Sample_Name	DateTime_Collected	Date_Received	Leachate_Date	Leachate_Time	Extraction_Date	Extraction_Time	Analysis_Date	Analysis_Time	Lab_Sample_ID	Dilution	Run_Number	Percent_Moisture
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3FB15-1216	12/02/2016 14:48	12/06/2016			20161208	11:45:00	20161213	16:35:00	320-24069-14	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3FB15-1216	12/02/2016 14:48	12/06/2016			20161208	11:45:00	20161213	16:35:00	320-24069-14	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3FB15-1216	12/02/2016 14:48	12/06/2016			20161208	11:45:00	20161213	16:35:00	320-24069-14	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3FB15-1216	12/02/2016 14:48	12/06/2016			20161208	11:45:00	20161213	16:35:00	320-24069-14	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3FB15-1216	12/02/2016 14:48	12/06/2016			20161208	11:45:00	20161213	16:35:00	320-24069-14	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3RW16-1216	12/02/2016 17:25	12/06/2016			20161208	11:45:00	20161213	17:05:00	320-24069-15	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3RW16-1216	12/02/2016 17:25	12/06/2016			20161208	11:45:00	20161213	17:05:00	320-24069-15	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3RW16-1216	12/02/2016 17:25	12/06/2016			20161208	11:45:00	20161213	17:05:00	320-24069-15	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3RW16-1216	12/02/2016 17:25	12/06/2016			20161208	11:45:00	20161213	17:05:00	320-24069-15	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3RW16-1216	12/02/2016 17:25	12/06/2016			20161208	11:45:00	20161213	17:05:00	320-24069-15	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3FB16-1216	12/02/2016 17:26	12/06/2016			20161208	11:45:00	20161213	17:35:00	320-24069-16	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3FB16-1216	12/02/2016 17:26	12/06/2016			20161208	11:45:00	20161213	17:35:00	320-24069-16	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3FB16-1216	12/02/2016 17:26	12/06/2016			20161208	11:45:00	20161213	17:35:00	320-24069-16	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3FB16-1216	12/02/2016 17:26	12/06/2016			20161208	11:45:00	20161213	17:35:00	320-24069-16	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3FB16-1216	12/02/2016 17:26	12/06/2016			20161208	11:45:00	20161213	17:35:00	320-24069-16	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW18-1216	12/03/2016 09:05	12/06/2016			20161208	11:45:00	20161213	18:04:00	320-24069-17	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW18-1216	12/03/2016 09:05	12/06/2016			20161208	11:45:00	20161213	18:04:00	320-24069-17	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW18-1216	12/03/2016 09:05	12/06/2016			20161208	11:45:00	20161213	18:04:00	320-24069-17	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW18-1216	12/03/2016 09:05	12/06/2016			20161208	11:45:00	20161213	18:04:00	320-24069-17	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW18-1216	12/03/2016 09:05	12/06/2016			20161208	11:45:00	20161213	18:04:00	320-24069-17	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB18-1216	12/03/2016 09:04	12/06/2016			20161208	11:45:00	20161213	18:34:00	320-24069-18	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB18-1216	12/03/2016 09:04	12/06/2016			20161208	11:45:00	20161213	18:34:00	320-24069-18	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB18-1216	12/03/2016 09:04	12/06/2016			20161208	11:45:00	20161213	18:34:00	320-24069-18	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB18-1216	12/03/2016 09:04	12/06/2016			20161208	11:45:00	20161213	18:34:00	320-24069-18	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB18-1216	12/03/2016 09:04	12/06/2016			20161208	11:45:00	20161213	18:34:00	320-24069-18	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW19-1216	12/03/2016 10:05	12/06/2016			20161208	11:45:00	20161213	19:03:00	320-24069-19	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW19-1216	12/03/2016 10:05	12/06/2016			20161208	11:45:00	20161213	19:03:00	320-24069-19	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW19-1216	12/03/2016 10:05	12/06/2016			20161208	11:45:00	20161213	19:03:00	320-24069-19	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW19-1216	12/03/2016 10:05	12/06/2016			20161208	11:45:00	20161213	19:03:00	320-24069-19	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW19-1216	12/03/2016 10:05	12/06/2016			20161208	11:45:00	20161213	19:03:00	320-24069-19	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB19-1216	12/03/2016 10:04	12/06/2016			20161208	11:45:00	20161213	19:33:00	320-24069-20	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB19-1216	12/03/2016 10:04	12/06/2016			20161208	11:45:00	20161213	19:33:00	320-24069-20	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB19-1216	12/03/2016 10:04	12/06/2016			20161208	11:45:00	20161213	19:33:00	320-24069-20	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB19-1216	12/03/2016 10:04	12/06/2016			20161208	11:45:00	20161213	19:33:00	320-24069-20	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB19-1216	12/03/2016 10:04	12/06/2016			20161208	11:45:00	20161213	19:33:00	320-24069-20	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW20-1216	12/03/2016 10:46	12/06/2016			20161208	18:21:00	20161214	16:46:00	320-24069-21	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW20-1216	12/03/2016 10:46	12/06/2016			20161208	18:21:00	20161214	16:46:00	320-24069-21	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW20-1216	12/03/2016 10:46	12/06/2016			20161208	18:21:00	20161214	16:46:00	320-24069-21	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW20-1216	12/03/2016 10:46	12/06/2016			20161208	18:21:00	20161214	16:46:00	320-24069-21	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW20-1216	12/03/2016 10:46	12/06/2016			20161208	18:21:00	20161214	16:46:00	320-24069-21	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB20-1216	12/03/2016 10:45	12/06/2016			20161208	18:21:00	20161214	17:15:00	320-24069-22	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB20-1216	12/03/2016 10:45	12/06/2016			20161208	18:21:00	20161214	17:15:00	320-24069-22	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB20-1216	12/03/2016 10:45	12/06/2016			20161208	18:21:00	20161214	17:15:00	320-24069-22	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB20-1216	12/03/2016 10:45	12/06/2016			20161208	18:21:00	20161214	17:15:00	320-24069-22	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB20-1216	12/03/2016 10:45	12/06/2016			20161208	18:21:00	20161214	17:15:00	320-24069-22	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW21-1216	12/03/2016 11:22	12/06/2016			20161208	18:21:00	20161214	17:45:00	320-24069-23	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW21-1216	12/03/2016 11:22	12/06/2016			20161208	18:21:00	20161214	17:45:00	320-24069-23	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW21-1216	12/03/2016 11:22	12/06/2016			20161208	18:21:00	20161214	17:45:00	320-24069-23	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW21-1216	12/03/2016 11:22	12/06/2016			20161208	18:21:00	20161214	17:45:00	320-24069-23	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW21-1216	12/03/2016 11:22	12/06/2016			20161208	18:21:00	20161214	17:45:00	320-24069-23	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB21-1216	12/03/2016 11:21	12/06/2016			20161208	18:21:00	20161214	00:29:00	320-24069-24	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB21-1216	12/03/2016 11:21	12/06/2016			20161208	18:21:00	20161214	00:29:00	320-24069-24	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB21-1216	12/03/2016 11:21	12/06/2016			20161208	18:21:00	20161214	00:29:00	320-24069-24	1	1	
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N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB21-1216	12/03/2016 11:21	12/06/2016			20161208	18:21:00	20161214	00:29:00	320-24069-24	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW22-1216	12/03/2016 12:02	12/06/2016			20161208	18:21:00	20161214	00:59:00	320-24069-25	1	1	
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N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW22-1216	12/03/2016 12:02	12/06/2016			20161208	18:21:00	20161214	00:59:00	320-24069-25	1	1	
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N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW22-1216	12/03/2016 12:02	12/06/2016			20161208	18:21:00	20161214	00:59:00	320-24069-25	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB22-1216	12/03/2016 12:01	12/06/2016			20161208	18:21:00	20161214	18:14:00	320-24069-26	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB22-1216	12/03/2016 12:01	12/06/2016			20161208	18:21:00	20161214	18:14:00	320-24069-26	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB22-1216	12/03/2016 12:01	12/06/2016			20161208	18:21:00	20161214	18:14:00	320-24069-26	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB22-1216	12/03/2016 12:01	12/06/2016			20161208	18:21:00	20161214	18:14:00	320-24069-26	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB22-1216	12/03/2016 12:01	12/06/2016			20161208	18:21:00	20161214	18:14:00	320-24069-26	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3RW17-1216	12/03/2016 09:13	12/06/2016			20161208	18:21:00	20161214	01:58:00	320-24069-27	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3RW17-1216	12/03/2016 09:13	12/06/2016			20161208	18:21:00	20161214	01:58:00	320-24069-27	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3RW17-1216	12/03/2016 09:13	12/06/2016			20161208	18:21:00	20161214	01:58:00	320-24069-27	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3RW17-1216	12/03/2016 09:13	12/06/2016			20161208	18:21:00	20161214	01:58:00	320-24069-27	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3RW17-1216	12/03/2016 09:13	12/06/2016			20161208	18:21:00	20161214	01:58:00	320-24069-27	1	1	

Contract_ID	DO_CTO_Number	Phase	Installation_ID	Sample_Name	DateTime_Collected	Date_Received	Leachate_Date	Leachate_Time	Extraction_Date	Extraction_Time	Analysis_Date	Analysis_Time	Lab_Sample_ID	Dilution	Run_Number	Percent_Moisture
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3FB17-1216	12/03/2016 09:14	12/06/2016			20161208	18:21:00	20161214	03:56:00	320-24069-28	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3FB17-1216	12/03/2016 09:14	12/06/2016			20161208	18:21:00	20161214	03:56:00	320-24069-28	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3FB17-1216	12/03/2016 09:14	12/06/2016			20161208	18:21:00	20161214	03:56:00	320-24069-28	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3FB17-1216	12/03/2016 09:14	12/06/2016			20161208	18:21:00	20161214	03:56:00	320-24069-28	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3FB17-1216	12/03/2016 09:14	12/06/2016			20161208	18:21:00	20161214	03:56:00	320-24069-28	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3RW18-1216	12/03/2016 12:08	12/06/2016			20161208	18:21:00	20161214	04:26:00	320-24069-29	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3RW18-1216	12/03/2016 12:08	12/06/2016			20161208	18:21:00	20161214	04:26:00	320-24069-29	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3RW18-1216	12/03/2016 12:08	12/06/2016			20161208	18:21:00	20161214	04:26:00	320-24069-29	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3RW18-1216	12/03/2016 12:08	12/06/2016			20161208	18:21:00	20161214	04:26:00	320-24069-29	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3RW18-1216	12/03/2016 12:08	12/06/2016			20161208	18:21:00	20161214	04:26:00	320-24069-29	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3FB18-1216	12/03/2016 12:09	12/06/2016			20161208	18:21:00	20161214	04:55:00	320-24069-30	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3FB18-1216	12/03/2016 12:09	12/06/2016			20161208	18:21:00	20161214	04:55:00	320-24069-30	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3FB18-1216	12/03/2016 12:09	12/06/2016			20161208	18:21:00	20161214	04:55:00	320-24069-30	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3FB18-1216	12/03/2016 12:09	12/06/2016			20161208	18:21:00	20161214	04:55:00	320-24069-30	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3FB18-1216	12/03/2016 12:09	12/06/2016			20161208	18:21:00	20161214	04:55:00	320-24069-30	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS 320-141212/2-A	12/08/2016 11:45	12/08/2016			20161208	11:45:00	20161214	05:25:00	LCS 320-141212/2-A	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS 320-141212/2-A	12/08/2016 11:45	12/08/2016			20161208	11:45:00	20161214	05:25:00	LCS 320-141212/2-A	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS 320-141212/2-A	12/08/2016 11:45	12/08/2016			20161208	11:45:00	20161214	05:25:00	LCS 320-141212/2-A	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS 320-141212/2-A	12/08/2016 11:45	12/08/2016			20161208	11:45:00	20161214	05:25:00	LCS 320-141212/2-A	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS 320-141212/2-A	12/08/2016 11:45	12/08/2016			20161208	11:45:00	20161214	05:25:00	LCS 320-141212/2-A	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCSD 320-141212/3-A	12/08/2016 11:45	12/08/2016			20161208	11:45:00	20161214	05:55:00	LCSD 320-141212/3-A	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCSD 320-141212/3-A	12/08/2016 11:45	12/08/2016			20161208	11:45:00	20161214	05:55:00	LCSD 320-141212/3-A	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCSD 320-141212/3-A	12/08/2016 11:45	12/08/2016			20161208	11:45:00	20161214	05:55:00	LCSD 320-141212/3-A	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCSD 320-141212/3-A	12/08/2016 11:45	12/08/2016			20161208	11:45:00	20161214	05:55:00	LCSD 320-141212/3-A	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCSD 320-141212/3-A	12/08/2016 11:45	12/08/2016			20161208	11:45:00	20161214	05:55:00	LCSD 320-141212/3-A	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LLCS 320-141328/2-A	12/08/2016 18:21	12/08/2016			20161208	18:21:00	20161213	22:01:00	LLCS 320-141328/2-A	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LLCS 320-141328/2-A	12/08/2016 18:21	12/08/2016			20161208	18:21:00	20161213	22:01:00	LLCS 320-141328/2-A	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LLCS 320-141328/2-A	12/08/2016 18:21	12/08/2016			20161208	18:21:00	20161213	22:01:00	LLCS 320-141328/2-A	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LLCS 320-141328/2-A	12/08/2016 18:21	12/08/2016			20161208	18:21:00	20161213	22:01:00	LLCS 320-141328/2-A	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LLCS 320-141328/2-A	12/08/2016 18:21	12/08/2016			20161208	18:21:00	20161213	22:01:00	LLCS 320-141328/2-A	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LLCSD 320-141328/3-A	12/08/2016 18:21	12/08/2016			20161208	18:21:00	20161213	22:31:00	LLCSD 320-141328/3-A	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LLCSD 320-141328/3-A	12/08/2016 18:21	12/08/2016			20161208	18:21:00	20161213	22:31:00	LLCSD 320-141328/3-A	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LLCSD 320-141328/3-A	12/08/2016 18:21	12/08/2016			20161208	18:21:00	20161213	22:31:00	LLCSD 320-141328/3-A	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LLCSD 320-141328/3-A	12/08/2016 18:21	12/08/2016			20161208	18:21:00	20161213	22:31:00	LLCSD 320-141328/3-A	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LLCSD 320-141328/3-A	12/08/2016 18:21	12/08/2016			20161208	18:21:00	20161213	22:31:00	LLCSD 320-141328/3-A	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	MB 320-141212/1-A	12/08/2016 11:45	12/08/2016			20161208	11:45:00	20161213	05:28:00	MB 320-141212/1-A	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	MB 320-141212/1-A	12/08/2016 11:45	12/08/2016			20161208	11:45:00	20161213	05:28:00	MB 320-141212/1-A	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	MB 320-141212/1-A	12/08/2016 11:45	12/08/2016			20161208	11:45:00	20161213	05:28:00	MB 320-141212/1-A	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	MB 320-141212/1-A	12/08/2016 11:45	12/08/2016			20161208	11:45:00	20161213	05:28:00	MB 320-141212/1-A	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	MB 320-141212/1-A	12/08/2016 11:45	12/08/2016			20161208	11:45:00	20161213	05:28:00	MB 320-141212/1-A	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	MB 320-141328/1-A	12/08/2016 18:21	12/08/2016			20161208	18:21:00	20161213	21:31:00	MB 320-141328/1-A	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	MB 320-141328/1-A	12/08/2016 18:21	12/08/2016			20161208	18:21:00	20161213	21:31:00	MB 320-141328/1-A	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	MB 320-141328/1-A	12/08/2016 18:21	12/08/2016			20161208	18:21:00	20161213	21:31:00	MB 320-141328/1-A	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	MB 320-141328/1-A	12/08/2016 18:21	12/08/2016			20161208	18:21:00	20161213	21:31:00	MB 320-141328/1-A	1	1	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	MB 320-141328/1-A	12/08/2016 18:21	12/08/2016			20161208	18:21:00	20161213	21:31:00	MB 320-141328/1-A	1	1	

Contract_ID	DO_CTO_Number	Phase	Installation_ID	Sample_Name	Percent_Lipid	Chem_Name	Analyte_ID	Analyte_Value	Original_Analyte_Value	Result_Units	Lab_Qualifier	Validator_ Qualifier	GC_Column_Type	Analysis_Result_ Type	Result_Narrative
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW13-1216		Perfluorooctane Sulfonate (PFOS)	1763-23-1		0.047	UG_L	U		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW13-1216		Perfluorooctanoic acid (PFOA)	335-67-1		0.024	UG_L	U M		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW13-1216		Perfluorobutanesulfonic acid (PFBS)	375-73-5		0.11	UG_L	U		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW13-1216		13C2 PFHXA	13C2 PFHXA		135	PCT_REC	Q		PR	SURR	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW13-1216		13C2 PFDA	13C2 PFDA		137	PCT_REC	Q		PR	SURR	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB13-1216		Perfluorooctane Sulfonate (PFOS)	1763-23-1		0.045	UG_L	U		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB13-1216		Perfluorooctanoic acid (PFOA)	335-67-1		0.022	UG_L	U		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB13-1216		Perfluorobutanesulfonic acid (PFBS)	375-73-5		0.10	UG_L	U		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB13-1216		13C2 PFHXA	13C2 PFHXA		112	PCT_REC			PR	SURR	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB13-1216		13C2 PFDA	13C2 PFDA		118	PCT_REC			PR	SURR	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW14-1216		Perfluorooctane Sulfonate (PFOS)	1763-23-1		0.046	UG_L	U		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW14-1216		Perfluorooctanoic acid (PFOA)	335-67-1		0.023	UG_L	U		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW14-1216		Perfluorobutanesulfonic acid (PFBS)	375-73-5		0.11	UG_L	U		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW14-1216		13C2 PFHXA	13C2 PFHXA		130	PCT_REC			PR	SURR	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW14-1216		13C2 PFDA	13C2 PFDA		129	PCT_REC			PR	SURR	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB14-1216		Perfluorooctane Sulfonate (PFOS)	1763-23-1		0.047	UG_L	U M		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB14-1216		Perfluorooctanoic acid (PFOA)	335-67-1		0.023	UG_L	U M		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB14-1216		Perfluorobutanesulfonic acid (PFBS)	375-73-5		0.11	UG_L	U		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB14-1216		13C2 PFHXA	13C2 PFHXA		115	PCT_REC			PR	SURR	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB14-1216		13C2 PFDA	13C2 PFDA		117	PCT_REC			PR	SURR	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW15-1216		Perfluorooctane Sulfonate (PFOS)	1763-23-1		0.047	UG_L	U		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW15-1216		Perfluorooctanoic acid (PFOA)	335-67-1		0.024	UG_L	U		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW15-1216		Perfluorobutanesulfonic acid (PFBS)	375-73-5		0.11	UG_L	U		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW15-1216		13C2 PFHXA	13C2 PFHXA		142	PCT_REC	Q		PR	SURR	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW15-1216		13C2 PFDA	13C2 PFDA		140	PCT_REC	Q		PR	SURR	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB15-1216		Perfluorooctane Sulfonate (PFOS)	1763-23-1		0.047	UG_L	U		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB15-1216		Perfluorooctanoic acid (PFOA)	335-67-1		0.023	UG_L	U M		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB15-1216		Perfluorobutanesulfonic acid (PFBS)	375-73-5		0.11	UG_L	U		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB15-1216		13C2 PFHXA	13C2 PFHXA		124	PCT_REC			PR	SURR	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB15-1216		13C2 PFDA	13C2 PFDA		125	PCT_REC			PR	SURR	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB15-1216		Perfluorooctane Sulfonate (PFOS)	1763-23-1		0.047	UG_L	U		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB15-1216		Perfluorooctanoic acid (PFOA)	335-67-1		0.023	UG_L	U		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB15-1216		Perfluorobutanesulfonic acid (PFBS)	375-73-5		0.11	UG_L	U		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB15-1216		13C2 PFHXA	13C2 PFHXA		126	PCT_REC			PR	SURR	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB15-1216		13C2 PFDA	13C2 PFDA		131	PCT_REC	Q		PR	SURR	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW16-1216		Perfluorooctane Sulfonate (PFOS)	1763-23-1		0.047	UG_L	U		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW16-1216		Perfluorooctanoic acid (PFOA)	335-67-1		0.024	UG_L	U		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW16-1216		Perfluorobutanesulfonic acid (PFBS)	375-73-5		0.11	UG_L	U		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW16-1216		13C2 PFHXA	13C2 PFHXA		110	PCT_REC			PR	SURR	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW16-1216		13C2 PFDA	13C2 PFDA		106	PCT_REC			PR	SURR	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB16-1216		Perfluorooctane Sulfonate (PFOS)	1763-23-1		0.045	UG_L	U		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB16-1216		Perfluorooctanoic acid (PFOA)	335-67-1		0.023	UG_L	U		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB16-1216		Perfluorobutanesulfonic acid (PFBS)	375-73-5		0.10	UG_L	U		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB16-1216		13C2 PFHXA	13C2 PFHXA		114	PCT_REC			PR	SURR	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB16-1216		13C2 PFDA	13C2 PFDA		116	PCT_REC			PR	SURR	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW17-1216		Perfluorooctane Sulfonate (PFOS)	1763-23-1		0.047	UG_L	U		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW17-1216		Perfluorooctanoic acid (PFOA)	335-67-1		0.023	UG_L	U		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW17-1216		Perfluorobutanesulfonic acid (PFBS)	375-73-5		0.11	UG_L	U		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW17-1216		13C2 PFHXA	13C2 PFHXA		107	PCT_REC			PR	SURR	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW17-1216		13C2 PFDA	13C2 PFDA		117	PCT_REC			PR	SURR	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB17-1216		Perfluorooctane Sulfonate (PFOS)	1763-23-1		0.045	UG_L	U		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB17-1216		Perfluorooctanoic acid (PFOA)	335-67-1		0.022	UG_L	U		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB17-1216		Perfluorobutanesulfonic acid (PFBS)	375-73-5		0.10	UG_L	U		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB17-1216		13C2 PFHXA	13C2 PFHXA		114	PCT_REC			PR	SURR	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB17-1216		13C2 PFDA	13C2 PFDA		111	PCT_REC			PR	SURR	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3RW14-1216		Perfluorooctane Sulfonate (PFOS)	1763-23-1		0.047	UG_L	U		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3RW14-1216		Perfluorooctanoic acid (PFOA)	335-67-1		0.023	UG_L	U		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3RW14-1216		Perfluorobutanesulfonic acid (PFBS)	375-73-5		0.11	UG_L	U		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3RW14-1216		13C2 PFHXA	13C2 PFHXA		97	PCT_REC			PR	SURR	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3RW14-1216		13C2 PFDA	13C2 PFDA		114	PCT_REC			PR	SURR	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3FB14-1216		Perfluorooctane Sulfonate (PFOS)	1763-23-1		0.044	UG_L	U		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3FB14-1216		Perfluorooctanoic acid (PFOA)	335-67-1		0.022	UG_L	U		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3FB14-1216		Perfluorobutanesulfonic acid (PFBS)	375-73-5		0.10	UG_L	U		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3FB14-1216		13C2 PFHXA	13C2 PFHXA		114	PCT_REC			PR	SURR	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3FB14-1216		13C2 PFDA	13C2 PFDA		122	PCT_REC			PR	SURR	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3RW15-1216		Perfluorooctane Sulfonate (PFOS)	1763-23-1		0.045	UG_L	U M		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3RW15-1216		Perfluorooctanoic acid (PFOA)	335-67-1		0.023	UG_L	U		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3RW15-1216		Perfluorobutanesulfonic acid (PFBS)	375-73-5		0.10	UG_L	U		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3RW15-1216		13C2 PFHXA	13C2 PFHXA		115	PCT_REC			PR	SURR	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3RW15-1216		13C2 PFDA	13C2 PFDA		117	PCT_REC			PR	SURR	

Contract_ID	DO_CTO_Number	Phase	Installation_ID	Sample_Name	Percent_Lipid	Chem_Name	Analyte_ID	Analyte_Value	Original_Analyte_Value	Result_Units	Lab_Qualifier	Validator_ Qualifier	GC_Column_Type	Analysis_Result_ Type	Result_Narrative
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3FB15-1216		Perfluorooctane Sulfonate (PFOS)	1763-23-1		0.047	UG_L	U		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3FB15-1216		Perfluorooctanoic acid (PFOA)	335-67-1		0.024	UG_L	U		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3FB15-1216		Perfluorobutanesulfonic acid (PFBS)	375-73-5		0.11	UG_L	U		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3FB15-1216		13C2 PFHXA	13C2 PFHXA		114	PCT_REC			PR	SURR	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3FB15-1216		13C2 PFDA	13C2 PFDA		110	PCT_REC			PR	SURR	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3RW16-1216		Perfluorooctane Sulfonate (PFOS)	1763-23-1		0.044	UG_L	U		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3RW16-1216		Perfluorooctanoic acid (PFOA)	335-67-1		0.022	UG_L	U		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3RW16-1216		Perfluorobutanesulfonic acid (PFBS)	375-73-5		0.10	UG_L	U		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3RW16-1216		13C2 PFHXA	13C2 PFHXA		106	PCT_REC			PR	SURR	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3RW16-1216		13C2 PFDA	13C2 PFDA		110	PCT_REC			PR	SURR	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3FB16-1216		Perfluorooctane Sulfonate (PFOS)	1763-23-1		0.045	UG_L	U		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3FB16-1216		Perfluorooctanoic acid (PFOA)	335-67-1		0.023	UG_L	U		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3FB16-1216		Perfluorobutanesulfonic acid (PFBS)	375-73-5		0.10	UG_L	U		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3FB16-1216		13C2 PFHXA	13C2 PFHXA		119	PCT_REC			PR	SURR	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3FB16-1216		13C2 PFDA	13C2 PFDA		118	PCT_REC			PR	SURR	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW18-1216		Perfluorooctane Sulfonate (PFOS)	1763-23-1		0.045	UG_L	U		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW18-1216		Perfluorooctanoic acid (PFOA)	335-67-1		0.022	UG_L	U		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW18-1216		Perfluorobutanesulfonic acid (PFBS)	375-73-5		0.10	UG_L	U M		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW18-1216		13C2 PFHXA	13C2 PFHXA		115	PCT_REC			PR	SURR	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW18-1216		13C2 PFDA	13C2 PFDA		116	PCT_REC			PR	SURR	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB18-1216		Perfluorooctane Sulfonate (PFOS)	1763-23-1		0.045	UG_L	U		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB18-1216		Perfluorooctanoic acid (PFOA)	335-67-1		0.022	UG_L	U		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB18-1216		Perfluorobutanesulfonic acid (PFBS)	375-73-5		0.10	UG_L	U		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB18-1216		13C2 PFHXA	13C2 PFHXA		115	PCT_REC			PR	SURR	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB18-1216		13C2 PFDA	13C2 PFDA		117	PCT_REC			PR	SURR	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW19-1216		Perfluorooctane Sulfonate (PFOS)	1763-23-1		0.045	UG_L	U		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW19-1216		Perfluorooctanoic acid (PFOA)	335-67-1		0.022	UG_L	U		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW19-1216		Perfluorobutanesulfonic acid (PFBS)	375-73-5		0.10	UG_L	U		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW19-1216		13C2 PFHXA	13C2 PFHXA		119	PCT_REC			PR	SURR	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW19-1216		13C2 PFDA	13C2 PFDA		125	PCT_REC			PR	SURR	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB19-1216		Perfluorooctane Sulfonate (PFOS)	1763-23-1		0.046	UG_L	U		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB19-1216		Perfluorooctanoic acid (PFOA)	335-67-1		0.023	UG_L	U		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB19-1216		Perfluorobutanesulfonic acid (PFBS)	375-73-5		0.11	UG_L	U		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB19-1216		13C2 PFHXA	13C2 PFHXA		120	PCT_REC			PR	SURR	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB19-1216		13C2 PFDA	13C2 PFDA		118	PCT_REC			PR	SURR	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW20-1216		Perfluorooctane Sulfonate (PFOS)	1763-23-1		0.044	UG_L	U M		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW20-1216		Perfluorooctanoic acid (PFOA)	335-67-1		0.022	UG_L	U M		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW20-1216		Perfluorobutanesulfonic acid (PFBS)	375-73-5		0.10	UG_L	U		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW20-1216		13C2 PFHXA	13C2 PFHXA		112	PCT_REC			PR	SURR	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW20-1216		13C2 PFDA	13C2 PFDA		119	PCT_REC			PR	SURR	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB20-1216		Perfluorooctane Sulfonate (PFOS)	1763-23-1		0.042	UG_L	U M		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB20-1216		Perfluorooctanoic acid (PFOA)	335-67-1		0.021	UG_L	U		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB20-1216		Perfluorobutanesulfonic acid (PFBS)	375-73-5		0.097	UG_L	U		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB20-1216		13C2 PFHXA	13C2 PFHXA		121	PCT_REC			PR	SURR	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB20-1216		13C2 PFDA	13C2 PFDA		124	PCT_REC			PR	SURR	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW21-1216		Perfluorooctane Sulfonate (PFOS)	1763-23-1		0.045	UG_L	U		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW21-1216		Perfluorooctanoic acid (PFOA)	335-67-1		0.023	UG_L	U		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW21-1216		Perfluorobutanesulfonic acid (PFBS)	375-73-5		0.10	UG_L	U		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW21-1216		13C2 PFHXA	13C2 PFHXA		108	PCT_REC			PR	SURR	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW21-1216		13C2 PFDA	13C2 PFDA		113	PCT_REC			PR	SURR	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB21-1216		Perfluorooctane Sulfonate (PFOS)	1763-23-1		0.043	UG_L	U M		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB21-1216		Perfluorooctanoic acid (PFOA)	335-67-1		0.022	UG_L	U		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB21-1216		Perfluorobutanesulfonic acid (PFBS)	375-73-5		0.099	UG_L	U		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB21-1216		13C2 PFHXA	13C2 PFHXA		114	PCT_REC			PR	SURR	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB21-1216		13C2 PFDA	13C2 PFDA		114	PCT_REC			PR	SURR	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW22-1216		Perfluorooctane Sulfonate (PFOS)	1763-23-1		0.043	UG_L	U		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW22-1216		Perfluorooctanoic acid (PFOA)	335-67-1		0.022	UG_L	U M		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW22-1216		Perfluorobutanesulfonic acid (PFBS)	375-73-5		0.10	UG_L	U		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW22-1216		13C2 PFHXA	13C2 PFHXA		110	PCT_REC			PR	SURR	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW22-1216		13C2 PFDA	13C2 PFDA		105	PCT_REC			PR	SURR	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB22-1216		Perfluorooctane Sulfonate (PFOS)	1763-23-1		0.042	UG_L	U		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB22-1216		Perfluorooctanoic acid (PFOA)	335-67-1		0.021	UG_L	U		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB22-1216		Perfluorobutanesulfonic acid (PFBS)	375-73-5		0.096	UG_L	U		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB22-1216		13C2 PFHXA	13C2 PFHXA		113	PCT_REC			PR	SURR	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB22-1216		13C2 PFDA	13C2 PFDA		118	PCT_REC			PR	SURR	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3RW17-1216		Perfluorooctane Sulfonate (PFOS)	1763-23-1		0.044	UG_L	U M		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3RW17-1216		Perfluorooctanoic acid (PFOA)	335-67-1		0.022	UG_L	U M		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3RW17-1216		Perfluorobutanesulfonic acid (PFBS)	375-73-5		0.10	UG_L	U		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3RW17-1216		13C2 PFHXA	13C2 PFHXA		110	PCT_REC			PR	SURR	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3RW17-1216		13C2 PFDA	13C2 PFDA		100	PCT_REC			PR	SURR	

Contract_ID	DO_CTO_Number	Phase	Installation_ID	Sample_Name	Percent_Lipid	Chem_Name	Analyte_ID	Analyte_Value	Original_Analyte_Value	Result_Units	Lab_Qualifier	Validator_Qualifier	GC_Column_Type	Analysis_Result_Type	Result_Narrative
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3FB17-1216		Perfluorooctane Sulfonate (PFOS)	1763-23-1		0.043	UG_L	U M		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3FB17-1216		Perfluorooctanoic acid (PFOA)	335-67-1		0.022	UG_L	U M		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3FB17-1216		Perfluorobutanesulfonic acid (PFBS)	375-73-5		0.099	UG_L	U		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3FB17-1216		13C2 PFHXA	13C2 PFHXA		106	PCT_REC			PR	SURR	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3FB17-1216		13C2 PFDA	13C2 PFDA		110	PCT_REC			PR	SURR	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3RW18-1216		Perfluorooctane Sulfonate (PFOS)	1763-23-1		0.044	UG_L	U		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3RW18-1216		Perfluorooctanoic acid (PFOA)	335-67-1		0.022	UG_L	U		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3RW18-1216		Perfluorobutanesulfonic acid (PFBS)	375-73-5		0.10	UG_L	U		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3RW18-1216		13C2 PFHXA	13C2 PFHXA		115	PCT_REC			PR	SURR	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3RW18-1216		13C2 PFDA	13C2 PFDA		113	PCT_REC			PR	SURR	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3FB18-1216		Perfluorooctane Sulfonate (PFOS)	1763-23-1		0.043	UG_L	U		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3FB18-1216		Perfluorooctanoic acid (PFOA)	335-67-1		0.021	UG_L	U		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3FB18-1216		Perfluorobutanesulfonic acid (PFBS)	375-73-5		0.098	UG_L	U		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3FB18-1216		13C2 PFHXA	13C2 PFHXA		102	PCT_REC			PR	SURR	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3FB18-1216		13C2 PFDA	13C2 PFDA		108	PCT_REC			PR	SURR	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS 320-141212/2-A		Perfluorooctane Sulfonate (PFOS)	1763-23-1		102	PCT_REC			PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS 320-141212/2-A		Perfluorooctanoic acid (PFOA)	335-67-1		106	PCT_REC			PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS 320-141212/2-A		Perfluorobutanesulfonic acid (PFBS)	375-73-5		94	PCT_REC			PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS 320-141212/2-A		13C2 PFHXA	13C2 PFHXA		123	PCT_REC			PR	SURR	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS 320-141212/2-A		13C2 PFDA	13C2 PFDA		123	PCT_REC			PR	SURR	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCSD 320-141212/3-A		Perfluorooctane Sulfonate (PFOS)	1763-23-1		97	PCT_REC			PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCSD 320-141212/3-A		Perfluorooctanoic acid (PFOA)	335-67-1		105	PCT_REC			PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCSD 320-141212/3-A		Perfluorobutanesulfonic acid (PFBS)	375-73-5		92	PCT_REC			PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCSD 320-141212/3-A		13C2 PFHXA	13C2 PFHXA		126	PCT_REC			PR	SURR	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCSD 320-141212/3-A		13C2 PFDA	13C2 PFDA		131	PCT_REC	Q		PR	SURR	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LLCS 320-141328/2-A		Perfluorooctane Sulfonate (PFOS)	1763-23-1		81	PCT_REC	J		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LLCS 320-141328/2-A		Perfluorooctanoic acid (PFOA)	335-67-1		95	PCT_REC	J M		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LLCS 320-141328/2-A		Perfluorobutanesulfonic acid (PFBS)	375-73-5		93	PCT_REC	J		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LLCS 320-141328/2-A		13C2 PFHXA	13C2 PFHXA		124	PCT_REC			PR	SURR	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LLCS 320-141328/2-A		13C2 PFDA	13C2 PFDA		129	PCT_REC			PR	SURR	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LLCSD 320-141328/3-A		Perfluorooctane Sulfonate (PFOS)	1763-23-1		89	PCT_REC	J		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LLCSD 320-141328/3-A		Perfluorooctanoic acid (PFOA)	335-67-1		93	PCT_REC	J M		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LLCSD 320-141328/3-A		Perfluorobutanesulfonic acid (PFBS)	375-73-5		98	PCT_REC	J		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LLCSD 320-141328/3-A		13C2 PFHXA	13C2 PFHXA		119	PCT_REC			PR	SURR	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LLCSD 320-141328/3-A		13C2 PFDA	13C2 PFDA		116	PCT_REC			PR	SURR	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	MB 320-141212/1-A		Perfluorooctane Sulfonate (PFOS)	1763-23-1		0.048	UG_L	U		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	MB 320-141212/1-A		Perfluorooctanoic acid (PFOA)	335-67-1		0.024	UG_L	U		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	MB 320-141212/1-A		Perfluorobutanesulfonic acid (PFBS)	375-73-5		0.11	UG_L	U		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	MB 320-141212/1-A		13C2 PFHXA	13C2 PFHXA		113	PCT_REC			PR	SURR	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	MB 320-141212/1-A		13C2 PFDA	13C2 PFDA		111	PCT_REC			PR	SURR	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	MB 320-141328/1-A		Perfluorooctane Sulfonate (PFOS)	1763-23-1		0.048	UG_L	U		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	MB 320-141328/1-A		Perfluorooctanoic acid (PFOA)	335-67-1		0.024	UG_L	U		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	MB 320-141328/1-A		Perfluorobutanesulfonic acid (PFBS)	375-73-5		0.11	UG_L	U		PR	TRG	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	MB 320-141328/1-A		13C2 PFHXA	13C2 PFHXA		121	PCT_REC			PR	SURR	
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	MB 320-141328/1-A		13C2 PFDA	13C2 PFDA		120	PCT_REC			PR	SURR	

Contract_ID	DO_CTO_Number	Phase	Installation_ID	Sample_Name	QC_Control_ Limit_Code	QC_Accuracy_ Upper	QC_Accuracy_ Lower	Control_Limit_Date	QC_Narrative	MDL	Detection_Limit	QSM_Version	DL	LOD	LOQ	SDG	Analysis_Batch	Validator_Name	Val_Date
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW13-1216				00000000				5.0	0.015	0.047	0.059	320-24069-1	320-141771		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW13-1216				00000000				5.0	0.0092	0.024	0.029	320-24069-1	320-141771		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW13-1216				00000000				5.0	0.047	0.11	0.14	320-24069-1	320-141771		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW13-1216	SLSA	130	70	00000000				5.0				320-24069-1	320-141771		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW13-1216	SLSA	130	70	00000000				5.0				320-24069-1	320-141771		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB13-1216				00000000				5.0	0.014	0.045	0.056	320-24069-1	320-141768		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB13-1216				00000000				5.0	0.0088	0.022	0.028	320-24069-1	320-141768		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB13-1216				00000000				5.0	0.044	0.10	0.13	320-24069-1	320-141768		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB13-1216	SLSA	130	70	00000000				5.0				320-24069-1	320-141768		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB13-1216	SLSA	130	70	00000000				5.0				320-24069-1	320-141768		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW14-1216				00000000				5.0	0.015	0.046	0.057	320-24069-1	320-141771		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW14-1216				00000000				5.0	0.0090	0.023	0.029	320-24069-1	320-141771		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW14-1216				00000000				5.0	0.045	0.11	0.13	320-24069-1	320-141771		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW14-1216	SLSA	130	70	00000000				5.0				320-24069-1	320-141771		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW14-1216	SLSA	130	70	00000000				5.0				320-24069-1	320-141771		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB14-1216				00000000				5.0	0.015	0.047	0.058	320-24069-1	320-141771		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB14-1216				00000000				5.0	0.0092	0.023	0.029	320-24069-1	320-141771		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB14-1216				00000000				5.0	0.046	0.11	0.14	320-24069-1	320-141771		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB14-1216	SLSA	130	70	00000000				5.0				320-24069-1	320-141771		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB14-1216	SLSA	130	70	00000000				5.0				320-24069-1	320-141771		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW15-1216				00000000				5.0	0.015	0.047	0.059	320-24069-1	320-141771		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW15-1216				00000000				5.0	0.0092	0.024	0.029	320-24069-1	320-141771		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW15-1216				00000000				5.0	0.047	0.11	0.14	320-24069-1	320-141771		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW15-1216	SLSA	130	70	00000000				5.0				320-24069-1	320-141771		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW15-1216	SLSA	130	70	00000000				5.0				320-24069-1	320-141771		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB15-1216				00000000				5.0	0.015	0.047	0.059	320-24069-1	320-141768		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB15-1216				00000000				5.0	0.0092	0.023	0.029	320-24069-1	320-141768		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB15-1216				00000000				5.0	0.047	0.11	0.14	320-24069-1	320-141768		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB15-1216	SLSA	130	70	00000000				5.0				320-24069-1	320-141768		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB15-1216	SLSA	130	70	00000000				5.0				320-24069-1	320-141768		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB15-1216				00000000				5.0	0.015	0.047	0.059	320-24069-1	320-141771		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB15-1216				00000000				5.0	0.0092	0.023	0.029	320-24069-1	320-141771		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB15-1216				00000000				5.0	0.047	0.11	0.14	320-24069-1	320-141771		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB15-1216	SLSA	130	70	00000000				5.0				320-24069-1	320-141771		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB15-1216	SLSA	130	70	00000000				5.0				320-24069-1	320-141771		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW16-1216				00000000				5.0	0.015	0.047	0.059	320-24069-1	320-141768		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW16-1216				00000000				5.0	0.0093	0.024	0.029	320-24069-1	320-141768		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW16-1216				00000000				5.0	0.047	0.11	0.14	320-24069-1	320-141768		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW16-1216	SLSA	130	70	00000000				5.0				320-24069-1	320-141768		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW16-1216	SLSA	130	70	00000000				5.0				320-24069-1	320-141768		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB16-1216				00000000				5.0	0.015	0.045	0.057	320-24069-1	320-141768		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB16-1216				00000000				5.0	0.0089	0.023	0.028	320-24069-1	320-141768		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB16-1216				00000000				5.0	0.045	0.10	0.13	320-24069-1	320-141768		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB16-1216	SLSA	130	70	00000000				5.0				320-24069-1	320-141768		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB16-1216	SLSA	130	70	00000000				5.0				320-24069-1	320-141768		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW17-1216				00000000				5.0	0.015	0.047	0.058	320-24069-1	320-141768		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW17-1216				00000000				5.0	0.0092	0.023	0.029	320-24069-1	320-141768		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW17-1216				00000000				5.0	0.046	0.11	0.14	320-24069-1	320-141768		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW17-1216	SLSA	130	70	00000000				5.0				320-24069-1	320-141768		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW17-1216	SLSA	130	70	00000000				5.0				320-24069-1	320-141768		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB17-1216				00000000				5.0	0.014	0.045	0.056	320-24069-1	320-141768		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB17-1216				00000000				5.0	0.0088	0.022	0.028	320-24069-1	320-141768		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB17-1216				00000000				5.0	0.044	0.10	0.13	320-24069-1	320-141768		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB17-1216	SLSA	130	70	00000000				5.0				320-24069-1	320-141768		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB17-1216	SLSA	130	70	00000000				5.0				320-24069-1	320-141768		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3RW14-1216				00000000				5.0	0.015	0.047	0.058	320-24069-1	320-141768		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3RW14-1216				00000000				5.0	0.0091	0.023	0.029	320-24069-1	320-141768		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3RW14-1216				00000000				5.0	0.046	0.11	0.14	320-24069-1	320-141768		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3RW14-1216	SLSA	130	70	00000000				5.0				320-24069-1	320-141768		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3RW14-1216	SLSA	130	70	00000000				5.0				320-24069-1	320-141768		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3FB14-1216				00000000				5.0	0.014	0.044	0.055	320-24069-1	320-141769		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3FB14-1216				00000000				5.0	0.0087	0.022	0.028	320-24069-1	320-141769		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3FB14-1216				00000000				5.0	0.044	0.10	0.13	320-24069-1	320-141769		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3FB14-1216	SLSA	130	70	00000000				5.0				320-24069-1	320-141769		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3FB14-1216	SLSA	130	70	00000000				5.0				320-24069-1	320-141769		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3RW15-1216				00000000				5.0	0.015	0.045	0.056	320-24069-1	320-141769		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3RW15-1216				00000000				5.0	0.0089	0.023	0.028	320-24069-1	320-141769		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3RW15-1216				00000000				5.0	0.045	0.10	0.13	320-24069-1	320-141769		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3RW15-1216	SLSA	130	70	00000000				5.0				320-24069-1	320-141769		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3RW15-1216	SLSA	130	70	00000000				5.0				320-24069-1	320-141769		

Contract_ID	DO_CTO_Number	Phase	Installation_ID	Sample_Name	QC_Control_ Limit_Code	QC_Accuracy_ Upper	QC_Accuracy_ Lower	Control_Limit_Date	QC_Narrative	MDL	Detection_Limit	QSM_Version	DL	LOD	LOQ	SDG	Analysis_Batch	Validator_Name	Val_Date
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3FB15-1216				00000000				5.0	0.015	0.047	0.059	320-24069-1	320-141769		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3FB15-1216				00000000				5.0	0.0092	0.024	0.029	320-24069-1	320-141769		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3FB15-1216				00000000				5.0	0.047	0.11	0.14	320-24069-1	320-141769		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3FB15-1216	SLSA	130	70	00000000				5.0				320-24069-1	320-141769		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3FB15-1216	SLSA	130	70	00000000				5.0				320-24069-1	320-141769		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3RW16-1216				00000000				5.0	0.014	0.044	0.056	320-24069-1	320-141769		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3RW16-1216				00000000				5.0	0.0087	0.022	0.028	320-24069-1	320-141769		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3RW16-1216				00000000				5.0	0.044	0.10	0.13	320-24069-1	320-141769		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3RW16-1216	SLSA	130	70	00000000				5.0				320-24069-1	320-141769		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3RW16-1216	SLSA	130	70	00000000				5.0				320-24069-1	320-141769		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3FB16-1216				00000000				5.0	0.015	0.045	0.056	320-24069-1	320-141769		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3FB16-1216				00000000				5.0	0.0088	0.023	0.028	320-24069-1	320-141769		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3FB16-1216				00000000				5.0	0.045	0.10	0.13	320-24069-1	320-141769		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3FB16-1216	SLSA	130	70	00000000				5.0				320-24069-1	320-141769		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3FB16-1216	SLSA	130	70	00000000				5.0				320-24069-1	320-141769		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW18-1216				00000000				5.0	0.014	0.045	0.056	320-24069-1	320-141769		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW18-1216				00000000				5.0	0.0088	0.022	0.028	320-24069-1	320-141769		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW18-1216				00000000				5.0	0.044	0.10	0.13	320-24069-1	320-141769		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW18-1216	SLSA	130	70	00000000				5.0				320-24069-1	320-141769		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW18-1216	SLSA	130	70	00000000				5.0				320-24069-1	320-141769		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB18-1216				00000000				5.0	0.015	0.045	0.056	320-24069-1	320-141769		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB18-1216				00000000				5.0	0.0088	0.022	0.028	320-24069-1	320-141769		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB18-1216				00000000				5.0	0.045	0.10	0.13	320-24069-1	320-141769		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB18-1216	SLSA	130	70	00000000				5.0				320-24069-1	320-141769		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB18-1216	SLSA	130	70	00000000				5.0				320-24069-1	320-141769		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW19-1216				00000000				5.0	0.014	0.045	0.056	320-24069-1	320-141769		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW19-1216				00000000				5.0	0.0088	0.022	0.028	320-24069-1	320-141769		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW19-1216				00000000				5.0	0.044	0.10	0.13	320-24069-1	320-141769		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW19-1216	SLSA	130	70	00000000				5.0				320-24069-1	320-141769		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW19-1216	SLSA	130	70	00000000				5.0				320-24069-1	320-141769		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB19-1216				00000000				5.0	0.015	0.046	0.058	320-24069-1	320-141769		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB19-1216				00000000				5.0	0.0091	0.023	0.029	320-24069-1	320-141769		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB19-1216				00000000				5.0	0.046	0.11	0.13	320-24069-1	320-141769		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB19-1216	SLSA	130	70	00000000				5.0				320-24069-1	320-141769		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB19-1216	SLSA	130	70	00000000				5.0				320-24069-1	320-141769		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW20-1216				00000000				5.0	0.014	0.044	0.055	320-24069-1	320-141966		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW20-1216				00000000				5.0	0.0086	0.022	0.027	320-24069-1	320-141966		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW20-1216				00000000				5.0	0.043	0.10	0.13	320-24069-1	320-141966		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW20-1216	SLSA	130	70	00000000				5.0				320-24069-1	320-141966		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW20-1216	SLSA	130	70	00000000				5.0				320-24069-1	320-141966		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB20-1216				00000000				5.0	0.014	0.042	0.053	320-24069-1	320-141966		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB20-1216				00000000				5.0	0.0083	0.021	0.026	320-24069-1	320-141966		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB20-1216				00000000				5.0	0.042	0.097	0.12	320-24069-1	320-141966		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB20-1216	SLSA	130	70	00000000				5.0				320-24069-1	320-141966		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB20-1216	SLSA	130	70	00000000				5.0				320-24069-1	320-141966		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW21-1216				00000000				5.0	0.015	0.045	0.057	320-24069-1	320-141966		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW21-1216				00000000				5.0	0.0089	0.023	0.028	320-24069-1	320-141966		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW21-1216				00000000				5.0	0.045	0.10	0.13	320-24069-1	320-141966		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW21-1216	SLSA	130	70	00000000				5.0				320-24069-1	320-141966		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW21-1216	SLSA	130	70	00000000				5.0				320-24069-1	320-141966		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB21-1216				00000000				5.0	0.014	0.043	0.054	320-24069-1	320-141770		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB21-1216				00000000				5.0	0.0084	0.022	0.027	320-24069-1	320-141770		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB21-1216				00000000				5.0	0.043	0.099	0.13	320-24069-1	320-141770		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB21-1216	SLSA	130	70	00000000				5.0				320-24069-1	320-141770		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB21-1216	SLSA	130	70	00000000				5.0				320-24069-1	320-141770		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW22-1216				00000000				5.0	0.014	0.043	0.054	320-24069-1	320-141770		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW22-1216				00000000				5.0	0.0085	0.022	0.027	320-24069-1	320-141770		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW22-1216				00000000				5.0	0.043	0.10	0.13	320-24069-1	320-141770		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW22-1216	SLSA	130	70	00000000				5.0				320-24069-1	320-141770		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1RW22-1216	SLSA	130	70	00000000				5.0				320-24069-1	320-141770		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB22-1216				00000000				5.0	0.014	0.042	0.053	320-24069-1	320-141966		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB22-1216				00000000				5.0	0.0083	0.021	0.026	320-24069-1	320-141966		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB22-1216				00000000				5.0	0.042	0.096	0.12	320-24069-1	320-141966		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB22-1216	SLSA	130	70	00000000				5.0				320-24069-1	320-141966		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-1FB22-1216	SLSA	130	70	00000000				5.0				320-24069-1	320-141966		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3RW17-1216				00000000				5.0	0.014	0.044	0.055	320-24069-1	320-141770		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3RW17-1216				00000000				5.0	0.0087	0.022	0.028	320-24069-1	320-141770		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3RW17-1216				00000000				5.0	0.044	0.10	0.13	320-24069-1	320-141770		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3RW17-1216	SLSA	130	70	00000000				5.0				320-24069-1	320-141770		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3RW17-1216	SLSA	130	70	00000000				5.0				320-24069-1	320-141770		

Contract_ID	DO_CTO_Number	Phase	Installation_ID	Sample_Name	QC_Control_ Limit_Code	QC_Accuracy_ Upper	QC_Accuracy_ Lower	Control_Limit_Date	QC_Narrative	MDL	Detection_Limit	QSM_Version	DL	LOD	LOQ	SDG	Analysis_Batch	Validator_Name	Val_Date
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3FB17-1216				00000000				5.0	0.014	0.043	0.054	320-24069-1	320-141771		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3FB17-1216				00000000				5.0	0.0084	0.022	0.027	320-24069-1	320-141771		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3FB17-1216				00000000				5.0	0.043	0.099	0.13	320-24069-1	320-141771		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3FB17-1216	SLSA	130	70	00000000				5.0				320-24069-1	320-141771		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3FB17-1216	SLSA	130	70	00000000				5.0				320-24069-1	320-141771		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3RW18-1216				00000000				5.0	0.014	0.044	0.055	320-24069-1	320-141771		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3RW18-1216				00000000				5.0	0.0086	0.022	0.027	320-24069-1	320-141771		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3RW18-1216				00000000				5.0	0.044	0.10	0.13	320-24069-1	320-141771		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3RW18-1216	SLSA	130	70	00000000				5.0				320-24069-1	320-141771		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3RW18-1216	SLSA	130	70	00000000				5.0				320-24069-1	320-141771		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3FB18-1216				00000000				5.0	0.014	0.043	0.053	320-24069-1	320-141771		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3FB18-1216				00000000				5.0	0.0084	0.021	0.027	320-24069-1	320-141771		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3FB18-1216				00000000				5.0	0.042	0.098	0.12	320-24069-1	320-141771		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3FB18-1216	SLSA	130	70	00000000				5.0				320-24069-1	320-141771		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	WI-CV-3FB18-1216	SLSA	130	70	00000000				5.0				320-24069-1	320-141771		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS 320-141212/2-A	LSA	130	70	00000000				5.0	0.016	0.048	0.060	320-24069-1	320-141771		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS 320-141212/2-A	LSA	130	70	00000000				5.0	0.0094	0.024	0.030	320-24069-1	320-141771		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS 320-141212/2-A	LSA	130	70	00000000				5.0	0.048	0.11	0.14	320-24069-1	320-141771		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS 320-141212/2-A	SLSA	130	70	00000000				5.0				320-24069-1	320-141771		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCS 320-141212/2-A	SLSA	130	70	00000000				5.0				320-24069-1	320-141771		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCSD 320-141212/3-A	LSP	130	70	00000000				5.0	0.016	0.048	0.060	320-24069-1	320-141771		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCSD 320-141212/3-A	LSP	130	70	00000000				5.0	0.0094	0.024	0.030	320-24069-1	320-141771		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCSD 320-141212/3-A	LSP	130	70	00000000				5.0	0.048	0.11	0.14	320-24069-1	320-141771		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCSD 320-141212/3-A	SLSA	130	70	00000000				5.0				320-24069-1	320-141771		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LCSD 320-141212/3-A	SLSA	130	70	00000000				5.0				320-24069-1	320-141771		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LLCS 320-141328/2-A	LSA	150	50	00000000				5.0	0.016	0.048	0.060	320-24069-1	320-141770		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LLCS 320-141328/2-A	LSA	150	50	00000000				5.0	0.0094	0.024	0.030	320-24069-1	320-141770		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LLCS 320-141328/2-A	LSA	150	50	00000000				5.0	0.048	0.11	0.14	320-24069-1	320-141770		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LLCS 320-141328/2-A	SLSA	130	70	00000000				5.0				320-24069-1	320-141770		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LLCS 320-141328/2-A	SLSA	130	70	00000000				5.0				320-24069-1	320-141770		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LLCSD 320-141328/3-A	LSP	150	50	00000000				5.0	0.016	0.048	0.060	320-24069-1	320-141770		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LLCSD 320-141328/3-A	LSP	150	50	00000000				5.0	0.0094	0.024	0.030	320-24069-1	320-141770		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LLCSD 320-141328/3-A	LSP	150	50	00000000				5.0	0.048	0.11	0.14	320-24069-1	320-141770		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LLCSD 320-141328/3-A	SLSA	130	70	00000000				5.0				320-24069-1	320-141770		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	LLCSD 320-141328/3-A	SLSA	130	70	00000000				5.0				320-24069-1	320-141770		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	MB 320-141212/1-A				00000000				5.0	0.016	0.048	0.060	320-24069-1	320-141767		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	MB 320-141212/1-A				00000000				5.0	0.0094	0.024	0.030	320-24069-1	320-141767		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	MB 320-141212/1-A				00000000				5.0	0.048	0.11	0.14	320-24069-1	320-141767		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	MB 320-141212/1-A	SLSA	130	70	00000000				5.0				320-24069-1	320-141767		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	MB 320-141212/1-A	SLSA	130	70	00000000				5.0				320-24069-1	320-141767		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	MB 320-141328/1-A				00000000				5.0	0.016	0.048	0.060	320-24069-1	320-141770		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	MB 320-141328/1-A				00000000				5.0	0.0094	0.024	0.030	320-24069-1	320-141770		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	MB 320-141328/1-A				00000000				5.0	0.048	0.11	0.14	320-24069-1	320-141770		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	MB 320-141328/1-A	SLSA	130	70	00000000				5.0				320-24069-1	320-141770		
N6247016D9000	0008		WHIDBEY_ISLAND_NAS	MB 320-141328/1-A	SLSA	130	70	00000000				5.0				320-24069-1	320-141770		

ENVIRONMENTAL
Data Services, Inc.

DATA VALIDATION SUMMARY REPORT
WHIDBEY ISLAND, WASHINGTON

Client: CH2M HILL, Inc., Corvallis, Oregon
SDG: 320-24069-1
Laboratory: Test America, Sacramento, California
Site: Whidbey Island, CTO-0008, Washington
Date: January 4, 2017

PFCs			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	WI-CV-1RW13-1216	320-24069-1	Water
2	WI-CV-1FB13-1216	320-24069-2	Water
3	WI-CV-1RW14-1216	320-24069-3	Water
4	WI-CV-1FB14-1216	320-24069-4	Water
5	WI-CV-1RW15-1216	320-24069-5	Water
6	WI-CV-1FB15-1216	320-24069-6	Water
6RE	WI-CV-1FB15-1216RE	320-24069-6RE	Water
7	WI-CV-1RW16-1216	320-24069-7	Water
8	WI-CV-1FB16-1216	320-24069-8	Water
9	WI-CV-1RW17-1216	320-24069-9	Water
10	WI-CV-1FB17-1216	320-24069-10	Water
11	WI-CV-3RW14-1216	320-24069-11	Water
12	WI-CV-3FB14-1216	320-24069-12	Water
13	WI-CV-3RW15-1216	320-24069-13	Water
14	WI-CV-3FB15-1216	320-24069-14	Water
15	WI-CV-3RW16-1216	320-24069-15	Water
16	WI-CV-3FB16-1216	320-24069-16	Water
17	WI-CV-1RW18-1216	320-24069-17	Water
18	WI-CV-1FB18-1216	320-24069-18	Water
19	WI-CV-1RW19-1216	320-24069-19	Water
20	WI-CV-1FB19-1216	320-24069-20	Water
21	WI-CV-1RW20-1216	320-24069-21	Water
22	WI-CV-1FB20-1216	320-24069-22	Water
23	WI-CV-1RW21-1216	320-24069-23	Water
24	WI-CV-1FB21-1216	320-24069-24	Water
25	WI-CV-1RW22-1216	320-24069-25	Water
26	WI-CV-1FB22-1216	320-24069-26	Water
27	WI-CV-3RW17-1216	320-24069-27	Water
28	WI-CV-3FB17-1216	320-24069-28	Water
29	WI-CV-3RW18-1216	320-24069-29	Water
30	WI-CV-3FB18-1216	320-24069-30	Water

A full data validation was performed on the analytical data for fifteen water samples and fifteen aqueous field blank samples collected on December 2-3, 2016 by CH2M HILL at the Whidbey Island site in Washington. The samples were analyzed under the EPA Method "Determination of

Selected Perfluorinated Alkyl Acids in Drinking Water by Solid Phase Extraction and Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS)".

Specific method references are as follows:

Analysis	*Method References*
PFCs	USEPA Method 537 Rev 1.1 Modified

The data have been validated according to the protocols and quality control (QC) requirements of the analytical method, and the U.S. Department of Defense (DoD) Quality Systems Manual (QSM), Version 5.0 (DoD 2013) and the USEPA National Functional Guidelines for Organic Data Review as follows:

- The USEPA "Contract Laboratories Program National Functional Guidelines for Superfund Organic Methods Data Review," August 2014;
- and the reviewer's professional judgment.

The following data quality indicators were reviewed for this report:

Organics

- Date Completeness, Case Narrative & Custody Documentation
- Holding times
- Gas Chromatography/Mass Spectrometry (GC/MS) Tuning
- Initial and continuing calibration summaries
- Method blank and field QC blank contamination
- Surrogate Spike recoveries
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) recoveries
- Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD) recoveries
- Internal standard area and retention time summary forms
- Target Compound Identification
- Compound Quantitation
- Field Duplicate sample precision

A full (Level IV) data validation was performed with this review including a recalculation of 10% of the detected results in the samples.

Data Usability Assessment

There were no rejections of data.

Overall the data is acceptable for the intended purposes as qualified for the deficiencies detailed in this report.

Please note that any results qualified (U) due to blank contamination may be then qualified (J) due to another action. Therefore, the results may be qualified (UJ) due to the culmination of the blank contaminations and actions from other exceedences of QC criteria.

Perfluorinated Compounds (PFCs)

Data Completeness, Case Narrative & Custody Documentation

- The case narrative and chain-of-custody documentation were included in the data package as required. All criteria were met.

Holding Times

- All samples were extracted within 14 days for water samples and analyzed within 28 days.

GC/MS Tuning

- All criteria were met.

Initial Calibration

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

Continuing Calibration

- All percent difference (%D) and RRF criteria were met.

Method Blank

- The method blanks were free of contamination.

Field QC Blank

- The field blank samples were free of contamination.

Surrogate Spike Recoveries

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

Sample ID	Surrogate	%R	Qualifier
1	13C2-PFHxA	135%	None - Sample ND
	13C2-PFDA	137%	
5	13C2-PFHxA	142%	None - Sample ND
	13C2-PFDA	140%	
6RE	13C2-PFDA	131%	None - Sample ND

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

- A MS/MSD sample was not collected.

Laboratory Control Samples/Laboratory Control Sample Duplicates

- The LCS/LCSD samples exhibited acceptable percent recoveries (%R) and RPD values.

Internal Standard (IS) Area Performance

- All internal standards met response and retention time (RT) criteria except for the following.

Sample ID	Internal Standard	Area Count	Qualifier
5	13C2-PFOA	Low	UJ - PFOA Only
6*	13C2-PFOA	Low	UJ - PFOA Only

* - EDS Sample ID #6 was reanalyzed with acceptable area counts. Use the reanalysis results for reporting purposes.

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 Dated: 1/6/17

Nancy Weaver
Senior Chemist

Data Qualifier	Definition
U	The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
J	The analyte is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
NJ	The analysis has been "tentatively identified" or "presumptively" as present and the associated numerical value is the estimated concentration in the samples.
UJ	The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the samples.

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

1

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Client Sample ID: WI-CV-1RW13-1216 Lab Sample ID: 320-24069-1

Matrix: Water Lab File ID: 11DEC2016A6A_137.d

Analysis Method: 537 Date Collected: 12/02/2016 09:09

Extraction Method: 537 Date Extracted: 12/08/2016 11:45

Sample wt/vol: 254.6(mL) Date Analyzed: 12/14/2016 06:24

Con. Extract Vol.: 1.0(mL) Dilution Factor: 1

Injection Volume: 10(uL) GC Column: Acquity ID: 2.1(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 141771 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	0.047	U	0.059	0.047	0.015
335-67-1	Perfluorooctanoic acid (PFOA)	0.024	U M	0.029	0.024	0.0092
375-73-5	Perfluorobutanesulfonic acid (PFBS)	0.11	U	0.14	0.11	0.047

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00993	13C2 PFHxA	135	Q	70-130
STL00996	13C2 PFDA	137	Q	70-130

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

2

Lab Name: TestAmerica Sacramento | Job No.: 320-24069-1

SDG No.:

Client Sample ID: WI-CV-1FB13-1216 | Lab Sample ID: 320-24069-2

Matrix: Water | Lab File ID: 11DEC2016A6A_094.d

Analysis Method: 537 | Date Collected: 12/02/2016 09:08

Extraction Method: 537 | Date Extracted: 12/08/2016 11:45

Sample wt/vol: 268.2(mL) | Date Analyzed: 12/13/2016 08:56

Con. Extract Vol.: 1.0(mL) | Dilution Factor: 1

Injection Volume: 10(uL) | GC Column: Acquity ID: 2.1(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 141768 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	0.045	U	0.056	0.045	0.014
335-67-1	Perfluorooctanoic acid (PFOA)	0.022	U	0.028	0.022	0.0088
375-73-5	Perfluorobutanesulfonic acid (PFBS)	0.10	U	0.13	0.10	0.044

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00993	13C2 PFHxA	112		70-130
STL00996	13C2 PFDA	118		70-130

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

3

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Client Sample ID: WI-CV-1RW14-1216 Lab Sample ID: 320-24069-3

Matrix: Water Lab File ID: 11DEC2016A6A_138.d

Analysis Method: 537 Date Collected: 12/02/2016 09:53

Extraction Method: 537 Date Extracted: 12/08/2016 11:45

Sample wt/vol: 261.9(mL) Date Analyzed: 12/14/2016 06:54

Con. Extract Vol.: 1.0(mL) Dilution Factor: 1

Injection Volume: 10(uL) GC Column: Acquity ID: 2.1(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 141771 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	0.046	U	0.057	0.046	0.015
335-67-1	Perfluorooctanoic acid (PFOA)	0.023	U	0.029	0.023	0.0090
375-73-5	Perfluorobutanesulfonic acid (PFBS)	0.11	U	0.13	0.11	0.045

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00993	13C2 PFHxA	130		70-130
STL00996	13C2 PFDA	129		70-130

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

4

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Client Sample ID: WI-CV-1FB14-1216 Lab Sample ID: 320-24069-4

Matrix: Water Lab File ID: 11DEC2016A6A_139.d

Analysis Method: 537 Date Collected: 12/02/2016 09:52

Extraction Method: 537 Date Extracted: 12/08/2016 11:45

Sample wt/vol: 257.1(mL) Date Analyzed: 12/14/2016 07:23

Con. Extract Vol.: 1.0(mL) Dilution Factor: 1

Injection Volume: 10(uL) GC Column: Acquity ID: 2.1(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 141771 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	0.047	U M	0.058	0.047	0.015
335-67-1	Perfluorooctanoic acid (PFOA)	0.023	U M	0.029	0.023	0.0092
375-73-5	Perfluorobutanesulfonic acid (PFBS)	0.11	U	0.14	0.11	0.046

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00993	13C2 PFHxA	115		70-130
STL00996	13C2 PFDA	117		70-130

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

5

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Client Sample ID: WI-CV-1RW15-1216 Lab Sample ID: 320-24069-5

Matrix: Water Lab File ID: 11DEC2016A6A_140.d

Analysis Method: 537 Date Collected: 12/02/2016 11:25

Extraction Method: 537 Date Extracted: 12/08/2016 11:45

Sample wt/vol: 255.2(mL) Date Analyzed: 12/14/2016 07:53

Con. Extract Vol.: 1.0(mL) Dilution Factor: 1

Injection Volume: 10(uL) GC Column: Acquity ID: 2.1(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 141771 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	0.047	U	0.059	0.047	0.015
335-67-1	Perfluorooctanoic acid (PFOA)	0.024	~~U~~ UJ	0.029	0.024	0.0092 ISL
375-73-5	Perfluorobutanesulfonic acid (PFBS)	0.11	U	0.14	0.11	0.047

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00993	13C2 PFHxA	142	Q	70-130
STL00996	13C2 PFDA	140	Q	70-130

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

6

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Client Sample ID: WI-CV-1FB15-1216 Lab Sample ID: 320-24069-6

Matrix: Water Lab File ID: 11DEC2016A6A_098.d

Analysis Method: 537 Date Collected: 12/02/2016 11:24

Extraction Method: 537 Date Extracted: 12/08/2016 11:45

Sample wt/vol: 255.7(mL) Date Analyzed: 12/13/2016 10:54

Con. Extract Vol.: 1.0(mL) Dilution Factor: 1

Injection Volume: 10(uL) GC Column: Acquity ID: 2.1(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 141768 Units: ug/L

use reanalysis

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	0.047	U	0.059	0.047	0.015
335-67-1	Perfluorooctanoic acid (PFOA)	0.023	~~U M~~ UJ	0.029	0.023	0.0092
375-73-5	Perfluorobutanesulfonic acid (PFBS)	0.11	U	0.14	0.11	0.047

ISL

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00993	13C2 PFHxA	124		70-130
STL00996	13C2 PFDA	125		70-130

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

6RE

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Client Sample ID: WI-CV-1FB15-1216 RA Lab Sample ID: 320-24069-6 RA

Matrix: Water Lab File ID: 11DEC2016A6A_141.d

Analysis Method: 537 Date Collected: 12/02/2016 11:24

Extraction Method: 537 Date Extracted: 12/08/2016 11:45

Sample wt/vol: 255.7(mL) Date Analyzed: 12/14/2016 08:23

Con. Extract Vol.: 1.0(mL) Dilution Factor: 1

Injection Volume: 10(uL) GC Column: Acquity ID: 2.1(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 141771 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	0.047	U	0.059	0.047	0.015
335-67-1	Perfluorooctanoic acid (PFOA)	0.023	U	0.029	0.023	0.0092
375-73-5	Perfluorobutanesulfonic acid (PFBS)	0.11	U	0.14	0.11	0.047

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00993	13C2 PFHxA	126		70-130
STL00996	13C2 PFDA	131	Q	70-130

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

7

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Client Sample ID: WI-CV-1RW16-1216 Lab Sample ID: 320-24069-7

Matrix: Water Lab File ID: 11DEC2016A6A_099.d

Analysis Method: 537 Date Collected: 12/02/2016 14:09

Extraction Method: 537 Date Extracted: 12/08/2016 11:45

Sample wt/vol: 254.5(mL) Date Analyzed: 12/13/2016 11:24

Con. Extract Vol.: 1.0(mL) Dilution Factor: 1

Injection Volume: 10(uL) GC Column: Acquity ID: 2.1(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 141768 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	0.047	U	0.059	0.047	0.015
335-67-1	Perfluorooctanoic acid (PFOA)	0.024	U	0.029	0.024	0.0093
375-73-5	Perfluorobutanesulfonic acid (PFBS)	0.11	U	0.14	0.11	0.047

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00993	13C2 PFHxA	110		70-130
STL00996	13C2 PFDA	106		70-130

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LCMS ORGANICS ANALYSIS DATA SHEET

8

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Client Sample ID: WI-CV-1FB16-1216 Lab Sample ID: 320-24069-8

Matrix: Water Lab File ID: 11DEC2016A6A_100.d

Analysis Method: 537 Date Collected: 12/02/2016 14:08

Extraction Method: 537 Date Extracted: 12/08/2016 11:45

Sample wt/vol: 264.5(mL) Date Analyzed: 12/13/2016 11:53

Con. Extract Vol.: 1.0(mL) Dilution Factor: 1

Injection Volume: 10(uL) GC Column: Acquity ID: 2.1(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 141768 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	0.045	U	0.057	0.045	0.015
335-67-1	Perfluorooctanoic acid (PFOA)	0.023	U	0.028	0.023	0.0089
375-73-5	Perfluorobutanesulfonic acid (PFBS)	0.10	U	0.13	0.10	0.045

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00993	13C2 PFHxA	114		70-130
STL00996	13C2 PFDA	116		70-130

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

9

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Client Sample ID: WI-CV-1RW17-1216 Lab Sample ID: 320-24069-9

Matrix: Water Lab File ID: 11DEC2016A6A_101.d

Analysis Method: 537 Date Collected: 12/02/2016 14:17

Extraction Method: 537 Date Extracted: 12/08/2016 11:45

Sample wt/vol: 257.3(mL) Date Analyzed: 12/13/2016 12:23

Con. Extract Vol.: 1.0(mL) Dilution Factor: 1

Injection Volume: 10(uL) GC Column: Acquity ID: 2.1(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 141768 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	0.047	U	0.058	0.047	0.015
335-67-1	Perfluorooctanoic acid (PFOA)	0.023	U	0.029	0.023	0.0092
375-73-5	Perfluorobutanesulfonic acid (PFBS)	0.11	U	0.14	0.11	0.046

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00993	13C2 PFHxA	107		70-130
STL00996	13C2 PFDA	117		70-130

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

10

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Client Sample ID: WI-CV-1FB17-1216 Lab Sample ID: 320-24069-10

Matrix: Water Lab File ID: 11DEC2016A6A_102.d

Analysis Method: 537 Date Collected: 12/02/2016 14:16

Extraction Method: 537 Date Extracted: 12/08/2016 11:45

Sample wt/vol: 268.6(mL) Date Analyzed: 12/13/2016 12:52

Con. Extract Vol.: 1.0(mL) Dilution Factor: 1

Injection Volume: 10(uL) GC Column: Acquity ID: 2.1(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 141768 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	0.045	U	0.056	0.045	0.014
335-67-1	Perfluorooctanoic acid (PFOA)	0.022	U	0.028	0.022	0.0088
375-73-5	Perfluorobutanesulfonic acid (PFBS)	0.10	U	0.13	0.10	0.044

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00993	13C2 PFHxA	114		70-130
STL00996	13C2 PFDA	111		70-130

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

11

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Client Sample ID: WI-CV-3RW14-1216 Lab Sample ID: 320-24069-11

Matrix: Water Lab File ID: 11DEC2016A6A_103.d

Analysis Method: 537 Date Collected: 12/02/2016 14:31

Extraction Method: 537 Date Extracted: 12/08/2016 11:45

Sample wt/vol: 258(mL) Date Analyzed: 12/13/2016 13:22

Con. Extract Vol.: 1.0(mL) Dilution Factor: 1

Injection Volume: 10(uL) GC Column: Acquity ID: 2.1(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 141768 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	0.047	U	0.058	0.047	0.015
335-67-1	Perfluorooctanoic acid (PFOA)	0.023	U	0.029	0.023	0.0091
375-73-5	Perfluorobutanesulfonic acid (PFBS)	0.11	U	0.14	0.11	0.046

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00993	13C2 PFHxA	97		70-130
STL00996	13C2 PFDA	114		70-130

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

12

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Client Sample ID: WI-CV-3FB14-1216 Lab Sample ID: 320-24069-12

Matrix: Water Lab File ID: 11DEC2016A6A_107.d

Analysis Method: 537 Date Collected: 12/02/2016 14:32

Extraction Method: 537 Date Extracted: 12/08/2016 11:45

Sample wt/vol: 270.4(mL) Date Analyzed: 12/13/2016 15:36

Con. Extract Vol.: 1.0(mL) Dilution Factor: 1

Injection Volume: 10(uL) GC Column: Acquity ID: 2.1(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 141769 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	0.044	U	0.055	0.044	0.014
335-67-1	Perfluorooctanoic acid (PFOA)	0.022	U	0.028	0.022	0.0087
375-73-5	Perfluorobutanesulfonic acid (PFBS)	0.10	U	0.13	0.10	0.044

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00993	13C2 PFHxA	114		70-130
STL00996	13C2 PFDA	122		70-130

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LCMS ORGANICS ANALYSIS DATA SHEET

13

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Client Sample ID: WI-CV-3RW15-1216 Lab Sample ID: 320-24069-13

Matrix: Water Lab File ID: 11DEC2016A6A_108.d

Analysis Method: 537 Date Collected: 12/02/2016 14:47

Extraction Method: 537 Date Extracted: 12/08/2016 11:45

Sample wt/vol: 265.9(mL) Date Analyzed: 12/13/2016 16:06

Con. Extract Vol.: 1.0(mL) Dilution Factor: 1

Injection Volume: 10(uL) GC Column: Acquity ID: 2.1(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 141769 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	0.045	U M	0.056	0.045	0.015
335-67-1	Perfluorooctanoic acid (PFOA)	0.023	U	0.028	0.023	0.0089
375-73-5	Perfluorobutanesulfonic acid (PFBS)	0.10	U	0.13	0.10	0.045

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00993	13C2 PFHxA	115		70-130
STL00996	13C2 PFDA	117		70-130

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

14

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Client Sample ID: WI-CV-3FB15-1216 Lab Sample ID: 320-24069-14

Matrix: Water Lab File ID: 11DEC2016A6A_109.d

Analysis Method: 537 Date Collected: 12/02/2016 14:48

Extraction Method: 537 Date Extracted: 12/08/2016 11:45

Sample wt/vol: 255.1(mL) Date Analyzed: 12/13/2016 16:35

Con. Extract Vol.: 1.0(mL) Dilution Factor: 1

Injection Volume: 10(uL) GC Column: Acquity ID: 2.1(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 141769 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	0.047	U	0.059	0.047	0.015
335-67-1	Perfluorooctanoic acid (PFOA)	0.024	U	0.029	0.024	0.0092
375-73-5	Perfluorobutanesulfonic acid (PFBS)	0.11	U	0.14	0.11	0.047

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00993	13C2 PFHxA	114		70-130
STL00996	13C2 PFDA	110		70-130

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

15

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Client Sample ID: WI-CV-3RW16-1216 Lab Sample ID: 320-24069-15

Matrix: Water Lab File ID: 11DEC2016A6A_110.d

Analysis Method: 537 Date Collected: 12/02/2016 17:25

Extraction Method: 537 Date Extracted: 12/08/2016 11:45

Sample wt/vol: 270.1(mL) Date Analyzed: 12/13/2016 17:05

Con. Extract Vol.: 1.0(mL) Dilution Factor: 1

Injection Volume: 10(uL) GC Column: Acquity ID: 2.1(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 141769 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	0.044	U	0.056	0.044	0.014
335-67-1	Perfluorooctanoic acid (PFOA)	0.022	U	0.028	0.022	0.0087
375-73-5	Perfluorobutanesulfonic acid (PFBS)	0.10	U	0.13	0.10	0.044

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00993	13C2 PFHxA	106		70-130
STL00996	13C2 PFDA	110		70-130

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LCMS ORGANICS ANALYSIS DATA SHEET

16

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Client Sample ID: WI-CV-3FB16-1216 Lab Sample ID: 320-24069-16

Matrix: Water Lab File ID: 11DEC2016A6A_111.d

Analysis Method: 537 Date Collected: 12/02/2016 17:26

Extraction Method: 537 Date Extracted: 12/08/2016 11:45

Sample wt/vol: 266.2(mL) Date Analyzed: 12/13/2016 17:35

Con. Extract Vol.: 1.0(mL) Dilution Factor: 1

Injection Volume: 10(uL) GC Column: Acquity ID: 2.1(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 141769 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	0.045	U	0.056	0.045	0.015
335-67-1	Perfluorooctanoic acid (PFOA)	0.023	U	0.028	0.023	0.0088
375-73-5	Perfluorobutanesulfonic acid (PFBS)	0.10	U	0.13	0.10	0.045

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00993	13C2 PFHxA	119		70-130
STL00996	13C2 PFDA	118		70-130

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

17

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Client Sample ID: WI-CV-1RW18-1216 Lab Sample ID: 320-24069-17

Matrix: Water Lab File ID: 11DEC2016A6A_112.d

Analysis Method: 537 Date Collected: 12/03/2016 09:05

Extraction Method: 537 Date Extracted: 12/08/2016 11:45

Sample wt/vol: 267.5(mL) Date Analyzed: 12/13/2016 18:04

Con. Extract Vol.: 1.0(mL) Dilution Factor: 1

Injection Volume: 10(uL) GC Column: Acquity ID: 2.1(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 141769 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	0.045	U	0.056	0.045	0.014
335-67-1	Perfluorooctanoic acid (PFOA)	0.022	U	0.028	0.022	0.0088
375-73-5	Perfluorobutanesulfonic acid (PFBS)	0.10	U M	0.13	0.10	0.044

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00993	13C2 PFHxA	115		70-130
STL00996	13C2 PFDA	116		70-130

FORM I
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18

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Client Sample ID: WI-CV-1FB18-1216 Lab Sample ID: 320-24069-18

Matrix: Water Lab File ID: 11DEC2016A6A_113.d

Analysis Method: 537 Date Collected: 12/03/2016 09:04

Extraction Method: 537 Date Extracted: 12/08/2016 11:45

Sample wt/vol: 267(mL) Date Analyzed: 12/13/2016 18:34

Con. Extract Vol.: 1.0(mL) Dilution Factor: 1

Injection Volume: 10(uL) GC Column: Acquity ID: 2.1(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 141769 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	0.045	U	0.056	0.045	0.015
335-67-1	Perfluorooctanoic acid (PFOA)	0.022	U	0.028	0.022	0.0088
375-73-5	Perfluorobutanesulfonic acid (PFBS)	0.10	U	0.13	0.10	0.045

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00993	13C2 PFHxA	115		70-130
STL00996	13C2 PFDA	117		70-130

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19

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Client Sample ID: WI-CV-1RW19-1216 Lab Sample ID: 320-24069-19

Matrix: Water Lab File ID: 11DEC2016A6A_114.d

Analysis Method: 537 Date Collected: 12/03/2016 10:05

Extraction Method: 537 Date Extracted: 12/08/2016 11:45

Sample wt/vol: 268.3(mL) Date Analyzed: 12/13/2016 19:03

Con. Extract Vol.: 1.0(mL) Dilution Factor: 1

Injection Volume: 10(uL) GC Column: Acquity ID: 2.1(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 141769 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	0.045	U	0.056	0.045	0.014
335-67-1	Perfluorooctanoic acid (PFOA)	0.022	U	0.028	0.022	0.0088
375-73-5	Perfluorobutanesulfonic acid (PFBS)	0.10	U	0.13	0.10	0.044

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00993	13C2 PFHxA	119		70-130
STL00996	13C2 PFDA	125		70-130

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20

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Client Sample ID: WI-CV-1FB19-1216 Lab Sample ID: 320-24069-20

Matrix: Water Lab File ID: 11DEC2016A6A_115.d

Analysis Method: 537 Date Collected: 12/03/2016 10:04

Extraction Method: 537 Date Extracted: 12/08/2016 11:45

Sample wt/vol: 259.5(mL) Date Analyzed: 12/13/2016 19:33

Con. Extract Vol.: 1.0(mL) Dilution Factor: 1

Injection Volume: 10(uL) GC Column: Acquity ID: 2.1(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 141769 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	0.046	U	0.058	0.046	0.015
335-67-1	Perfluorooctanoic acid (PFOA)	0.023	U	0.029	0.023	0.0091
375-73-5	Perfluorobutanesulfonic acid (PFBS)	0.11	U	0.13	0.11	0.046

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00993	13C2 PFHxA	120		70-130
STL00996	13C2 PFDA	118		70-130

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21

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Client Sample ID: WI-CV-1RW20-1216 Lab Sample ID: 320-24069-21

Matrix: Water Lab File ID: 11DEC2016A6A_158.d

Analysis Method: 537 Date Collected: 12/03/2016 10:46

Extraction Method: 537 Date Extracted: 12/08/2016 18:21

Sample wt/vol: 274.2(mL) Date Analyzed: 12/14/2016 16:46

Con. Extract Vol.: 1.00(mL) Dilution Factor: 1

Injection Volume: 10(uL) GC Column: Acquity ID: 2.1(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 141966 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	0.044	U M	0.055	0.044	0.014
335-67-1	Perfluorooctanoic acid (PFOA)	0.022	U M	0.027	0.022	0.0086
375-73-5	Perfluorobutanesulfonic acid (PFBS)	0.10	U	0.13	0.10	0.043

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00993	13C2 PFHxA	112		70-130
STL00996	13C2 PFDA	119		70-130

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22

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Client Sample ID: WI-CV-1FB20-1216 Lab Sample ID: 320-24069-22

Matrix: Water Lab File ID: 11DEC2016A6A_159.d

Analysis Method: 537 Date Collected: 12/03/2016 10:45

Extraction Method: 537 Date Extracted: 12/08/2016 18:21

Sample wt/vol: 284.3(mL) Date Analyzed: 12/14/2016 17:15

Con. Extract Vol.: 1.00(mL) Dilution Factor: 1

Injection Volume: 10(uL) GC Column: Acquity ID: 2.1(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 141966 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	0.042	U M	0.053	0.042	0.014
335-67-1	Perfluorooctanoic acid (PFOA)	0.021	U	0.026	0.021	0.0083
375-73-5	Perfluorobutanesulfonic acid (PFBS)	0.097	U	0.12	0.097	0.042

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00993	13C2 PFHxA	121		70-130
STL00996	13C2 PFDA	124		70-130

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23

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Client Sample ID: WI-CV-1RW21-1216 Lab Sample ID: 320-24069-23

Matrix: Water Lab File ID: 11DEC2016A6A_160.d

Analysis Method: 537 Date Collected: 12/03/2016 11:22

Extraction Method: 537 Date Extracted: 12/08/2016 18:21

Sample wt/vol: 263.9(mL) Date Analyzed: 12/14/2016 17:45

Con. Extract Vol.: 1.00(mL) Dilution Factor: 1

Injection Volume: 10(uL) GC Column: Acquity ID: 2.1(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 141966 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	0.045	U	0.057	0.045	0.015
335-67-1	Perfluorooctanoic acid (PFOA)	0.023	U	0.028	0.023	0.0089
375-73-5	Perfluorobutanesulfonic acid (PFBS)	0.10	U	0.13	0.10	0.045

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00993	13C2 PFHxA	108		70-130
STL00996	13C2 PFDA	113		70-130

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24

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Client Sample ID: WI-CV-1FB21-1216 Lab Sample ID: 320-24069-24

Matrix: Water Lab File ID: 11DEC2016A6A_125.d

Analysis Method: 537 Date Collected: 12/03/2016 11:21

Extraction Method: 537 Date Extracted: 12/08/2016 18:21

Sample wt/vol: 278.9(mL) Date Analyzed: 12/14/2016 00:29

Con. Extract Vol.: 1.00(mL) Dilution Factor: 1

Injection Volume: 10(uL) GC Column: Acquity ID: 2.1(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 141770 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	0.043	U M	0.054	0.043	0.014
335-67-1	Perfluorooctanoic acid (PFOA)	0.022	U	0.027	0.022	0.0084
375-73-5	Perfluorobutanesulfonic acid (PFBS)	0.099	U	0.13	0.099	0.043

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00993	13C2 PFHxA	114		70-130
STL00996	13C2 PFDA	114		70-130

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25

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Client Sample ID: WI-CV-1RW22-1216 Lab Sample ID: 320-24069-25

Matrix: Water Lab File ID: 11DEC2016A6A_126.d

Analysis Method: 537 Date Collected: 12/03/2016 12:02

Extraction Method: 537 Date Extracted: 12/08/2016 18:21

Sample wt/vol: 276.1(mL) Date Analyzed: 12/14/2016 00:59

Con. Extract Vol.: 1.00(mL) Dilution Factor: 1

Injection Volume: 10(uL) GC Column: Acquity ID: 2.1(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 141770 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	0.043	U	0.054	0.043	0.014
335-67-1	Perfluorooctanoic acid (PFOA)	0.022	U	0.027	0.022	0.0085
375-73-5	Perfluorobutanesulfonic acid (PFBS)	0.10	U	0.13	0.10	0.043

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00993	13C2 PFHxA	110		70-130
STL00996	13C2 PFDA	105		70-130

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26

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Client Sample ID: WI-CV-1FB22-1216 Lab Sample ID: 320-24069-26

Matrix: Water Lab File ID: 11DEC2016A6A_161.d

Analysis Method: 537 Date Collected: 12/03/2016 12:01

Extraction Method: 537 Date Extracted: 12/08/2016 18:21

Sample wt/vol: 285.4(mL) Date Analyzed: 12/14/2016 18:14

Con. Extract Vol.: 1.00(mL) Dilution Factor: 1

Injection Volume: 10(uL) GC Column: Acquity ID: 2.1(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 141966 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	0.042	U	0.053	0.042	0.014
335-67-1	Perfluorooctanoic acid (PFOA)	0.021	U	0.026	0.021	0.0083
375-73-5	Perfluorobutanesulfonic acid (PFBS)	0.096	U	0.12	0.096	0.042

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00993	13C2 PFHxA	113		70-130
STL00996	13C2 PFDA	118		70-130

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27

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Client Sample ID: WI-CV-3RW17-1216 Lab Sample ID: 320-24069-27

Matrix: Water Lab File ID: 11DEC2016A6A_128.d

Analysis Method: 537 Date Collected: 12/03/2016 09:13

Extraction Method: 537 Date Extracted: 12/08/2016 18:21

Sample wt/vol: 271.3(mL) Date Analyzed: 12/14/2016 01:58

Con. Extract Vol.: 1.00(mL) Dilution Factor: 1

Injection Volume: 10(uL) GC Column: Acquity ID: 2.1(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 141770 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	0.044	U M	0.055	0.044	0.014
335-67-1	Perfluorooctanoic acid (PFOA)	0.022	U M	0.028	0.022	0.0087
375-73-5	Perfluorobutanesulfonic acid (PFBS)	0.10	U	0.13	0.10	0.044

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00993	13C2 PFHxA	110		70-130
STL00996	13C2 PFDA	100		70-130

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28

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Client Sample ID: WI-CV-3FB17-1216 Lab Sample ID: 320-24069-28

Matrix: Water Lab File ID: 11DEC2016A6A_132.d

Analysis Method: 537 Date Collected: 12/03/2016 09:14

Extraction Method: 537 Date Extracted: 12/08/2016 18:21

Sample wt/vol: 278.7(mL) Date Analyzed: 12/14/2016 03:56

Con. Extract Vol.: 1.00(mL) Dilution Factor: 1

Injection Volume: 10(uL) GC Column: Acquity ID: 2.1(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 141771 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	0.043	U M	0.054	0.043	0.014
335-67-1	Perfluorooctanoic acid (PFOA)	0.022	U M	0.027	0.022	0.0084
375-73-5	Perfluorobutanesulfonic acid (PFBS)	0.099	U	0.13	0.099	0.043

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00993	13C2 PFHxA	106		70-130
STL00996	13C2 PFDA	110		70-130

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LCMS ORGANICS ANALYSIS DATA SHEET

29

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Client Sample ID: WI-CV-3RW18-1216 Lab Sample ID: 320-24069-29

Matrix: Water Lab File ID: 11DEC2016A6A_133.d

Analysis Method: 537 Date Collected: 12/03/2016 12:08

Extraction Method: 537 Date Extracted: 12/08/2016 18:21

Sample wt/vol: 273.4(mL) Date Analyzed: 12/14/2016 04:26

Con. Extract Vol.: 1.00(mL) Dilution Factor: 1

Injection Volume: 10(uL) GC Column: Acquity ID: 2.1(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 141771 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	0.044	U	0.055	0.044	0.014
335-67-1	Perfluorooctanoic acid (PFOA)	0.022	U	0.027	0.022	0.0086
375-73-5	Perfluorobutanesulfonic acid (PFBS)	0.10	U	0.13	0.10	0.044

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00993	13C2 PFHxA	115		70-130
STL00996	13C2 PFDA	113		70-130

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30

Lab Name: TestAmerica Sacramento Job No.: 320-24069-1

SDG No.:

Client Sample ID: WI-CV-3FB18-1216 Lab Sample ID: 320-24069-30

Matrix: Water Lab File ID: 11DEC2016A6A_134.d

Analysis Method: 537 Date Collected: 12/03/2016 12:09

Extraction Method: 537 Date Extracted: 12/08/2016 18:21

Sample wt/vol: 281.6(mL) Date Analyzed: 12/14/2016 04:55

Con. Extract Vol.: 1.00(mL) Dilution Factor: 1

Injection Volume: 10(uL) GC Column: Acquity ID: 2.1(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 141771 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	0.043	U	0.053	0.043	0.014
335-67-1	Perfluorooctanoic acid (PFOA)	0.021	U	0.027	0.021	0.0084
375-73-5	Perfluorobutanesulfonic acid (PFBS)	0.098	U	0.12	0.098	0.042

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00993	13C2 PFHxA	102		70-130
STL00996	13C2 PFDA	108		70-130

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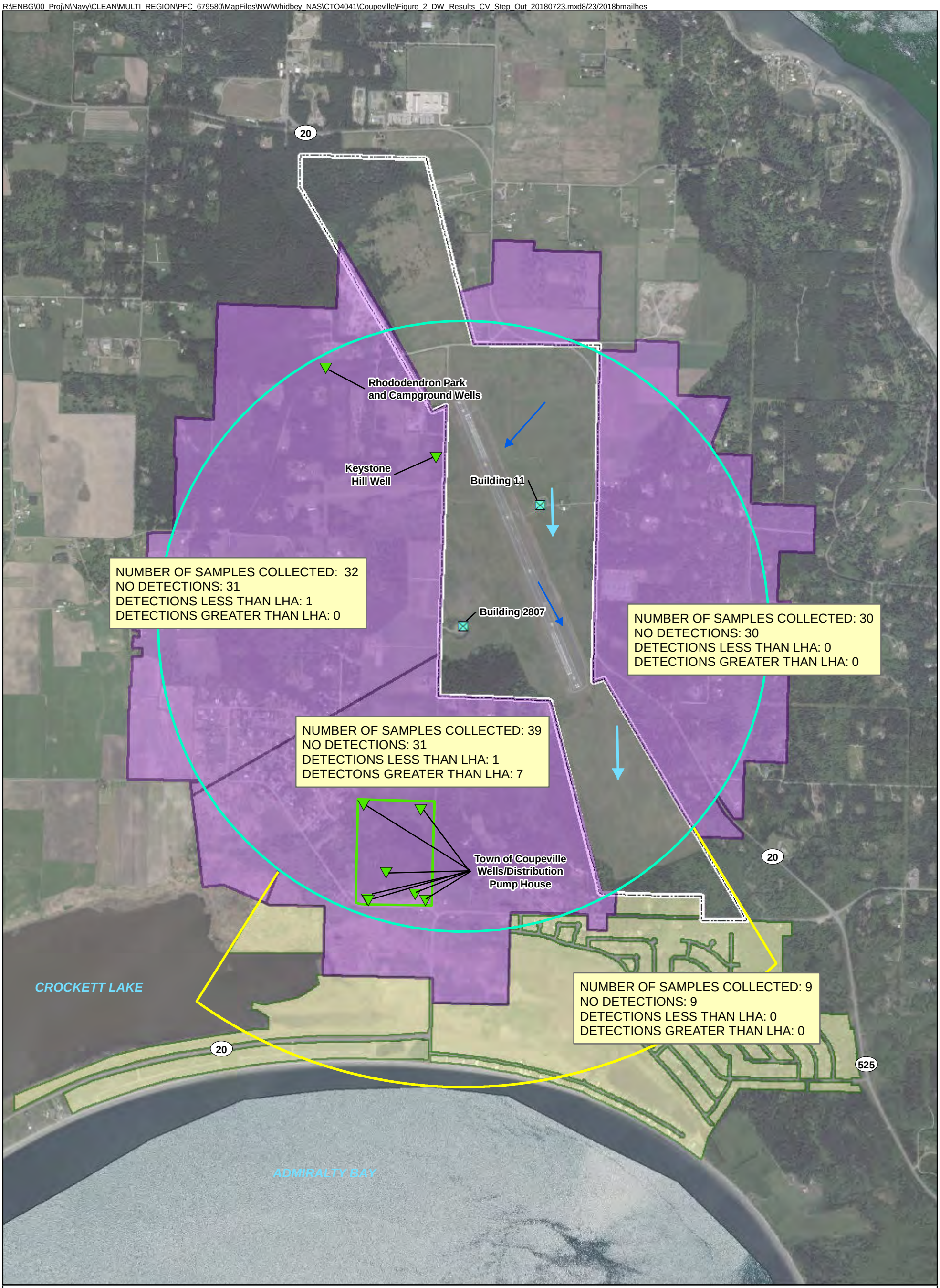

Legend

- Direction of Middle Zone Groundwater Flow
- Direction of Deep Zone Groundwater Flow
- Municipal Well
- Base Supply Well
- Fort Casey Well Field
- 1-mile zone
- Phase 1 Sampling Area
- Phase 2 Sampling Area
- Half-mile Step-out Downgradient
- Base Boundary

Note:
One parcel outside the Phase 1 and Phase 2 sampling areas was sampled, and PFOA and PFOS were detected less than the LHA. This sample is not included in the sample counts shown on the figure.

N

0 0.15 0.3 Miles

1 inch = 0.3 mile

Imagery Source: Esri

Figure 2
Results for Drinking Water Well Sampling
Outlying Landing Field Coupeville
Coupeville, Washington

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