NAVFAC
Naval Facilities Engineering Command

Groundwater Sample Results, Level 2 Laboratory Report, Level 4 Laboratory Report, Electronic Data Deliverable, Data Validation Report, and the Sample Location Report, SDG J25962-1

Naval Air Station Meridian
Meridian, Mississippi

July 2019

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

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TestAmerica Job ID: 320-25962-1
Client Project/Site: Meridian 10006-7-105420 JM01 Navy Clean
Revision: 1

For:
CH2M Hill, Inc.
2411 Dulles Corner Park
Suite 500
Herndon, Virginia 20171

Attn: Mr. Michael Zamboni

Authorized for release by:
3/27/2017 4:53:26 PM

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Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.
M	Manual integrated compound.

LCMS

Qualifier	Qualifier Description
Q	One or more quality control criteria failed.
U	Undetected at the Limit of Detection.
M	Manual integrated compound.
E	Result exceeded calibration range.
D	The reported value is from a dilution.
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: 320-25962-1

Laboratory: TestAmerica Sacramento

Narrative

Client: CH2M Hill, Inc.

Project: Meridian 10006-7-105420 JM01 Navy Clean

Report Number: 320-25962-1

Revision - March 27, 2017
Revision created to include PFBS in the method 537 Mod analyte list.

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 West 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 West 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 02/22/2017; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 0.8 C.

1,4-DIOXANE
Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 320-152172.

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

PFAS
Perfluorooctanesulfonic acid (PFOS) was detected in method blank MB 320-152015/1-A at a level that was above the detection limit (DL) but below the limit of quantitation (LOQ). The value should be considered an estimate, and has been flagged. Refer to the QC report for

Job ID: 320-25962-1 (Continued)

Laboratory: TestAmerica Sacramento (Continued)

details.

The following sample was diluted to bring the concentration of target analytes within the calibration range: MEAFF-PWMA-SB01-0001 (320-25962-4). Elevated reporting limits (RLs) are provided.

The Isotope Dilution Analyte (IDA) recovery for 13C2 PFDoA in the following samples is below the method recommended limit: (320-25933-A-1-A) and (320-25933-A-1-B MS). These samples were re-analyzed and the results were confirmed. Generally, data quality is not considered affected if the IDA signal-to-noise ratio is greater than 10:1, which is achieved for all IDA in the samples.

The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 320-152015 and analytical batch 320-152825 were outside control limits for Perfluorotridecanoic Acid (PFTriA) and Perfluorotetradecanoic acid (PFTeA). Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) precision was within acceptance limits.

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

PERCENT SOLIDS

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

Detection Summary

Client: CH2M Hill, Inc.
Project/Site: Meridian 10006-7-105420 JM01 Navy Clean

TestAmerica Job ID: 320-25962-1

Client Sample ID: MEAFF-MRD-1A01-0217 — Lab Sample ID: 320-25962-1

No Detections.

Client Sample ID: MEAFF-MRD-1A01P-0217 — Lab Sample ID: 320-25962-2

No Detections.

Client Sample ID: MEAFF-EB01-022117-SO — Lab Sample ID: 320-25962-3

No Detections.

Client Sample ID: MEAFF-PWMA-SB01-0001 — Lab Sample ID: 320-25962-4

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanoic acid (PFOA)	27		0.57	0.12	ug/Kg	1	☼	537 (Modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	220	E	0.57	0.14	ug/Kg	1	☼	537 (Modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	2.0	M	0.46	0.12	ug/Kg	1	☼	537 (Modified)	Total/NA
Perfluorooctanoic acid (PFOA) - DL	28	D M	5.7	1.2	ug/Kg	10	☼	537 (Modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS) - DL	270	D	5.7	1.4	ug/Kg	10	☼	537 (Modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS) - DL	1.6	J D M	4.6	1.2	ug/Kg	10	☼	537 (Modified)	Total/NA

Client Sample ID: MEAFF-PWMA-SB01-0204 — Lab Sample ID: 320-25962-5

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanoic acid (PFOA)	5.5	M	0.59	0.12	ug/Kg	1	☼	537 (Modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	30	M	0.59	0.15	ug/Kg	1	☼	537 (Modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	0.95	M	0.47	0.12	ug/Kg	1	☼	537 (Modified)	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: MEAFF-MRD-1A01-0217

Lab Sample ID: 320-25962-1
Date Collected: 02/21/17 15:55
Matrix: Water
Date Received: 02/22/17 10:00

Method: WS-MS-0011 - 1,4-Dioxane (GC/MS SIM)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	0.48	U	0.95	0.19	ug/L		02/24/17 15:44	03/06/17 16:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*61*		*42 - 91*	*02/24/17 15:44*	*03/06/17 16:12*	*1*

Client Sample ID: MEAFF-MRD-1A01P-0217

Lab Sample ID: 320-25962-2
Date Collected: 02/21/17 15:55
Matrix: Water
Date Received: 02/22/17 10:00

Method: WS-MS-0011 - 1,4-Dioxane (GC/MS SIM)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	0.48	U	0.97	0.19	ug/L		02/24/17 15:44	03/06/17 16:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*63*		*42 - 91*	*02/24/17 15:44*	*03/06/17 16:34*	*1*

Client Sample ID: MEAFF-EB01-022117-SO

Lab Sample ID: 320-25962-3
Date Collected: 02/21/17 13:25
Matrix: Water
Date Received: 02/22/17 10:00

Method: 537 (Modified) - Perfluorinated Hydrocarbons

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanoic acid (PFOA)	1.8	U M	2.2	0.67	ng/L		02/28/17 16:42	03/02/17 11:12	1
Perfluorooctanesulfonic acid (PFOS)	2.7	U	3.6	1.1	ng/L		02/28/17 16:42	03/02/17 11:12	1
Perfluorobutanesulfonic acid (PFBS)	1.8	U	2.2	0.82	ng/L		02/28/17 16:42	03/02/17 11:12	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFOA	*152*	*Q*	*25 - 150*	*02/28/17 16:42*	*03/02/17 11:12*	*1*
13C4 PFOS	*135*		*25 - 150*	*02/28/17 16:42*	*03/02/17 11:12*	*1*
18O2 PFHxS	*141*		*25 - 150*	*02/28/17 16:42*	*03/02/17 11:12*	*1*

Client Sample ID: MEAFF-PWMA-SB01-0001

Lab Sample ID: 320-25962-4
Date Collected: 02/21/17 13:35
Matrix: Solid
Date Received: 02/22/17 10:00
Percent Solids: 86.7

Method: 537 (Modified) - Perfluorinated Hydrocarbons

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanoic acid (PFOA)	**27**		0.57	0.12	ug/Kg	☼	02/23/17 17:22	03/01/17 19:45	1
Perfluorooctanesulfonic acid (PFOS)	**220**	**E**	0.57	0.14	ug/Kg	☼	02/23/17 17:22	03/01/17 19:45	1
Perfluorobutanesulfonic acid (PFBS)	**2.0**	**M**	0.46	0.12	ug/Kg	☼	02/23/17 17:22	03/01/17 19:45	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFOA	*111*		*25 - 150*	*02/23/17 17:22*	*03/01/17 19:45*	*1*
13C4 PFOS	*55*		*25 - 150*	*02/23/17 17:22*	*03/01/17 19:45*	*1*
18O2 PFHxS	*95*		*25 - 150*	*02/23/17 17:22*	*03/01/17 19:45*	*1*

Method: 537 (Modified) - Perfluorinated Hydrocarbons - DL

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanoic acid (PFOA)	**28**	**D M**	5.7	1.2	ug/Kg	☼	02/23/17 17:22	03/03/17 09:53	10
Perfluorooctanesulfonic acid (PFOS)	**270**	**D**	5.7	1.4	ug/Kg	☼	02/23/17 17:22	03/03/17 09:53	10

Client Sample ID: MEAFF-PWMA-SB01-0001

Lab Sample ID: 320-25962-4
Date Collected: 02/21/17 13:35
Matrix: Solid
Date Received: 02/22/17 10:00
Percent Solids: 86.7

Method: 537 (Modified) - Perfluorinated Hydrocarbons - DL (Continued)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	1.6	J D M	4.6	1.2	ug/Kg	☼	02/23/17 17:22	03/03/17 09:53	10

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFOA	*136*		*25 - 150*	*02/23/17 17:22*	*03/03/17 09:53*	*10*
13C4 PFOS	*90*		*25 - 150*	*02/23/17 17:22*	*03/03/17 09:53*	*10*
18O2 PFHxS	*122*		*25 - 150*	*02/23/17 17:22*	*03/03/17 09:53*	*10*

Client Sample ID: MEAFF-PWMA-SB01-0204

Lab Sample ID: 320-25962-5
Date Collected: 02/21/17 13:40
Matrix: Solid
Date Received: 02/22/17 10:00
Percent Solids: 85.3

Method: 537 (Modified) - Perfluorinated Hydrocarbons

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanoic acid (PFOA)	5.5	M	0.59	0.12	ug/Kg	☼	02/23/17 17:22	03/01/17 20:00	1
Perfluorooctanesulfonic acid (PFOS)	30	M	0.59	0.15	ug/Kg	☼	02/23/17 17:22	03/01/17 20:00	1
Perfluorobutanesulfonic acid (PFBS)	0.95	M	0.47	0.12	ug/Kg	☼	02/23/17 17:22	03/01/17 20:00	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFOA	*101*	*M*	*25 - 150*	*02/23/17 17:22*	*03/01/17 20:00*	*1*
13C4 PFOS	*56*	*M*	*25 - 150*	*02/23/17 17:22*	*03/01/17 20:00*	*1*
18O2 PFHxS	*95*	*M*	*25 - 150*	*02/23/17 17:22*	*03/01/17 20:00*	*1*

Surrogate Summary

Client: CH2M Hill, Inc.
Project/Site: Meridian 10006-7-105420 JM01 Navy Clean

TestAmerica Job ID: 320-25962-1

Method: WS-MS-0011 - 1,4-Dioxane (GC/MS SIM)

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

		Percent Surrogate Recovery (Acceptance Limits)
		NBZ
Lab Sample ID	Client Sample ID	(42-91)
320-25962-1	MEAFF-MRD-1A01-0217	61
320-25962-2	MEAFF-MRD-1A01P-0217	63
LCS 320-152172/2-A	Lab Control Sample	73
LCSD 320-152172/3-A	Lab Control Sample Dup	61
MB 320-152172/1-A	Method Blank	63

Surrogate Legend

NBZ = Nitrobenzene-d5

Isotope Dilution Summary

Client: CH2M Hill, Inc.
Project/Site: Meridian 10006-7-105420 JM01 Navy Clean

TestAmerica Job ID: 320-25962-1

Method: 537 (Modified) - Perfluorinated Hydrocarbons

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

		Percent Isotope Dilution Recovery (Acceptance Limits)		
Lab Sample ID	Client Sample ID	3C4 PFO/ (25-150)	3C4 PFOS (25-150)	3O2 PFHx (25-150)
320-25962-4	MEAFF-PWMA-SB01-0001	111	55	95
320-25962-4 - DL	MEAFF-PWMA-SB01-0001	136	90	122
320-25962-5	MEAFF-PWMA-SB01-0204	101 M	56 M	95 M
LCS 320-152015/2-A	Lab Control Sample	106	91	101
MB 320-152015/1-A	Method Blank	121	95	113

Surrogate Legend

13C4 PFOA = 13C4 PFOA
13C4 PFOS = 13C4 PFOS
18O2 PFHxS = 18O2 PFHxS

Method: 537 (Modified) - Perfluorinated Hydrocarbons

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

		Percent Isotope Dilution Recovery (Acceptance Limits)		
Lab Sample ID	Client Sample ID	3C4 PFO/ (25-150)	3C4 PFOS (25-150)	3O2 PFHx (25-150)
320-25962-3	MEAFF-EB01-022117-SO	152 Q	135	141
LCS 320-152587/2-A	Lab Control Sample	142	133	136
LCSD 320-152587/3-A	Lab Control Sample Dup	142	135	140
MB 320-152587/1-A	Method Blank	158 Q	138	145

Surrogate Legend

13C4 PFOA = 13C4 PFOA
13C4 PFOS = 13C4 PFOS
18O2 PFHxS = 18O2 PFHxS

Method: WS-MS-0011 - 1,4-Dioxane (GC/MS SIM)

Lab Sample ID: MB 320-152172/1-A
Matrix: Water
Analysis Batch: 153398

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 152172

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	0.50	U	1.0	0.20	ug/L		02/24/17 15:44	03/06/17 11:24	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*63*		*42 - 91*	*02/24/17 15:44*	*03/06/17 11:24*	*1*

Lab Sample ID: LCS 320-152172/2-A
Matrix: Water
Analysis Batch: 153398

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 152172

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,4-Dioxane			10.0	2.90	M	ug/L		29	12 - 52		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Nitrobenzene-d5	*73*		*42 - 91*

Lab Sample ID: LCSD 320-152172/3-A
Matrix: Water
Analysis Batch: 153398

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 152172

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,4-Dioxane			10.0	2.61	M	ug/L		26	12 - 52	11	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Nitrobenzene-d5	*61*		*42 - 91*

Method: 537 (Modified) - Perfluorinated Hydrocarbons

Lab Sample ID: MB 320-152015/1-A
Matrix: Solid
Analysis Batch: 152825

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 152015

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanoic acid (PFOA)	0.30	U	0.50	0.10	ug/Kg		02/23/17 17:22	03/01/17 18:37	1
Perfluorooctanesulfonic acid (PFOS)	0.178	J	0.50	0.13	ug/Kg		02/23/17 17:22	03/01/17 18:37	1
Perfluorobutanesulfonic acid (PFBS)	0.30	U	0.40	0.10	ug/Kg		02/23/17 17:22	03/01/17 18:37	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFOA	*121*		*25 - 150*	*02/23/17 17:22*	*03/01/17 18:37*	*1*
13C4 PFOS	*95*		*25 - 150*	*02/23/17 17:22*	*03/01/17 18:37*	*1*
18O2 PFHxS	*113*		*25 - 150*	*02/23/17 17:22*	*03/01/17 18:37*	*1*

Lab Sample ID: LCS 320-152015/2-A
Matrix: Solid
Analysis Batch: 153020

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 152015

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Perfluorooctanoic acid (PFOA)			4.00	4.09		ug/Kg		102	60 - 140		

Method: 537 (Modified) - Perfluorinated Hydrocarbons (Continued)

Lab Sample ID: LCS 320-152015/2-A
Matrix: Solid
Analysis Batch: 153020

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 152015

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Perfluorooctanesulfonic acid (PFOS)			3.71	3.96		ug/Kg		107	60 - 140		
Perfluorobutanesulfonic acid (PFBS)			3.54	3.95		ug/Kg		112	50 - 150		

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C4 PFOA	*106*		*25 - 150*
13C4 PFOS	*91*		*25 - 150*
18O2 PFHxS	*101*		*25 - 150*

Lab Sample ID: MB 320-152587/1-A
Matrix: Water
Analysis Batch: 152836

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 152587

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanoic acid (PFOA)	2.0	U M	2.5	0.75	ng/L		02/28/17 16:42	03/02/17 10:35	1
Perfluorooctanesulfonic acid (PFOS)	3.0	U	4.0	1.3	ng/L		02/28/17 16:42	03/02/17 10:35	1
Perfluorobutanesulfonic acid (PFBS)	2.0	U	2.5	0.92	ng/L		02/28/17 16:42	03/02/17 10:35	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFOA	*158*	*Q*	*25 - 150*	*02/28/17 16:42*	*03/02/17 10:35*	*1*
13C4 PFOS	*138*		*25 - 150*	*02/28/17 16:42*	*03/02/17 10:35*	*1*
18O2 PFHxS	*145*		*25 - 150*	*02/28/17 16:42*	*03/02/17 10:35*	*1*

Lab Sample ID: LCS 320-152587/2-A
Matrix: Water
Analysis Batch: 152836

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 152587

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Perfluorooctanoic acid (PFOA)			40.0	38.6		ng/L		97	60 - 140		
Perfluorooctanesulfonic acid (PFOS)			37.1	35.6		ng/L		96	60 - 140		
Perfluorobutanesulfonic acid (PFBS)			35.4	39.5		ng/L		112	50 - 150		

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C4 PFOA	*142*		*25 - 150*
13C4 PFOS	*133*		*25 - 150*
18O2 PFHxS	*136*		*25 - 150*

Lab Sample ID: LCSD 320-152587/3-A
Matrix: Water
Analysis Batch: 152836

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 152587

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perfluorooctanoic acid (PFOA)			40.0	38.5		ng/L		96	60 - 140	0	30
Perfluorooctanesulfonic acid (PFOS)			37.1	35.6	M	ng/L		96	60 - 140	0	30
Perfluorobutanesulfonic acid (PFBS)			35.4	40.3	M	ng/L		114	50 - 150	2	30

Isotope Dilution	LCSD %Recovery	LCSD Qualifier	Limits
13C4 PFOA	142		25 - 150
13C4 PFOS	135		25 - 150
18O2 PFHxS	140		25 - 150

GC/MS Semi VOA

Prep Batch: 152172

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-25962-1	MEAFF-MRD-1A01-0217	Total/NA	Water	3510C	
320-25962-2	MEAFF-MRD-1A01P-0217	Total/NA	Water	3510C	
MB 320-152172/1-A	Method Blank	Total/NA	Water	3510C	
LCS 320-152172/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 320-152172/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

Analysis Batch: 153398

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-25962-1	MEAFF-MRD-1A01-0217	Total/NA	Water	WS-MS-0011	152172
320-25962-2	MEAFF-MRD-1A01P-0217	Total/NA	Water	WS-MS-0011	152172
MB 320-152172/1-A	Method Blank	Total/NA	Water	WS-MS-0011	152172
LCS 320-152172/2-A	Lab Control Sample	Total/NA	Water	WS-MS-0011	152172
LCSD 320-152172/3-A	Lab Control Sample Dup	Total/NA	Water	WS-MS-0011	152172

LCMS

Prep Batch: 152015

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-25962-4	MEAFF-PWMA-SB01-0001	Total/NA	Solid	SHAKE	
320-25962-4 - DL	MEAFF-PWMA-SB01-0001	Total/NA	Solid	SHAKE	
320-25962-5	MEAFF-PWMA-SB01-0204	Total/NA	Solid	SHAKE	
MB 320-152015/1-A	Method Blank	Total/NA	Solid	SHAKE	
LCS 320-152015/2-A	Lab Control Sample	Total/NA	Solid	SHAKE	

Prep Batch: 152587

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-25962-3	MEAFF-EB01-022117-SO	Total/NA	Water	3535	
MB 320-152587/1-A	Method Blank	Total/NA	Water	3535	
LCS 320-152587/2-A	Lab Control Sample	Total/NA	Water	3535	
LCSD 320-152587/3-A	Lab Control Sample Dup	Total/NA	Water	3535	

Analysis Batch: 152825

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-25962-4	MEAFF-PWMA-SB01-0001	Total/NA	Solid	537 (Modified)	152015
320-25962-5	MEAFF-PWMA-SB01-0204	Total/NA	Solid	537 (Modified)	152015
MB 320-152015/1-A	Method Blank	Total/NA	Solid	537 (Modified)	152015

Analysis Batch: 152836

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-25962-3	MEAFF-EB01-022117-SO	Total/NA	Water	537 (Modified)	152587
MB 320-152587/1-A	Method Blank	Total/NA	Water	537 (Modified)	152587
LCS 320-152587/2-A	Lab Control Sample	Total/NA	Water	537 (Modified)	152587
LCSD 320-152587/3-A	Lab Control Sample Dup	Total/NA	Water	537 (Modified)	152587

Analysis Batch: 153020

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-25962-4 - DL	MEAFF-PWMA-SB01-0001	Total/NA	Solid	537 (Modified)	152015
LCS 320-152015/2-A	Lab Control Sample	Total/NA	Solid	537 (Modified)	152015

QC Association Summary

Client: CH2M Hill, Inc.
Project/Site: Meridian 10006-7-105420 JM01 Navy Clean

TestAmerica Job ID: 320-25962-1

General Chemistry

Analysis Batch: 152218

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-25962-4	MEAFF-PWMA-SB01-0001	Total/NA	Solid	D 2216	
320-25962-5	MEAFF-PWMA-SB01-0204	Total/NA	Solid	D 2216	

Lab Chronicle

Client: CH2M Hill, Inc.
Project/Site: Meridian 10006-7-105420 JM01 Navy Clean

TestAmerica Job ID: 320-25962-1

Client Sample ID: MEAFF-MRD-1A01-0217

Lab Sample ID: 320-25962-1
Date Collected: 02/21/17 15:55
Matrix: Water
Date Received: 02/22/17 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			1049 mL	1.0 mL	152172	02/24/17 15:44	SR1	TAL SAC
Total/NA	Analysis	WS-MS-0011		1			153398	03/06/17 16:12	MEO	TAL SAC

Client Sample ID: MEAFF-MRD-1A01P-0217

Lab Sample ID: 320-25962-2
Date Collected: 02/21/17 15:55
Matrix: Water
Date Received: 02/22/17 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			1035.2 mL	1.0 mL	152172	02/24/17 15:44	SR1	TAL SAC
Total/NA	Analysis	WS-MS-0011		1			153398	03/06/17 16:34	MEO	TAL SAC

Client Sample ID: MEAFF-EB01-022117-SO

Lab Sample ID: 320-25962-3
Date Collected: 02/21/17 13:25
Matrix: Water
Date Received: 02/22/17 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			279.3 mL	0.50 mL	152587	02/28/17 16:42	JER	TAL SAC
Total/NA	Analysis	537 (Modified)		1			152836	03/02/17 11:12	SBC	TAL SAC

Client Sample ID: MEAFF-PWMA-SB01-0001

Lab Sample ID: 320-25962-4
Date Collected: 02/21/17 13:35
Matrix: Solid
Date Received: 02/22/17 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			152218	02/25/17 14:01	EP1	TAL SAC

Client Sample ID: MEAFF-PWMA-SB01-0001

Lab Sample ID: 320-25962-4
Date Collected: 02/21/17 13:35
Matrix: Solid
Date Received: 02/22/17 10:00
Percent Solids: 86.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			5.05 g	1.00 mL	152015	02/23/17 17:22	JER	TAL SAC
Total/NA	Analysis	537 (Modified)		1			152825	03/01/17 19:45	SBC	TAL SAC
Total/NA	Prep	SHAKE	DL		5.05 g	1.00 mL	152015	02/23/17 17:22	JER	TAL SAC
Total/NA	Analysis	537 (Modified)	DL	10			153020	03/03/17 09:53	SBC	TAL SAC

Client Sample ID: MEAFF-PWMA-SB01-0204

Lab Sample ID: 320-25962-5
Date Collected: 02/21/17 13:40
Matrix: Solid
Date Received: 02/22/17 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			152218	02/25/17 14:01	EP1	TAL SAC

Lab Chronicle

Client: CH2M Hill, Inc.
Project/Site: Meridian 10006-7-105420 JM01 Navy Clean

TestAmerica Job ID: 320-25962-1

Client Sample ID: MEAFF-PWMA-SB01-0204
Date Collected: 02/21/17 13:40
Date Received: 02/22/17 10:00

Lab Sample ID: 320-25962-5
Matrix: Solid
Percent Solids: 85.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			4.97 g	1.00 mL	152015	02/23/17 17:22	JER	TAL SAC
Total/NA	Analysis	537 (Modified)		1			152825	03/01/17 20:00	SBC	TAL SAC

Laboratory References:

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

Certification Summary

Client: CH2M Hill, Inc.
Project/Site: Meridian 10006-7-105420 JM01 Navy Clean

TestAmerica Job ID: 320-25962-1

Laboratory: TestAmerica Sacramento

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska (UST)	State Program	10	UST-055	12-18-17
Arizona	State Program	9	AZ0708	08-11-17
Arkansas DEQ	State Program	6	88-0691	06-17-17
California	State Program	9	2897	01-31-18
Colorado	State Program	8	CA00044	08-31-17
Connecticut	State Program	1	PH-0691	06-30-17
Florida	NELAP	4	E87570	06-30-17
Hawaii	State Program	9	N/A	01-29-18
Illinois	NELAP	5	200060	03-17-18
Kansas	NELAP	7	E-10375	10-31-17
L-A-B	DoD ELAP		L2468	01-20-18
Louisiana	NELAP	6	30612	06-30-17
Maine	State Program	1	CA0004	04-18-18
Michigan	State Program	5	9947	01-31-18
Nevada	State Program	9	CA00044	07-31-17
New Jersey	NELAP	2	CA005	06-30-17
New York	NELAP	2	11666	04-01-17 *
Oregon	NELAP	10	4040	01-28-18
Pennsylvania	NELAP	3	68-01272	03-31-17 *
Texas	NELAP	6	T104704399	07-31-17
US Fish & Wildlife	Federal		LE148388-0	10-31-17
USDA	Federal		P330-11-00436	12-30-17
USEPA UCMR	Federal	1	CA00044	11-06-18
Utah	NELAP	8	CA00044	02-28-18
Virginia	NELAP	3	460278	03-14-18
Washington	State Program	10	C581	05-05-17
West Virginia (DW)	State Program	3	9930C	12-31-17
Wyoming	State Program	8	8TMS-L	01-29-17 *

* Certification renewal pending - certification considered valid.

Method Summary

Client: CH2M Hill, Inc.
Project/Site: Meridian 10006-7-105420 JM01 Navy Clean

TestAmerica Job ID: 320-25962-1

Method	Method Description	Protocol	Laboratory
WS-MS-0011	1,4-Dioxane (GC/MS SIM)	TAL SOP	TAL SAC
537 (Modified)	Perfluorinated Hydrocarbons	EPA	TAL SAC
D 2216	Percent Moisture	ASTM	TAL SAC

Protocol References:

ASTM = ASTM International
EPA = US Environmental Protection Agency
TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: CH2M Hill, Inc.
Project/Site: Meridian 10006-7-105420 JM01 Navy Clean

TestAmerica Job ID: 320-25962-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-25962-1	MEAFF-MRD-1A01-0217	Water	02/21/17 15:55	02/22/17 10:00
320-25962-2	MEAFF-MRD-1A01P-0217	Water	02/21/17 15:55	02/22/17 10:00
320-25962-3	MEAFF-EB01-022117-SO	Water	02/21/17 13:25	02/22/17 10:00
320-25962-4	MEAFF-PWMA-SB01-0001	Solid	02/21/17 13:35	02/22/17 10:00
320-25962-5	MEAFF-PWMA-SB01-0204	Solid	02/21/17 13:40	02/22/17 10:00

TestAmerica Sacramento
880 Riverside Parkway

West Sacramento, CA 95605-1500
phone 916.373.5600 fax 303.467.7248

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Bryan Burkingstock	Site Contact: Ryan Brown	Date: 2/21/17	COC No: 1
CH2M Hill	Tel/Fax:	Lab Contact: Jill Kellmann	Carrier: FedEx	1 of 1 COCs
6600 Peachtree Dunwoody Rd., 400 Embassy Row, Suite 600	**Analysis Turnaround Time**			Sampler: K Braun, J. McCann
Atlanta, GA 30328	~~X~~ CALENDAR DAYS X WORKING DAYS			**For Lab Use Only:**
(678) 530-4060 Phone	TAT if different from Below _____			Walk-in Client:
(770) 604-9183 FAX	X 2 weeks			Lab Sampling:
Project Name: Meridian 10006-7-105420 JM01 Navy Clean	☐ 1 week			
Site: NAS Meridian	☐ 2 days			Job / SDG No.:
P O #: 10006-7-105420	☐ 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)	1,4-Dioxane 8270	PFC 537M	Sample Specific Notes:
MEAFF-MRD-1A01-0217	2/21/17	1555	G	GW	4	N	N	X	X	
MEAFF-MRD-1A01P-0217	↓	↓	↓	↓	↓	N	N	X	X	field duplicate
MEAFF-EB01-022117	↓	1325	G	~~W~~ SO	1	N	N		X	equipment blank
MEAFF-PWMA-SB01-00001	↓	1335	↓	SO	↓	N	N		X	
MEAFF-PWMA-SB01-0204	↓	1340	↓	↓	↓	N	N		X	

320-25962 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 X 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:
Send results to Mike Zamboni - address should be on file

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: 4.8 Corr'd: 4.8 | Therm ID No.: AK

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Ryan Braun	CH2M	2/21/17@1800	Tuyet Tuyen	TAMS	2/22/17 0900
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. 4.11, dated 1/24/2017

Login Sample Receipt Checklist

Client: CH2M Hill, Inc.

Job Number: 320-25962-1

Login Number: 25962
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?	True	
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: 320-25962-1

Job Description: Meridian 10006-7-105420 JM01 Navy Clean

For:
CH2M Hill, Inc.
2411 Dulles Corner Park
Suite 500
Herndon, VA 20171

Attention: Mr. Michael Zamboni

Approved for release.
Jill Kellmann
Manager of Project Management
3/27/2017 4:54 PM

Jill Kellmann, Manager of Project Management
880 Riverside Parkway, West Sacramento, CA, 95605
(916)374-4402
jill.kellmann@testamericainc.com
03/27/2017
Revision: 1

Table of Contents

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Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.
M	Manual integrated compound.

LCMS

Qualifier	Qualifier Description
Q	One or more quality control criteria failed.
U	Undetected at the Limit of Detection.
M	Manual integrated compound.
E	Result exceeded calibration range.
D	The reported value is from a dilution.
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)

Client: CH2M Hill, Inc.

Project: Meridian 10006-7-105420 JM01 Navy Clean

Report Number: 320-25962-1

Revision - March 27, 2017
Revision created to include PFBS in the method 537 Mod analyte list.

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 West 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 West 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 02/22/2017; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 0.8 C.

1,4-DIOXANE
Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 320-152172.

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

PFAS
Perfluorooctanesulfonic acid (PFOS) was detected in method blank MB 320-152015/1-A at a level that was above the detection limit (DL) but below the limit of quantitation (LOQ). The value should be considered an estimate, and has been flagged. Refer to the QC report for details.

The following sample was diluted to bring the concentration of target analytes within the calibration range: MEAFF-PWMA-SB01-0001 (320-25962-4). Elevated reporting limits (RLs) are provided.

The Isotope Dilution Analyte (IDA) recovery for 13C2 PFDoA in the following samples is below the method recommended limit: (320-25933-A-1-A) and (320-25933-A-1-B MS). These samples were re-analyzed and the results were confirmed. Generally, data quality is not considered affected if the IDA signal-to-noise ratio is greater than 10:1, which is achieved for all IDA in the samples.

The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 320-152015 and analytical batch 320-152825 were outside control limits for Perfluorotridecanoic Acid (PFTriA) and Perfluorotetradecanoic acid (PFTeA). Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) precision was within acceptance limits.

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

PERCENT SOLIDS

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

Detection Summary

Client: CH2M Hill, Inc.
Project/Site: Meridian 10006-7-105420 JM01 Navy Clean

TestAmerica Job ID: 320-25962-1

Client Sample ID: MEAFF-MRD-1A01-0217 — Lab Sample ID: 320-25962-1

No Detections.

Client Sample ID: MEAFF-MRD-1A01P-0217 — Lab Sample ID: 320-25962-2

No Detections.

Client Sample ID: MEAFF-EB01-022117-SO — Lab Sample ID: 320-25962-3

No Detections.

Client Sample ID: MEAFF-PWMA-SB01-0001 — Lab Sample ID: 320-25962-4

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanoic acid (PFOA)	27		0.57	0.12	ug/Kg	1	☼	537 (Modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	220	E	0.57	0.14	ug/Kg	1	☼	537 (Modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	2.0	M	0.46	0.12	ug/Kg	1	☼	537 (Modified)	Total/NA
Perfluorooctanoic acid (PFOA) - DL	28	D M	5.7	1.2	ug/Kg	10	☼	537 (Modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS) - DL	270	D	5.7	1.4	ug/Kg	10	☼	537 (Modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS) - DL	1.6	J D M	4.6	1.2	ug/Kg	10	☼	537 (Modified)	Total/NA

Client Sample ID: MEAFF-PWMA-SB01-0204 — Lab Sample ID: 320-25962-5

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanoic acid (PFOA)	5.5	M	0.59	0.12	ug/Kg	1	☼	537 (Modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	30	M	0.59	0.15	ug/Kg	1	☼	537 (Modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	0.95	M	0.47	0.12	ug/Kg	1	☼	537 (Modified)	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: MEAFF-MRD-1A01-0217

Lab Sample ID: 320-25962-1
Date Collected: 02/21/17 15:55
Matrix: Water
Date Received: 02/22/17 10:00

Method: WS-MS-0011 - 1,4-Dioxane (GC/MS SIM)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	0.48	U	0.95	0.19	ug/L		02/24/17 15:44	03/06/17 16:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*61*		*42 - 91*	*02/24/17 15:44*	*03/06/17 16:12*	*1*

Client Sample ID: MEAFF-MRD-1A01P-0217

Lab Sample ID: 320-25962-2
Date Collected: 02/21/17 15:55
Matrix: Water
Date Received: 02/22/17 10:00

Method: WS-MS-0011 - 1,4-Dioxane (GC/MS SIM)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	0.48	U	0.97	0.19	ug/L		02/24/17 15:44	03/06/17 16:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*63*		*42 - 91*	*02/24/17 15:44*	*03/06/17 16:34*	*1*

Client Sample ID: MEAFF-EB01-022117-SO

Lab Sample ID: 320-25962-3
Date Collected: 02/21/17 13:25
Matrix: Water
Date Received: 02/22/17 10:00

Method: 537 (Modified) - Perfluorinated Hydrocarbons

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanoic acid (PFOA)	1.8	U M	2.2	0.67	ng/L		02/28/17 16:42	03/02/17 11:12	1
Perfluorooctanesulfonic acid (PFOS)	2.7	U	3.6	1.1	ng/L		02/28/17 16:42	03/02/17 11:12	1
Perfluorobutanesulfonic acid (PFBS)	1.8	U	2.2	0.82	ng/L		02/28/17 16:42	03/02/17 11:12	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFOA	*152*	*Q*	*25 - 150*	*02/28/17 16:42*	*03/02/17 11:12*	*1*
13C4 PFOS	*135*		*25 - 150*	*02/28/17 16:42*	*03/02/17 11:12*	*1*
18O2 PFHxS	*141*		*25 - 150*	*02/28/17 16:42*	*03/02/17 11:12*	*1*

Client Sample ID: MEAFF-PWMA-SB01-0001

Lab Sample ID: 320-25962-4
Date Collected: 02/21/17 13:35
Matrix: Solid
Date Received: 02/22/17 10:00
Percent Solids: 86.7

Method: 537 (Modified) - Perfluorinated Hydrocarbons

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanoic acid (PFOA)	**27**		0.57	0.12	ug/Kg	☼	02/23/17 17:22	03/01/17 19:45	1
Perfluorooctanesulfonic acid (PFOS)	**220**	**E**	0.57	0.14	ug/Kg	☼	02/23/17 17:22	03/01/17 19:45	1
Perfluorobutanesulfonic acid (PFBS)	**2.0**	**M**	0.46	0.12	ug/Kg	☼	02/23/17 17:22	03/01/17 19:45	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFOA	*111*		*25 - 150*	*02/23/17 17:22*	*03/01/17 19:45*	*1*
13C4 PFOS	*55*		*25 - 150*	*02/23/17 17:22*	*03/01/17 19:45*	*1*
18O2 PFHxS	*95*		*25 - 150*	*02/23/17 17:22*	*03/01/17 19:45*	*1*

Method: 537 (Modified) - Perfluorinated Hydrocarbons - DL

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanoic acid (PFOA)	**28**	**D M**	5.7	1.2	ug/Kg	☼	02/23/17 17:22	03/03/17 09:53	10
Perfluorooctanesulfonic acid (PFOS)	**270**	**D**	5.7	1.4	ug/Kg	☼	02/23/17 17:22	03/03/17 09:53	10

Client Sample ID: MEAFF-PWMA-SB01-0001 — Lab Sample ID: 320-25962-4

Date Collected: 02/21/17 13:35 — **Matrix: Solid**
Date Received: 02/22/17 10:00 — **Percent Solids: 86.7**

Method: 537 (Modified) - Perfluorinated Hydrocarbons - DL (Continued)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	1.6	J D M	4.6	1.2	ug/Kg	☼	02/23/17 17:22	03/03/17 09:53	10

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFOA	*136*		*25 - 150*	*02/23/17 17:22*	*03/03/17 09:53*	*10*
13C4 PFOS	*90*		*25 - 150*	*02/23/17 17:22*	*03/03/17 09:53*	*10*
18O2 PFHxS	*122*		*25 - 150*	*02/23/17 17:22*	*03/03/17 09:53*	*10*

Client Sample ID: MEAFF-PWMA-SB01-0204 — Lab Sample ID: 320-25962-5

Date Collected: 02/21/17 13:40 — **Matrix: Solid**
Date Received: 02/22/17 10:00 — **Percent Solids: 85.3**

Method: 537 (Modified) - Perfluorinated Hydrocarbons

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanoic acid (PFOA)	5.5	M	0.59	0.12	ug/Kg	☼	02/23/17 17:22	03/01/17 20:00	1
Perfluorooctanesulfonic acid (PFOS)	30	M	0.59	0.15	ug/Kg	☼	02/23/17 17:22	03/01/17 20:00	1
Perfluorobutanesulfonic acid (PFBS)	0.95	M	0.47	0.12	ug/Kg	☼	02/23/17 17:22	03/01/17 20:00	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFOA	*101*	*M*	*25 - 150*	*02/23/17 17:22*	*03/01/17 20:00*	*1*
13C4 PFOS	*56*	*M*	*25 - 150*	*02/23/17 17:22*	*03/01/17 20:00*	*1*
18O2 PFHxS	*95*	*M*	*25 - 150*	*02/23/17 17:22*	*03/01/17 20:00*	*1*

Default Detection Limits

Client: CH2M Hill, Inc.
Project/Site: Meridian 10006-7-105420 JM01 Navy Clean

TestAmerica Job ID: 320-25962-1

Method: WS-MS-0011 - 1,4-Dioxane (GC/MS SIM)

Prep: 3510C

Analyte	LOQ	DL	Units	Method
1,4-Dioxane	1.0	0.20	ug/L	WS-MS-0011

Method: 537 (Modified) - Perfluorinated Hydrocarbons

Prep: 3535

Analyte	LOQ	DL	Units	Method
Perfluorobutanesulfonic acid (PFBS)	2.5	0.92	ng/L	537 (Modified)
Perfluorooctanesulfonic acid (PFOS)	4.0	1.3	ng/L	537 (Modified)
Perfluorooctanoic acid (PFOA)	2.5	0.75	ng/L	537 (Modified)

Method: 537 (Modified) - Perfluorinated Hydrocarbons

Prep: SHAKE

Analyte	LOQ	DL	Units	Method
Perfluorobutanesulfonic acid (PFBS)	0.40	0.10	ug/Kg	537 (Modified)
Perfluorooctanesulfonic acid (PFOS)	0.50	0.13	ug/Kg	537 (Modified)
Perfluorooctanoic acid (PFOA)	0.50	0.10	ug/Kg	537 (Modified)

Surrogate Summary

Client: CH2M Hill, Inc.
Project/Site: Meridian 10006-7-105420 JM01 Navy Clean

TestAmerica Job ID: 320-25962-1

Method: WS-MS-0011 - 1,4-Dioxane (GC/MS SIM)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)								
		NBZ								
Lab Sample ID	Client Sample ID	(42-91)								
320-25962-1	MEAFF-MRD-1A01-0217	61								
320-25962-2	MEAFF-MRD-1A01P-0217	63								
LCS 320-152172/2-A	Lab Control Sample	73								
LCSD 320-152172/3-A	Lab Control Sample Dup	61								
MB 320-152172/1-A	Method Blank	63								

Surrogate Legend

NBZ = Nitrobenzene-d5

Isotope Dilution Summary

Client: CH2M Hill, Inc.
Project/Site: Meridian 10006-7-105420 JM01 Navy Clean

TestAmerica Job ID: 320-25962-1

Method: 537 (Modified) - Perfluorinated Hydrocarbons

Matrix: Solid

Prep Type: Total/NA

		Percent Isotope Dilution Recovery (Acceptance Limits)		
Lab Sample ID	Client Sample ID	3C4 PFO/ (25-150)	3C4 PFOS (25-150)	3O2 PFHx (25-150)
320-25962-4	MEAFF-PWMA-SB01-0001	111	55	95
320-25962-4 - DL	MEAFF-PWMA-SB01-0001	136	90	122
320-25962-5	MEAFF-PWMA-SB01-0204	101 M	56 M	95 M
LCS 320-152015/2-A	Lab Control Sample	106	91	101
MB 320-152015/1-A	Method Blank	121	95	113

Surrogate Legend

13C4 PFOA = 13C4 PFOA
13C4 PFOS = 13C4 PFOS
18O2 PFHxS = 18O2 PFHxS

Method: 537 (Modified) - Perfluorinated Hydrocarbons

Matrix: Water

Prep Type: Total/NA

		Percent Isotope Dilution Recovery (Acceptance Limits)		
Lab Sample ID	Client Sample ID	3C4 PFO/ (25-150)	3C4 PFOS (25-150)	3O2 PFHx (25-150)
320-25962-3	MEAFF-EB01-022117-SO	152 Q	135	141
LCS 320-152587/2-A	Lab Control Sample	142	133	136
LCSD 320-152587/3-A	Lab Control Sample Dup	142	135	140
MB 320-152587/1-A	Method Blank	158 Q	138	145

Surrogate Legend

13C4 PFOA = 13C4 PFOA
13C4 PFOS = 13C4 PFOS
18O2 PFHxS = 18O2 PFHxS

Method: WS-MS-0011 - 1,4-Dioxane (GC/MS SIM)

Lab Sample ID: MB 320-152172/1-A
Matrix: Water
Analysis Batch: 153398

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 152172

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	0.50	U	1.0	0.20	ug/L		02/24/17 15:44	03/06/17 11:24	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*63*		*42 - 91*	*02/24/17 15:44*	*03/06/17 11:24*	*1*

Lab Sample ID: LCS 320-152172/2-A
Matrix: Water
Analysis Batch: 153398

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 152172

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,4-Dioxane	10.0	2.90	M	ug/L		29	12 - 52

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Nitrobenzene-d5	*73*		*42 - 91*

Lab Sample ID: LCSD 320-152172/3-A
Matrix: Water
Analysis Batch: 153398

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 152172

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,4-Dioxane	10.0	2.61	M	ug/L		26	12 - 52	11	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Nitrobenzene-d5	*61*		*42 - 91*

Method: 537 (Modified) - Perfluorinated Hydrocarbons

Lab Sample ID: MB 320-152015/1-A
Matrix: Solid
Analysis Batch: 152825

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 152015

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanoic acid (PFOA)	0.30	U	0.50	0.10	ug/Kg		02/23/17 17:22	03/01/17 18:37	1
Perfluorooctanesulfonic acid (PFOS)	0.178	J	0.50	0.13	ug/Kg		02/23/17 17:22	03/01/17 18:37	1
Perfluorobutanesulfonic acid (PFBS)	0.30	U	0.40	0.10	ug/Kg		02/23/17 17:22	03/01/17 18:37	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFOA	*121*		*25 - 150*	*02/23/17 17:22*	*03/01/17 18:37*	*1*
13C4 PFOS	*95*		*25 - 150*	*02/23/17 17:22*	*03/01/17 18:37*	*1*
18O2 PFHxS	*113*		*25 - 150*	*02/23/17 17:22*	*03/01/17 18:37*	*1*

Lab Sample ID: LCS 320-152015/2-A
Matrix: Solid
Analysis Batch: 153020

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 152015

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorooctanoic acid (PFOA)	4.00	4.09		ug/Kg		102	60 - 140

Method: 537 (Modified) - Perfluorinated Hydrocarbons (Continued)

Lab Sample ID: LCS 320-152015/2-A
Matrix: Solid
Analysis Batch: 153020

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 152015

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorooctanesulfonic acid (PFOS)	3.71	3.96		ug/Kg		107	60 - 140
Perfluorobutanesulfonic acid (PFBS)	3.54	3.95		ug/Kg		112	50 - 150

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C4 PFOA	*106*		*25 - 150*
13C4 PFOS	*91*		*25 - 150*
18O2 PFHxS	*101*		*25 - 150*

Lab Sample ID: MB 320-152587/1-A
Matrix: Water
Analysis Batch: 152836

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 152587

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanoic acid (PFOA)	2.0	U M	2.5	0.75	ng/L		02/28/17 16:42	03/02/17 10:35	1
Perfluorooctanesulfonic acid (PFOS)	3.0	U	4.0	1.3	ng/L		02/28/17 16:42	03/02/17 10:35	1
Perfluorobutanesulfonic acid (PFBS)	2.0	U	2.5	0.92	ng/L		02/28/17 16:42	03/02/17 10:35	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFOA	*158*	*Q*	*25 - 150*	*02/28/17 16:42*	*03/02/17 10:35*	*1*
13C4 PFOS	*138*		*25 - 150*	*02/28/17 16:42*	*03/02/17 10:35*	*1*
18O2 PFHxS	*145*		*25 - 150*	*02/28/17 16:42*	*03/02/17 10:35*	*1*

Lab Sample ID: LCS 320-152587/2-A
Matrix: Water
Analysis Batch: 152836

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 152587

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorooctanoic acid (PFOA)	40.0	38.6		ng/L		97	60 - 140
Perfluorooctanesulfonic acid (PFOS)	37.1	35.6		ng/L		96	60 - 140
Perfluorobutanesulfonic acid (PFBS)	35.4	39.5		ng/L		112	50 - 150

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C4 PFOA	*142*		*25 - 150*
13C4 PFOS	*133*		*25 - 150*
18O2 PFHxS	*136*		*25 - 150*

Lab Sample ID: LCSD 320-152587/3-A
Matrix: Water
Analysis Batch: 152836

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 152587

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perfluorooctanoic acid (PFOA)	40.0	38.5		ng/L		96	60 - 140	0	30
Perfluorooctanesulfonic acid (PFOS)	37.1	35.6	M	ng/L		96	60 - 140	0	30
Perfluorobutanesulfonic acid (PFBS)	35.4	40.3	M	ng/L		114	50 - 150	2	30

Isotope Dilution	LCSD %Recovery	LCSD Qualifier	Limits
13C4 PFOA	142		25 - 150
13C4 PFOS	135		25 - 150
18O2 PFHxS	140		25 - 150

GC/MS Semi VOA

Prep Batch: 152172

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-25962-1	MEAFF-MRD-1A01-0217	Total/NA	Water	3510C	
320-25962-2	MEAFF-MRD-1A01P-0217	Total/NA	Water	3510C	
MB 320-152172/1-A	Method Blank	Total/NA	Water	3510C	
LCS 320-152172/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 320-152172/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

Analysis Batch: 153398

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-25962-1	MEAFF-MRD-1A01-0217	Total/NA	Water	WS-MS-0011	152172
320-25962-2	MEAFF-MRD-1A01P-0217	Total/NA	Water	WS-MS-0011	152172
MB 320-152172/1-A	Method Blank	Total/NA	Water	WS-MS-0011	152172
LCS 320-152172/2-A	Lab Control Sample	Total/NA	Water	WS-MS-0011	152172
LCSD 320-152172/3-A	Lab Control Sample Dup	Total/NA	Water	WS-MS-0011	152172

LCMS

Prep Batch: 152015

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-25962-4	MEAFF-PWMA-SB01-0001	Total/NA	Solid	SHAKE	
320-25962-4 - DL	MEAFF-PWMA-SB01-0001	Total/NA	Solid	SHAKE	
320-25962-5	MEAFF-PWMA-SB01-0204	Total/NA	Solid	SHAKE	
MB 320-152015/1-A	Method Blank	Total/NA	Solid	SHAKE	
LCS 320-152015/2-A	Lab Control Sample	Total/NA	Solid	SHAKE	

Prep Batch: 152587

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-25962-3	MEAFF-EB01-022117-SO	Total/NA	Water	3535	
MB 320-152587/1-A	Method Blank	Total/NA	Water	3535	
LCS 320-152587/2-A	Lab Control Sample	Total/NA	Water	3535	
LCSD 320-152587/3-A	Lab Control Sample Dup	Total/NA	Water	3535	

Analysis Batch: 152825

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-25962-4	MEAFF-PWMA-SB01-0001	Total/NA	Solid	537 (Modified)	152015
320-25962-5	MEAFF-PWMA-SB01-0204	Total/NA	Solid	537 (Modified)	152015
MB 320-152015/1-A	Method Blank	Total/NA	Solid	537 (Modified)	152015

Analysis Batch: 152836

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-25962-3	MEAFF-EB01-022117-SO	Total/NA	Water	537 (Modified)	152587
MB 320-152587/1-A	Method Blank	Total/NA	Water	537 (Modified)	152587
LCS 320-152587/2-A	Lab Control Sample	Total/NA	Water	537 (Modified)	152587
LCSD 320-152587/3-A	Lab Control Sample Dup	Total/NA	Water	537 (Modified)	152587

Analysis Batch: 153020

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-25962-4 - DL	MEAFF-PWMA-SB01-0001	Total/NA	Solid	537 (Modified)	152015
LCS 320-152015/2-A	Lab Control Sample	Total/NA	Solid	537 (Modified)	152015

General Chemistry

Analysis Batch: 152218

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-25962-4	MEAFF-PWMA-SB01-0001	Total/NA	Solid	D 2216	
320-25962-5	MEAFF-PWMA-SB01-0204	Total/NA	Solid	D 2216	

Client Sample ID: MEAFF-MRD-1A01-0217

Lab Sample ID: 320-25962-1
Date Collected: 02/21/17 15:55
Matrix: Water
Date Received: 02/22/17 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			152172	02/24/17 15:44	SR1	TAL SAC
Total/NA	Analysis	WS-MS-0011		1	153398	03/06/17 16:12	MEO	TAL SAC

Client Sample ID: MEAFF-MRD-1A01P-0217

Lab Sample ID: 320-25962-2
Date Collected: 02/21/17 15:55
Matrix: Water
Date Received: 02/22/17 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			152172	02/24/17 15:44	SR1	TAL SAC
Total/NA	Analysis	WS-MS-0011		1	153398	03/06/17 16:34	MEO	TAL SAC

Client Sample ID: MEAFF-EB01-022117-SO

Lab Sample ID: 320-25962-3
Date Collected: 02/21/17 13:25
Matrix: Water
Date Received: 02/22/17 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			152587	02/28/17 16:42	JER	TAL SAC
Total/NA	Analysis	537 (Modified)		1	152836	03/02/17 11:12	SBC	TAL SAC

Client Sample ID: MEAFF-PWMA-SB01-0001

Lab Sample ID: 320-25962-4
Date Collected: 02/21/17 13:35
Matrix: Solid
Date Received: 02/22/17 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	152218	02/25/17 14:01	EP1	TAL SAC

Client Sample ID: MEAFF-PWMA-SB01-0001

Lab Sample ID: 320-25962-4
Date Collected: 02/21/17 13:35
Matrix: Solid
Date Received: 02/22/17 10:00
Percent Solids: 86.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			152015	02/23/17 17:22	JER	TAL SAC
Total/NA	Analysis	537 (Modified)		1	152825	03/01/17 19:45	SBC	TAL SAC
Total/NA	Prep	SHAKE	DL		152015	02/23/17 17:22	JER	TAL SAC
Total/NA	Analysis	537 (Modified)	DL	10	153020	03/03/17 09:53	SBC	TAL SAC

Client Sample ID: MEAFF-PWMA-SB01-0204

Lab Sample ID: 320-25962-5
Date Collected: 02/21/17 13:40
Matrix: Solid
Date Received: 02/22/17 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	152218	02/25/17 14:01	EP1	TAL SAC

Client Sample ID: MEAFF-PWMA-SB01-0204

Date Collected: 02/21/17 13:40
Date Received: 02/22/17 10:00

Lab Sample ID: 320-25962-5

Matrix: Solid
Percent Solids: 85.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			152015	02/23/17 17:22	JER	TAL SAC
Total/NA	Analysis	537 (Modified)		1	152825	03/01/17 20:00	SBC	TAL SAC

Laboratory References:

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

Certification Summary

Client: CH2M Hill, Inc.
Project/Site: Meridian 10006-7-105420 JM01 Navy Clean

TestAmerica Job ID: 320-25962-1

Laboratory: TestAmerica Sacramento

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska (UST)	State Program	10	UST-055	12-18-17
Arizona	State Program	9	AZ0708	08-11-17
Arkansas DEQ	State Program	6	88-0691	06-17-17
California	State Program	9	2897	01-31-18
Colorado	State Program	8	CA00044	08-31-17
Connecticut	State Program	1	PH-0691	06-30-17
Florida	NELAP	4	E87570	06-30-17
Hawaii	State Program	9	N/A	01-29-18
Illinois	NELAP	5	200060	03-17-18
Kansas	NELAP	7	E-10375	10-31-17
L-A-B	DoD ELAP		L2468	01-20-18
Louisiana	NELAP	6	30612	06-30-17
Maine	State Program	1	CA0004	04-18-18
Michigan	State Program	5	9947	01-31-18
Nevada	State Program	9	CA00044	07-31-17
New Jersey	NELAP	2	CA005	06-30-17
New York	NELAP	2	11666	04-01-17 *
Oregon	NELAP	10	4040	01-28-18
Pennsylvania	NELAP	3	68-01272	03-31-17 *
Texas	NELAP	6	T104704399	07-31-17
US Fish & Wildlife	Federal		LE148388-0	10-31-17
USDA	Federal		P330-11-00436	12-30-17
USEPA UCMR	Federal	1	CA00044	11-06-18
Utah	NELAP	8	CA00044	02-28-18
Virginia	NELAP	3	460278	03-14-18
Washington	State Program	10	C581	05-05-17
West Virginia (DW)	State Program	3	9930C	12-31-17
Wyoming	State Program	8	8TMS-L	01-29-17 *

* Certification renewal pending - certification considered valid.

Method Summary

Client: CH2M Hill, Inc.
Project/Site: Meridian 10006-7-105420 JM01 Navy Clean

TestAmerica Job ID: 320-25962-1

Method	Method Description	Protocol	Laboratory
WS-MS-0011	1,4-Dioxane (GC/MS SIM)	TAL SOP	TAL SAC
537 (Modified)	Perfluorinated Hydrocarbons	EPA	TAL SAC
D 2216	Percent Moisture	ASTM	TAL SAC

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: CH2M Hill, Inc.
TestAmerica Job ID: 320-25962-1
Project/Site: Meridian 10006-7-105420 JM01 Navy Clean

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-25962-1	MEAFF-MRD-1A01-0217	Water	02/21/17 15:55	02/22/17 10:00
320-25962-2	MEAFF-MRD-1A01P-0217	Water	02/21/17 15:55	02/22/17 10:00
320-25962-3	MEAFF-EB01-022117-SO	Water	02/21/17 13:25	02/22/17 10:00
320-25962-4	MEAFF-PWMA-SB01-0001	Solid	02/21/17 13:35	02/22/17 10:00
320-25962-5	MEAFF-PWMA-SB01-0204	Solid	02/21/17 13:40	02/22/17 10:00

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Sacramento Job No.: 320-25962-1

SDG No.:

Instrument ID: SV1 Analysis Batch Number: 151686

Lab Sample ID: IC 320-151686/1 Client Sample ID:

Date Analyzed: 02/22/17 09:35 Lab File ID: 14D0222A.D GC Column: HP-5MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dioxane	3.36	Baseline	onishim	02/22/17 14:19
Nitrobenzene-d5	8.06	Peak Tail	onishim	02/22/17 14:19

Lab Sample ID: IC 320-151686/2 Client Sample ID:

Date Analyzed: 02/22/17 09:56 Lab File ID: 14D0222B.D GC Column: HP-5MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dioxane	3.36	Poor chromatography	onishim	02/22/17 14:19
Nitrobenzene-d5	8.06	Poor chromatography	onishim	02/22/17 14:19

Lab Sample ID: IC 320-151686/3 Client Sample ID:

Date Analyzed: 02/22/17 10:19 Lab File ID: 14D0222C.D GC Column: HP-5MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dioxane	3.36	Baseline	onishim	02/22/17 14:19
Nitrobenzene-d5	8.06	Peak Tail	onishim	02/22/17 14:19

Lab Sample ID: IC 320-151686/4 Client Sample ID:

Date Analyzed: 02/22/17 10:41 Lab File ID: 14D0222D.D GC Column: HP-5MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dioxane	3.35	Poor chromatography	onishim	02/22/17 14:19

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Sacramento Job No.: 320-25962-1

SDG No.:

Instrument ID: SV1 Analysis Batch Number: 151686

Lab Sample ID: ICIS 320-151686/5 Client Sample ID:

Date Analyzed: 02/22/17 11:03 Lab File ID: 14D0222E.D GC Column: HP-5MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dioxane	3.35	Poor chromatography	onishim	02/22/17 14:19

Lab Sample ID: IC 320-151686/6 Client Sample ID:

Date Analyzed: 02/22/17 11:25 Lab File ID: 14D0222F.D GC Column: HP-5MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dioxane	3.36	Poor chromatography	onishim	02/22/17 14:19

Lab Sample ID: IC 320-151686/7 Client Sample ID:

Date Analyzed: 02/22/17 11:47 Lab File ID: 14D0222G.D GC Column: HP-5MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dioxane	3.36	Poor chromatography	onishim	02/22/17 14:19

Lab Sample ID: IC 320-151686/8 Client Sample ID:

Date Analyzed: 02/22/17 12:09 Lab File ID: 14D0222H.D GC Column: HP-5MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dioxane	3.37	Poor chromatography	onishim	02/22/17 14:19

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Sacramento Job No.: 320-25962-1

SDG No.:

Instrument ID: SV1 Analysis Batch Number: 153398

Lab Sample ID: CCV 320-153398/2 Client Sample ID:

Date Analyzed: 03/06/17 10:55 Lab File ID: 14D0306.D GC Column: HP-5MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dioxane	3.35	Peak Tail	onishim	03/06/17 11:21

Lab Sample ID: LCS 320-152172/2-A Client Sample ID:

Date Analyzed: 03/06/17 11:46 Lab File ID: S030602.D GC Column: HP-5MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dioxane	3.35	Peak Tail	onishim	03/06/17 12:15

Lab Sample ID: LCSD 320-152172/3-A Client Sample ID:

Date Analyzed: 03/06/17 12:08 Lab File ID: S030603.D GC Column: HP-5MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dioxane	3.35	Peak Tail	onishim	03/06/17 13:09

LCMS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Sacramento Job No.: 320-25962-1

SDG No.:

Instrument ID: A8_N Analysis Batch Number: 152681

Lab Sample ID: IC 320-152681/2 Client Sample ID:

Date Analyzed: 03/01/17 11:08 Lab File ID: 2017.03.01CURVE_003.d GC Column: GeminiC18 3x1 ID: 3(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perfluorohexanesulfonic acid (PFHxS)	2.51	Isomers	chandrasenas	03/01/17 15:43
Perfluorooctanoic acid (PFOA)	2.86	Incomplete Integration	chandrasenas	03/01/17 15:43
Perfluorooctanesulfonic acid (PFOS)	3.23	Isomers	chandrasenas	03/01/17 15:43

Lab Sample ID: IC 320-152681/4 Client Sample ID:

Date Analyzed: 03/01/17 11:23 Lab File ID: 2017.03.01CURVE_005.d GC Column: GeminiC18 3x1 ID: 3(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perfluorooctanoic acid (PFOA)	2.83	Baseline	chandrasenas	03/01/17 15:43
Perfluorooctanesulfonic acid (PFOS)	3.17	Baseline	chandrasenas	03/01/17 15:43

Lab Sample ID: IC 320-152681/5 Client Sample ID:

Date Analyzed: 03/01/17 11:31 Lab File ID: 2017.03.01CURVE_006.d GC Column: GeminiC18 3x1 ID: 3(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perfluorohexanesulfonic acid (PFHxS)	2.49	Isomers	chandrasenas	03/01/17 15:43

537 (Modified)

LCMS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Sacramento Job No.: 320-25962-1

SDG No.:

Instrument ID: A8_N Analysis Batch Number: 152681

Lab Sample ID: IC 320-152681/6 Client Sample ID:

Date Analyzed: 03/01/17 11:38 Lab File ID: 2017.03.01CURVE_007.d GC Column: GeminiC18 3x1 ID: 3(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perfluorohexanesulfonic acid (PFHxS)	2.48	Isomers	chandrasenas	03/01/17 15:43
13C2 PFUnA	3.87	Incomplete Integration	chandrasenas	03/01/17 15:43

Lab Sample ID: IC 320-152681/7 Client Sample ID:

Date Analyzed: 03/01/17 11:46 Lab File ID: 2017.03.01CURVE_008.d GC Column: GeminiC18 3x1 ID: 3(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perfluorooctanesulfonic acid (PFOS)	3.19	Baseline	chandrasenas	03/01/17 15:43
M2-8:2FTS	3.52	Incomplete Integration	chandrasenas	03/01/17 15:43
13C2 PFDoA	4.15	Incomplete Integration	chandrasenas	03/01/17 15:43

LCMS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Sacramento Job No.: 320-25962-1

SDG No.:

Instrument ID: A8_N Analysis Batch Number: 152825

Lab Sample ID: CCV 320-152825/2 Client Sample ID:

Date Analyzed: 03/01/17 18:30 Lab File ID: 2017.03.01A_002.d GC Column: GeminiC18 3x1 ID: 3(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
13C4-PFHpA	2.42	Incomplete Integration	chandrasenas	03/03/17 10:36
Perfluorooctanoic acid (PFOA)	2.79	Incomplete Integration	chandrasenas	03/03/17 10:36

Lab Sample ID: 320-25962-4 Client Sample ID: MEAFF-PWMA-SB01-0001

Date Analyzed: 03/01/17 19:45 Lab File ID: 2017.03.01A_012.d GC Column: GeminiC18 3x1 ID: 3(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perfluorobutanesulfonic acid (PFBS)	1.85	Baseline	chandrasenas	03/27/17 10:46

Lab Sample ID: 320-25962-5 Client Sample ID: MEAFF-PWMA-SB01-0204

Date Analyzed: 03/01/17 20:00 Lab File ID: 2017.03.01A_014.d GC Column: GeminiC18 3x1 ID: 3(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perfluorobutanesulfonic acid (PFBS)	1.86	Assign Peak	chandrasenas	03/27/17 10:47
18O2 PFHxS	2.46	Assign Peak	chandrasenas	03/27/17 10:47
13C4 PFOA	2.81	Baseline	chandrasenas	03/27/17 10:46
Perfluorooctanoic acid (PFOA)	2.81	Baseline	chandrasenas	03/27/17 10:46
13C4 PFOS	3.17	Baseline	chandrasenas	03/27/17 10:46
Perfluorooctanesulfonic acid (PFOS)	3.17	Baseline	chandrasenas	03/27/17 10:46

LCMS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Sacramento Job No.: 320-25962-1

SDG No.:

Instrument ID: A8_N Analysis Batch Number: 152836

Lab Sample ID: CCV 320-152836/10 CCVL Client Sample ID:

Date Analyzed: 03/02/17 10:12 Lab File ID: 2017.03.02A_001.d GC Column: GeminiC18 3x1 ID: 3(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perfluorohexanesulfonic acid (PFHxS)	2.48	Isomers	chandrasenas	03/27/17 09:41
Perfluorooctanesulfonic acid (PFOS)	3.19	Baseline	chandrasenas	03/27/17 09:41
Perfluorododecanoic acid (PFDoA)	4.17	Incomplete Integration	chandrasenas	03/27/17 09:41
Perfluorotetradecanoic acid (PFTeA)	4.67	Baseline	chandrasenas	03/27/17 09:41
Perfluoro-n-hexadecanoic acid (PFHxDA)	5.09	Baseline	chandrasenas	03/27/17 09:41

Lab Sample ID: CCV 320-152836/11 Client Sample ID:

Date Analyzed: 03/02/17 10:20 Lab File ID: 2017.03.02A_002.d GC Column: GeminiC18 3x1 ID: 3(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perfluoropentanoic acid (PFPeA)	1.82	Baseline	chandrasenas	03/02/17 12:33
Perfluorohexanoic acid (PFHxA)	2.12	Baseline	chandrasenas	03/02/17 12:33

Lab Sample ID: MB 320-152587/1-A Client Sample ID:

Date Analyzed: 03/02/17 10:35 Lab File ID: 2017.03.02A_004.d GC Column: GeminiC18 3x1 ID: 3(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perfluorooctanoic acid (PFOA)	2.82	Baseline	westendorfc	03/08/17 08:23

LCMS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Sacramento Job No.: 320-25962-1

SDG No.:

Instrument ID: A8_N Analysis Batch Number: 152836

Lab Sample ID: LCSD 320-152587/3-A Client Sample ID:

Date Analyzed: 03/02/17 10:50 Lab File ID: 2017.03.02A_006.d GC Column: GeminiC18 3x1 ID: 3(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perfluorobutanesulfonic acid (PFBS)	1.86	Baseline	chandrasenas	03/02/17 12:34
Perfluorooctanesulfonic acid (PFOS)	3.22	Isomers	chandrasenas	03/02/17 12:34

Lab Sample ID: 320-25962-3 Client Sample ID: MEAFF-EB01-022117-SO

Date Analyzed: 03/02/17 11:12 Lab File ID: 2017.03.02A_009.d GC Column: GeminiC18 3x1 ID: 3(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perfluorooctanoic acid (PFOA)	2.82	Baseline	westendorfc	03/27/17 09:38

Lab Sample ID: CCV 320-152836/23 Client Sample ID:

Date Analyzed: 03/02/17 11:50 Lab File ID: 2017.03.02A_014.d GC Column: GeminiC18 3x1 ID: 3(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perfluorohexanesulfonic acid (PFHxS)	2.48	Isomers	chandrasenas	03/02/17 12:34

537 (Modified)

LCMS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Sacramento Job No.: 320-25962-1

SDG No.:

Instrument ID: A8_N Analysis Batch Number: 153020

Lab Sample ID: 320-25962-4 DL Client Sample ID: MEAFF-PWMA-SB01-0001 DL

Date Analyzed: 03/03/17 09:53 Lab File ID: 2017.03.03A_008.d GC Column: GeminiC18 3x1 ID: 3(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perfluorobutanesulfonic acid (PFBS)	1.86	Baseline	chandrasenas	03/27/17 10:05
Perfluorooctanoic acid (PFOA)	2.83	Isomers	chandrasenas	03/27/17 10:05

Lab Sample ID: CCV 320-153020/9 Client Sample ID:

Date Analyzed: 03/03/17 10:00 Lab File ID: 2017.03.03A_009.d GC Column: GeminiC18 3x1 ID: 3(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perfluorohexanesulfonic acid (PFHxS)	2.48	Isomers	chandrasenas	03/27/17 10:05

537 (Modified)

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Sacramento Job No.: 320-25962-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
LCMPFC2SU_00014	08/13/17	02/13/17	Methanol, Lot 104453	50000 uL	LCd-NEtFOSA-M_00004	1000 uL	d-N-EtFOSA-M	1 ug/mL
					LCd-NMeFOSA-M_00003	1000 uL	d-N-MeFOSA-M	1 ug/mL
					LCd3-NMeFOSAA_00003	1000 uL	d3-NMeFOSAA	1 ug/mL
					LCd5-NEtFOSAA_00003	1000 uL	d5-NEtFOSAA	1 ug/mL
					LCM2-6:FTS_00003	1000 uL	M2-6:2FTS	0.95 ug/mL
					LCM2-8:2FTS_00003	1000 uL	M2-8:2FTS	0.958 ug/mL
.LCd-NEtFOSA-M_00004	06/10/21	WELLINGTON, Lot dNEtFOSA0616M			(Purchased Reagent)		d-N-EtFOSA-M	50 ug/mL
.LCd-NMeFOSA-M_00003	06/10/21	WELLINGTON, Lot dNMeFOSA0616M			(Purchased Reagent)		d-N-MeFOSA-M	50 ug/mL
.LCd3-NMeFOSAA_00003	05/31/21	WELLINGTON, Lot d3NMeFOSAA0516			(Purchased Reagent)		d3-NMeFOSAA	50 ug/mL
.LCd5-NEtFOSAA_00003	08/02/21	WELLINGTON, Lot d5NEtFOSAA0716			(Purchased Reagent)		d5-NEtFOSAA	50 ug/mL
.LCM2-6:FTS_00003	01/08/21	WELLINGTON, Lot M262FTS0116			(Purchased Reagent)		M2-6:2FTS	47.5 ug/mL
.LCM2-8:2FTS_00003	01/08/21	WELLINGTON, Lot M282FTS0116			(Purchased Reagent)		M2-8:2FTS	47.9 ug/mL
LCMPFCSU_00047	06/14/17	12/14/16	Methanol, Lot Baker 144541	50000 uL	LCM2PFHxDA_00008	1000 uL	13C2-PFHxDA	1 ug/mL
					LCM2PFTeDA_00007	1000 uL	13C2-PFTeDA	1 ug/mL
					LCM4PFHPA_00007	1000 uL	13C4-PFHpA	1 ug/mL
					LCM5PFPEA_00008	1000 uL	13C5-PFPeA	1 ug/mL
					LCM8FOSA_00011	1000 uL	13C8 FOSA	1 ug/mL
					LCMPFBA_00008	1000 uL	13C4 PFBA	1 ug/mL
					LCMPFDA_00011	1000 uL	13C2 PFDA	1 ug/mL
					LCMPFDoA_00008	1000 uL	13C2 PFDoA	1 ug/mL
					LCMPFHxA_00012	1000 uL	13C2 PFHxA	1 ug/mL
					LCMPFHxS_00008	1000 uL	18O2 PFHxS	0.946 ug/mL
					LCMPFNA_00008	1000 uL	13C5 PFNA	1 ug/mL
					LCMPFOA_00012	1000 uL	13C4 PFOA	1 ug/mL
					LCMPFOS_00017	1000 uL	13C4 PFOS	0.956 ug/mL
					LCMPFUdA_00009	1000 uL	13C2 PFUnA	1 ug/mL
.LCM2PFHxDA_00008	01/07/21	Wellington Laboratories, Lot M2PFHxDA1112			(Purchased Reagent)		13C2-PFHxDA	50 ug/mL
.LCM2PFTeDA_00007	12/07/20	Wellington Laboratories, Lot M2PFTeDA1115			(Purchased Reagent)		13C2-PFTeDA	50 ug/mL
.LCM4PFHPA_00007	05/27/21	Wellington Laboratories, Lot M4PFHpA0516			(Purchased Reagent)		13C4-PFHpA	50 ug/mL
.LCM5PFPEA_00008	05/22/20	Wellington Laboratories, Lot M5PFPeA0515			(Purchased Reagent)		13C5-PFPeA	50 ug/mL
.LCM8FOSA_00011	12/22/17	Wellington Laboratories, Lot M8FOSA1215I			(Purchased Reagent)		13C8 FOSA	50 ug/mL
.LCMPFBA_00008	05/24/21	Wellington Laboratories, Lot MPFBA0516			(Purchased Reagent)		13C4 PFBA	50 ug/mL
.LCMPFDA_00011	08/19/20	Wellington Laboratories, Lot MPFDA0815			(Purchased Reagent)		13C2 PFDA	50 ug/mL
.LCMPFDoA_00008	04/08/21	Wellington Laboratories, Lot MPFDoA0416			(Purchased Reagent)		13C2 PFDoA	50 ug/mL
.LCMPFHxA_00012	04/08/21	Wellington Laboratories, Lot MPFHxA0416			(Purchased Reagent)		13C2 PFHxA	50 ug/mL
.LCMPFHxS_00008	10/23/20	Wellington Laboratories, Lot MPFHxS1015			(Purchased Reagent)		18O2 PFHxS	47.3 ug/mL
.LCMPFNA_00008	04/13/19	Wellington Laboratories, Lot MPFNA0414			(Purchased Reagent)		13C5 PFNA	50 ug/mL
.LCMPFOA_00012	01/22/21	Wellington Laboratories, Lot MPFOA0116			(Purchased Reagent)		13C4 PFOA	50 ug/mL
.LCMPFOS_00017	08/03/21	Wellington Laboratories, Lot MPFOS0816			(Purchased Reagent)		13C4 PFOS	47.8 ug/mL
.LCMPFUdA_00009	02/12/21	Wellington Laboratories, Lot MPFUdA0216			(Purchased Reagent)		13C2 PFUnA	50 ug/mL
LCPFC_FULL-L1_00001	06/14/17	02/16/17	MeOH/H2O, Lot 90285	5 mL	LCMPFC2SU_00014	250 uL	d-N-EtFOSA-M	50 ng/mL
							d-N-MeFOSA-M	50 ng/mL
							d3-NMeFOSAA	50 ng/mL
							d5-NEtFOSAA	50 ng/mL
							M2-6:2FTS	47.5 ng/mL
							M2-8:2FTS	47.9 ng/mL

Lab Name: TestAmerica Sacramento Job No.: 320-25962-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					LCMPFCSU_00047	250 uL	13C2-PFHxDA	50 ng/mL
							13C2-PFTeDA	50 ng/mL
							13C4-PFHpA	50 ng/mL
							13C5-PFPeA	50 ng/mL
							13C8 FOSA	50 ng/mL
							13C4 PFBA	50 ng/mL
							13C2 PFDA	50 ng/mL
							13C2 PFDoA	50 ng/mL
							13C2 PFHxA	50 ng/mL
							18O2 PFHxS	47.3 ng/mL
							13C5 PFNA	50 ng/mL
							13C4 PFOA	50 ng/mL
							13C4 PFOS	47.8 ng/mL
							13C2 PFUnA	50 ng/mL
					LCPFC2SP_00025	25 uL	Sodium 1H,1H,2H,2H-perfluorooctane sulfonate (6:2)	0.474 ng/mL
							Sodium 1H,1H,2H,2H-perfluorooctane sulfonate (8:2)	0.479 ng/mL
							N-ethylperfluoro-1-octanesulfonamide	0.5 ng/mL
							N-ethyl perfluorooctane sulfonamidoacetic acid	0.5 ng/mL
							MeFOSA	0.5 ng/mL
							N-methyl perfluorooctane sulfonamidoacetic acid	0.5 ng/mL
					LCPFCSP_00078	25 uL	Perfluorobutyric acid	0.5 ng/mL
							Perfluorobutanesulfonic acid (PFBS)	0.442 ng/mL
							Perfluorodecanoic acid	0.5 ng/mL
							Perfluorododecanoic acid	0.5 ng/mL
							Perfluorodecane Sulfonic acid	0.482 ng/mL
							Perfluoroheptanoic acid	0.5 ng/mL
							Perfluoroheptanesulfonic Acid	0.476 ng/mL
							Perfluorohexanoic acid	0.5 ng/mL
							Perfluorohexadecanoic acid	0.5 ng/mL
							Perfluorohexanesulfonic acid	0.455 ng/mL
							Perfluorononanoic acid	0.5 ng/mL
							Perfluorooctanoic acid (PFOA)	0.5 ng/mL
							Perfluorooctadecanoic acid	0.5 ng/mL
							Perfluorooctanesulfonic acid (PFOS)	0.464 ng/mL
							Perfluorooctane Sulfonamide	0.5 ng/mL
							Perfluoropentanoic acid	0.5 ng/mL
							Perfluorotetradecanoic acid	0.5 ng/mL
							Perfluorotridecanoic acid	0.5 ng/mL
							Perfluoroundecanoic acid	0.5 ng/mL
.LCMPFC2SU_00014	08/13/17	02/13/17	Methanol, Lot 104453	50000 uL	LCd-NEtFOSA-M_00004	1000 uL	d-N-EtFOSA-M	1 ug/mL

Lab Name: TestAmerica Sacramento Job No.: 320-25962-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					LCd-NMeFOSA-M_00003	1000 uL	d-N-MeFOSA-M	1 ug/mL
					LCd3-NMeFOSAA_00003	1000 uL	d3-NMeFOSAA	1 ug/mL
					LCd5-NEtFOSAA_00003	1000 uL	d5-NEtFOSAA	1 ug/mL
					LCM2-6:FTS_00003	1000 uL	M2-6:2FTS	0.95 ug/mL
					LCM2-8:2FTS_00003	1000 uL	M2-8:2FTS	0.958 ug/mL
..LCd-NEtFOSA-M_00004	06/10/21	WELLINGTON, Lot dNEtFOSA0616M			(Purchased Reagent)		d-N-EtFOSA-M	50 ug/mL
..LCd-NMeFOSA-M_00003	06/10/21	WELLINGTON, Lot dNMeFOSA0616M			(Purchased Reagent)		d-N-MeFOSA-M	50 ug/mL
..LCd3-NMeFOSAA_00003	05/31/21	WELLINGTON, Lot d3NMeFOSAA0516			(Purchased Reagent)		d3-NMeFOSAA	50 ug/mL
..LCd5-NEtFOSAA_00003	08/02/21	WELLINGTON, Lot d5NEtFOSAA0716			(Purchased Reagent)		d5-NEtFOSAA	50 ug/mL
..LCM2-6:FTS_00003	01/08/21	WELLINGTON, Lot M262FTS0116			(Purchased Reagent)		M2-6:2FTS	47.5 ug/mL
..LCM2-8:2FTS_00003	01/08/21	WELLINGTON, Lot M282FTS0116			(Purchased Reagent)		M2-8:2FTS	47.9 ug/mL
.LCMPFCSU_00047	06/14/17	12/14/16	Methanol, Lot Baker 144541	50000 uL	LCM2PFHxDA_00008	1000 uL	13C2-PFHxDA	1 ug/mL
					LCM2PFTeDA_00007	1000 uL	13C2-PFTeDA	1 ug/mL
					LCM4PFHPA_00007	1000 uL	13C4-PFHpA	1 ug/mL
					LCM5PFPEA_00008	1000 uL	13C5-PFPeA	1 ug/mL
					LCM8FOSA_00011	1000 uL	13C8 FOSA	1 ug/mL
					LCMPFBA_00008	1000 uL	13C4 PFBA	1 ug/mL
					LCMPFDA_00011	1000 uL	13C2 PFDA	1 ug/mL
					LCMPFDoA_00008	1000 uL	13C2 PFDoA	1 ug/mL
					LCMPFHxA_00012	1000 uL	13C2 PFHxA	1 ug/mL
					LCMPFHxS_00008	1000 uL	18O2 PFHxS	0.946 ug/mL
					LCMPFNA_00008	1000 uL	13C5 PFNA	1 ug/mL
					LCMPFOA_00012	1000 uL	13C4 PFOA	1 ug/mL
					LCMPFOS_00017	1000 uL	13C4 PFOS	0.956 ug/mL
					LCMPFUdA_00009	1000 uL	13C2 PFUnA	1 ug/mL
..LCM2PFHxDA_00008	01/07/21	Wellington Laboratories, Lot M2PFHxDA1112			(Purchased Reagent)		13C2-PFHxDA	50 ug/mL
..LCM2PFTeDA_00007	12/07/20	Wellington Laboratories, Lot M2PFTeDA1115			(Purchased Reagent)		13C2-PFTeDA	50 ug/mL
..LCM4PFHPA_00007	05/27/21	Wellington Laboratories, Lot M4PFHpA0516			(Purchased Reagent)		13C4-PFHpA	50 ug/mL
..LCM5PFPEA_00008	05/22/20	Wellington Laboratories, Lot M5PFPeA0515			(Purchased Reagent)		13C5-PFPeA	50 ug/mL
..LCM8FOSA_00011	12/22/17	Wellington Laboratories, Lot M8FOSA1215I			(Purchased Reagent)		13C8 FOSA	50 ug/mL
..LCMPFBA_00008	05/24/21	Wellington Laboratories, Lot MPFBA0516			(Purchased Reagent)		13C4 PFBA	50 ug/mL
..LCMPFDA_00011	08/19/20	Wellington Laboratories, Lot MPFDA0815			(Purchased Reagent)		13C2 PFDA	50 ug/mL
..LCMPFDoA_00008	04/08/21	Wellington Laboratories, Lot MPFDoA0416			(Purchased Reagent)		13C2 PFDoA	50 ug/mL
..LCMPFHxA_00012	04/08/21	Wellington Laboratories, Lot MPFHxA0416			(Purchased Reagent)		13C2 PFHxA	50 ug/mL
..LCMPFHxS_00008	10/23/20	Wellington Laboratories, Lot MPFHxS1015			(Purchased Reagent)		18O2 PFHxS	47.3 ug/mL
..LCMPFNA_00008	04/13/19	Wellington Laboratories, Lot MPFNA0414			(Purchased Reagent)		13C5 PFNA	50 ug/mL
..LCMPFOA_00012	01/22/21	Wellington Laboratories, Lot MPFOA0116			(Purchased Reagent)		13C4 PFOA	50 ug/mL
..LCMPFOS_00017	08/03/21	Wellington Laboratories, Lot MPFOS0816			(Purchased Reagent)		13C4 PFOS	47.8 ug/mL
..LCMPFUdA_00009	02/12/21	Wellington Laboratories, Lot MPFUdA0216			(Purchased Reagent)		13C2 PFUnA	50 ug/mL
.LCPFC2SP_00025	06/28/17	01/30/17	Methanol, Lot 104453	10000 uL	LCPFC2SP_00020	2000 uL	Sodium 1H,1H,2H,2H-perfluorooctane sulfonate (6:2)	0.0948 ug/mL
							Sodium 1H,1H,2H,2H-perfluorooctane sulfonate (8:2)	0.0958 ug/mL
							N-ethylperfluoro-1-octanesulfonamide	0.1 ug/mL

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							N-ethyl perfluorooctane sulfonamidoacetic acid	0.1 ug/mL
							MeFOSA	0.1 ug/mL
							N-methyl perfluorooctane sulfonamidoacetic acid	0.1 ug/mL
..LCPFC2SP_00020	06/28/17	12/28/16	Methanol, Lot 104453	10000 uL	LC6:2FTS_00002	100 uL	Sodium 1H,1H,2H,2H-perfluorooctane sulfonate (6:2)	0.474 ug/mL
					LC8:2FTS_00002	100 uL	Sodium 1H,1H,2H,2H-perfluorooctane sulfonate (8:2)	0.479 ug/mL
					LCN-EtFOSA-M_00003	100 uL	N-ethylperfluoro-1-octanesulfonamide	0.5 ug/mL
					LCN-EtFOSAA_00002	100 uL	N-ethyl perfluorooctane sulfonamidoacetic acid	0.5 ug/mL
					LCN-MeFOSA-M_00002	100 uL	MeFOSA	0.5 ug/mL
					LCN-MeFOSAA_00003	100 uL	N-methyl perfluorooctane sulfonamidoacetic acid	0.5 ug/mL
...LC6:2FTS_00002	06/25/21	WELLINGTON, Lot 62FTS0616			(Purchased Reagent)		Sodium 1H,1H,2H,2H-perfluorooctane sulfonate (6:2)	47.4 ug/mL
...LC8:2FTS_00002	10/23/20	WELLINGTON, Lot 82FTS1015			(Purchased Reagent)		Sodium 1H,1H,2H,2H-perfluorooctane sulfonate (8:2)	47.9 ug/mL
...LCN-EtFOSA-M_00003	05/24/21	WELLINGTON, Lot NEtFOSA0516M			(Purchased Reagent)		N-ethylperfluoro-1-octanesulfonamide	50 ug/mL
...LCN-EtFOSAA_00002	01/20/21	WELLINGTON, Lot NEtFOSAA0116			(Purchased Reagent)		N-ethyl perfluorooctane sulfonamidoacetic acid	50 ug/mL
...LCN-MeFOSA-M_00002	05/24/21	WELLINGTON, Lot NMeFOSA0714M			(Purchased Reagent)		MeFOSA	50 ug/mL
...LCN-MeFOSAA_00003	01/20/21	WELLINGTON, Lot NMeFOSAA0116			(Purchased Reagent)		N-methyl perfluorooctane sulfonamidoacetic acid	50 ug/mL
.LCPFCSP_00078	06/14/17	01/16/17	Methanol, Lot 090285	10000 uL	LCPFCSP_00075	2000 uL	Perfluorobutyric acid	0.1 ug/mL
							Perfluorobutanesulfonic acid (PFBS)	0.0884 ug/mL
							Perfluorodecanoic acid	0.1 ug/mL
							Perfluorododecanoic acid	0.1 ug/mL
							Perfluorodecane Sulfonic acid	0.0964 ug/mL
							Perfluoroheptanoic acid	0.1 ug/mL
							Perfluoroheptanesulfonic Acid	0.0952 ug/mL
							Perfluorohexanoic acid	0.1 ug/mL
							Perfluorohexadecanoic acid	0.1 ug/mL
							Perfluorohexanesulfonic acid	0.091 ug/mL
							Perfluorononanoic acid	0.1 ug/mL
							Perfluorooctanoic acid (PFOA)	0.1 ug/mL
							Perfluorooctadecanoic acid	0.1 ug/mL
							Perfluorooctanesulfonic acid (PFOS)	0.0928 ug/mL
							Perfluorooctane Sulfonamide	0.1 ug/mL
							Perfluoropentanoic acid	0.1 ug/mL
							Perfluorotetradecanoic acid	0.1 ug/mL

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Perfluorotridecanoic acid	0.1 ug/mL
							Perfluoroundecanoic acid	0.1 ug/mL
..LCPFCSP_00075	06/14/17	12/14/16	Methanol, Lot 090285	10000 uL	LCPFCSP_00074	5000 uL	Perfluorobutyric acid	0.5 ug/mL
							Perfluorobutanesulfonic acid (PFBS)	0.442 ug/mL
							Perfluorodecanoic acid	0.5 ug/mL
							Perfluorododecanoic acid	0.5 ug/mL
							Perfluorodecane Sulfonic acid	0.482 ug/mL
							Perfluoroheptanoic acid	0.5 ug/mL
							Perfluoroheptanesulfonic Acid	0.476 ug/mL
							Perfluorohexanoic acid	0.5 ug/mL
							Perfluorohexadecanoic acid	0.5 ug/mL
							Perfluorohexanesulfonic acid	0.455 ug/mL
							Perfluorononanoic acid	0.5 ug/mL
							Perfluorooctanoic acid (PFOA)	0.5 ug/mL
							Perfluorooctadecanoic acid	0.5 ug/mL
							Perfluorooctanesulfonic acid (PFOS)	0.464 ug/mL
							Perfluorooctane Sulfonamide	0.5 ug/mL
							Perfluoropentanoic acid	0.5 ug/mL
							Perfluorotetradecanoic acid	0.5 ug/mL
							Perfluorotridecanoic acid	0.5 ug/mL
							Perfluoroundecanoic acid	0.5 ug/mL
...LCPFCSP_00074	06/14/17	12/14/16	Methanol, Lot 090285	10000 uL	LCPFBA_00005	200 uL	Perfluorobutyric acid	1 ug/mL
					LCPFBS_00005	200 uL	Perfluorobutanesulfonic acid (PFBS)	0.884 ug/mL
					LCPFDA_00005	200 uL	Perfluorodecanoic acid	1 ug/mL
					LCPFDoA_00005	200 uL	Perfluorododecanoic acid	1 ug/mL
					LCPFDS_00006	200 uL	Perfluorodecane Sulfonic acid	0.964 ug/mL
					LCPFHpA_00006	200 uL	Perfluoroheptanoic acid	1 ug/mL
					LCPFHpS_00009	200 uL	Perfluoroheptanesulfonic Acid	0.952 ug/mL
					LCPFHxA_00005	200 uL	Perfluorohexanoic acid	1 ug/mL
					LCPFHxDA_00006	200 uL	Perfluorohexadecanoic acid	1 ug/mL
					LCPFHxS-br_00002	200 uL	Perfluorohexanesulfonic acid	0.91 ug/mL
					LCPFNA_00006	200 uL	Perfluorononanoic acid	1 ug/mL
					LCPFOA_00006	200 uL	Perfluorooctanoic acid (PFOA)	1 ug/mL
					LCPFODA_00006	200 uL	Perfluorooctadecanoic acid	1 ug/mL
					LCPFOS-br_00002	200 uL	Perfluorooctanesulfonic acid (PFOS)	0.928 ug/mL
					LCPFOSA_00008	200 uL	Perfluorooctane Sulfonamide	1 ug/mL
					LCPFPeA_00005	200 uL	Perfluoropentanoic acid	1 ug/mL
					LCPFTeDA_00005	200 uL	Perfluorotetradecanoic acid	1 ug/mL
					LCPFTrDA_00005	200 uL	Perfluorotridecanoic acid	1 ug/mL
					LCPFUdA_00005	200 uL	Perfluoroundecanoic acid	1 ug/mL
....LCPFBA_00005	05/27/21	Wellington Laboratories, Lot PFBA0516			(Purchased Reagent)		Perfluorobutyric acid	50 ug/mL
....LCPFBS_00005	03/15/21	Wellington Laboratories, Lot LPFBS0316			(Purchased Reagent)		Perfluorobutanesulfonic acid (PFBS)	44.2 ug/mL
....LCPFDA_00005	07/02/20	Wellington Laboratories, Lot PFDA0615			(Purchased Reagent)		Perfluorodecanoic acid	50 ug/mL

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
....LCPFDoA_00005	01/30/20	Wellington Laboratories, Lot PFDoA0115			(Purchased Reagent)		Perfluorododecanoic acid	50 ug/mL
....LCPFDS_00006	05/24/21	Wellington Laboratories, Lot LPFDS0516			(Purchased Reagent)		Perfluorodecane Sulfonic acid	48.2 ug/mL
....LCPFHpA_00006	01/22/21	Wellington Laboratories, Lot PFHpA0116			(Purchased Reagent)		Perfluoroheptanoic acid	50 ug/mL
....LCPFHpS_00009	11/06/20	Wellington Laboratories, Lot LPFHpS1115			(Purchased Reagent)		Perfluoroheptanesulfonic Acid	47.6 ug/mL
....LCPFHxA_00005	12/22/20	Wellington Laboratories, Lot PFHxA1215			(Purchased Reagent)		Perfluorohexanoic acid	50 ug/mL
....LCPFHxDA_00006	05/25/21	Wellington Laboratories, Lot PFHxDA0516			(Purchased Reagent)		Perfluorohexadecanoic acid	50 ug/mL
....LCPFHxS-br_00002	07/03/20	Wellington Laboratories, Lot brPFHxSK0615			(Purchased Reagent)		Perfluorohexanesulfonic acid	45.5 ug/mL
....LCPFNA_00006	10/23/20	Wellington Laboratories, Lot PFNA1015			(Purchased Reagent)		Perfluorononanoic acid	50 ug/mL
....LCPFOA_00006	11/06/20	Wellington Laboratories, Lot PFOA1115			(Purchased Reagent)		Perfluorooctanoic acid (PFOA)	50 ug/mL
....LCPFODA_00006	04/29/21	Wellington Laboratories, Lot PFODA0416			(Purchased Reagent)		Perfluorooctadecanoic acid	50 ug/mL
....LCPFOS-br_00002	10/14/20	Wellington Laboratories, Lot brPFOSK1015			(Purchased Reagent)		Perfluorooctanesulfonic acid (PFOS)	46.4 ug/mL
....LCPFOSA_00008	09/02/17	Wellington Laboratories, Lot FOSA0815I			(Purchased Reagent)		Perfluorooctane Sulfonamide	50 ug/mL
....LCPFPeA_00005	01/30/20	Wellington Laboratories, Lot PFPeA0115			(Purchased Reagent)		Perfluoropentanoic acid	50 ug/mL
....LCPFTeDA_00005	12/09/20	Wellington Laboratories, Lot PFTeDA1215			(Purchased Reagent)		Perfluorotetradecanoic acid	50 ug/mL
....LCPFTrDA_00005	02/12/21	Wellington Laboratories, Lot PFTrDA0216			(Purchased Reagent)		Perfluorotridecanoic acid	50 ug/mL
....LCPFUdA_00005	08/19/20	Wellington Laboratories, Lot PFUdA0815			(Purchased Reagent)		Perfluoroundecanoic acid	50 ug/mL
LCPFC_FULL-L2_00001	06/14/17	02/16/17	MeOH/H2O, Lot 090285	5 mL	LCMPFC2SU_00014	250 uL	d-N-EtFOSA-M	50 ng/mL
							d-N-MeFOSA-M	50 ng/mL
							d3-NMeFOSAA	50 ng/mL
							d5-NEtFOSAA	50 ng/mL
							M2-6:2FTS	47.5 ng/mL
							M2-8:2FTS	47.9 ng/mL
					LCMPFCSU_00047	250 uL	13C2-PFHxDA	50 ng/mL
							13C2-PFTeDA	50 ng/mL
							13C4-PFHpA	50 ng/mL
							13C5-PFPeA	50 ng/mL
							13C8 FOSA	50 ng/mL
							13C4 PFBA	50 ng/mL
							13C2 PFDA	50 ng/mL
							13C2 PFDoA	50 ng/mL
							13C2 PFHxA	50 ng/mL
							18O2 PFHxS	47.3 ng/mL
							13C5 PFNA	50 ng/mL
							13C4 PFOA	50 ng/mL
							13C4 PFOS	47.8 ng/mL
							13C2 PFUnA	50 ng/mL
					LCPFC2SP_00025	50 uL	Sodium 1H,1H,2H,2H-perfluorooctane sulfonate (6:2)	0.948 ng/mL
							Sodium 1H,1H,2H,2H-perfluorooctane sulfonate (8:2)	0.958 ng/mL
							N-ethylperfluoro-1-octanesulfonamide	1 ng/mL
							N-ethyl perfluorooctane sulfonamidoacetic acid	1 ng/mL
							MeFOSA	1 ng/mL

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							N-methyl perfluorooctane sulfonamidoacetic acid	1 ng/mL
					LCPFCSP_00078	50 uL	Perfluorobutyric acid	1 ng/mL
							Perfluorobutanesulfonic acid (PFBS)	0.884 ng/mL
							Perfluorodecanoic acid	1 ng/mL
							Perfluorododecanoic acid	1 ng/mL
							Perfluorodecane Sulfonic acid	0.964 ng/mL
							Perfluoroheptanoic acid	1 ng/mL
							Perfluoroheptanesulfonic Acid	0.952 ng/mL
							Perfluorohexanoic acid	1 ng/mL
							Perfluorohexadecanoic acid	1 ng/mL
							Perfluorohexanesulfonic acid	0.91 ng/mL
							Perfluorononanoic acid	1 ng/mL
							Perfluorooctanoic acid (PFOA)	1 ng/mL
							Perfluorooctadecanoic acid	1 ng/mL
							Perfluorooctanesulfonic acid (PFOS)	0.928 ng/mL
							Perfluorooctane Sulfonamide	1 ng/mL
							Perfluoropentanoic acid	1 ng/mL
							Perfluorotetradecanoic acid	1 ng/mL
							Perfluorotridecanoic acid	1 ng/mL
							Perfluoroundecanoic acid	1 ng/mL
.LCMPFC2SU_00014	08/13/17	02/13/17	Methanol, Lot 104453	50000 uL	LCd-NEtFOSA-M_00004	1000 uL	d-N-EtFOSA-M	1 ug/mL
					LCd-NMeFOSA-M_00003	1000 uL	d-N-MeFOSA-M	1 ug/mL
					LCd3-NMeFOSAA_00003	1000 uL	d3-NMeFOSAA	1 ug/mL
					LCd5-NEtFOSAA_00003	1000 uL	d5-NEtFOSAA	1 ug/mL
					LCM2-6:FTS_00003	1000 uL	M2-6:2FTS	0.95 ug/mL
					LCM2-8:2FTS_00003	1000 uL	M2-8:2FTS	0.958 ug/mL
..LCd-NEtFOSA-M_00004	06/10/21	WELLINGTON, Lot dNEtFOSA0616M			(Purchased Reagent)		d-N-EtFOSA-M	50 ug/mL
..LCd-NMeFOSA-M_00003	06/10/21	WELLINGTON, Lot dNMeFOSA0616M			(Purchased Reagent)		d-N-MeFOSA-M	50 ug/mL
..LCd3-NMeFOSAA_00003	05/31/21	WELLINGTON, Lot d3NMeFOSAA0516			(Purchased Reagent)		d3-NMeFOSAA	50 ug/mL
..LCd5-NEtFOSAA_00003	08/02/21	WELLINGTON, Lot d5NEtFOSAA0716			(Purchased Reagent)		d5-NEtFOSAA	50 ug/mL
..LCM2-6:FTS_00003	01/08/21	WELLINGTON, Lot M262FTS0116			(Purchased Reagent)		M2-6:2FTS	47.5 ug/mL
..LCM2-8:2FTS_00003	01/08/21	WELLINGTON, Lot M282FTS0116			(Purchased Reagent)		M2-8:2FTS	47.9 ug/mL
.LCMPFCSU_00047	06/14/17	12/14/16	Methanol, Lot Baker 144541	50000 uL	LCM2PFHxDA_00008	1000 uL	13C2-PFHxDA	1 ug/mL
					LCM2PFTeDA_00007	1000 uL	13C2-PFTeDA	1 ug/mL
					LCM4PFHPA_00007	1000 uL	13C4-PFHpA	1 ug/mL
					LCM5PFPEA_00008	1000 uL	13C5-PFPeA	1 ug/mL
					LCM8FOSA_00011	1000 uL	13C8 FOSA	1 ug/mL
					LCMPFBA_00008	1000 uL	13C4 PFBA	1 ug/mL
					LCMPFDA_00011	1000 uL	13C2 PFDA	1 ug/mL
					LCMPFDoA_00008	1000 uL	13C2 PFDoA	1 ug/mL
					LCMPFHxA_00012	1000 uL	13C2 PFHxA	1 ug/mL
					LCMPFHxS_00008	1000 uL	18O2 PFHxS	0.946 ug/mL
					LCMPFNA_00008	1000 uL	13C5 PFNA	1 ug/mL
					LCMPFOA_00012	1000 uL	13C4 PFOA	1 ug/mL

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					LCMPFOS_00017	1000 uL	13C4 PFOS	0.956 ug/mL
					LCMPFUdA_00009	1000 uL	13C2 PFUnA	1 ug/mL
..LCM2PFHxDA_00008	01/07/21	Wellington Laboratories, Lot M2PFHxDA1112			(Purchased Reagent)		13C2-PFHxDA	50 ug/mL
..LCM2PFTeDA_00007	12/07/20	Wellington Laboratories, Lot M2PFTeDA1115			(Purchased Reagent)		13C2-PFTeDA	50 ug/mL
..LCM4PFHPA_00007	05/27/21	Wellington Laboratories, Lot M4PFHpA0516			(Purchased Reagent)		13C4-PFHpA	50 ug/mL
..LCM5PFPEA_00008	05/22/20	Wellington Laboratories, Lot M5PFPeA0515			(Purchased Reagent)		13C5-PFPeA	50 ug/mL
..LCM8FOSA_00011	12/22/17	Wellington Laboratories, Lot M8FOSA1215I			(Purchased Reagent)		13C8 FOSA	50 ug/mL
..LCMPFBA_00008	05/24/21	Wellington Laboratories, Lot MPFBA0516			(Purchased Reagent)		13C4 PFBA	50 ug/mL
..LCMPFDA_00011	08/19/20	Wellington Laboratories, Lot MPFDA0815			(Purchased Reagent)		13C2 PFDA	50 ug/mL
..LCMPFDoA_00008	04/08/21	Wellington Laboratories, Lot MPFDoA0416			(Purchased Reagent)		13C2 PFDoA	50 ug/mL
..LCMPFHxA_00012	04/08/21	Wellington Laboratories, Lot MPFHxA0416			(Purchased Reagent)		13C2 PFHxA	50 ug/mL
..LCMPFHxS_00008	10/23/20	Wellington Laboratories, Lot MPFHxS1015			(Purchased Reagent)		18O2 PFHxS	47.3 ug/mL
..LCMPFNA_00008	04/13/19	Wellington Laboratories, Lot MPFNA0414			(Purchased Reagent)		13C5 PFNA	50 ug/mL
..LCMPFOA_00012	01/22/21	Wellington Laboratories, Lot MPFOA0116			(Purchased Reagent)		13C4 PFOA	50 ug/mL
..LCMPFOS_00017	08/03/21	Wellington Laboratories, Lot MPFOS0816			(Purchased Reagent)		13C4 PFOS	47.8 ug/mL
..LCMPFUdA_00009	02/12/21	Wellington Laboratories, Lot MPFUdA0216			(Purchased Reagent)		13C2 PFUnA	50 ug/mL
.LCPFC2SP_00025	06/28/17	01/30/17	Methanol, Lot 104453	10000 uL	LCPFC2SP_00020	2000 uL	Sodium 1H,1H,2H,2H-perfluorooctane sulfonate (6:2)	0.0948 ug/mL
							Sodium 1H,1H,2H,2H-perfluorooctane sulfonate (8:2)	0.0958 ug/mL
							N-ethylperfluoro-1-octanesulfonamide	0.1 ug/mL
							N-ethyl perfluorooctane sulfonamidoacetic acid	0.1 ug/mL
							MeFOSA	0.1 ug/mL
							N-methyl perfluorooctane sulfonamidoacetic acid	0.1 ug/mL
..LCPFC2SP_00020	06/28/17	12/28/16	Methanol, Lot 104453	10000 uL	LC6:2FTS_00002	100 uL	Sodium 1H,1H,2H,2H-perfluorooctane sulfonate (6:2)	0.474 ug/mL
					LC8:2FTS_00002	100 uL	Sodium 1H,1H,2H,2H-perfluorooctane sulfonate (8:2)	0.479 ug/mL
					LCN-EtFOSA-M_00003	100 uL	N-ethylperfluoro-1-octanesulfonamide	0.5 ug/mL
					LCN-EtFOSAA_00002	100 uL	N-ethyl perfluorooctane sulfonamidoacetic acid	0.5 ug/mL
					LCN-MeFOSA-M_00002	100 uL	MeFOSA	0.5 ug/mL
					LCN-MeFOSAA_00003	100 uL	N-methyl perfluorooctane sulfonamidoacetic acid	0.5 ug/mL
...LC6:2FTS_00002	06/25/21	WELLINGTON, Lot 62FTS0616			(Purchased Reagent)		Sodium 1H,1H,2H,2H-perfluorooctane sulfonate (6:2)	47.4 ug/mL
...LC8:2FTS_00002	10/23/20	WELLINGTON, Lot 82FTS1015			(Purchased Reagent)		Sodium 1H,1H,2H,2H-perfluorooctane sulfonate (8:2)	47.9 ug/mL
...LCN-EtFOSA-M_00003	05/24/21	WELLINGTON, Lot NEtFOSA0516M			(Purchased Reagent)		N-ethylperfluoro-1-octanesulfonamide	50 ug/mL

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Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
...LCN-EtFOSAA_00002	01/20/21	WELLINGTON, Lot NEtFOSAA0116			(Purchased Reagent)		N-ethyl perfluorooctane sulfonamidoacetic acid	50 ug/mL
...LCN-MeFOSA-M_00002	05/24/21	WELLINGTON, Lot NMeFOSA0714M			(Purchased Reagent)		MeFOSA	50 ug/mL
...LCN-MeFOSAA_00003	01/20/21	WELLINGTON, Lot NMeFOSAA0116			(Purchased Reagent)		N-methyl perfluorooctane sulfonamidoacetic acid	50 ug/mL
.LCPFCSP_00078	06/14/17	01/16/17	Methanol, Lot 090285	10000 uL	LCPFCSP_00075	2000 uL	Perfluorobutyric acid	0.1 ug/mL
							Perfluorobutanesulfonic acid (PFBS)	0.0884 ug/mL
							Perfluorodecanoic acid	0.1 ug/mL
							Perfluorododecanoic acid	0.1 ug/mL
							Perfluorodecane Sulfonic acid	0.0964 ug/mL
							Perfluoroheptanoic acid	0.1 ug/mL
							Perfluoroheptanesulfonic Acid	0.0952 ug/mL
							Perfluorohexanoic acid	0.1 ug/mL
							Perfluorohexadecanoic acid	0.1 ug/mL
							Perfluorohexanesulfonic acid	0.091 ug/mL
							Perfluorononanoic acid	0.1 ug/mL
							Perfluorooctanoic acid (PFOA)	0.1 ug/mL
							Perfluorooctadecanoic acid	0.1 ug/mL
							Perfluorooctanesulfonic acid (PFOS)	0.0928 ug/mL
							Perfluorooctane Sulfonamide	0.1 ug/mL
							Perfluoropentanoic acid	0.1 ug/mL
							Perfluorotetradecanoic acid	0.1 ug/mL
							Perfluorotridecanoic acid	0.1 ug/mL
							Perfluoroundecanoic acid	0.1 ug/mL
..LCPFCSP_00075	06/14/17	12/14/16	Methanol, Lot 090285	10000 uL	LCPFCSP_00074	5000 uL	Perfluorobutyric acid	0.5 ug/mL
							Perfluorobutanesulfonic acid (PFBS)	0.442 ug/mL
							Perfluorodecanoic acid	0.5 ug/mL
							Perfluorododecanoic acid	0.5 ug/mL
							Perfluorodecane Sulfonic acid	0.482 ug/mL
							Perfluoroheptanoic acid	0.5 ug/mL
							Perfluoroheptanesulfonic Acid	0.476 ug/mL
							Perfluorohexanoic acid	0.5 ug/mL
							Perfluorohexadecanoic acid	0.5 ug/mL
							Perfluorohexanesulfonic acid	0.455 ug/mL
							Perfluorononanoic acid	0.5 ug/mL
							Perfluorooctanoic acid (PFOA)	0.5 ug/mL
							Perfluorooctadecanoic acid	0.5 ug/mL
							Perfluorooctanesulfonic acid (PFOS)	0.464 ug/mL
							Perfluorooctane Sulfonamide	0.5 ug/mL
							Perfluoropentanoic acid	0.5 ug/mL
							Perfluorotetradecanoic acid	0.5 ug/mL
							Perfluorotridecanoic acid	0.5 ug/mL
							Perfluoroundecanoic acid	0.5 ug/mL
...LCPFCSP_00074	06/14/17	12/14/16	Methanol, Lot 090285	10000 uL	LCPFBA_00005	200 uL	Perfluorobutyric acid	1 ug/mL

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Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					LCPFBS_00005	200 uL	Perfluorobutanesulfonic acid (PFBS)	0.884 ug/mL
					LCPFDA_00005	200 uL	Perfluorodecanoic acid	1 ug/mL
					LCPFDoA_00005	200 uL	Perfluorododecanoic acid	1 ug/mL
					LCPFDS_00006	200 uL	Perfluorodecane Sulfonic acid	0.964 ug/mL
					LCPFHpA_00006	200 uL	Perfluoroheptanoic acid	1 ug/mL
					LCPFHpS_00009	200 uL	Perfluoroheptanesulfonic Acid	0.952 ug/mL
					LCPFHxA_00005	200 uL	Perfluorohexanoic acid	1 ug/mL
					LCPFHxDA_00006	200 uL	Perfluorohexadecanoic acid	1 ug/mL
					LCPFHxS-br_00002	200 uL	Perfluorohexanesulfonic acid	0.91 ug/mL
					LCPFNA_00006	200 uL	Perfluorononanoic acid	1 ug/mL
					LCPFOA_00006	200 uL	Perfluorooctanoic acid (PFOA)	1 ug/mL
					LCPFODA_00006	200 uL	Perfluorooctadecanoic acid	1 ug/mL
					LCPFOS-br_00002	200 uL	Perfluorooctanesulfonic acid (PFOS)	0.928 ug/mL
					LCPFOSA_00008	200 uL	Perfluorooctane Sulfonamide	1 ug/mL
					LCPFPeA_00005	200 uL	Perfluoropentanoic acid	1 ug/mL
					LCPFTeDA_00005	200 uL	Perfluorotetradecanoic acid	1 ug/mL
					LCPFTrDA_00005	200 uL	Perfluorotridecanoic acid	1 ug/mL
					LCPFUdA_00005	200 uL	Perfluoroundecanoic acid	1 ug/mL
....LCPFBA_00005	05/27/21	Wellington Laboratories, Lot PFBA0516			(Purchased Reagent)		Perfluorobutyric acid	50 ug/mL
....LCPFBS_00005	03/15/21	Wellington Laboratories, Lot LPFBS0316			(Purchased Reagent)		Perfluorobutanesulfonic acid (PFBS)	44.2 ug/mL
....LCPFDA_00005	07/02/20	Wellington Laboratories, Lot PFDA0615			(Purchased Reagent)		Perfluorodecanoic acid	50 ug/mL
....LCPFDoA_00005	01/30/20	Wellington Laboratories, Lot PFDoA0115			(Purchased Reagent)		Perfluorododecanoic acid	50 ug/mL
....LCPFDS_00006	05/24/21	Wellington Laboratories, Lot LPFDS0516			(Purchased Reagent)		Perfluorodecane Sulfonic acid	48.2 ug/mL
....LCPFHpA_00006	01/22/21	Wellington Laboratories, Lot PFHpA0116			(Purchased Reagent)		Perfluoroheptanoic acid	50 ug/mL
....LCPFHpS_00009	11/06/20	Wellington Laboratories, Lot LPFHpS1115			(Purchased Reagent)		Perfluoroheptanesulfonic Acid	47.6 ug/mL
....LCPFHxA_00005	12/22/20	Wellington Laboratories, Lot PFHxA1215			(Purchased Reagent)		Perfluorohexanoic acid	50 ug/mL
....LCPFHxDA_00006	05/25/21	Wellington Laboratories, Lot PFHxDA0516			(Purchased Reagent)		Perfluorohexadecanoic acid	50 ug/mL
....LCPFHxS-br_00002	07/03/20	Wellington Laboratories, Lot brPFHxSK0615			(Purchased Reagent)		Perfluorohexanesulfonic acid	45.5 ug/mL
....LCPFNA_00006	10/23/20	Wellington Laboratories, Lot PFNA1015			(Purchased Reagent)		Perfluorononanoic acid	50 ug/mL
....LCPFOA_00006	11/06/20	Wellington Laboratories, Lot PFOA1115			(Purchased Reagent)		Perfluorooctanoic acid (PFOA)	50 ug/mL
....LCPFODA_00006	04/29/21	Wellington Laboratories, Lot PFODA0416			(Purchased Reagent)		Perfluorooctadecanoic acid	50 ug/mL
....LCPFOS-br_00002	10/14/20	Wellington Laboratories, Lot brPFOSK1015			(Purchased Reagent)		Perfluorooctanesulfonic acid (PFOS)	46.4 ug/mL
....LCPFOSA_00008	09/02/17	Wellington Laboratories, Lot FOSA0815I			(Purchased Reagent)		Perfluorooctane Sulfonamide	50 ug/mL
....LCPFPeA_00005	01/30/20	Wellington Laboratories, Lot PFPeA0115			(Purchased Reagent)		Perfluoropentanoic acid	50 ug/mL
....LCPFTeDA_00005	12/09/20	Wellington Laboratories, Lot PFTeDA1215			(Purchased Reagent)		Perfluorotetradecanoic acid	50 ug/mL
....LCPFTrDA_00005	02/12/21	Wellington Laboratories, Lot PFTrDA0216			(Purchased Reagent)		Perfluorotridecanoic acid	50 ug/mL
....LCPFUdA_00005	08/19/20	Wellington Laboratories, Lot PFUdA0815			(Purchased Reagent)		Perfluoroundecanoic acid	50 ug/mL
LCPFC_FULL-L3_00001	06/14/17	02/16/17	MeOH/H2O, Lot 090285	5 mL	LCMPFC2SU_00014	250 uL	d-N-EtFOSA-M	50 ng/mL
							d-N-MeFOSA-M	50 ng/mL
							d3-NMeFOSAA	50 ng/mL
							d5-NEtFOSAA	50 ng/mL
							M2-6:2FTS	47.5 ng/mL
							M2-8:2FTS	47.9 ng/mL
					LCMPFCSU_00047	250 uL	13C2-PFHxDA	50 ng/mL

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Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							13C2-PFTeDA	50 ng/mL
							13C4-PFHpA	50 ng/mL
							13C5-PFPeA	50 ng/mL
							13C8 FOSA	50 ng/mL
							13C4 PFBA	50 ng/mL
							13C2 PFDA	50 ng/mL
							13C2 PFDoA	50 ng/mL
							13C2 PFHxA	50 ng/mL
							18O2 PFHxS	47.3 ng/mL
							13C5 PFNA	50 ng/mL
							13C4 PFOA	50 ng/mL
							13C4 PFOS	47.8 ng/mL
							13C2 PFUnA	50 ng/mL
					LCPFC2SP_00025	250 uL	Sodium 1H,1H,2H,2H-perfluorooctane sulfonate (6:2)	4.74 ng/mL
							Sodium 1H,1H,2H,2H-perfluorooctane sulfonate (8:2)	4.79 ng/mL
							N-ethylperfluoro-1-octanesulfonamide	5 ng/mL
							N-ethyl perfluorooctane sulfonamidoacetic acid	5 ng/mL
							MeFOSA	5 ng/mL
							N-methyl perfluorooctane sulfonamidoacetic acid	5 ng/mL
					LCPFCSP_00078	250 uL	Perfluorobutyric acid	5 ng/mL
							Perfluorobutanesulfonic acid (PFBS)	4.42 ng/mL
							Perfluorodecanoic acid	5 ng/mL
							Perfluorododecanoic acid	5 ng/mL
							Perfluorodecane Sulfonic acid	4.82 ng/mL
							Perfluoroheptanoic acid	5 ng/mL
							Perfluoroheptanesulfonic Acid	4.76 ng/mL
							Perfluorohexanoic acid	5 ng/mL
							Perfluorohexadecanoic acid	5 ng/mL
							Perfluorohexanesulfonic acid	4.55 ng/mL
							Perfluorononanoic acid	5 ng/mL
							Perfluorooctanoic acid (PFOA)	5 ng/mL
							Perfluorooctadecanoic acid	5 ng/mL
							Perfluorooctanesulfonic acid (PFOS)	4.64 ng/mL
							Perfluorooctane Sulfonamide	5 ng/mL
							Perfluoropentanoic acid	5 ng/mL
							Perfluorotetradecanoic acid	5 ng/mL
							Perfluorotridecanoic acid	5 ng/mL
							Perfluoroundecanoic acid	5 ng/mL
.LCMPFC2SU_00014	08/13/17	02/13/17	Methanol, Lot 104453	50000 uL	LCd-NEtFOSA-M_00004	1000 uL	d-N-EtFOSA-M	1 ug/mL
					LCd-NMeFOSA-M_00003	1000 uL	d-N-MeFOSA-M	1 ug/mL

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Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					LCd3-NMeFOSAA_00003	1000 uL	d3-NMeFOSAA	1 ug/mL
					LCd5-NEtFOSAA_00003	1000 uL	d5-NEtFOSAA	1 ug/mL
					LCM2-6:FTS_00003	1000 uL	M2-6:2FTS	0.95 ug/mL
					LCM2-8:2FTS_00003	1000 uL	M2-8:2FTS	0.958 ug/mL
..LCd-NEtFOSA-M_00004	06/10/21	WELLINGTON, Lot dNEtFOSA0616M			(Purchased Reagent)		d-N-EtFOSA-M	50 ug/mL
..LCd-NMeFOSA-M_00003	06/10/21	WELLINGTON, Lot dNMeFOSA0616M			(Purchased Reagent)		d-N-MeFOSA-M	50 ug/mL
..LCd3-NMeFOSAA_00003	05/31/21	WELLINGTON, Lot d3NMeFOSAA0516			(Purchased Reagent)		d3-NMeFOSAA	50 ug/mL
..LCd5-NEtFOSAA_00003	08/02/21	WELLINGTON, Lot d5NEtFOSAA0716			(Purchased Reagent)		d5-NEtFOSAA	50 ug/mL
..LCM2-6:FTS_00003	01/08/21	WELLINGTON, Lot M262FTS0116			(Purchased Reagent)		M2-6:2FTS	47.5 ug/mL
..LCM2-8:2FTS_00003	01/08/21	WELLINGTON, Lot M282FTS0116			(Purchased Reagent)		M2-8:2FTS	47.9 ug/mL
.LCMPFCSU_00047	06/14/17	12/14/16	Methanol, Lot Baker 144541	50000 uL	LCM2PFHxDA_00008	1000 uL	13C2-PFHxDA	1 ug/mL
					LCM2PFTeDA_00007	1000 uL	13C2-PFTeDA	1 ug/mL
					LCM4PFHPA_00007	1000 uL	13C4-PFHpA	1 ug/mL
					LCM5PFPEA_00008	1000 uL	13C5-PFPeA	1 ug/mL
					LCM8FOSA_00011	1000 uL	13C8 FOSA	1 ug/mL
					LCMPFBA_00008	1000 uL	13C4 PFBA	1 ug/mL
					LCMPFDA_00011	1000 uL	13C2 PFDA	1 ug/mL
					LCMPFDoA_00008	1000 uL	13C2 PFDoA	1 ug/mL
					LCMPFHxA_00012	1000 uL	13C2 PFHxA	1 ug/mL
					LCMPFHxS_00008	1000 uL	18O2 PFHxS	0.946 ug/mL
					LCMPFNA_00008	1000 uL	13C5 PFNA	1 ug/mL
					LCMPFOA_00012	1000 uL	13C4 PFOA	1 ug/mL
					LCMPFOS_00017	1000 uL	13C4 PFOS	0.956 ug/mL
					LCMPFUdA_00009	1000 uL	13C2 PFUnA	1 ug/mL
..LCM2PFHxDA_00008	01/07/21	Wellington Laboratories, Lot M2PFHxDA1112			(Purchased Reagent)		13C2-PFHxDA	50 ug/mL
..LCM2PFTeDA_00007	12/07/20	Wellington Laboratories, Lot M2PFTeDA1115			(Purchased Reagent)		13C2-PFTeDA	50 ug/mL
..LCM4PFHPA_00007	05/27/21	Wellington Laboratories, Lot M4PFHpA0516			(Purchased Reagent)		13C4-PFHpA	50 ug/mL
..LCM5PFPEA_00008	05/22/20	Wellington Laboratories, Lot M5PFPeA0515			(Purchased Reagent)		13C5-PFPeA	50 ug/mL
..LCM8FOSA_00011	12/22/17	Wellington Laboratories, Lot M8FOSA1215I			(Purchased Reagent)		13C8 FOSA	50 ug/mL
..LCMPFBA_00008	05/24/21	Wellington Laboratories, Lot MPFBA0516			(Purchased Reagent)		13C4 PFBA	50 ug/mL
..LCMPFDA_00011	08/19/20	Wellington Laboratories, Lot MPFDA0815			(Purchased Reagent)		13C2 PFDA	50 ug/mL
..LCMPFDoA_00008	04/08/21	Wellington Laboratories, Lot MPFDoA0416			(Purchased Reagent)		13C2 PFDoA	50 ug/mL
..LCMPFHxA_00012	04/08/21	Wellington Laboratories, Lot MPFHxA0416			(Purchased Reagent)		13C2 PFHxA	50 ug/mL
..LCMPFHxS_00008	10/23/20	Wellington Laboratories, Lot MPFHxS1015			(Purchased Reagent)		18O2 PFHxS	47.3 ug/mL
..LCMPFNA_00008	04/13/19	Wellington Laboratories, Lot MPFNA0414			(Purchased Reagent)		13C5 PFNA	50 ug/mL
..LCMPFOA_00012	01/22/21	Wellington Laboratories, Lot MPFOA0116			(Purchased Reagent)		13C4 PFOA	50 ug/mL
..LCMPFOS_00017	08/03/21	Wellington Laboratories, Lot MPFOS0816			(Purchased Reagent)		13C4 PFOS	47.8 ug/mL
..LCMPFUdA_00009	02/12/21	Wellington Laboratories, Lot MPFUdA0216			(Purchased Reagent)		13C2 PFUnA	50 ug/mL
.LCPFC2SP_00025	06/28/17	01/30/17	Methanol, Lot 104453	10000 uL	LCPFC2SP_00020	2000 uL	Sodium 1H,1H,2H,2H-perfluorooctane sulfonate (6:2)	0.0948 ug/mL
							Sodium 1H,1H,2H,2H-perfluorooctane sulfonate (8:2)	0.0958 ug/mL
							N-ethylperfluoro-1-octanesulfonamide	0.1 ug/mL
							N-ethyl perfluorooctane sulfonamidoacetic acid	0.1 ug/mL

REAGENT TRACEABILITY SUMMARY

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Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							MeFOSA	0.1 ug/mL
							N-methyl perfluorooctane sulfonamidoacetic acid	0.1 ug/mL
..LCPFC2SP_00020	06/28/17	12/28/16	Methanol, Lot 104453	10000 uL	LC6:2FTS_00002	100 uL	Sodium 1H,1H,2H,2H-perfluorooctane sulfonate (6:2)	0.474 ug/mL
					LC8:2FTS_00002	100 uL	Sodium 1H,1H,2H,2H-perfluorooctane sulfonate (8:2)	0.479 ug/mL
					LCN-EtFOSA-M_00003	100 uL	N-ethylperfluoro-1-octanesulfonamide	0.5 ug/mL
					LCN-EtFOSAA_00002	100 uL	N-ethyl perfluorooctane sulfonamidoacetic acid	0.5 ug/mL
					LCN-MeFOSA-M_00002	100 uL	MeFOSA	0.5 ug/mL
					LCN-MeFOSAA_00003	100 uL	N-methyl perfluorooctane sulfonamidoacetic acid	0.5 ug/mL
...LC6:2FTS_00002	06/25/21	WELLINGTON, Lot 62FTS0616			(Purchased Reagent)		Sodium 1H,1H,2H,2H-perfluorooctane sulfonate (6:2)	47.4 ug/mL
...LC8:2FTS_00002	10/23/20	WELLINGTON, Lot 82FTS1015			(Purchased Reagent)		Sodium 1H,1H,2H,2H-perfluorooctane sulfonate (8:2)	47.9 ug/mL
...LCN-EtFOSA-M_00003	05/24/21	WELLINGTON, Lot NEtFOSA0516M			(Purchased Reagent)		N-ethylperfluoro-1-octanesulfonamide	50 ug/mL
...LCN-EtFOSAA_00002	01/20/21	WELLINGTON, Lot NEtFOSAA0116			(Purchased Reagent)		N-ethyl perfluorooctane sulfonamidoacetic acid	50 ug/mL
...LCN-MeFOSA-M_00002	05/24/21	WELLINGTON, Lot NMeFOSA0714M			(Purchased Reagent)		MeFOSA	50 ug/mL
...LCN-MeFOSAA_00003	01/20/21	WELLINGTON, Lot NMeFOSAA0116			(Purchased Reagent)		N-methyl perfluorooctane sulfonamidoacetic acid	50 ug/mL
.LCPFCSP_00078	06/14/17	01/16/17	Methanol, Lot 090285	10000 uL	LCPFCSP_00075	2000 uL	Perfluorobutyric acid	0.1 ug/mL
							Perfluorobutanesulfonic acid (PFBS)	0.0884 ug/mL
							Perfluorodecanoic acid	0.1 ug/mL
							Perfluorododecanoic acid	0.1 ug/mL
							Perfluorodecane Sulfonic acid	0.0964 ug/mL
							Perfluoroheptanoic acid	0.1 ug/mL
							Perfluoroheptanesulfonic Acid	0.0952 ug/mL
							Perfluorohexanoic acid	0.1 ug/mL
							Perfluorohexadecanoic acid	0.1 ug/mL
							Perfluorohexanesulfonic acid	0.091 ug/mL
							Perfluorononanoic acid	0.1 ug/mL
							Perfluorooctanoic acid (PFOA)	0.1 ug/mL
							Perfluorooctadecanoic acid	0.1 ug/mL
							Perfluorooctanesulfonic acid (PFOS)	0.0928 ug/mL
							Perfluorooctane Sulfonamide	0.1 ug/mL
							Perfluoropentanoic acid	0.1 ug/mL
							Perfluorotetradecanoic acid	0.1 ug/mL
							Perfluorotridecanoic acid	0.1 ug/mL
							Perfluoroundecanoic acid	0.1 ug/mL

REAGENT TRACEABILITY SUMMARY

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Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..LCPFCSP_00075	06/14/17	12/14/16	Methanol, Lot 090285	10000 uL	LCPFCSP_00074	5000 uL	Perfluorobutyric acid	0.5 ug/mL
							Perfluorobutanesulfonic acid (PFBS)	0.442 ug/mL
							Perfluorodecanoic acid	0.5 ug/mL
							Perfluorododecanoic acid	0.5 ug/mL
							Perfluorodecane Sulfonic acid	0.482 ug/mL
							Perfluoroheptanoic acid	0.5 ug/mL
							Perfluoroheptanesulfonic Acid	0.476 ug/mL
							Perfluorohexanoic acid	0.5 ug/mL
							Perfluorohexadecanoic acid	0.5 ug/mL
							Perfluorohexanesulfonic acid	0.455 ug/mL
							Perfluorononanoic acid	0.5 ug/mL
							Perfluorooctanoic acid (PFOA)	0.5 ug/mL
							Perfluorooctadecanoic acid	0.5 ug/mL
							Perfluorooctanesulfonic acid (PFOS)	0.464 ug/mL
							Perfluorooctane Sulfonamide	0.5 ug/mL
							Perfluoropentanoic acid	0.5 ug/mL
							Perfluorotetradecanoic acid	0.5 ug/mL
							Perfluorotridecanoic acid	0.5 ug/mL
							Perfluoroundecanoic acid	0.5 ug/mL
...LCPFCSP_00074	06/14/17	12/14/16	Methanol, Lot 090285	10000 uL	LCPFBA_00005	200 uL	Perfluorobutyric acid	1 ug/mL
					LCPFBS_00005	200 uL	Perfluorobutanesulfonic acid (PFBS)	0.884 ug/mL
					LCPFDA_00005	200 uL	Perfluorodecanoic acid	1 ug/mL
					LCPFDoA_00005	200 uL	Perfluorododecanoic acid	1 ug/mL
					LCPFDS_00006	200 uL	Perfluorodecane Sulfonic acid	0.964 ug/mL
					LCPFHpA_00006	200 uL	Perfluoroheptanoic acid	1 ug/mL
					LCPFHpS_00009	200 uL	Perfluoroheptanesulfonic Acid	0.952 ug/mL
					LCPFHxA_00005	200 uL	Perfluorohexanoic acid	1 ug/mL
					LCPFHxDA_00006	200 uL	Perfluorohexadecanoic acid	1 ug/mL
					LCPFHxS-br_00002	200 uL	Perfluorohexanesulfonic acid	0.91 ug/mL
					LCPFNA_00006	200 uL	Perfluorononanoic acid	1 ug/mL
					LCPFOA_00006	200 uL	Perfluorooctanoic acid (PFOA)	1 ug/mL
					LCPFODA_00006	200 uL	Perfluorooctadecanoic acid	1 ug/mL
					LCPFOS-br_00002	200 uL	Perfluorooctanesulfonic acid (PFOS)	0.928 ug/mL
					LCPFOSA_00008	200 uL	Perfluorooctane Sulfonamide	1 ug/mL
					LCPFPeA_00005	200 uL	Perfluoropentanoic acid	1 ug/mL
					LCPFTeDA_00005	200 uL	Perfluorotetradecanoic acid	1 ug/mL
					LCPFTrDA_00005	200 uL	Perfluorotridecanoic acid	1 ug/mL
					LCPFUdA_00005	200 uL	Perfluoroundecanoic acid	1 ug/mL
....LCPFBA_00005	05/27/21	Wellington Laboratories, Lot PFBA0516			(Purchased Reagent)		Perfluorobutyric acid	50 ug/mL
....LCPFBS_00005	03/15/21	Wellington Laboratories, Lot LPFBS0316			(Purchased Reagent)		Perfluorobutanesulfonic acid (PFBS)	44.2 ug/mL
....LCPFDA_00005	07/02/20	Wellington Laboratories, Lot PFDA0615			(Purchased Reagent)		Perfluorodecanoic acid	50 ug/mL
....LCPFDoA_00005	01/30/20	Wellington Laboratories, Lot PFDoA0115			(Purchased Reagent)		Perfluorododecanoic acid	50 ug/mL
....LCPFDS_00006	05/24/21	Wellington Laboratories, Lot LPFDS0516			(Purchased Reagent)		Perfluorodecane Sulfonic acid	48.2 ug/mL

Lab Name: TestAmerica Sacramento Job No.: 320-25962-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
....LCPFHpA_00006	01/22/21	Wellington Laboratories, Lot PFHpA0116			(Purchased Reagent)		Perfluoroheptanoic acid	50 ug/mL
....LCPFHpS_00009	11/06/20	Wellington Laboratories, Lot LPFHpS1115			(Purchased Reagent)		Perfluoroheptanesulfonic Acid	47.6 ug/mL
....LCPFHxA_00005	12/22/20	Wellington Laboratories, Lot PFHxA1215			(Purchased Reagent)		Perfluorohexanoic acid	50 ug/mL
....LCPFHxDA_00006	05/25/21	Wellington Laboratories, Lot PFHxDA0516			(Purchased Reagent)		Perfluorohexadecanoic acid	50 ug/mL
....LCPFHxS-br_00002	07/03/20	Wellington Laboratories, Lot brPFHxSK0615			(Purchased Reagent)		Perfluorohexanesulfonic acid	45.5 ug/mL
....LCPFNA_00006	10/23/20	Wellington Laboratories, Lot PFNA1015			(Purchased Reagent)		Perfluorononanoic acid	50 ug/mL
....LCPFOA_00006	11/06/20	Wellington Laboratories, Lot PFOA1115			(Purchased Reagent)		Perfluorooctanoic acid (PFOA)	50 ug/mL
....LCPFODA_00006	04/29/21	Wellington Laboratories, Lot PFODA0416			(Purchased Reagent)		Perfluorooctadecanoic acid	50 ug/mL
....LCPFOS-br_00002	10/14/20	Wellington Laboratories, Lot brPFOSK1015			(Purchased Reagent)		Perfluorooctanesulfonic acid (PFOS)	46.4 ug/mL
....LCPFOSA_00008	09/02/17	Wellington Laboratories, Lot FOSA0815I			(Purchased Reagent)		Perfluorooctane Sulfonamide	50 ug/mL
....LCPFPeA_00005	01/30/20	Wellington Laboratories, Lot PFPeA0115			(Purchased Reagent)		Perfluoropentanoic acid	50 ug/mL
....LCPFTeDA_00005	12/09/20	Wellington Laboratories, Lot PFTeDA1215			(Purchased Reagent)		Perfluorotetradecanoic acid	50 ug/mL
....LCPFTrDA_00005	02/12/21	Wellington Laboratories, Lot PFTrDA0216			(Purchased Reagent)		Perfluorotridecanoic acid	50 ug/mL
....LCPFUdA_00005	08/19/20	Wellington Laboratories, Lot PFUdA0815			(Purchased Reagent)		Perfluoroundecanoic acid	50 ug/mL
LCPFC_FULL-L4_00001	06/14/17	02/16/17	MeOH/H2O, Lot 090285	5 mL	LCMPFC2SU_00014	250 uL	d-N-EtFOSA-M	50 ng/mL
							d-N-MeFOSA-M	50 ng/mL
							d3-NMeFOSAA	50 ng/mL
							d5-NEtFOSAA	50 ng/mL
							M2-6:2FTS	47.5 ng/mL
							M2-8:2FTS	47.9 ng/mL
					LCMPFCSU_00047	250 uL	13C2-PFHxDA	50 ng/mL
							13C2-PFTeDA	50 ng/mL
							13C4-PFHpA	50 ng/mL
							13C5-PFPeA	50 ng/mL
							13C8 FOSA	50 ng/mL
							13C4 PFBA	50 ng/mL
							13C2 PFDA	50 ng/mL
							13C2 PFDoA	50 ng/mL
							13C2 PFHxA	50 ng/mL
							18O2 PFHxS	47.3 ng/mL
							13C5 PFNA	50 ng/mL
							13C4 PFOA	50 ng/mL
							13C4 PFOS	47.8 ng/mL
							13C2 PFUnA	50 ng/mL
					LCPFC2SP_00026	200 uL	Sodium 1H,1H,2H,2H-perfluorooctane sulfonate (6:2)	18.96 ng/mL
							Sodium 1H,1H,2H,2H-perfluorooctane sulfonate (8:2)	19.16 ng/mL
							N-ethylperfluoro-1-octanesulfonamide	20 ng/mL
							N-ethyl perfluorooctane sulfonamidoacetic acid	20 ng/mL
							MeFOSA	20 ng/mL
							N-methyl perfluorooctane sulfonamidoacetic acid	20 ng/mL

Lab Name: TestAmerica Sacramento Job No.: 320-25962-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					LCPFCSP_00074	100 uL	Perfluorobutyric acid	20 ng/mL
							Perfluorobutanesulfonic acid (PFBS)	17.68 ng/mL
							Perfluorodecanoic acid	20 ng/mL
							Perfluorododecanoic acid	20 ng/mL
							Perfluorodecane Sulfonic acid	19.28 ng/mL
							Perfluoroheptanoic acid	20 ng/mL
							Perfluoroheptanesulfonic Acid	19.04 ng/mL
							Perfluorohexanoic acid	20 ng/mL
							Perfluorohexadecanoic acid	20 ng/mL
							Perfluorohexanesulfonic acid	18.2 ng/mL
							Perfluorononanoic acid	20 ng/mL
							Perfluorooctanoic acid (PFOA)	20 ng/mL
							Perfluorooctadecanoic acid	20 ng/mL
							Perfluorooctanesulfonic acid (PFOS)	18.56 ng/mL
							Perfluorooctane Sulfonamide	20 ng/mL
							Perfluoropentanoic acid	20 ng/mL
							Perfluorotetradecanoic acid	20 ng/mL
							Perfluorotridecanoic acid	20 ng/mL
							Perfluoroundecanoic acid	20 ng/mL
.LCMPFC2SU_00014	08/13/17	02/13/17	Methanol, Lot 104453	50000 uL	LCd-NEtFOSA-M_00004	1000 uL	d-N-EtFOSA-M	1 ug/mL
					LCd-NMeFOSA-M_00003	1000 uL	d-N-MeFOSA-M	1 ug/mL
					LCd3-NMeFOSAA_00003	1000 uL	d3-NMeFOSAA	1 ug/mL
					LCd5-NEtFOSAA_00003	1000 uL	d5-NEtFOSAA	1 ug/mL
					LCM2-6:FTS_00003	1000 uL	M2-6:2FTS	0.95 ug/mL
					LCM2-8:2FTS_00003	1000 uL	M2-8:2FTS	0.958 ug/mL
..LCd-NEtFOSA-M_00004	06/10/21	WELLINGTON, Lot dNEtFOSA0616M			(Purchased Reagent)		d-N-EtFOSA-M	50 ug/mL
..LCd-NMeFOSA-M_00003	06/10/21	WELLINGTON, Lot dNMeFOSA0616M			(Purchased Reagent)		d-N-MeFOSA-M	50 ug/mL
..LCd3-NMeFOSAA_00003	05/31/21	WELLINGTON, Lot d3NMeFOSAA0516			(Purchased Reagent)		d3-NMeFOSAA	50 ug/mL
..LCd5-NEtFOSAA_00003	08/02/21	WELLINGTON, Lot d5NEtFOSAA0716			(Purchased Reagent)		d5-NEtFOSAA	50 ug/mL
..LCM2-6:FTS_00003	01/08/21	WELLINGTON, Lot M262FTS0116			(Purchased Reagent)		M2-6:2FTS	47.5 ug/mL
..LCM2-8:2FTS_00003	01/08/21	WELLINGTON, Lot M282FTS0116			(Purchased Reagent)		M2-8:2FTS	47.9 ug/mL
.LCMPFCSU_00047	06/14/17	12/14/16	Methanol, Lot Baker 144541	50000 uL	LCM2PFHxDA_00008	1000 uL	13C2-PFHxDA	1 ug/mL
					LCM2PFTeDA_00007	1000 uL	13C2-PFTeDA	1 ug/mL
					LCM4PFHPA_00007	1000 uL	13C4-PFHpA	1 ug/mL
					LCM5PFPEA_00008	1000 uL	13C5-PFPeA	1 ug/mL
					LCM8FOSA_00011	1000 uL	13C8 FOSA	1 ug/mL
					LCMPFBA_00008	1000 uL	13C4 PFBA	1 ug/mL
					LCMPFDA_00011	1000 uL	13C2 PFDA	1 ug/mL
					LCMPFDoA_00008	1000 uL	13C2 PFDoA	1 ug/mL
					LCMPFHxA_00012	1000 uL	13C2 PFHxA	1 ug/mL
					LCMPFHxS_00008	1000 uL	18O2 PFHxS	0.946 ug/mL
					LCMPFNA_00008	1000 uL	13C5 PFNA	1 ug/mL
					LCMPFOA_00012	1000 uL	13C4 PFOA	1 ug/mL
					LCMPFOS_00017	1000 uL	13C4 PFOS	0.956 ug/mL
					LCMPFUdA_00009	1000 uL	13C2 PFUnA	1 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Sacramento Job No.: 320-25962-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..LCM2PFHxDA_00008	01/07/21	Wellington Laboratories, Lot M2PFHxDA1112			(Purchased Reagent)		13C2-PFHxDA	50 ug/mL
..LCM2PFTeDA_00007	12/07/20	Wellington Laboratories, Lot M2PFTeDA1115			(Purchased Reagent)		13C2-PFTeDA	50 ug/mL
..LCM4PFHPA_00007	05/27/21	Wellington Laboratories, Lot M4PFHpA0516			(Purchased Reagent)		13C4-PFHpA	50 ug/mL
..LCM5PFPEA_00008	05/22/20	Wellington Laboratories, Lot M5PFPeA0515			(Purchased Reagent)		13C5-PFPeA	50 ug/mL
..LCM8FOSA_00011	12/22/17	Wellington Laboratories, Lot M8FOSA1215I			(Purchased Reagent)		13C8 FOSA	50 ug/mL
..LCMPFBA_00008	05/24/21	Wellington Laboratories, Lot MPFBA0516			(Purchased Reagent)		13C4 PFBA	50 ug/mL
..LCMPFDA_00011	08/19/20	Wellington Laboratories, Lot MPFDA0815			(Purchased Reagent)		13C2 PFDA	50 ug/mL
..LCMPFDoA_00008	04/08/21	Wellington Laboratories, Lot MPFDoA0416			(Purchased Reagent)		13C2 PFDoA	50 ug/mL
..LCMPFHxA_00012	04/08/21	Wellington Laboratories, Lot MPFHxA0416			(Purchased Reagent)		13C2 PFHxA	50 ug/mL
..LCMPFHxS_00008	10/23/20	Wellington Laboratories, Lot MPFHxS1015			(Purchased Reagent)		18O2 PFHxS	47.3 ug/mL
..LCMPFNA_00008	04/13/19	Wellington Laboratories, Lot MPFNA0414			(Purchased Reagent)		13C5 PFNA	50 ug/mL
..LCMPFOA_00012	01/22/21	Wellington Laboratories, Lot MPFOA0116			(Purchased Reagent)		13C4 PFOA	50 ug/mL
..LCMPFOS_00017	08/03/21	Wellington Laboratories, Lot MPFOS0816			(Purchased Reagent)		13C4 PFOS	47.8 ug/mL
..LCMPFUdA_00009	02/12/21	Wellington Laboratories, Lot MPFUdA0216			(Purchased Reagent)		13C2 PFUnA	50 ug/mL
.LCPFC2SP_00026	07/30/17	01/30/17	Methanol, Lot 104453	10000 uL	LC6:2FTS_00002	100 uL	Sodium 1H,1H,2H,2H-perfluorooctane sulfonate (6:2)	0.474 ug/mL
					LC8:2FTS_00002	100 uL	Sodium 1H,1H,2H,2H-perfluorooctane sulfonate (8:2)	0.479 ug/mL
					LCN-EtFOSA-M_00003	100 uL	N-ethylperfluoro-1-octanesulfonamide	0.5 ug/mL
					LCN-EtFOSAA_00002	100 uL	N-ethyl perfluorooctane sulfonamidoacetic acid	0.5 ug/mL
					LCN-MeFOSA-M_00002	100 uL	MeFOSA	0.5 ug/mL
					LCN-MeFOSAA_00003	100 uL	N-methyl perfluorooctane sulfonamidoacetic acid	0.5 ug/mL
..LC6:2FTS_00002	06/25/21	WELLINGTON, Lot 62FTS0616			(Purchased Reagent)		Sodium 1H,1H,2H,2H-perfluorooctane sulfonate (6:2)	47.4 ug/mL
..LC8:2FTS_00002	10/23/20	WELLINGTON, Lot 82FTS1015			(Purchased Reagent)		Sodium 1H,1H,2H,2H-perfluorooctane sulfonate (8:2)	47.9 ug/mL
..LCN-EtFOSA-M_00003	05/24/21	WELLINGTON, Lot NEtFOSA0516M			(Purchased Reagent)		N-ethylperfluoro-1-octanesulfonamide	50 ug/mL
..LCN-EtFOSAA_00002	01/20/21	WELLINGTON, Lot NEtFOSAA0116			(Purchased Reagent)		N-ethyl perfluorooctane sulfonamidoacetic acid	50 ug/mL
..LCN-MeFOSA-M_00002	05/24/21	WELLINGTON, Lot NMeFOSA0714M			(Purchased Reagent)		MeFOSA	50 ug/mL
..LCN-MeFOSAA_00003	01/20/21	WELLINGTON, Lot NMeFOSAA0116			(Purchased Reagent)		N-methyl perfluorooctane sulfonamidoacetic acid	50 ug/mL
.LCPFCSP_00074	06/14/17	12/14/16	Methanol, Lot 090285	10000 uL	LCPFBA_00005	200 uL	Perfluorobutyric acid	1 ug/mL
					LCPFBS_00005	200 uL	Perfluorobutanesulfonic acid (PFBS)	0.884 ug/mL
					LCPFDA_00005	200 uL	Perfluorodecanoic acid	1 ug/mL
					LCPFDoA_00005	200 uL	Perfluorododecanoic acid	1 ug/mL
					LCPFDS_00006	200 uL	Perfluorodecane Sulfonic acid	0.964 ug/mL
					LCPFHpA_00006	200 uL	Perfluoroheptanoic acid	1 ug/mL
					LCPFHpS_00009	200 uL	Perfluoroheptanesulfonic Acid	0.952 ug/mL
					LCPFHxA_00005	200 uL	Perfluorohexanoic acid	1 ug/mL

Lab Name: TestAmerica Sacramento Job No.: 320-25962-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					LCPFHxDA_00006	200 uL	Perfluorohexadecanoic acid	1 ug/mL
					LCPFHxS-br_00002	200 uL	Perfluorohexanesulfonic acid	0.91 ug/mL
					LCPFNA_00006	200 uL	Perfluorononanoic acid	1 ug/mL
					LCPFOA_00006	200 uL	Perfluorooctanoic acid (PFOA)	1 ug/mL
					LCPFODA_00006	200 uL	Perfluorooctadecanoic acid	1 ug/mL
					LCPFOS-br_00002	200 uL	Perfluorooctanesulfonic acid (PFOS)	0.928 ug/mL
					LCPFOSA_00008	200 uL	Perfluorooctane Sulfonamide	1 ug/mL
					LCPFPeA_00005	200 uL	Perfluoropentanoic acid	1 ug/mL
					LCPFTeDA_00005	200 uL	Perfluorotetradecanoic acid	1 ug/mL
					LCPFTrDA_00005	200 uL	Perfluorotridecanoic acid	1 ug/mL
					LCPFUdA_00005	200 uL	Perfluoroundecanoic acid	1 ug/mL
..LCPFBA_00005	05/27/21	Wellington Laboratories, Lot PFBA0516			(Purchased Reagent)		Perfluorobutyric acid	50 ug/mL
..LCPFBS_00005	03/15/21	Wellington Laboratories, Lot LPFBS0316			(Purchased Reagent)		Perfluorobutanesulfonic acid (PFBS)	44.2 ug/mL
..LCPFDA_00005	07/02/20	Wellington Laboratories, Lot PFDA0615			(Purchased Reagent)		Perfluorodecanoic acid	50 ug/mL
..LCPFDoA_00005	01/30/20	Wellington Laboratories, Lot PFDoA0115			(Purchased Reagent)		Perfluorododecanoic acid	50 ug/mL
..LCPFDS_00006	05/24/21	Wellington Laboratories, Lot LPFDS0516			(Purchased Reagent)		Perfluorodecane Sulfonic acid	48.2 ug/mL
..LCPFHpA_00006	01/22/21	Wellington Laboratories, Lot PFHpA0116			(Purchased Reagent)		Perfluoroheptanoic acid	50 ug/mL
..LCPFHpS_00009	11/06/20	Wellington Laboratories, Lot LPFHpS1115			(Purchased Reagent)		Perfluoroheptanesulfonic Acid	47.6 ug/mL
..LCPFHxA_00005	12/22/20	Wellington Laboratories, Lot PFHxA1215			(Purchased Reagent)		Perfluorohexanoic acid	50 ug/mL
..LCPFHxDA_00006	05/25/21	Wellington Laboratories, Lot PFHxDA0516			(Purchased Reagent)		Perfluorohexadecanoic acid	50 ug/mL
..LCPFHxS-br_00002	07/03/20	Wellington Laboratories, Lot brPFHxSK0615			(Purchased Reagent)		Perfluorohexanesulfonic acid	45.5 ug/mL
..LCPFNA_00006	10/23/20	Wellington Laboratories, Lot PFNA1015			(Purchased Reagent)		Perfluorononanoic acid	50 ug/mL
..LCPFOA_00006	11/06/20	Wellington Laboratories, Lot PFOA1115			(Purchased Reagent)		Perfluorooctanoic acid (PFOA)	50 ug/mL
..LCPFODA_00006	04/29/21	Wellington Laboratories, Lot PFODA0416			(Purchased Reagent)		Perfluorooctadecanoic acid	50 ug/mL
..LCPFOS-br_00002	10/14/20	Wellington Laboratories, Lot brPFOSK1015			(Purchased Reagent)		Perfluorooctanesulfonic acid (PFOS)	46.4 ug/mL
..LCPFOSA_00008	09/02/17	Wellington Laboratories, Lot FOSA0815I			(Purchased Reagent)		Perfluorooctane Sulfonamide	50 ug/mL
..LCPFPeA_00005	01/30/20	Wellington Laboratories, Lot PFPeA0115			(Purchased Reagent)		Perfluoropentanoic acid	50 ug/mL
..LCPFTeDA_00005	12/09/20	Wellington Laboratories, Lot PFTeDA1215			(Purchased Reagent)		Perfluorotetradecanoic acid	50 ug/mL
..LCPFTrDA_00005	02/12/21	Wellington Laboratories, Lot PFTrDA0216			(Purchased Reagent)		Perfluorotridecanoic acid	50 ug/mL
..LCPFUdA_00005	08/19/20	Wellington Laboratories, Lot PFUdA0815			(Purchased Reagent)		Perfluoroundecanoic acid	50 ug/mL
LCPFC_FULL-L5_00001	06/14/17	02/16/17	MeOH/H2O, Lot 090285	5 mL	LCMPFC2SU_00014	250 uL	d-N-EtFOSA-M	50 ng/mL
							d-N-MeFOSA-M	50 ng/mL
							d3-NMeFOSAA	50 ng/mL
							d5-NEtFOSAA	50 ng/mL
							M2-6:2FTS	47.5 ng/mL
							M2-8:2FTS	47.9 ng/mL
					LCMPFCSU_00047	250 uL	13C2-PFHxDA	50 ng/mL
							13C2-PFTeDA	50 ng/mL
							13C4-PFHpA	50 ng/mL
							13C5-PFPeA	50 ng/mL
							13C8 FOSA	50 ng/mL
							13C4 PFBA	50 ng/mL
							13C2 PFDA	50 ng/mL
							13C2 PFDoA	50 ng/mL
							13C2 PFHxA	50 ng/mL

Lab Name: TestAmerica Sacramento Job No.: 320-25962-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							18O2 PFHxS	47.3 ng/mL
							13C5 PFNA	50 ng/mL
							13C4 PFOA	50 ng/mL
							13C4 PFOS	47.8 ng/mL
							13C2 PFUnA	50 ng/mL
					LCPFC2SP_00026	500 uL	Sodium 1H,1H,2H,2H-perfluorooctane sulfonate (6:2)	47.4 ng/mL
							Sodium 1H,1H,2H,2H-perfluorooctane sulfonate (8:2)	47.9 ng/mL
							N-ethylperfluoro-1-octanesulfonamide	50 ng/mL
							N-ethyl perfluorooctane sulfonamidoacetic acid	50 ng/mL
							MeFOSA	50 ng/mL
							N-methyl perfluorooctane sulfonamidoacetic acid	50 ng/mL
					LCPFCSP_00074	250 uL	Perfluorobutyric acid	50 ng/mL
							Perfluorobutanesulfonic acid (PFBS)	44.2 ng/mL
							Perfluorodecanoic acid	50 ng/mL
							Perfluorododecanoic acid	50 ng/mL
							Perfluorodecane Sulfonic acid	48.2 ng/mL
							Perfluoroheptanoic acid	50 ng/mL
							Perfluoroheptanesulfonic Acid	47.6 ng/mL
							Perfluorohexanoic acid	50 ng/mL
							Perfluorohexadecanoic acid	50 ng/mL
							Perfluorohexanesulfonic acid	45.5 ng/mL
							Perfluorononanoic acid	50 ng/mL
							Perfluorooctanoic acid (PFOA)	50 ng/mL
							Perfluorooctadecanoic acid	50 ng/mL
							Perfluorooctanesulfonic acid (PFOS)	46.4 ng/mL
							Perfluorooctane Sulfonamide	50 ng/mL
							Perfluoropentanoic acid	50 ng/mL
							Perfluorotetradecanoic acid	50 ng/mL
							Perfluorotridecanoic acid	50 ng/mL
							Perfluoroundecanoic acid	50 ng/mL
.LCMPFC2SU_00014	08/13/17	02/13/17	Methanol, Lot 104453	50000 uL	LCd-NEtFOSA-M_00004	1000 uL	d-N-EtFOSA-M	1 ug/mL
					LCd-NMeFOSA-M_00003	1000 uL	d-N-MeFOSA-M	1 ug/mL
					LCd3-NMeFOSAA_00003	1000 uL	d3-NMeFOSAA	1 ug/mL
					LCd5-NEtFOSAA_00003	1000 uL	d5-NEtFOSAA	1 ug/mL
					LCM2-6:FTS_00003	1000 uL	M2-6:2FTS	0.95 ug/mL
					LCM2-8:2FTS_00003	1000 uL	M2-8:2FTS	0.958 ug/mL
..LCd-NEtFOSA-M_00004	06/10/21	WELLINGTON, Lot dNEtFOSA0616M			(Purchased Reagent)		d-N-EtFOSA-M	50 ug/mL
..LCd-NMeFOSA-M_00003	06/10/21	WELLINGTON, Lot dNMeFOSA0616M			(Purchased Reagent)		d-N-MeFOSA-M	50 ug/mL
..LCd3-NMeFOSAA_00003	05/31/21	WELLINGTON, Lot d3NMeFOSAA0516			(Purchased Reagent)		d3-NMeFOSAA	50 ug/mL
..LCd5-NEtFOSAA_00003	08/02/21	WELLINGTON, Lot d5NEtFOSAA0716			(Purchased Reagent)		d5-NEtFOSAA	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Sacramento Job No.: 320-25962-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..LCM2-6:FTS_00003	01/08/21	WELLINGTON, Lot M262FTS0116			(Purchased Reagent)		M2-6:2FTS	47.5 ug/mL
..LCM2-8:2FTS_00003	01/08/21	WELLINGTON, Lot M282FTS0116			(Purchased Reagent)		M2-8:2FTS	47.9 ug/mL
.LCMPFCSU_00047	06/14/17	12/14/16	Methanol, Lot Baker 144541	50000 uL	LCM2PFHxDA_00008	1000 uL	13C2-PFHxDA	1 ug/mL
					LCM2PFTeDA_00007	1000 uL	13C2-PFTeDA	1 ug/mL
					LCM4PFHPA_00007	1000 uL	13C4-PFHpA	1 ug/mL
					LCM5PFPEA_00008	1000 uL	13C5-PFPeA	1 ug/mL
					LCM8FOSA_00011	1000 uL	13C8 FOSA	1 ug/mL
					LCMPFBA_00008	1000 uL	13C4 PFBA	1 ug/mL
					LCMPFDA_00011	1000 uL	13C2 PFDA	1 ug/mL
					LCMPFDoA_00008	1000 uL	13C2 PFDoA	1 ug/mL
					LCMPFHxA_00012	1000 uL	13C2 PFHxA	1 ug/mL
					LCMPFHxS_00008	1000 uL	18O2 PFHxS	0.946 ug/mL
					LCMPFNA_00008	1000 uL	13C5 PFNA	1 ug/mL
					LCMPFOA_00012	1000 uL	13C4 PFOA	1 ug/mL
					LCMPFOS_00017	1000 uL	13C4 PFOS	0.956 ug/mL
					LCMPFUdA_00009	1000 uL	13C2 PFUnA	1 ug/mL
..LCM2PFHxDA_00008	01/07/21	Wellington Laboratories, Lot M2PFHxDA1112			(Purchased Reagent)		13C2-PFHxDA	50 ug/mL
..LCM2PFTeDA_00007	12/07/20	Wellington Laboratories, Lot M2PFTeDA1115			(Purchased Reagent)		13C2-PFTeDA	50 ug/mL
..LCM4PFHPA_00007	05/27/21	Wellington Laboratories, Lot M4PFHpA0516			(Purchased Reagent)		13C4-PFHpA	50 ug/mL
..LCM5PFPEA_00008	05/22/20	Wellington Laboratories, Lot M5PFPeA0515			(Purchased Reagent)		13C5-PFPeA	50 ug/mL
..LCM8FOSA_00011	12/22/17	Wellington Laboratories, Lot M8FOSA1215I			(Purchased Reagent)		13C8 FOSA	50 ug/mL
..LCMPFBA_00008	05/24/21	Wellington Laboratories, Lot MPFBA0516			(Purchased Reagent)		13C4 PFBA	50 ug/mL
..LCMPFDA_00011	08/19/20	Wellington Laboratories, Lot MPFDA0815			(Purchased Reagent)		13C2 PFDA	50 ug/mL
..LCMPFDoA_00008	04/08/21	Wellington Laboratories, Lot MPFDoA0416			(Purchased Reagent)		13C2 PFDoA	50 ug/mL
..LCMPFHxA_00012	04/08/21	Wellington Laboratories, Lot MPFHxA0416			(Purchased Reagent)		13C2 PFHxA	50 ug/mL
..LCMPFHxS_00008	10/23/20	Wellington Laboratories, Lot MPFHxS1015			(Purchased Reagent)		18O2 PFHxS	47.3 ug/mL
..LCMPFNA_00008	04/13/19	Wellington Laboratories, Lot MPFNA0414			(Purchased Reagent)		13C5 PFNA	50 ug/mL
..LCMPFOA_00012	01/22/21	Wellington Laboratories, Lot MPFOA0116			(Purchased Reagent)		13C4 PFOA	50 ug/mL
..LCMPFOS_00017	08/03/21	Wellington Laboratories, Lot MPFOS0816			(Purchased Reagent)		13C4 PFOS	47.8 ug/mL
..LCMPFUdA_00009	02/12/21	Wellington Laboratories, Lot MPFUdA0216			(Purchased Reagent)		13C2 PFUnA	50 ug/mL
.LCPFC2SP_00026	07/30/17	01/30/17	Methanol, Lot 104453	10000 uL	LC6:2FTS_00002	100 uL	Sodium 1H,1H,2H,2H-perfluorooctane sulfonate (6:2)	0.474 ug/mL
					LC8:2FTS_00002	100 uL	Sodium 1H,1H,2H,2H-perfluorooctane sulfonate (8:2)	0.479 ug/mL
					LCN-EtFOSA-M_00003	100 uL	N-ethylperfluoro-1-octanesulfonamide	0.5 ug/mL
					LCN-EtFOSAA_00002	100 uL	N-ethyl perfluorooctane sulfonamidoacetic acid	0.5 ug/mL
					LCN-MeFOSA-M_00002	100 uL	MeFOSA	0.5 ug/mL
					LCN-MeFOSAA_00003	100 uL	N-methyl perfluorooctane sulfonamidoacetic acid	0.5 ug/mL
..LC6:2FTS_00002	06/25/21	WELLINGTON, Lot 62FTS0616			(Purchased Reagent)		Sodium 1H,1H,2H,2H-perfluorooctane sulfonate (6:2)	47.4 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Sacramento Job No.: 320-25962-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..LC8:2FTS_00002	10/23/20	WELLINGTON, Lot 82FTS1015			(Purchased Reagent)		Sodium 1H,1H,2H,2H-perfluorooctane sulfonate (8:2)	47.9 ug/mL
..LCN-EtFOSA-M_00003	05/24/21	WELLINGTON, Lot NEtFOSA0516M			(Purchased Reagent)		N-ethylperfluoro-1-octanesulfonamide	50 ug/mL
..LCN-EtFOSAA_00002	01/20/21	WELLINGTON, Lot NEtFOSAA0116			(Purchased Reagent)		N-ethyl perfluorooctane sulfonamidoacetic acid	50 ug/mL
..LCN-MeFOSA-M_00002	05/24/21	WELLINGTON, Lot NMeFOSA0714M			(Purchased Reagent)		MeFOSA	50 ug/mL
..LCN-MeFOSAA_00003	01/20/21	WELLINGTON, Lot NMeFOSAA0116			(Purchased Reagent)		N-methyl perfluorooctane sulfonamidoacetic acid	50 ug/mL
.LCPFCSP_00074	06/14/17	12/14/16	Methanol, Lot 090285	10000 uL	LCPFBA_00005	200 uL	Perfluorobutyric acid	1 ug/mL
					LCPFBS_00005	200 uL	Perfluorobutanesulfonic acid (PFBS)	0.884 ug/mL
					LCPFDA_00005	200 uL	Perfluorodecanoic acid	1 ug/mL
					LCPFDoA_00005	200 uL	Perfluorododecanoic acid	1 ug/mL
					LCPFDS_00006	200 uL	Perfluorodecane Sulfonic acid	0.964 ug/mL
					LCPFHpA_00006	200 uL	Perfluoroheptanoic acid	1 ug/mL
					LCPFHpS_00009	200 uL	Perfluoroheptanesulfonic Acid	0.952 ug/mL
					LCPFHxA_00005	200 uL	Perfluorohexanoic acid	1 ug/mL
					LCPFHxDA_00006	200 uL	Perfluorohexadecanoic acid	1 ug/mL
					LCPFHxS-br_00002	200 uL	Perfluorohexanesulfonic acid	0.91 ug/mL
					LCPFNA_00006	200 uL	Perfluorononanoic acid	1 ug/mL
					LCPFOA_00006	200 uL	Perfluorooctanoic acid (PFOA)	1 ug/mL
					LCPFODA_00006	200 uL	Perfluorooctadecanoic acid	1 ug/mL
					LCPFOS-br_00002	200 uL	Perfluorooctanesulfonic acid (PFOS)	0.928 ug/mL
					LCPFOSA_00008	200 uL	Perfluorooctane Sulfonamide	1 ug/mL
					LCPFPeA_00005	200 uL	Perfluoropentanoic acid	1 ug/mL
					LCPFTeDA_00005	200 uL	Perfluorotetradecanoic acid	1 ug/mL
					LCPFTrDA_00005	200 uL	Perfluorotridecanoic acid	1 ug/mL
					LCPFUdA_00005	200 uL	Perfluoroundecanoic acid	1 ug/mL
..LCPFBA_00005	05/27/21	Wellington Laboratories, Lot PFBA0516			(Purchased Reagent)		Perfluorobutyric acid	50 ug/mL
..LCPFBS_00005	03/15/21	Wellington Laboratories, Lot LPFBS0316			(Purchased Reagent)		Perfluorobutanesulfonic acid (PFBS)	44.2 ug/mL
..LCPFDA_00005	07/02/20	Wellington Laboratories, Lot PFDA0615			(Purchased Reagent)		Perfluorodecanoic acid	50 ug/mL
..LCPFDoA_00005	01/30/20	Wellington Laboratories, Lot PFDoA0115			(Purchased Reagent)		Perfluorododecanoic acid	50 ug/mL
..LCPFDS_00006	05/24/21	Wellington Laboratories, Lot LPFDS0516			(Purchased Reagent)		Perfluorodecane Sulfonic acid	48.2 ug/mL
..LCPFHpA_00006	01/22/21	Wellington Laboratories, Lot PFHpA0116			(Purchased Reagent)		Perfluoroheptanoic acid	50 ug/mL
..LCPFHpS_00009	11/06/20	Wellington Laboratories, Lot LPFHpS1115			(Purchased Reagent)		Perfluoroheptanesulfonic Acid	47.6 ug/mL
..LCPFHxA_00005	12/22/20	Wellington Laboratories, Lot PFHxA1215			(Purchased Reagent)		Perfluorohexanoic acid	50 ug/mL
..LCPFHxDA_00006	05/25/21	Wellington Laboratories, Lot PFHxDA0516			(Purchased Reagent)		Perfluorohexadecanoic acid	50 ug/mL
..LCPFHxS-br_00002	07/03/20	Wellington Laboratories, Lot brPFHxSK0615			(Purchased Reagent)		Perfluorohexanesulfonic acid	45.5 ug/mL
..LCPFNA_00006	10/23/20	Wellington Laboratories, Lot PFNA1015			(Purchased Reagent)		Perfluorononanoic acid	50 ug/mL
..LCPFOA_00006	11/06/20	Wellington Laboratories, Lot PFOA1115			(Purchased Reagent)		Perfluorooctanoic acid (PFOA)	50 ug/mL
..LCPFODA_00006	04/29/21	Wellington Laboratories, Lot PFODA0416			(Purchased Reagent)		Perfluorooctadecanoic acid	50 ug/mL
..LCPFOS-br_00002	10/14/20	Wellington Laboratories, Lot brPFOSK1015			(Purchased Reagent)		Perfluorooctanesulfonic acid (PFOS)	46.4 ug/mL
..LCPFOSA_00008	09/02/17	Wellington Laboratories, Lot FOSA0815I			(Purchased Reagent)		Perfluorooctane Sulfonamide	50 ug/mL
..LCPFPeA_00005	01/30/20	Wellington Laboratories, Lot PFPeA0115			(Purchased Reagent)		Perfluoropentanoic acid	50 ug/mL

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..LCPFTeDA_00005	12/09/20	Wellington Laboratories, Lot PFTeDA1215			(Purchased Reagent)		Perfluorotetradecanoic acid	50 ug/mL
..LCPFTrDA_00005	02/12/21	Wellington Laboratories, Lot PFTrDA0216			(Purchased Reagent)		Perfluorotridecanoic acid	50 ug/mL
..LCPFUdA_00005	08/19/20	Wellington Laboratories, Lot PFUdA0815			(Purchased Reagent)		Perfluoroundecanoic acid	50 ug/mL
LCPFC_FULL-L6_00002	06/14/17	02/24/17	MeOH/H2O, Lot 090285	5 mL	LCMPFC2SU_00014	250 uL	d-N-EtFOSA-M	50 ng/mL
							d-N-MeFOSA-M	50 ng/mL
							d3-NMeFOSAA	50 ng/mL
							d5-NEtFOSAA	50 ng/mL
							M2-6:2FTS	47.5 ng/mL
							M2-8:2FTS	47.9 ng/mL
					LCMPFCSU_00047	250 uL	13C2-PFHxDA	50 ng/mL
							13C2-PFTeDA	50 ng/mL
							13C4-PFHpA	50 ng/mL
							13C5-PFPeA	50 ng/mL
							13C8 FOSA	50 ng/mL
							13C4 PFBA	50 ng/mL
							13C2 PFDA	50 ng/mL
							13C2 PFDoA	50 ng/mL
							13C2 PFHxA	50 ng/mL
							18O2 PFHxS	47.3 ng/mL
							13C5 PFNA	50 ng/mL
							13C4 PFOA	50 ng/mL
							13C4 PFOS	47.8 ng/mL
							13C2 PFUnA	50 ng/mL
					LCPFC2SP_00027	1000 uL	Sodium 1H,1H,2H,2H-perfluorooctane sulfonate (6:2)	189.6 ng/mL
							Sodium 1H,1H,2H,2H-perfluorooctane sulfonate (8:2)	191.6 ng/mL
							N-ethylperfluoro-1-octanesulfonamide	200 ng/mL
							N-ethyl perfluorooctane sulfonamidoacetic acid	200 ng/mL
							MeFOSA	200 ng/mL
							N-methyl perfluorooctane sulfonamidoacetic acid	200 ng/mL
					LCPFCSP_00080	2000 uL	Perfluorobutyric acid	200 ng/mL
							Perfluorobutanesulfonic acid (PFBS)	176.8 ng/mL
							Perfluorodecanoic acid	200 ng/mL
							Perfluorododecanoic acid	200 ng/mL
							Perfluorodecane Sulfonic acid	192.8 ng/mL
							Perfluoroheptanoic acid	200 ng/mL
							Perfluoroheptanesulfonic Acid	190.4 ng/mL
							Perfluorohexanoic acid	200 ng/mL
							Perfluorohexadecanoic acid	200 ng/mL
							Perfluorohexanesulfonic acid	182 ng/mL
							Perfluorononanoic acid	200 ng/mL

Lab Name: TestAmerica Sacramento Job No.: 320-25962-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Perfluorooctanoic acid (PFOA)	200 ng/mL
							Perfluorooctadecanoic acid	200 ng/mL
							Perfluorooctanesulfonic acid (PFOS)	185.6 ng/mL
							Perfluorooctane Sulfonamide	200 ng/mL
							Perfluoropentanoic acid	200 ng/mL
							Perfluorotetradecanoic acid	200 ng/mL
							Perfluorotridecanoic acid	200 ng/mL
							Perfluoroundecanoic acid	200 ng/mL
.LCMPFC2SU_00014	08/13/17	02/13/17	Methanol, Lot 104453	50000 uL	LCd-NEtFOSA-M_00004	1000 uL	d-N-EtFOSA-M	1 ug/mL
					LCd-NMeFOSA-M_00003	1000 uL	d-N-MeFOSA-M	1 ug/mL
					LCd3-NMeFOSAA_00003	1000 uL	d3-NMeFOSAA	1 ug/mL
					LCd5-NEtFOSAA_00003	1000 uL	d5-NEtFOSAA	1 ug/mL
					LCM2-6:FTS_00003	1000 uL	M2-6:2FTS	0.95 ug/mL
					LCM2-8:2FTS_00003	1000 uL	M2-8:2FTS	0.958 ug/mL
..LCd-NEtFOSA-M_00004	06/10/21	WELLINGTON, Lot dNEtFOSA0616M			(Purchased Reagent)		d-N-EtFOSA-M	50 ug/mL
..LCd-NMeFOSA-M_00003	06/10/21	WELLINGTON, Lot dNMeFOSA0616M			(Purchased Reagent)		d-N-MeFOSA-M	50 ug/mL
..LCd3-NMeFOSAA_00003	05/31/21	WELLINGTON, Lot d3NMeFOSAA0516			(Purchased Reagent)		d3-NMeFOSAA	50 ug/mL
..LCd5-NEtFOSAA_00003	08/02/21	WELLINGTON, Lot d5NEtFOSAA0716			(Purchased Reagent)		d5-NEtFOSAA	50 ug/mL
..LCM2-6:FTS_00003	01/08/21	WELLINGTON, Lot M262FTS0116			(Purchased Reagent)		M2-6:2FTS	47.5 ug/mL
..LCM2-8:2FTS_00003	01/08/21	WELLINGTON, Lot M282FTS0116			(Purchased Reagent)		M2-8:2FTS	47.9 ug/mL
.LCMPFCSU_00047	06/14/17	12/14/16	Methanol, Lot Baker 144541	50000 uL	LCM2PFHxDA_00008	1000 uL	13C2-PFHxDA	1 ug/mL
					LCM2PFTeDA_00007	1000 uL	13C2-PFTeDA	1 ug/mL
					LCM4PFHPA_00007	1000 uL	13C4-PFHpA	1 ug/mL
					LCM5PFPEA_00008	1000 uL	13C5-PFPeA	1 ug/mL
					LCM8FOSA_00011	1000 uL	13C8 FOSA	1 ug/mL
					LCMPFBA_00008	1000 uL	13C4 PFBA	1 ug/mL
					LCMPFDA_00011	1000 uL	13C2 PFDA	1 ug/mL
					LCMPFDoA_00008	1000 uL	13C2 PFDoA	1 ug/mL
					LCMPFHxA_00012	1000 uL	13C2 PFHxA	1 ug/mL
					LCMPFHxS_00008	1000 uL	18O2 PFHxS	0.946 ug/mL
					LCMPFNA_00008	1000 uL	13C5 PFNA	1 ug/mL
					LCMPFOA_00012	1000 uL	13C4 PFOA	1 ug/mL
					LCMPFOS_00017	1000 uL	13C4 PFOS	0.956 ug/mL
					LCMPFUdA_00009	1000 uL	13C2 PFUnA	1 ug/mL
..LCM2PFHxDA_00008	01/07/21	Wellington Laboratories, Lot M2PFHxDA1112			(Purchased Reagent)		13C2-PFHxDA	50 ug/mL
..LCM2PFTeDA_00007	12/07/20	Wellington Laboratories, Lot M2PFTeDA1115			(Purchased Reagent)		13C2-PFTeDA	50 ug/mL
..LCM4PFHPA_00007	05/27/21	Wellington Laboratories, Lot M4PFHpA0516			(Purchased Reagent)		13C4-PFHpA	50 ug/mL
..LCM5PFPEA_00008	05/22/20	Wellington Laboratories, Lot M5PFPeA0515			(Purchased Reagent)		13C5-PFPeA	50 ug/mL
..LCM8FOSA_00011	12/22/17	Wellington Laboratories, Lot M8FOSA1215I			(Purchased Reagent)		13C8 FOSA	50 ug/mL
..LCMPFBA_00008	05/24/21	Wellington Laboratories, Lot MPFBA0516			(Purchased Reagent)		13C4 PFBA	50 ug/mL
..LCMPFDA_00011	08/19/20	Wellington Laboratories, Lot MPFDA0815			(Purchased Reagent)		13C2 PFDA	50 ug/mL
..LCMPFDoA_00008	04/08/21	Wellington Laboratories, Lot MPFDoA0416			(Purchased Reagent)		13C2 PFDoA	50 ug/mL
..LCMPFHxA_00012	04/08/21	Wellington Laboratories, Lot MPFHxA0416			(Purchased Reagent)		13C2 PFHxA	50 ug/mL
..LCMPFHxS_00008	10/23/20	Wellington Laboratories, Lot MPFHxS1015			(Purchased Reagent)		18O2 PFHxS	47.3 ug/mL
..LCMPFNA_00008	04/13/19	Wellington Laboratories, Lot MPFNA0414			(Purchased Reagent)		13C5 PFNA	50 ug/mL
..LCMPFOA_00012	01/22/21	Wellington Laboratories, Lot MPFOA0116			(Purchased Reagent)		13C4 PFOA	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Sacramento Job No.: 320-25962-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..LCMPFOS_00017	08/03/21	Wellington Laboratories, Lot MPFOS0816			(Purchased Reagent)		13C4 PFOS	47.8 ug/mL
..LCMPFUdA_00009	02/12/21	Wellington Laboratories, Lot MPFUdA0216			(Purchased Reagent)		13C2 PFUnA	50 ug/mL
.LCPFC2SP_00027	08/24/17	02/24/17	Methanol, Lot 104453	10000 uL	LC6:2FTS_00002	200 uL	Sodium 1H,1H,2H,2H-perfluorooctane sulfonate (6:2)	0.948 ug/mL
					LC8:2FTS_00002	200 uL	Sodium 1H,1H,2H,2H-perfluorooctane sulfonate (8:2)	0.958 ug/mL
					LCN-EtFOSA-M_00003	200 uL	N-ethylperfluoro-1-octanesulfonamide	1 ug/mL
					LCN-EtFOSAA_00002	200 uL	N-ethyl perfluorooctane sulfonamidoacetic acid	1 ug/mL
					LCN-MeFOSA-M_00002	200 uL	MeFOSA	1 ug/mL
					LCN-MeFOSAA_00003	200 uL	N-methyl perfluorooctane sulfonamidoacetic acid	1 ug/mL
..LC6:2FTS_00002	06/25/21	WELLINGTON, Lot 62FTS0616			(Purchased Reagent)		Sodium 1H,1H,2H,2H-perfluorooctane sulfonate (6:2)	47.4 ug/mL
..LC8:2FTS_00002	10/23/20	WELLINGTON, Lot 82FTS1015			(Purchased Reagent)		Sodium 1H,1H,2H,2H-perfluorooctane sulfonate (8:2)	47.9 ug/mL
..LCN-EtFOSA-M_00003	05/24/21	WELLINGTON, Lot NEtFOSA0516M			(Purchased Reagent)		N-ethylperfluoro-1-octanesulfonamide	50 ug/mL
..LCN-EtFOSAA_00002	01/20/21	WELLINGTON, Lot NEtFOSAA0116			(Purchased Reagent)		N-ethyl perfluorooctane sulfonamidoacetic acid	50 ug/mL
..LCN-MeFOSA-M_00002	05/24/21	WELLINGTON, Lot NMeFOSA0714M			(Purchased Reagent)		MeFOSA	50 ug/mL
..LCN-MeFOSAA_00003	01/20/21	WELLINGTON, Lot NMeFOSAA0116			(Purchased Reagent)		N-methyl perfluorooctane sulfonamidoacetic acid	50 ug/mL
.LCPFCSP_00080	08/01/17	02/01/17	Methanol, Lot 090285	10000 uL	LCPFBA_00005	100 uL	Perfluorobutyric acid	0.5 ug/mL
					LCPFBS_00005	100 uL	Perfluorobutanesulfonic acid (PFBS)	0.442 ug/mL
					LCPFDA_00005	100 uL	Perfluorodecanoic acid	0.5 ug/mL
					LCPFDoA_00005	100 uL	Perfluorododecanoic acid	0.5 ug/mL
					LCPFDS_00006	100 uL	Perfluorodecane Sulfonic acid	0.482 ug/mL
					LCPFHpA_00006	100 uL	Perfluoroheptanoic acid	0.5 ug/mL
					LCPFHpS_00009	100 uL	Perfluoroheptanesulfonic Acid	0.476 ug/mL
					LCPFHxA_00005	100 uL	Perfluorohexanoic acid	0.5 ug/mL
					LCPFHxDA_00006	100 uL	Perfluorohexadecanoic acid	0.5 ug/mL
					LCPFHxS-br_00002	100 uL	Perfluorohexanesulfonic acid	0.455 ug/mL
					LCPFNA_00006	100 uL	Perfluorononanoic acid	0.5 ug/mL
					LCPFOA_00006	100 uL	Perfluorooctanoic acid (PFOA)	0.5 ug/mL
					LCPFODA_00006	100 uL	Perfluorooctadecanoic acid	0.5 ug/mL
					LCPFOS-br_00002	100 uL	Perfluorooctanesulfonic acid (PFOS)	0.464 ug/mL
					LCPFOSA_00008	100 uL	Perfluorooctane Sulfonamide	0.5 ug/mL
					LCPFPeA_00005	100 uL	Perfluoropentanoic acid	0.5 ug/mL
					LCPFTeDA_00005	100 uL	Perfluorotetradecanoic acid	0.5 ug/mL
					LCPFTrDA_00005	100 uL	Perfluorotridecanoic acid	0.5 ug/mL
					LCPFUdA_00005	100 uL	Perfluoroundecanoic acid	0.5 ug/mL

Lab Name: TestAmerica Sacramento Job No.: 320-25962-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..LCPFBA_00005	05/27/21	Wellington Laboratories, Lot PFBA0516			(Purchased Reagent)		Perfluorobutyric acid	50 ug/mL
..LCPFBS_00005	03/15/21	Wellington Laboratories, Lot LPFBS0316			(Purchased Reagent)		Perfluorobutanesulfonic acid (PFBS)	44.2 ug/mL
..LCPFDA_00005	07/02/20	Wellington Laboratories, Lot PFDA0615			(Purchased Reagent)		Perfluorodecanoic acid	50 ug/mL
..LCPFDoA_00005	01/30/20	Wellington Laboratories, Lot PFDoA0115			(Purchased Reagent)		Perfluorododecanoic acid	50 ug/mL
..LCPFDS_00006	05/24/21	Wellington Laboratories, Lot LPFDS0516			(Purchased Reagent)		Perfluorodecane Sulfonic acid	48.2 ug/mL
..LCPFHpA_00006	01/22/21	Wellington Laboratories, Lot PFHpA0116			(Purchased Reagent)		Perfluoroheptanoic acid	50 ug/mL
..LCPFHpS_00009	11/06/20	Wellington Laboratories, Lot LPFHpS1115			(Purchased Reagent)		Perfluoroheptanesulfonic Acid	47.6 ug/mL
..LCPFHxA_00005	12/22/20	Wellington Laboratories, Lot PFHxA1215			(Purchased Reagent)		Perfluorohexanoic acid	50 ug/mL
..LCPFHxDA_00006	05/25/21	Wellington Laboratories, Lot PFHxDA0516			(Purchased Reagent)		Perfluorohexadecanoic acid	50 ug/mL
..LCPFHxS-br_00002	07/03/20	Wellington Laboratories, Lot brPFHxSK0615			(Purchased Reagent)		Perfluorohexanesulfonic acid	45.5 ug/mL
..LCPFNA_00006	10/23/20	Wellington Laboratories, Lot PFNA1015			(Purchased Reagent)		Perfluorononanoic acid	50 ug/mL
..LCPFOA_00006	11/06/20	Wellington Laboratories, Lot PFOA1115			(Purchased Reagent)		Perfluorooctanoic acid (PFOA)	50 ug/mL
..LCPFODA_00006	04/29/21	Wellington Laboratories, Lot PFODA0416			(Purchased Reagent)		Perfluorooctadecanoic acid	50 ug/mL
..LCPFOS-br_00002	10/14/20	Wellington Laboratories, Lot brPFOSK1015			(Purchased Reagent)		Perfluorooctanesulfonic acid (PFOS)	46.4 ug/mL
..LCPFOSA_00008	09/02/17	Wellington Laboratories, Lot FOSA0815I			(Purchased Reagent)		Perfluorooctane Sulfonamide	50 ug/mL
..LCPFPeA_00005	01/30/20	Wellington Laboratories, Lot PFPeA0115			(Purchased Reagent)		Perfluoropentanoic acid	50 ug/mL
..LCPFTeDA_00005	12/09/20	Wellington Laboratories, Lot PFTeDA1215			(Purchased Reagent)		Perfluorotetradecanoic acid	50 ug/mL
..LCPFTrDA_00005	02/12/21	Wellington Laboratories, Lot PFTrDA0216			(Purchased Reagent)		Perfluorotridecanoic acid	50 ug/mL
..LCPFUdA_00005	08/19/20	Wellington Laboratories, Lot PFUdA0815			(Purchased Reagent)		Perfluoroundecanoic acid	50 ug/mL
LCPFC2SP_00017	03/02/17	09/02/16	Methanol, Lot 104453	10000 uL	LC6:2FTS_00002	100 uL	Sodium 1H,1H,2H,2H-perfluorooctane sulfonate (6:2)	0.474 ug/mL
					LC8:2FTS_00002	100 uL	Sodium 1H,1H,2H,2H-perfluorooctane sulfonate (8:2)	0.479 ug/mL
					LCN-EtFOSA-M_00003	100 uL	N-ethylperfluoro-1-octanesulfonamide	0.5 ug/mL
					LCN-EtFOSAA_00002	100 uL	N-ethyl perfluorooctane sulfonamidoacetic acid	0.5 ug/mL
					LCN-MeFOSA-M_00002	100 uL	MeFOSA	0.5 ug/mL
					LCN-MeFOSAA_00003	100 uL	N-methyl perfluorooctane sulfonamidoacetic acid	0.5 ug/mL
.LC6:2FTS_00002	06/25/21	WELLINGTON, Lot 62FTS0616			(Purchased Reagent)		Sodium 1H,1H,2H,2H-perfluorooctane sulfonate (6:2)	47.4 ug/mL
.LC8:2FTS_00002	10/23/20	WELLINGTON, Lot 82FTS1015			(Purchased Reagent)		Sodium 1H,1H,2H,2H-perfluorooctane sulfonate (8:2)	47.9 ug/mL
.LCN-EtFOSA-M_00003	05/24/21	WELLINGTON, Lot NEtFOSA0516M			(Purchased Reagent)		N-ethylperfluoro-1-octanesulfonamide	50 ug/mL
.LCN-EtFOSAA_00002	01/20/21	WELLINGTON, Lot NEtFOSAA0116			(Purchased Reagent)		N-ethyl perfluorooctane sulfonamidoacetic acid	50 ug/mL
.LCN-MeFOSA-M_00002	05/24/21	WELLINGTON, Lot NMeFOSA0714M			(Purchased Reagent)		MeFOSA	50 ug/mL
.LCN-MeFOSAA_00003	01/20/21	WELLINGTON, Lot NMeFOSAA0116			(Purchased Reagent)		N-methyl perfluorooctane sulfonamidoacetic acid	50 ug/mL
LCPFCIC_FULL_00001	06/01/17	02/16/17	MeOH/H2O, Lot 09285	5 mL	LCMPFC2SU_00014	250 uL	d-N-EtFOSA-M	50 ng/mL
							d-N-MeFOSA-M	50 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Sacramento Job No.: 320-25962-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							d3-NMeFOSAA	50 ng/mL
							d5-NEtFOSAA	50 ng/mL
							M2-6:2FTS	47.5 ng/mL
							M2-8:2FTS	47.9 ng/mL
					LCMPFCSU_00047	250 uL	13C2-PFHxDA	50 ng/mL
							13C2-PFTeDA	50 ng/mL
							13C4-PFHpA	50 ng/mL
							13C5-PFPeA	50 ng/mL
							13C8 FOSA	50 ng/mL
							13C4 PFBA	50 ng/mL
							13C2 PFDA	50 ng/mL
							13C2 PFDoA	50 ng/mL
							13C2 PFHxA	50 ng/mL
							18O2 PFHxS	47.3 ng/mL
							13C5 PFNA	50 ng/mL
							13C4 PFOA	50 ng/mL
							13C4 PFOS	47.8 ng/mL
							13C2 PFUnA	50 ng/mL
					LCPFACMXB_00007	125 uL	Perfluorooctanesulfonic acid (PFOS)	47.75 ng/mL
							Perfluorooctanoic acid (PFOA)	50 ng/mL
.LCMPFC2SU_00014	08/13/17	02/13/17	Methanol, Lot 104453	50000 uL	LCd-NEtFOSA-M_00004	1000 uL	d-N-EtFOSA-M	1 ug/mL
					LCd-NMeFOSA-M_00003	1000 uL	d-N-MeFOSA-M	1 ug/mL
					LCd3-NMeFOSAA_00003	1000 uL	d3-NMeFOSAA	1 ug/mL
					LCd5-NEtFOSAA_00003	1000 uL	d5-NEtFOSAA	1 ug/mL
					LCM2-6:FTS_00003	1000 uL	M2-6:2FTS	0.95 ug/mL
					LCM2-8:2FTS_00003	1000 uL	M2-8:2FTS	0.958 ug/mL
..LCd-NEtFOSA-M_00004	06/10/21	WELLINGTON, Lot dNEtFOSA0616M			(Purchased Reagent)		d-N-EtFOSA-M	50 ug/mL
..LCd-NMeFOSA-M_00003	06/10/21	WELLINGTON, Lot dNMeFOSA0616M			(Purchased Reagent)		d-N-MeFOSA-M	50 ug/mL
..LCd3-NMeFOSAA_00003	05/31/21	WELLINGTON, Lot d3NMeFOSAA0516			(Purchased Reagent)		d3-NMeFOSAA	50 ug/mL
..LCd5-NEtFOSAA_00003	08/02/21	WELLINGTON, Lot d5NEtFOSAA0716			(Purchased Reagent)		d5-NEtFOSAA	50 ug/mL
..LCM2-6:FTS_00003	01/08/21	WELLINGTON, Lot M262FTS0116			(Purchased Reagent)		M2-6:2FTS	47.5 ug/mL
..LCM2-8:2FTS_00003	01/08/21	WELLINGTON, Lot M282FTS0116			(Purchased Reagent)		M2-8:2FTS	47.9 ug/mL
.LCMPFCSU_00047	06/14/17	12/14/16	Methanol, Lot Baker 144541	50000 uL	LCM2PFHxDA_00008	1000 uL	13C2-PFHxDA	1 ug/mL
					LCM2PFTeDA_00007	1000 uL	13C2-PFTeDA	1 ug/mL
					LCM4PFHPA_00007	1000 uL	13C4-PFHpA	1 ug/mL
					LCM5PFPEA_00008	1000 uL	13C5-PFPeA	1 ug/mL
					LCM8FOSA_00011	1000 uL	13C8 FOSA	1 ug/mL
					LCMPFBA_00008	1000 uL	13C4 PFBA	1 ug/mL
					LCMPFDA_00011	1000 uL	13C2 PFDA	1 ug/mL
					LCMPFDoA_00008	1000 uL	13C2 PFDoA	1 ug/mL
					LCMPFHxA_00012	1000 uL	13C2 PFHxA	1 ug/mL
					LCMPFHxS_00008	1000 uL	18O2 PFHxS	0.946 ug/mL
					LCMPFNA_00008	1000 uL	13C5 PFNA	1 ug/mL
					LCMPFOA_00012	1000 uL	13C4 PFOA	1 ug/mL
					LCMPFOS_00017	1000 uL	13C4 PFOS	0.956 ug/mL
					LCMPFUdA_00009	1000 uL	13C2 PFUnA	1 ug/mL

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..LCM2PFHxDA_00008	01/07/21	Wellington Laboratories, Lot M2PFHxDA1112			(Purchased Reagent)		13C2-PFHxDA	50 ug/mL
..LCM2PFTeDA_00007	12/07/20	Wellington Laboratories, Lot M2PFTeDA1115			(Purchased Reagent)		13C2-PFTeDA	50 ug/mL
..LCM4PFHPA_00007	05/27/21	Wellington Laboratories, Lot M4PFHpA0516			(Purchased Reagent)		13C4-PFHpA	50 ug/mL
..LCM5PFPEA_00008	05/22/20	Wellington Laboratories, Lot M5PFPeA0515			(Purchased Reagent)		13C5-PFPeA	50 ug/mL
..LCM8FOSA_00011	12/22/17	Wellington Laboratories, Lot M8FOSA1215I			(Purchased Reagent)		13C8 FOSA	50 ug/mL
..LCMPFBA_00008	05/24/21	Wellington Laboratories, Lot MPFBA0516			(Purchased Reagent)		13C4 PFBA	50 ug/mL
..LCMPFDA_00011	08/19/20	Wellington Laboratories, Lot MPFDA0815			(Purchased Reagent)		13C2 PFDA	50 ug/mL
..LCMPFDoA_00008	04/08/21	Wellington Laboratories, Lot MPFDoA0416			(Purchased Reagent)		13C2 PFDoA	50 ug/mL
..LCMPFHxA_00012	04/08/21	Wellington Laboratories, Lot MPFHxA0416			(Purchased Reagent)		13C2 PFHxA	50 ug/mL
..LCMPFHxS_00008	10/23/20	Wellington Laboratories, Lot MPFHxS1015			(Purchased Reagent)		18O2 PFHxS	47.3 ug/mL
..LCMPFNA_00008	04/13/19	Wellington Laboratories, Lot MPFNA0414			(Purchased Reagent)		13C5 PFNA	50 ug/mL
..LCMPFOA_00012	01/22/21	Wellington Laboratories, Lot MPFOA0116			(Purchased Reagent)		13C4 PFOA	50 ug/mL
..LCMPFOS_00017	08/03/21	Wellington Laboratories, Lot MPFOS0816			(Purchased Reagent)		13C4 PFOS	47.8 ug/mL
..LCMPFUdA_00009	02/12/21	Wellington Laboratories, Lot MPFUdA0216			(Purchased Reagent)		13C2 PFUnA	50 ug/mL
.LCPFACMXB_00007	11/06/20	Wellington Laboratories, Lot PFACMXB1115			(Purchased Reagent)		Perfluorooctanesulfonic acid (PFOS)	1.91 ug/mL
							Perfluorooctanoic acid (PFOA)	2 ug/mL
LCPFCSP_00080	08/01/17	02/01/17	Methanol, Lot 090285	10000 uL	LCPFBA_00005	100 uL	Perfluorobutyric acid	0.5 ug/mL
					LCPFBS_00005	100 uL	Perfluorobutane Sulfonate	0.442 ug/mL
							Perfluorobutanesulfonic acid (PFBS)	0.442 ug/mL
					LCPFDA_00005	100 uL	Perfluorodecanoic acid	0.5 ug/mL
					LCPFDoA_00005	100 uL	Perfluorododecanoic acid	0.5 ug/mL
					LCPFDS_00006	100 uL	Perfluorodecane Sulfonate	0.482 ug/mL
							Perfluorodecane Sulfonic acid	0.482 ug/mL
					LCPFHpA_00006	100 uL	Perfluoroheptanoic acid	0.5 ug/mL
					LCPFHpS_00009	100 uL	Perfluoroheptane Sulfonate	0.476 ug/mL
							Perfluoroheptanesulfonic Acid	0.476 ug/mL
					LCPFHxA_00005	100 uL	Perfluorohexanoic acid	0.5 ug/mL
					LCPFHxDA_00006	100 uL	Perfluorohexadecanoic acid	0.5 ug/mL
					LCPFHxS-br_00002	100 uL	Perfluorohexane Sulfonate	0.455 ug/mL
							Perfluorohexanesulfonic acid	0.455 ug/mL
					LCPFNA_00006	100 uL	Perfluorononanoic acid	0.5 ug/mL
					LCPFOA_00006	100 uL	Perfluorooctanoic acid (PFOA)	0.5 ug/mL
					LCPFODA_00006	100 uL	Perfluorooctadecanoic acid	0.5 ug/mL
					LCPFOS-br_00002	100 uL	Perfluorooctanesulfonic acid (PFOS)	0.464 ug/mL
					LCPFOSA_00008	100 uL	Perfluorooctane Sulfonamide	0.5 ug/mL
					LCPFPeA_00005	100 uL	Perfluoropentanoic acid	0.5 ug/mL
					LCPFTeDA_00005	100 uL	Perfluorotetradecanoic acid	0.5 ug/mL
					LCPFTrDA_00005	100 uL	Perfluorotridecanoic acid	0.5 ug/mL
					LCPFUdA_00005	100 uL	Perfluoroundecanoic acid	0.5 ug/mL
.LCPFBA_00005	05/27/21	Wellington Laboratories, Lot PFBA0516			(Purchased Reagent)		Perfluorobutyric acid	50 ug/mL
.LCPFBS_00005	03/15/21	Wellington Laboratories, Lot LPFBS0316			(Purchased Reagent)		Perfluorobutane Sulfonate	44.2 ug/mL
							Perfluorobutanesulfonic acid (PFBS)	44.2 ug/mL
.LCPFDA_00005	07/02/20	Wellington Laboratories, Lot PFDA0615			(Purchased Reagent)		Perfluorodecanoic acid	50 ug/mL
.LCPFDoA_00005	01/30/20	Wellington Laboratories, Lot PFDoA0115			(Purchased Reagent)		Perfluorododecanoic acid	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Sacramento Job No.: 320-25962-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.LCPFDS_00006	05/24/21	Wellington Laboratories, Lot LPFDS0516			(Purchased Reagent)		Perfluorodecane Sulfonate	48.2 ug/mL
							Perfluorodecane Sulfonic acid	48.2 ug/mL
.LCPFHpA_00006	01/22/21	Wellington Laboratories, Lot PFHpA0116			(Purchased Reagent)		Perfluoroheptanoic acid	50 ug/mL
.LCPFHpS_00009	11/06/20	Wellington Laboratories, Lot LPFHpS1115			(Purchased Reagent)		Perfluoroheptane Sulfonate	47.6 ug/mL
							Perfluoroheptanesulfonic Acid	47.6 ug/mL
.LCPFHxA_00005	12/22/20	Wellington Laboratories, Lot PFHxA1215			(Purchased Reagent)		Perfluorohexanoic acid	50 ug/mL
.LCPFHxDA_00006	05/25/21	Wellington Laboratories, Lot PFHxDA0516			(Purchased Reagent)		Perfluorohexadecanoic acid	50 ug/mL
.LCPFHxS-br_00002	07/03/20	Wellington Laboratories, Lot brPFHxSK0615			(Purchased Reagent)		Perfluorohexane Sulfonate	45.5 ug/mL
							Perfluorohexanesulfonic acid	45.5 ug/mL
.LCPFNA_00006	10/23/20	Wellington Laboratories, Lot PFNA1015			(Purchased Reagent)		Perfluorononanoic acid	50 ug/mL
.LCPFOA_00006	11/06/20	Wellington Laboratories, Lot PFOA1115			(Purchased Reagent)		Perfluorooctanoic acid (PFOA)	50 ug/mL
.LCPFODA_00006	04/29/21	Wellington Laboratories, Lot PFODA0416			(Purchased Reagent)		Perfluorooctadecanoic acid	50 ug/mL
.LCPFOS-br_00002	10/14/20	Wellington Laboratories, Lot brPFOSK1015			(Purchased Reagent)		Perfluorooctanesulfonic acid (PFOS)	46.4 ug/mL
.LCPFOSA_00008	09/02/17	Wellington Laboratories, Lot FOSA0815I			(Purchased Reagent)		Perfluorooctane Sulfonamide	50 ug/mL
.LCPFPeA_00005	01/30/20	Wellington Laboratories, Lot PFPeA0115			(Purchased Reagent)		Perfluoropentanoic acid	50 ug/mL
.LCPFTeDA_00005	12/09/20	Wellington Laboratories, Lot PFTeDA1215			(Purchased Reagent)		Perfluorotetradecanoic acid	50 ug/mL
.LCPFTrDA_00005	02/12/21	Wellington Laboratories, Lot PFTrDA0216			(Purchased Reagent)		Perfluorotridecanoic acid	50 ug/mL
.LCPFUdA_00005	08/19/20	Wellington Laboratories, Lot PFUdA0815			(Purchased Reagent)		Perfluoroundecanoic acid	50 ug/mL
MS14DICV_00004	01/12/18	02/21/17	MeCl2, Lot 0000152943	1 mL	MS8270IS_00016	5 uL	1,4-Dichlorobenzene-d4	10 ug/mL
.MS8270IS_00016	01/12/18	Restek, Lot A0120796			(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
MS14DICV_00004	01/12/18	02/21/17	MeCl2, Lot 0000152943	1 mL	MS14DIC_00008	100 uL	1,4-Dioxane	10 ug/mL
							Nitrobenzene-d5	10 ug/mL
.MS14DIC_00008	02/21/18	02/21/17	MeCl2, Lot 0000152943	10 mL	MS14DIC_00007	500 uL	1,4-Dioxane	100 ug/mL
					MS8270SU_00100	200 uL	Nitrobenzene-d5	100 ug/mL
..MS14DIC_00007	02/21/18	Restek, Lot A0124653			(Purchased Reagent)		1,4-Dioxane	2000 ug/mL
..MS8270SU_00100	02/21/18	Restek, Lot A0103960			(Purchased Reagent)		Nitrobenzene-d5	5000 ug/mL
MS14DL1_00011	01/12/18	02/21/17	MeCl2, Lot 0000152943	1 mL	MS14DTA_00024	5 uL	1,4-Dioxane	0.5 ug/mL
							Nitrobenzene-d5	0.5 ug/mL
					MS8270IS_00016	5 uL	1,4-Dichlorobenzene-d4	10 ug/mL
.MS14DTA_00024	02/21/18	02/21/17	MeCl2, Lot 0000152943	10 mL	MS14DTA_00023	500 uL	1,4-Dioxane	100 ug/mL
					MS8270SU_00100	200 uL	Nitrobenzene-d5	100 ug/mL
..MS14DTA_00023	02/21/18	Restek, Lot A0121319			(Purchased Reagent)		1,4-Dioxane	2000 ug/mL
..MS8270SU_00100	02/21/18	Restek, Lot A0103960			(Purchased Reagent)		Nitrobenzene-d5	5000 ug/mL
.MS8270IS_00016	01/12/18	Restek, Lot A0120796			(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
MS14DL2_00010	01/12/18	02/21/17	MeCl2, Lot 0000152943	1 mL	MS14DTA_00024	10 uL	1,4-Dioxane	1 ug/mL
							Nitrobenzene-d5	1 ug/mL
					MS8270IS_00016	5 uL	1,4-Dichlorobenzene-d4	10 ug/mL
.MS14DTA_00024	02/21/18	02/21/17	MeCl2, Lot 0000152943	10 mL	MS14DTA_00023	500 uL	1,4-Dioxane	100 ug/mL
					MS8270SU_00100	200 uL	Nitrobenzene-d5	100 ug/mL
..MS14DTA_00023	02/21/18	Restek, Lot A0121319			(Purchased Reagent)		1,4-Dioxane	2000 ug/mL
..MS8270SU_00100	02/21/18	Restek, Lot A0103960			(Purchased Reagent)		Nitrobenzene-d5	5000 ug/mL
.MS8270IS_00016	01/12/18	Restek, Lot A0120796			(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
MS14DL3_00010	01/12/18	02/21/17	MeCl2, Lot 0000152943	1 mL	MS14DTA_00024	20 uL	1,4-Dioxane	2 ug/mL
							Nitrobenzene-d5	2 ug/mL
					MS8270IS_00016	5 uL	1,4-Dichlorobenzene-d4	10 ug/mL
.MS14DTA_00024	02/21/18	02/21/17	MeCl2, Lot 0000152943	10 mL	MS14DTA_00023	500 uL	1,4-Dioxane	100 ug/mL

Lab Name: TestAmerica Sacramento Job No.: 320-25962-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					MS8270SU_00100	200 uL	Nitrobenzene-d5	100 ug/mL
..MS14DTA_00023	02/21/18		Restek, Lot A0121319		(Purchased Reagent)		1,4-Dioxane	2000 ug/mL
..MS8270SU_00100	02/21/18		Restek, Lot A0103960		(Purchased Reagent)		Nitrobenzene-d5	5000 ug/mL
.MS8270IS_00016	01/12/18		Restek, Lot A0120796		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
MS14DL4_00010	01/12/18	02/21/17	MeCl2, Lot 0000152943	1 mL	MS14DTA_00024	50 uL	1,4-Dioxane	5 ug/mL
							Nitrobenzene-d5	5 ug/mL
					MS8270IS_00016	5 uL	1,4-Dichlorobenzene-d4	10 ug/mL
.MS14DTA_00024	02/21/18	02/21/17	MeCl2, Lot 0000152943	10 mL	MS14DTA_00023	500 uL	1,4-Dioxane	100 ug/mL
					MS8270SU_00100	200 uL	Nitrobenzene-d5	100 ug/mL
..MS14DTA_00023	02/21/18		Restek, Lot A0121319		(Purchased Reagent)		1,4-Dioxane	2000 ug/mL
..MS8270SU_00100	02/21/18		Restek, Lot A0103960		(Purchased Reagent)		Nitrobenzene-d5	5000 ug/mL
.MS8270IS_00016	01/12/18		Restek, Lot A0120796		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
MS14DL5_00010	01/12/18	02/21/17	MeCl2, Lot 0000152943	1 mL	MS14DTA_00024	100 uL	1,4-Dioxane	10 ug/mL
							Nitrobenzene-d5	10 ug/mL
					MS8270IS_00016	5 uL	1,4-Dichlorobenzene-d4	10 ug/mL
.MS14DTA_00024	02/21/18	02/21/17	MeCl2, Lot 0000152943	10 mL	MS14DTA_00023	500 uL	1,4-Dioxane	100 ug/mL
					MS8270SU_00100	200 uL	Nitrobenzene-d5	100 ug/mL
..MS14DTA_00023	02/21/18		Restek, Lot A0121319		(Purchased Reagent)		1,4-Dioxane	2000 ug/mL
..MS8270SU_00100	02/21/18		Restek, Lot A0103960		(Purchased Reagent)		Nitrobenzene-d5	5000 ug/mL
.MS8270IS_00016	01/12/18		Restek, Lot A0120796		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
MS14DL6_00010	01/12/18	02/21/17	MeCl2, Lot 0000152943	1 mL	MS14DTA_00024	200 uL	1,4-Dioxane	20 ug/mL
							Nitrobenzene-d5	20 ug/mL
					MS8270IS_00016	5 uL	1,4-Dichlorobenzene-d4	10 ug/mL
.MS14DTA_00024	02/21/18	02/21/17	MeCl2, Lot 0000152943	10 mL	MS14DTA_00023	500 uL	1,4-Dioxane	100 ug/mL
					MS8270SU_00100	200 uL	Nitrobenzene-d5	100 ug/mL
..MS14DTA_00023	02/21/18		Restek, Lot A0121319		(Purchased Reagent)		1,4-Dioxane	2000 ug/mL
..MS8270SU_00100	02/21/18		Restek, Lot A0103960		(Purchased Reagent)		Nitrobenzene-d5	5000 ug/mL
.MS8270IS_00016	01/12/18		Restek, Lot A0120796		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
MS14DL7_00010	01/12/18	02/21/17	MeCl2, Lot 0000152943	1 mL	MS14DTA_00024	500 uL	1,4-Dioxane	50 ug/mL
							Nitrobenzene-d5	50 ug/mL
					MS8270IS_00016	5 uL	1,4-Dichlorobenzene-d4	10 ug/mL
.MS14DTA_00024	02/21/18	02/21/17	MeCl2, Lot 0000152943	10 mL	MS14DTA_00023	500 uL	1,4-Dioxane	100 ug/mL
					MS8270SU_00100	200 uL	Nitrobenzene-d5	100 ug/mL
..MS14DTA_00023	02/21/18		Restek, Lot A0121319		(Purchased Reagent)		1,4-Dioxane	2000 ug/mL
..MS8270SU_00100	02/21/18		Restek, Lot A0103960		(Purchased Reagent)		Nitrobenzene-d5	5000 ug/mL
.MS8270IS_00016	01/12/18		Restek, Lot A0120796		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
MS14DL8_00005	01/12/18	02/21/17	MeCl2, Lot 0000152943	1 mL	MS14DTA_00024	1000 uL	1,4-Dioxane	100 ug/mL
							Nitrobenzene-d5	100 ug/mL
					MS8270IS_00016	5 uL	1,4-Dichlorobenzene-d4	10 ug/mL
.MS14DTA_00024	02/21/18	02/21/17	MeCl2, Lot 0000152943	10 mL	MS14DTA_00023	500 uL	1,4-Dioxane	100 ug/mL
					MS8270SU_00100	200 uL	Nitrobenzene-d5	100 ug/mL
..MS14DTA_00023	02/21/18		Restek, Lot A0121319		(Purchased Reagent)		1,4-Dioxane	2000 ug/mL
..MS8270SU_00100	02/21/18		Restek, Lot A0103960		(Purchased Reagent)		Nitrobenzene-d5	5000 ug/mL
.MS8270IS_00016	01/12/18		Restek, Lot A0120796		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
MS14DSP_00030	06/20/17	12/20/16	Methanol, Lot 0000152413	100 mL	MS14DTA_00022	1 mL	1,4-Dioxane	20 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Sacramento Job No.: 320-25962-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.MS14DTA_00022	09/30/18	SUPELCO, Lot LC16305V			(Purchased Reagent)		1,4-Dioxane	2000 ug/mL
MS14DSU_00003	03/21/17	10/31/16	Methanol, Lot 00000142776	200 mL	MS8270SU_00094	20 mL	2,4,6-Tribromophenol	10 ug/mL
							2-Fluorobiphenyl (Surr)	10 ug/mL
							2-Fluorophenol	10 ug/mL
							Nitrobenzene-d5	10 ug/mL
							Phenol-d5	10 ug/mL
							Terphenyl-d14	10 ug/mL
.MS8270SU_00094	03/21/17	Restek, Lot A0117528			(Purchased Reagent)		2,4,6-Tribromophenol	100 ug/mL
							2-Fluorobiphenyl (Surr)	100 ug/mL
							2-Fluorophenol	100 ug/mL
							Nitrobenzene-d5	100 ug/mL
							Phenol-d5	100 ug/mL
							Terphenyl-d14	100 ug/mL
MS8270IS_00016	01/12/18	Restek, Lot A0120796			(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL

Reagent

LC6:2FTS_00002

R: 8/23/16 SBC

715544
ID: LC6:2FTS_00002
Exp: 06/25/21 Prpd: SBC
6:2FTS

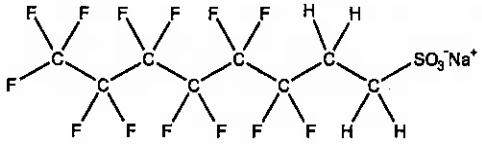
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: 6:2FTS **LOT NUMBER:** 62FTS0616

COMPOUND: Sodium 1H,1H,2H,2H-perfluorooctane sulfonate

STRUCTURE: **CAS #:** Not available



MOLECULAR FORMULA:	$C_8H_4F_{13}SO_3Na$		**MOLECULAR WEIGHT:**	450.15
CONCENTRATION:	50.0 ± 2.5 µg/ml	(Na salt)	**SOLVENT(S):**	Methanol
	47.4 ± 2.4 µg/ml	(6:2FTS anion)		
CHEMICAL PURITY:	>98%			
LAST TESTED: (mm/dd/yyyy)	06/25/2016			
EXPIRY DATE: (mm/dd/yyyy)	06/25/2021			
RECOMMENDED STORAGE:	Refrigerate ampoule			

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.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: B.G. Chittim **Date:** 06/29/2016 (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:

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, SFC/UV/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:

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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 $x_1, x_2, \ldots x_n$ 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:

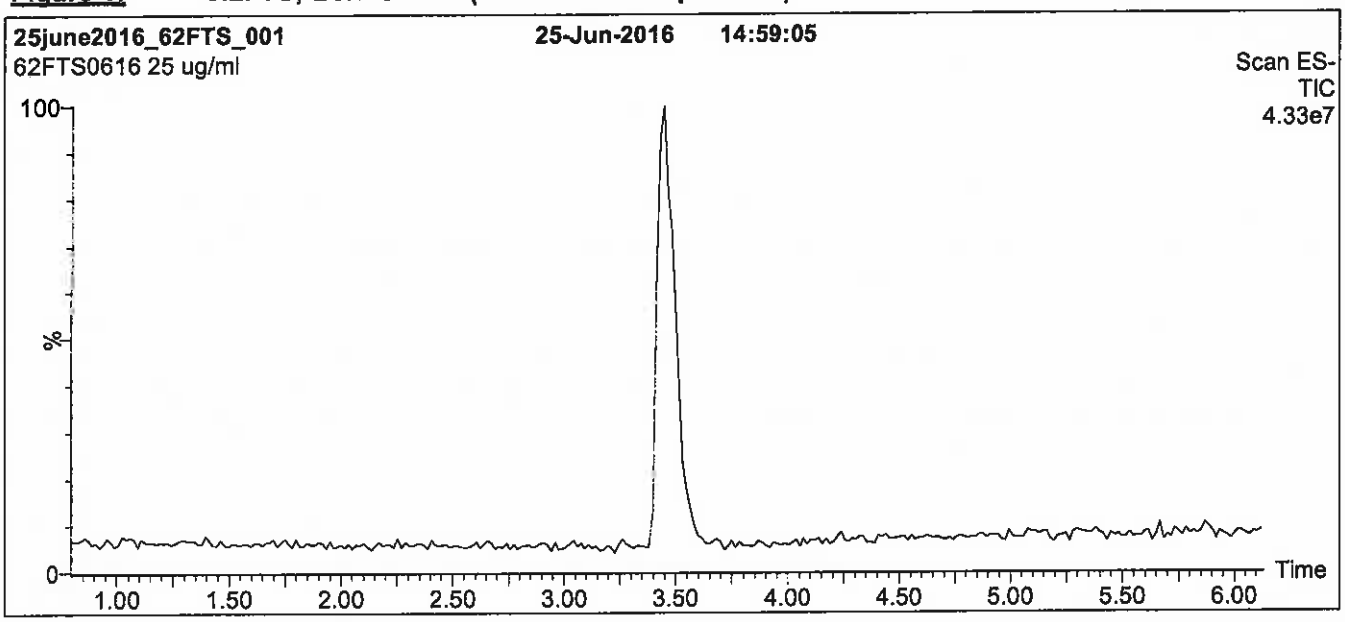
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO GUIDE 34 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

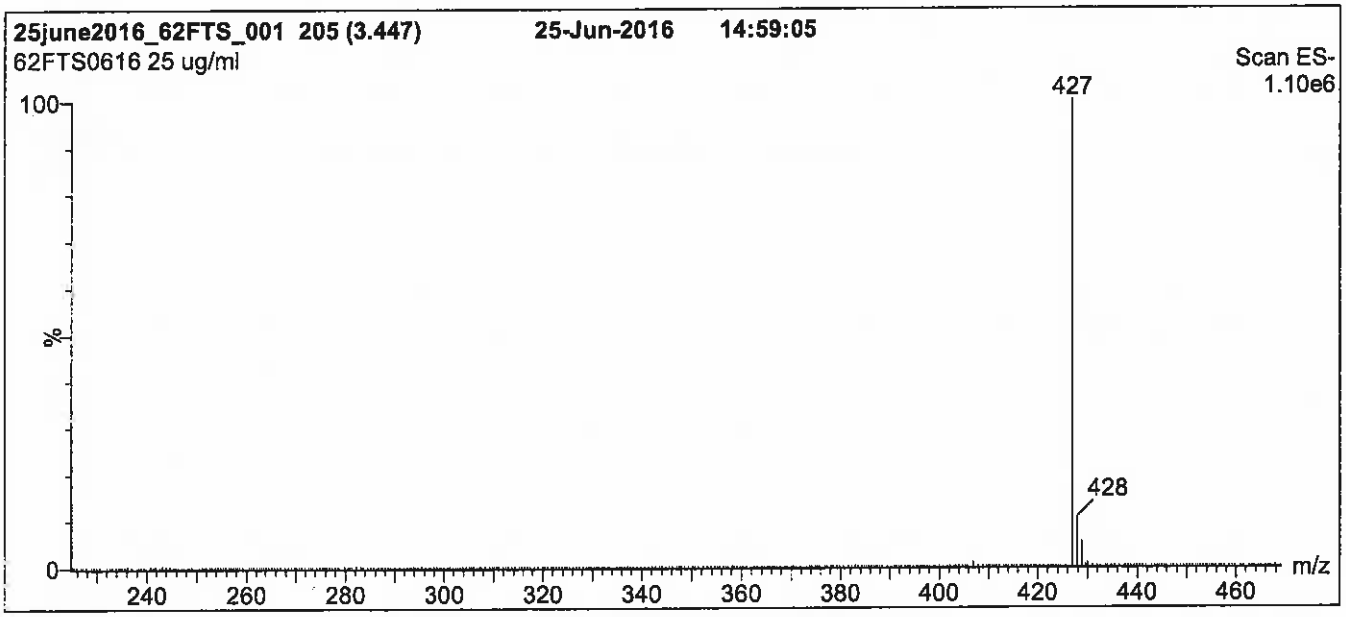
CALA Testing

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: **6:2FTS; 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 1.5 min
before returning to initial conditions in 0.5 min.
Time: 10 min

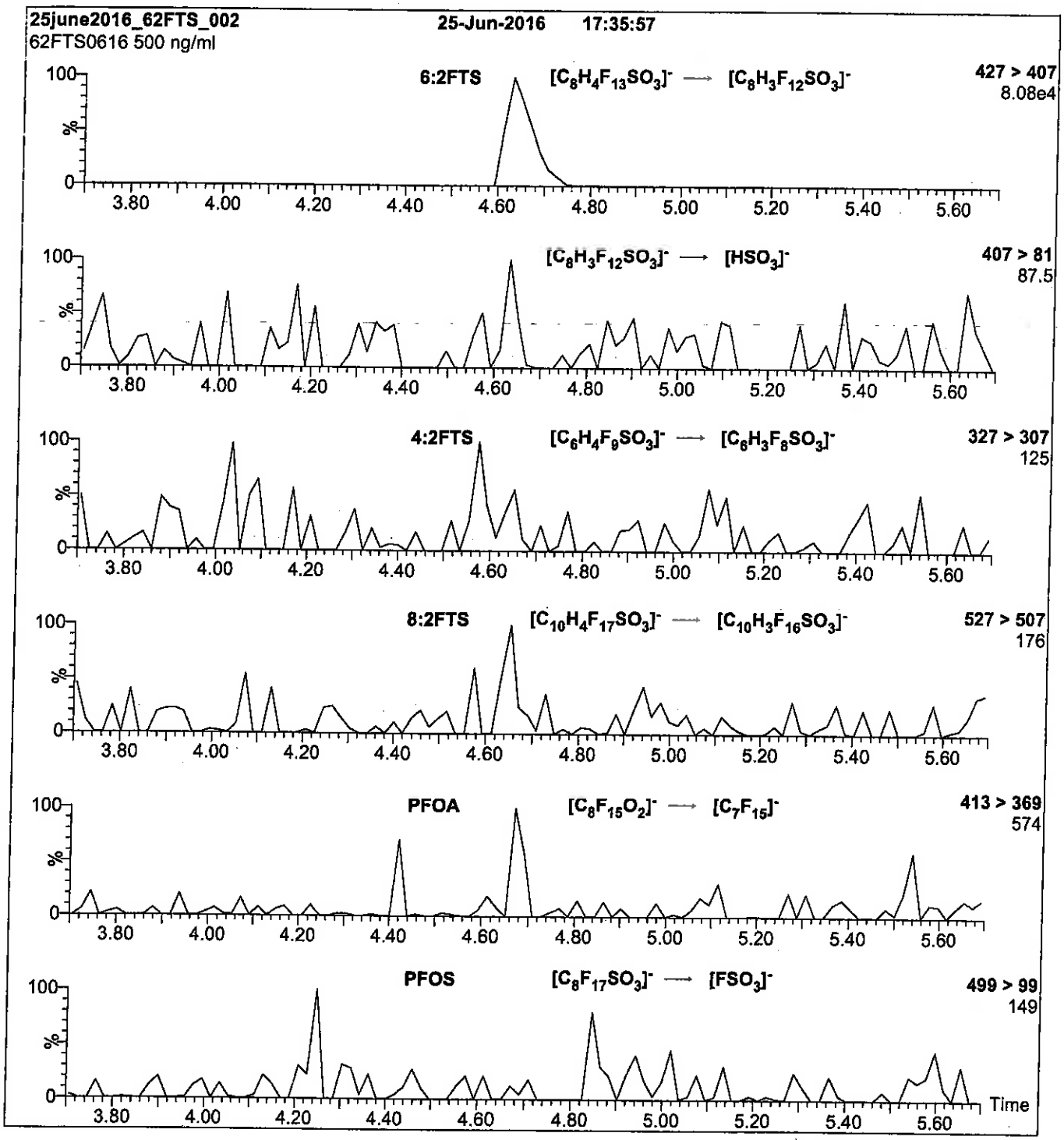
Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 3.00
Cone Voltage (V) = 30.00
Cone Gas Flow (l/hr) = 50
Desolvation Gas Flow (l/hr) = 750

Figure 2: **6:2FTS; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: Direct loop injection
10 µl (500 ng/ml 6:2FTS)

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) = 25

Reagent

LC8:2FTS_00002

R: 8/23/16 SBC

715545
ID: LC8:2FTS_00002
Exp: 10/23/20 Prpd: SBC
8:2FTS

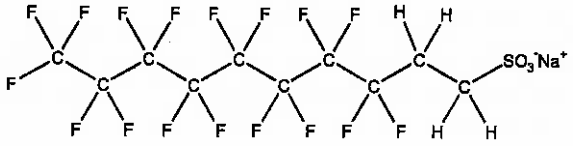
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: 8:2FTS **LOT NUMBER:** 82FTS1015

COMPOUND: Sodium 1H,1H,2H,2H-perfluorodecane sulfonate

STRUCTURE: **CAS #:** Not available



MOLECULAR FORMULA:	$C_{10}H_4F_{17}SO_3Na$		**MOLECULAR WEIGHT:**	550.16
CONCENTRATION:	50.0 ± 2.5 µg/ml	(Na salt)	**SOLVENT(S):**	Methanol
	47.9 ± 2.4 µg/ml	(8:2FTS anion)		
CHEMICAL PURITY:	>98%			
LAST TESTED: (mm/dd/yyyy)	10/23/2015			
EXPIRY DATE: (mm/dd/yyyy)	10/23/2020			
RECOMMENDED STORAGE:	Refrigerate ampoule			

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.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: B.G. Chittim **Date:** 10/27/2015 (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:

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HAZARDS:

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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, SFC/UV/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.

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where x is expressed as a relative standard uncertainty of the individual parameter.

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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:

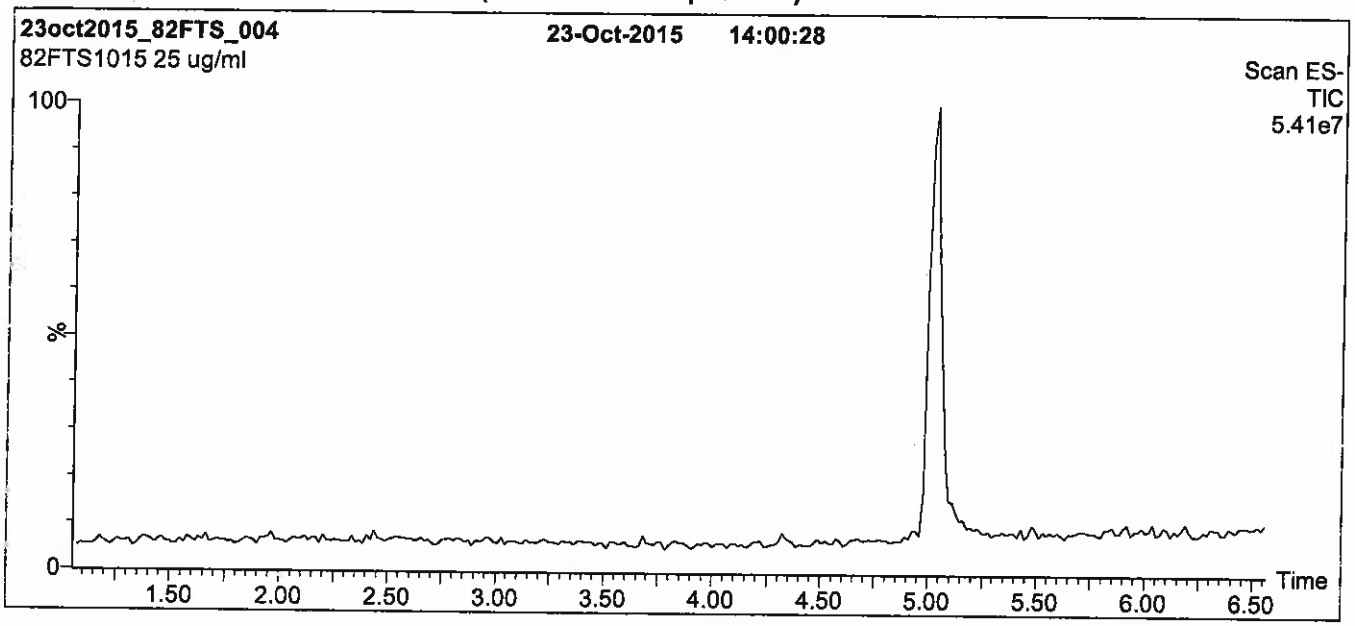
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO GUIDE 34 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

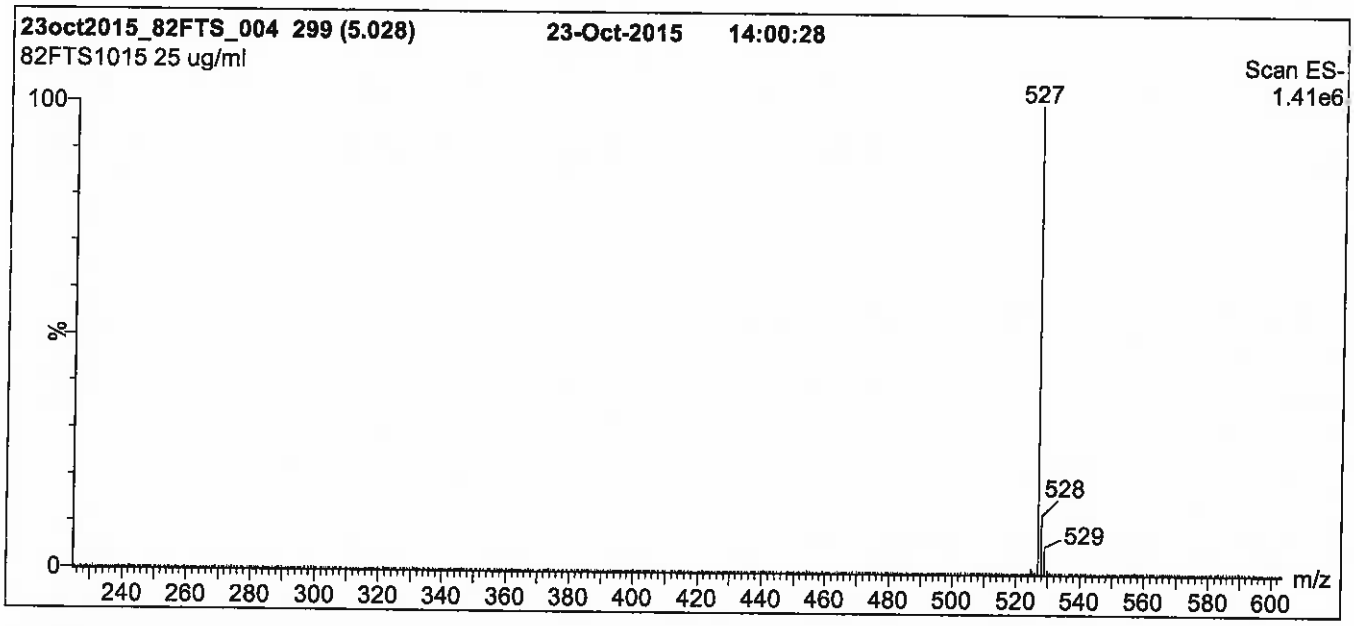
CALA

ANAB ACCREDITED ISO 17034 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: **8:2FTS; 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.
Return to Initial conditions in 0.5 min.
Time: 10 min

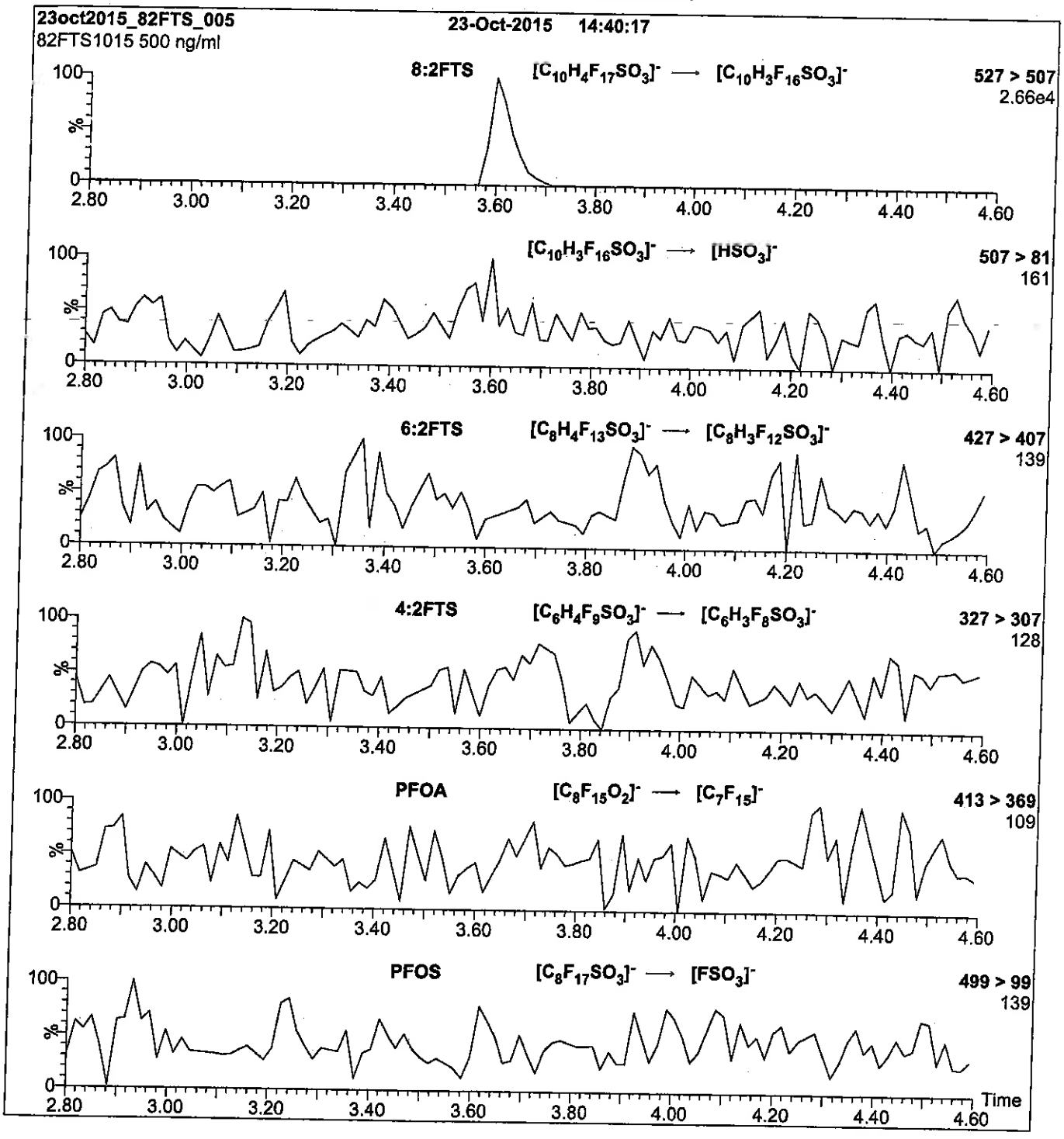
Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 3.00
Cone Voltage (V) = 30.00
Cone Gas Flow (l/hr) = 100
Desolvation Gas Flow (l/hr) = 750

Figure 2: **8:2FTS; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: Direct loop injection
10 µl (500 ng/ml 8:2FTS)

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) = 3.28e-3
Collision Energy (eV) = 30

Reagent

LCd-NMeFOSA-M_00003

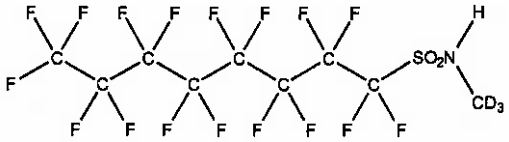
R: 9/9/16 SBC

728303
ID: LCd-NMeFOSA-M_00003
Exp: 06/10/21 Prpd: SBC
d-N-MeFOSA-M

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE:	d-N-MeFOSA-M	**LOT NUMBER:**	dNMeFOSA0616M
COMPOUND:	N-methyl-d_3-perfluoro-1-octanesulfonamide		
STRUCTURE:		**CAS #:**	Not available



MOLECULAR FORMULA:	$C_9D_3HF_{17}NO_2S$	**MOLECULAR WEIGHT:**	516.19
CONCENTRATION:	50 ± 2.5 µg/ml	**SOLVENT(S):**	Methanol
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥98% $^2H_3$
LAST TESTED: (mm/dd/yyyy)	06/10/2016		
EXPIRY DATE: (mm/dd/yyyy)	06/10/2021		
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.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: B.G. Chittim **Date:** 06/16/2016 (mm/dd/yyyy)

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
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CALA

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

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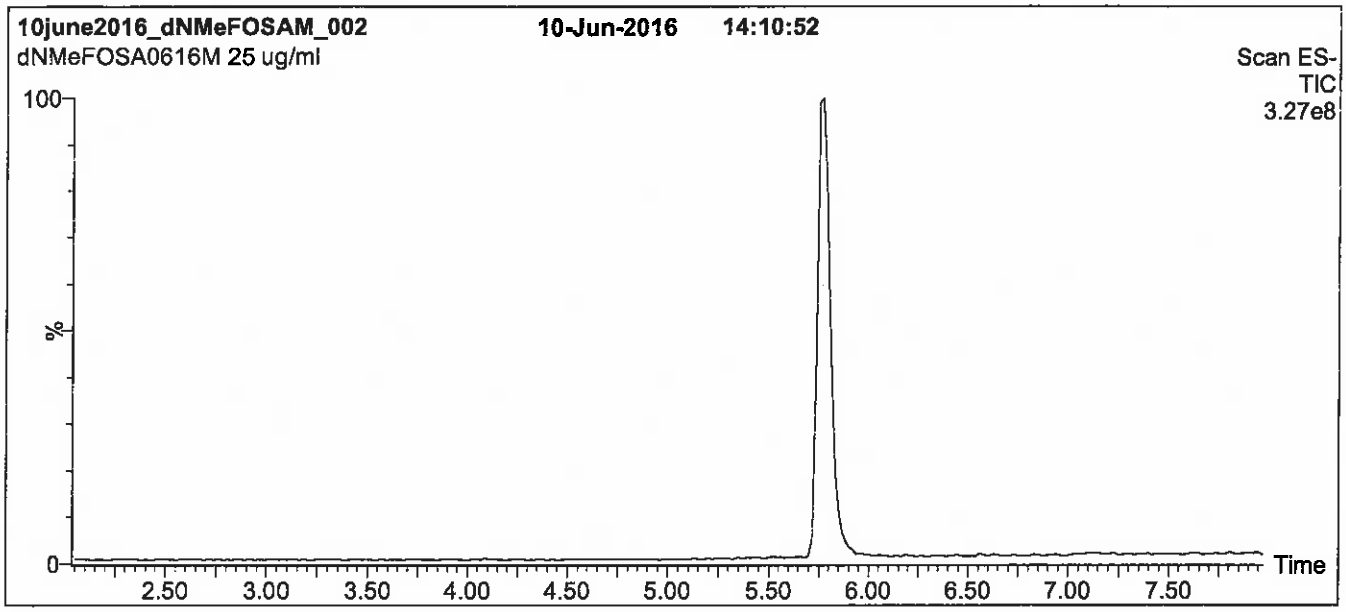
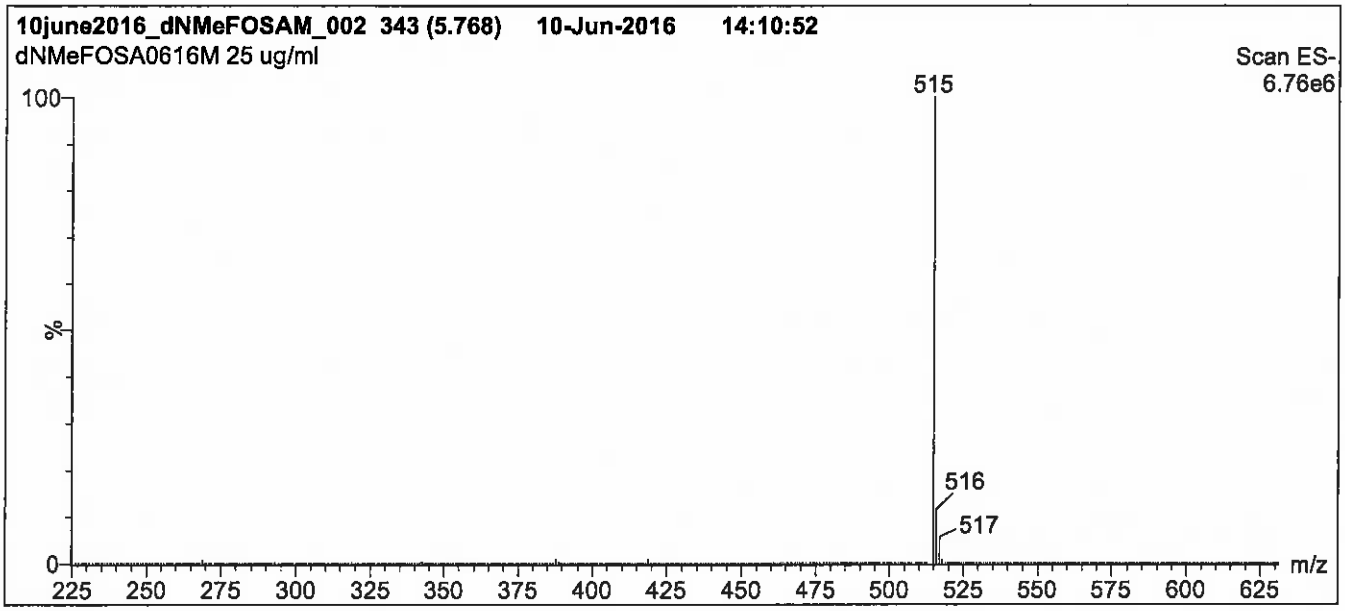
Figure 1: **d-N-MeFOSA-M; LC/MS Data (TIC and Mass Spectrum)**





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: 40% H_2O / 60% (80:20 MeOH:ACN)
(both with 10mM 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

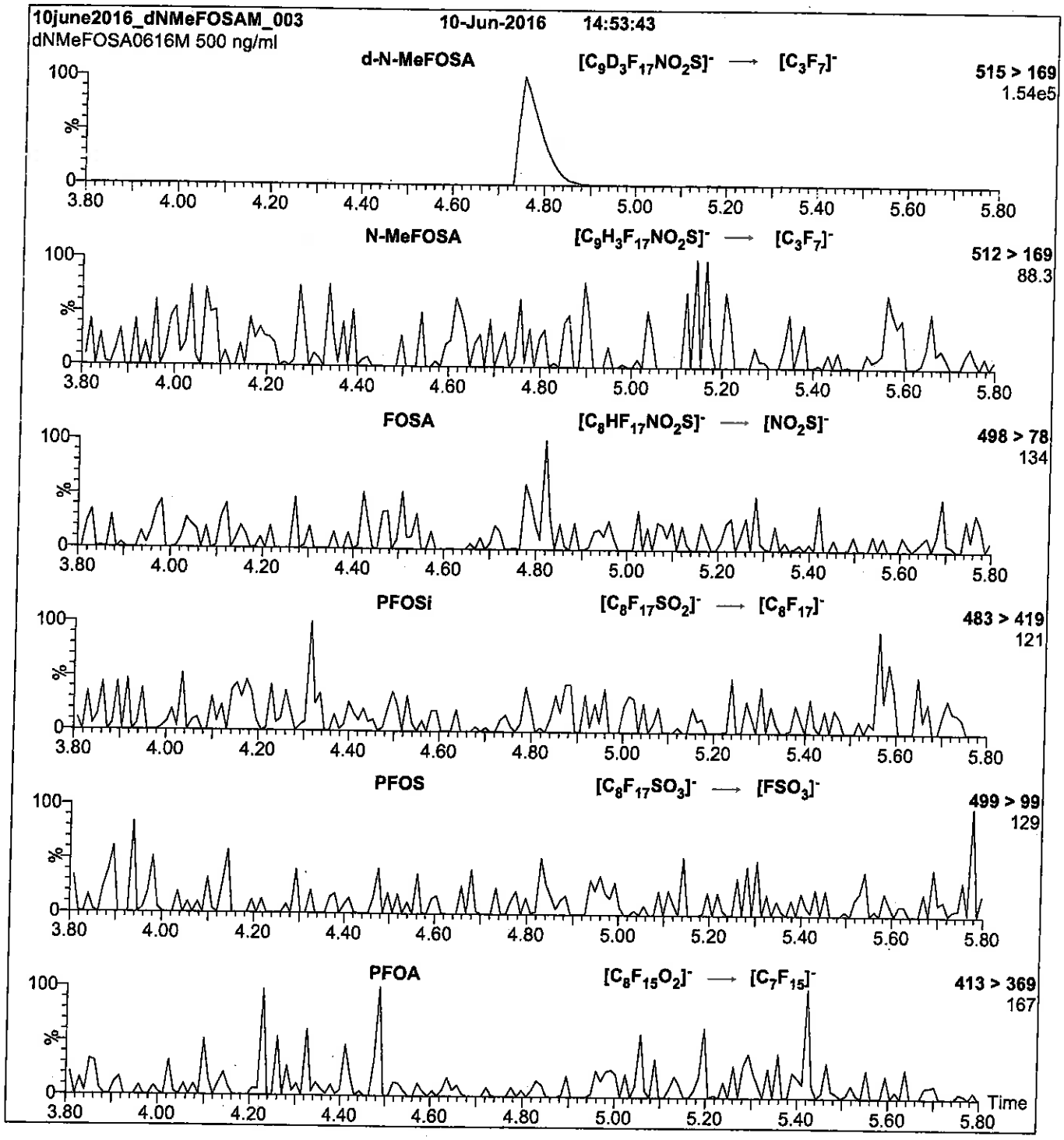
Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.50
Cone Voltage (V) = 40.00
Cone Gas Flow (l/hr) = 50
Desolvation Gas Flow (l/hr) = 750

Figure 2: **d-N-MeFOSA-M; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: Direct loop injection
10 µl (500 ng/ml d-N-MeFOSA-M)

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) = 3.39e-3
Collision Energy (eV) = 25

Reagent

LCd3-NMeFOSAA_00003

R: 9/9/16 SBC

728300
ID: LCd3-NMeFOSAA_00003
Exp: 05/31/21 Prpd: SBC
d3-N-MeFOSAA

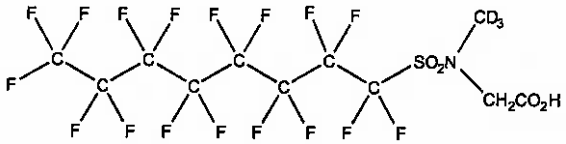
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: d3-N-MeFOSAA **LOT NUMBER:** d3NMeFOSAA0516

COMPOUND: N-methyl-d3-perfluoro-1-octanesulfonamidoacetic acid

STRUCTURE: **CAS #:** Not available



MOLECULAR FORMULA:	$C_{11}D_3H_3F_{17}NO_4S$	**MOLECULAR WEIGHT:**	574.23
CONCENTRATION:	50 ± 2.5 µg/ml	**SOLVENT(S):**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥98% $^2H_3$
LAST TESTED: (mm/dd/yyyy)	05/31/2016		
EXPIRY DATE: (mm/dd/yyyy)	05/31/2021		
RECOMMENDED STORAGE:	Refrigerate ampoule		

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 the conversion of the acetic acid moiety to the methyl ester.
- Contains ~ 1% of branched isomer.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: B.G. Chittim **Date:** 06/01/2016 (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:

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CALA

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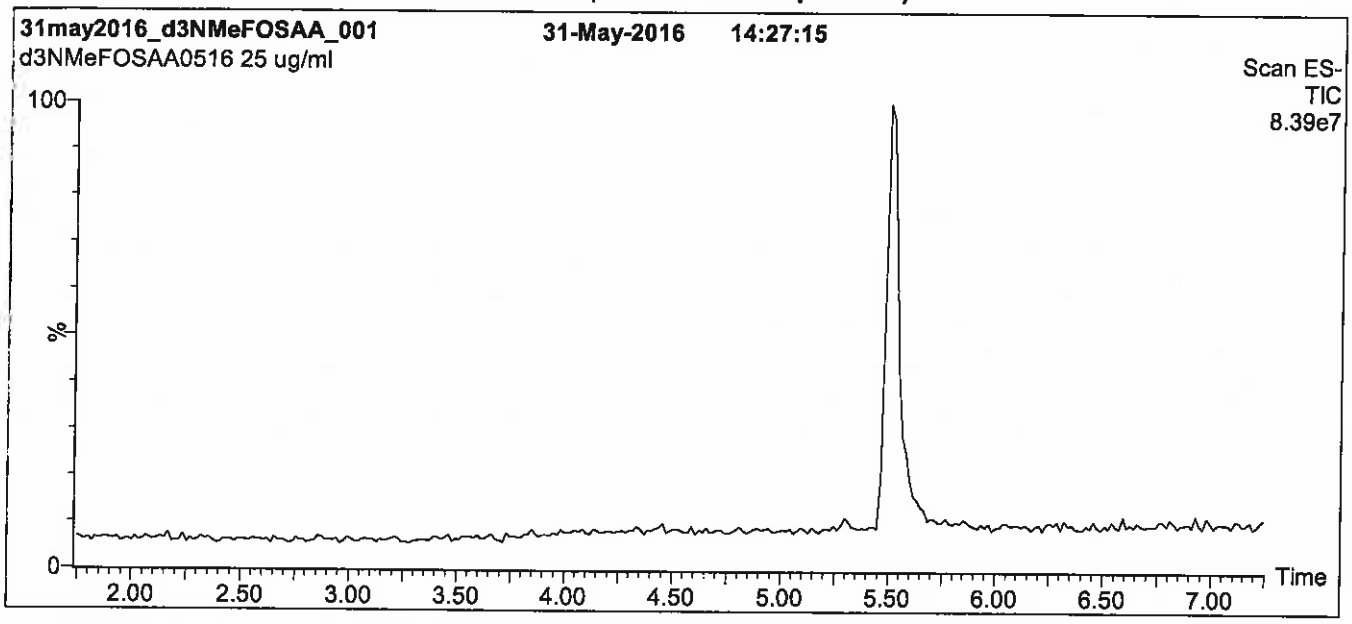
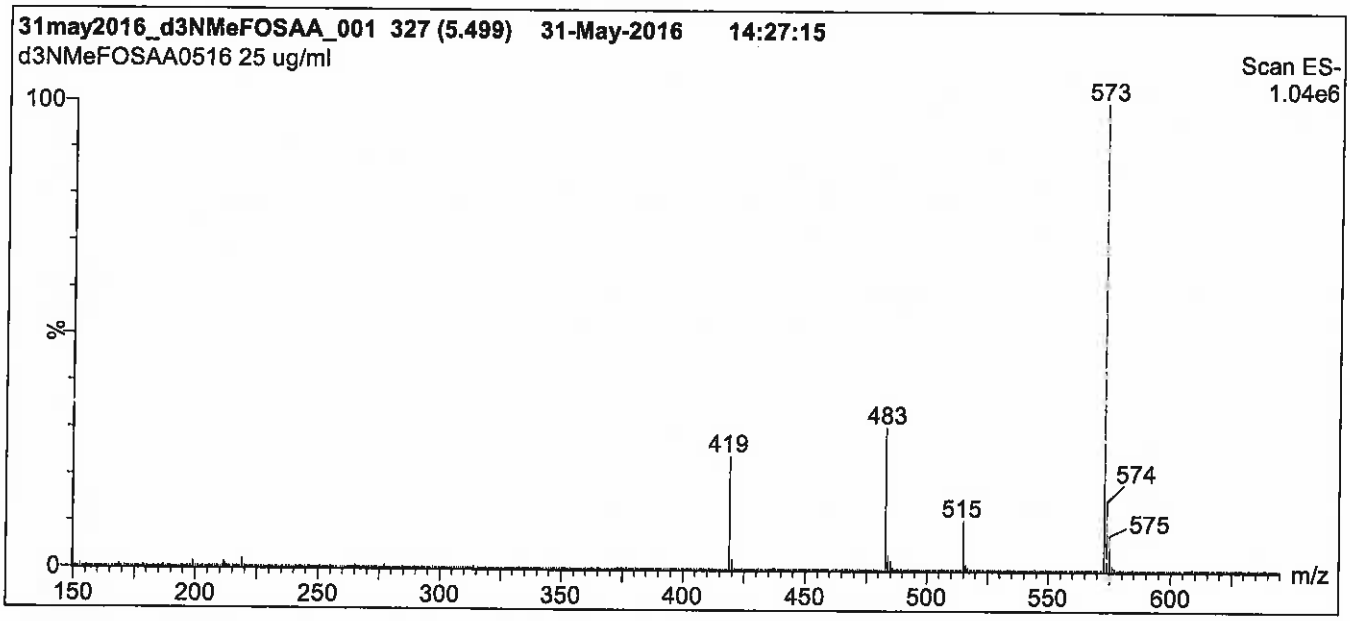
Figure 1: **d3-N-MeFOSAA; LC/MS Data (TIC and Mass Spectrum)**





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 7.5 min and hold for 1.5 min before returning to initial conditions in 0.5 min.
Time: 10 min

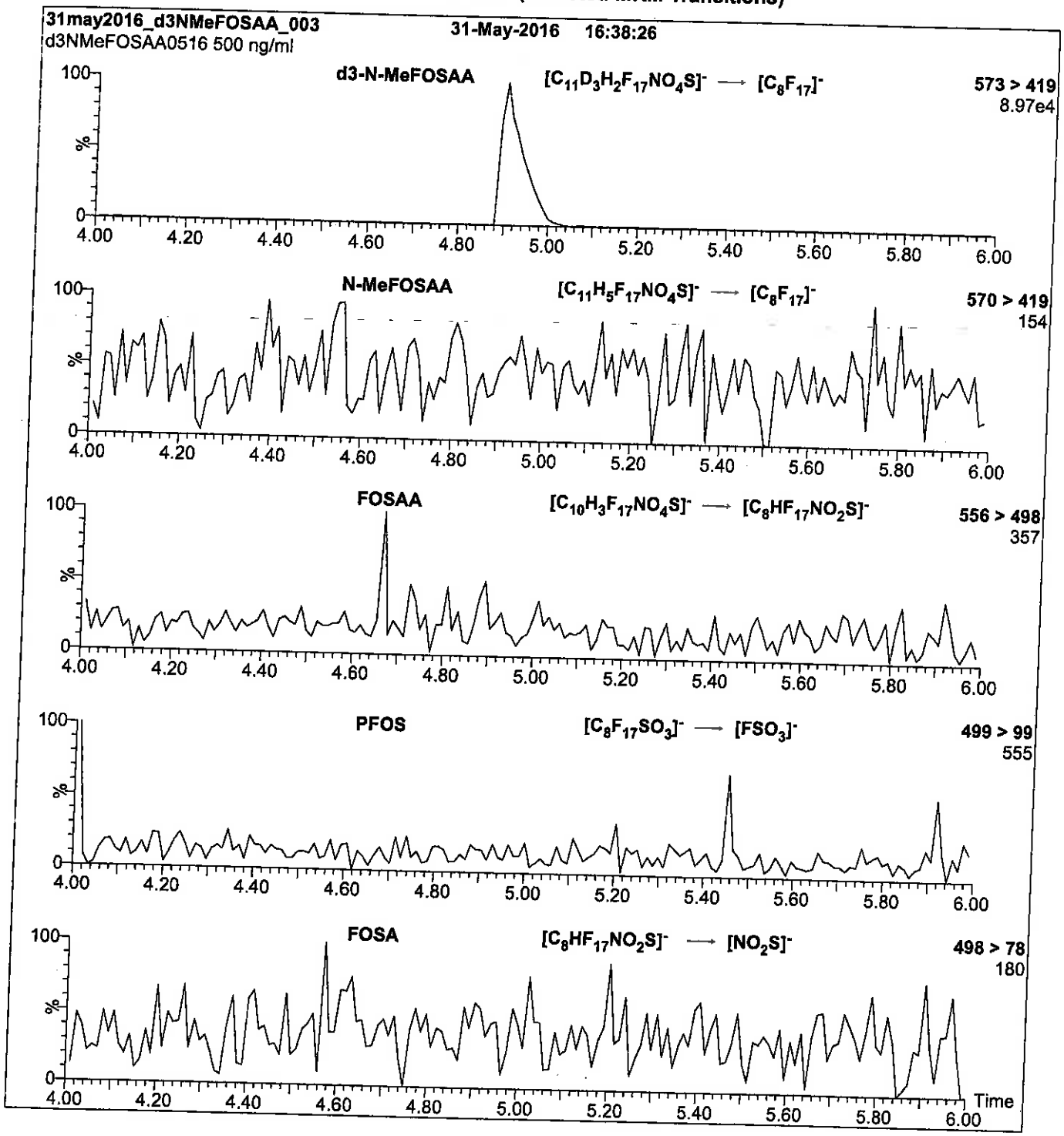
Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (150 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 3.00
Cone Voltage (V) = 35.00
Cone Gas Flow (l/hr) = 50
Desolvation Gas Flow (l/hr) = 750

Figure 2: **d3-N-MeFOSAA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection:	Direct loop injection 10 µl (500 ng/ml d3-N-MeFOSAA)
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) = 3.43e-3
Collision Energy (eV) = 25

Reagent

LCd5-NEtFOSAA_00003

R: 9/9/16 SBC

728301
ID: LCd5-NEtFOSAA_00003
Exp: 08/02/21 Prpd: SBC
d5-N-EtFOSAA

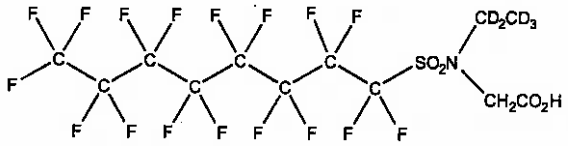
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: d5-N-EtFOSAA **LOT NUMBER:** d5NEtFOSAA0716

COMPOUND: N-ethyl-d5-perfluoro-1-octanesulfonamidoacetic acid

STRUCTURE: **CAS #:** Not available



MOLECULAR FORMULA:	$C_{12}D_5H_3F_{17}NO_4S$	**MOLECULAR WEIGHT:**	590.26
CONCENTRATION:	50 ± 2.5 µg/ml	**SOLVENT(S):**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥98% $^2H_5$
LAST TESTED: (mm/dd/yyyy)	08/02/2016		
EXPIRY DATE: (mm/dd/yyyy)	08/02/2021		
RECOMMENDED STORAGE:	Refrigerate ampoule		

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ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent the conversion of the acetic acid moiety to the methyl ester.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: B.G. Chittim **Date:** 08/09/2016 (mm/dd/yyyy)

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CALA

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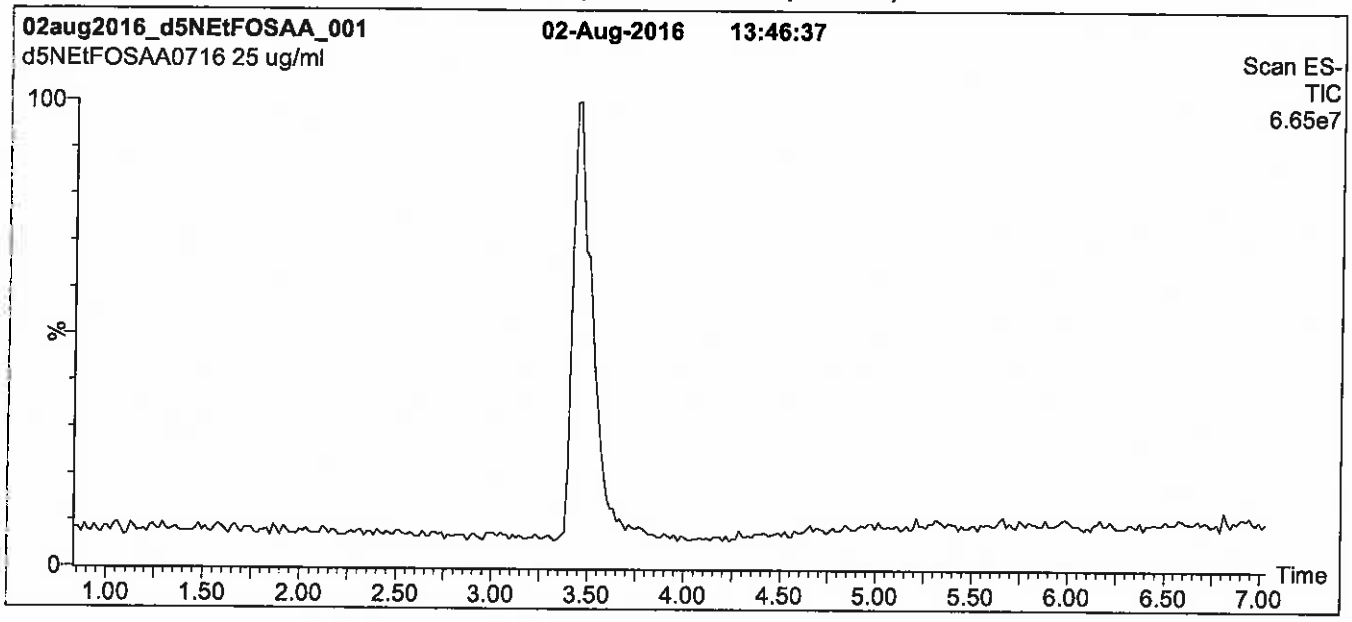

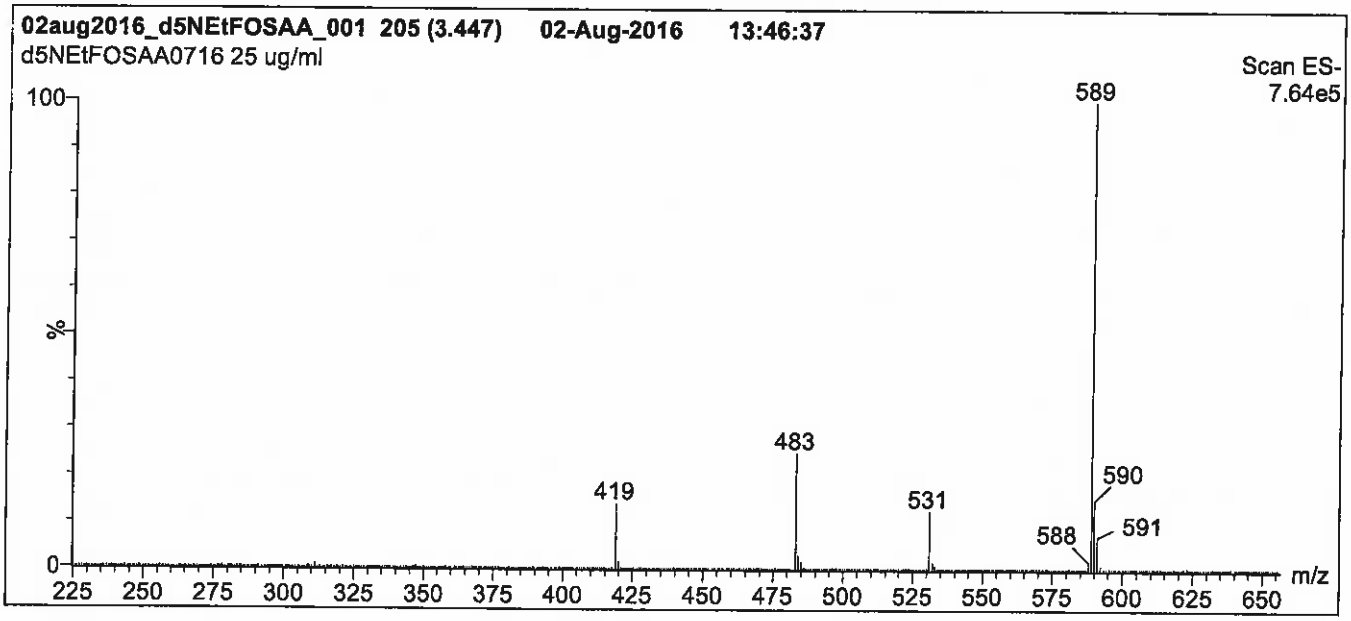

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MS: Micromass Quattro *micro* API MS

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1.7 µm, 2.1 x 100 mm

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Start: 65% (80:20 MeOH:ACN) / 35% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 7.5 min and hold for 1.5 min
before returning to initial conditions in 0.5 min.
Time: 10 min

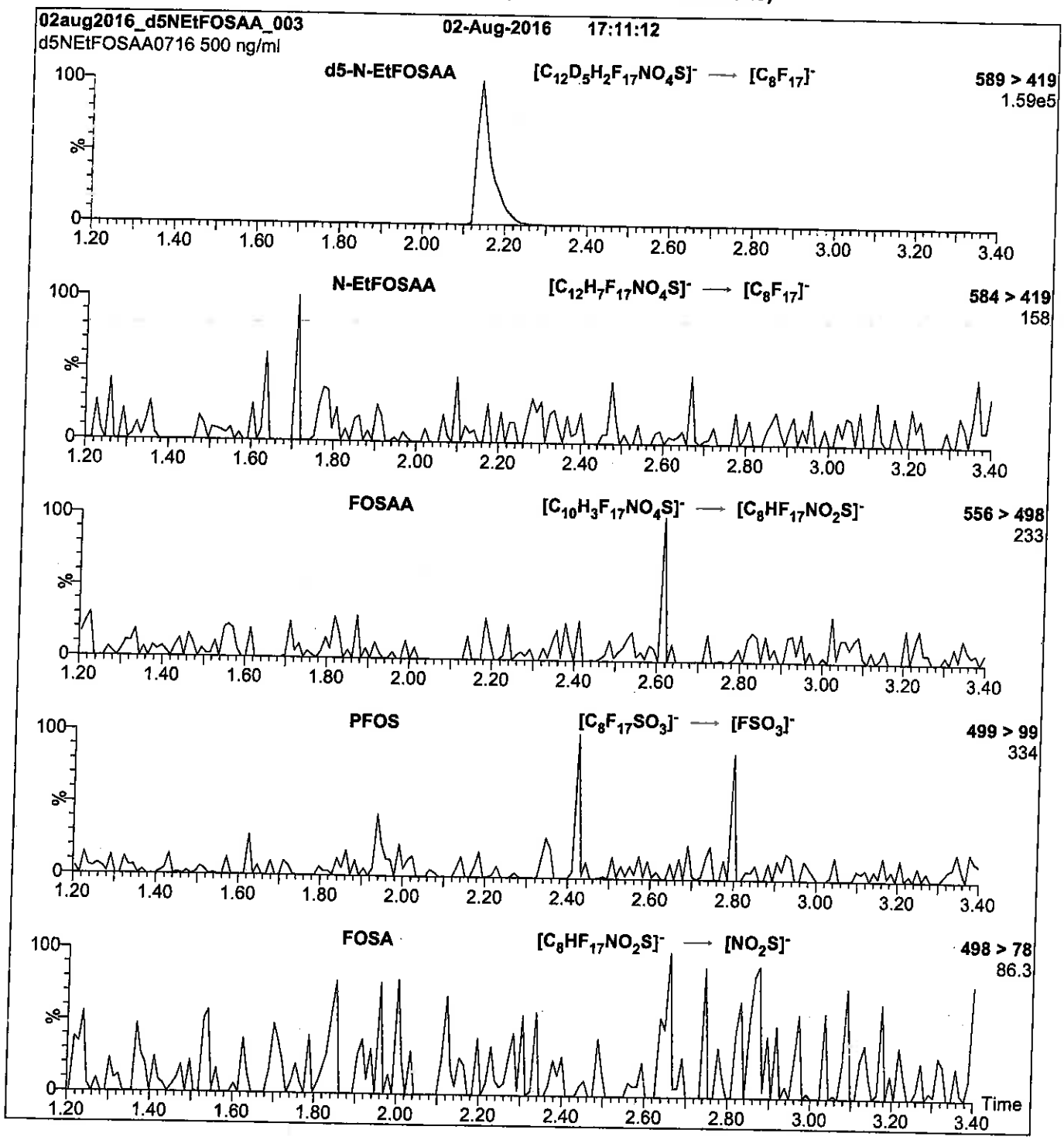
Flow: 350 µl/min

MS Parameters

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 3.00
Cone Voltage (V) = 35.00
Cone Gas Flow (l/hr) = 50
Desolvation Gas Flow (l/hr) = 750

Figure 2: **d5-N-EtFOSAA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection:	Direct loop injection 10 µl (500 ng/ml d5-N-EtFOSAA)
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) = 3.43e-3
Collision Energy (eV) = 25

Reagent

LCM2-6:FTS_00003

R: 9/9/16 SBC

728304
ID: LCM2-6:FTS_00003
Exp: 01/08/21 Prpd: SBC
M2-6:2FTS

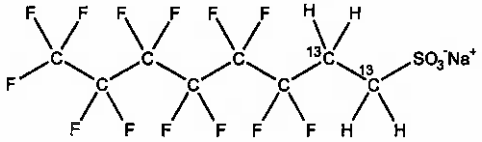
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: M2-6:2FTS **LOT NUMBER:** M262FTS0116

COMPOUND: Sodium 1H,1H,2H,2H-perfluoro-[1,2-$^{13}C_2$]octane sulfonate

STRUCTURE: **CAS #:** Not available



MOLECULAR FORMULA:	$^{13}C_2{}^{12}C_6H_4F_{13}SO_3Na$	**MOLECULAR WEIGHT:**	452.13
CONCENTRATION:	50.0 ± 2.5 µg/ml (Na salt)	**SOLVENT(S):**	Methanol
	47.5 ± 2.4 µg/ml (M2-6:2FTS anion)		
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C ($1,2\text{-}^{13}C_2$)
LAST TESTED: (mm/dd/yyyy)	01/08/2016		
EXPIRY DATE: (mm/dd/yyyy)	01/08/2021		
RECOMMENDED STORAGE:	Refrigerate ampoule		

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.
- The native 6:2FTS contains 4.22% of ^{34}S (due to natural isotopic abundance) therefore both native 6:2FTS and M2-6:2FTS will produce signals in the m/z 429 to m/z 409 channel during SRM analysis. We recommend using the m/z 429 to m/z 81 transition to monitor for M2-6:2FTS during quantitative analysis as it will be free of any native contribution (see Figure 2).

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: B.G. Chittim **Date:** 01/11/2016 (mm/dd/yyyy)

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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

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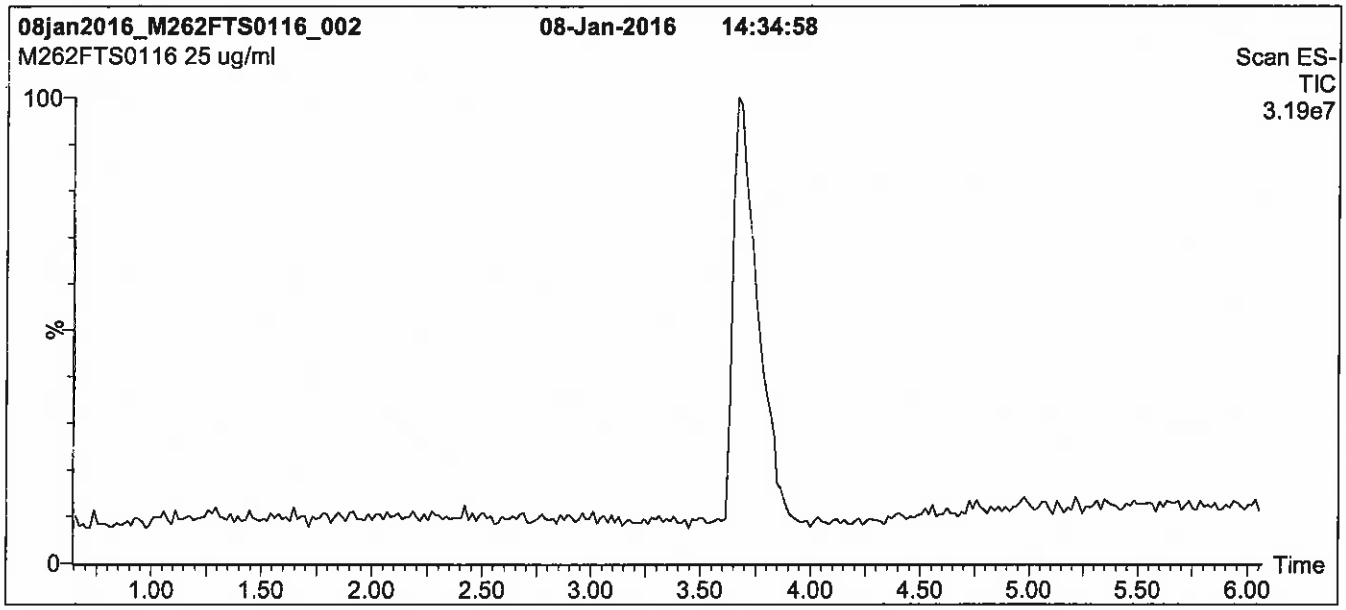
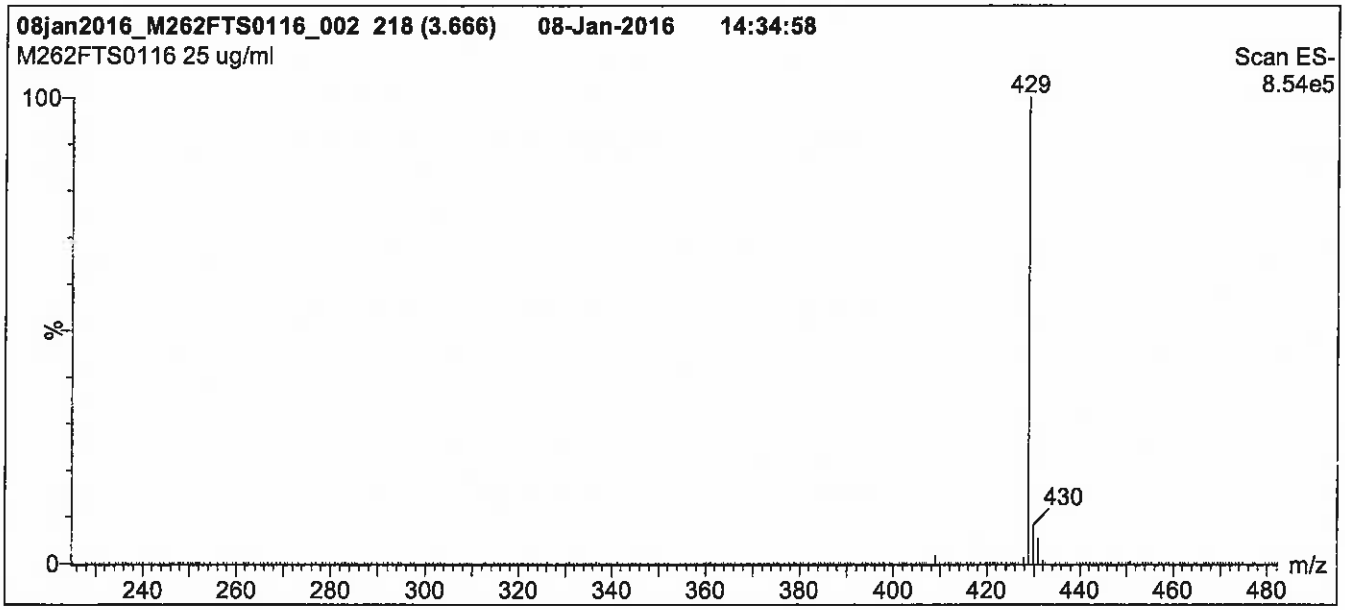
Figure 1: **M2-6:2FTS; LC/MS Data (TIC and Mass Spectrum)**





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

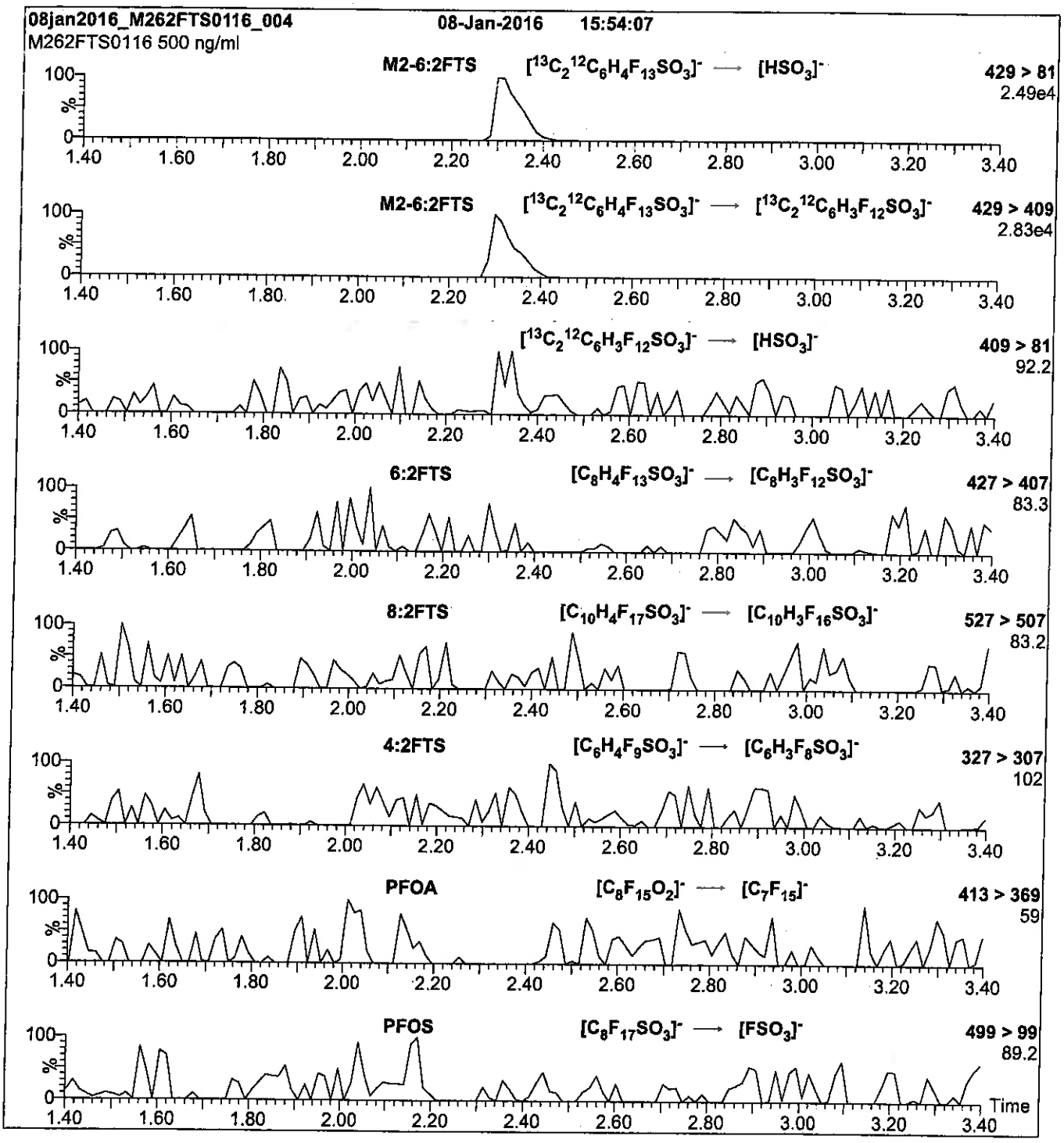
Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 3.00
Cone Voltage (V) = 30.00
Cone Gas Flow (l/hr) = 100
Desolvation Gas Flow (l/hr) = 750

Figure 2: **M2-6:2FTS; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: Direct loop injection
10 µl (500 ng/ml M2-6:2FTS)

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) = 3.28e-3
Collision Energy (eV) = 25

Reagent

LCM2PFHxDA_00008

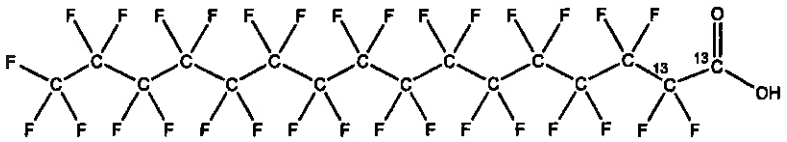
R: SBC 9/22/16

739512
ID: LCM2PFHxDA_00008
Exp: 01/07/21 Prpd: SBC
13C2-PFHxDA at 50ug/mL

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE:	M2PFHxDA	**LOT NUMBER:**	M2PFHxDA1112
COMPOUND:	Perfluoro-n-[1,2-$^{13}C_2$]hexadecanoic acid		
STRUCTURE:		**CAS #:**	Not available



MOLECULAR FORMULA:	$^{13}C_2{}^{12}C_{14}HF_{31}O_2$	**MOLECULAR WEIGHT:**	816.11
CONCENTRATION:	50 ± 2.5 µg/ml	**SOLVENT(S):**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C (1,2-$^{13}C_2$)
LAST TESTED: (mm/dd/yyyy)	01/07/2016		
EXPIRY DATE: (mm/dd/yyyy)	01/07/2021		
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 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Contains ~ 0.3% of native perfluoro-n-hexadecanoic acid.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: B.G. Chittim **Date:** 01/11/2016 (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:

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, SFC/UV/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, 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.

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 $x_1, x_2, \ldots x_n$ 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:

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CALA

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

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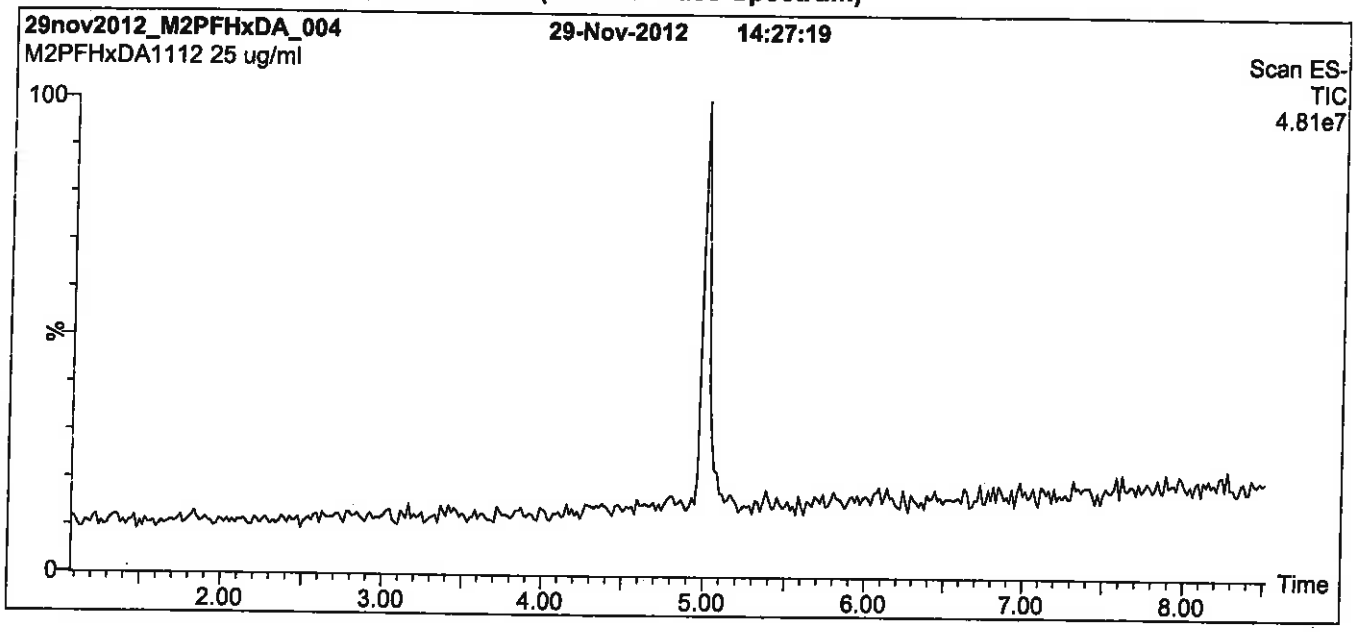
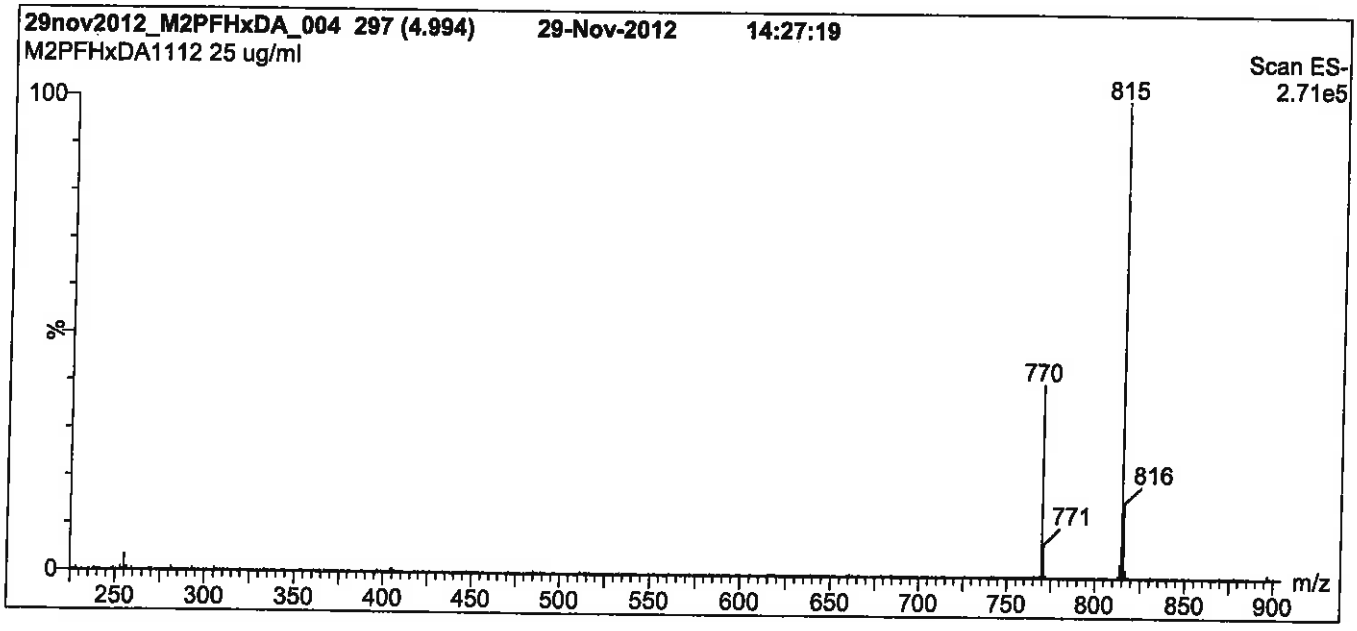
Figure 1: **M2PFHxDA; LC/MS Data (TIC and Mass Spectrum)**





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 100% organic over 7 min and hold for 1.5 min
before returning to initial conditions in 0.5 min.
Time: 10 min

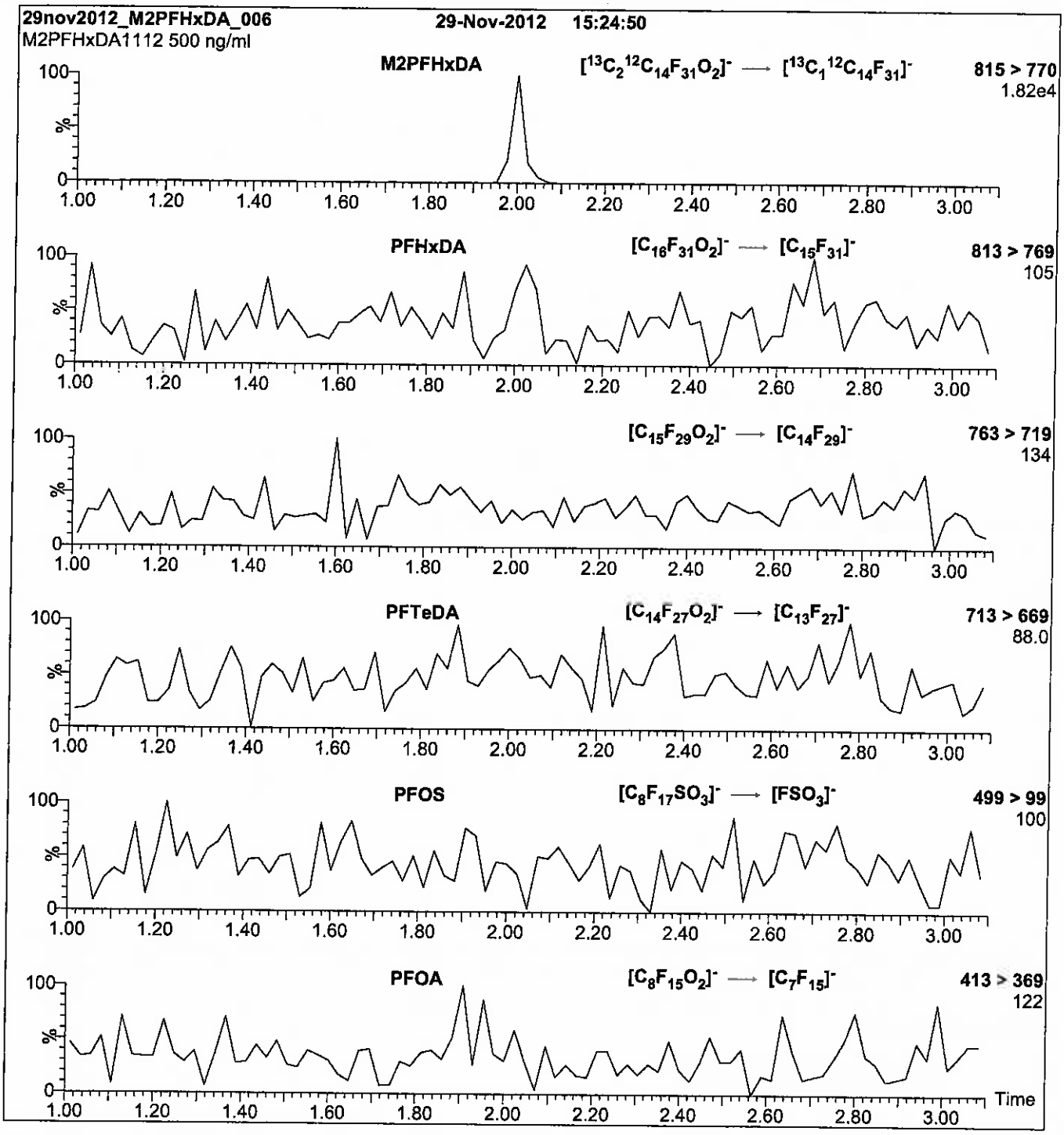
Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (225 - 1200 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 25.00
Cone Gas Flow (l/hr) = 60
Desolvation Gas Flow (l/hr) = 750

Figure 2: **M2PFHxDA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection:	Direct loop injection 10 µl (500 ng/ml M2PFHxDA)
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) = 3.39e-3
Collision Energy (eV) = 15

Reagent

LCM2PFTeDA_00007

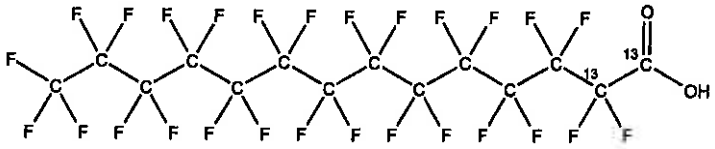
Scanned 10/14/16 R: SBC 9/22/16

738563
ID: LCM2PFTeDA_00007
Exp: 12/07/20 Prpd: SBC
13C2-PFTeDA at 50ug/mL

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE:	M2PFTeDA	**LOT NUMBER:**	M2PFTeDA1115
COMPOUND:	Perfluoro-n-[1,2-$^{13}C_2$]tetradecanoic acid		
STRUCTURE:		**CAS #:**	Not available



MOLECULAR FORMULA:	$^{13}C_2{}^{12}C_{12}HF_{27}O_2$	**MOLECULAR WEIGHT:**	716.10
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)	12/07/2015		
EXPIRY DATE: (mm/dd/yyyy)	12/07/2020		
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.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: B.G. Chittim **Date:** 12/08/2015 (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:

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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.

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CALA

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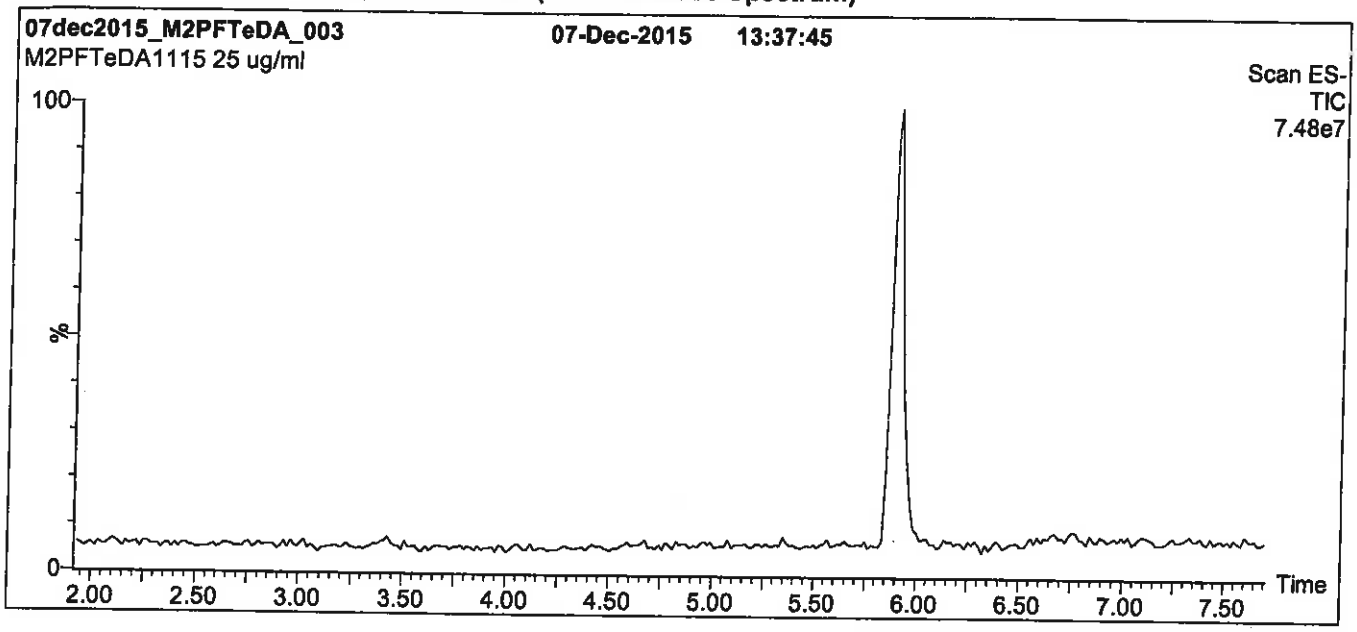
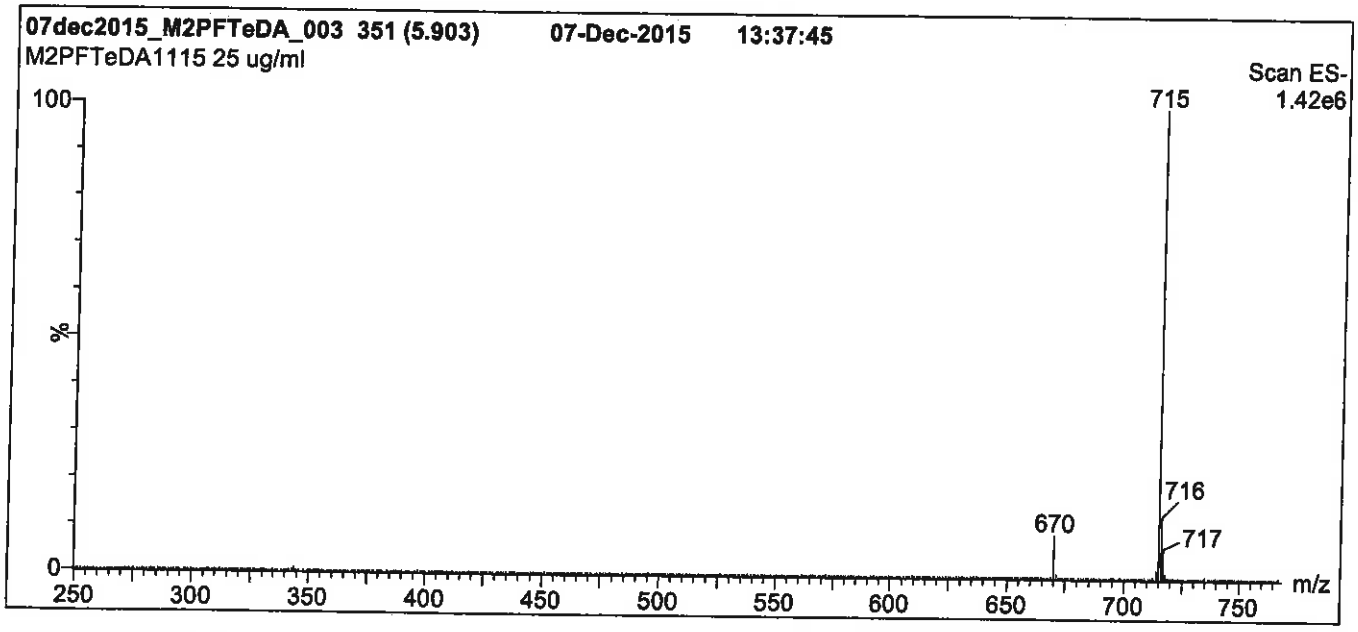
Figure 1: **M2PFTeDA; LC/MS Data (TIC and Mass Spectrum)**





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: 65% (80:20 MeOH:ACN) / 35% 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

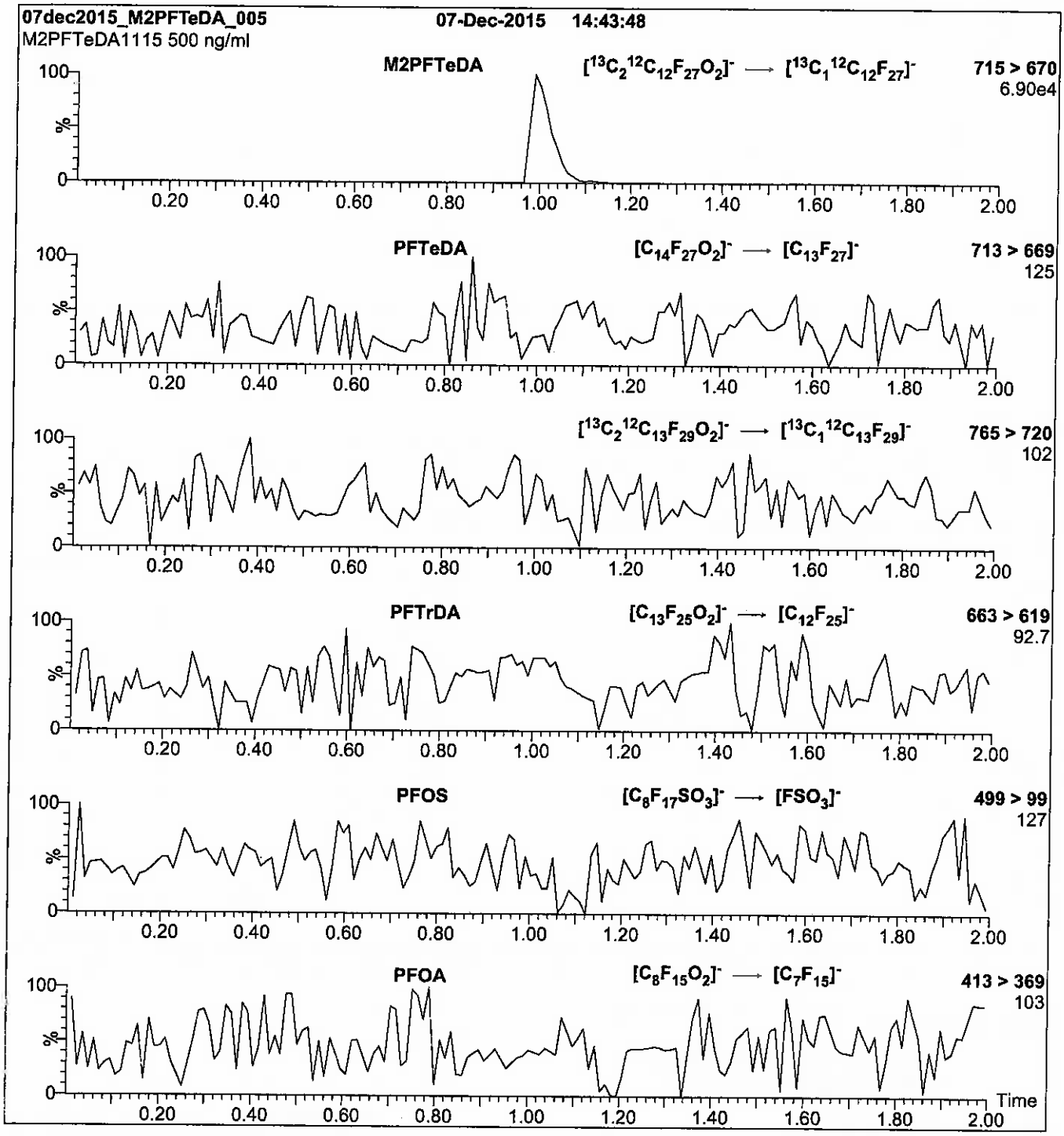
Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (250 - 1250 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 3.00
Cone Voltage (V) = 15.00
Cone Gas Flow (l/hr) = 60
Desolvation Gas Flow (l/hr) = 750

Figure 2: **M2PFTeDA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: Direct loop injection
10 µl (500 ng/ml M2PFTeDA)

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) = 3.28e-3
Collision Energy (eV) = 14

Reagent

LCM4PFHPA_00007

R: SBC 9/22/16

739567
ID: LCM4PFHPA_00007
Exp: 05/27/21 Prpd: SBC
13C4-Perfluoroheptanoic a

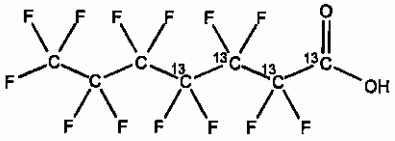
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS

DOCUMENTATION

Scanned 10/14/16 SBC

PRODUCT CODE:	M4PFHpA	**LOT NUMBER:**	M4PFHpA0516
COMPOUND:	Perfluoro-n-[1,2,3,4-$^{13}C_4$]heptanoic acid		
STRUCTURE:		**CAS #:**	Not available



MOLECULAR FORMULA:	$^{13}C_4{}^{12}C_3HF_{13}O_2$	**MOLECULAR WEIGHT:**	368.03
CONCENTRATION:	50 ± 2.5 µg/ml	**SOLVENT(S):**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C (1,2,3,4-$^{13}C_4$)
LAST TESTED: (mm/dd/yyyy)	05/27/2016		
EXPIRY DATE: (mm/dd/yyyy)	05/27/2021		
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 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:** 07/05/2016 (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

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CALA Testing

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

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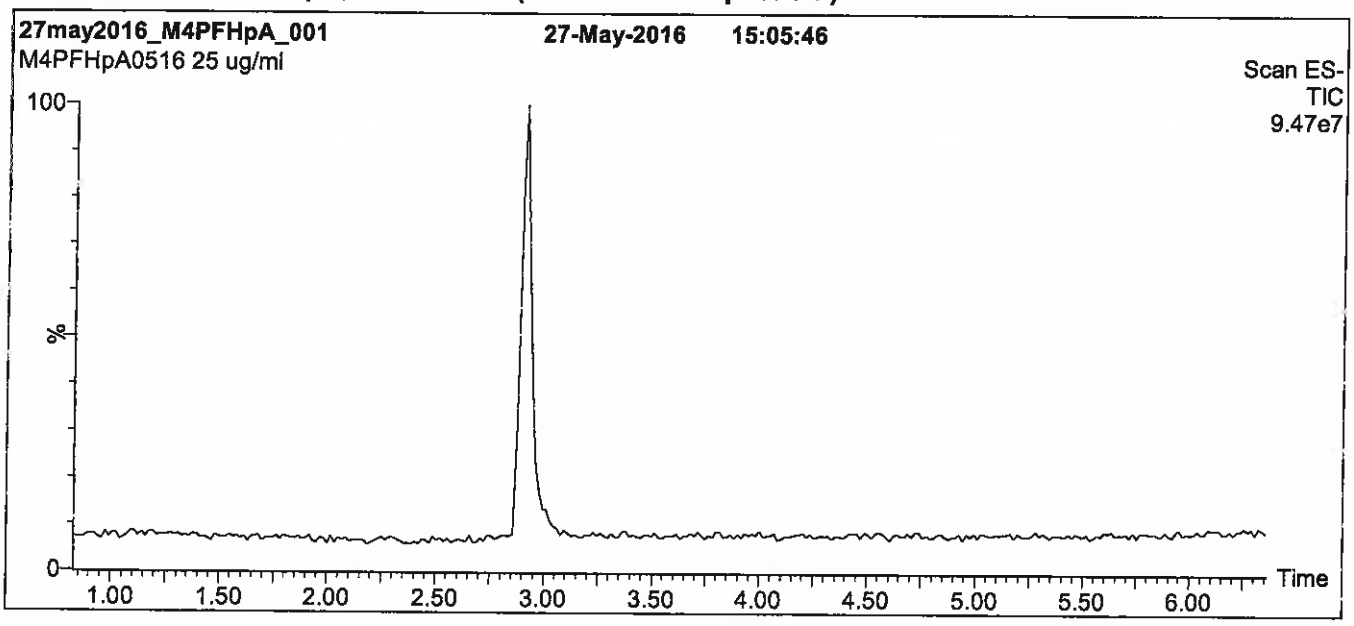
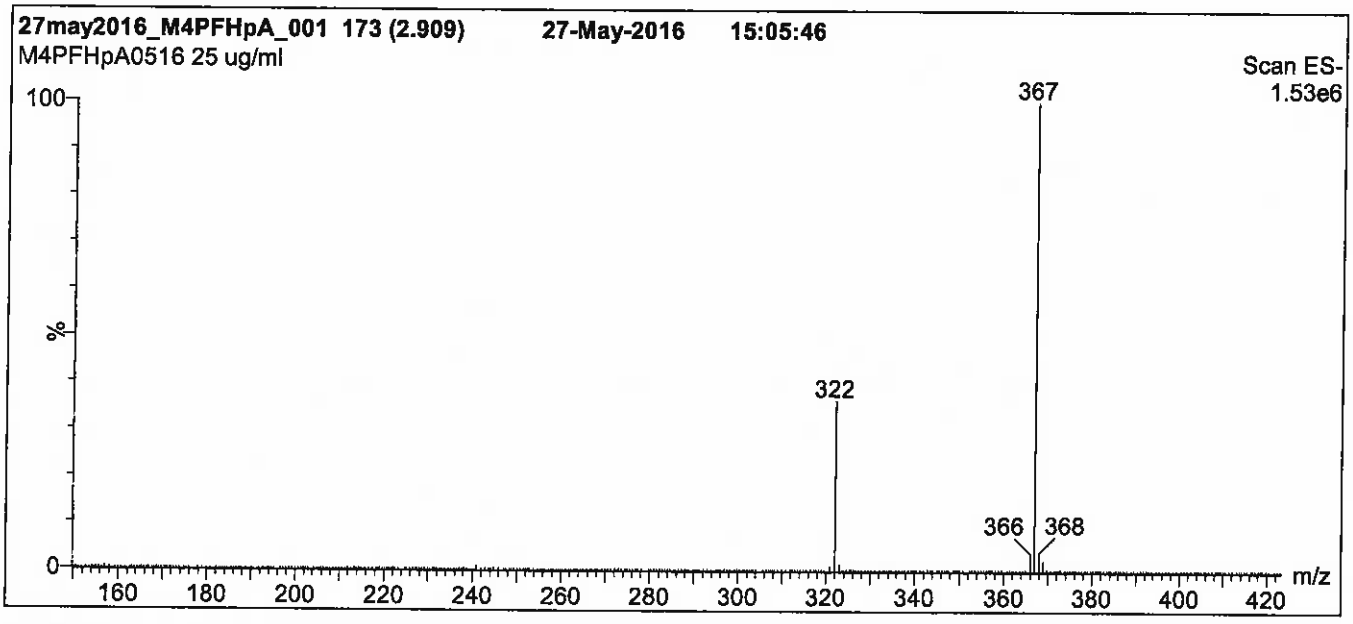
Figure 1: **M4PFHpA; LC/MS Data (TIC and Mass Spectrum)**





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 7.5 min and hold for 1.5 min before returning to initial conditions in 0.5 min.
Time: 10 min

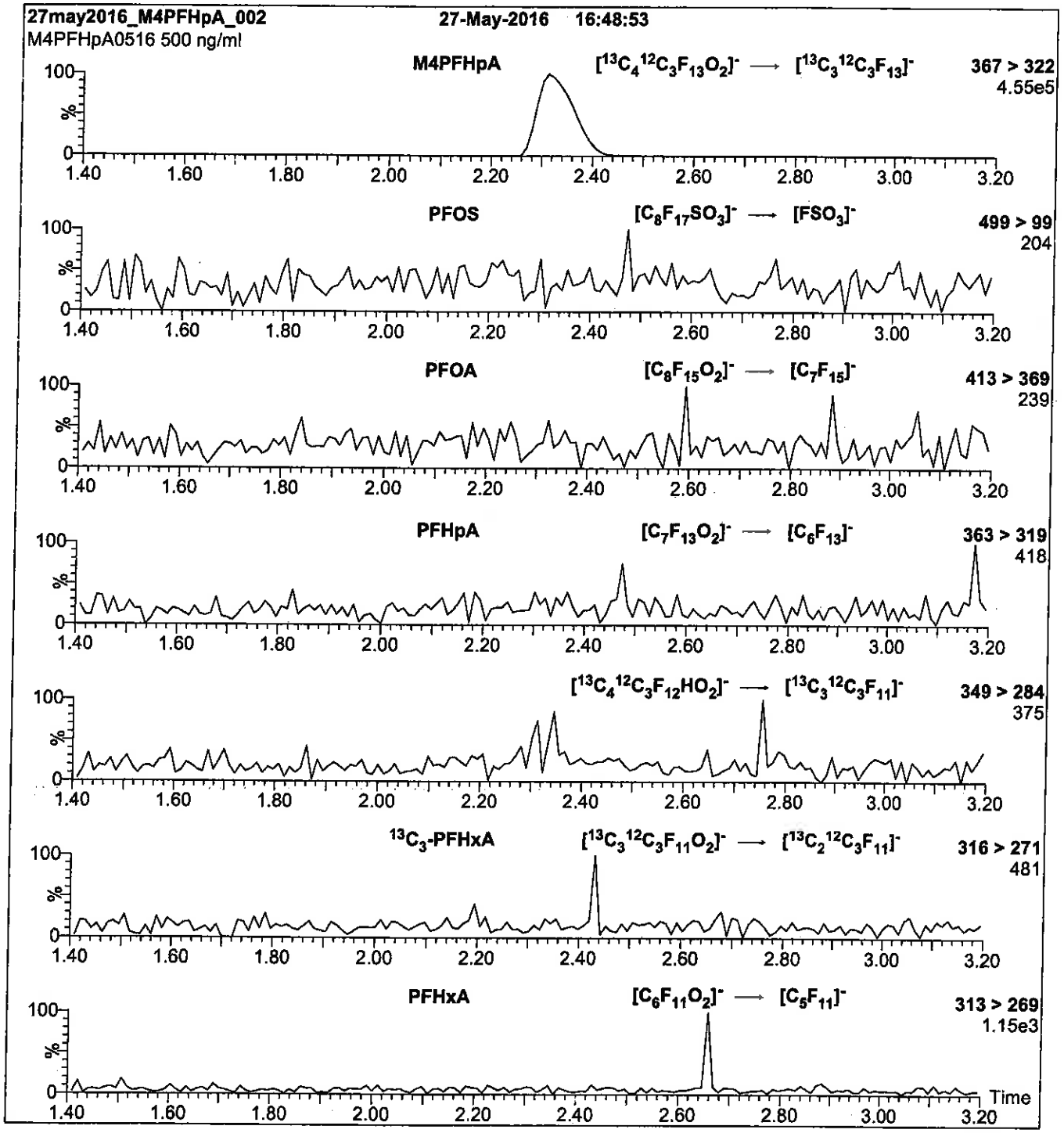
Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (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: **M4PFHpA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: Direct loop injection
10 µl (500 ng/ml M4PFHpA)

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) = 11

Reagent

LCM5PFPEA_00008

R: SBC 9/22/16

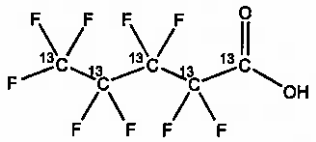
739590
ID: LCM5PFPEA_00008
Exp: 05/22/20 Prpd: SBC
13C5-Perfluoropentanoic a

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

Scanned 10/14/16 SR

PRODUCT CODE:	M5PFPeA	**LOT NUMBER:**	M5PFPeA0515
COMPOUND:	Perfluoro-n-[$^{13}C_5$]pentanoic acid		
STRUCTURE:		**CAS #:**	Not available



MOLECULAR FORMULA:	$^{13}C_5HF_9O_2$	**MOLECULAR WEIGHT:**	269.01
CONCENTRATION:	50 ± 2.5 µg/ml	**SOLVENT(S):**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C ($^{13}C_5$)
LAST TESTED: (mm/dd/yyyy)	05/22/2015		
EXPIRY DATE: (mm/dd/yyyy)	05/22/2020		
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-pentanoic acid.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: B.G. Chittim **Date:** 05/25/2015 (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:

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, SFC/UV/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, 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.

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 $x_1, x_2, \ldots x_n$ 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

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

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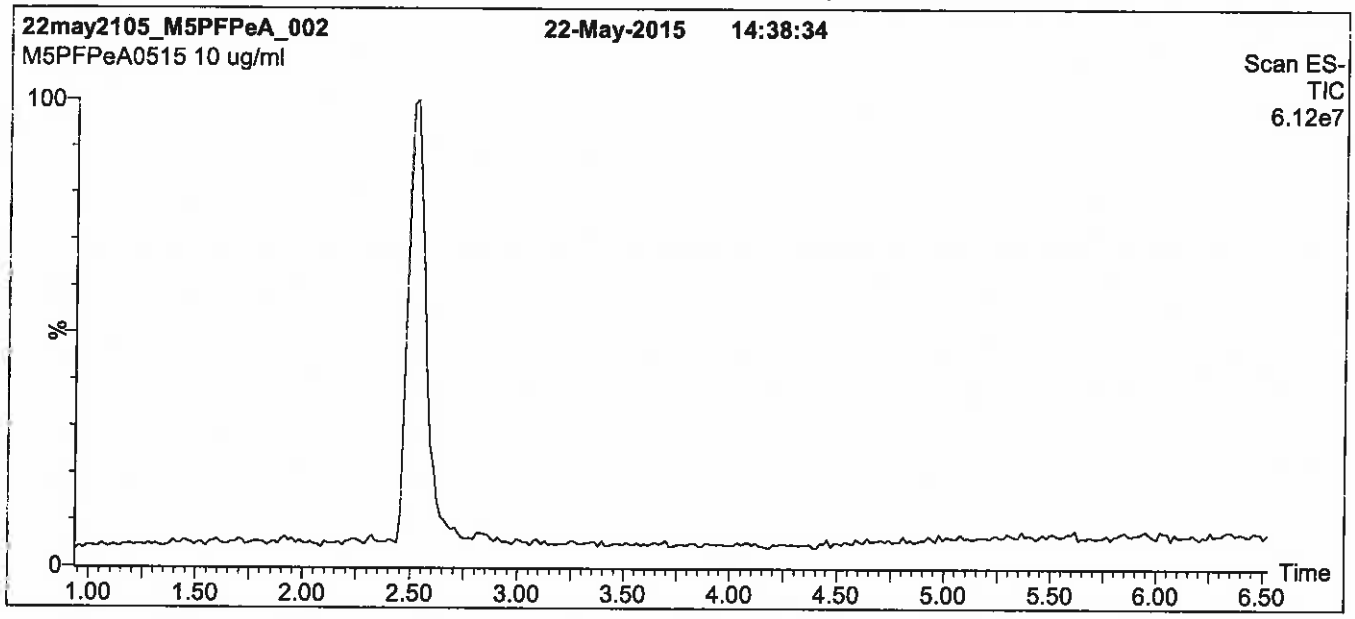
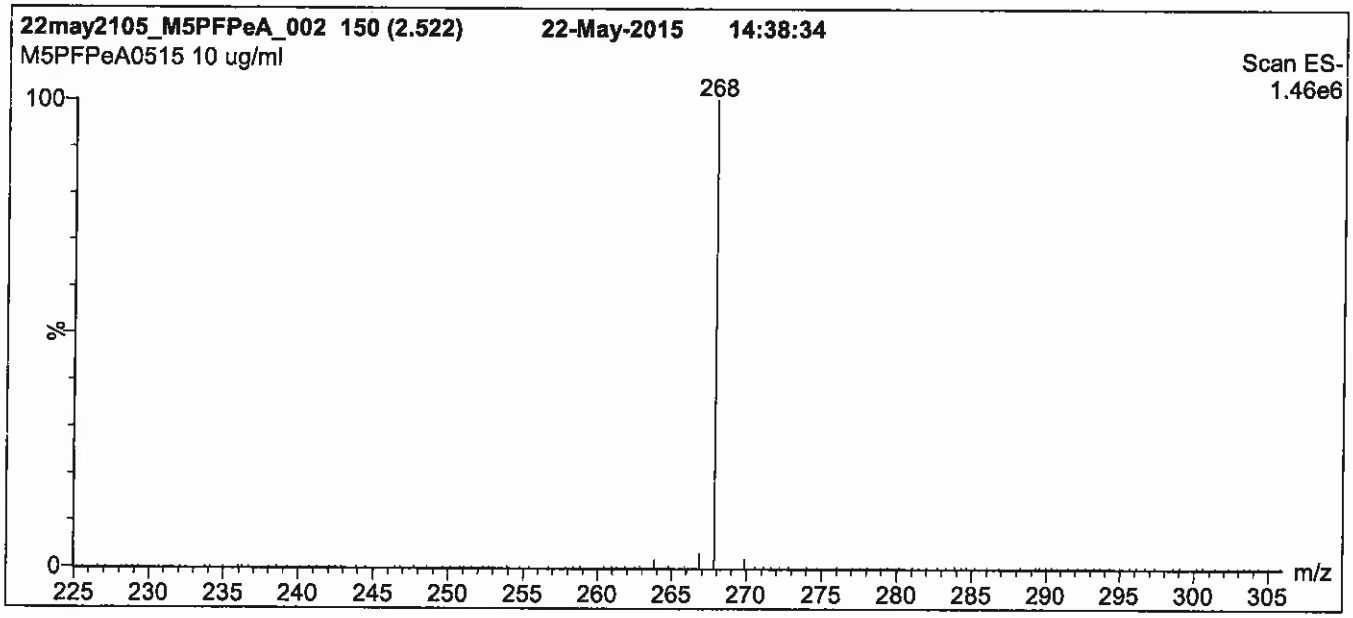
Figure 1: **M5PFPeA; LC/MS Data (TIC and Mass Spectrum)**





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: 40% (80:20 MeOH:ACN) / 60% 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

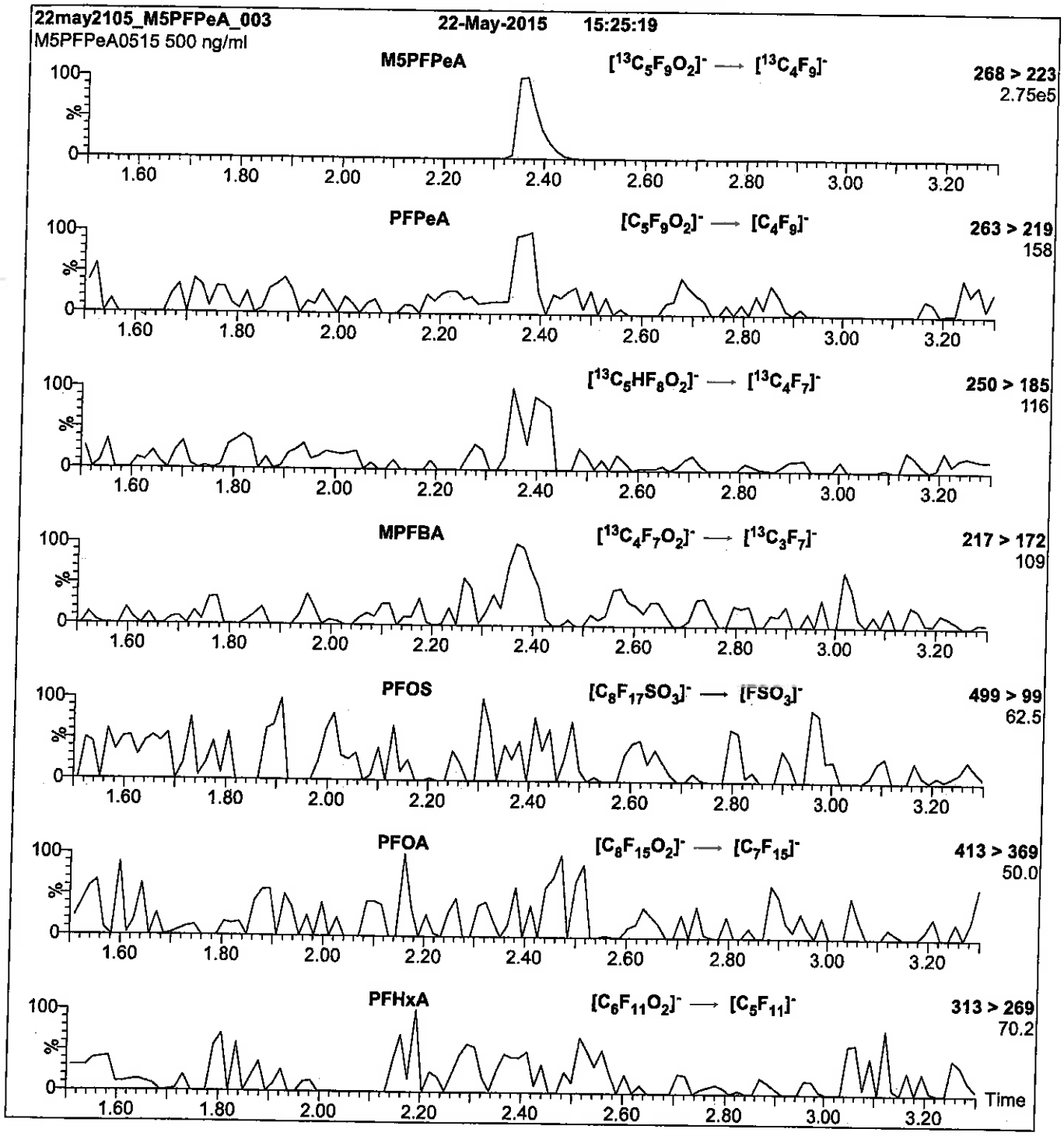
Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 15.00
Cone Gas Flow (l/hr) = 60
Desolvation Gas Flow (l/hr) = 750

Figure 2: **M5PFPeA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection:	Direct loop injection 10 µl (500 ng/ml M5PFPeA)
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) = 9

Reagent

LCM8FOSA_00011

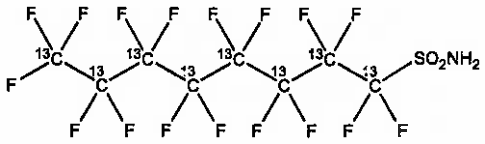
R: SBC 9/22/16
Scanned 10/14/16 SBC

739615
ID: LCM8FOSA_00011
Exp: 12/22/17 Prpd: SBC
13C8-Perfluorooctanesulfo

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE:	M8FOSA-I	**LOT NUMBER:**	M8FOSA1215I
COMPOUND:	Perfluoro-1-[$^{13}C_8$]octanesulfonamide		
STRUCTURE:		**CAS #:**	Not available



MOLECULAR FORMULA:	$^{13}C_8H_2F_{17}NO_2S$	**MOLECULAR WEIGHT:**	507.09
CONCENTRATION:	50 ± 2.5 µg/ml	**SOLVENT(S):**	Isopropanol
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C ($^{13}C_8$)
LAST TESTED: (mm/dd/yyyy)	12/22/2015		
EXPIRY DATE: (mm/dd/yyyy)	12/22/2017		
RECOMMENDED STORAGE:	Refrigerate ampoule		

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.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: B.G. Chittim **Date:** 01/14/2016 (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

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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, SFC/UV/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.

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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:

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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

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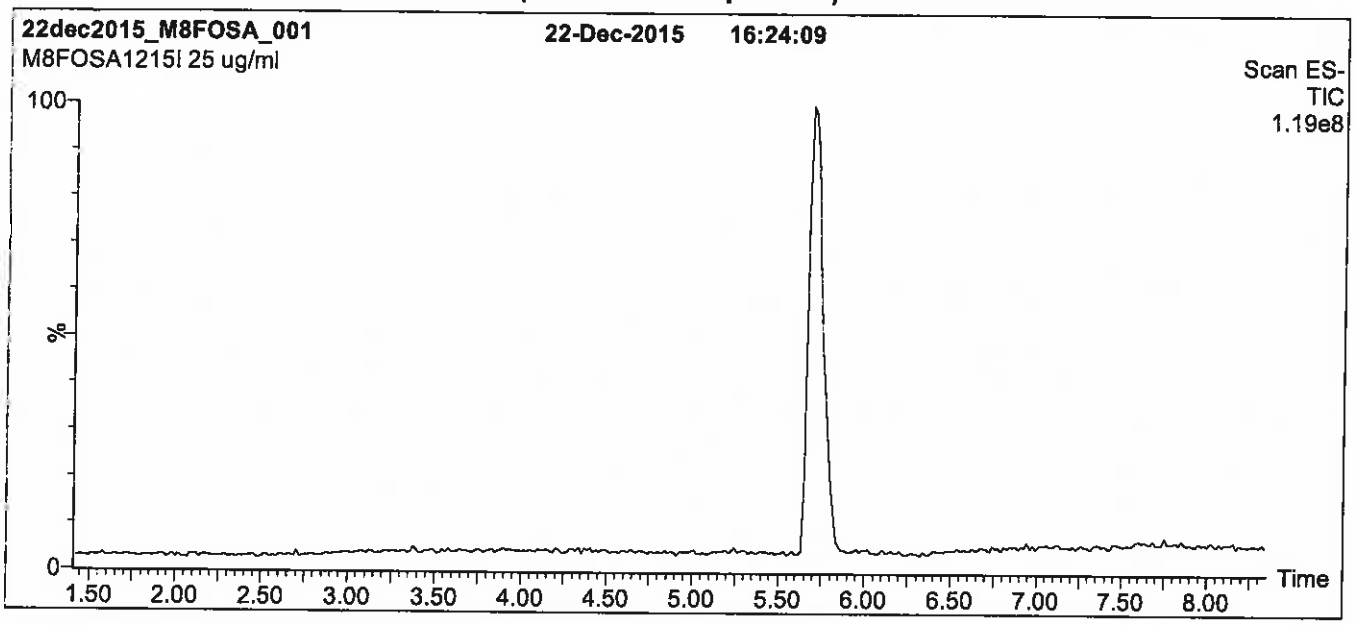
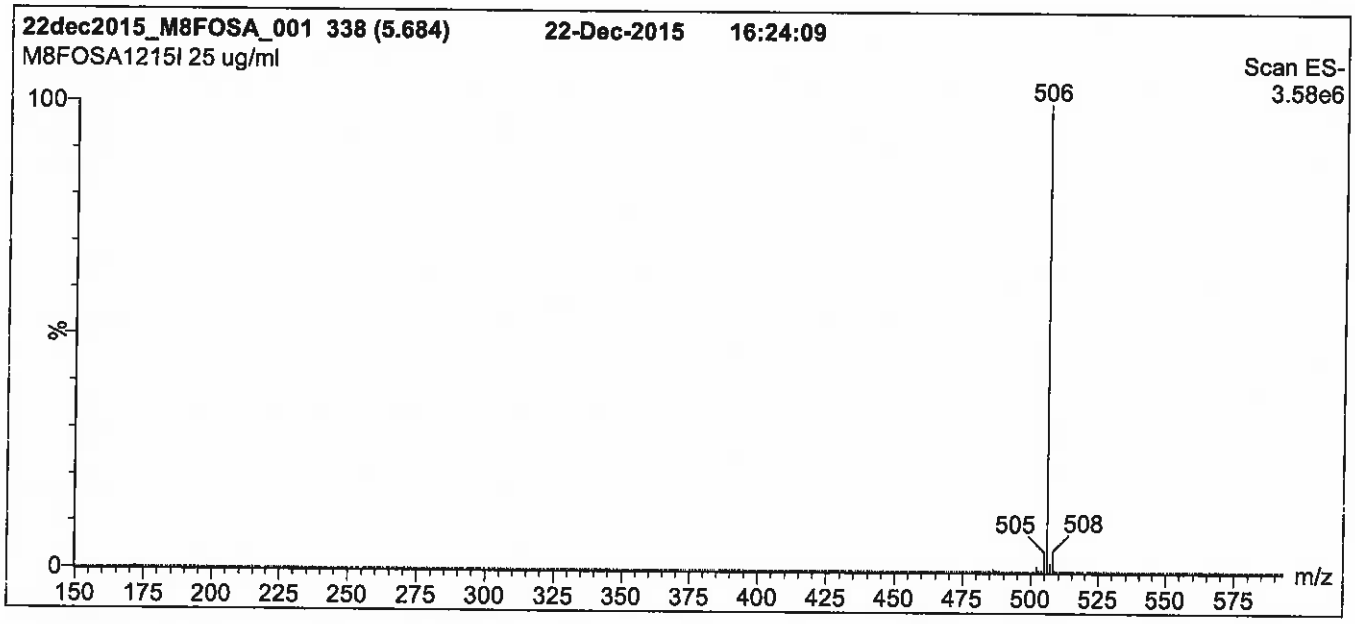
Figure 1: **M8FOSA-I; LC/MS Data (TIC and Mass Spectrum)**





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

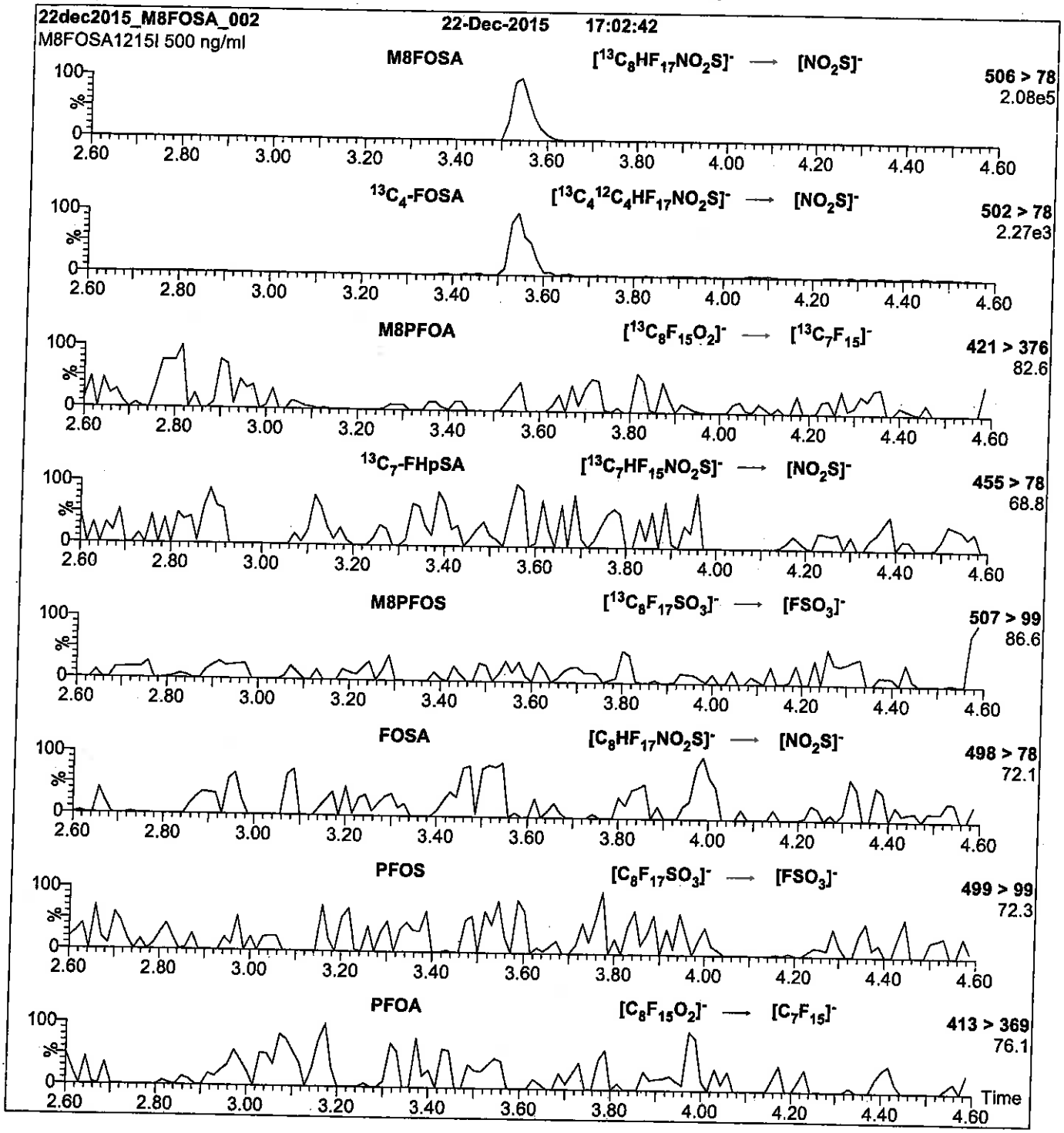
Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (150 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.50
Cone Voltage (V) = 40.00
Cone Gas Flow (l/hr) = 50
Desolvation Gas Flow (l/hr) = 750

Figure 2: **M8FOSA-I; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: Direct loop injection
10 µl (500 ng/ml M8FOSA-I)

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) = 3.39e-3
Collision Energy (eV) = 30

Reagent

LCMPFBA_00008

R: SBC 9/22/16

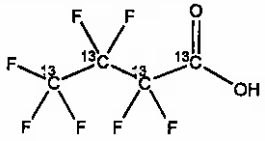
739593
ID: LCMPFBA_00008
Exp: 05/24/21 Prpd: SBC
13C4-Perfluorobutanoic ac

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

Scanned 10/14/16 SR

PRODUCT CODE:	MPFBA	**LOT NUMBER:**	MPFBA0516
COMPOUND:	Perfluoro-n-[1,2,3,4-$^{13}C_4$]butanoic acid		
STRUCTURE:		**CAS #:**	Not available



MOLECULAR FORMULA:	$^{13}C_4HF_7O_2$	**MOLECULAR WEIGHT:**	218.01
CONCENTRATION:	50 ± 2.5 µg/ml	**SOLVENT(S):**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C (1,2,3,4-$^{13}C_4$)
LAST TESTED: (mm/dd/yyyy)	05/24/2016		
EXPIRY DATE: (mm/dd/yyyy)	05/24/2021		
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 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:** 05/30/2016 (mm/dd/yyyy)

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
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CALA

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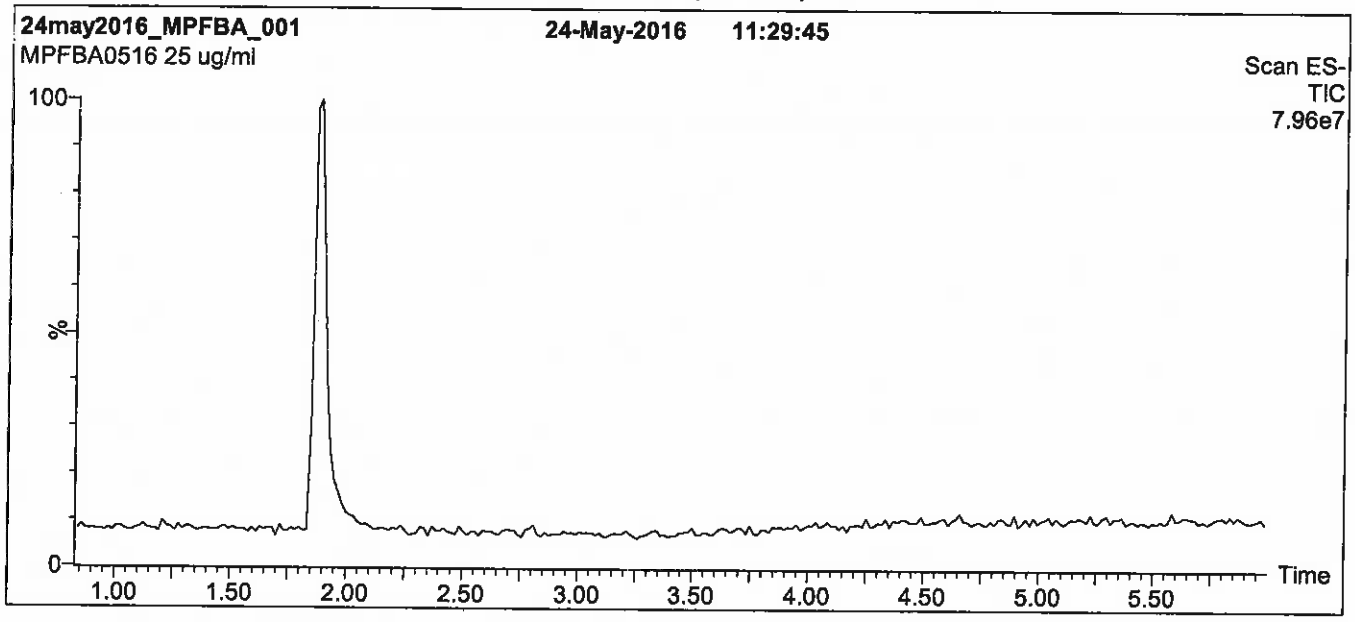
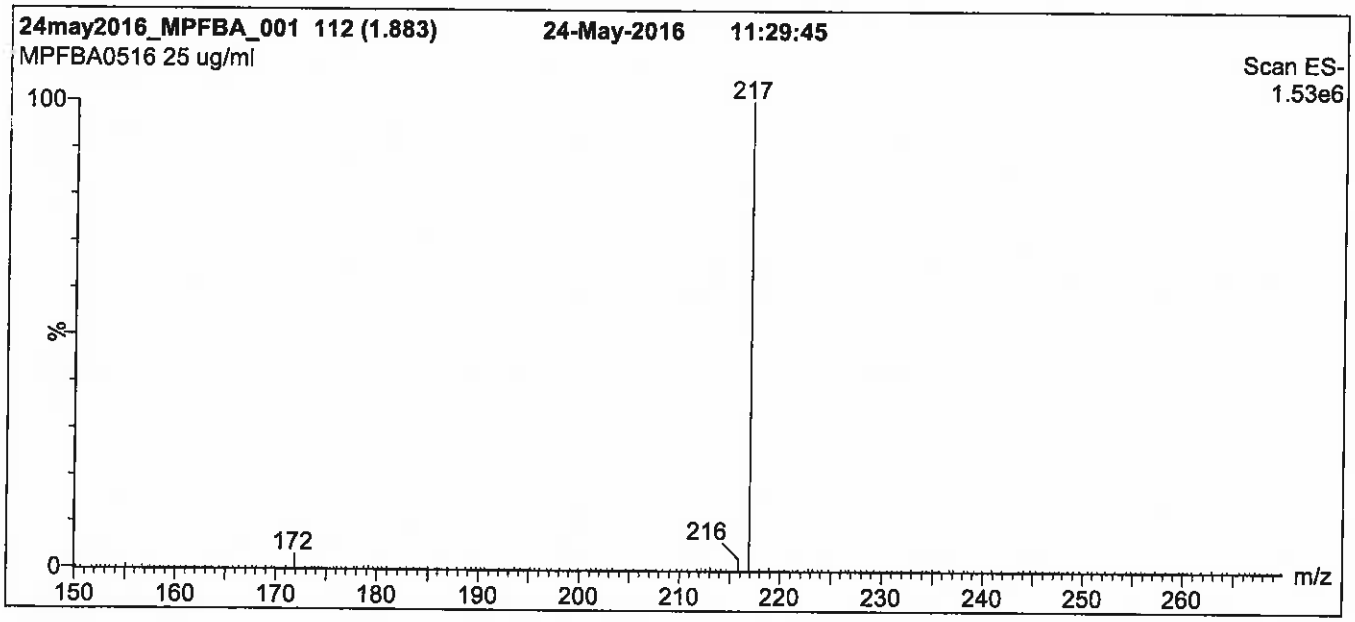
Figure 1: **MPFBA; LC/MS Data (TIC and Mass Spectrum)**





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: 30% (80:20 MeOH:ACN) / 70% 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

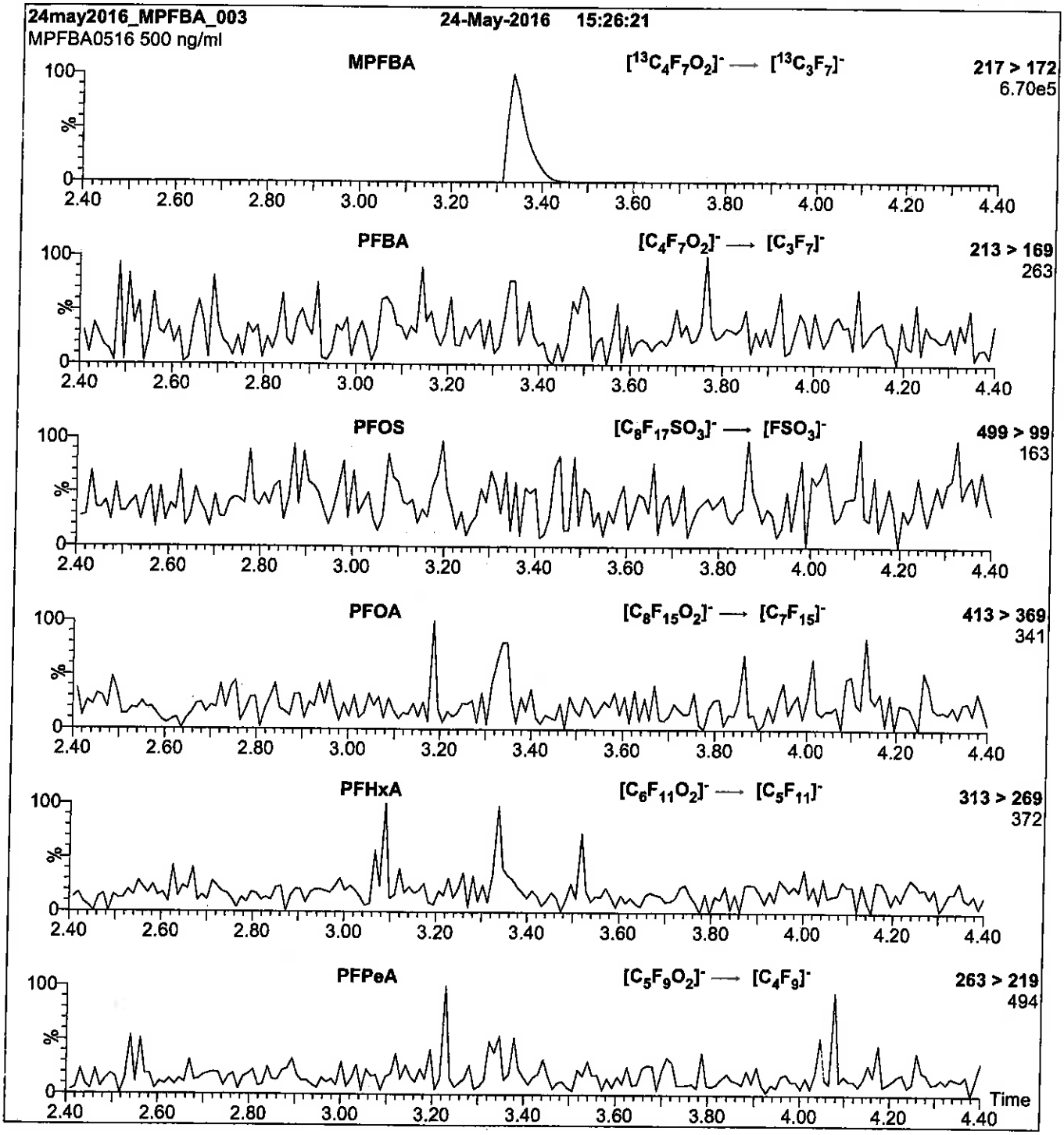
Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (150 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 3.00
Cone Voltage (V) = 10.00
Cone Gas Flow (l/hr) = 100
Desolvation Gas Flow (l/hr) = 750

Figure 2: **MPFBA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: Direct loop Injection
10 µl (500 ng/ml MPFBA)

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) = 3.50e-3
Collision Energy (eV) = 10

Reagent

LCMPFDA_00011

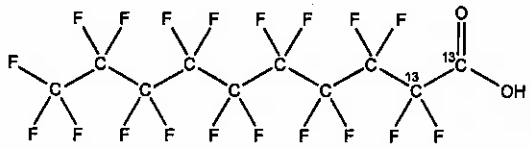
Scanned 10/14/16 R: SBC 9/22/16

739609
ID: LCMPFDA_00011
Exp: 08/19/20 Prpd: SBC
13C2-Perfluorodecanoic a

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE:	MPFDA	**LOT NUMBER:**	MPFDA0815
COMPOUND:	Perfluoro-n-[1,2-$^{13}C_2$]decanoic acid		
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

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:

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, SFC/UV/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, 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.

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 $x_1, x_2, \ldots x_n$ 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 Accreditation No. A1226

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

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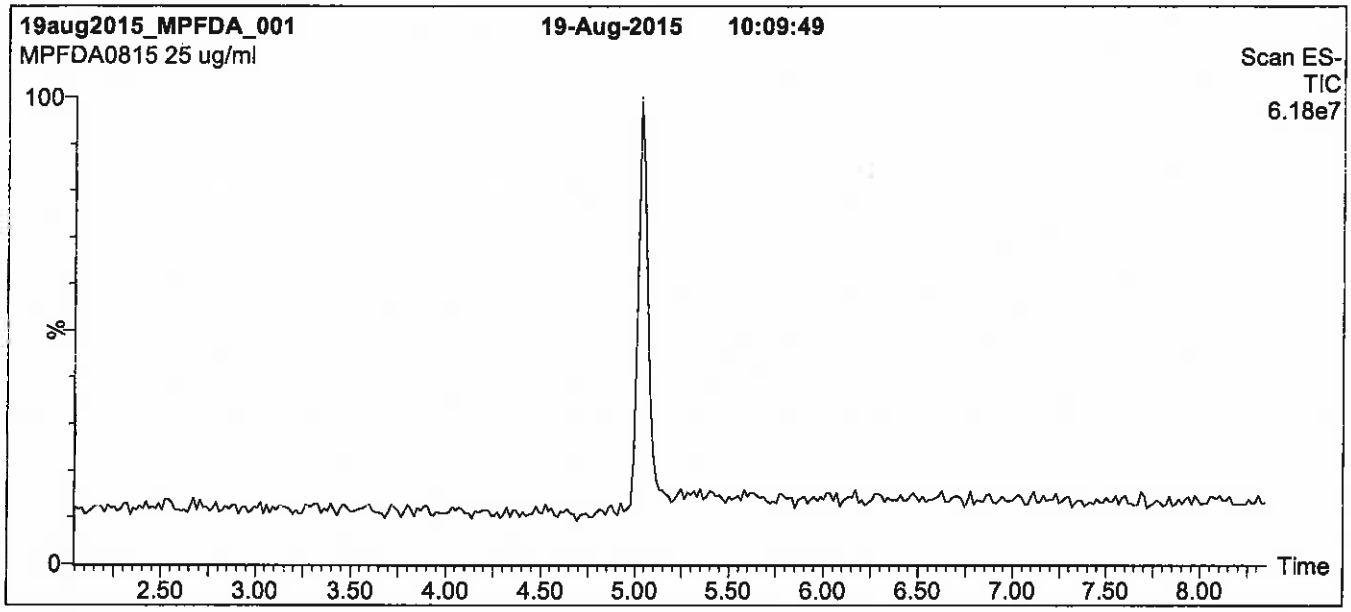
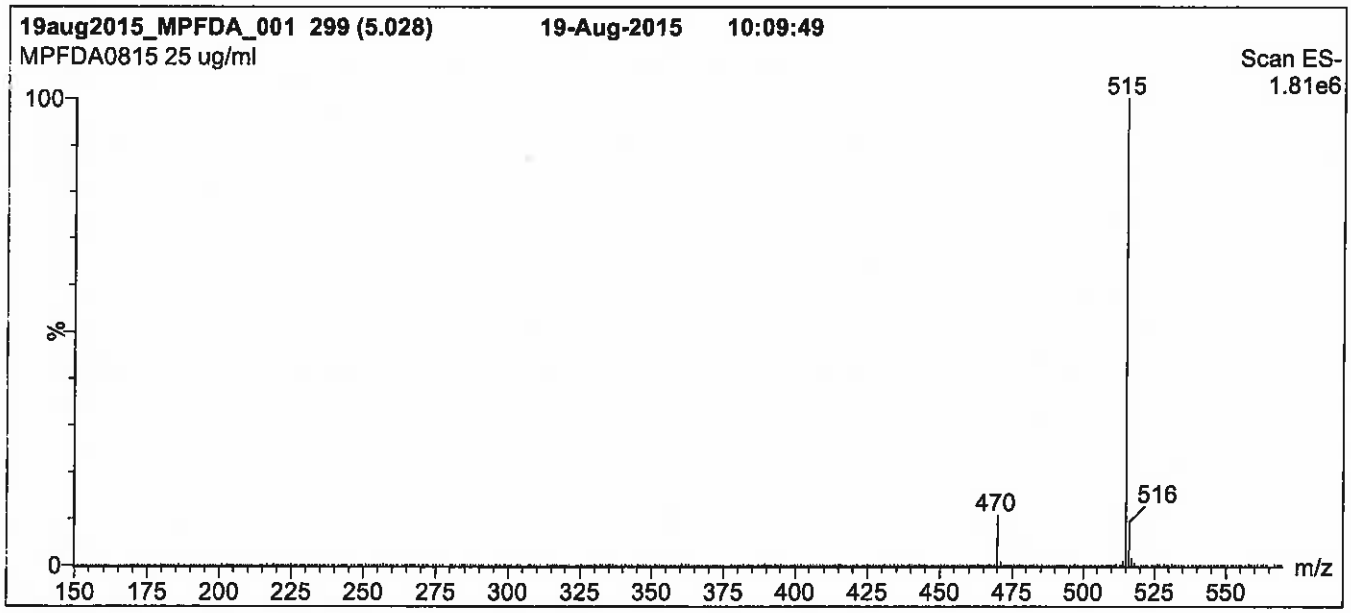
Figure 1: **MPFDA; LC/MS Data (TIC and Mass Spectrum)**





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

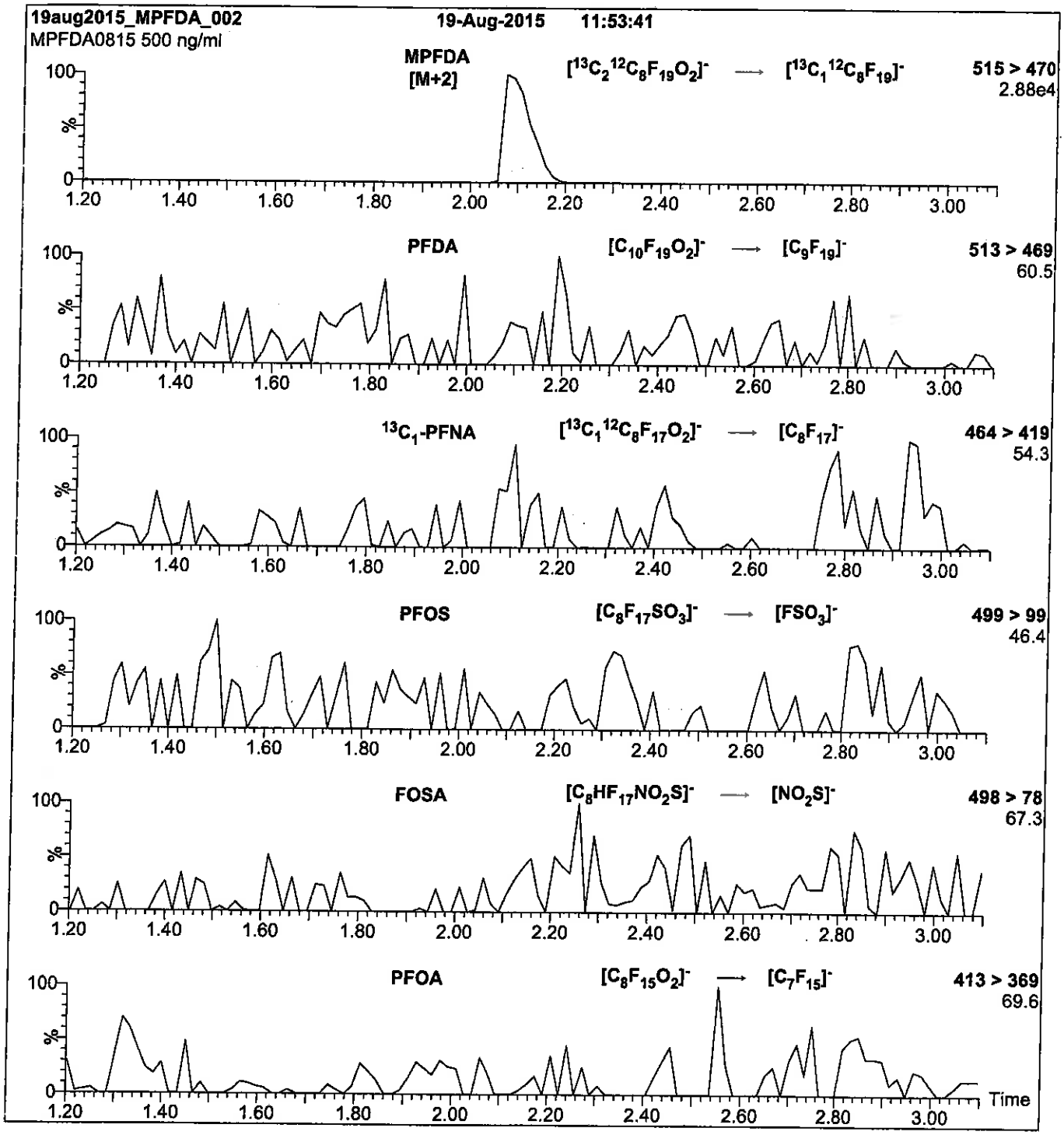
Flow: 300 µl/min

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

LCMPFDoA_00008

R: SBC 9/22/16

739598
ID: LCMPFDoA_00008
Exp: 04/08/21 Prpd: SBC
13C2-Perfluorododecanoic

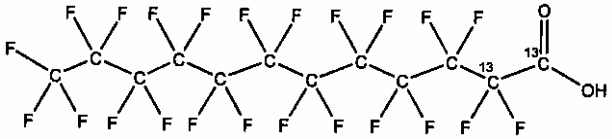
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

Scanned 10/14/16 SR

PRODUCT CODE: MPFDoA
LOT NUMBER: MPFDoA0416
COMPOUND: Perfluoro-n-[1,2-$^{13}C_2$]dodecanoic acid

STRUCTURE:
CAS #: Not available



MOLECULAR FORMULA:	$^{13}C_2{}^{12}C_{10}HF_{23}O_2$	**MOLECULAR WEIGHT:**	616.08
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)	04/08/2016		
EXPIRY DATE: (mm/dd/yyyy)	04/08/2021		
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 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:** 04/15/2016 (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:

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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, SFC/UV/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:

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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:

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QUALITY MANAGEMENT:

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CALA

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

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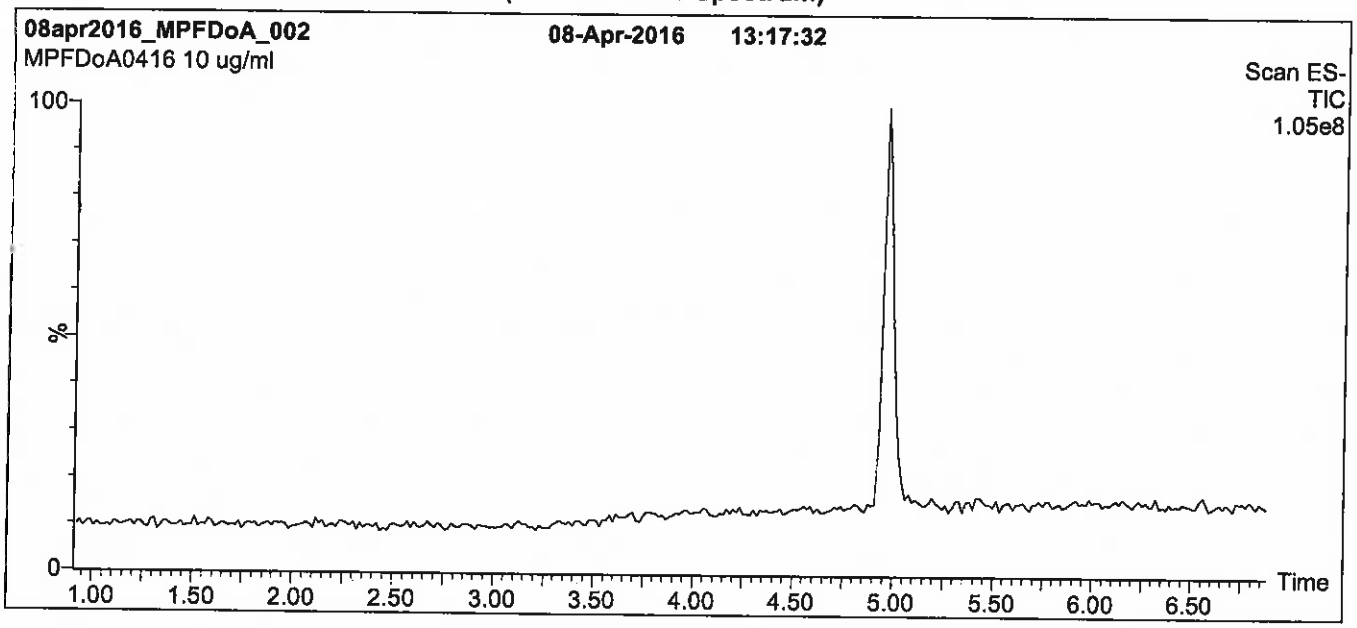
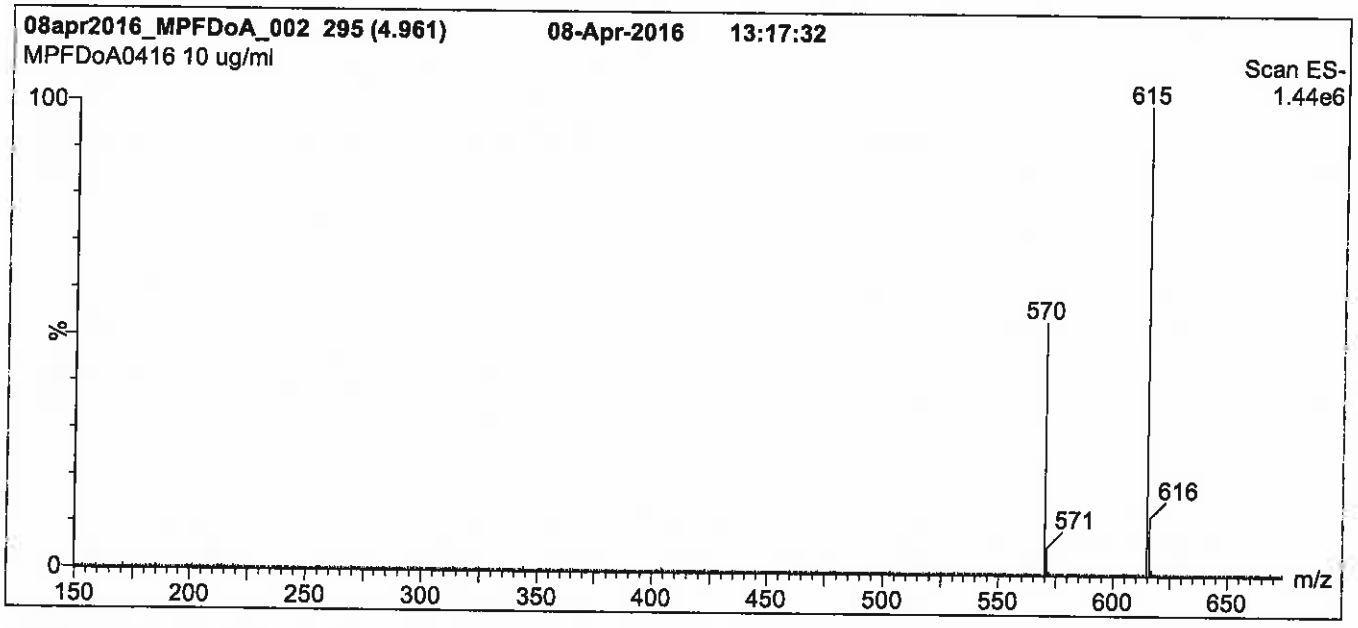
Figure 1: **MPFDoA; LC/MS Data (TIC and Mass Spectrum)**





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 7 min and hold for 1.5 min
before returning to initial conditions in 0.5 min.
Time: 10 min

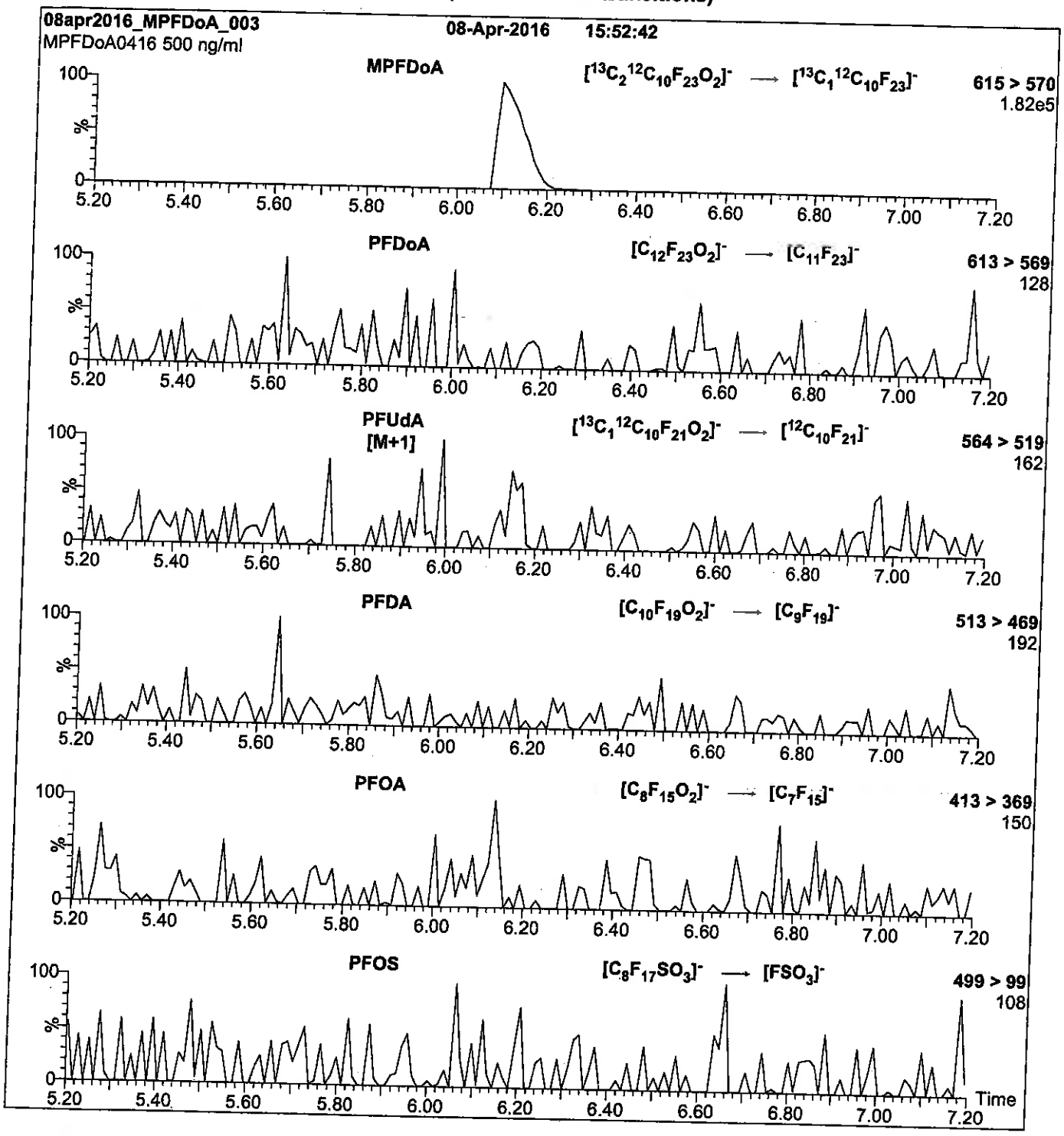
Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (150 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 20.00
Cone Gas Flow (l/hr) = 100
Desolvation Gas Flow (l/hr) = 750

Figure 2: **MPFDoA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection:	Direct loop injection 10 µl (500 ng/ml MPFDoA)
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) = 3.24e-3
Collision Energy (eV) = 13

Reagent

LCMPFHxA_00012

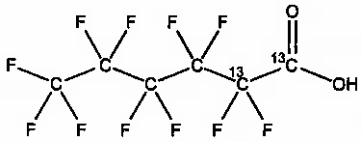
Scanned 10/14/16 JR R: SBC 9/22/16

739612
ID: LCMPFHxA_00012
Exp: 04/08/21 Prpd: SBC
13C2-Perfluorohexanoic ac

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE:	MPFHxA	**LOT NUMBER:**	MPFHxA0416
COMPOUND:	Perfluoro-n-[1,2-$^{13}C_2$]hexanoic acid		
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)	04/08/2016		
EXPIRY DATE: (mm/dd/yyyy)	04/08/2021		
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 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:** 04/29/2016 (mm/dd/yyyy)

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
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CALA

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

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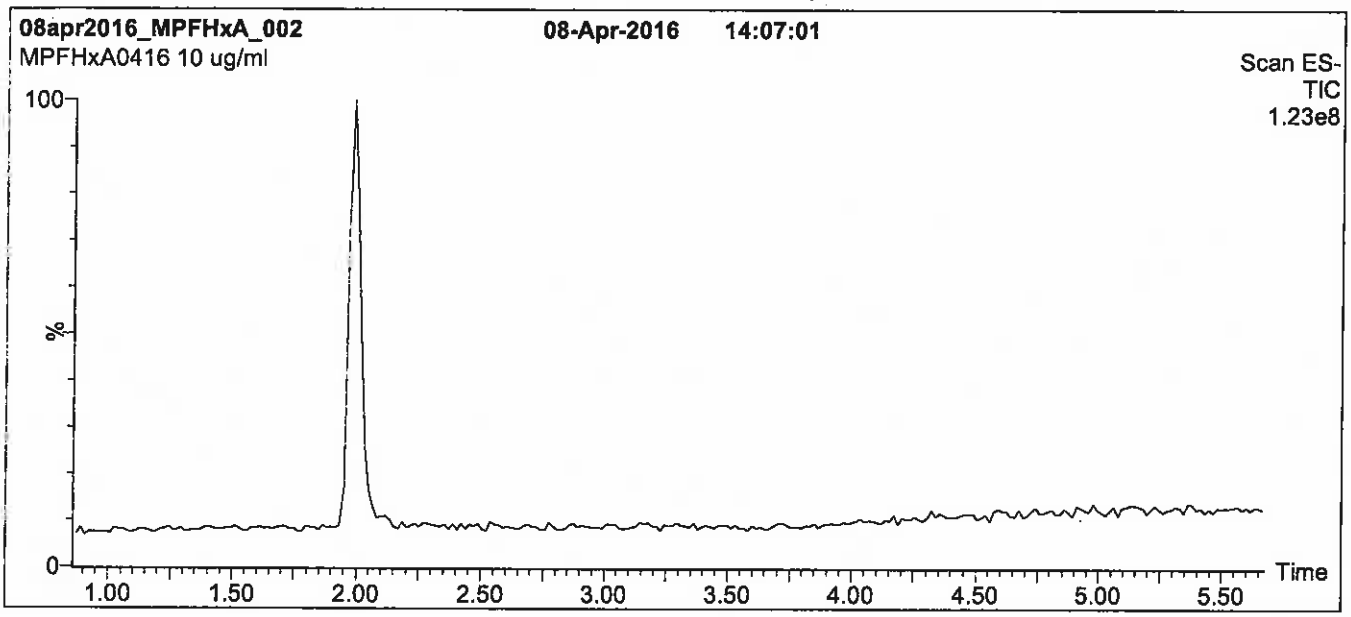
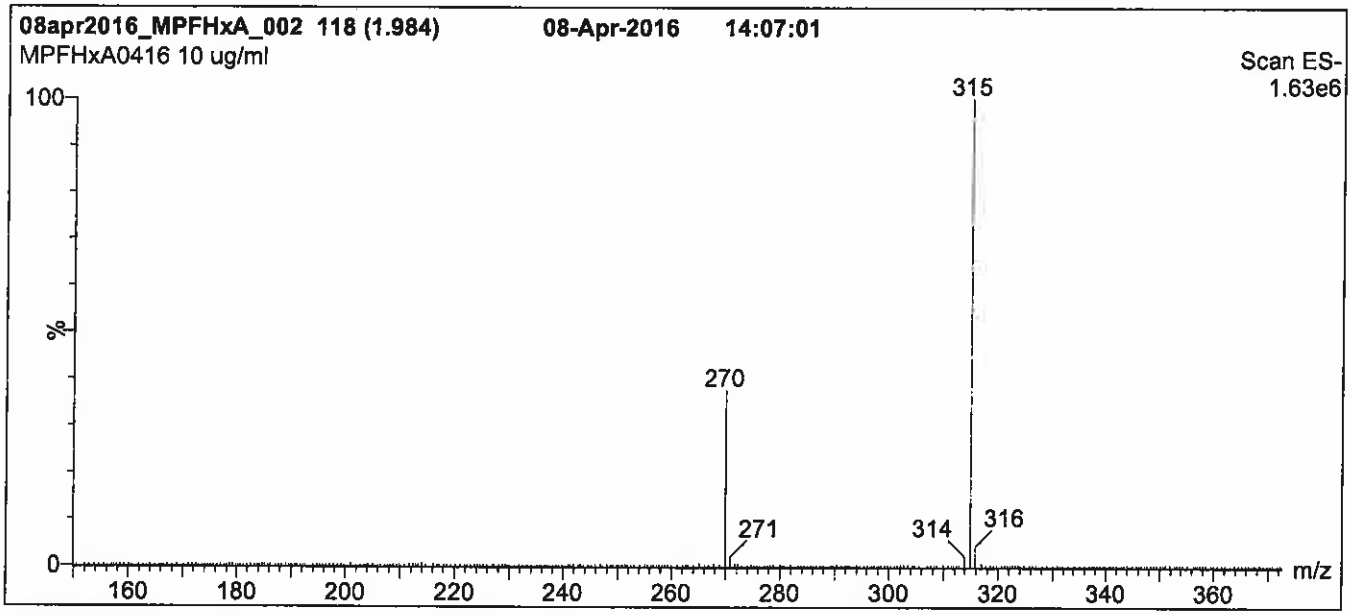
Figure 1: **MPFHxA; LC/MS Data (TIC and Mass Spectrum)**





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 7.5 min and hold for 1.5 min before returning to initial conditions over 0.5 min.
Time: 10 min

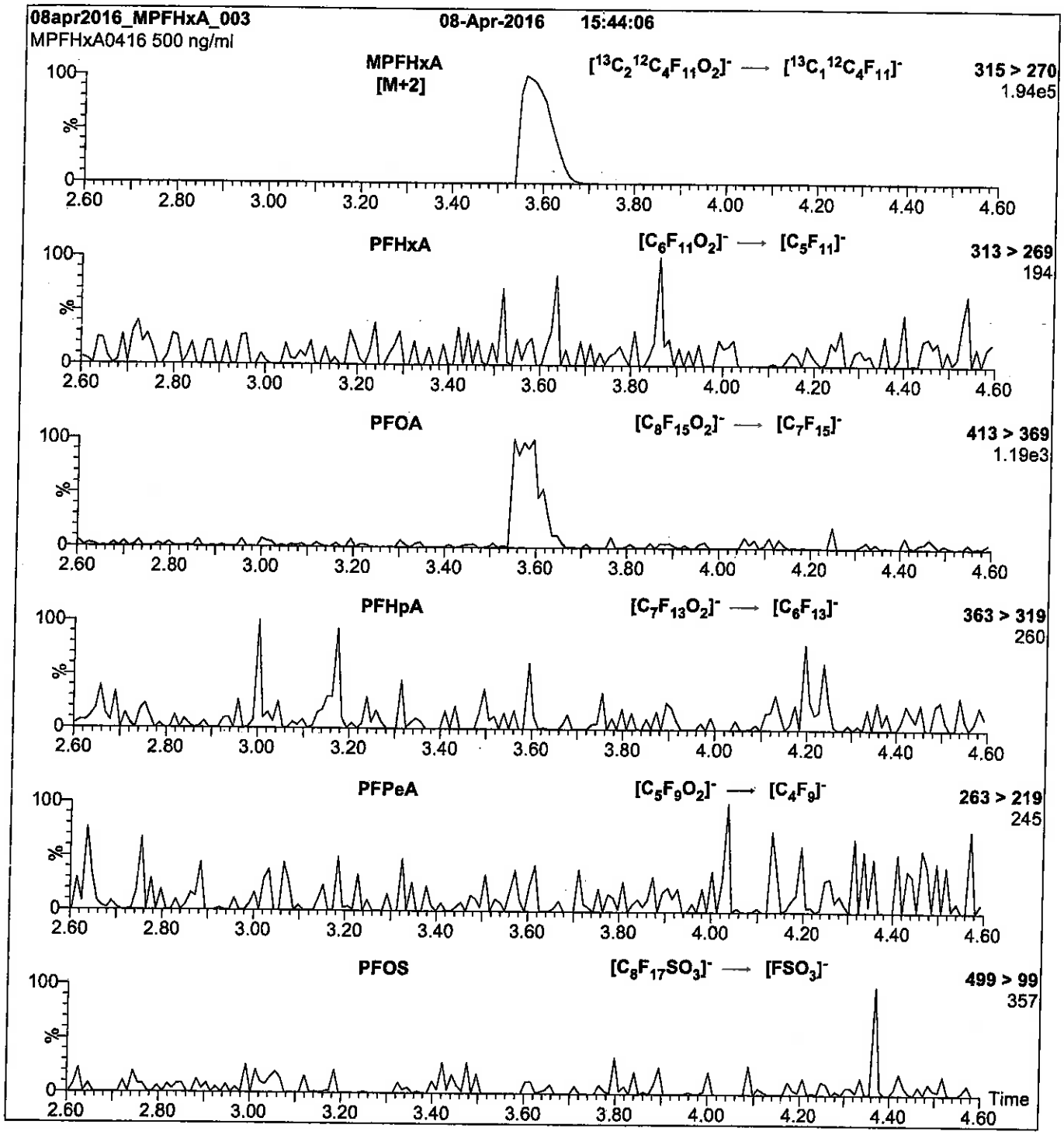
Flow: 300 µl/min

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) = 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) = 3.39e-3
Collision Energy (eV) = 10

Reagent

LCMPFHxS_00008

R: SBC 9/22/16

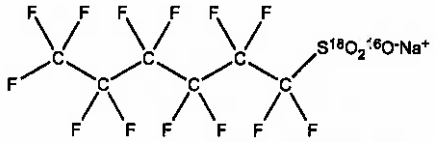
739601
ID: LCMPFHxS_00008
Exp: 10/23/20 Prpd: SBC
18O2-Perfluorohexanesulfo

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

Scanned 10/14/16 SR

PRODUCT CODE:	MPFHxS	**LOT NUMBER:**	MPFHxS1015
COMPOUND:	Sodium perfluoro-1-hexane[$^{18}O_2$]sulfonate		
STRUCTURE:		**CAS #:**	Not available



MOLECULAR FORMULA:	$C_6F_{13}S^{18}O_2{}^{16}ONa$	**MOLECULAR WEIGHT:**	426.10
CONCENTRATION:	50.0 ± 2.5 µg/ml (Na salt) 47.3 ± 2.4 µg/ml (MPFHxS anion)	**SOLVENT(S):**	Methanol
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	>94% ($^{18}O_2$)
LAST TESTED: (mm/dd/yyyy)	10/23/2015		
EXPIRY DATE: (mm/dd/yyyy)	10/23/2020		
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.
- The response factor for MPFHxS ($C_6F_{13}S^{18}O_2{}^{16}O^-$) has been observed to be up to 10% lower than for PFHxS ($C_6F_{13}S^{16}O_3^-$) when both compounds are injected together. This difference may vary between instruments.
- Due to the isotopic purity of the starting material ($^{18}O_2$ >94%), MPFHxS contains ~ 0.3% of PFHxS. This value agrees with the theoretical percent relative abundance that is expected based on the stated isotopic purity.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: B.G. Chittim **Date:** 10/28/2015 (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:

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, SFC/UV/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, 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.

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 $x_1, x_2, \ldots x_n$ 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:

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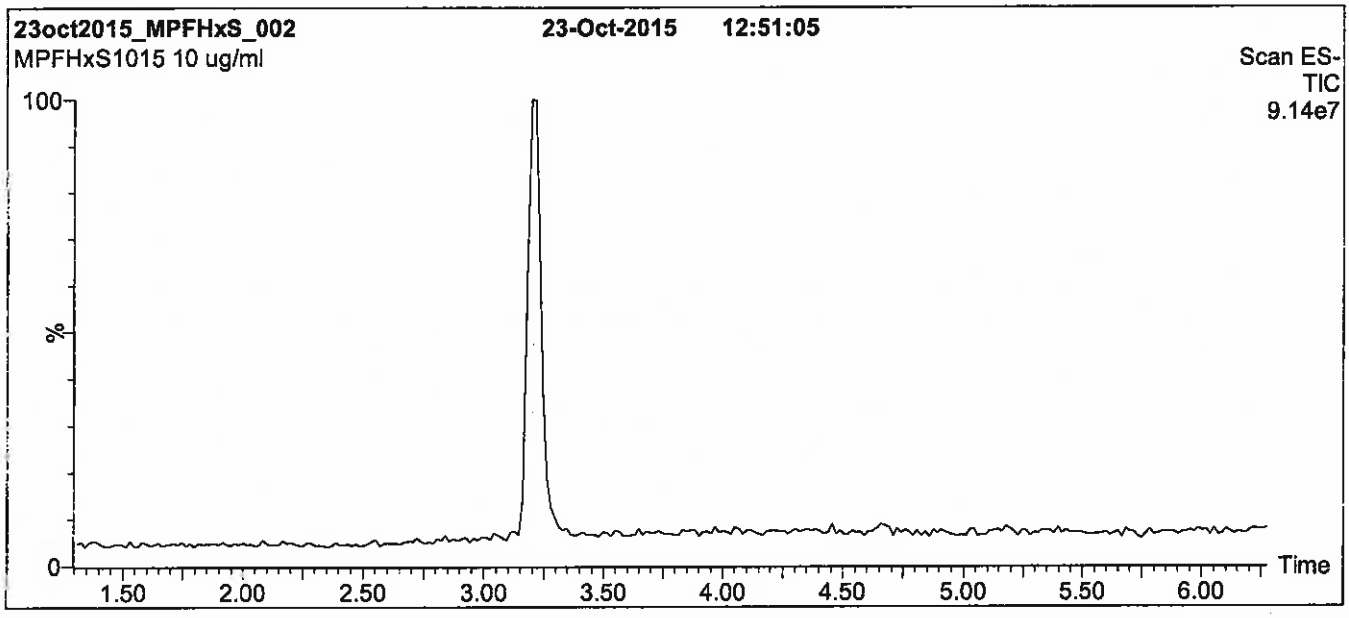
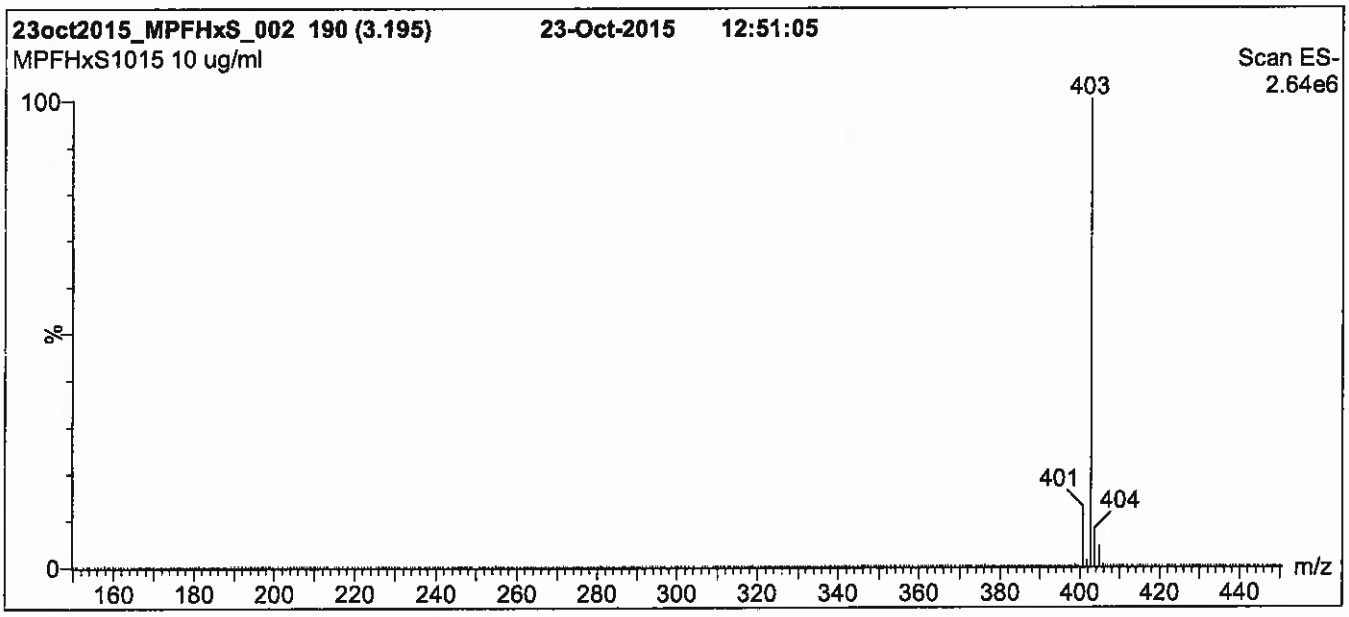
QUALITY MANAGEMENT:

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).

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: **MPFHxS; 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

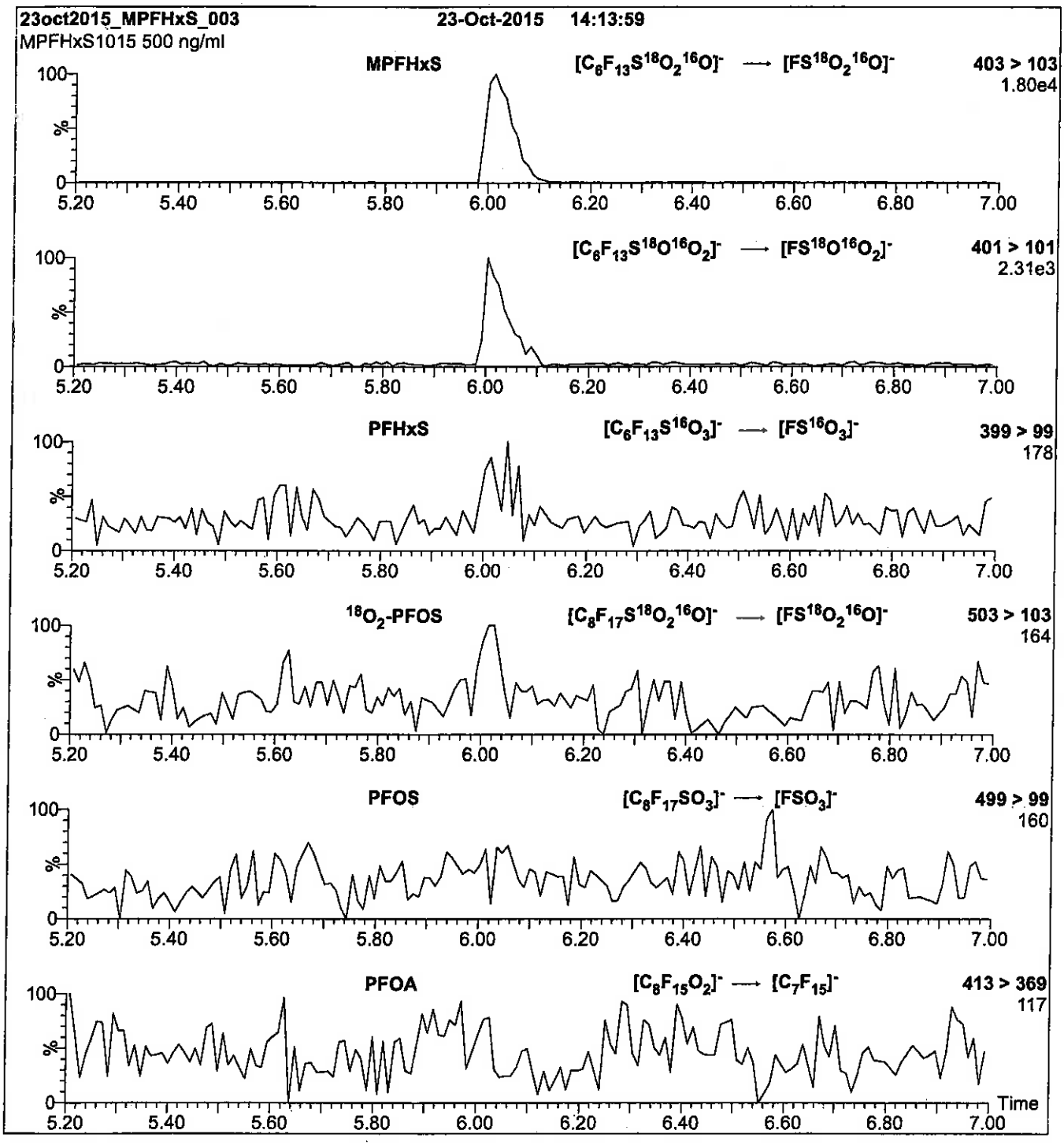
Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (150 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 3.00
Cone Voltage (V) = 50.00
Cone Gas Flow (l/hr) = 60
Desolvation Gas Flow (l/hr) = 750

Figure 2: **MPFHxS; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: Direct loop injection
10 µl (500 ng/ml MPFHxS)

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) = 30

Reagent

LCMPFNA_00008

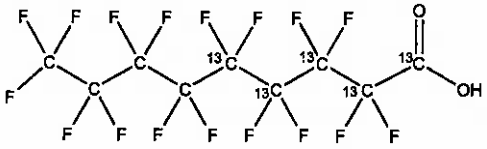
Scanned 10/14/16 R: SBC 9/22/16

739637
ID: LCMPFNA_00008
Exp: 04/13/19 Prpd: SBC
13C5-Perfluorononanoic aci

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE:	MPFNA	**LOT NUMBER:**	MPFNA0414
COMPOUND:	Perfluoro-n-[1,2,3,4,5-$^{13}C_5$]nonanoic acid		
STRUCTURE:		**CAS #:**	Not available



MOLECULAR FORMULA:	$^{13}C_5{}^{12}C_4HF_{17}O_2$	**MOLECULAR WEIGHT:**	469.04
CONCENTRATION:	50 ± 2.5 µg/ml	**SOLVENT(S):**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C (1,2,3,4,5-$^{13}C_5$)
LAST TESTED: (mm/dd/yyyy)	04/13/2014		
EXPIRY DATE: (mm/dd/yyyy)	04/13/2019		
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:** 04/01/2015 (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:

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SYNTHESIS / CHARACTERIZATION:

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where x is expressed as a relative standard uncertainty of the individual parameter.

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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.

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CALA

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

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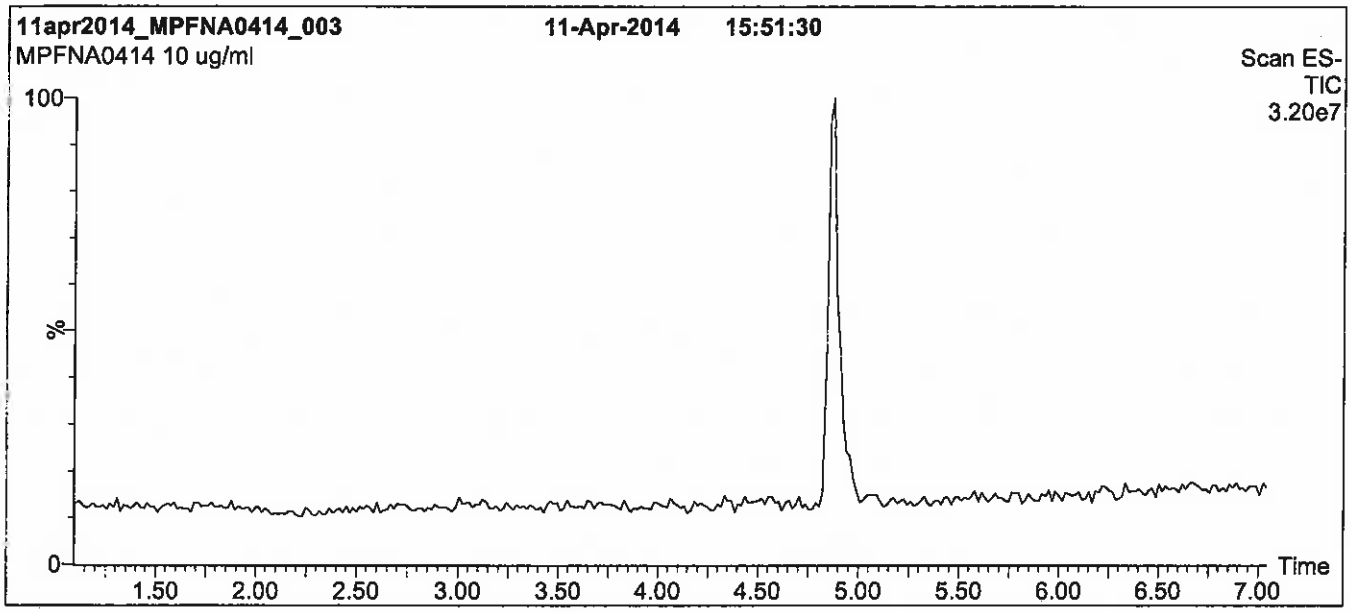
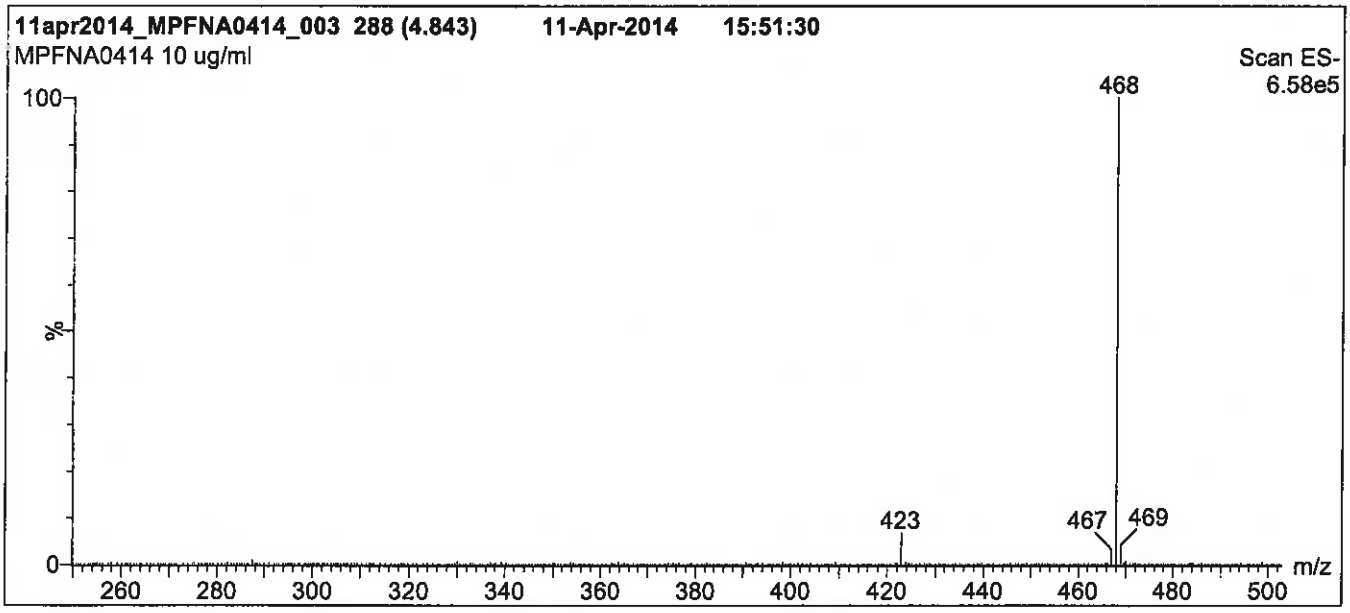
Figure 1: **MPFNA; LC/MS Data (TIC and Mass Spectrum)**





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

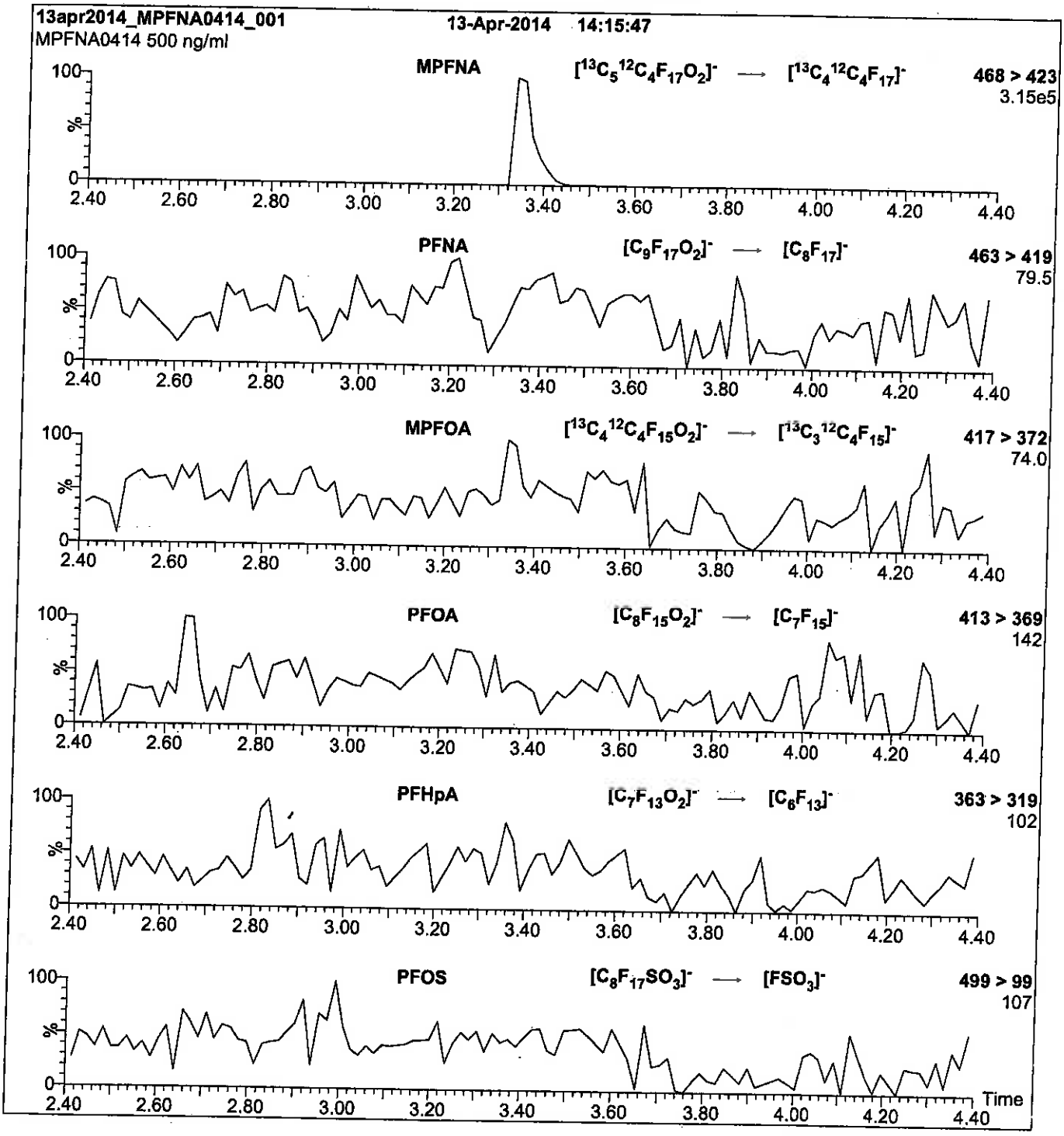
Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (250 - 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: **MPFNA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: Direct loop injection
10 µl (500 ng/ml MPFNA)

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) = 3.28e-3
Collision Energy (eV) = 11

Reagent

LCMPFOA_00012

R: SBC 9/22/16

738683
ID: LCMPFOA_00012
Exp: 01/22/21 Prpd: SBC
13C4-Perfluorooctanoic ac

WELLINGTON LABORATORIES

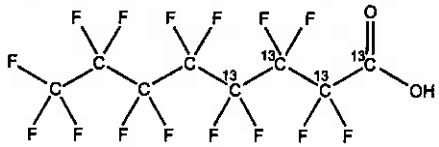
CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: MPFOA
COMPOUND: Perfluoro-n-[1,2,3,4-$^{13}C_4$]octanoic acid

LOT NUMBER: MPFOA0116

STRUCTURE:

CAS #: Not available



MOLECULAR FORMULA: $^{13}C_4{}^{12}C_4HF_{15}O_2$
CONCENTRATION: 50 ± 2.5 µg/ml

CHEMICAL PURITY: >98%
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

MOLECULAR WEIGHT: 418.04
SOLVENT(S): Methanol
Water (<1%)

ISOTOPIC PURITY: ≥99% ^{13}C ($1,2,3,4\text{-}^{13}C_4$)

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 native perfluoro-n-octanoic acid (PFOA).

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

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CALA

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

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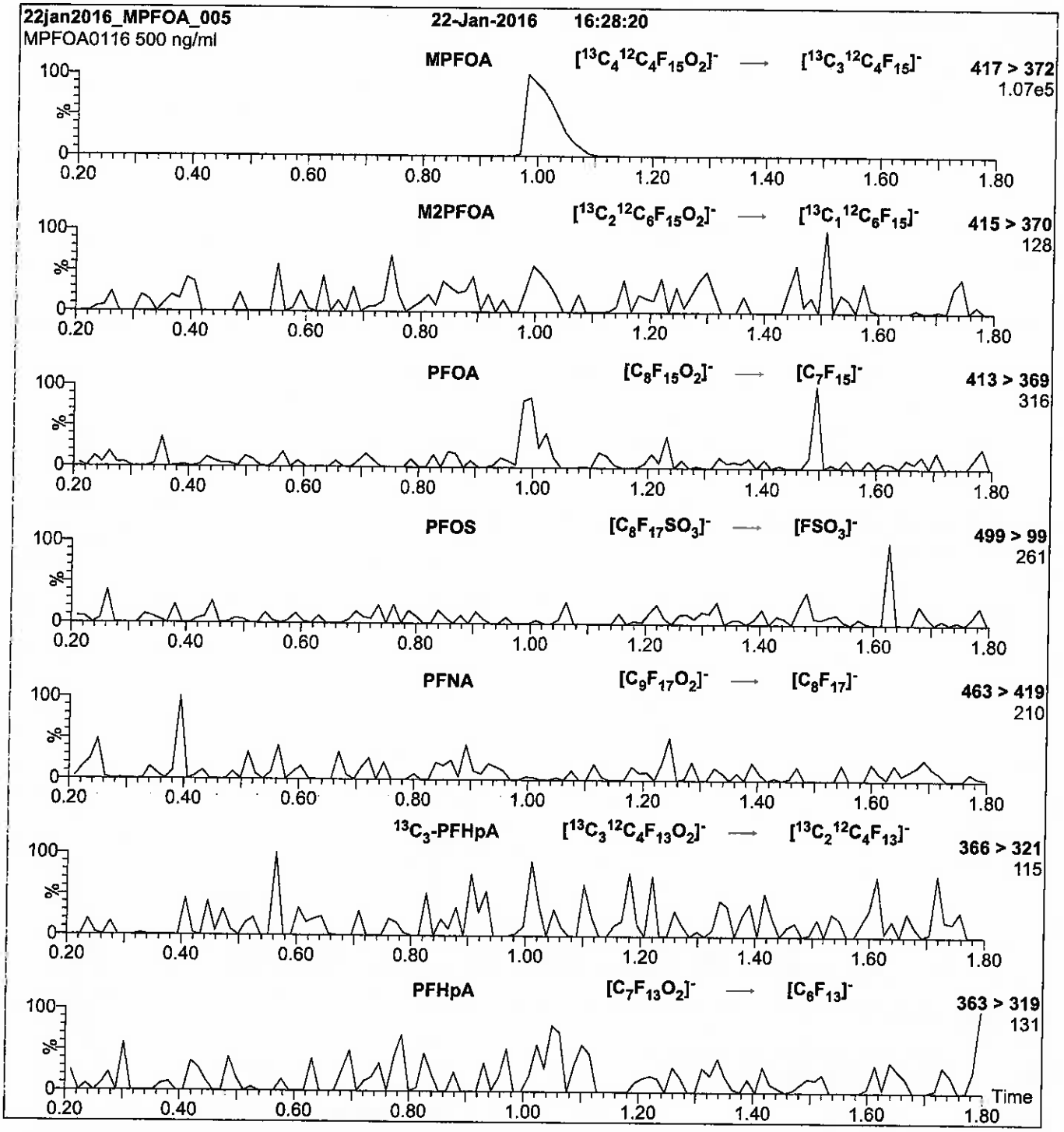
Figure 2: **MPFOA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: Direct loop injection
10 µl (500 ng/ml MPFOA)

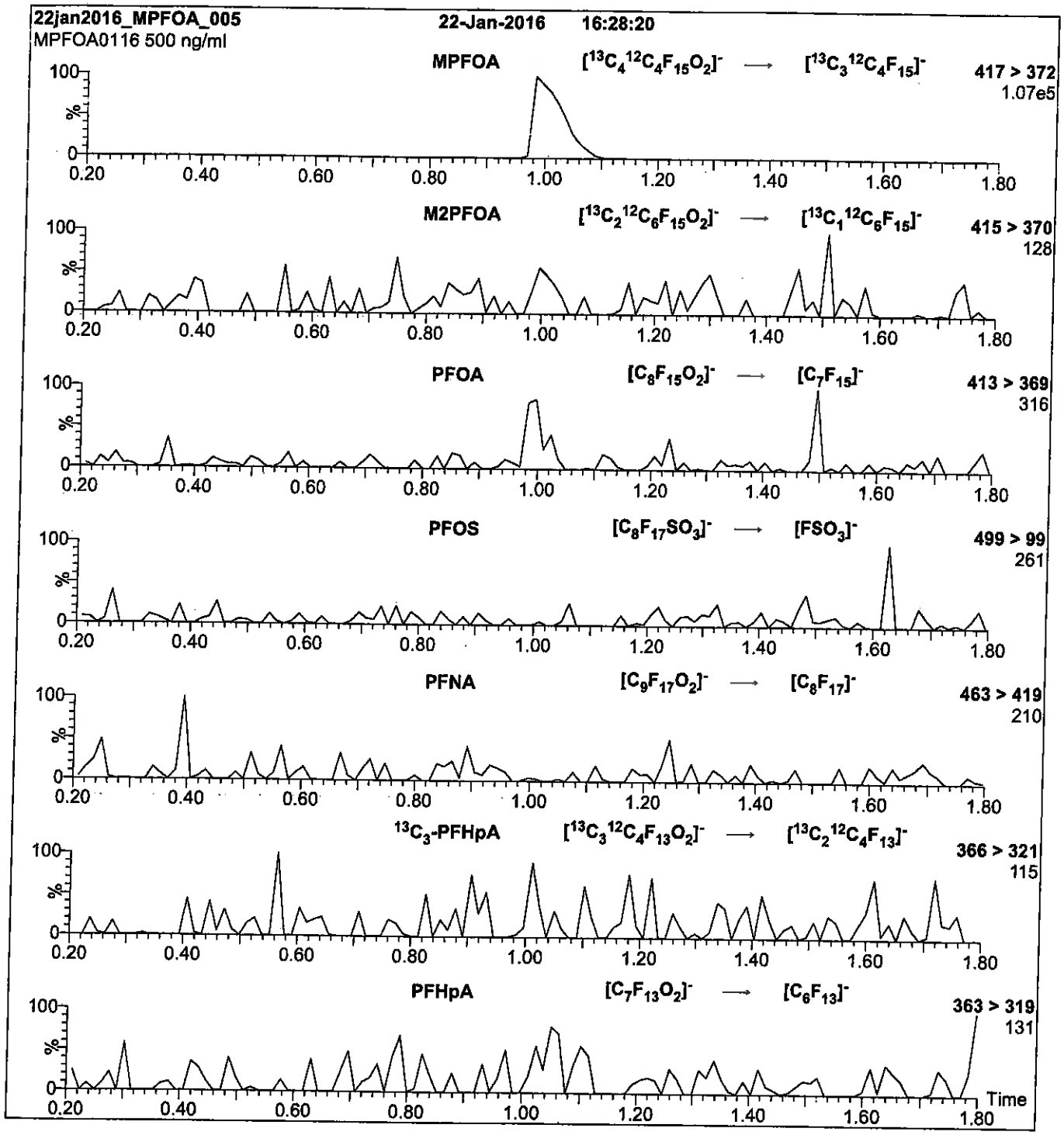
Mobile phase: Isocratic 80% (80:20 MeOH:ACN) / 20% H_2O
(both with 10 mM NH_4OAc buffer)

Flow: 300 µl/min

MS Parameters

Collision Gas (mbar) = 3.58e-3
Collision Energy (eV) = 10

Figure 2: **MPFOA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection:	Direct loop injection 10 µl (500 ng/ml MPFOA)
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) = 3.58e-3
Collision Energy (eV) = 10

Reagent

LCMPFOS_00017

R: 9/9/16 SBC

728309
ID: LCMPFOS_00017
Exp: 08/03/21 Prpd: SBC
13C4-Perfluorooctanesulfo

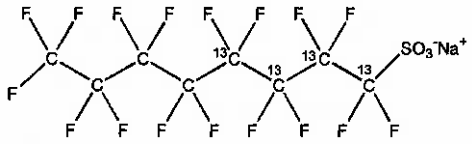
WELLINGTON LABORATORIES

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

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:

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, SFC/UV/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, 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.

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 $x_1, x_2, \ldots x_n$ 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:

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QUALITY MANAGEMENT:

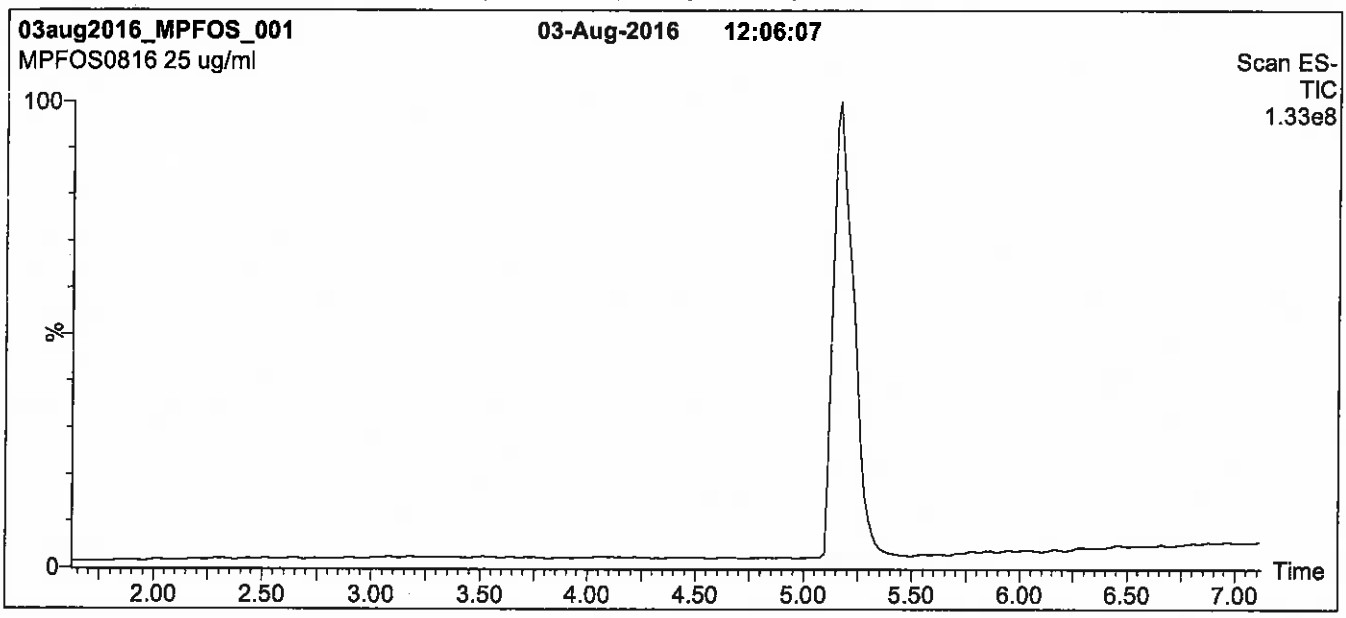
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO GUIDE 34 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

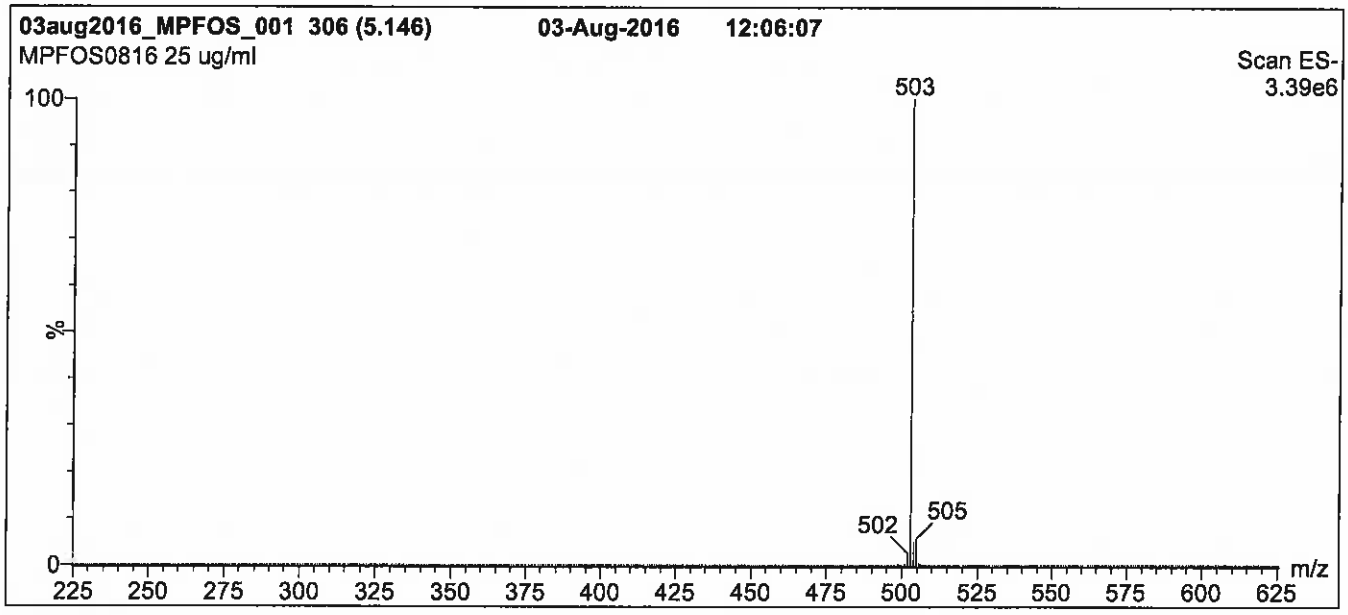
CALA

ANAB ACCREDITED

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: **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

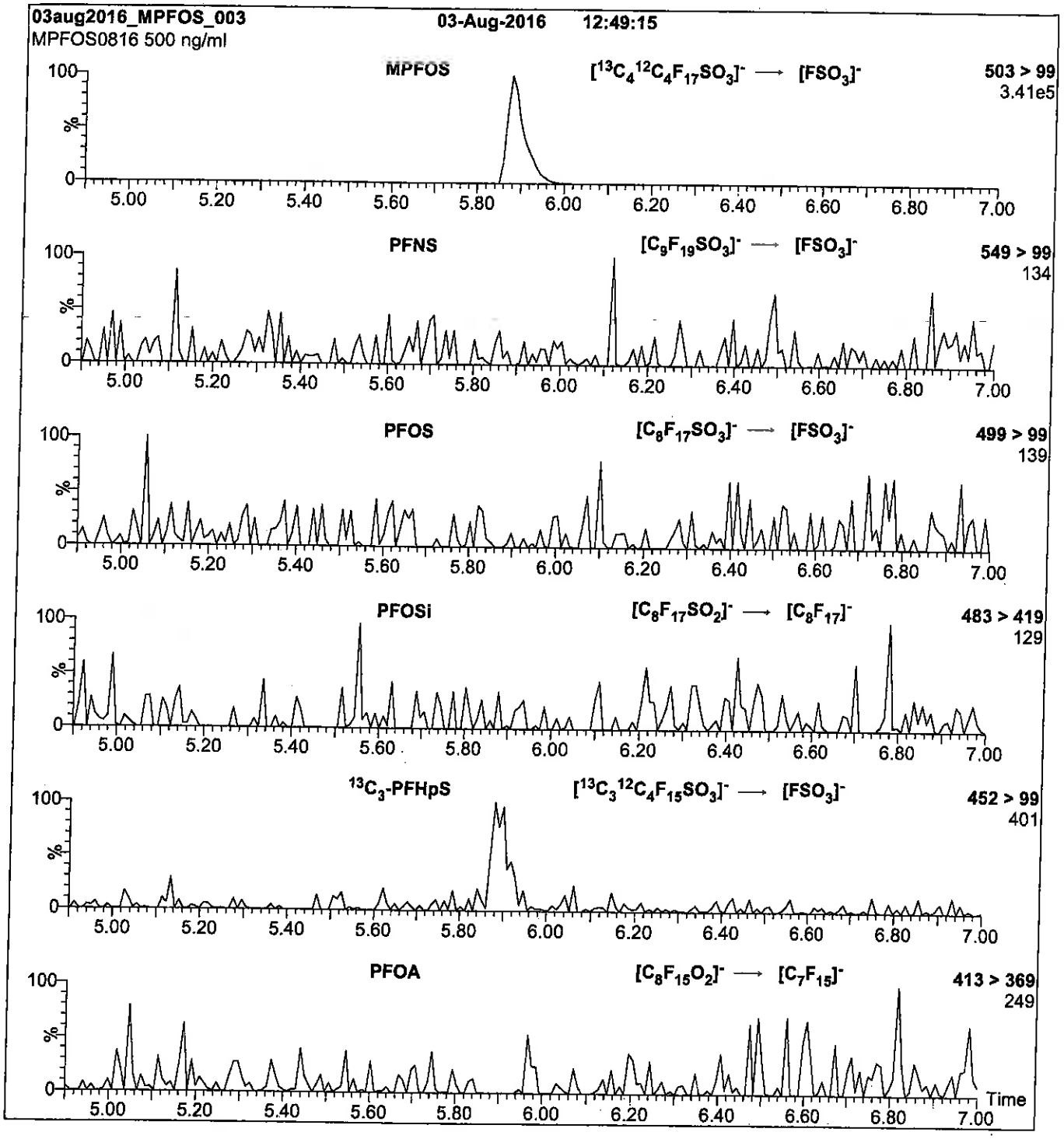
Flow: 300 µl/min

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

Reagent

LCMPFUdA_00009

R: SBC 9/22/16

739604
ID: LCMPFUdA_00009
Exp: 02/12/21 Prpd: SBC
13C2-Perfluoroundecanoic

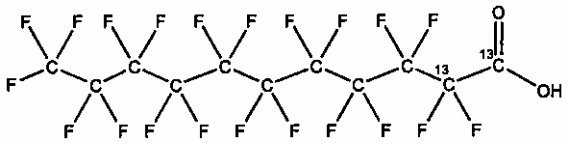
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

Scanned 10/14/16 SBC

PRODUCT CODE: MPFUdA
LOT NUMBER: MPFUdA0216
COMPOUND: Perfluoro-n-[1,2-$^{13}C_2$]undecanoic acid

STRUCTURE:
CAS #: Not available



MOLECULAR FORMULA:	$^{13}C_2{}^{12}C_9HF_{21}O_2$	**MOLECULAR WEIGHT:**	566.08
CONCENTRATION:	50 ± 2.5 µg/ml	**SOLVENT(S):**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C (1,2-$^{13}C_2$)
LAST TESTED: (mm/dd/yyyy)	02/12/2016		
EXPIRY DATE: (mm/dd/yyyy)	02/12/2021		
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 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Presence of 1-$^{13}C_1$-PFUdA (~1%; see Figure 2), 2-$^{13}C_1$-PFUdA (~1%), and PFUdA (~0.2%; see Figure 2) are due to the isotopic purity of the ^{13}C-precursor.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: B.G. Chittim **Date:** 02/24/2016 (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

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EXPIRY DATE / PERIOD OF VALIDITY:

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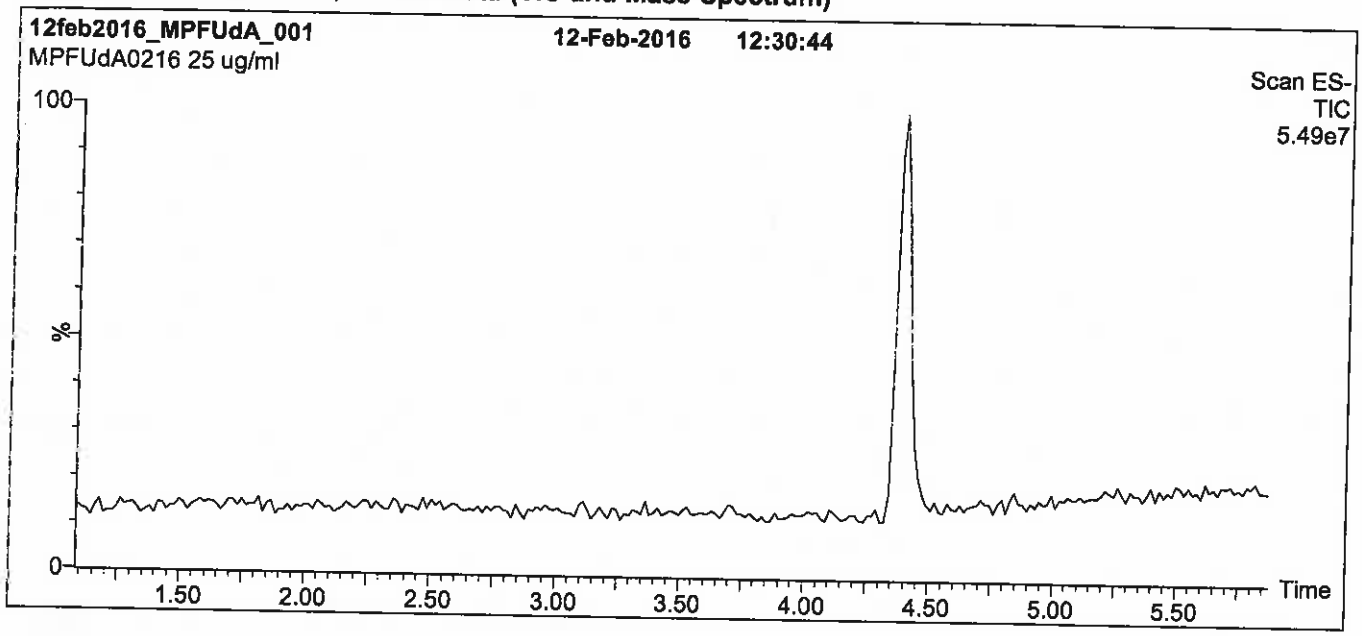
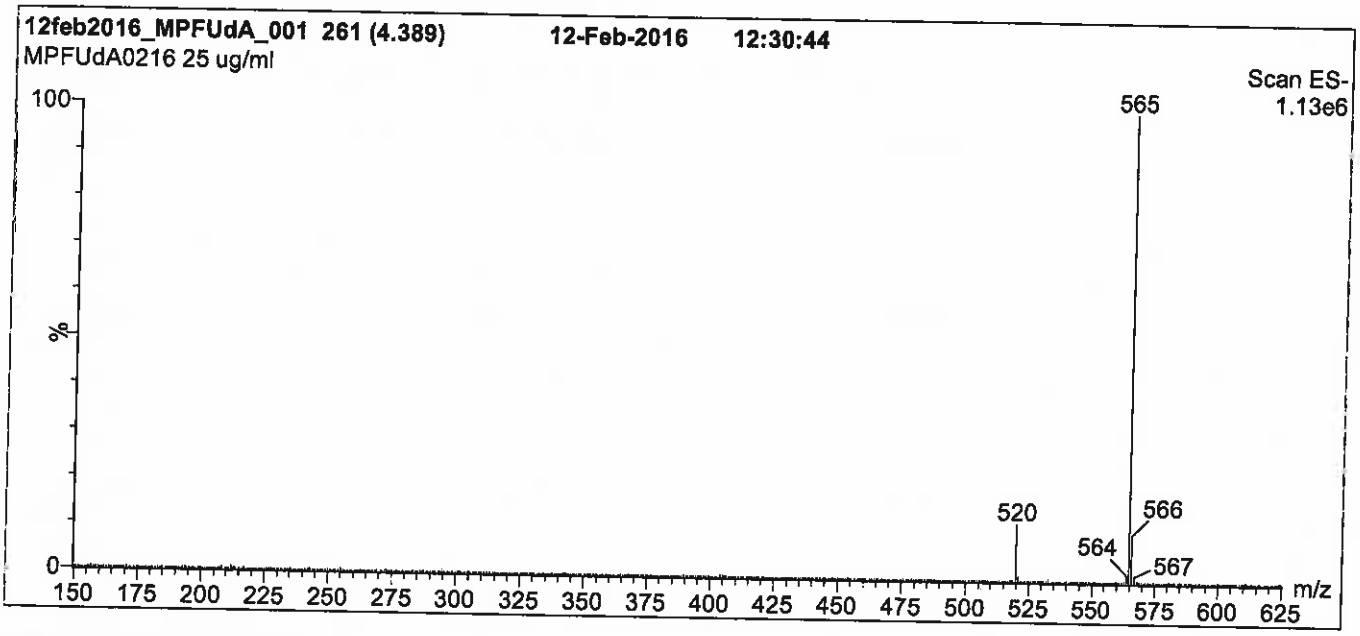
Figure 1: **MPFUdA; LC/MS Data (TIC and Mass Spectrum)**





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 7 min and hold for
1.5 min before returning to initial conditions in 0.5 min.
Time: 10 min

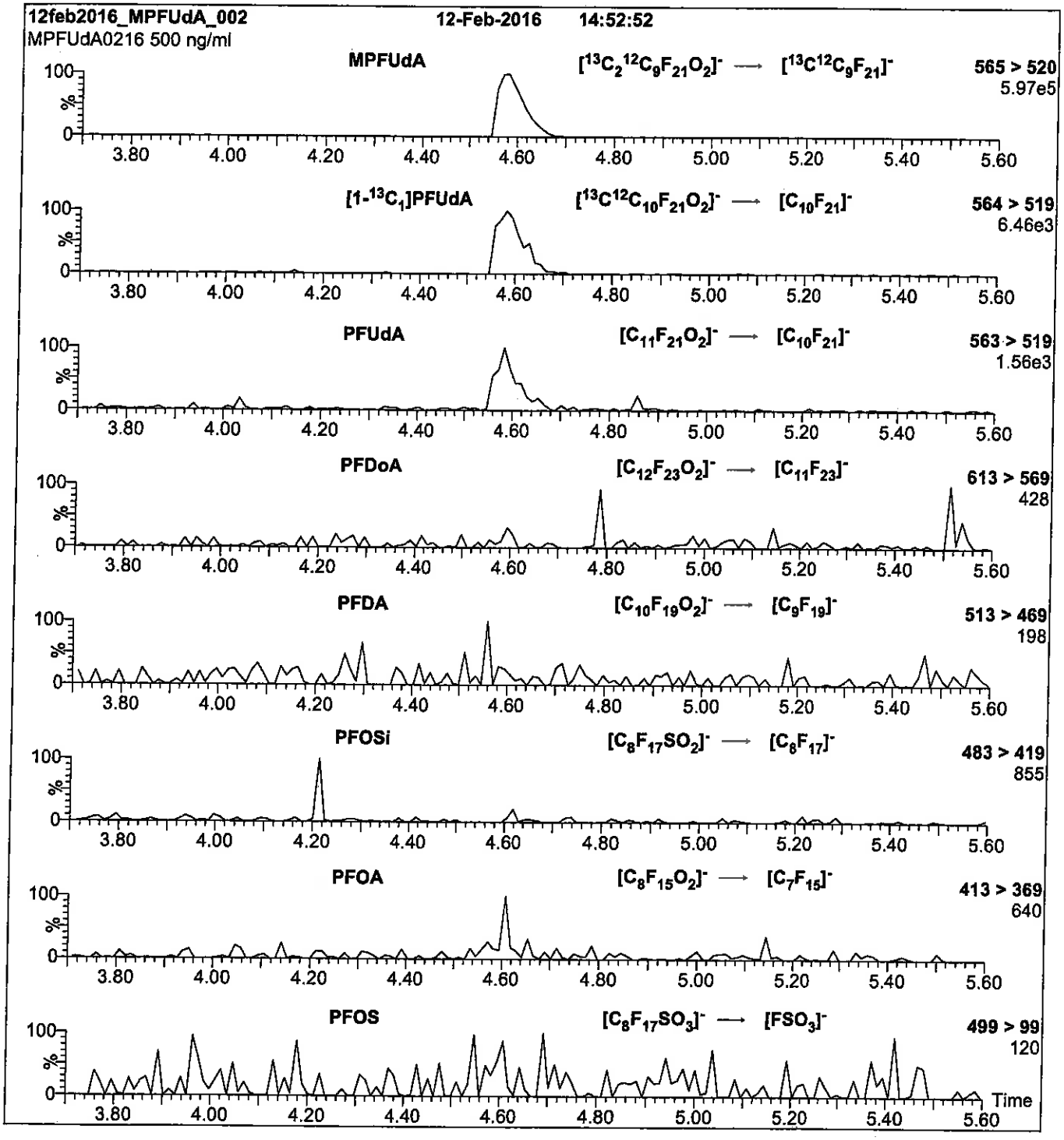
Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (150 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 3.00
Cone Voltage (V) = 15.00
Cone Gas Flow (l/hr) = 65
Desolvation Gas Flow (l/hr) = 750

Figure 2: **MPFUdA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: Direct loop injection
10 µl (500 ng/ml MPFUdA)

Mobile phase: Isocratic 80% MeOH / 20% H_2O

Flow: 300 µl/min

MS Parameters

Collision Gas (mbar) = 3.35e-3
Collision Energy (eV) = 11

Reagent

LCN-EtFOSA-M_00003

R: 8/23/16 SBC

715563
ID: LCN-EtFOSA-M_00003
Exp: 05/24/21 Prpd: SBC
N-EtFOSA-M

WELLINGTON LABORATORIES

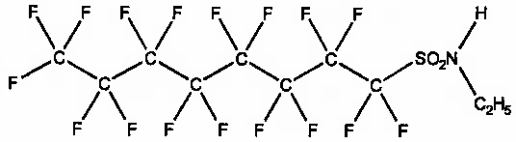
CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: N-EtFOSA-M
COMPOUND: N-ethylperfluoro-1-octanesulfonamide

LOT NUMBER: NEtFOSA0516M

STRUCTURE:

CAS #: 4151-50-2



MOLECULAR FORMULA:	$C_{10}H_8F_{17}NO_2S$	**MOLECULAR WEIGHT:**	527.20
CONCENTRATION:	50 ± 2.5 µg/ml	**SOLVENT(S):**	Methanol
CHEMICAL PURITY:	>98%		
LAST TESTED: (mm/dd/yyyy)	05/24/2016		
EXPIRY DATE: (mm/dd/yyyy)	05/24/2021		
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.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: B.G. Chittim **Date:** 05/27/2016 (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

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CALA Testing

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

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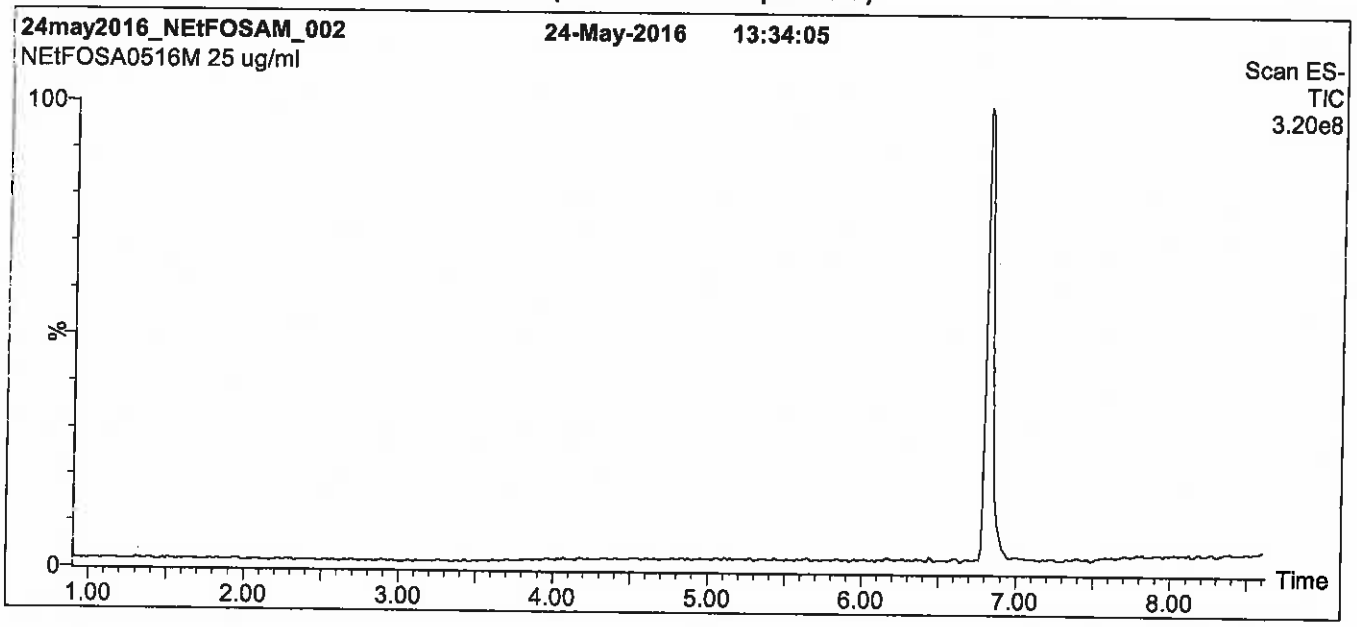
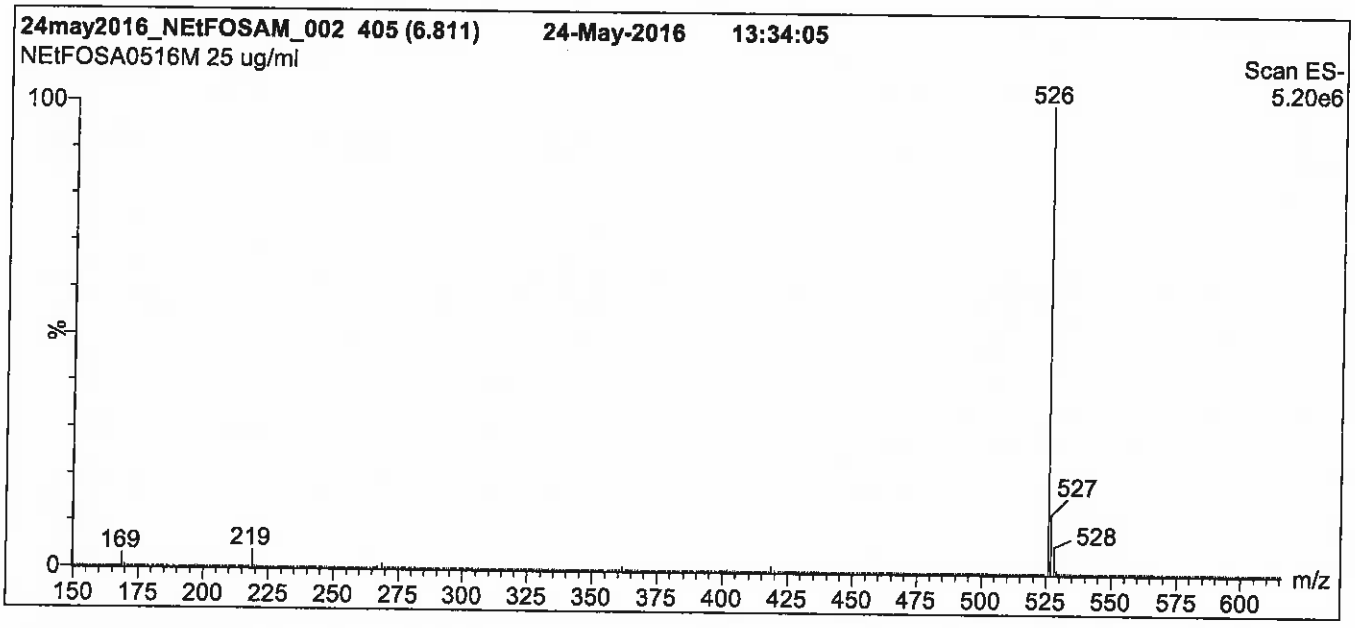
Figure 1: **N-EtFOSA-M; LC/MS Data (TIC and Mass Spectrum)**





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% H_2O / 55% (80:20 MeOH:ACN)
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 7.5 min and hold for 1.5 min before returning to initial conditions in 0.5 min.
Time: 10 min

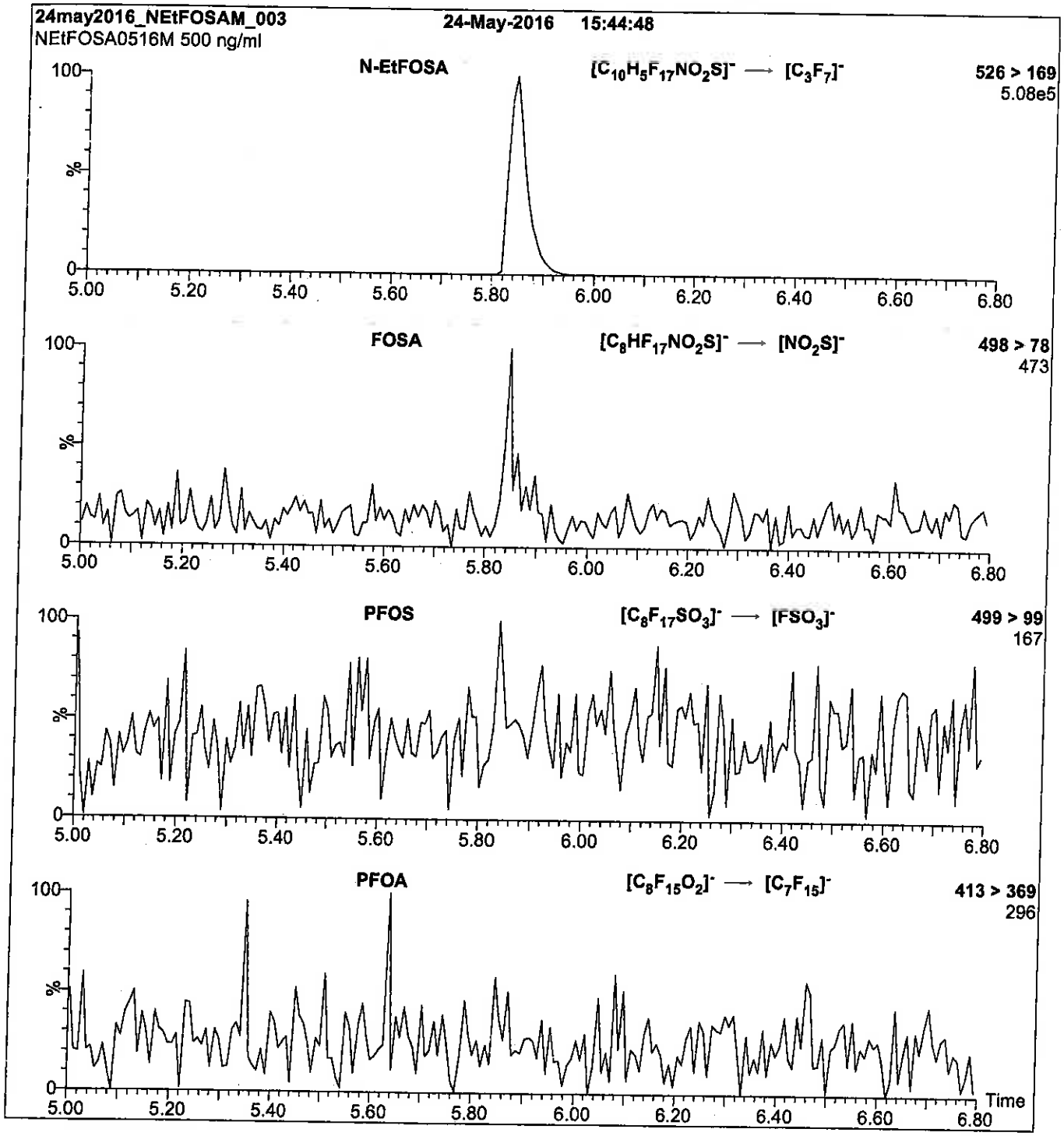
Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (150 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.50
Cone Voltage (V) = 40.00
Cone Gas Flow (l/hr) = 50
Desolvation Gas Flow (l/hr) = 750

Figure 2: **N-EtFOSA-M; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection:	Direct loop injection 10 µl (500 ng/ml N-EtFOSA-M)
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) = 3.54e-3
Collision Energy (eV) = 30

Reagent

LCN-EtFOSAA_00002

R: 8/23/16 SBE

715561
ID: LCN-EtFOSAA_00002
Exp: 01/20/21 Prpd: SBC
N-EtFOSAA

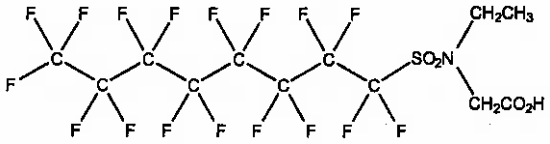
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: N-EtFOSAA **LOT NUMBER:** NEtFOSAA0116

COMPOUND: N-ethylperfluoro-1-octanesulfonamidoacetic acid

STRUCTURE: **CAS #:** 2991-50-6



MOLECULAR FORMULA: $C_{12}H_8F_{17}NO_4S$ **MOLECULAR WEIGHT:** 585.23

CONCENTRATION: 50 ± 2.5 µg/ml **SOLVENT(S):** Methanol
Water (<1%)

CHEMICAL PURITY: >98%

LAST TESTED: (mm/dd/yyyy) 01/20/2016

EXPIRY DATE: (mm/dd/yyyy) 01/20/2021

RECOMMENDED STORAGE: Refrigerate ampoule

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 the conversion of the acetic acid moiety to the methyl ester.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: B.G. Chittim **Date:** 01/21/2016 (mm/dd/yyyy)

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$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

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.

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EXPIRY DATE / PERIOD OF VALIDITY:

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LIMITED WARRANTY:

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QUALITY MANAGEMENT:

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CALA

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

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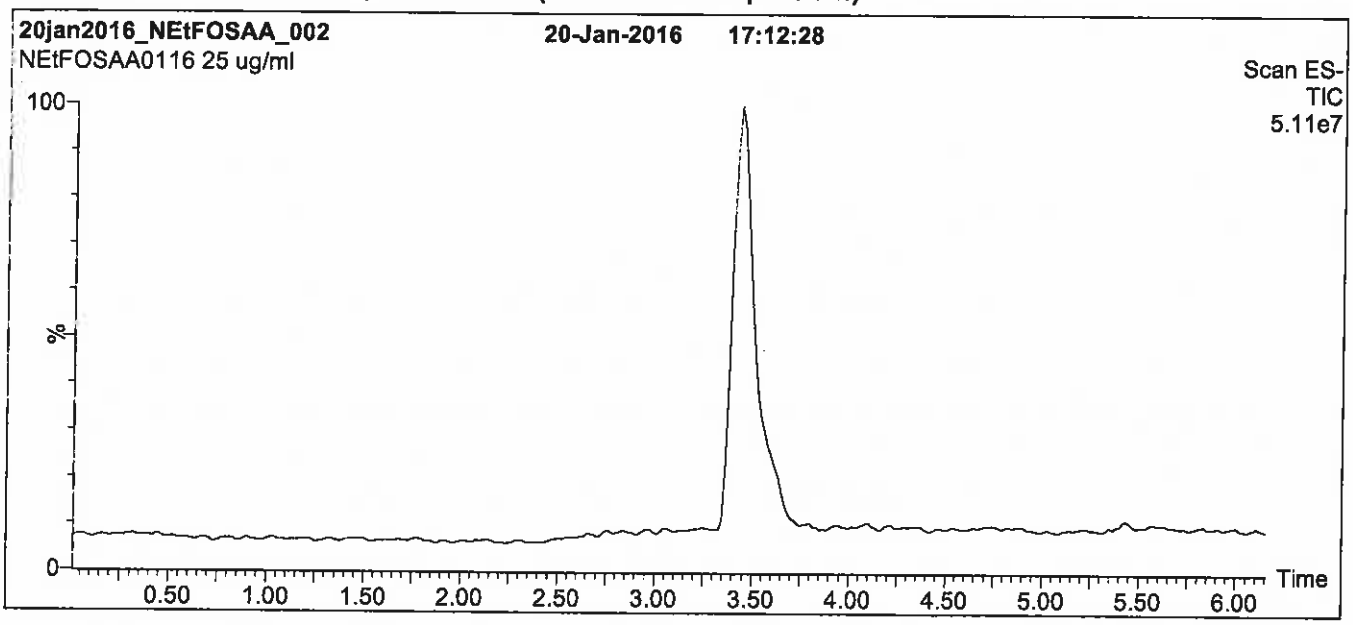
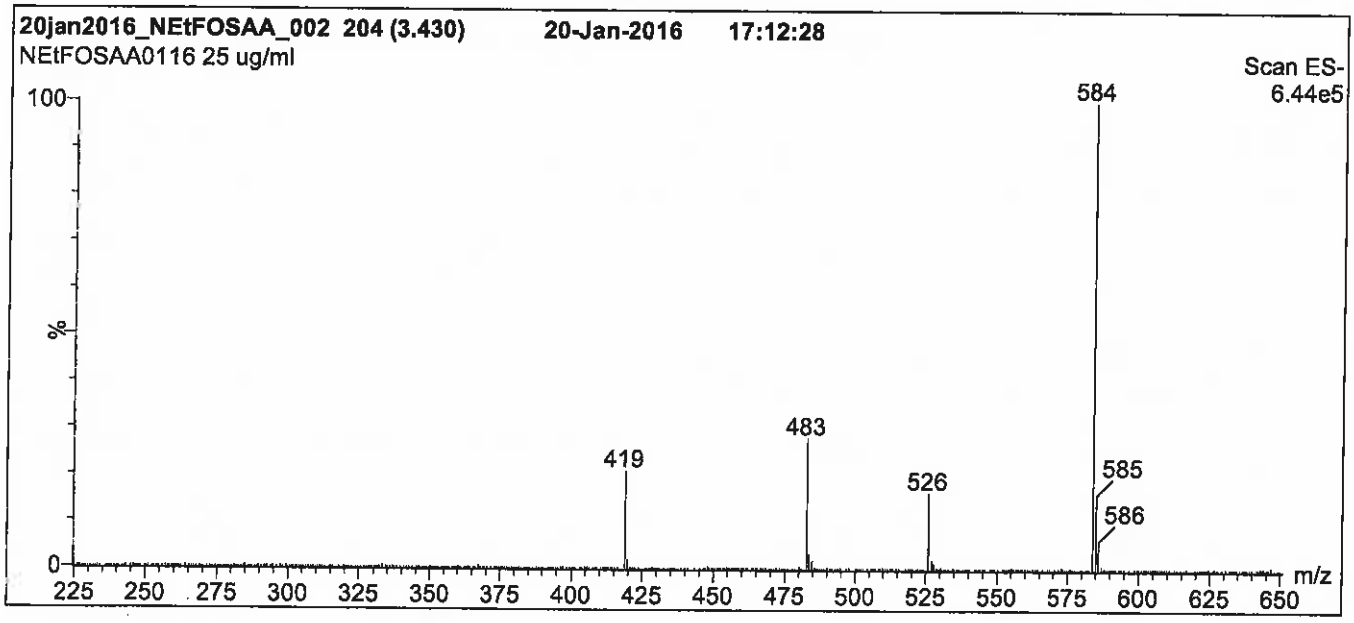
Figure 1: **N-EtFOSAA; LC/MS Data (TIC and Mass Spectrum)**





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 7 min and hold for 1.5 min
before returning to initial conditions in 0.5 min.
Time: 10 min

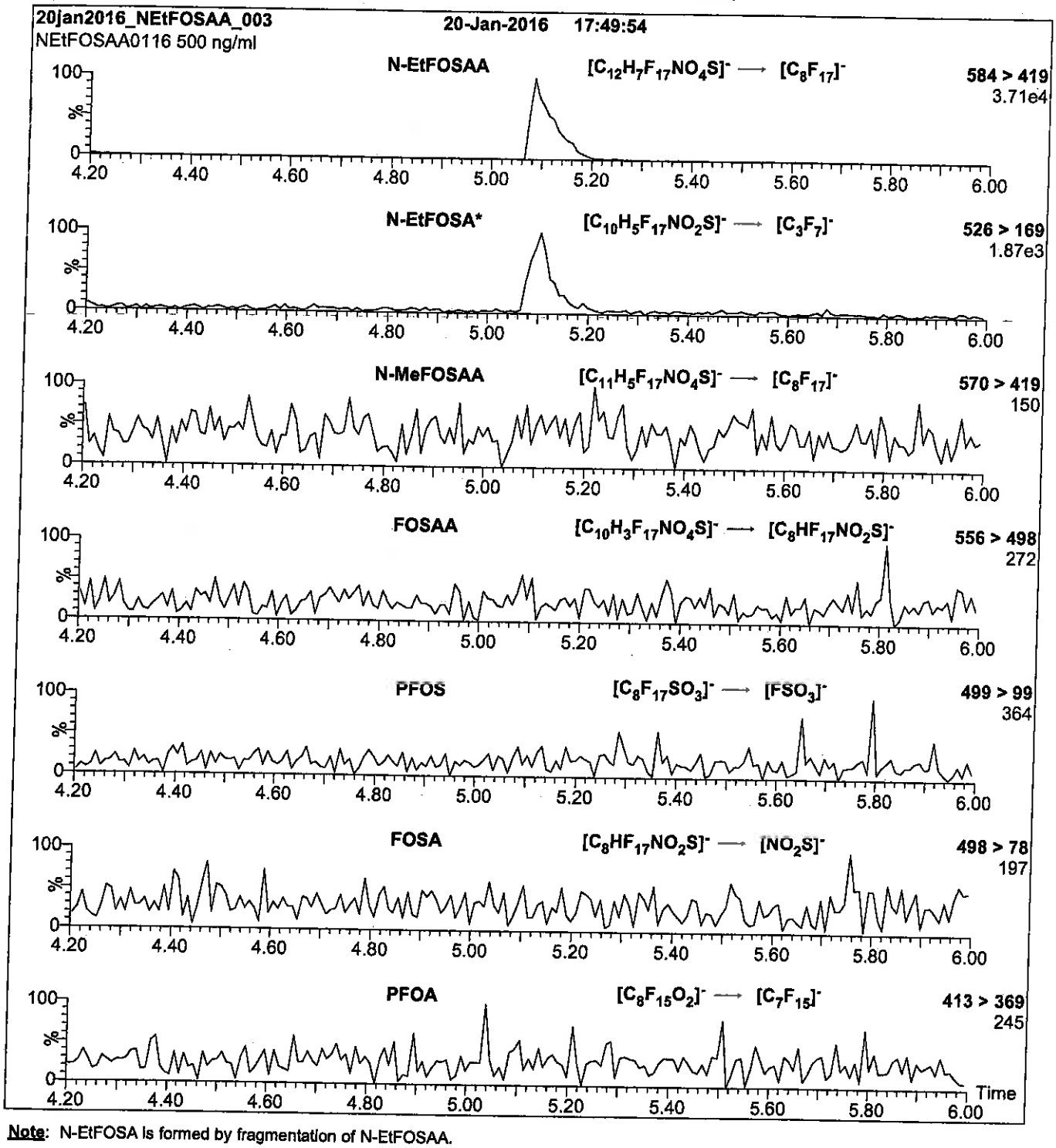
Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 3.00
Cone Voltage (V) = 35.00
Cone Gas Flow (l/hr) = 50
Desolvation Gas Flow (l/hr) = 750

Figure 2: **N-EtFOSAA; LC/MS/MS Data (Selected MRM Transitions)**



Note: N-EtFOSA is formed by fragmentation of N-EtFOSAA.

Conditions for Figure 2:

Injection: Direct loop injection
10 µl (500 ng/ml N-EtFOSAA)

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) = 3.66e-3
Collision Energy (eV) = 25

Reagent

LCN-MeFOSA-M_00002

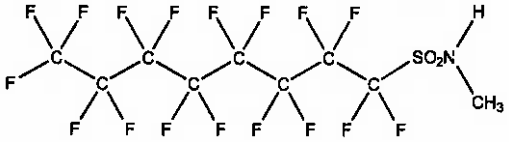
R: 8/23/16 SBC

715564
ID: LCN-MeFOSA-M_00002
Exp: 05/24/21 Prpd: SBC
N-MeFOSA-M

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE:	N-MeFOSA-M	**LOT NUMBER:**	NMeFOSA0516M
COMPOUND:	N-methylperfluoro-1-octanesulfonamide		
STRUCTURE:		**CAS #:**	31506-32-8



MOLECULAR FORMULA:	$C_8H_4F_{17}NO_2S$	**MOLECULAR WEIGHT:**	513.17
CONCENTRATION:	50 ± 2.5 µg/ml	**SOLVENT(S):**	Methanol
CHEMICAL PURITY:	>98%		
LAST TESTED: (mm/dd/yyyy)	05/24/2016		
EXPIRY DATE: (mm/dd/yyyy)	05/24/2021		
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.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: B.G. Chittim **Date:** 05/26/2016 (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:

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HAZARDS:

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CALA

ANAB ACCREDITED

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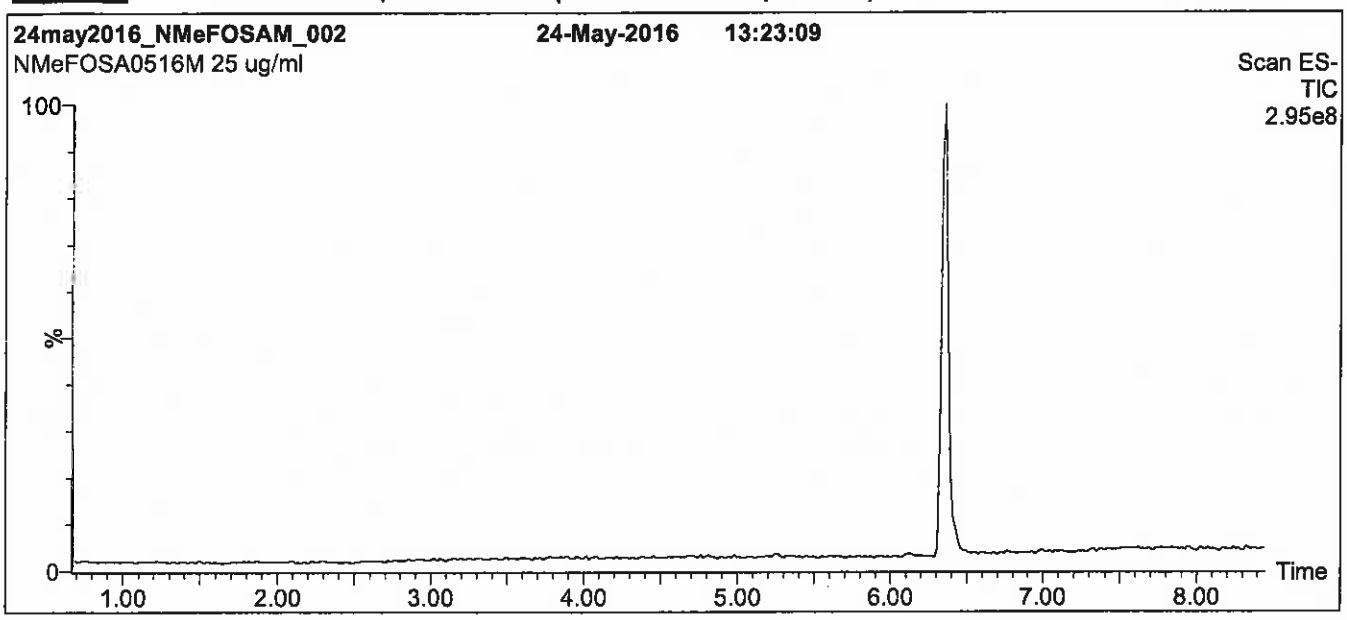
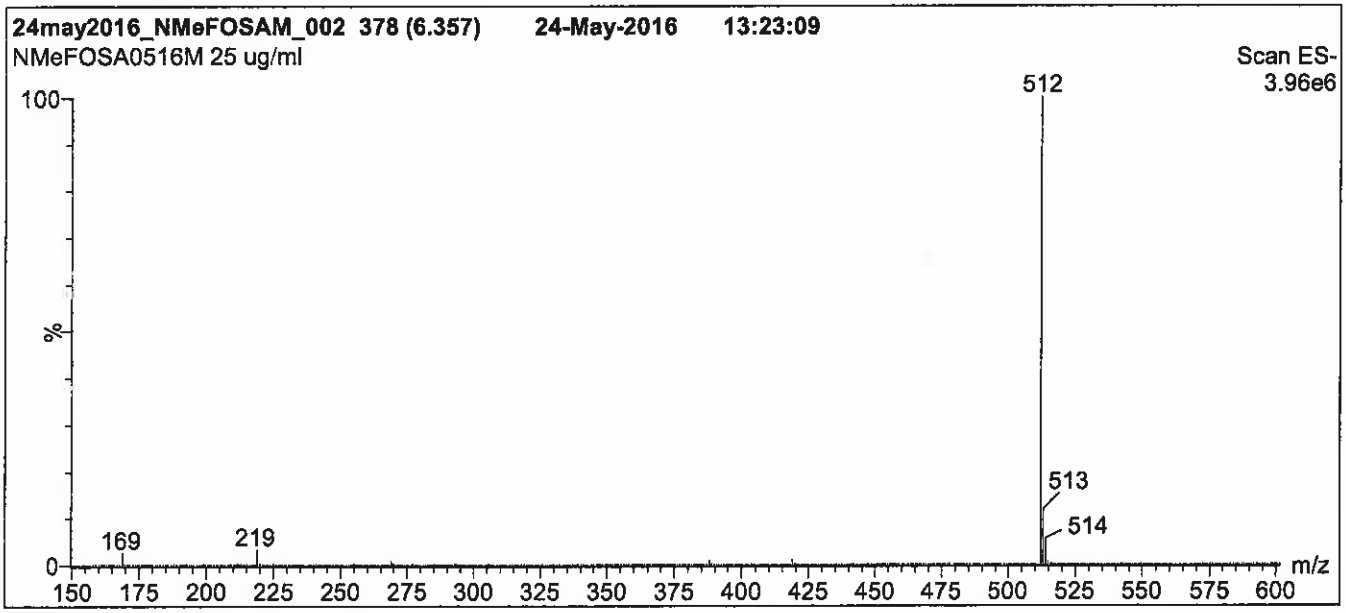
Figure 1: **N-MeFOSA-M; LC/MS Data (TIC and Mass Spectrum)**





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% H_2O / 55% (80:20 MeOH:ACN)
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 7.5 min and hold for
1.5 min before returning to initial conditions in 0.5 min.
Time: 10 min

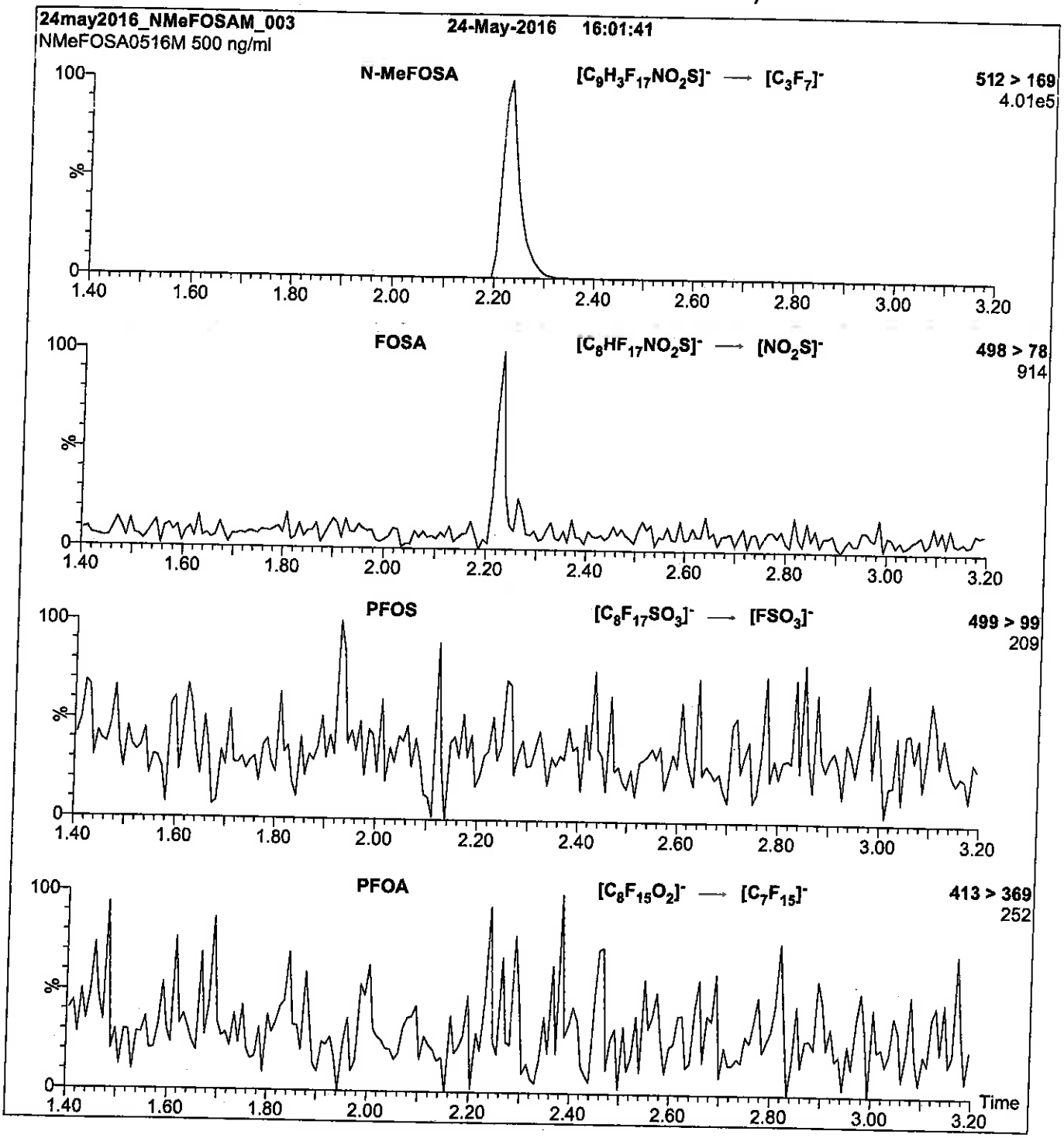
Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (150 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.50
Cone Voltage (V) = 40.00
Cone Gas Flow (l/hr) = 50
Desolvation Gas Flow (l/hr) = 750

Figure 2: **N-MeFOSA-M; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection:	Direct loop injection 10 µl (500 ng/ml N-MeFOSA-M)
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) = 3.54e-3
Collision Energy (eV) = 30

Reagent

LCN-MeFOSAA_00003

R: 8/23/16 SBC

715562
ID: LCN-MeFOSAA_00003
Exp: 01/20/21 Prpd: SBC
N-MeFOSAA

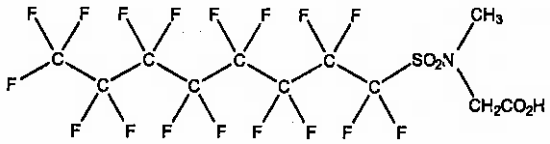
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: N-MeFOSAA **LOT NUMBER:** NMeFOSAA0116

COMPOUND: N-methylperfluoro-1-octanesulfonamidoacetic acid

STRUCTURE: **CAS #:** 2355-31-9



MOLECULAR FORMULA: $C_{11}H_6F_{17}NO_4S$ **MOLECULAR WEIGHT:** 571.21

CONCENTRATION: 50 ± 2.5 µg/ml **SOLVENT(S):** Methanol, Water (<1%)

CHEMICAL PURITY: >98%

LAST TESTED: (mm/dd/yyyy) 01/20/2016

EXPIRY DATE: (mm/dd/yyyy) 01/20/2021

RECOMMENDED STORAGE: Refrigerate ampoule

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 the conversion of the acetic acid moiety to the methyl ester.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: B.G. Chittim **Date:** 01/21/2016 (mm/dd/yyyy)

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
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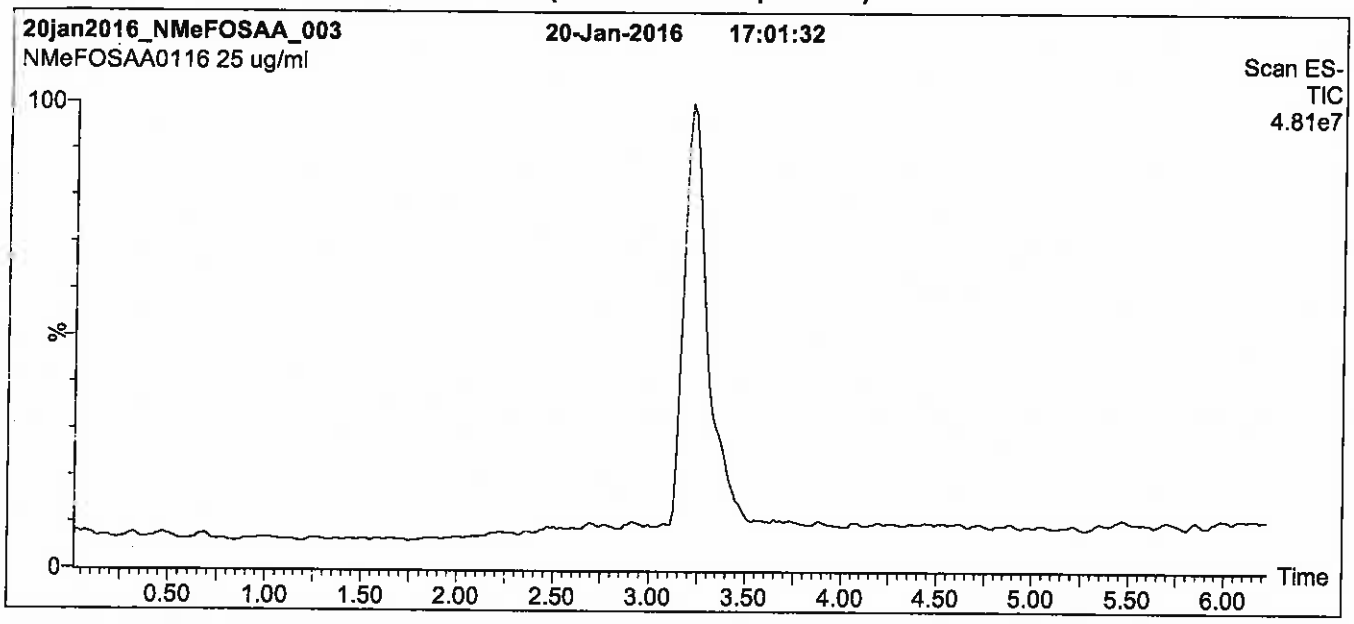
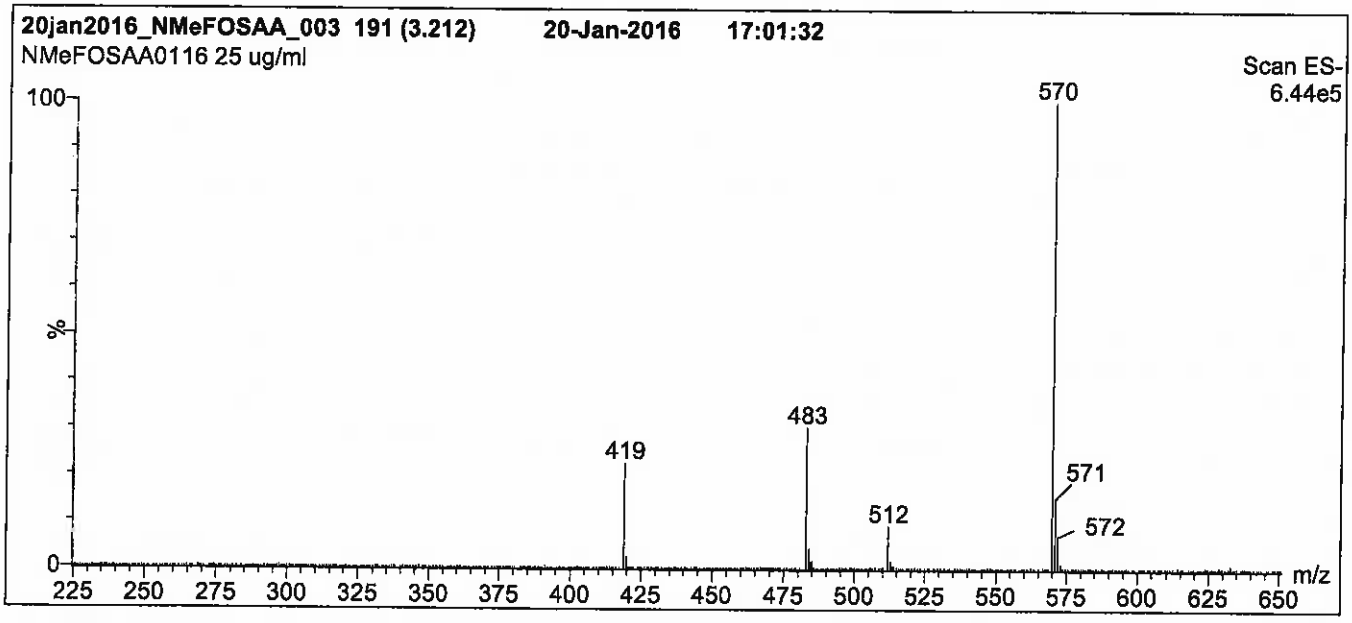
Figure 1: **N-MeFOSAA; LC/MS Data (TIC and Mass Spectrum)**





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 7 min and hold for 1.5 min
before returning to initial conditions in 0.5 min.
Time: 10 min

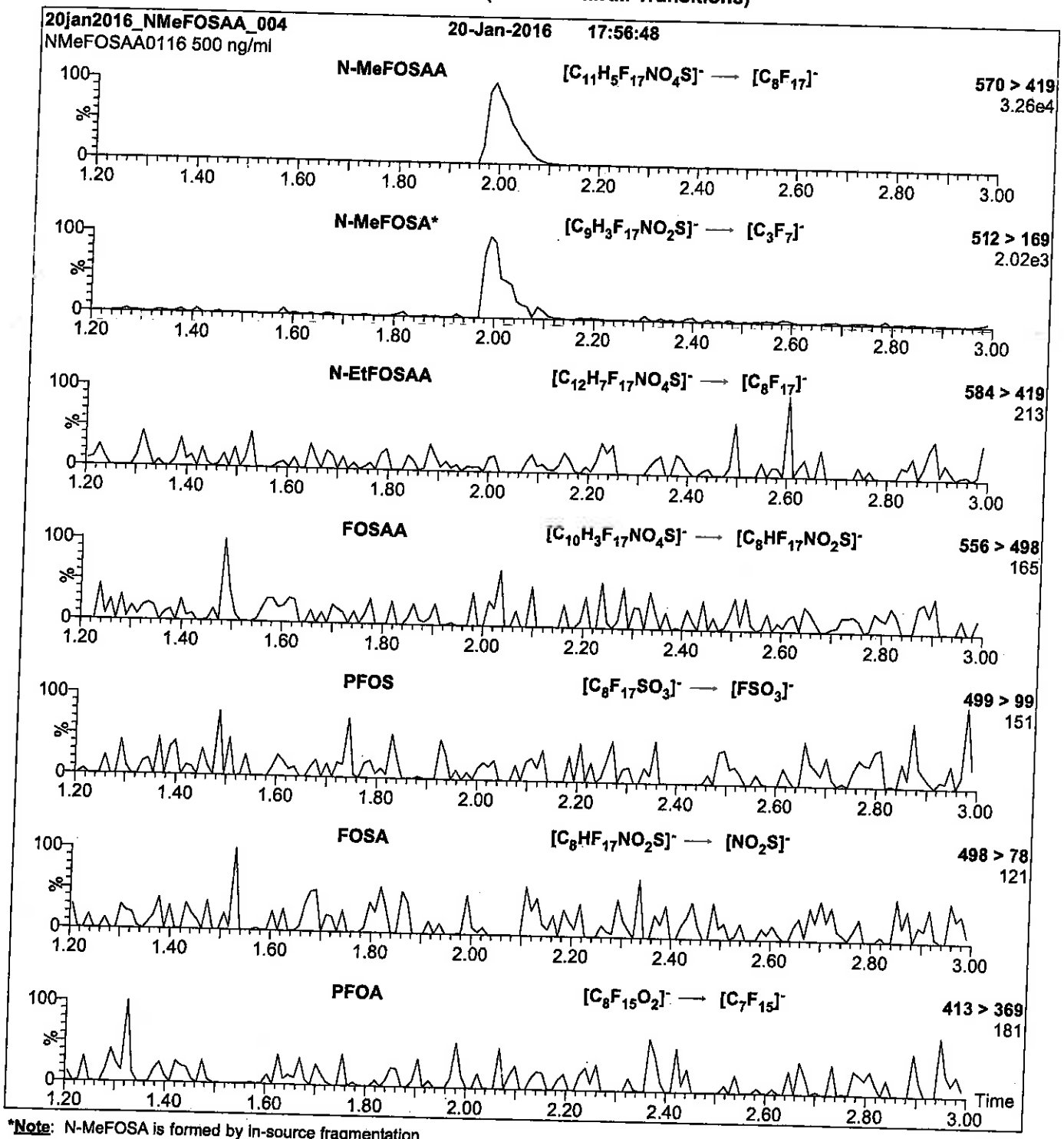
Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 3.00
Cone Voltage (V) = 35.00
Cone Gas Flow (l/hr) = 50
Desolvation Gas Flow (l/hr) = 750

Figure 2: **N-MeFOSAA; LC/MS/MS Data (Selected MRM Transitions)**



***Note**: N-MeFOSA is formed by in-source fragmentation.

Conditions for Figure 2:

Injection: Direct loop injection
10 µl (500 ng/ml N-MeFOSAA)

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) = 3.66e-3
Collision Energy (eV) = 25

Reagent

LCPFACMXB_00007

P: 12/30/15 CW

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PFAC-MXB

Solution/Mixture of Native Perfluoroalkylcarboxylic Acids and Native Perfluoroalkylsulfonates

PRODUCT CODE:	PFAC-MXB
LOT NUMBER:	PFACMXB1115
SOLVENT(S):	Methanol / Water (<1%)
DATE PREPARED: (mm/dd/yyyy)	11/04/2015
LAST TESTED: (mm/dd/yyyy)	11/06/2015
EXPIRY DATE: (mm/dd/yyyy)	11/06/2020
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place

DESCRIPTION:

PFAC-MXB is a solution/mixture of thirteen native perfluoroalkylcarboxylic acids (C_4-C_{14}, C_{16}, and C_{18}) and four native perfluoroalkylsulfonates (C_4, C_6, C_8 and C_{10}). The full name, abbreviation and concentration for each of the components are given in Table A.

The individual perfluoroalkylcarboxylic acids and perfluoroalkylsulfonates all have chemical purities of >98%.

DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)
Figure 3: 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 acids to their respective methyl esters.

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CALA Testing

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

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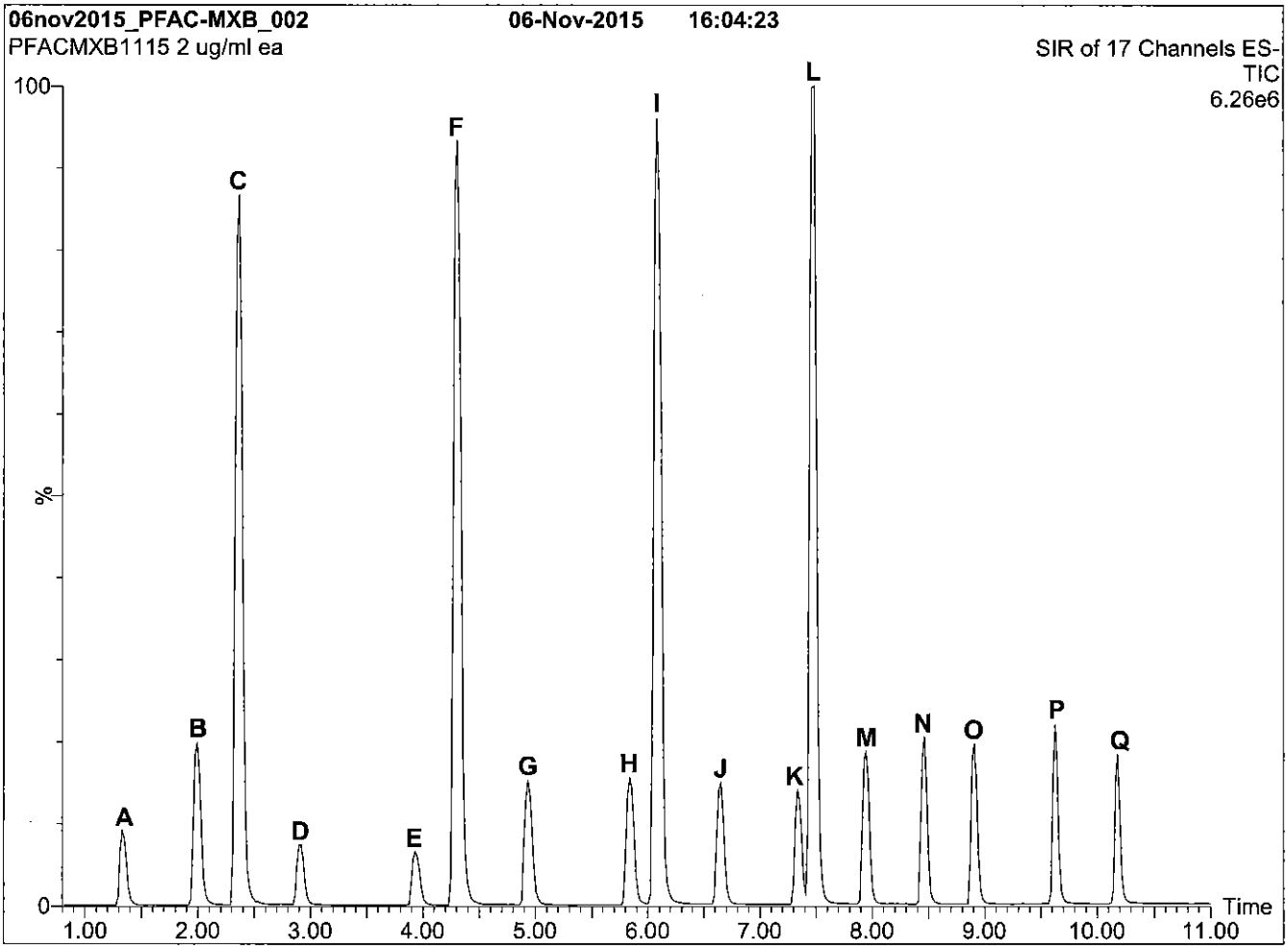
Table A: **PFAC-MXB; Components and Concentrations (ng/ml, ± 5% in Methanol / Water (<1%))**

Name	Abbreviation	Concentration (ng/ml)	Peak Assignment In Figure 1
Perfluoro-n-butanoic acid	PFBA	2000	A
Perfluoro-n-pentanoic acid	PFPeA	2000	B
Perfluoro-n-hexanoic acid	PFHxA	2000	D
Perfluoro-n-heptanoic acid	PFHpA	2000	E
Perfluoro-n-octanoic acid	PFOA	2000	G
Perfluoro-n-nonanoic acid	PFNA	2000	H
Perfluoro-n-decanoic acid	PFDA	2000	J
Perfluoro-n-undecanoic acid	PFUdA	2000	K
Perfluoro-n-dodecanoic acid	PFDoA	2000	M
Perfluoro-n-tridecanoic acid	PFTrDA	2000	N
Perfluoro-n-tetradecanoic acid	PFTeDA	2000	O
Perfluoro-n-hexadecanoic acid	PFHxDA	2000	P
Perfluoro-n-octadecanoic acid	PFODA	2000	Q

Name	Abbreviation	Concentration (ng/ml)		Peak Assignment in Figure 1
		as the salt	as the anion	
Potassium perfluoro-1-butanesulfonate	L-PFBS	2000	1770	C
Sodium perfluoro-1-hexanesulfonate	L-PFHxS	2000	1890	F
Sodium perfluoro-1-octanesulfonate	L-PFOS	2000	1910	I
Sodium perfluoro-1-decanesulfonate	L-PFDS	2000	1930	L

Certified By: B.G. Chittim **Date:** 11/11/2015 (mm/dd/yyyy)

Figure 1: **PFAC-MXB; LC/MS Data (Total Ion Current Chromatogram; SIR)**



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% H_2O / 45% (80:20 MeOH:ACN)
(both with 10 mM NH_4OAc buffer)
Ramp to 95% organic over 10 min and hold for 1 min
before returning to initial conditions in 0.5 min.

Time: 12 min

Flow: 300 µl/min

MS Parameters

Experiment: SIR of 17 Channels

Source: Electrospray (negative)
Capillary Voltage (kV) = 3.00
Cone Voltage (V) = variable (10-70)
Cone Gas Flow (l/hr) = 50
Desolvation Gas Flow (l/hr) = 750

Figure 2: **PFAC-MXB; LC/MS/MS Data (Selected MRM Transitions)**

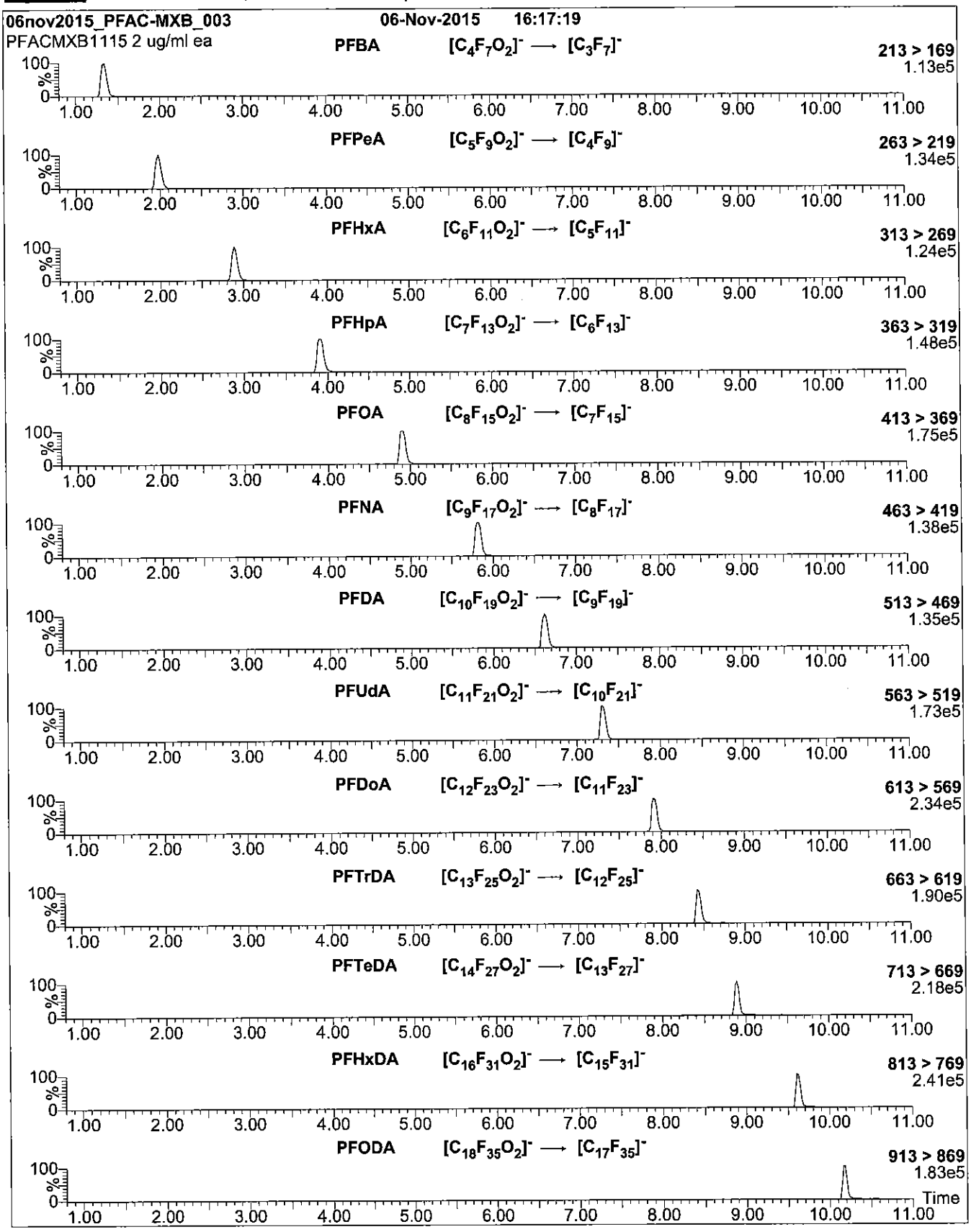
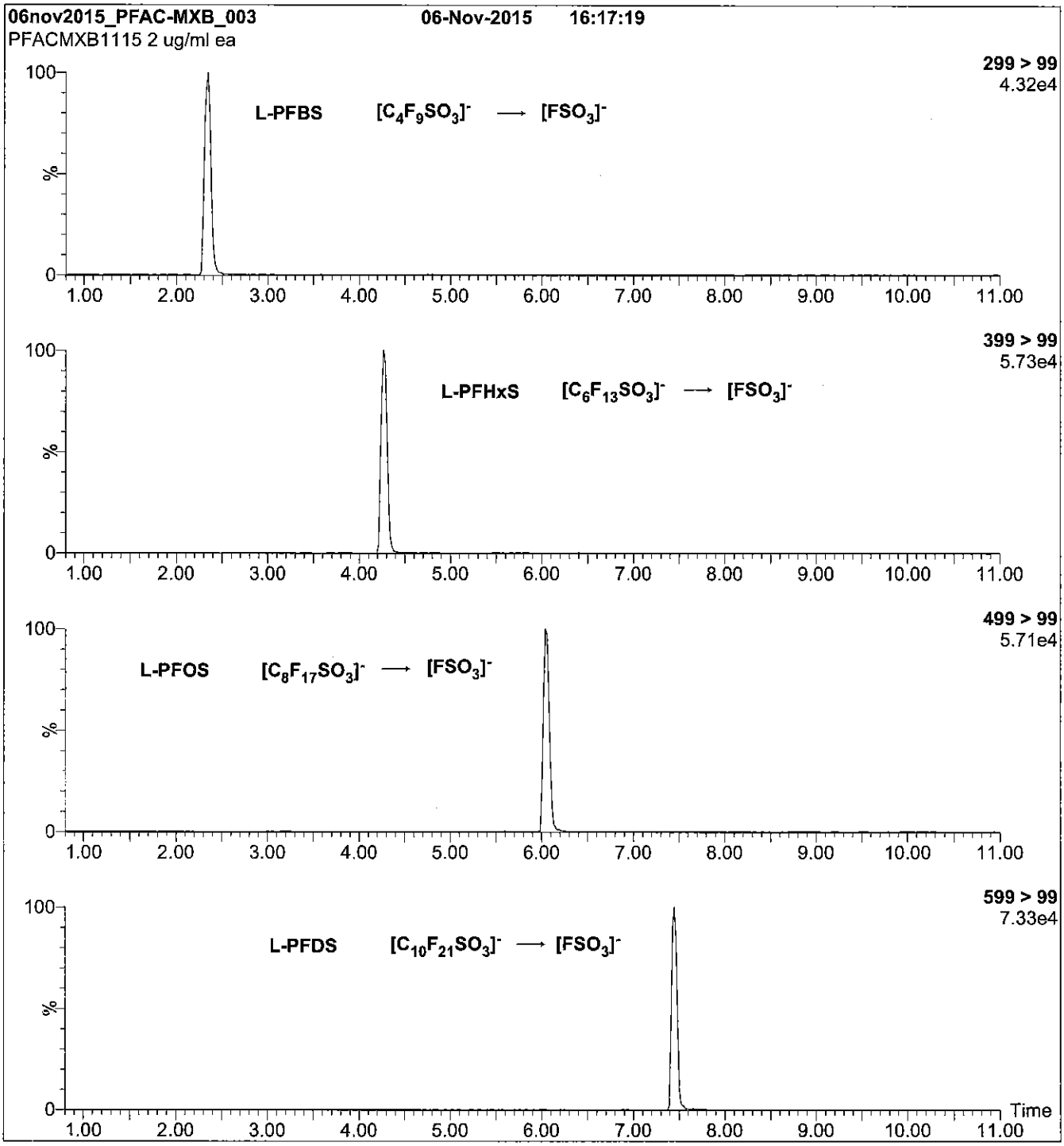


Figure 3: **PFAC-MXB; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figures 2 and 3:

Injection: on-column (PFAC-MXB)

Mobile phase: Same as Figure 1

Flow: 300 µl/min

MS Parameters
Collision Gas (mbar) = 3.24e-3
Collision Energy (eV) = 8-50 (variable)

Reagent

LCPFBA_00005

Scanned 10/16/14

R: SBC 9/13/16

730531
ID: LCPFBA_00005
Exp: 05/27/21 Prpd: SBC
PF-n-butanoic acid

730532
ID: LCPFBA_00006
Exp: 05/27/21 Prpd: SBC
PF-n-butanoic acid

WELLINGTON LABORATORIES

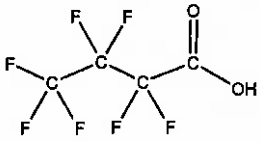
CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: PFBA
COMPOUND: Perfluoro-n-butanoic acid

LOT NUMBER: PFBA0516

STRUCTURE:

CAS #: 375-22-4



MOLECULAR FORMULA: $C_4HF_7O_2$
CONCENTRATION: 50 ± 2.5 µg/ml

MOLECULAR WEIGHT: 214.04
SOLVENT(S): Methanol
Water (<1%)

CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 05/27/2016
EXPIRY DATE: (mm/dd/yyyy) 05/27/2021
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 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

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Certified By: B.G. Chittim **Date:** 05/31/2016 (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:

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UNCERTAINTY:

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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:

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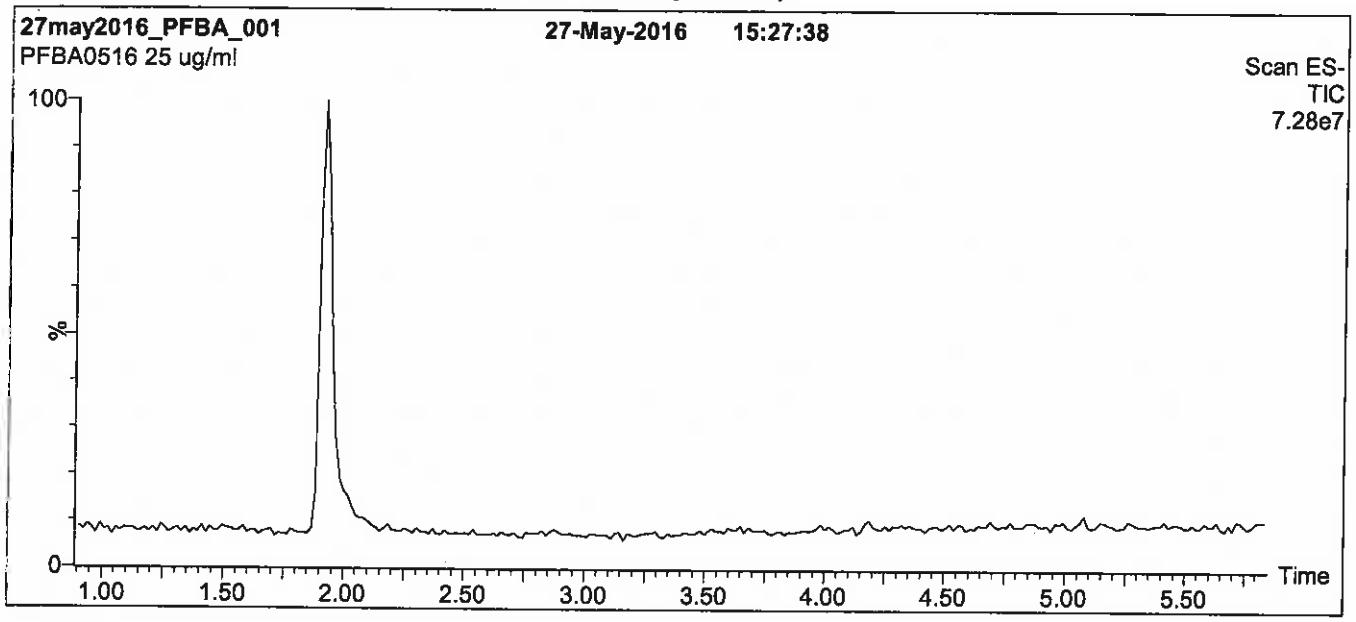
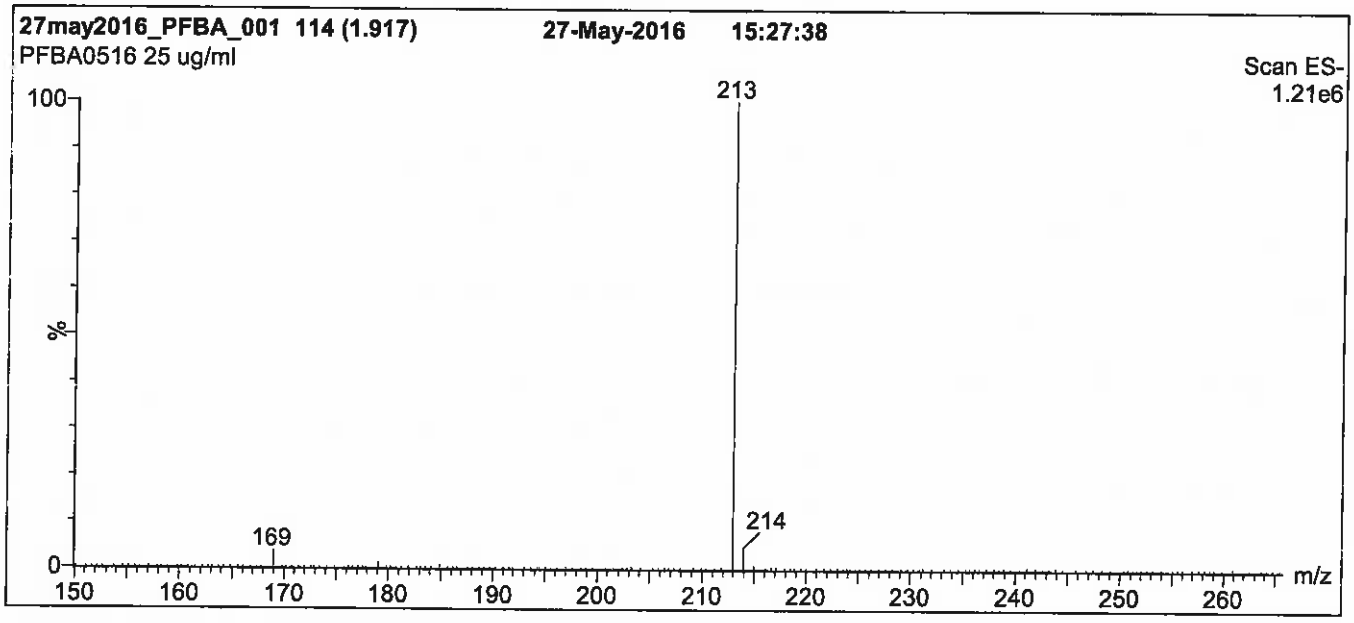
Figure 1: **PFBA; LC/MS Data (TIC and Mass Spectrum)**





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: 30% (80:20 MeOH:ACN) / 70% 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

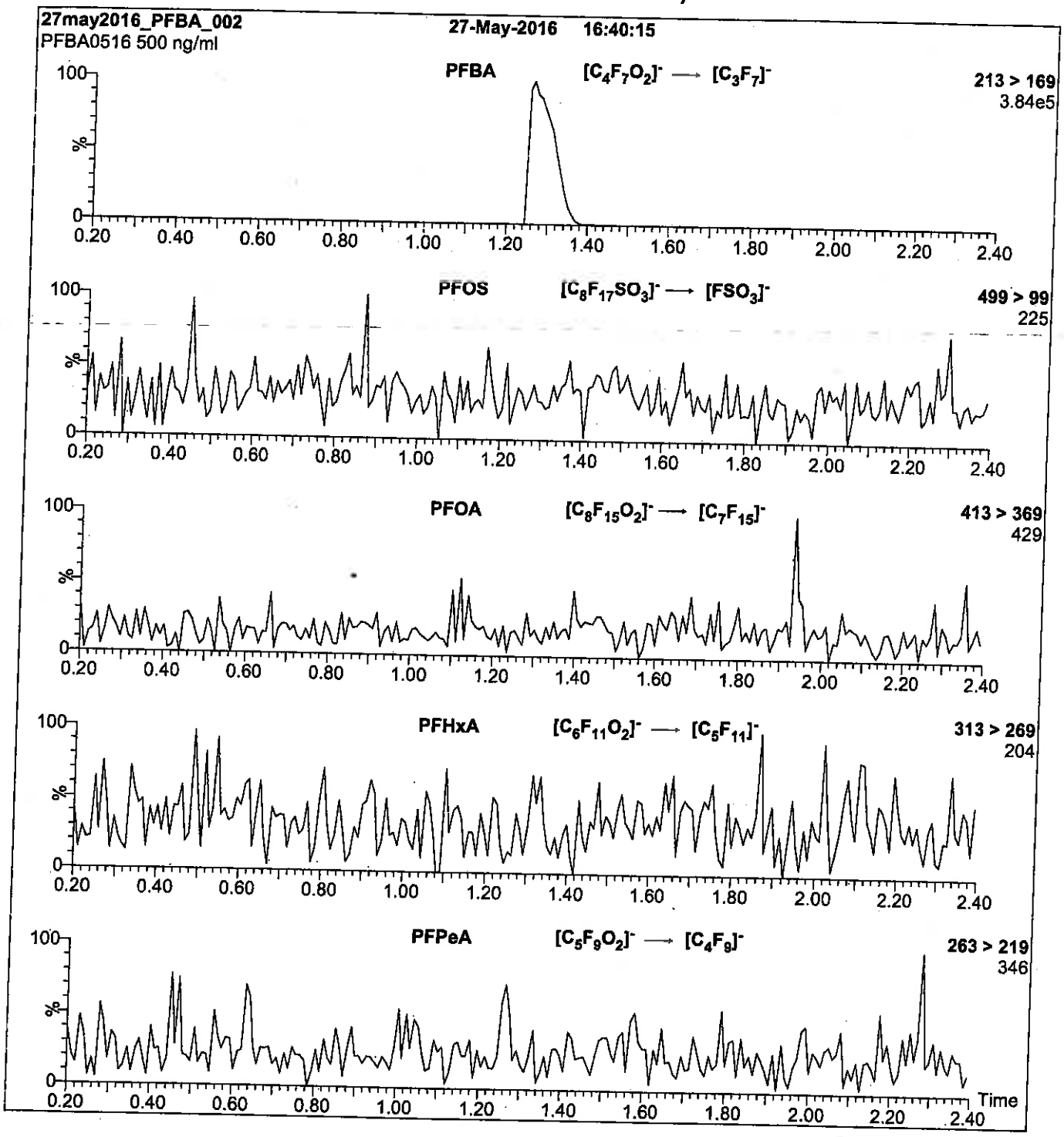
Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (150 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 3.00
Cone Voltage (V) = 10.00
Cone Gas Flow (l/hr) = 100
Desolvation Gas Flow (l/hr) = 750

Figure 2: **PFBA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: Direct loop injection
10 µl (500 ng/ml PFBA)

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) = 3.62e-3
Collision Energy (eV) = 10

Reagent

LCPFBS_00005

R: 9/9/16 SBC

728306
ID: LCM2-8:2FTS_00003
Exp: 01/08/21 Prpd: SBC
M2-8:2FTS

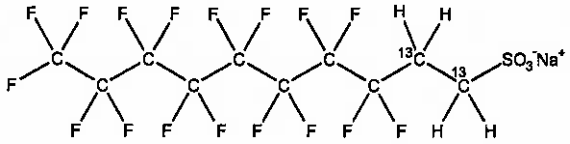
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: M2-8:2FTS **LOT NUMBER:** M282FTS0116

COMPOUND: Sodium 1H,1H,2H,2H-perfluoro-[1,2-$^{13}C_2$]decane sulfonate

STRUCTURE: **CAS #:** Not available



MOLECULAR FORMULA:	$^{13}C_2{}^{12}C_8H_4F_{17}SO_3Na$	**MOLECULAR WEIGHT:**	552.15
CONCENTRATION:	50.0 ± 2.5 µg/ml (Na salt)	**SOLVENT(S):**	Methanol
	47.9 ± 2.4 µg/ml (M2-8:2FTS anion)		
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C
LAST TESTED: (mm/dd/yyyy)	01/08/2016		(1,2-$^{13}C_2$)
EXPIRY DATE: (mm/dd/yyyy)	01/08/2021		
RECOMMENDED STORAGE:	Refrigerate ampoule		

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.
- The native 8:2FTS contains 4.22% of ^{34}S (due to natural isotopic abundance) therefore both native 8:2FTS and M2-8:2FTS will produce signals in the m/z 529 to m/z 509 channel during SRM analysis. We recommend using the m/z 529 to m/z 81 transition to monitor for M2-8:2FTS during quantitative analysis as it will be free of any native contribution (see Figure 2).

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: B.G. Chittim **Date:** 01/18/2016 (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

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CALA

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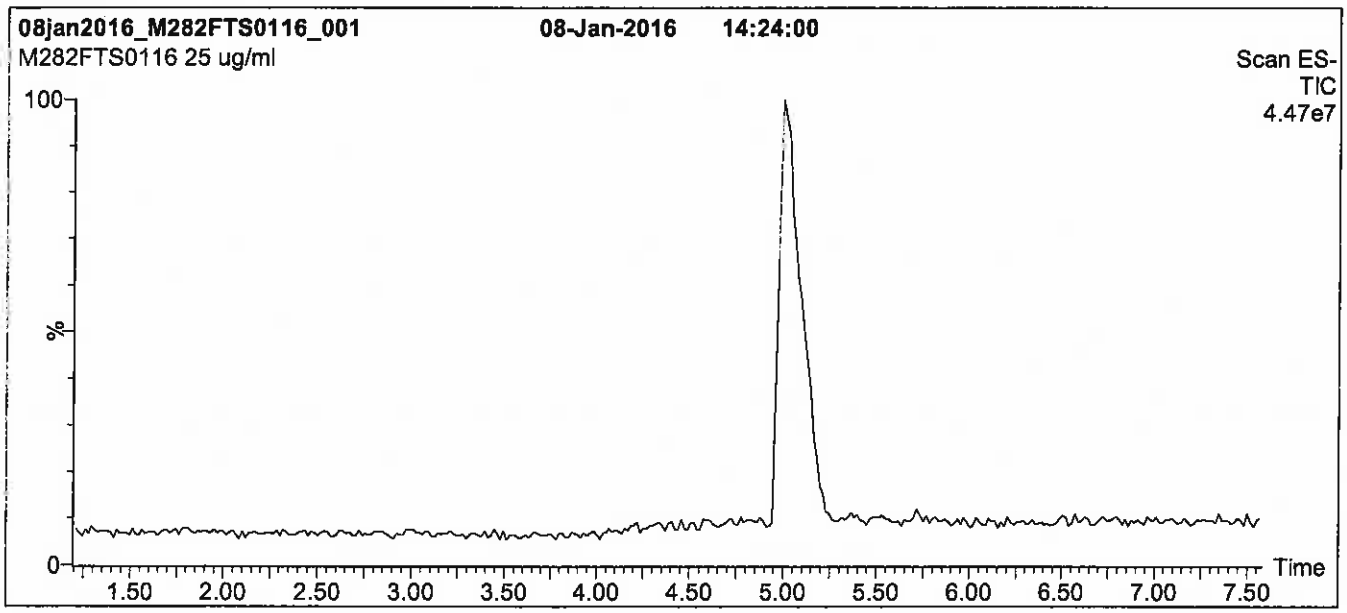
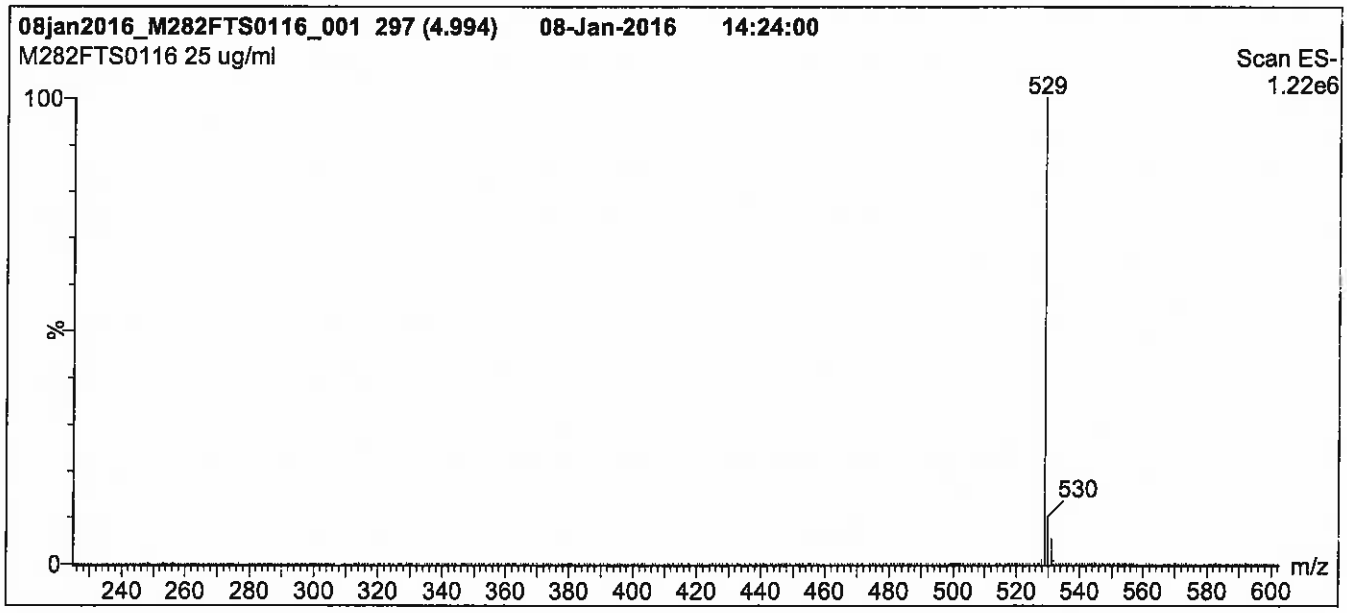
Figure 1: **M2-8:2FTS; LC/MS Data (TIC and Mass Spectrum)**





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

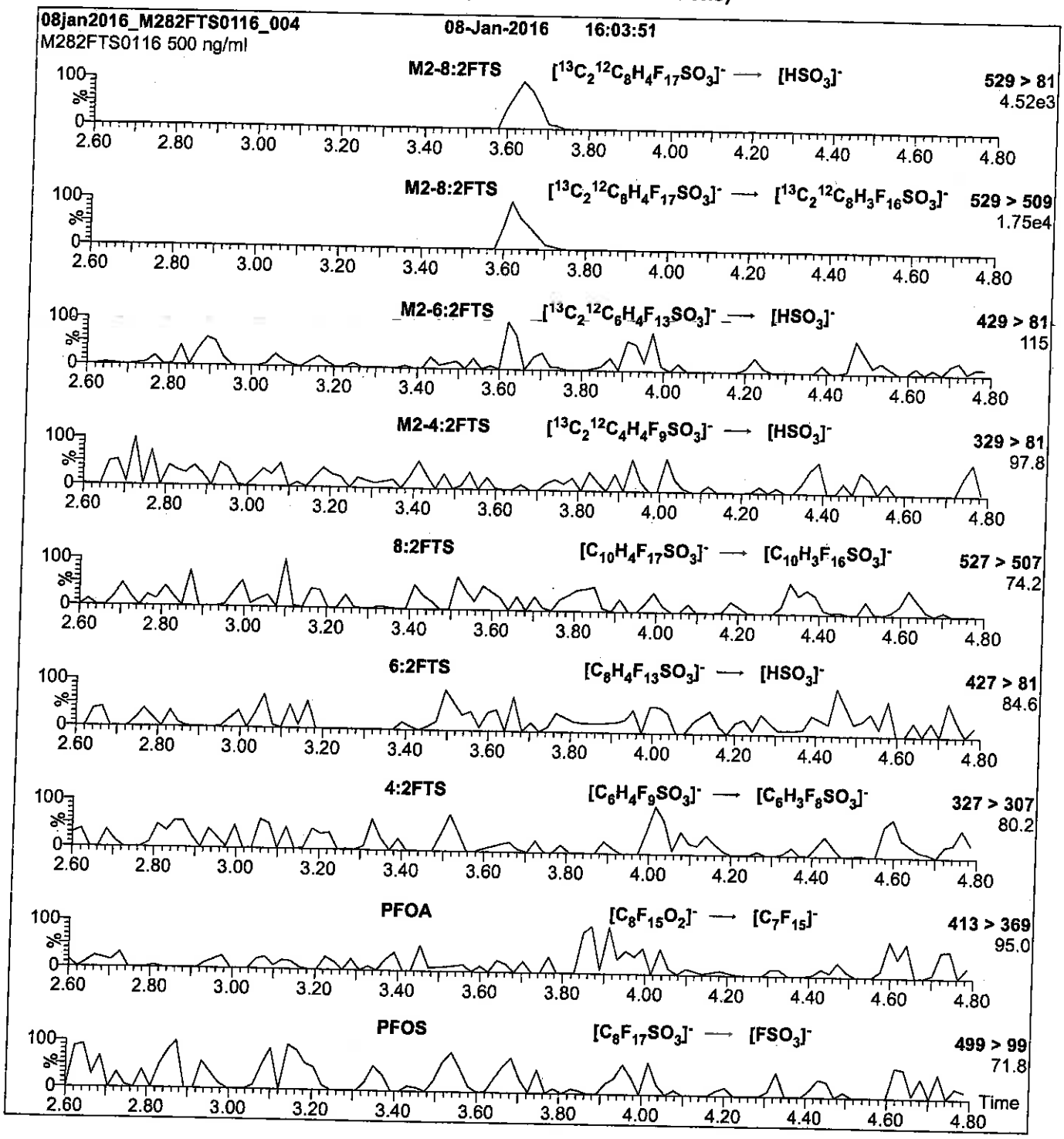
Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 3.00
Cone Voltage (V) = 30.00
Cone Gas Flow (l/hr) = 100
Desolvation Gas Flow (l/hr) = 750

Figure 2: **M2-8:2FTS; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: Direct loop injection
10 µl (500 ng/ml M2-8:2FTS)

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) = 30

R: SBC 9/13/16

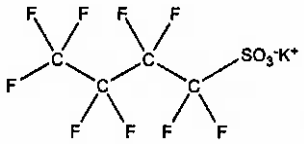
730511
ID: LCPFBS_00005
Exp: 03/15/21 Prpd: SBC
PF-1-butanesulfonate K sa

730512
ID: LCPFBS_00006
Exp: 03/15/21 Prpd: SBC
PF-1-butanesulfonate K sa

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: L-PFBS
LOT NUMBER: LPFBS0316
COMPOUND: Potassium perfluoro-1-butanesulfonate
STRUCTURE:
CAS #: 29420-49-3



MOLECULAR FORMULA:	$C_4F_9SO_3K$	**MOLECULAR WEIGHT:**	338.19
CONCENTRATION:	50.0 ± 2.5 µg/ml (K salt) 44.2 ± 2.2 µg/ml (PFBS anion)	**SOLVENT(S):**	Methanol
CHEMICAL PURITY:	>98%		
LAST TESTED: (mm/dd/yyyy)	03/15/2016		
EXPIRY DATE: (mm/dd/yyyy)	03/15/2021		
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.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: B.G. Chittim **Date:** 03/21/2016 (mm/dd/yyyy)

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
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EXPIRY DATE / PERIOD OF VALIDITY:

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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:

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CALA Testing Accreditation No. A1226

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

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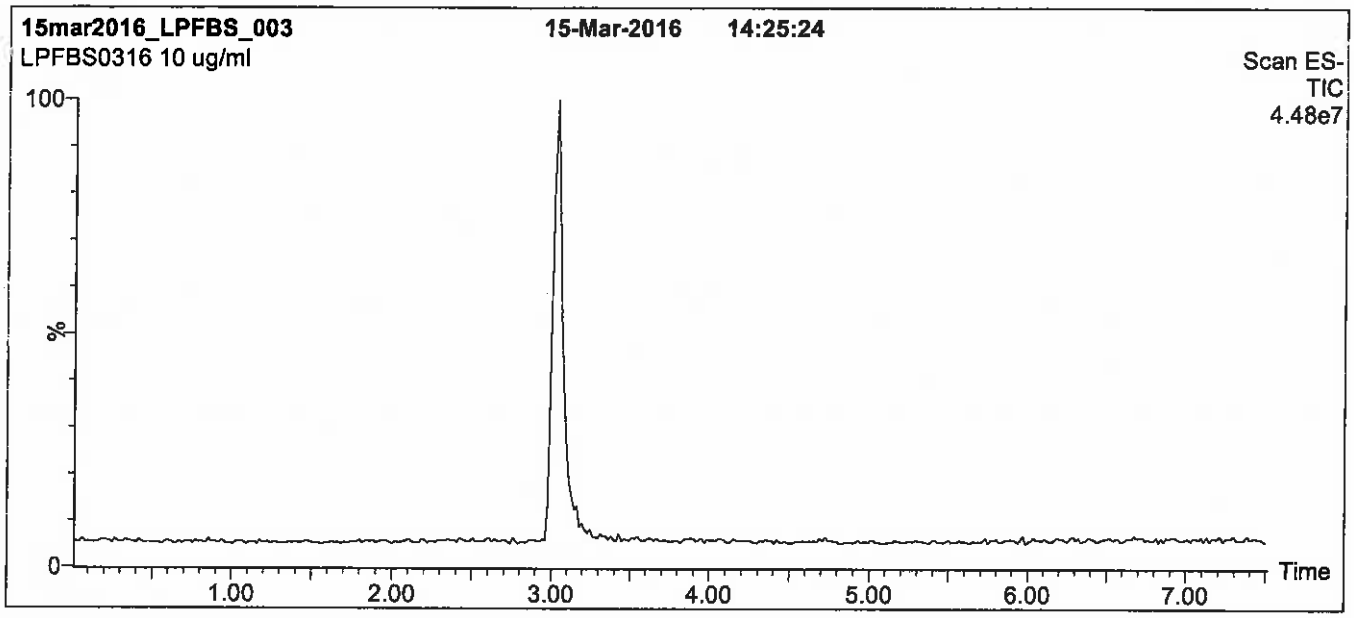
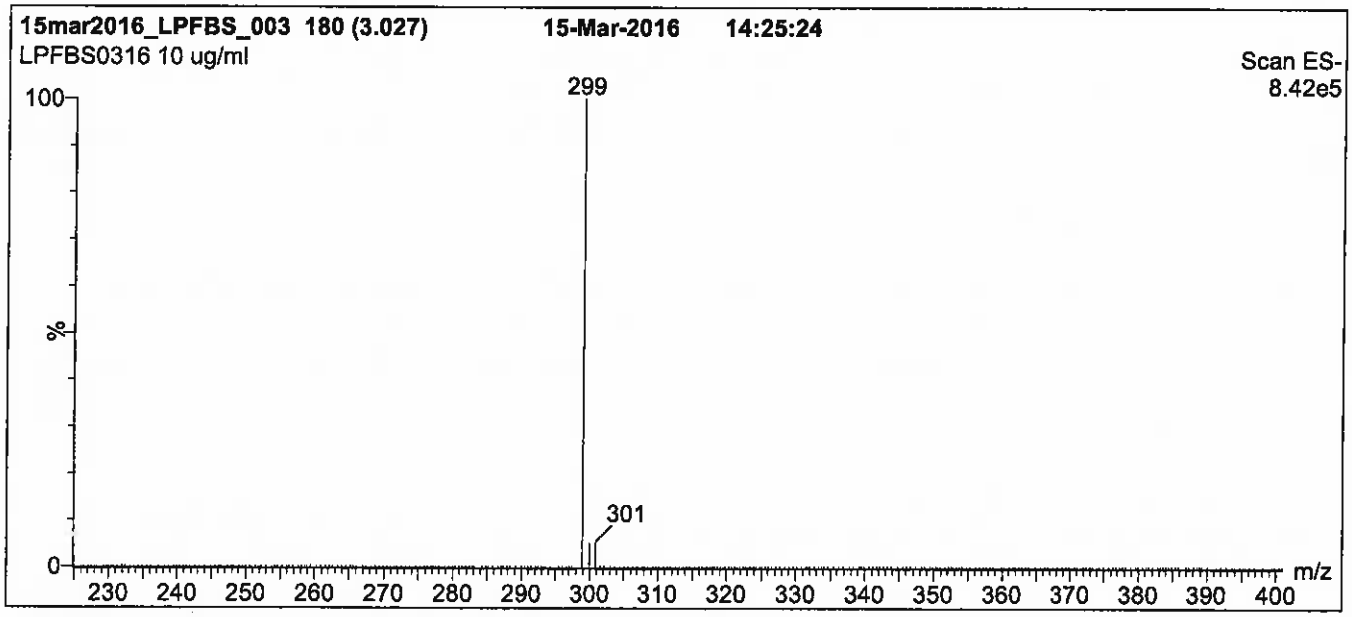
Figure 1: **L-PFBS; LC/MS Data (TIC and Mass Spectrum)**





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: 40% (80:20 MeOH:ACN) / 60% 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

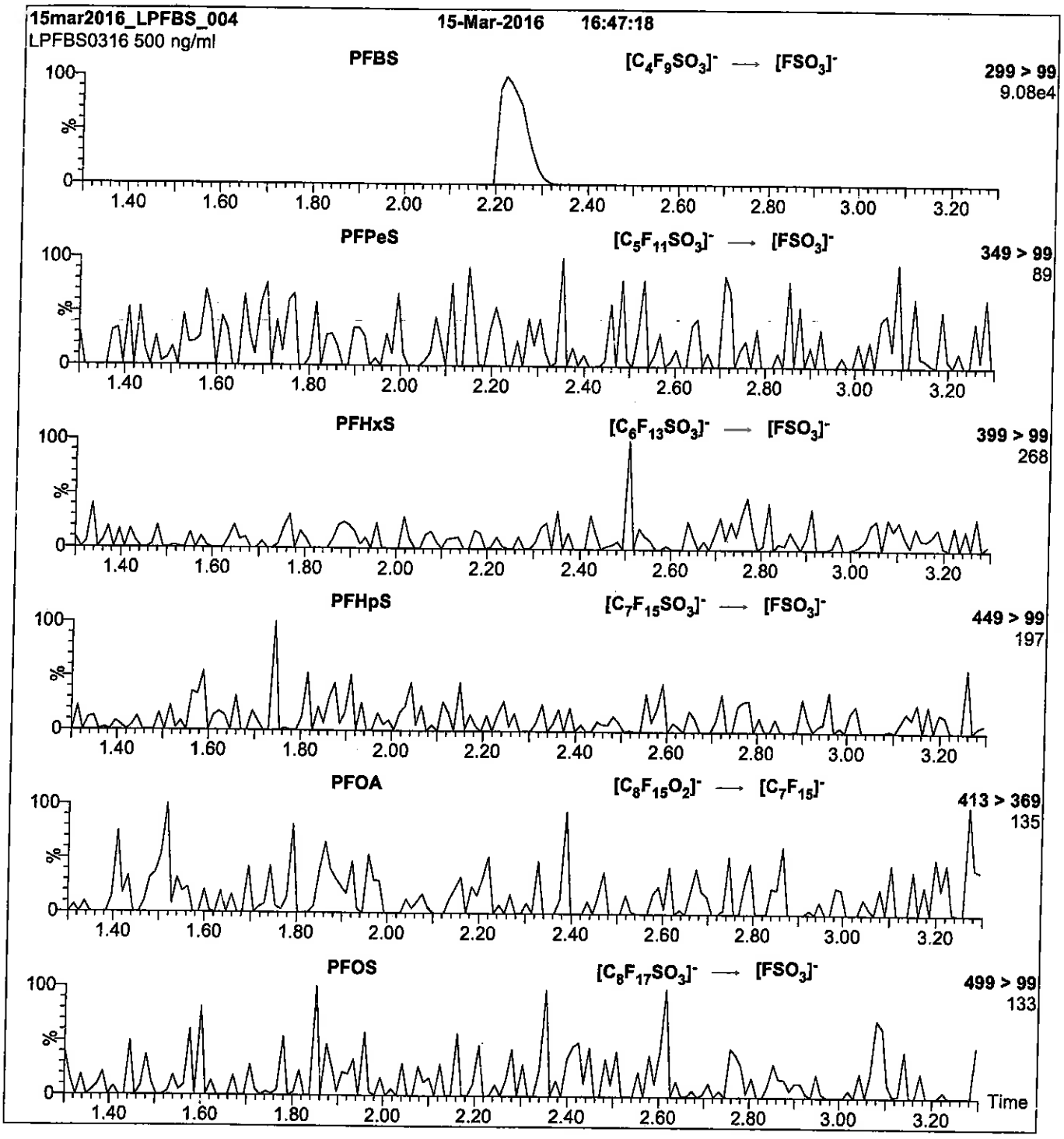
Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 40.00
Cone Gas Flow (l/hr) = 50
Desolvation Gas Flow (l/hr) = 750

Figure 2: **L-PFBS; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: Direct loop injection
10 µl (500 ng/ml L-PFBS)

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) = 25

Reagent

LCPFDA_00005

R: 7/16/16 CBW

671576
ID: LCPFDA_00005
Exp: 07/02/20 Prpd: CBW
PF-n-decanoic acid

WELLINGTON LABORATORIES

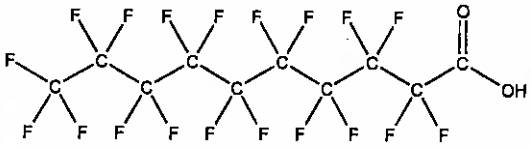
CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: PFDA
COMPOUND: Perfluoro-n-decanoic acid

LOT NUMBER: PFDA0615

STRUCTURE:

CAS #: 335-76-2



MOLECULAR FORMULA: $C_{10}HF_{19}O_2$
CONCENTRATION: 50 ± 2.5 µg/ml

MOLECULAR WEIGHT: 514.08
SOLVENT(S): Methanol
Water (<1%)

CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 07/02/2015
EXPIRY DATE: (mm/dd/yyyy) 07/02/2020
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 ~ 0.6% PFNA and ~ 0.3% PFOA.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: B.G. Chittim **Date:** 07/24/2015 (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:

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SYNTHESIS / CHARACTERIZATION:

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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 $x_1, x_2, \ldots x_n$ 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.

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CALA

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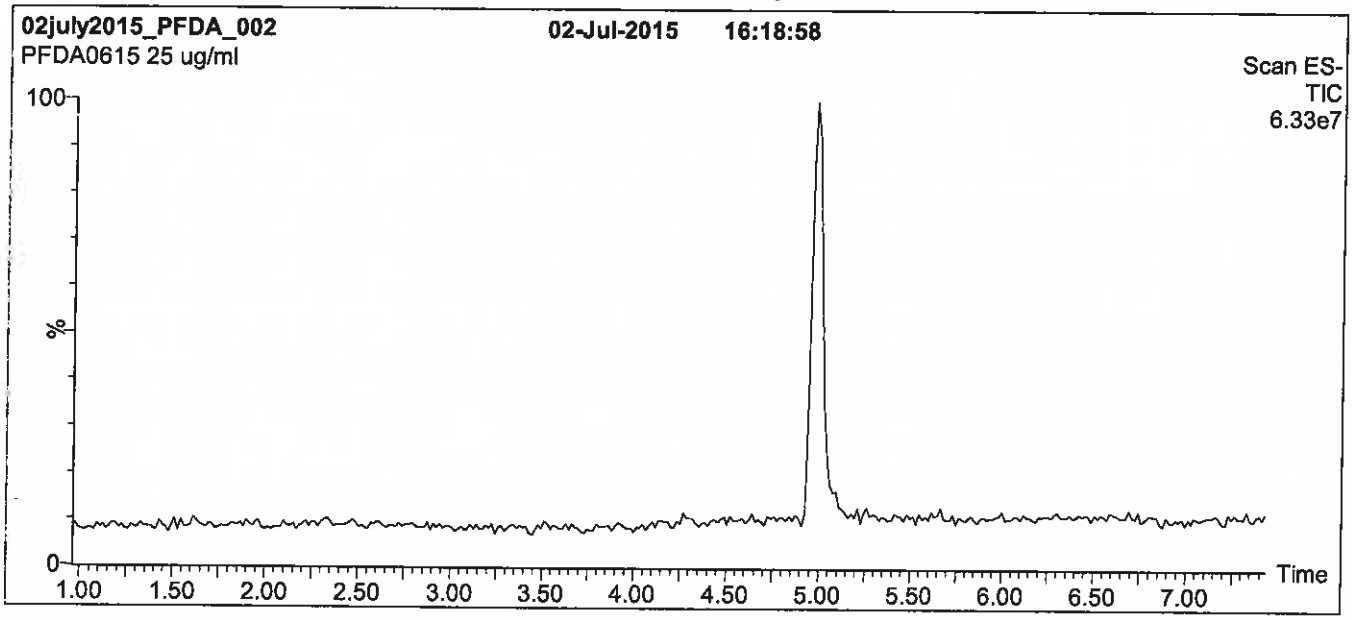
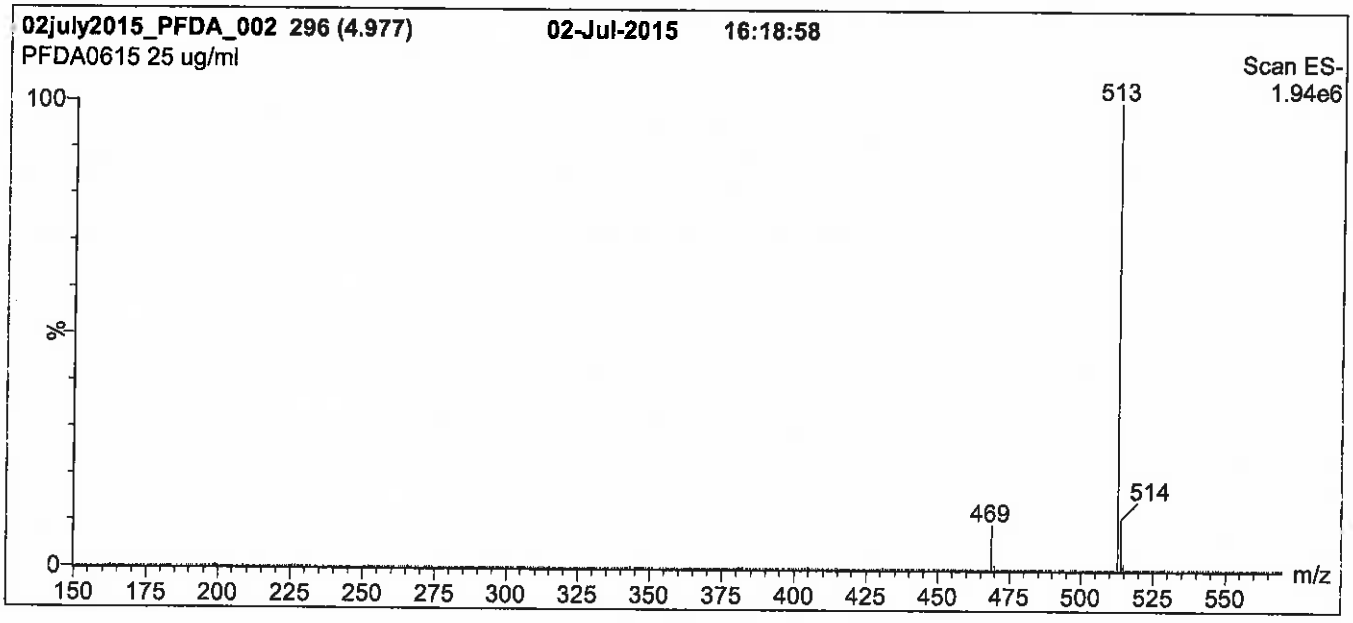
Figure 1: **PFDA; LC/MS Data (TIC and Mass Spectrum)**





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

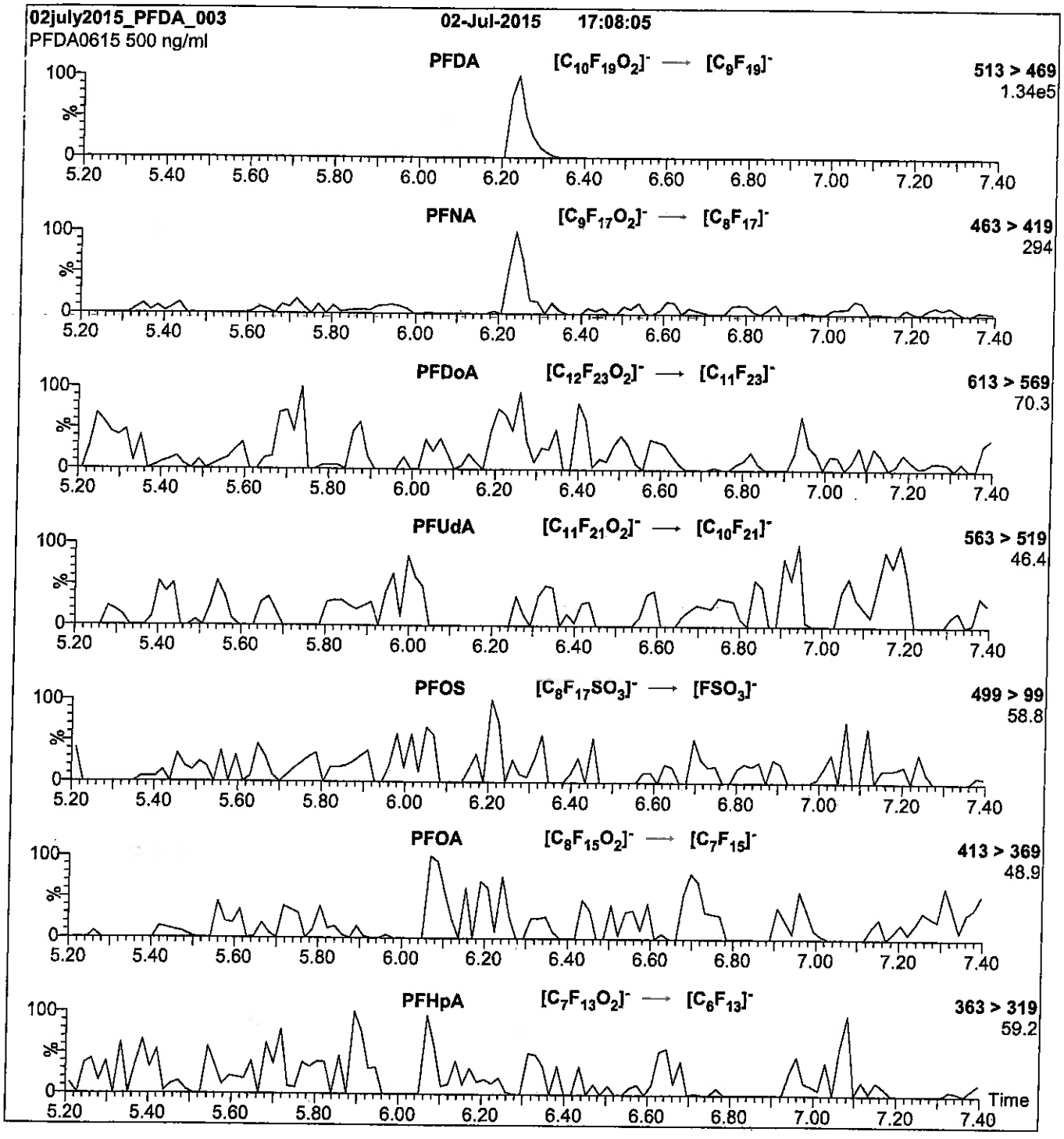
Flow: 300 µl/min

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: **PFDA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: Direct loop injection
10 µl (500 ng/ml PFDA)

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) = 3.62e-3
Collision Energy (eV) = 13

Reagent

LCPFDoA_00005

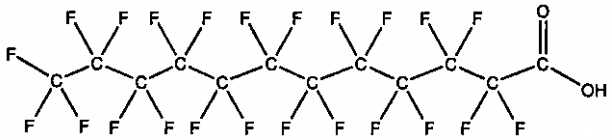
R: 7/6/16 cw

671601
ID: LCPFDoA_00005
Exp: 01/30/20 Prpd: CBW
PF-n-dodecanoic acid

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE:	PFDoA	**LOT NUMBER:**	PFDoA0115
COMPOUND:	Perfluoro-n-dodecanoic acid		
STRUCTURE:		**CAS #:**	307-55-1



MOLECULAR FORMULA:	$C_{12}HF_{23}O_2$	**MOLECULAR WEIGHT:**	614.10
CONCENTRATION:	50 ± 2.5 µg/ml	**SOLVENT(S):**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%		
LAST TESTED: (mm/dd/yyyy)	01/30/2015		
EXPIRY DATE: (mm/dd/yyyy)	01/30/2020		
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.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: B.G. Chittim **Date:** 03/25/2015 (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:

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CALA

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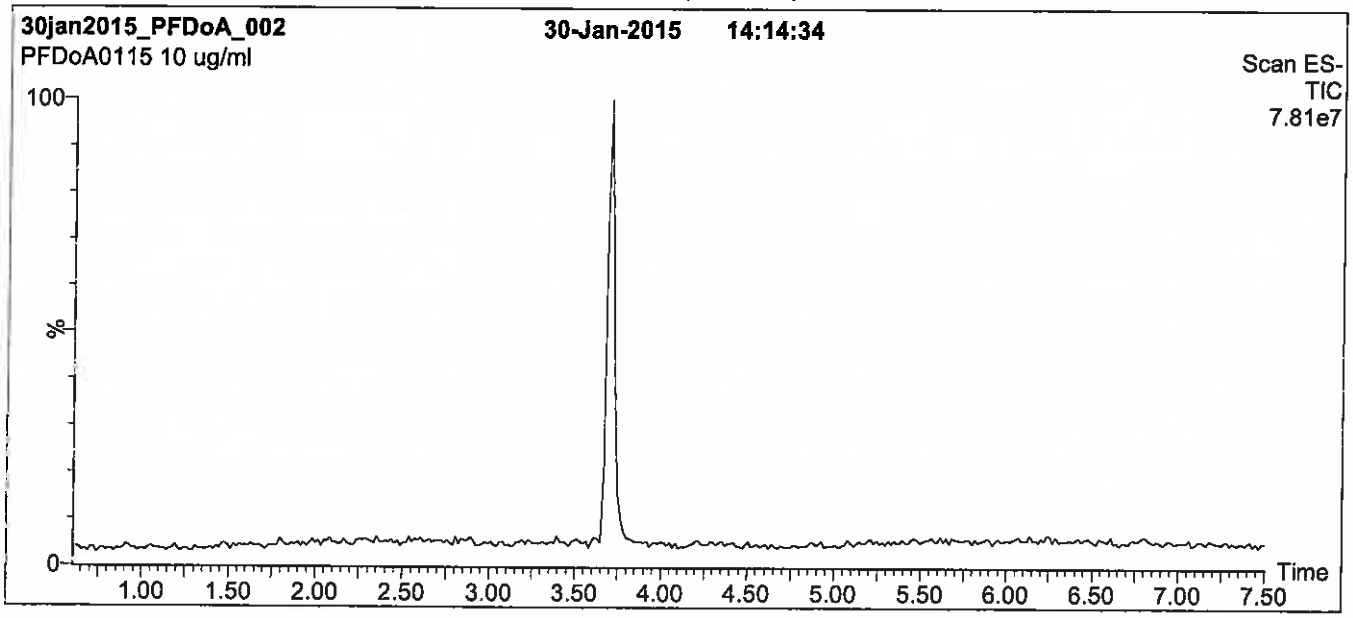
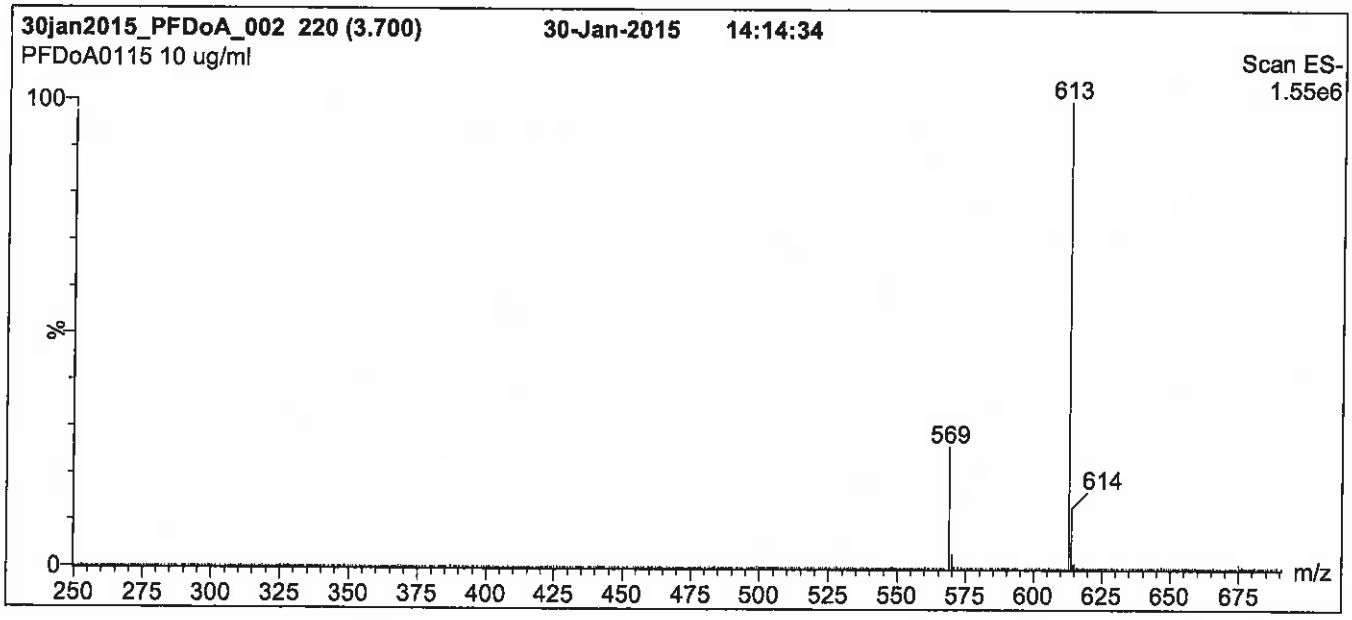
Figure 1: **PFDoA; LC/MS Data (TIC and Mass Spectrum)**





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 7 min and hold for 1.5 min
before returning to initial conditions in 0.5 min.
Time: 10 min

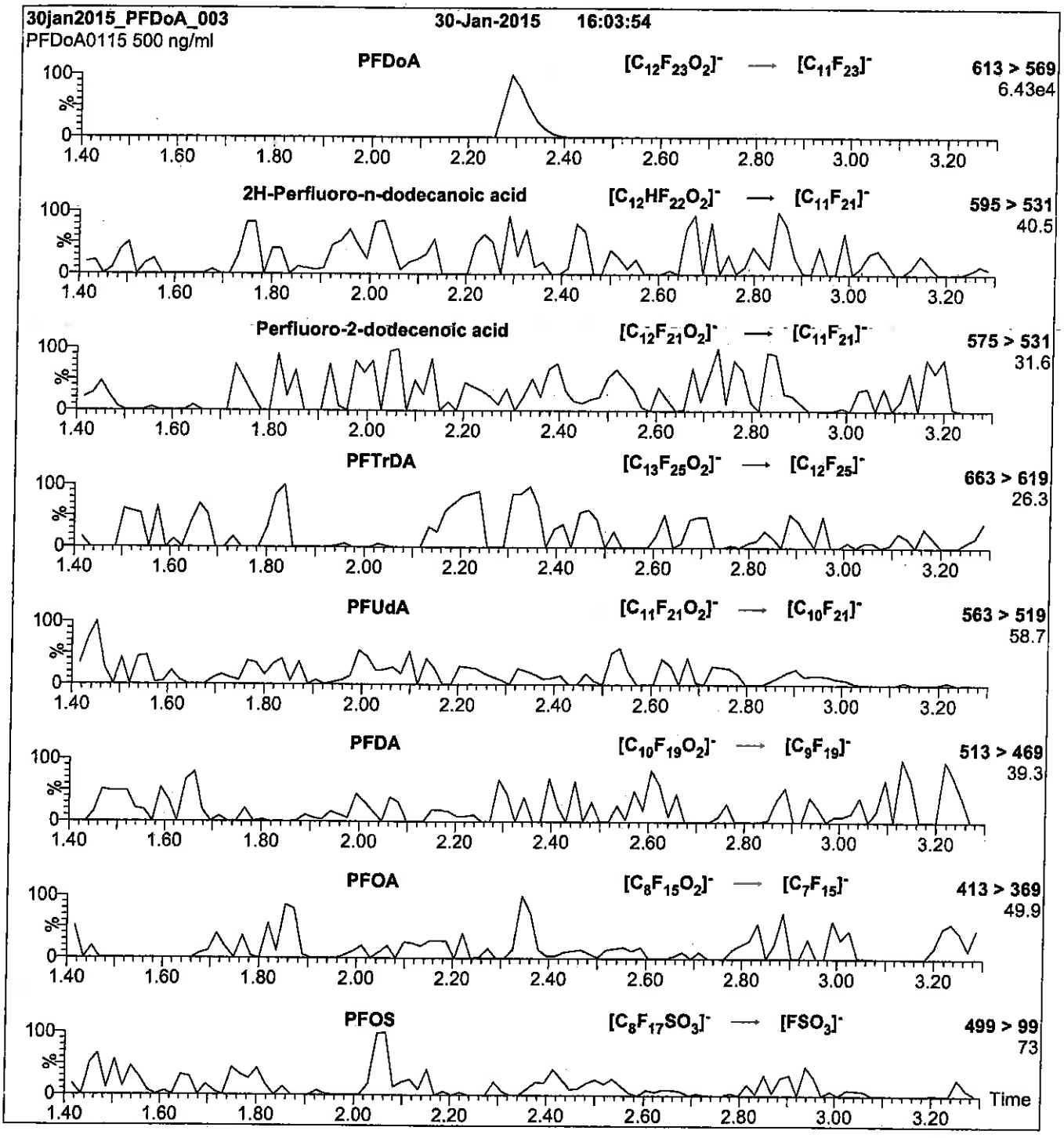
Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (250 - 1000 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 20.00
Cone Gas Flow (l/hr) = 100
Desolvation Gas Flow (l/hr) = 750

Figure 2: **PFDoA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: Direct loop injection
10 µl (500 ng/ml PFDoA)

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) = 3.28e-3
Collision Energy (eV) = 13

Reagent

LCPFHpA_00006

Scanned 10/14/16 SM R: SBC 9/13/16

730517
ID: LCPFHpA_00006
Exp: 01/22/21 Prpd: SBC
PF-n-heptanoic acid

730518
ID: LCPFHpA_00007
Exp: 01/22/21 Prpd: SBC
PF-n-heptanoic acid

WELLINGTON LABORATORIES

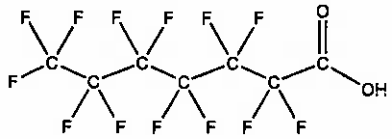
CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: PFHpA
COMPOUND: Perfluoro-n-heptanoic acid

LOT NUMBER: PFHpA0116

STRUCTURE:

CAS #: 375-85-9



MOLECULAR FORMULA: $C_7HF_{13}O_2$
CONCENTRATION: 50 ± 2.5 µg/ml

MOLECULAR WEIGHT: 364.06
SOLVENT(S): Methanol
Water (<1%)

CHEMICAL PURITY: >98%
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 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:** 02/02/2016 (mm/dd/yyyy)

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519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

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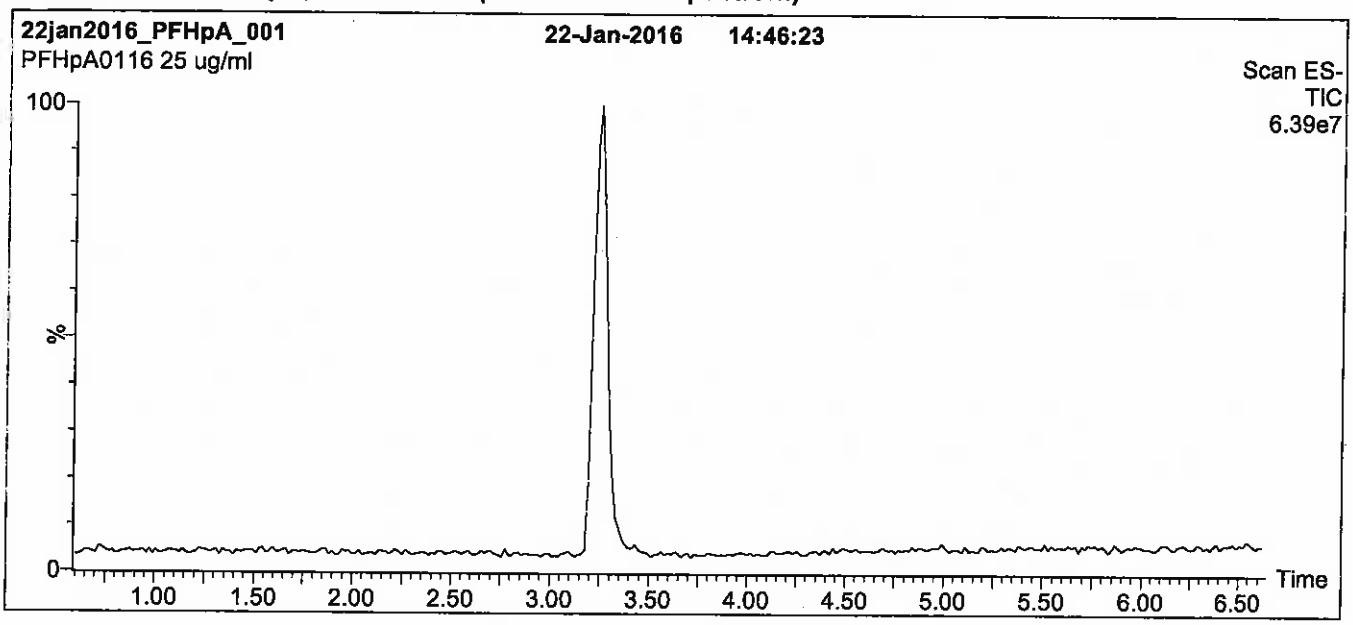
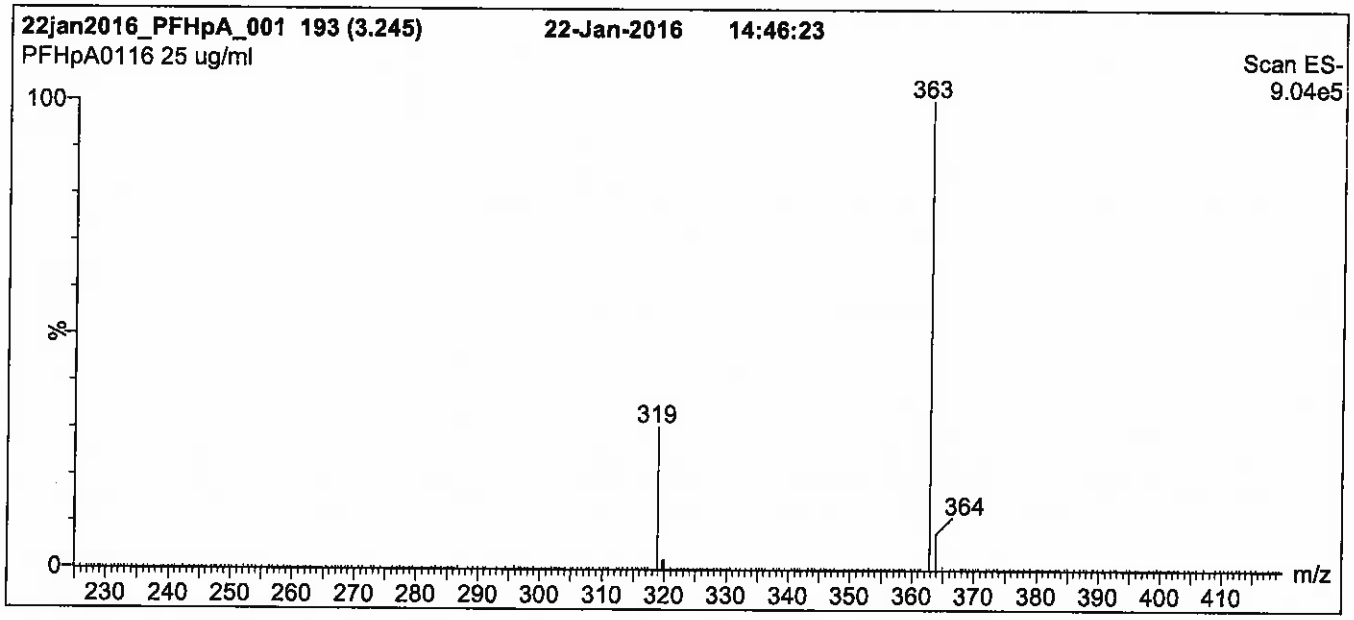
Figure 1: **PFHpA; LC/MS Data (TIC and Mass Spectrum)**





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

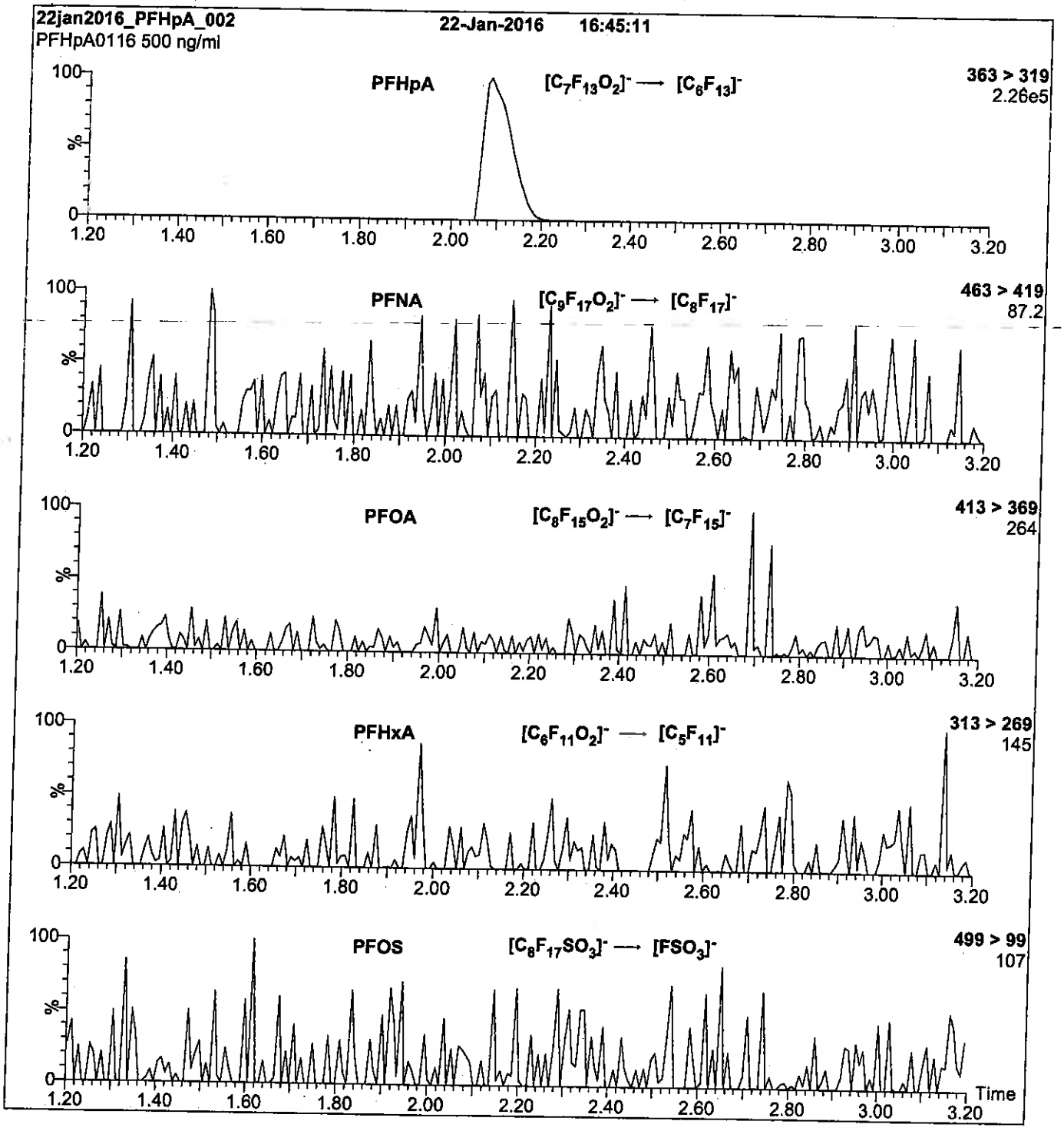
Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 15.00
Cone Gas Flow (l/hr) = 50
Desolvation Gas Flow (l/hr) = 750

Figure 2: **PFHpA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: Direct loop injection
10 µl (500 ng/ml PFHpA)

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) = 3.50e-3
Collision Energy (eV) = 11

Reagent

LCPFHpS_00009

Scanned 10/14/16 SR R: SBC 9/13/16

730635
ID: LCPFHpS_00009
Exp: 11/06/20 Prpd: SBC
PFHpS at 47.6ug/mL

730639
ID: LCPFHpS_00010
Exp: 11/06/20 Prpd: SBC
PFHpS at 47.6ug/mL

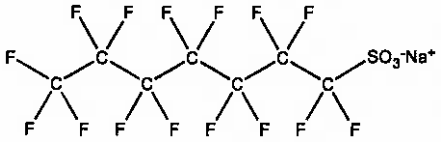
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: L-PFHpS
COMPOUND: Sodium perfluoro-1-heptanesulfonate
LOT NUMBER: LPFHpS1115

STRUCTURE:

CAS #: Not available



MOLECULAR FORMULA:	$C_7F_{15}SO_3Na$	**MOLECULAR WEIGHT:**	472.10
CONCENTRATION:	50.0 ± 2.5 µg/ml (Na salt) 47.6 ± 2.4 µg/ml (PFHpS anion)	**SOLVENT(S):**	Methanol
CHEMICAL PURITY:	>98%		
LAST TESTED: (mm/dd/yyyy)	11/06/2015		
EXPIRY DATE: (mm/dd/yyyy)	11/06/2020		
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 ~ 0.1% of L-PFHxS ($C_6F_{13}SO_3Na$) and ~ 0.2% of L-PFOS ($C_8F_{17}SO_3Na$).

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: B.G. Chittim **Date:** 11/09/2015 (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:

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.

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 $x_1, x_2, \ldots x_n$ 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:

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QUALITY MANAGEMENT:

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CALA

ANAB ACCREDITED

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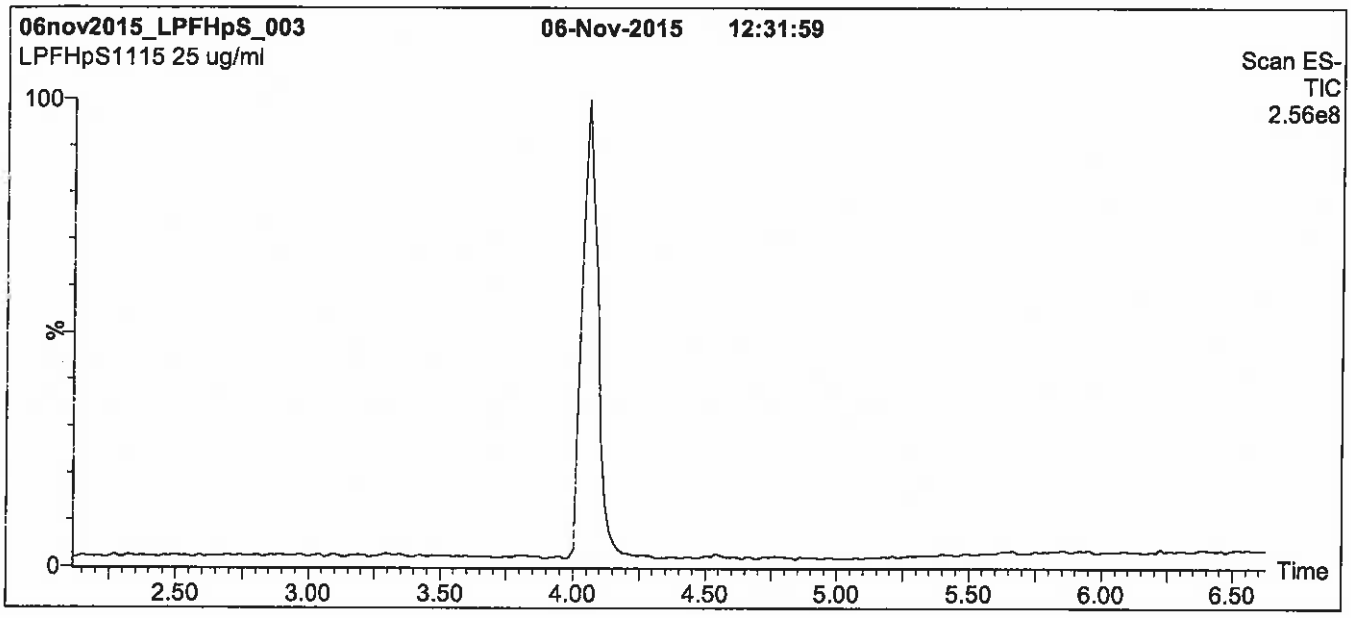
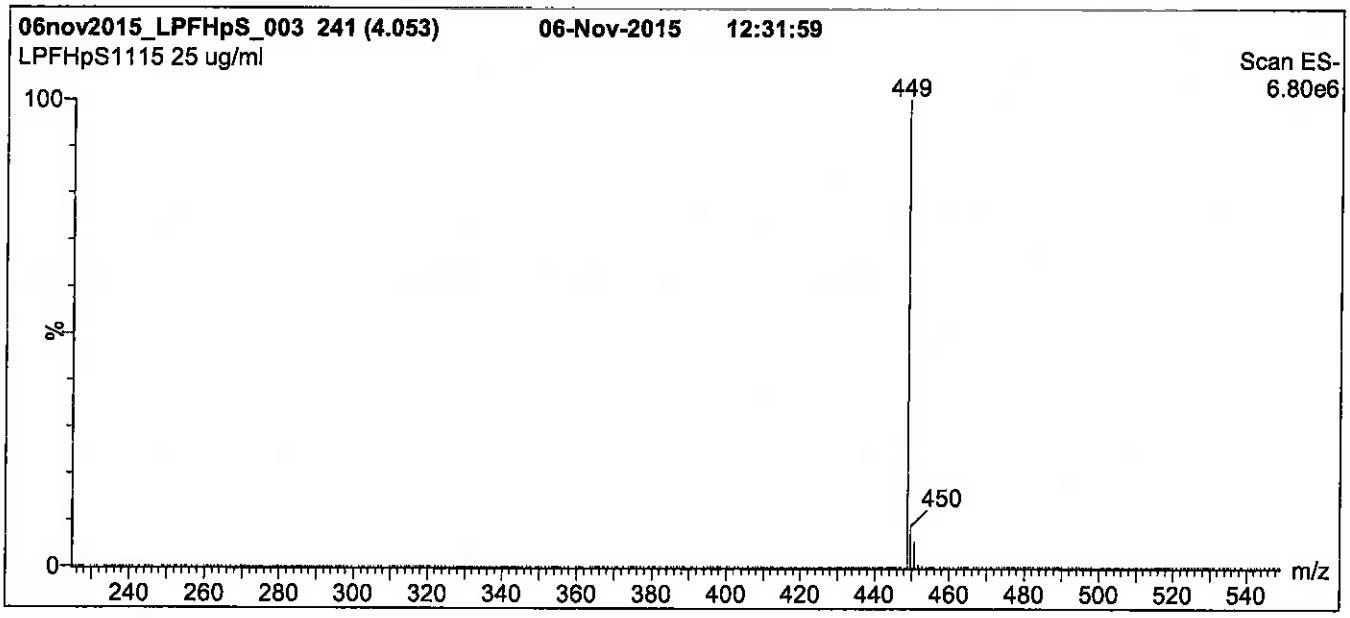
Figure 1: **L-PFHpS; LC/MS Data (TIC and Mass Spectrum)**





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

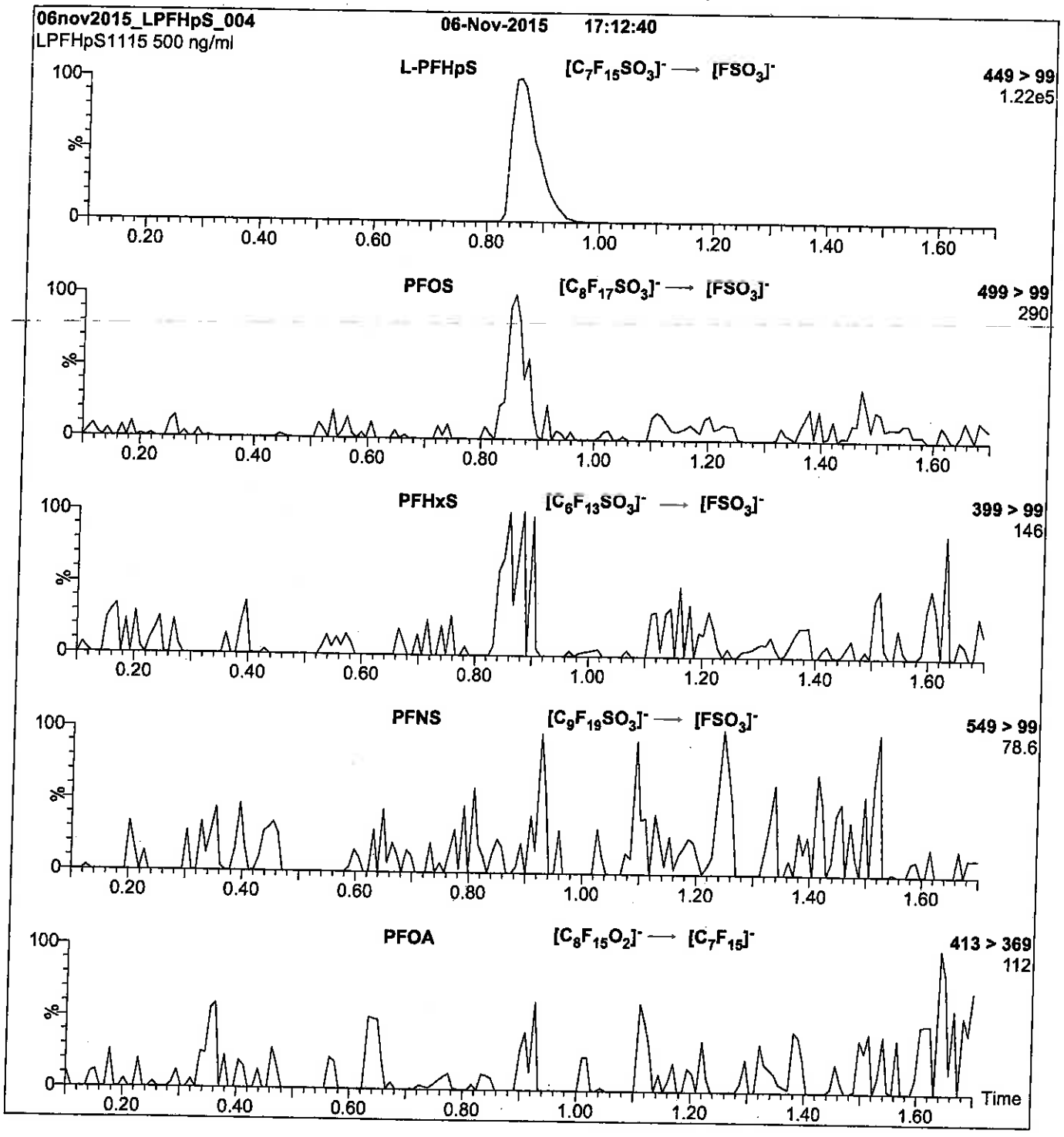
Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 60.00
Cone Gas Flow (l/hr) = 60
Desolvation Gas Flow (l/hr) = 750

Figure 2: **L-PFHpS; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: Direct loop injection
10 µl (500 ng/ml L-PFHpS)

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) = 3.31e-3
Collision Energy (eV) = 35

Reagent

LCPFHxA_00005

R: SBC 9/13/16

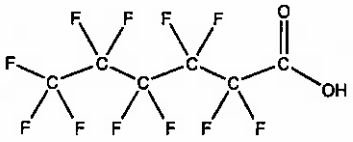
730551
ID: LCPFHxA_00005
Exp: 12/22/20 Prpd: SBC
PF-n-hexanoic acid

730552
ID: LCPFHxA_00006
Exp: 12/22/20 Prpd: SBC
PF-n-hexanoic acid

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE:	PFHxA	**LOT NUMBER:**	PFHxA1215
COMPOUND:	Perfluoro-n-hexanoic acid		
STRUCTURE:		**CAS #:**	307-24-4



MOLECULAR FORMULA:	$C_6HF_{11}O_2$	**MOLECULAR WEIGHT:**	314.05
CONCENTRATION:	50 ± 2.5 µg/ml	**SOLVENT(S):**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%		
LAST TESTED: (mm/dd/yyyy)	12/22/2015		
EXPIRY DATE: (mm/dd/yyyy)	12/22/2020		
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 ~ 0.2% of Perfluoro-n-pentanoic acid (PFPeA).

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: B.G. Chittim **Date:** 12/23/2015 (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:

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, SFC/UV/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, 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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The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

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$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

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:

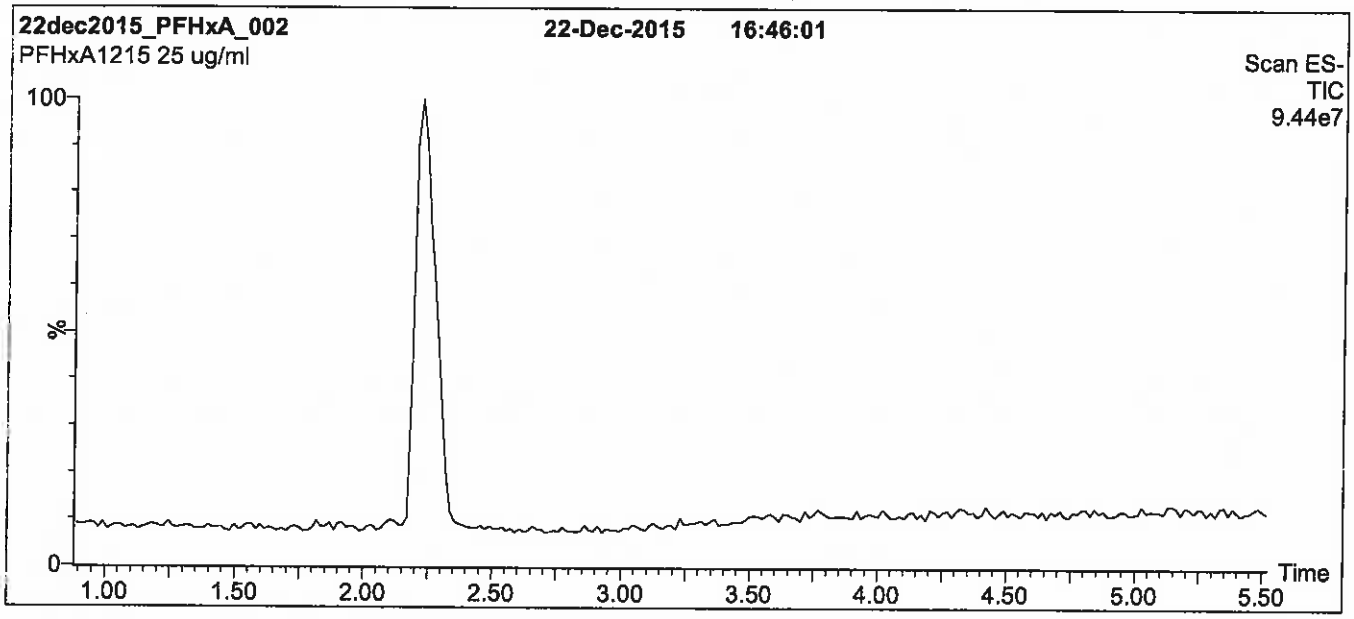
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO GUIDE 34 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

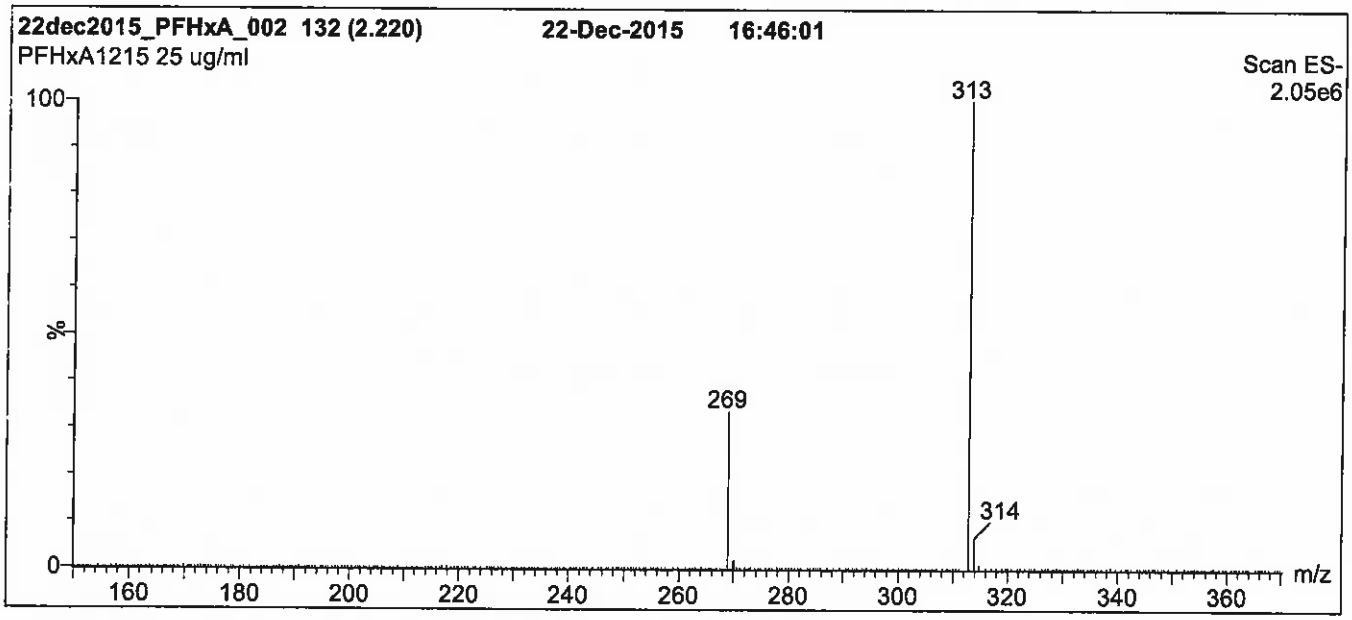
CALA

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: **PFHxA; 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

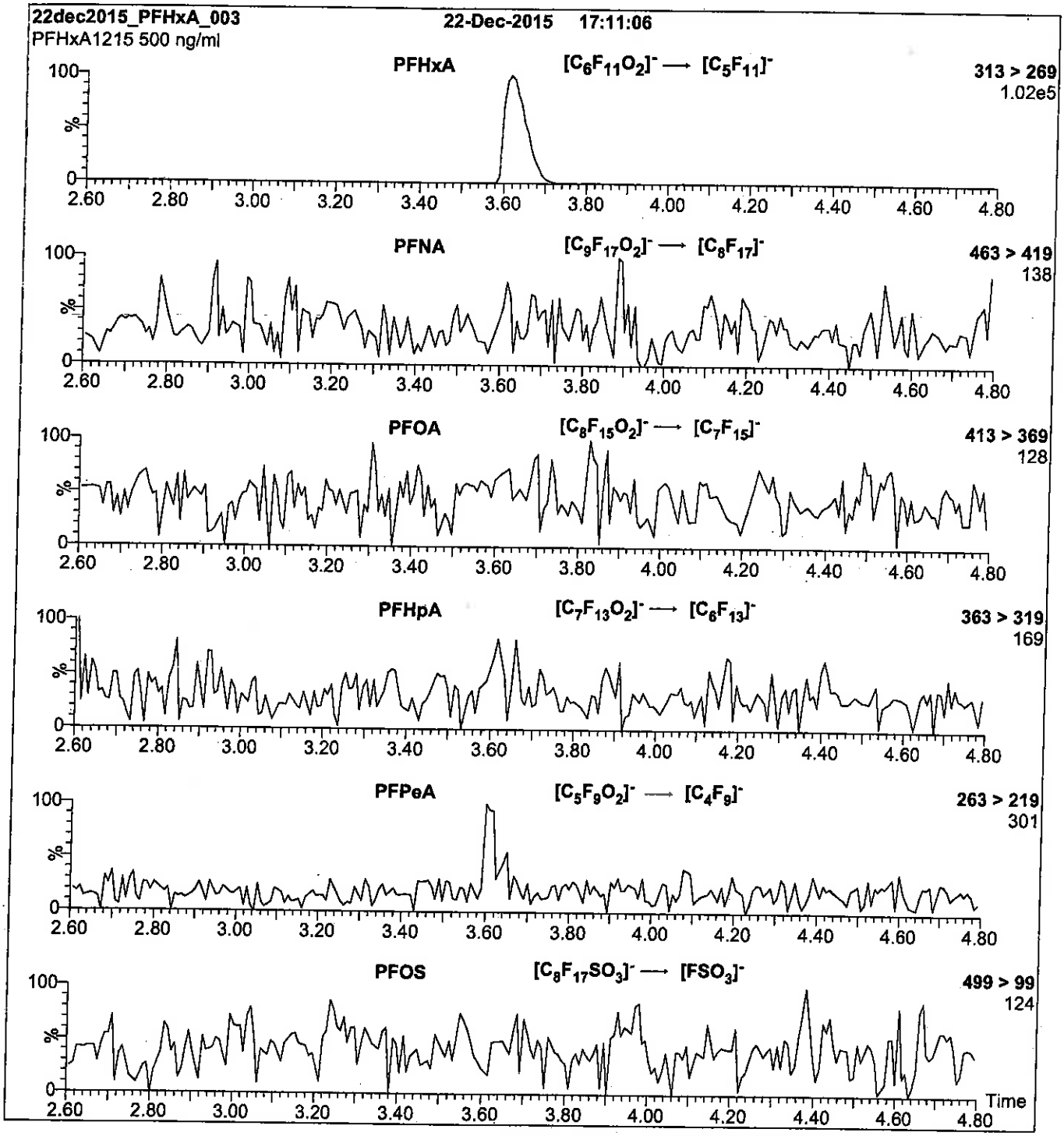
Flow: 300 µl/min

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) = 100
Desolvation Gas Flow (l/hr) = 750

Figure 2: **PFHxA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: Direct loop injection
10 µl (500 ng/ml PFHxA)

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) = 3.43e-3
Collision Energy (eV) = 10

Reagent

LCPFHxDA_00006

R: SBC 9/13/16
Scanned 10/14/16 SK

730630
ID: LCPFHxDA_00006
Exp: 05/25/21 Prpd: SBC
PFHxDA stock 50ug/mL

730631
ID: LCPFHxDA_00007
Exp: 05/25/21 Prpd: SBC
PFHxDA stock 50ug/mL

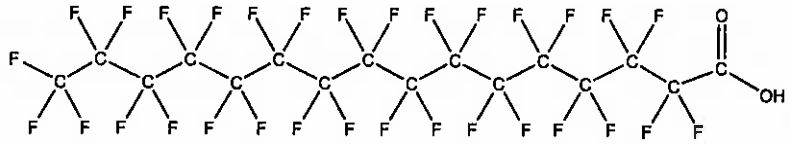
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: PFHxDA
LOT NUMBER: PFHxDA0516
COMPOUND: Perfluoro-n-hexadecanoic acid

STRUCTURE:

CAS #: 67905-19-5



MOLECULAR FORMULA: $C_{16}HF_{31}O_2$
MOLECULAR WEIGHT: 814.13
CONCENTRATION: 50 ± 2.5 µg/ml
SOLVENT(S): Methanol
Water (<1%)

CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 05/25/2016
EXPIRY DATE: (mm/dd/yyyy) 05/25/2021
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 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Contains ~ 0.4% of PFODA.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: B.G. Chittim **Date:** 05/27/2016 (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

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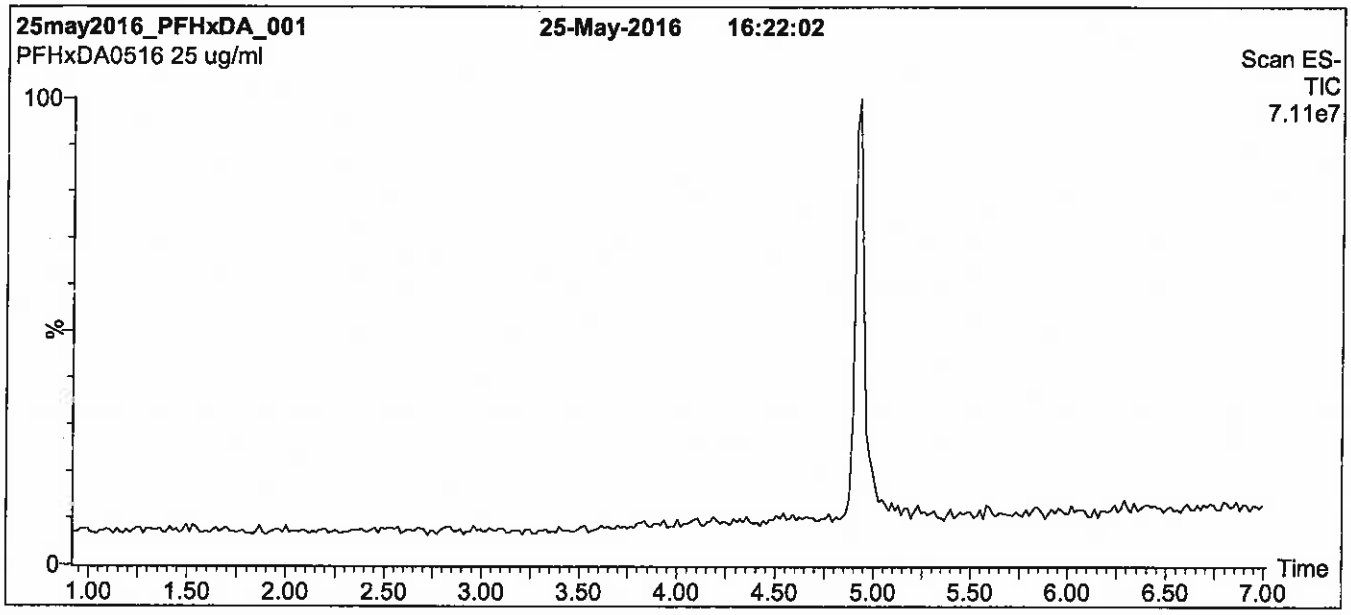
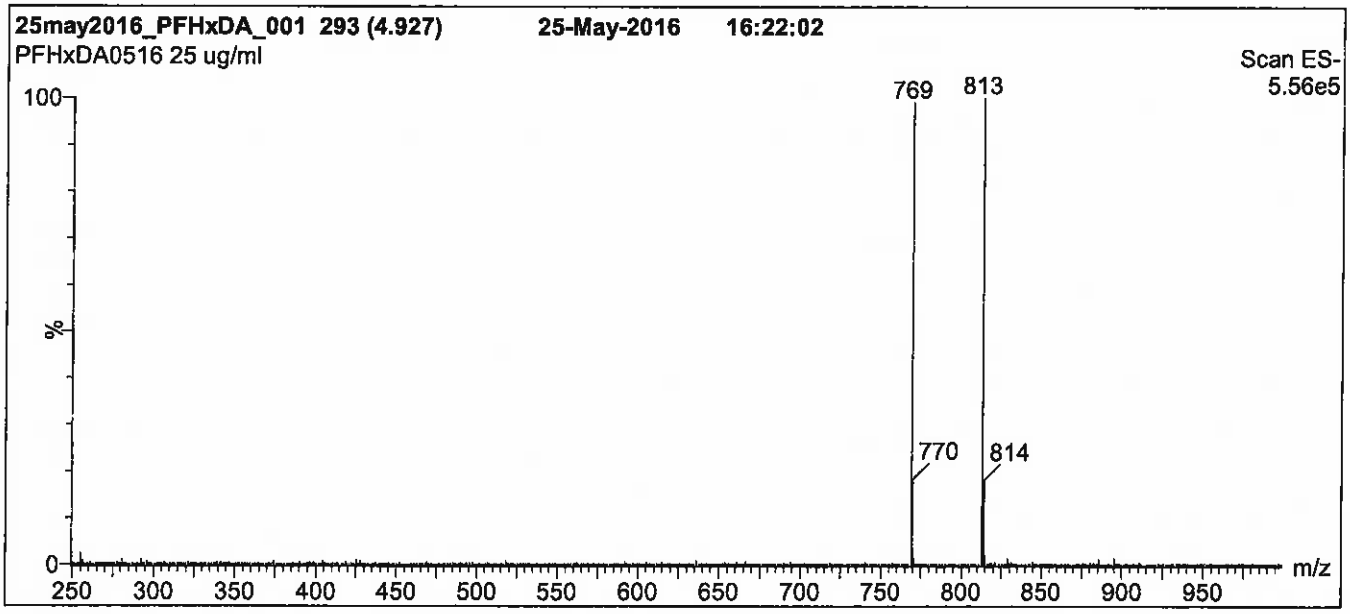
Figure 1: **PFHxDA; LC/MS Data (TIC and Mass Spectrum)**





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: 70% (80:20 MeOH:ACN) / 30% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 95% organic over 6 min and hold for 2.5 min
before returning to initial conditions in 0.5 min.
Time: 10 min

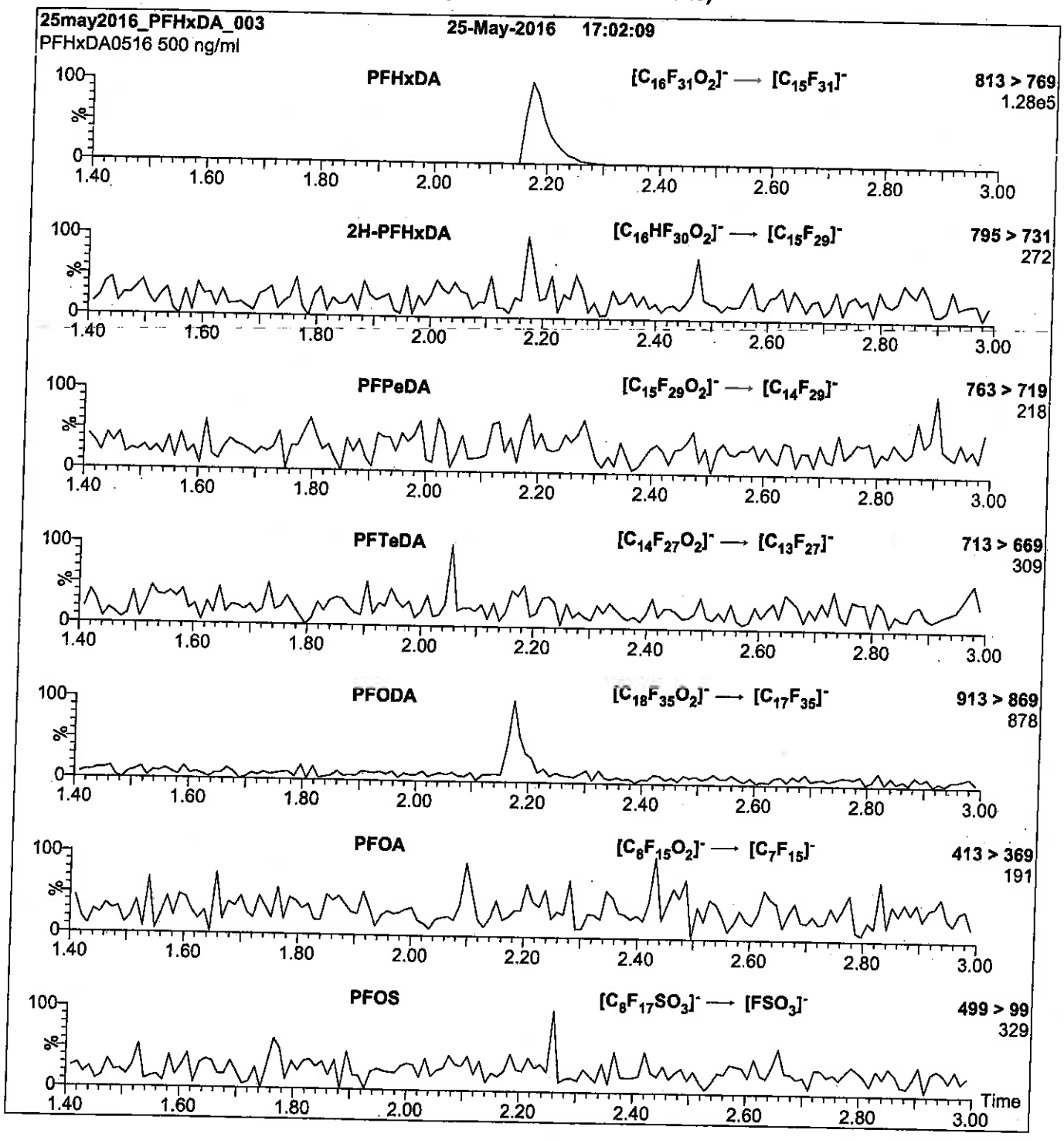
Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (250 - 1250 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 3.00
Cone Voltage (V) = 25.00
Cone Gas Flow (l/hr) = 60
Desolvation Gas Flow (l/hr) = 750

Figure 2: **PFHxDA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: Direct loop injection
10 µl (500 ng/ml PFHxDA)

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) = 3.66e-3
Collision Energy (eV) = 15

Reagent

LCPFHxS-br_00002

SBC
R: 9/13/16

730513
ID: LCPFHxS-br_00002
Exp: 07/03/20 Prpd: SBC
Potassium Perfluorohexane

730514
ID: LCPFHxS-br_00003
Exp: 07/03/20 Prpd: SBC
Potassium Perfluorohexane

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

br-PFHxSK

Potassium Perfluorohexanesulfonate Solution/Mixture of Linear and Branched Isomers

PRODUCT CODE:	br-PFHxSK
LOT NUMBER:	brPFHxSK0615
CONCENTRATION:	50.0 ± 2.5 µg/ml (total potassium salt)
	45.5 ± 2.3 µg/ml (total PFHxS anion)
SOLVENT(S):	Methanol
DATE PREPARED: (mm/dd/yyyy)	06/29/2015
LAST TESTED: (mm/dd/yyyy)	07/03/2015
EXPIRY DATE: (mm/dd/yyyy)	07/03/2020
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place

DESCRIPTION:

The chemical purity has been determined to be ≥98% perfluorohexanesulfonate linear and branched isomers. The full name, structure and percent composition for each of the identified isomeric components are given in Table A.

DOCUMENTATION/ DATA ATTACHED:

Table A: Isomeric Components and Percent Composition by ^{19}F-NMR
Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS Data
Figure 3: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains ~ 0.5% of perfluoro-1-pentanesulfonate and ~ 0.2% of perfluoro-1-octanesulfonate.
- CAS#: 3871-99-6 (for linear isomer; potassium salt).

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

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 compounds 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:

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, SFC/UV/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, 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.

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 $x_1, x_2, \ldots x_n$ 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.

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CALA

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

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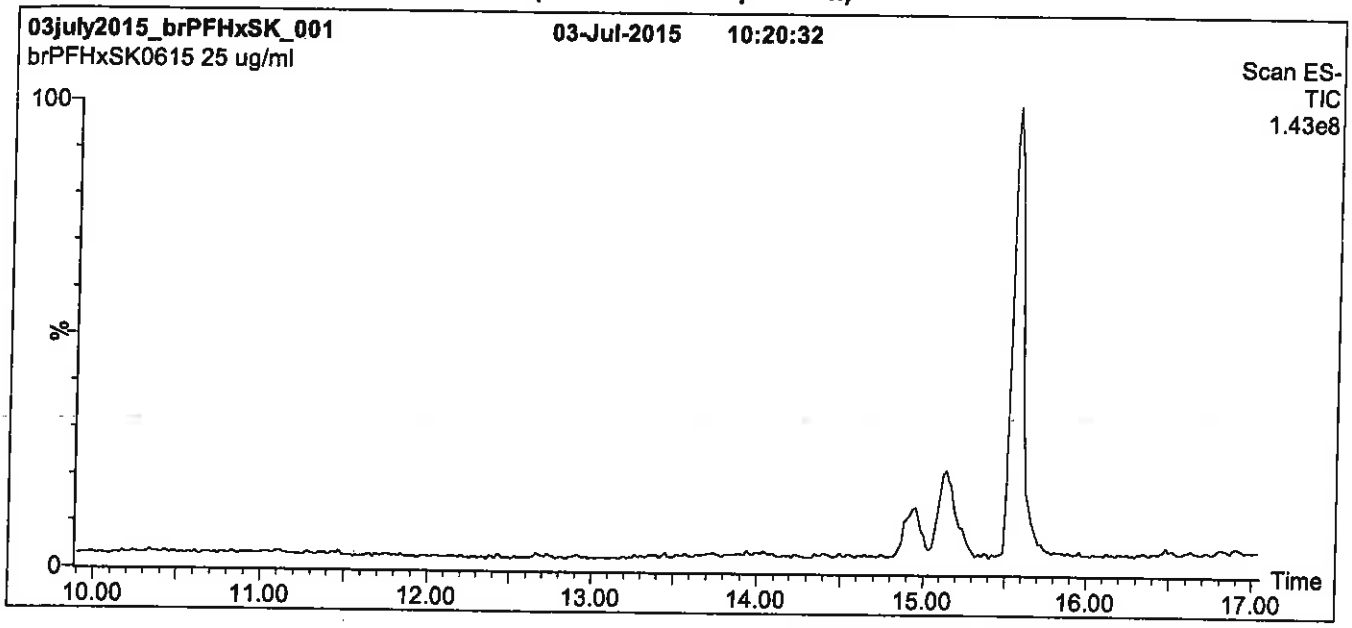
Table A: **br-PFHxSK; Isomeric Components and Percent Composition (by ^{19}F-NMR)***

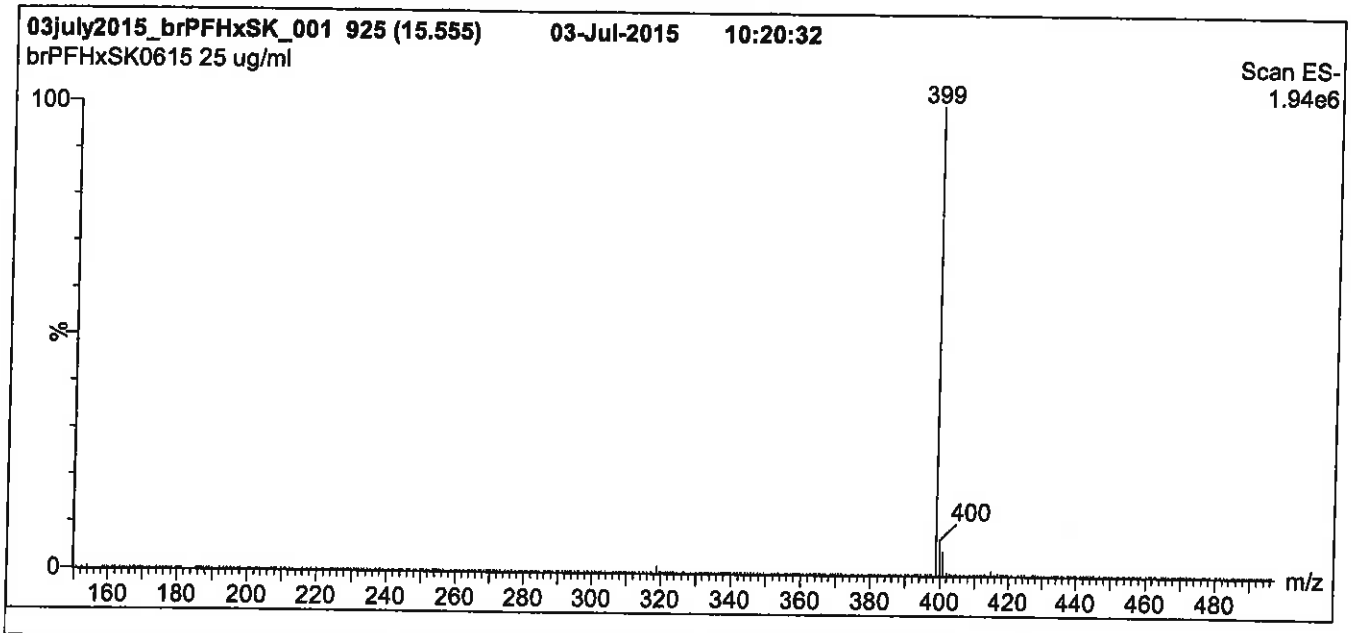
Isomer	Name	Structure	Percent Composition by ^{19}F-NMR
1	Potassium perfluoro-1-hexanesulfonate	$CF_3CF_2CF_2CF_2CF_2CF_2SO_3^-K^+$	81.1
2	Potassium 1-trifluoromethylperfluoropentanesulfonate**	$CF_3CF_2CF_2CF_2CF(CF_3)SO_3^-K^+$	2.9
3	Potassium 2-trifluoromethylperfluoropentanesulfonate	$CF_3CF_2CF_2CF(CF_3)CF_2SO_3^-K^+$	1.4
4	Potassium 3-trifluoromethylperfluoropentanesulfonate	$CF_3CF_2CF(CF_3)CF_2CF_2SO_3^-K^+$	5.0
5	Potassium 4-trifluoromethylperfluoropentanesulfonate	$CF_3CF(CF_3)CF_2CF_2CF_2SO_3^-K^+$	8.9
6	Potassium 3,3-di(trifluoromethyl)perfluorobutanesulfonate	$CF_3C(CF_3)CF_2CF_2SO_3^-K^+$	0.2
7	Other Unidentified Isomers		0.5

* Percent of total perfluorohexanesulfonate isomers only.
** Systematic Name: Potassium perfluorohexane-2-sulfonate.

Certified By: B.G. Chittim **Date:** 07/15/2015 (mm/dd/yyyy)

Figure 1: **br-PFHxSK; 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: 20% (80:20 MeOH:ACN) / 80% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 50% organic over 14 min. Ramp to 90% organic over 3 min and hold for 1.5 min before returning to initial conditions in 0.5 min.
Time: 20 min

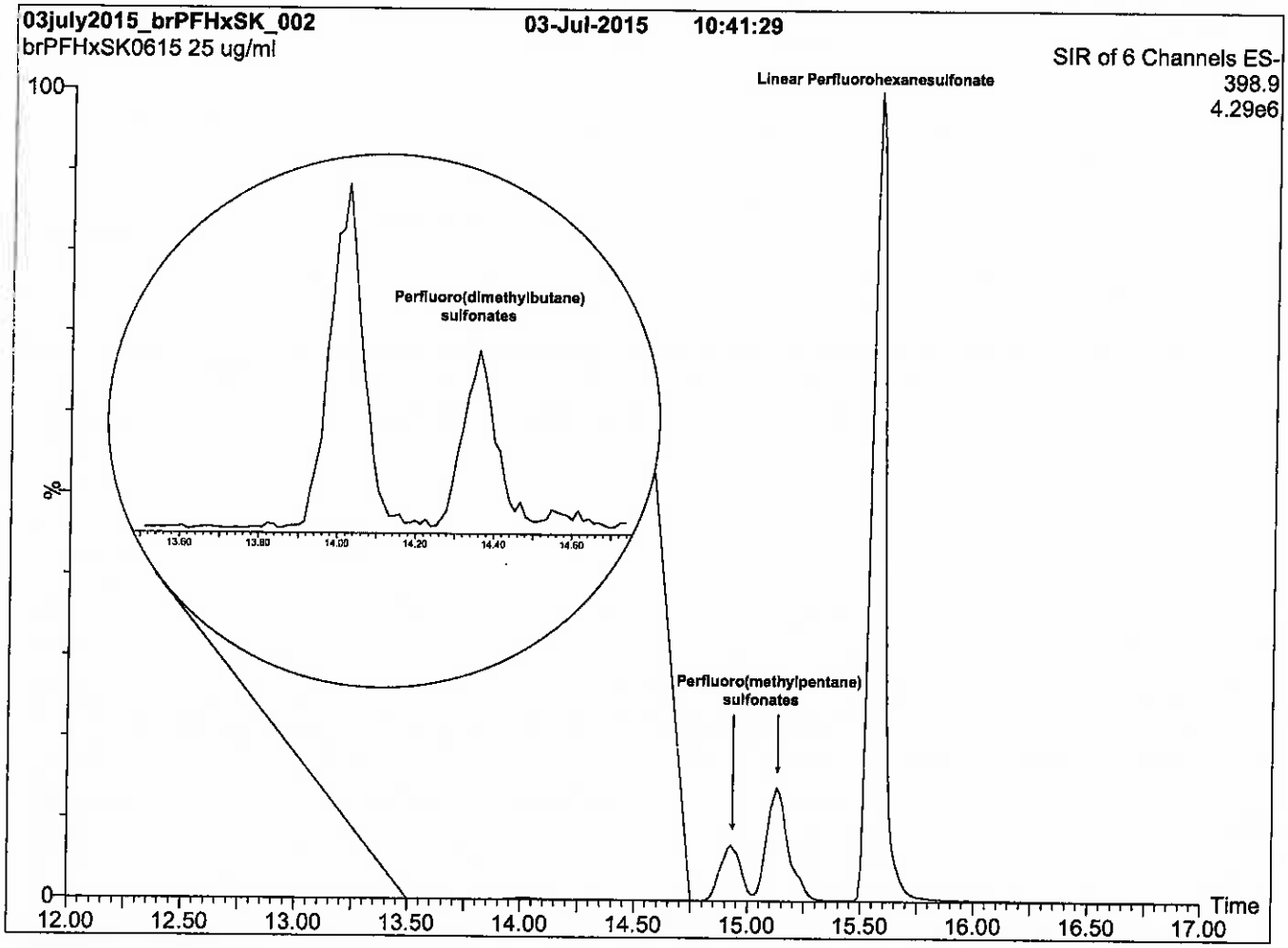
Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (150 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 3.00
Cone Voltage (V) = 50.00
Cone Gas Flow (l/hr) = 60
Desolvation Gas Flow (l/hr) = 750

Figure 2: **br-PFHxSK; LC/MS Data**



Conditions for Figure 2:

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: 20% (80:20 MeOH:ACN) / 80% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 50% organic over 14 min. Ramp to 90% organic over 3 min and hold for 1.5 min before returning to initial conditions in 0.5 min.
Time: 20 min

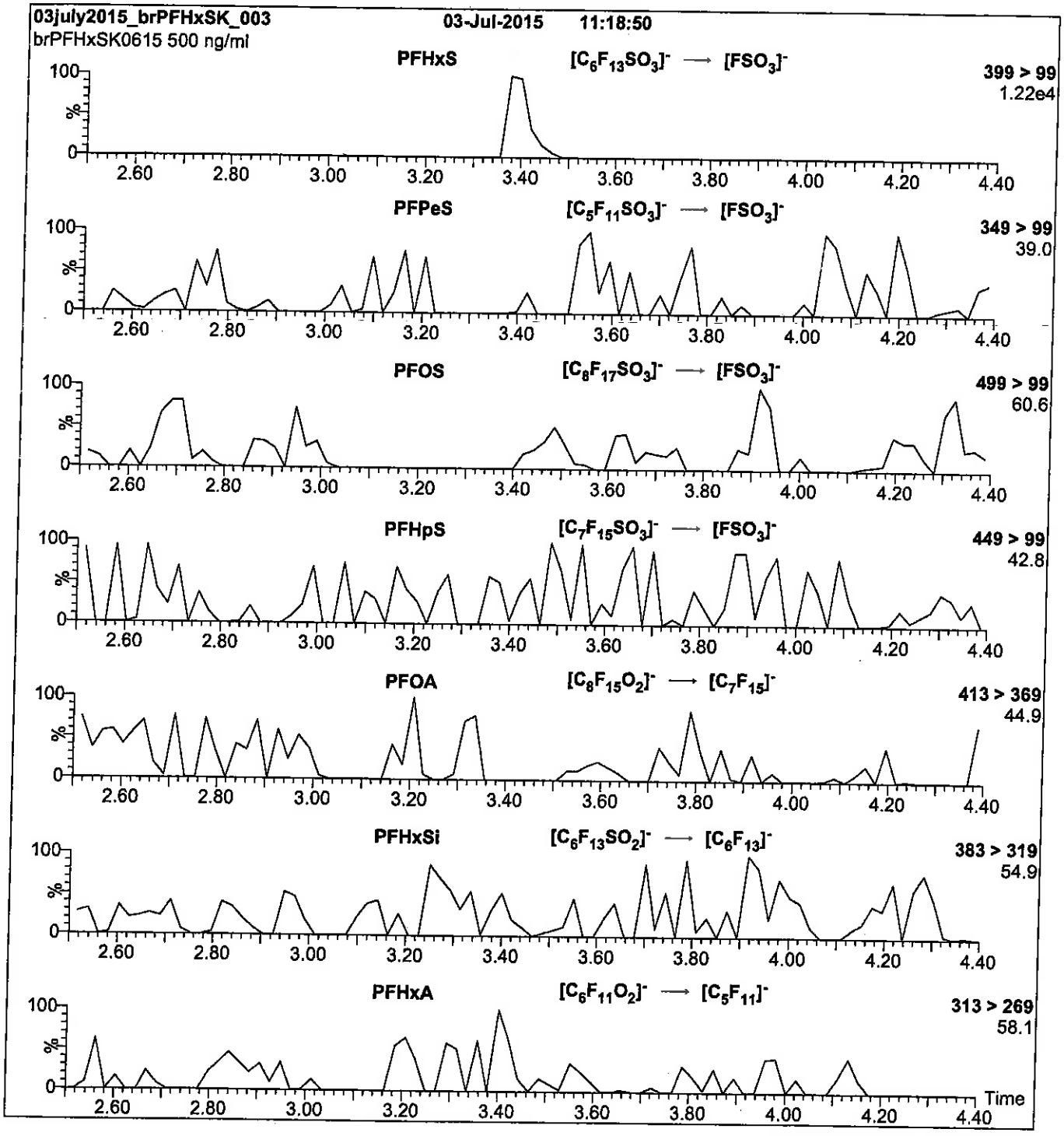
Flow: 300 µl/min

MS Parameters

Experiment: SIR (6 channels)

Source: Electrospray (negative)
Capillary Voltage (kV) = 3.00
Cone Voltage (V) = 50.00
Cone Gas Flow (l/hr) = 60
Desolvation Gas Flow (l/hr) = 750

Figure 3: **br-PFHxSK; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 3:

Injection: Direct loop injection
10 µl (500 ng/ml br-PFHxSK)

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) = 3.54e-3
Collision Energy (eV) = 30

Reagent

LCPFNA_00006

R: SBC 9/13/16

Scanned 10/14/16

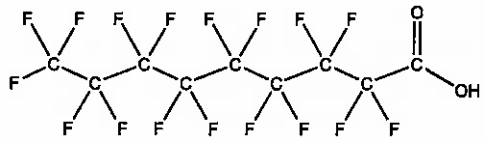
730559
ID: LCPFNA_00006
Exp: 10/23/20 Prpd: SBC
PF-n-nonanoic acid

730560
ID: LCPFNA_00007
Exp: 10/23/20 Prpd: SBC
PF-n-nonanoic acid

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE:	PFNA	**LOT NUMBER:**	PFNA1015
COMPOUND:	Perfluoro-n-nonanoic acid		
STRUCTURE:		**CAS #:**	375-95-1



MOLECULAR FORMULA:	$C_9HF_{17}O_2$	**MOLECULAR WEIGHT:**	464.08
CONCENTRATION:	50 ± 2.5 µg/ml	**SOLVENT(S):**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%		
LAST TESTED: (mm/dd/yyyy)	10/23/2015		
EXPIRY DATE: (mm/dd/yyyy)	10/23/2020		
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-octanoic acid (PFOA) and < 0.1% of perfluoro-n-heptanoic acid (PFHpA).

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: B.G. Chittim **Date:** 10/30/2015 (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:

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SYNTHESIS / CHARACTERIZATION:

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UNCERTAINTY:

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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:

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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:

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QUALITY MANAGEMENT:

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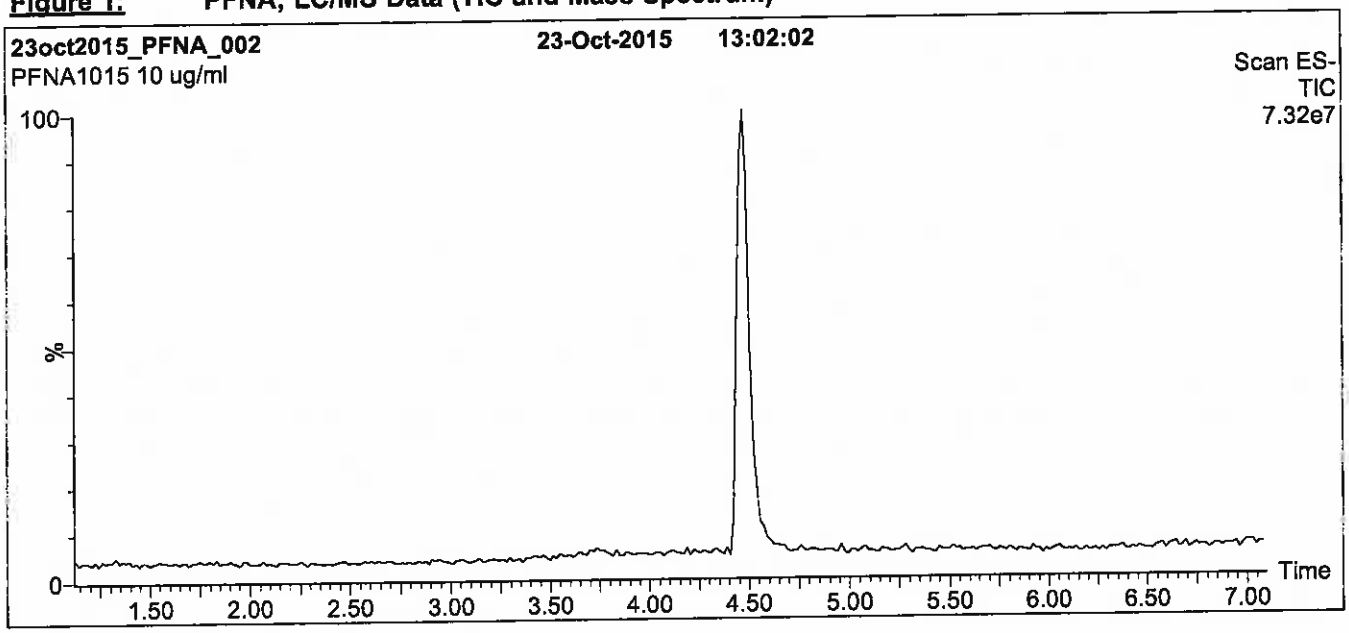
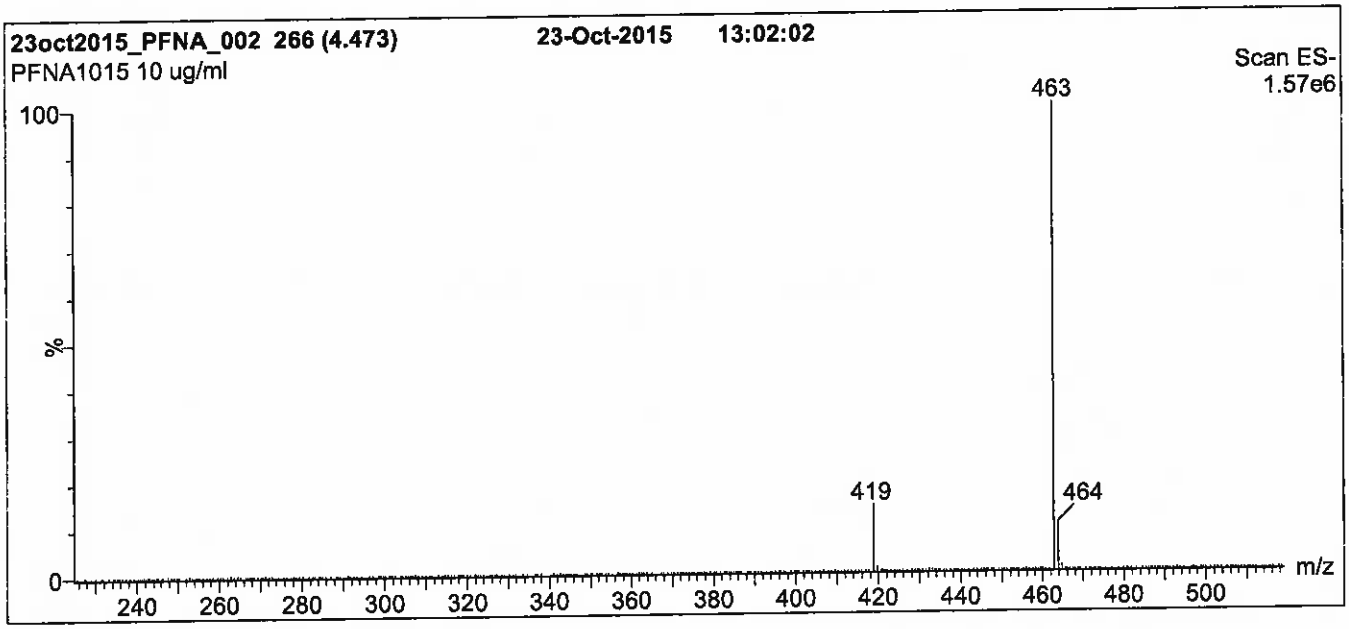
Figure 1: **PFNA; LC/MS Data (TIC and Mass Spectrum)**





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

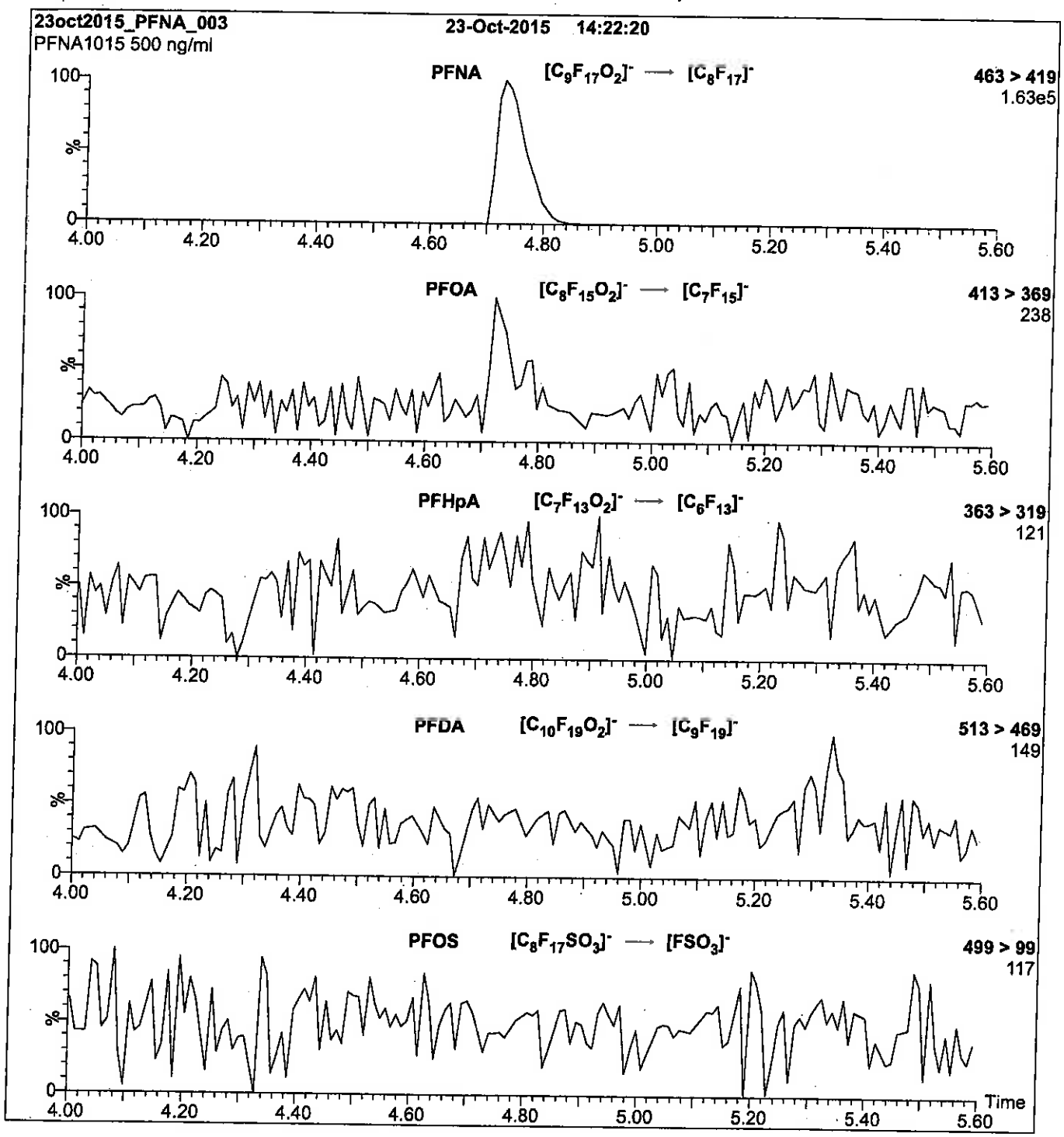
Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (225 - 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: **PFNA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: Direct loop injection
10 µl (500 ng/ml PFNA)

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) = 3.28e-3
Collision Energy (eV) = 11

Reagent

LCPFOA_00006

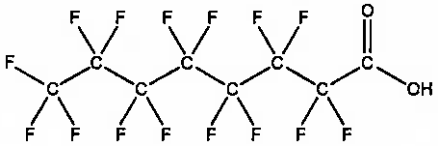
R-7/6/16 CBW

671577
ID: LCPFOA_00006
Exp: 11/06/20 Prpd: CBW
PF-n-octanoic acid

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE:	PFOA	**LOT NUMBER:**	PFOA1115
COMPOUND:	Perfluoro-n-octanoic acid		
STRUCTURE:		**CAS #:**	335-67-1



MOLECULAR FORMULA:	$C_8HF_{15}O_2$	**MOLECULAR WEIGHT:**	414.07
CONCENTRATION:	50 ± 2.5 µg/ml	**SOLVENT(S):**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%		
LAST TESTED: (mm/dd/yyyy)	11/06/2015		
EXPIRY DATE: (mm/dd/yyyy)	11/06/2020		
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.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: B.G. Chittim **Date:** 11/11/2015 (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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CALA

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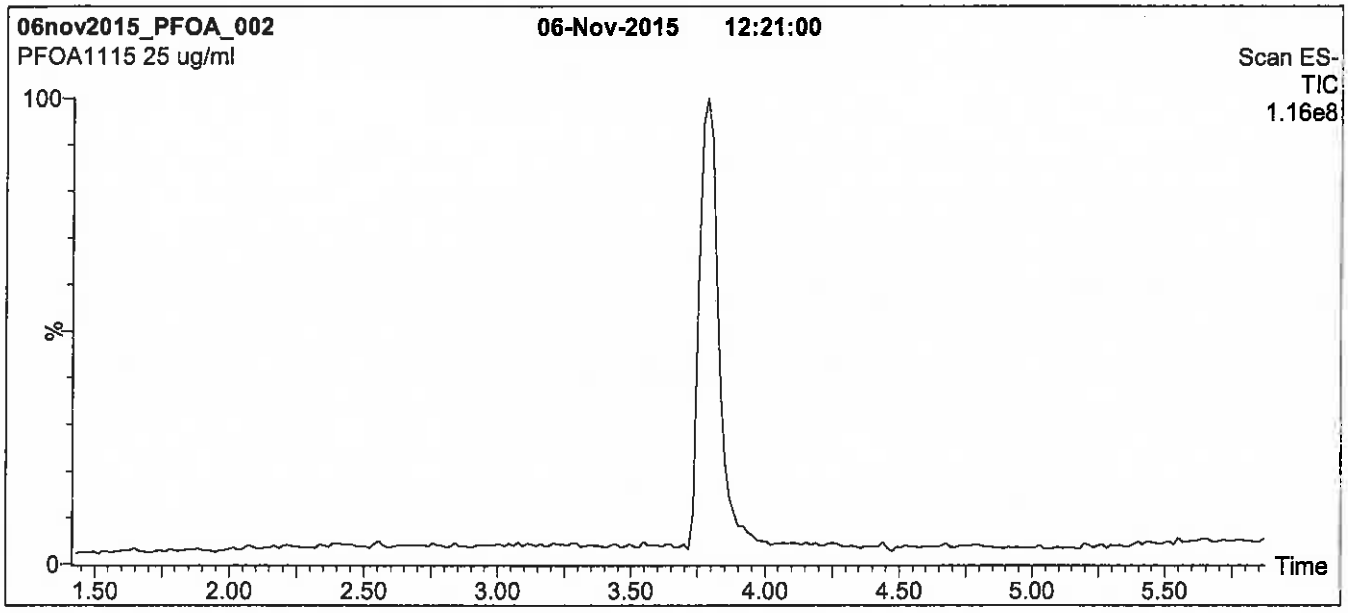
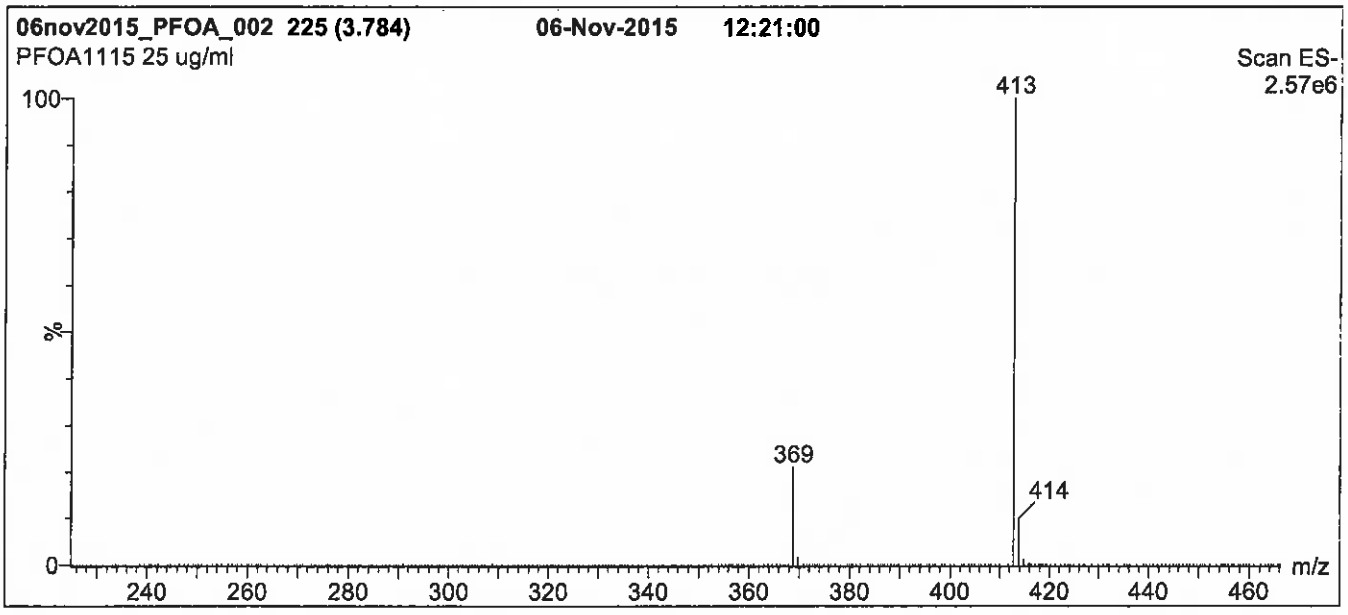
Figure 1: **PFOA; LC/MS Data (TIC and Mass Spectrum)**





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

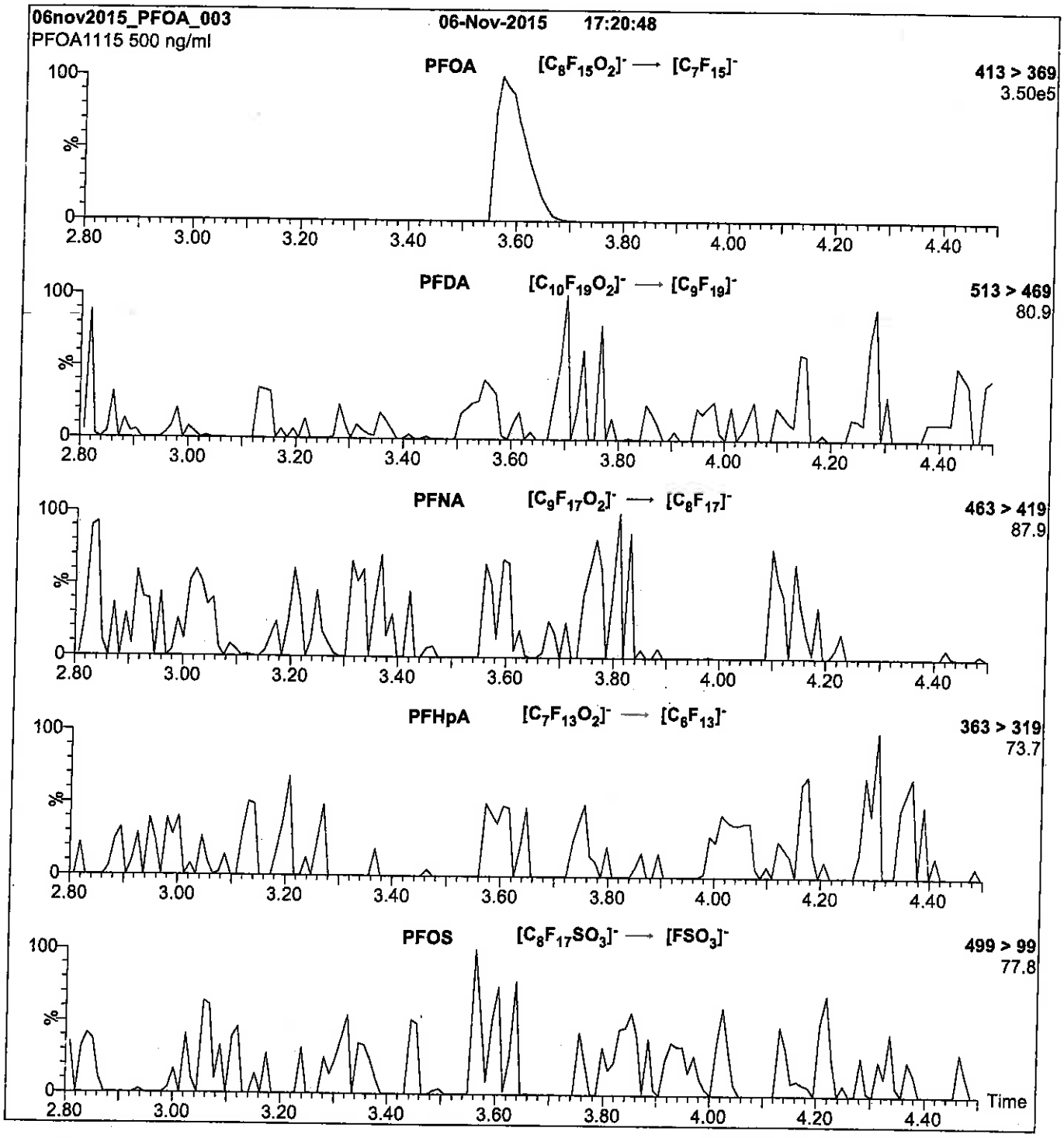
Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 3.00
Cone Voltage (V) = 15.00
Cone Gas Flow (l/hr) = 100
Desolvation Gas Flow (l/hr) = 750

Figure 2: **PFOA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: Direct loop injection
10 µl (500 ng/ml PFOA)

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) = 3.17e-3
Collision Energy (eV) = 10

Reagent

LCPFODA_00006

Scanned 10/14/16

R: SBC 9/13/16

730632
ID: LCPFODA_00006
Exp: 04/29/21 Prpd: SBC
PFODA stock 50ug/mL

730633
ID: LCPFODA_00007
Exp: 04/29/21 Prpd: SBC
PFODA stock 50ug/mL

WELLINGTON LABORATORIES

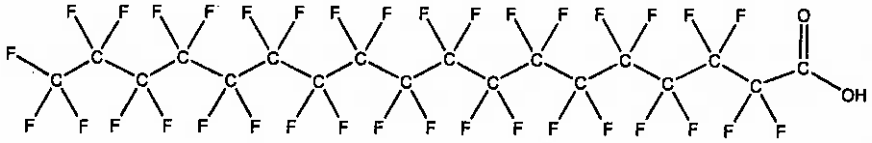
CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: PFODA
COMPOUND: Perfluoro-n-octadecanoic acid

LOT NUMBER: PFODA0416

STRUCTURE:

CAS #: 16517-11-6



MOLECULAR FORMULA: $C_{18}HF_{35}O_2$
CONCENTRATION: 50 ± 2.5 µg/ml

MOLECULAR WEIGHT: 914.14
SOLVENT(S): Methanol
Water (<1%)

CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 04/29/2016
EXPIRY DATE: (mm/dd/yyyy) 04/29/2021
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 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

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Certified By: B.G. Chittim **Date:** 05/20/2016 (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:

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, SFC/UV/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, 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.

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 $x_1, x_2, \ldots x_n$ 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 A1226

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

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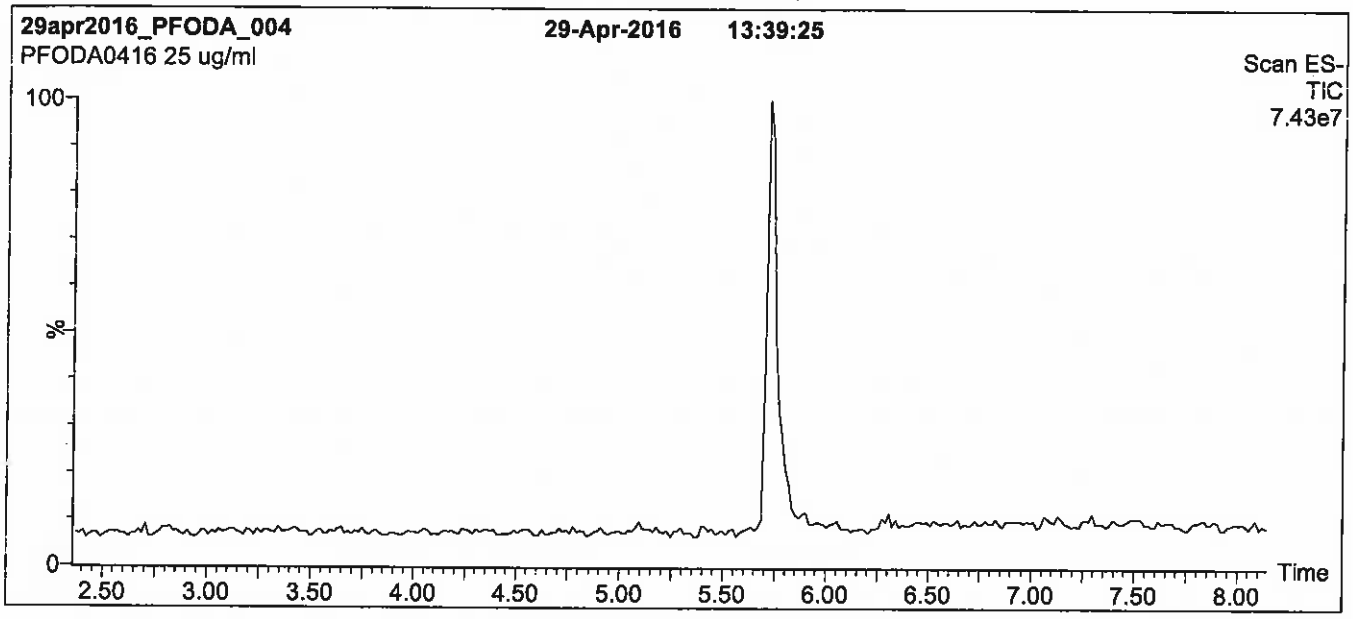
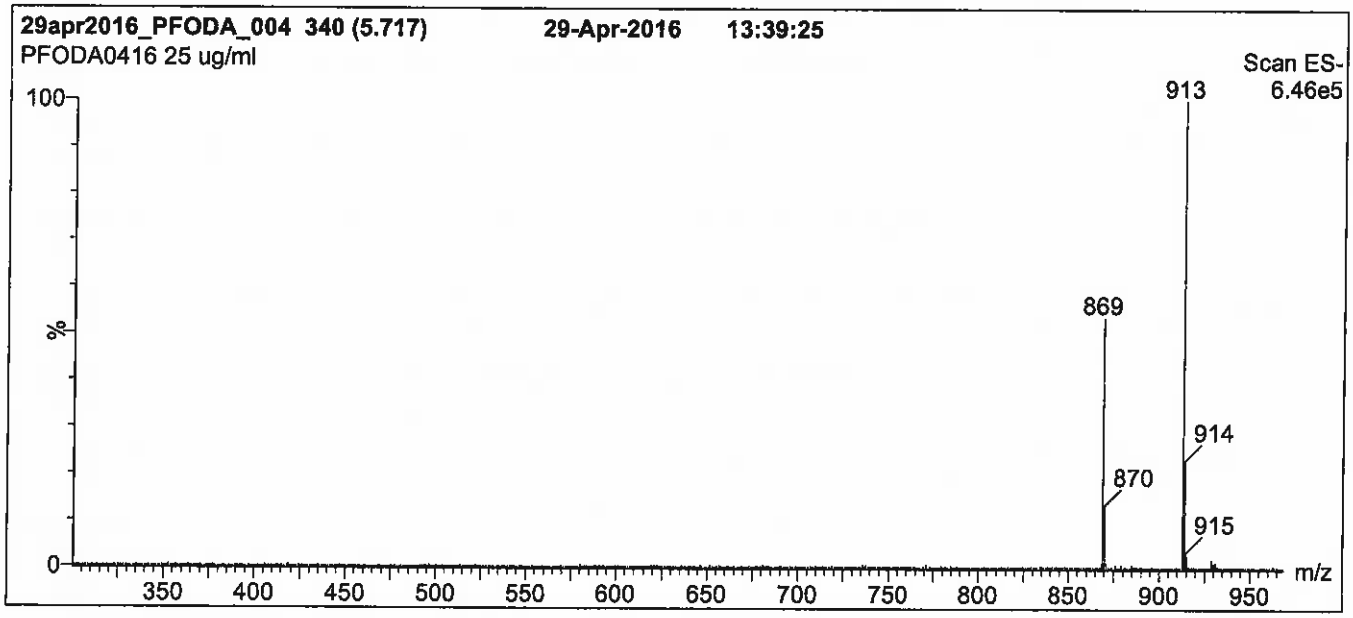
Figure 1: **PFODA; LC/MS Data (TIC and Mass Spectrum)**





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: 70% (80:20 MeOH:ACN) / 30% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 95% organic over 6 min and hold for
2.5 min before returning to initial conditions in 0.5 min.
Time: 10 min

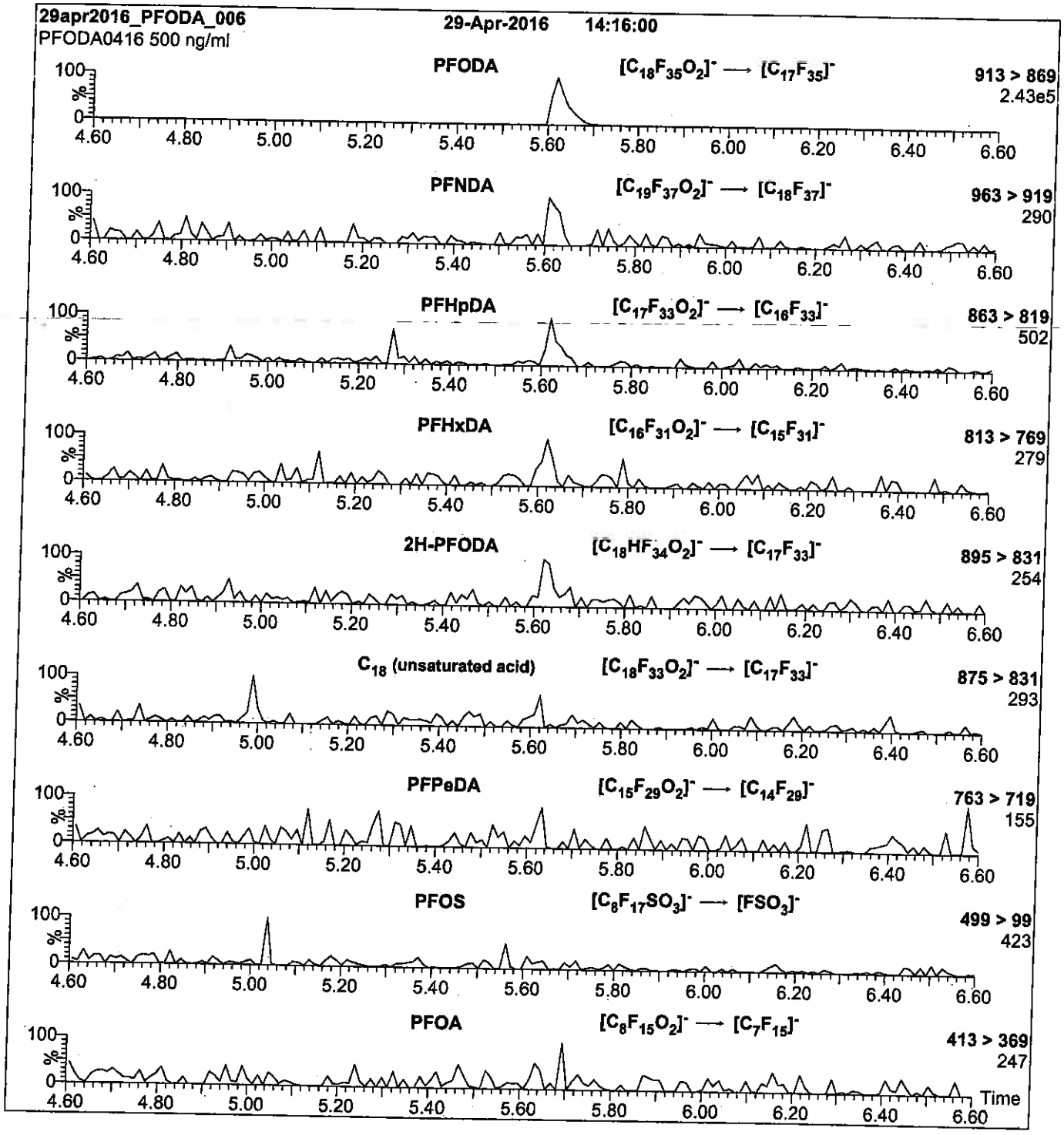
Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (250 - 1000 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 3.00
Cone Voltage (V) = 25.00
Cone Gas Flow (l/hr) = 50
Desolvation Gas Flow (l/hr) = 750

Figure 2: **PFODA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: Direct loop injection
10 µl (500 ng/ml PFODA)

Mobile phase: Isocratic 90% (80:20 MeOH:ACN) / 10% H_2O
(both with 10 mM NH_4OAc buffer)

Flow: 300 µl/min

MS Parameters

Collision Gas (mbar) = 3.39e-3
Collision Energy (eV) = 15

Reagent

LCPFOS-br_00002

Scanned 10/14/16 SC

R: SBC 9/13/16

730515
ID: LCPFOS-br_00002
Exp: 10/14/20 Prpd: SBC
Potassium Perfluorooctane

730516
ID: LCPFOS-br_00003
Exp: 10/14/20 Prpd: SBC
Potassium Perfluorooctane

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

br-PFOSK

Potassium Perfluorooctanesulfonate Solution/Mixture of Linear and Branched Isomers

PRODUCT CODE:	br-PFOSK
LOT NUMBER:	brPFOSK1015
CONCENTRATION:	50 ± 2.5 µg/ml (total potassium salt)
	46.4 ± 2.3 µg/ml (total PFOS anion)
SOLVENT(S):	Methanol
DATE PREPARED: (mm/dd/yyyy)	10/13/2015
LAST TESTED: (mm/dd/yyyy)	10/14/2015
EXPIRY DATE: (mm/dd/yyyy)	10/14/2020
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place

DESCRIPTION:

The chemical purity has been determined to be ≥98% perfluorooctanesulfonate linear and branched isomers. The full name, structure and percent composition for each of the isomeric components are given in Table A.

DOCUMENTATION/ DATA ATTACHED:

Table A: Isomeric Components and Percent Composition by ^{19}F-NMR
Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS Data (SIR)
Figure 3: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- A 5-point calibration curve was generated using linear PFOS (potassium salt) and mass-labelled PFOS as an internal standard to enable quantitation of br-PFOSK using isotopic dilution.
- CAS#: 2795-39-3 (for linear isomer; potassium salt).

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HAZARDS:

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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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$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

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CALA

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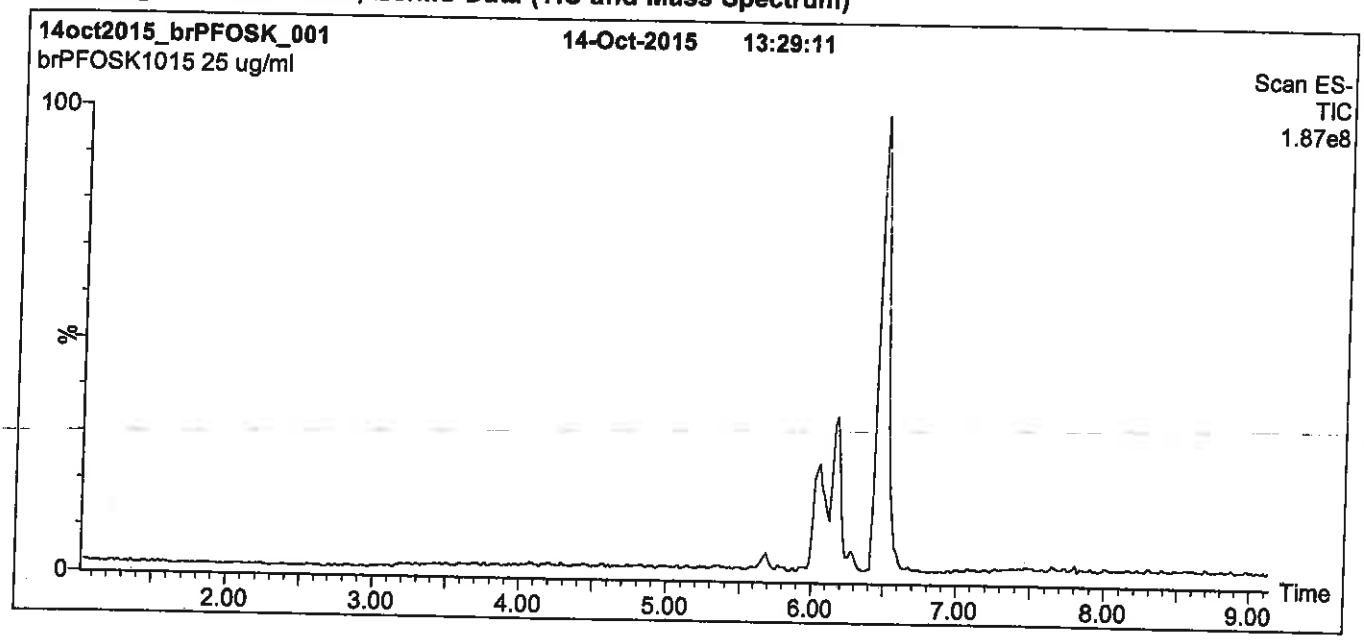
Table A: **br-PFOSK; Isomeric Components and Percent Composition (by ^{19}F-NMR)***

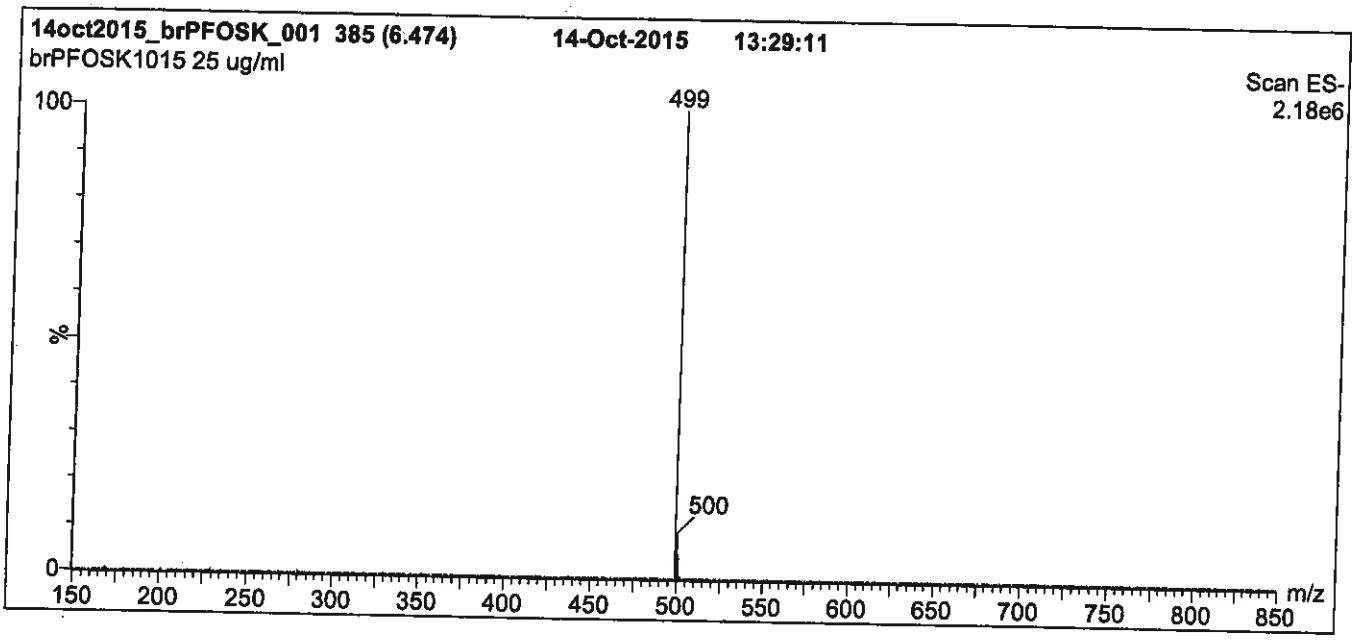
Isomer	Name	Structure	Percent Composition by ^{19}F-NMR
1	Potassium perfluoro-1-octanesulfonate	$CF_3CF_2CF_2CF_2CF_2CF_2CF_2CF_2SO_3^-K^+$	78.8
2	Potassium 1-trifluoromethylperfluoroheptanesulfonate**	$CF_3CF_2CF_2CF_2CF_2CF_2CF(CF_3)SO_3^-K^+$	1.2
3	Potassium 2-trifluoromethylperfluoroheptanesulfonate	$CF_3CF_2CF_2CF_2CF_2CF(CF_3)CF_2SO_3^-K^+$	0.6
4	Potassium 3-trifluoromethylperfluoroheptanesulfonate	$CF_3CF_2CF_2CF_2CF(CF_3)CF_2CF_2SO_3^-K^+$	1.9
5	Potassium 4-trifluoromethylperfluoroheptanesulfonate	$CF_3CF_2CF_2CF(CF_3)CF_2CF_2CF_2SO_3^-K^+$	2.2
6	Potassium 5-trifluoromethylperfluoroheptanesulfonate	$CF_3CF_2CF(CF_3)CF_2CF_2CF_2CF_2SO_3^-K^+$	4.5
7	Potassium 6-trifluoromethylperfluoroheptanesulfonate	$CF_3CF(CF_3)CF_2CF_2CF_2CF_2CF_2SO_3^-K^+$	10.0
8	Potassium 5,5-di(trifluoromethyl)perfluorohexanesulfonate	$CF_3-C(CF_3)CF_2CF_2CF_2CF_2SO_3^-K^+$	0.2
9	Potassium 4,4-di(trifluoromethyl)perfluorohexanesulfonate	$CF_3CF_2-C(CF_3)-CF_2CF_2CF_2SO_3^-K^+$	0.03
10	Potassium 4,5-di(trifluoromethyl)perfluorohexanesulfonate	$CF_3-CF(CF_3)-CF(CF_3)-CF_2CF_2CF_2SO_3^-K^+$	0.4
11	Potassium 3,5-di(trifluoromethyl)perfluorohexanesulfonate	$CF_3-CF(CF_3)-CF_2-CF(CF_3)-CF_2CF_2SO_3^-K^+$	0.07

* Percent of total perfluorooctanesulfonate isomers only. Isomers are labelled in Figure 2.
** Systematic Name: Potassium perfluorooctane-2-sulfonate.

Certified By: _____ **Date:** 10/15/2015
B.G. Chittim (mm/dd/yyyy)

Figure 1: **br-PFOSK; 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 12 min and hold for 2 min.
Return to initial conditions over 0.5 min.
Time: 16 min

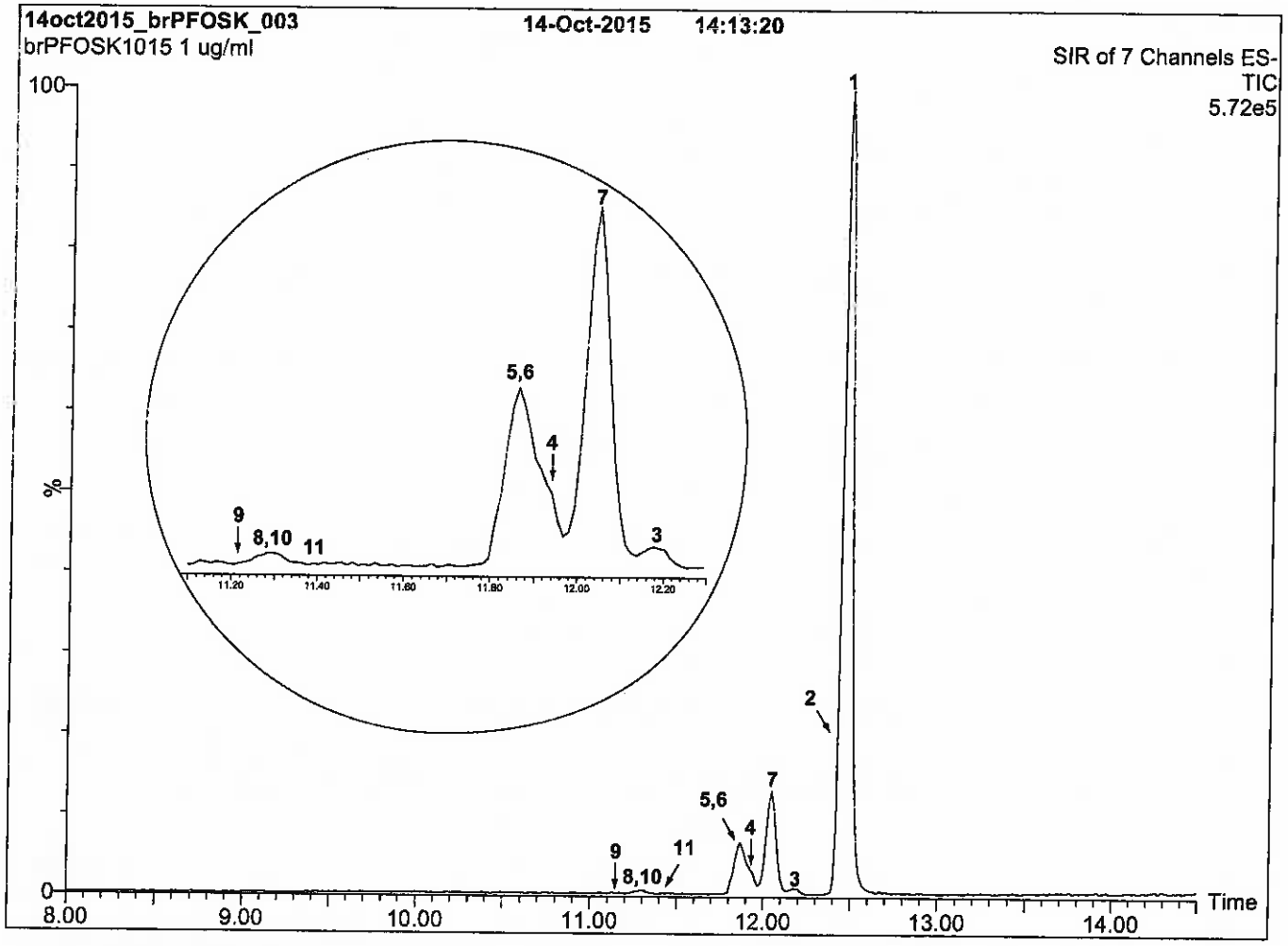
Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (150 - 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: **br-PFOSK; LC/MS Data (SIR)**



Conditions for Figure 2:

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)

Injection: 1.0 µg/ml of br-PFOSK

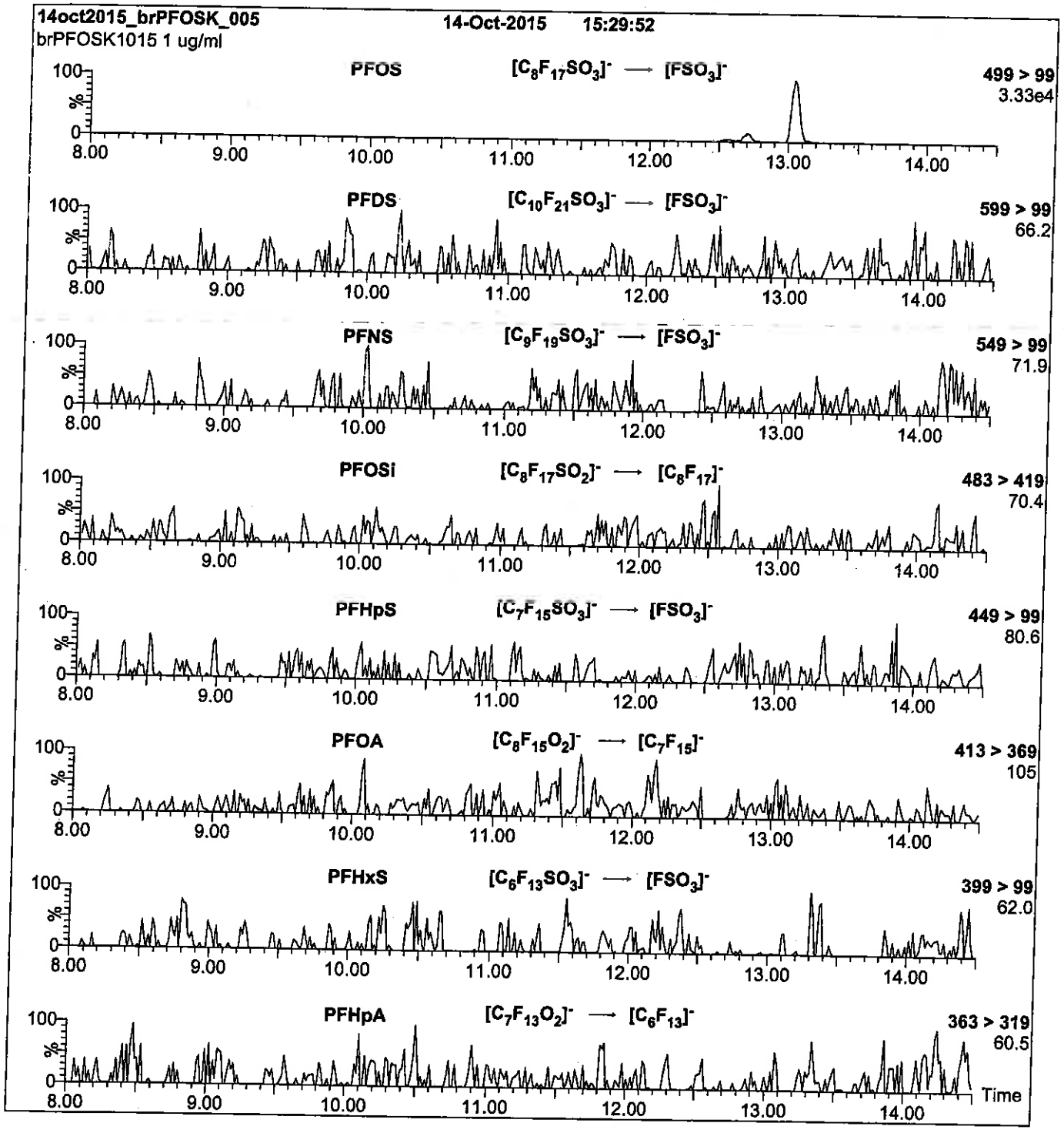
Mobile Phase: Gradient
45% (80:20 MeOH:ACN) / 55% H_2O (both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 15 min and hold for 3 min.
Return to initial conditions over 1 min.
Time: 20 min

Flow: 300 µl/min

MS Conditions:

SIR (ES^-)
Source = 110 °C
Desolvation = 325 °C
Cone Voltage = 60V

Figure 3: **br-PFOSK; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 3:

Injection: On-column

Mobile phase: Same as Figure 2

Flow: 300 µl/min

MS Parameters

Collision Gas (mbar) = 3.06e-3
Collision Energy (eV) = 11-50 (variable)

Reagent

LCPFOSA_00008

Scanned 10/14/16

R: SBC 9/13/16

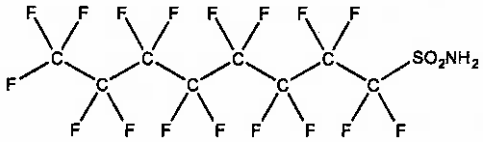
730534
ID: LCPFOSA_00009
Exp: 09/02/17 Prpd: SBC
PF-1-octanesulfonamide

730533
ID: LCPFOSA_00008
Exp: 09/02/17 Prpd: SBC
PF-1-octanesulfonamide

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE:	FOSA-I	**LOT NUMBER:**	FOSA0815I
COMPOUND:	Perfluoro-1-octanesulfonamide		
STRUCTURE:		**CAS #:**	754-91-6



MOLECULAR FORMULA:	$C_8H_2F_{17}NO_2S$	**MOLECULAR WEIGHT:**	499.14
CONCENTRATION:	50 ± 2.5 µg/ml	**SOLVENT(S):**	Isopropanol
CHEMICAL PURITY:	>98%		
LAST TESTED: (mm/dd/yyyy)	09/02/2015		
EXPIRY DATE: (mm/dd/yyyy)	09/02/2017		
RECOMMENDED STORAGE:	Refrigerate ampoule		

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.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: B.G. Chittim **Date:** 09/11/2015 (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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HOMOGENEITY:

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UNCERTAINTY:

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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.

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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 ISO 17025 REFERENCE MATERIAL PRODUCER

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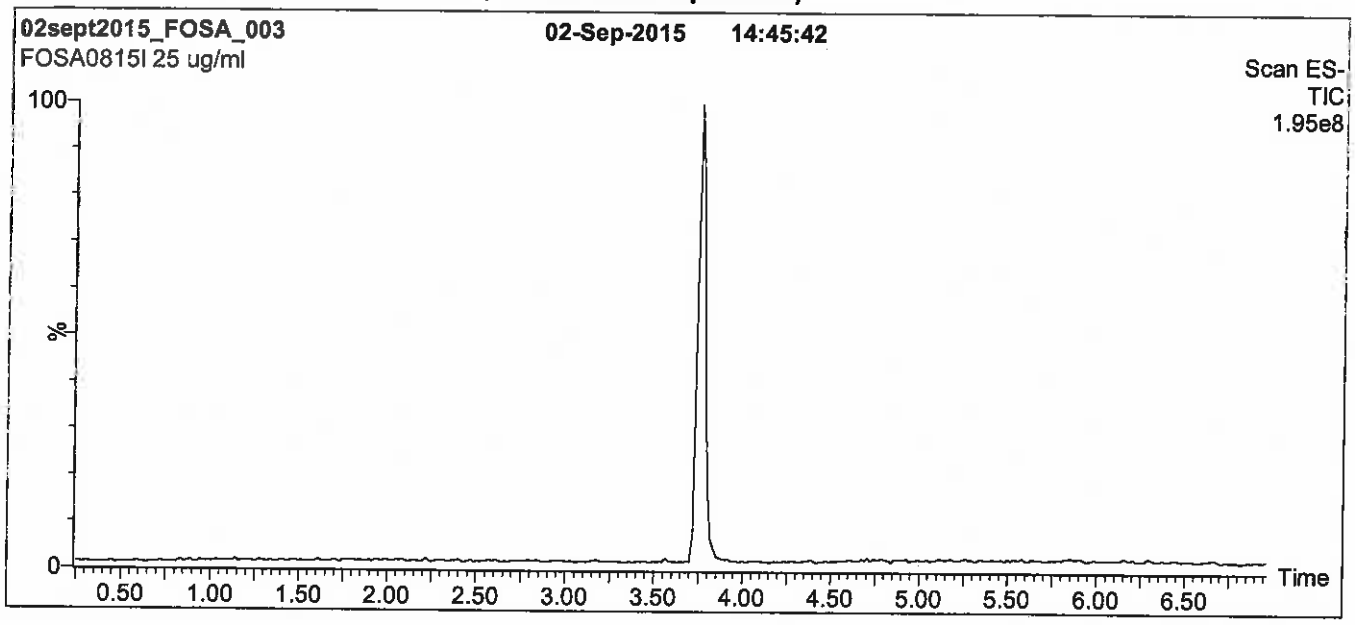
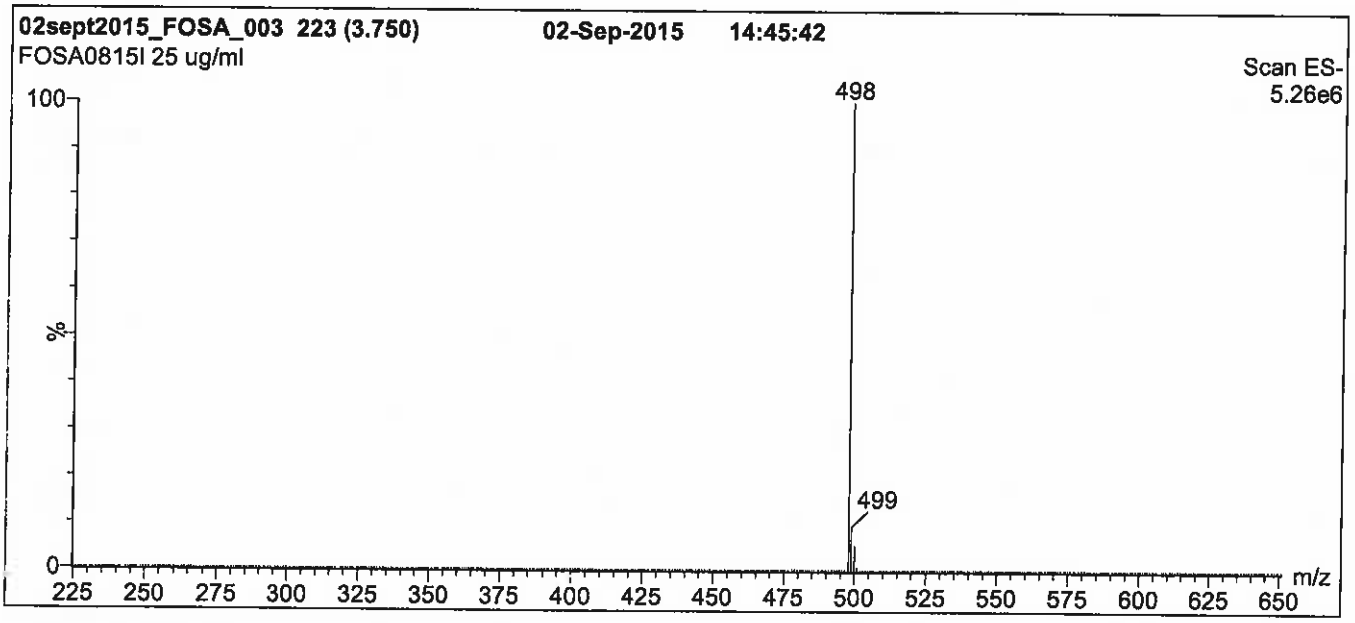
Figure 1: **FOSA-I; LC/MS Data (TIC and Mass Spectrum)**





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 7 min and hold for 1.5 min
before returning to initial conditions in 0.5 min.
Time: 10 min

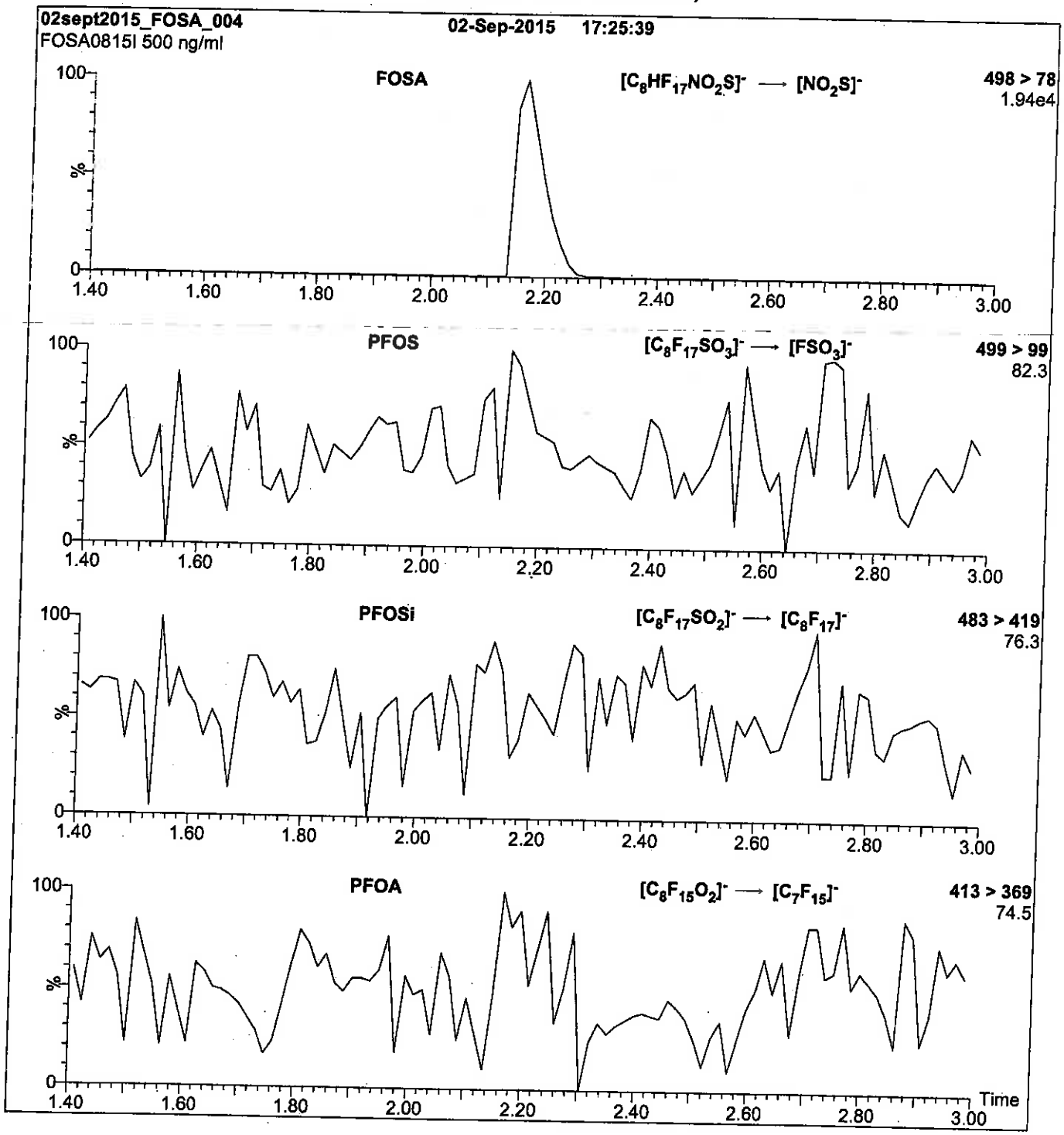
Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.50
Cone Voltage (V) = 40.00
Cone Gas Flow (l/hr) = 50
Desolvation Gas Flow (l/hr) = 750

Figure 2: **FOSA-I; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: Direct loop injection
10 µl (500 ng/ml FOSA-I)

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) = 3.54e-3
Collision Energy (eV) = 30

Reagent

LCPFPeA_00005

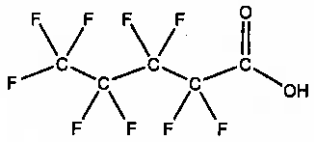
R: 7/6/16 CBW

671579
ID: LCPFPeA_00005
Exp: 01/30/20 Prpd: CBW
PF-n-pentanoic acid

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE:	PFPeA	**LOT NUMBER:**	PFPeA0115
COMPOUND:	Perfluoro-n-pentanoic acid		
STRUCTURE:		**CAS #:**	2706-90-3



MOLECULAR FORMULA:	$C_5HF_9O_2$	**MOLECULAR WEIGHT:**	264.05
CONCENTRATION:	50 ± 2.5 µg/ml	**SOLVENT(S):**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%		
LAST TESTED: (mm/dd/yyyy)	01/30/2015		
EXPIRY DATE: (mm/dd/yyyy)	01/30/2020		
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 ~ 0.3% of Perfluoro-n-heptanoic acid (PFHpA) and ~ 0.2% of $C_5H_2F_8O_2$ (hydrido - derivative) as measured by ^{19}F NMR.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: B.G. Chittim **Date:** 03/26/2015 (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

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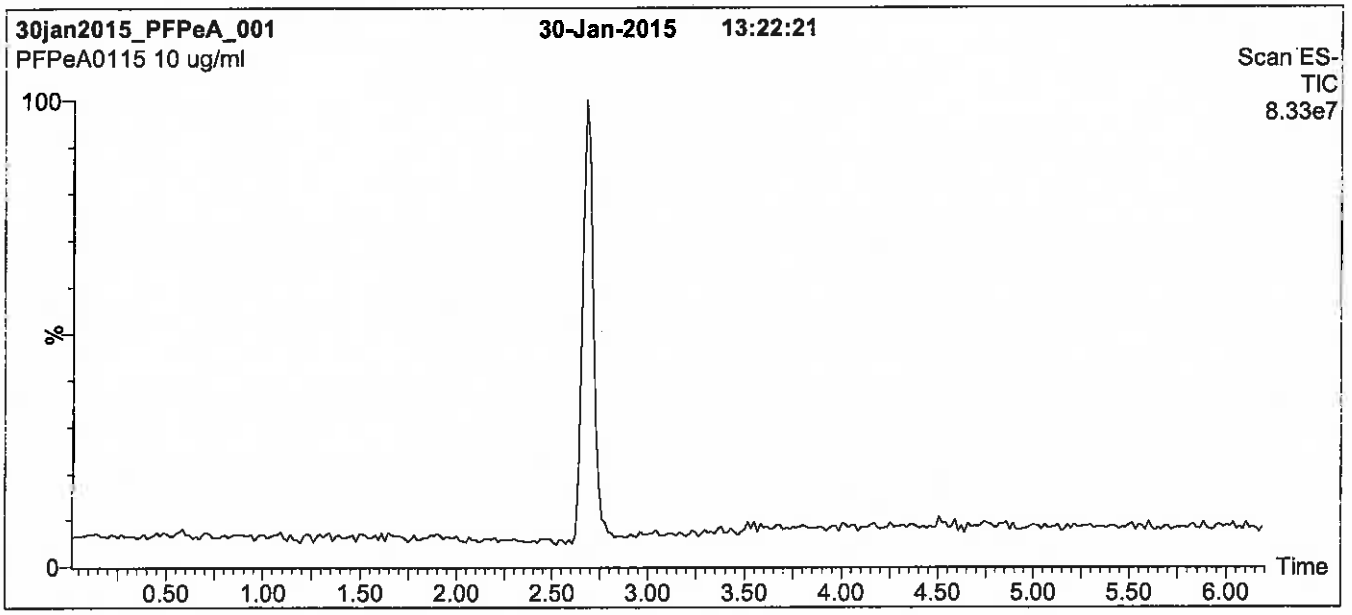
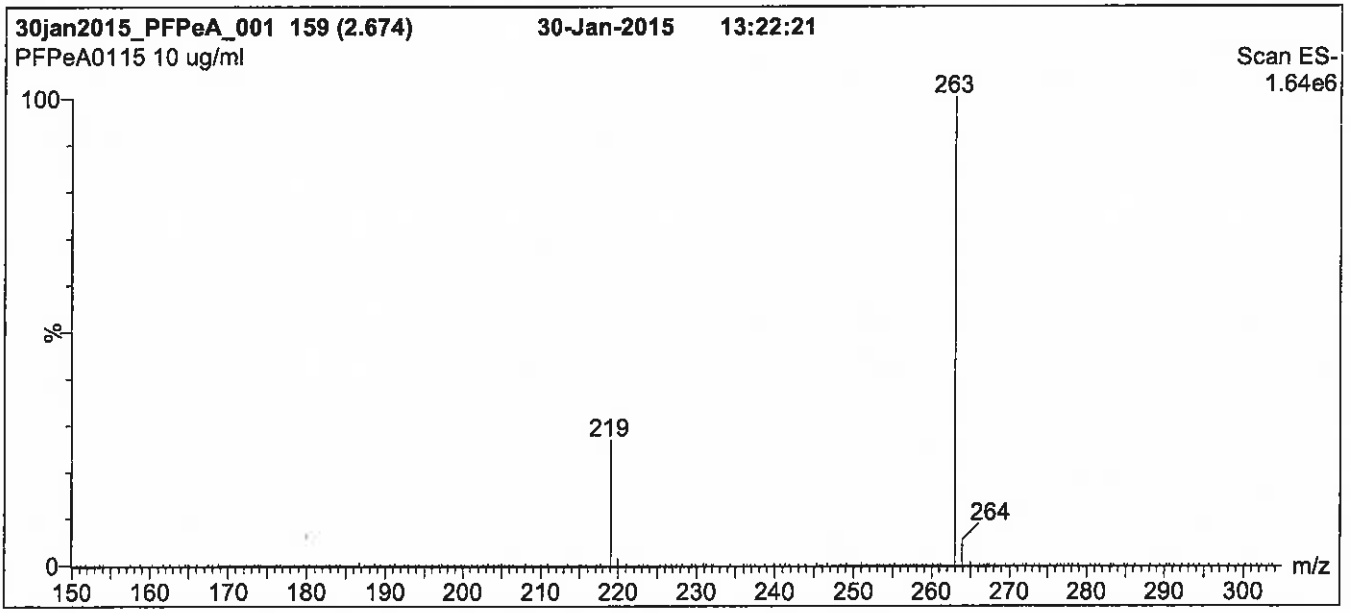
Figure 1: **PFPeA; LC/MS Data (TIC and Mass Spectrum)**





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: 30% (80:20 MeOH:ACN) / 70% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 7.5 min and hold for 1 min before returning to initial conditions in 0.5 min.
Time: 10 min

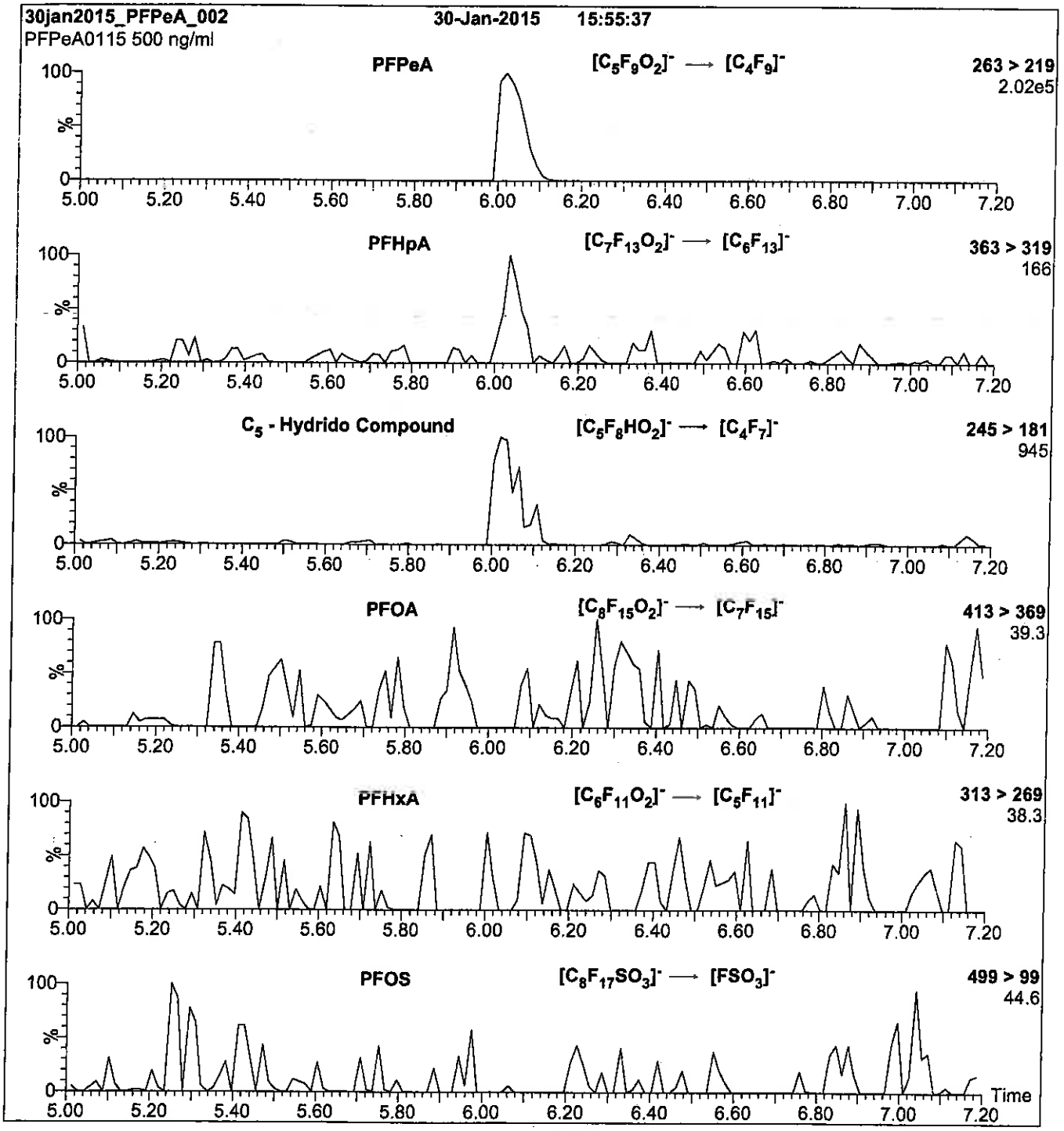
Flow: 300 µl/min

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) = 60
Desolvation Gas Flow (l/hr) = 750

Figure 2: **PFPeA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: Direct loop injection
10 µl (500 ng/ml PFPeA)

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) = 9

Reagent

LCPFTeDA_00005

R: SBG 9/13/16

730645
ID: LCPFTeDA_00005
Exp: 12/09/20 Prpd: SBC
PF-n-tetradecanoic acid

730659
ID: LCPFTeDA_00006
Exp: 12/09/20 Prpd: SBC
PF-n-tetradecanoic acid

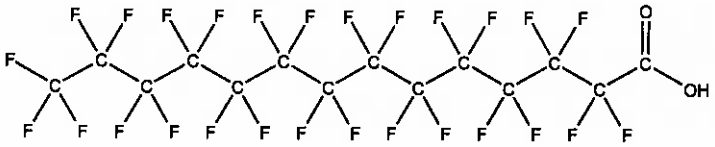
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: PFTeDA
LOT NUMBER: PFTeDA1215
COMPOUND: Perfluoro-n-tetradecanoic acid

STRUCTURE:

CAS #: 376-06-7



MOLECULAR FORMULA: $C_{14}HF_{27}O_2$
MOLECULAR WEIGHT: 714.11
CONCENTRATION: 50 ± 2.5 µg/ml
SOLVENT(S): Methanol
Water (<1%)

CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 12/09/2015
EXPIRY DATE: (mm/dd/yyyy) 12/09/2020
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 ~ 0.2% of PFDoA ($C_{12}HF_{23}O_2$) and ~ 0.2% of PFPeDA ($C_{15}HF_{29}O_2$).

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: B.G. Chittim **Date:** 12/09/2015 (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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HOMOGENEITY:

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CALA

ANAB ACCREDITED

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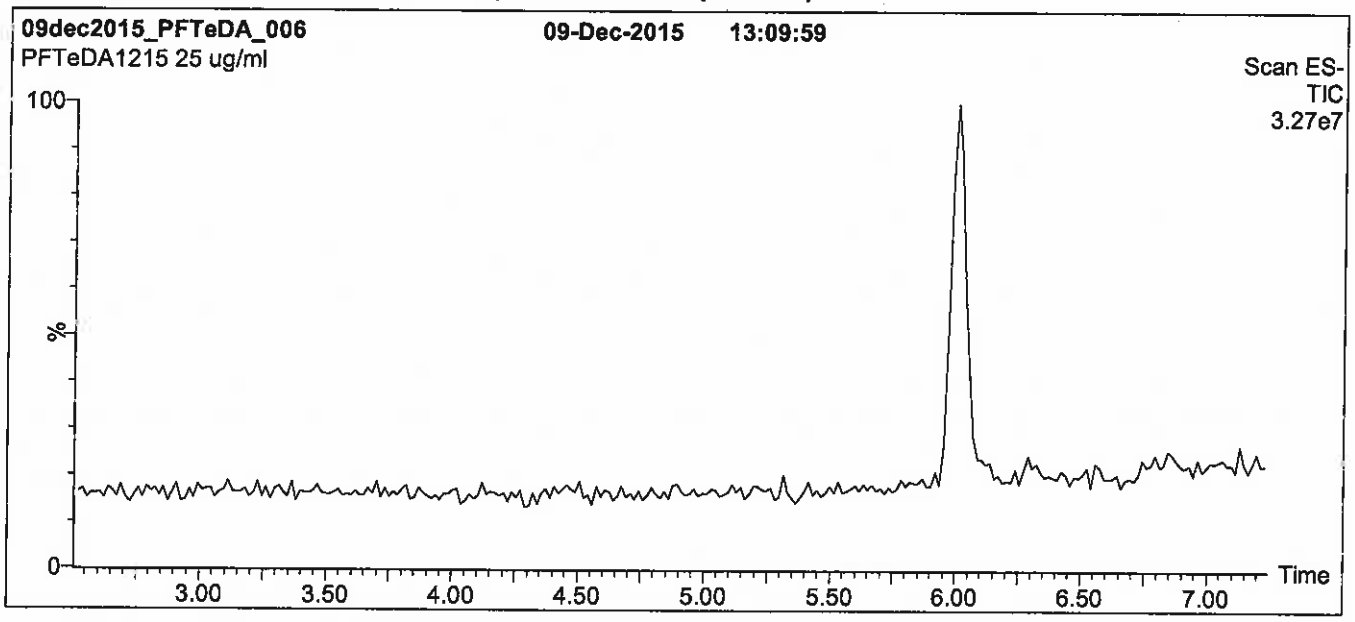
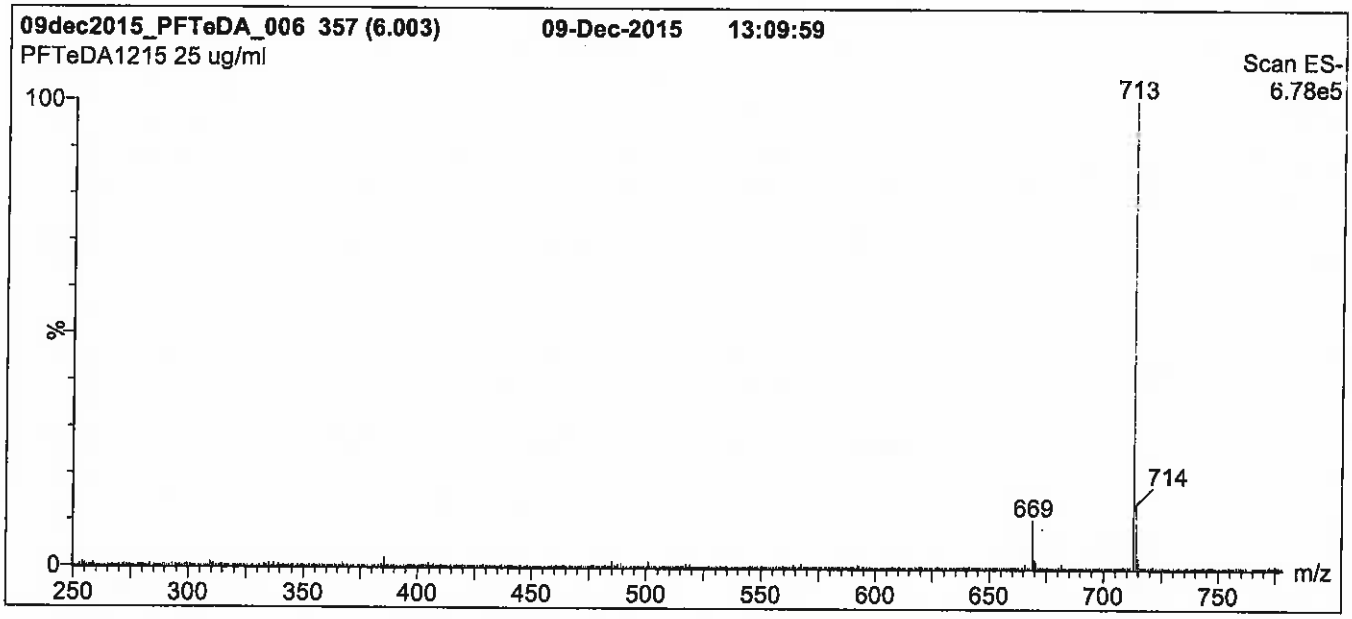
Figure 1: **PFTeDA; LC/MS Data (TIC and Mass Spectrum)**





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: 65% (80:20 MeOH:ACN) / 35% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 7.5 min and hold for 1.5 min before returning to initial conditions in 0.5 min.
Time: 10 min

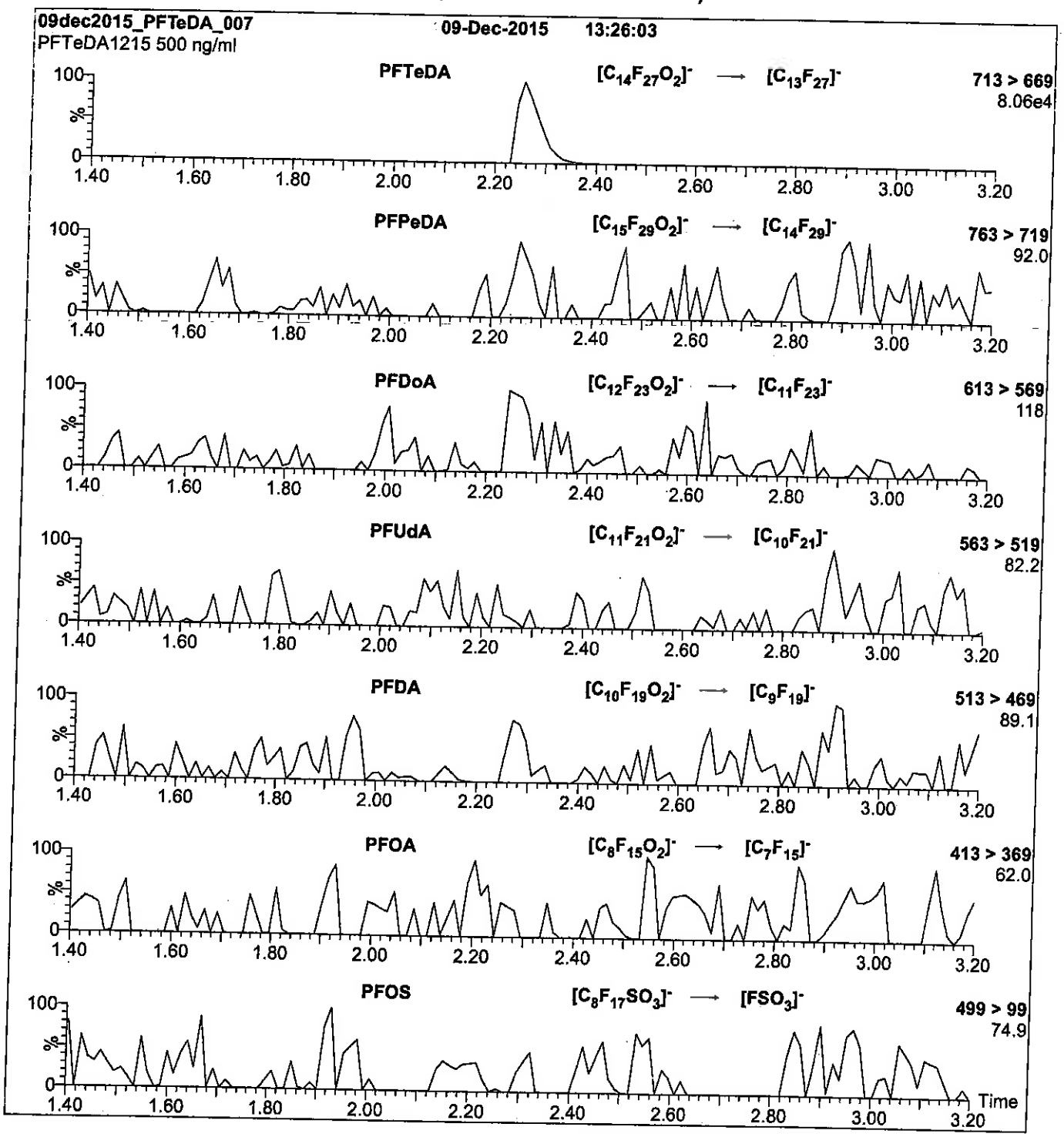
Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (250 - 1250 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 3.00
Cone Voltage (V) = 15.00
Cone Gas Flow (l/hr) = 60
Desolvation Gas Flow (l/hr) = 750

Figure 2: **PFTeDA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: Direct loop injection
10 µl (500 ng/ml PFTeDA)

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) = 3.43e-3
Collision Energy (eV) = 14

Reagent

LCPFTrDA_00005

R: SBC 9/13/16

730665
ID: LCPFTrDA_00005
Exp: 02/12/21 Prpd: SBC
PF-n-tridecanoic acid

730666
ID: LCPFTrDA_00006
Exp: 02/12/21 Prpd: SBC
PF-n-tridecanoic acid

WELLINGTON LABORATORIES

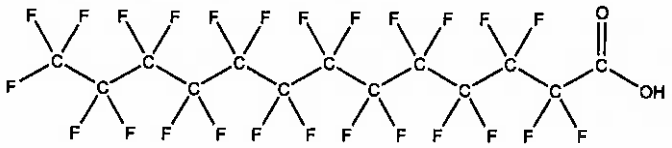
CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: PFTrDA
COMPOUND: Perfluoro-*n*-tridecanoic acid

LOT NUMBER: PFTrDA0216

STRUCTURE:

CAS #: 72629-94-8



MOLECULAR FORMULA: $C_{13}HF_{25}O_2$
CONCENTRATION: 50 ± 2.5 µg/ml

MOLECULAR WEIGHT: 664.11
SOLVENT(S): Methanol
Water (<1%)

CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 02/12/2016
EXPIRY DATE: (mm/dd/yyyy) 02/12/2021
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 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Contains ~ 0.1% of PFUdA ($C_{11}HF_{21}O_2$), ~ 0.4% of PFDoA ($C_{12}HF_{23}O_2$), and ~ 0.1% of PFTeDA ($C_{14}HF_{27}O_2$).

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: B.G. Chittim **Date:** 02/16/2016 (mm/dd/yyyy)

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
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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:

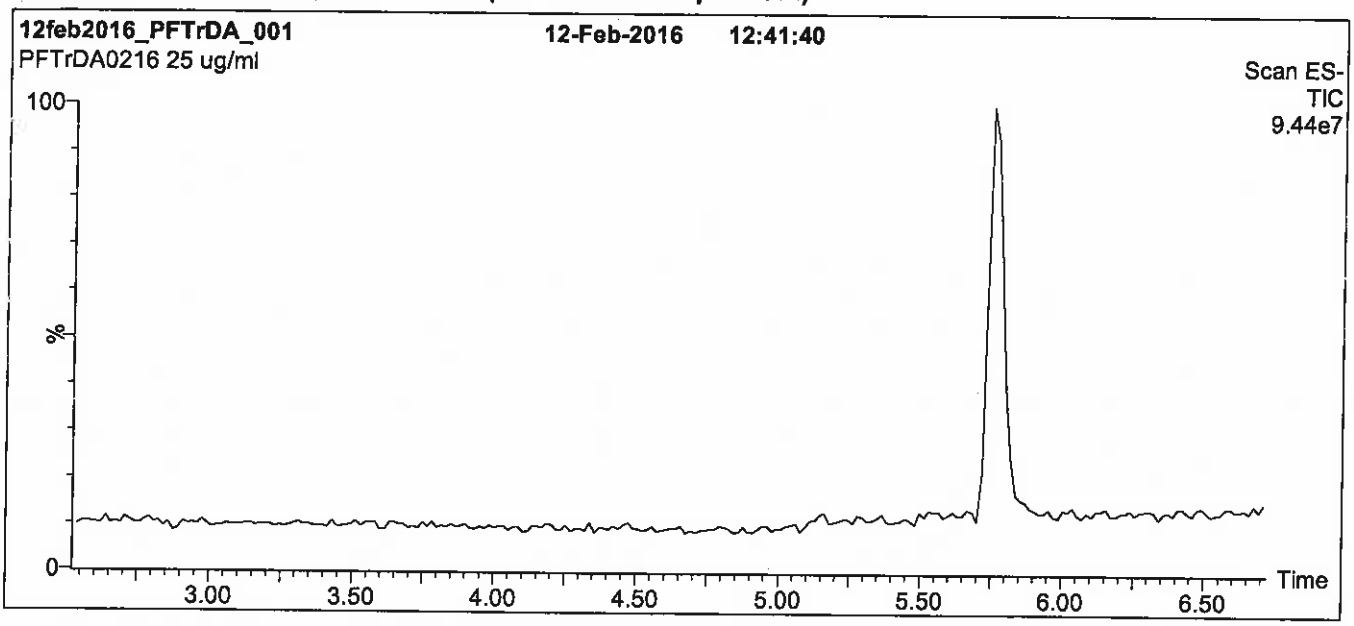
At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

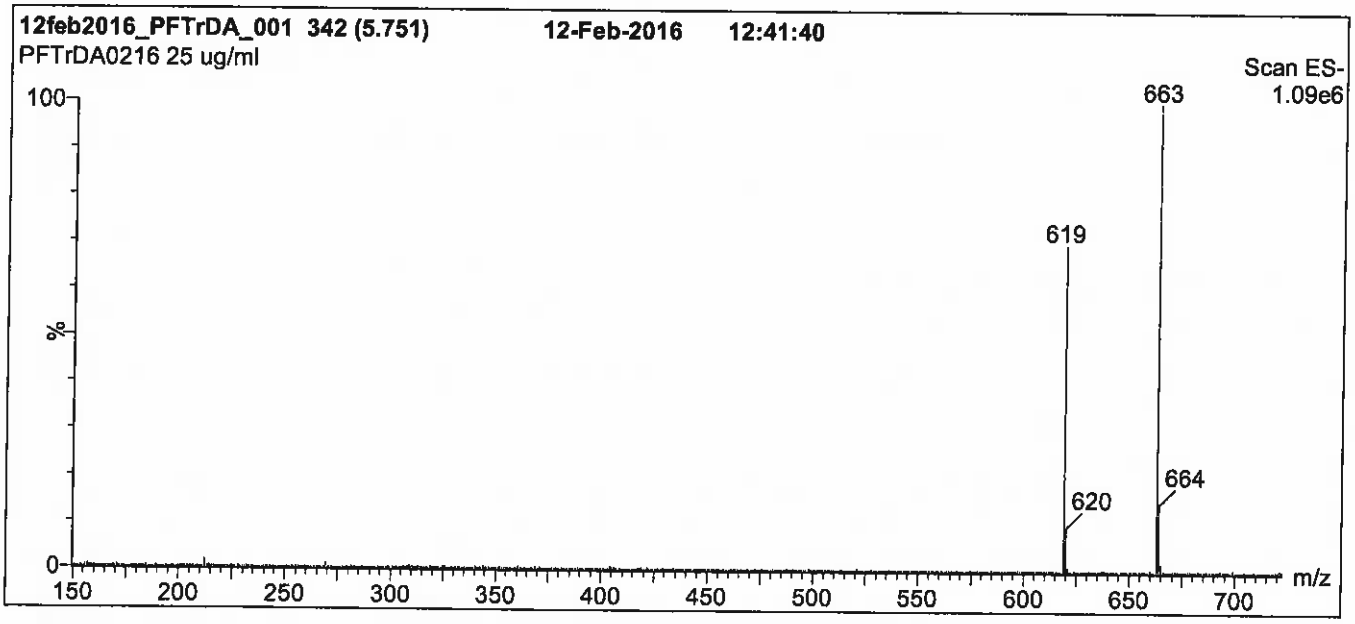
QUALITY MANAGEMENT:

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).

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: **PFTrDA; 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 7 min and hold for 1.5 min before returning to initial conditions in 0.5 min.
Time: 10 min

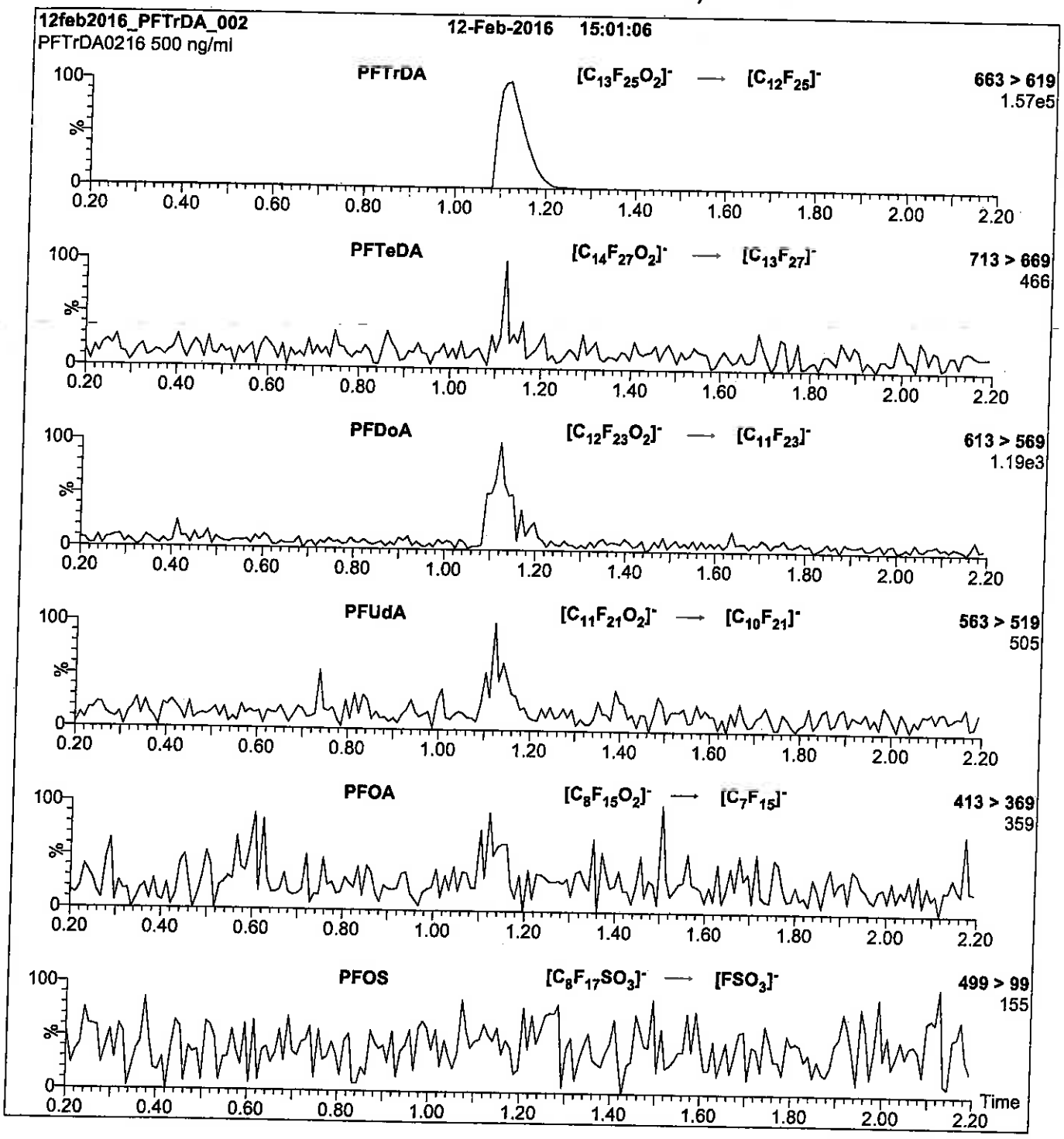
Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (150 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = 22.00
Cone Gas Flow (l/hr) = 60
Desolvation Gas Flow (l/hr) = 650

Figure 2: **PFTrDA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: Direct loop injection
10 µl (500 ng/ml PFTrDA)

Mobile phase: Isocratic 80% MeOH / 20% H_2O

Flow: 300 µl/min

MS Parameters

Collision Gas (mbar) = 3.35e-3
Collision Energy (eV) = 15

Reagent

LCPFUdA_00005

Scanned 10/14/16 R: SBC 9/13/16

730535
ID: LCPFUdA_00005
Exp: 08/19/20 Prpd: SBC
PF-n-undecanoic acid

730536
ID: LCPFUdA_00006
Exp: 08/19/20 Prpd: SBC
PF-n-undecanoic acid

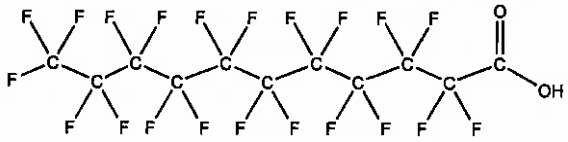
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: PFUdA
LOT NUMBER: PFUdA0815
COMPOUND: Perfluoro-n-undecanoic acid

STRUCTURE:

CAS #: 2058-94-8



MOLECULAR FORMULA: $C_{11}HF_{21}O_2$
MOLECULAR WEIGHT: 564.09
CONCENTRATION: 50 ± 2.5 µg/ml
SOLVENT(S): Methanol
Water (<1%)

CHEMICAL PURITY: >98%
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.

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

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:

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, SFC/UV/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, 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.

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 $x_1, x_2, \ldots x_n$ 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:

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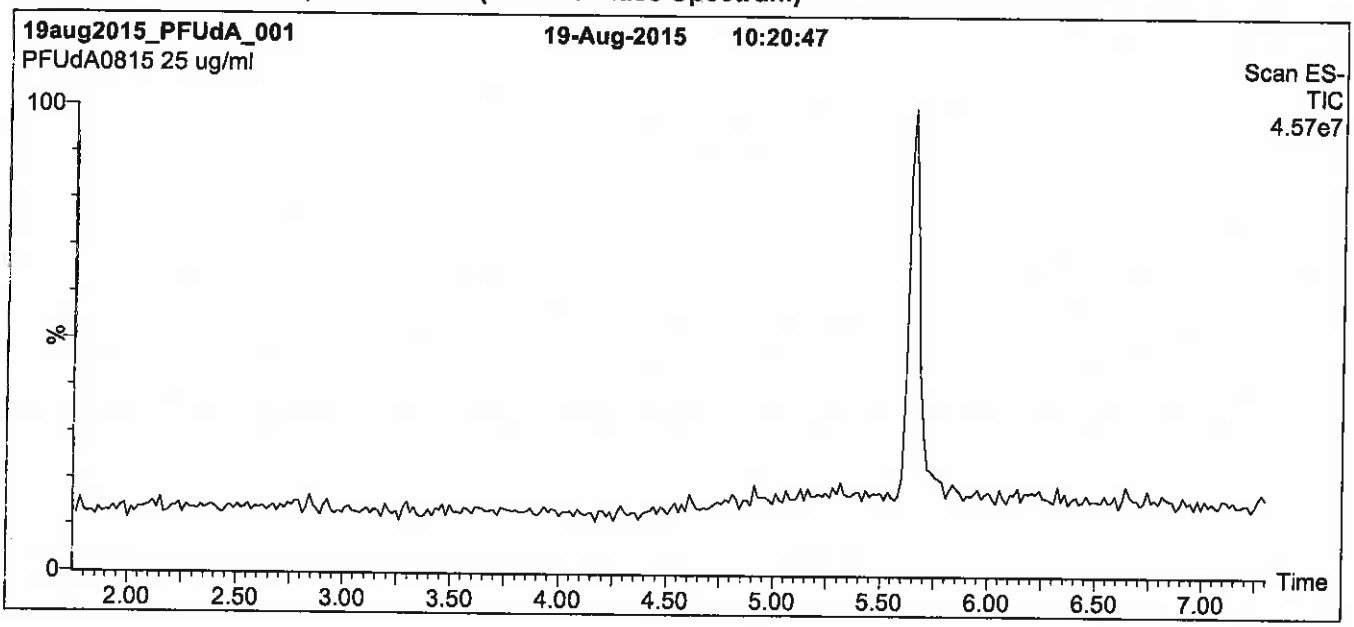
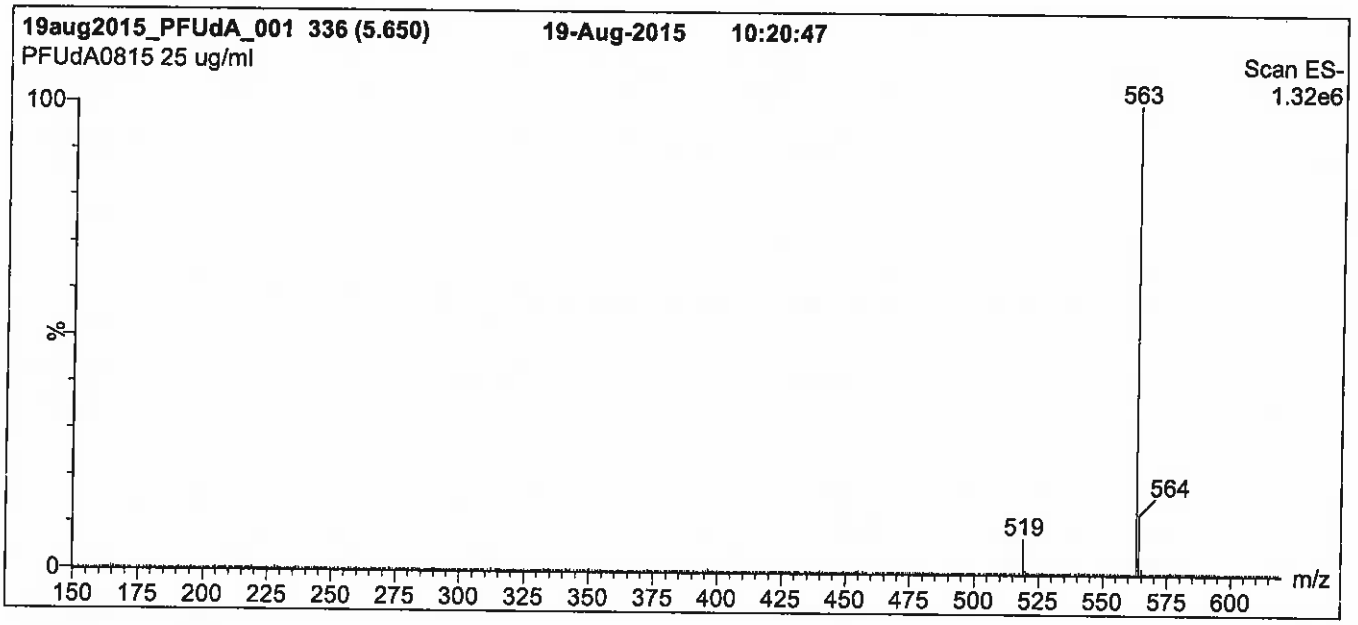
CALA

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: **PFUdA; 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

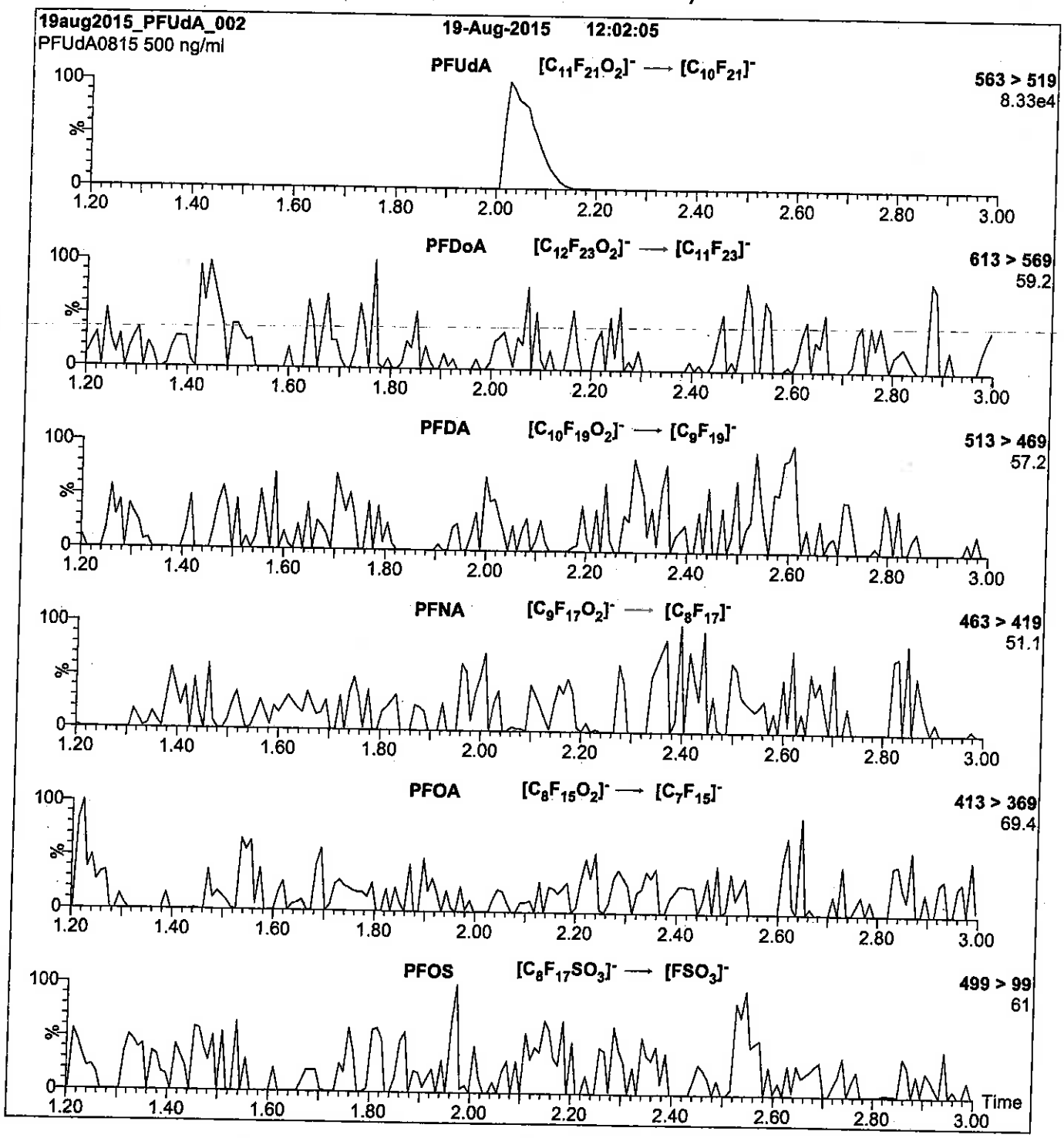
Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (150 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 3.00
Cone Voltage (V) = 15.00
Cone Gas Flow (l/hr) = 65
Desolvation Gas Flow (l/hr) = 750

Figure 2: **PFUdA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: Direct loop injection
10 µl (500 ng/ml PFUdA)

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) = 3.31e-3
Collision Energy (eV) = 11

Reagent

MS14DIC_00007

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Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31853 **Lot No.:** A0124653

Description : 1,4-dioxane

1,4-Dioxane 2,000µg/mL, Methylene Chloride, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : February 28, 2022 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	1,4-Dioxane	1,984.0 µg/mL	+/- 11.7844	µg/mL	Gravimetric
	CAS # 123-91-1 (Lot SHBG6312V)		+/- 42.5460	µg/mL	Unstressed
	Purity 99%		+/- 43.7790	µg/mL	Stressed

Solvent: Methylene Chloride (MEOH FREE)
CAS # 75-09-2
Purity 99%

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

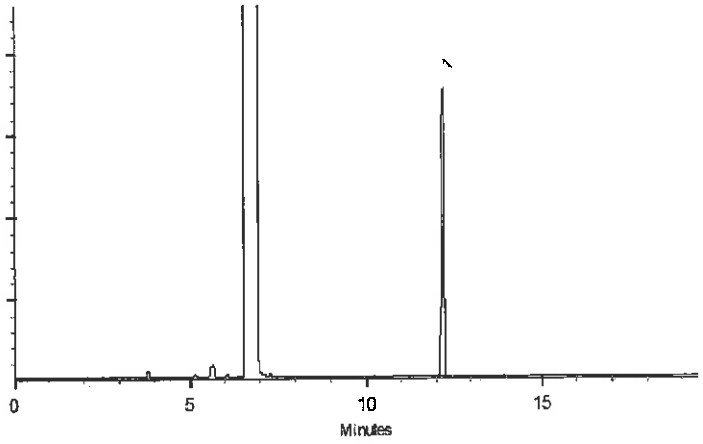
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Tom Suckar - Mix Technician

Date Mixed: 02-Feb-2017 **Balance:** 1128360905

Justine Albertson - Operations Tech-ARM QC

Date Passed: 06-Feb-2017

Manufactured under Restek's ISO 9001:2008
Registered Quality System
Certificate #FM 80397

Reagent

MS14DTA_00022

TraceCERT®
Traceable Certified Reference Materials

SUPELCO®
Solutions within.™
595 North Harrison Road • Bellefonte, PA
16823-0048 USA • Phone (814) 359-3441

Certificate of Analysis

Description: 1,4-Dioxane, 1x1ml, methanol, 2000ug/ml

Catalog Number: CRM48367
Lot Number: LC16305V

Expiration: September 2018

Storage: Room Temperature

Instructions for Use:
This sample is ready to use.
No additional sample preparation is necessary.

Analyte	CAS Number	Certified Conc. ug/mL	Uncertainty ug/mL	k
1,4-Dioxane	123-91-1	2000	+/- 58.2	2.00

Manufactured and certified by Sigma-Aldrich RTC, Inc.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER Cert# AR-1470

ANAB ACCREDITED TESTING LABORATORY Cert# AR-1467

Notes:

- Certified value – based on a prepared to value and analytically verified by RTC with associated uncertainties from the preparation and analytical procedures.

- Expanded Uncertainty – Uncertainty values in this document are expressed as Expanded Uncertainty (Ucrm) corresponding to the 95% confidence interval. Ucrm is derived from the combined standard uncertainty multiplied by the coverage factor k, which is obtained from a t-distribution and degrees of freedom. The components of combined standard uncertainty include the uncertainties due to characterization, homogeneity, long term stability, and short term stability (transport). The components due to stability are generally considered to be negligible unless otherwise indicated by stability studies.

- k: Coverage factor derived from a t-distribution table, based on the degrees of freedom of the data set. Confidence interval = 95%

- Traceability: The standard was manufactured under an ISO/IEC certified quality system. The balance used to weight raw materials is accurate to +/- 0.0001g and calibrated regularly using mass standards traceable to NIST. All dilutions were performed gravimetrically. Additionally, individual analytes are traceable to NIST SMRs were available or other certified reference material as specified by each analyte.

- Homogeneity: Homogeneity was assessed in accordance with ISO Guide 35. Completed units were sampled using a random stratified sampling protocol. The results of chemical analysis were then compared using a one-way analysis of variance approach as described by TNI EL-V3-2009 Appendix A.2. See instructions for minimum sub-sample size.

Certification Date: 9/25/2015
Form: CRM48367

Duane Funk
QC Manager

Reagent

MS14DTA_00023

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31853 **Lot No.:** A0121319

Description : 1,4-dioxane

1,4-Dioxane 2,000µg/mL, Methylene Chloride, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : August 31, 2021 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	1,4-Dioxane **CAS #** 123-91-1 **Purity** 99%	(Lot SHBG1461V)	2,001.0 µg/mL	+/- 11.7430 +/- 42.8714 +/- 44.1160	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

Solvent: Methylene Chloride (MEOH FREE)
CAS # 75-09-2
Purity 99%

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

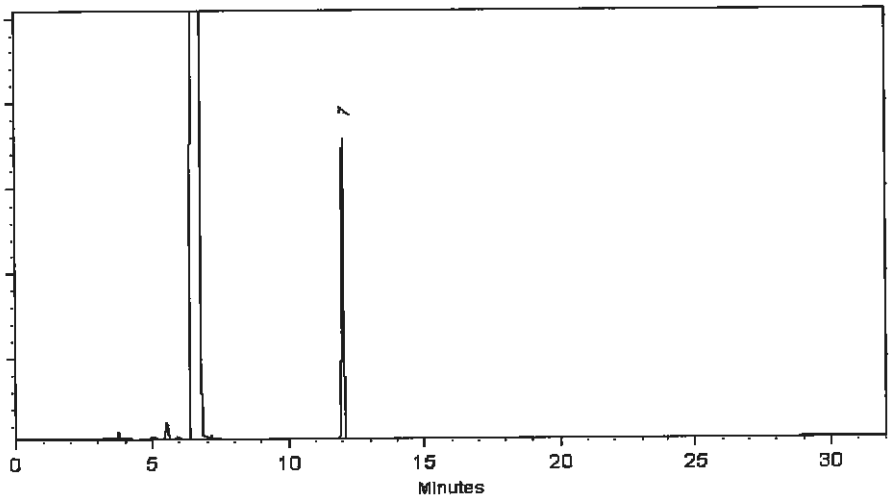
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Dawn Brownson - Mix Technician

Date Mixed: 31-Aug-2016 **Balance:** 1128360905

Jennifer L. Pollino - QC Analyst

Date Passed: 02-Sep-2016

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

Reagent

MS8270IS_00016

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

ACCREDITED
ISO Guide 34 Accredited Reference Material Producer Certificate #3222.01

Certificate of Analysis

ACCREDITED
ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 567684 **Lot No.:** A0120796

Description : 8270 Internal Standard

8270 Internal Standard 2,000µg/mL, Methylene Chloride, 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : August 31, 2021 **Storage:** 10°C or colder

Handling: Sonication required. Mix is photosensitive.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L., K=2)	
1	1,4-Dichlorobenzene-d4 **CAS #** 3855-82-1 (Lot PR-18488) **Purity** 99%	2,008.2 µg/mL	+/- 11.6758 µg/mL +/- 90.4505 µg/mL +/- 100.3660 µg/mL	Gravimetric Unstressed Stressed
2	Naphthalene-d8 **CAS #** 1146-65-2 (Lot M-1452) **Purity** 99%	2,004.0 µg/mL	+/- 11.6514 µg/mL +/- 90.2614 µg/mL +/- 100.1561 µg/mL	Gravimetric Unstressed Stressed
3	Acenaphthene-d10 **CAS #** 15067-26-2 (Lot PR-25444) **Purity** 99%	2,007.7 µg/mL	+/- 11.6729 µg/mL +/- 90.4280 µg/mL +/- 100.3410 µg/mL	Gravimetric Unstressed Stressed
4	Phenanthrene-d10 **CAS #** 1517-22-2 (Lot PR-23065) **Purity** 99%	2,011.4 µg/mL	+/- 11.6945 µg/mL +/- 90.5947 µg/mL +/- 100.5260 µg/mL	Gravimetric Unstressed Stressed
5	Chrysene-d12 **CAS #** 1719-03-5 (Lot PR-26678) **Purity** 98%	2,018.8 µg/mL	+/- 11.7375 µg/mL +/- 90.9280 µg/mL +/- 100.8958 µg/mL	Gravimetric Unstressed Stressed
6	Perylene-d12 **CAS #** 1520-96-3 (Lot PR-24113) **Purity** 99%	2,002.6 µg/mL	+/- 11.6433 µg/mL +/- 90.1983 µg/mL +/- 100.0862 µg/mL	Gravimetric Unstressed Stressed

Solvent: Methylene Chloride
CAS # 75-09-2
Purity 99%

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

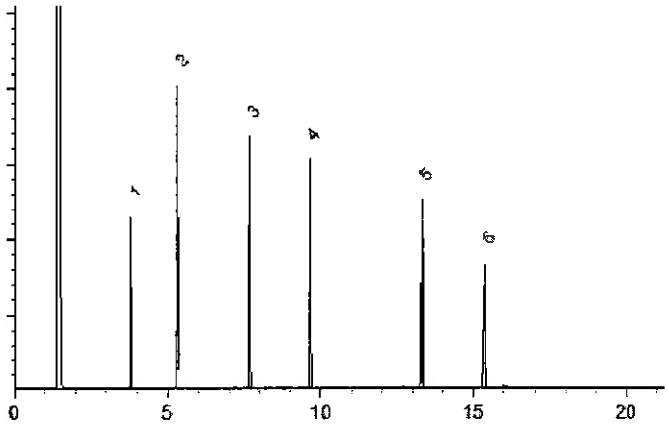
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Dawn Brownson - Mix Technician

Date Mixed: 03-Aug-2016 **Balance:** 1128353505

Date Passed: 05-Aug-2016

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

Reagent

MS8270SU_00094

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

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Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 570814 **Lot No.:** A0117528

Description : 8270 Surrogate Standard RTS with Indicator

8270 Surrogate Standard RTS with Indicator 100 µg/ml, Methanol/Methylene Chloride (95:5), 100 ml/bottle

Container Size : 100 mL **Pkg Amt:** > 100 mL

Expiration Date : February 28, 2019 **Storage:** 10°C or colder

Handling: Sonicate prior to use.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	2-Fluorophenol **CAS #** 367-12-4 **Purity** 99%	(Lot STBC5591V)	100.5 µg/mL	+/- 0.5843 +/- 2.9326 +/- 3.5586	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
2	Phenol-d5 **CAS #** 4165-62-2 **Purity** 99%	(Lot X479P8)	100.2 µg/mL	+/- 0.5827 +/- 2.9250 +/- 3.5494	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
3	Nitrobenzene-d5 **CAS #** 4165-60-0 **Purity** 99%	(Lot PR-24042)	100.0 µg/mL	+/- 0.5814 +/- 2.9183 +/- 3.5413	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
4	2-Fluorobiphenyl **CAS #** 321-60-8 **Purity** 99%	(Lot S26B003)	100.0 µg/mL	+/- 0.5815 +/- 2.9186 +/- 3.5416	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
5	2,4,6-Tribromophenol **CAS #** 118-79-6 **Purity** 99%	(Lot 29699MJV)	100.6 µg/mL	+/- 0.5846 +/- 2.9344 +/- 3.5608	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
6	p-Terphenyl-d14 **CAS #** 1718-51-0 **Purity** 99%	(Lot PR-21037)	100.0 µg/mL	+/- 0.5814 +/- 2.9183 +/- 3.5413	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

Solvent: Methanol/Methylene Chloride (95:5)
CAS # 67-56-1/75-09-2
Purity 99%

Tech Tips:
Due to the limited solubility of p-terphenyl-d14 in methanol, we do not recommend that this mixture be diluted in methanol.

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

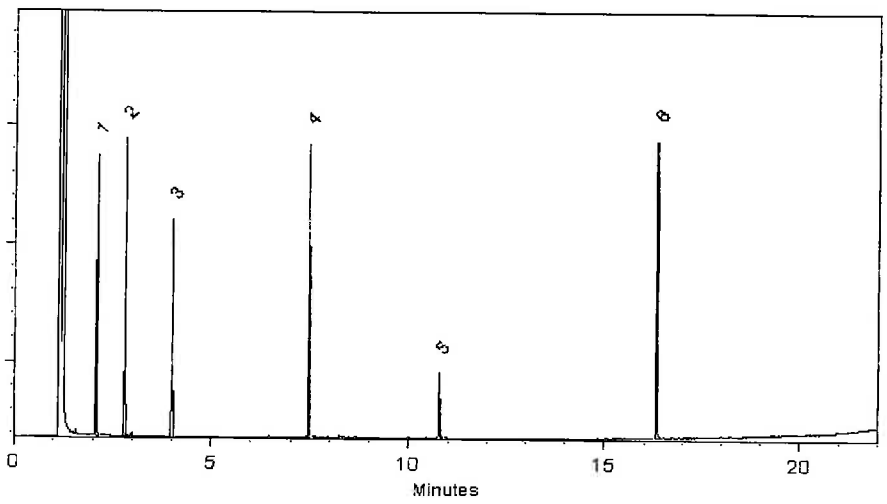
Carrier Gas:
hydrogen-constant flow 1.8 mL/min.

Temp. Program:
80°C (hold 0.1 min.) to 330°C
@ 9.6°C/min. (hold 0.86 min.)

Inj. Temp:
250°C

Det. Temp:
340°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Brandon Cook - Mix Technician

Date Mixed: 23-Feb-2016 **Balance:** B442140311

Amanda Miller - QC Analyst

Date Passed: 26-Feb-2016

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

MS8270SU_00100

RESTEK® CERTIFIED REFERENCE MATERIAL

110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

ACCREDITED
ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

Certificate of Analysis

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 567685 **Lot No.:** A0103960

Description : 8270 Surrogate Standard

8270 Surrogate Standard 5,000 ug/ml, Methylene Chloride, 5 ml/ampul

Rec'd 4/22/16

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : June 30, 2019 **Storage:** 10°C or colder

Handling: Sonicate prior to use.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	2-Fluorophenol		5,006.1 µg/mL	+/- 29.1044	µg/mL	Gravimetric
	CAS # 367-12-4	(Lot STBC5591V)		+/- 124.7363	µg/mL	Unstressed
	Purity 99%			+/- 156.8636	µg/mL	Stressed
2	Phenol-d5		5,002.5 µg/mL	+/- 29.0834	µg/mL	Gravimetric
	CAS # 4165-62-2	(Lot X479P6)		+/- 124.6466	µg/mL	Unstressed
	Purity 99%			+/- 156.7508	µg/mL	Stressed
3	Nitrobenzene-d5		5,003.7 µg/mL	+/- 29.0901	µg/mL	Gravimetric
	CAS # 4165-60-0	(Lot PR-20474)		+/- 124.6753	µg/mL	Unstressed
	Purity 99%			+/- 156.7868	µg/mL	Stressed
4	2-Fluorobiphenyl		5,002.4 µg/mL	+/- 29.0826	µg/mL	Gravimetric
	CAS # 321-60-8	(Lot B19Z016)		+/- 124.6429	µg/mL	Unstressed
	Purity 99%			+/- 156.7461	µg/mL	Stressed
5	2,4,6-Tribromophenol		5,024.2 µg/mL	+/- 29.2093	µg/mL	Gravimetric
	CAS # 118-79-6	(Lot 29699MJV)		+/- 125.1861	µg/mL	Unstressed
	Purity 99%			+/- 157.4292	µg/mL	Stressed
6	p-Terphenyl-d14		5,010.4 µg/mL	+/- 29.1291	µg/mL	Gravimetric
	CAS # 1718-51-0	(Lot PR-20577)		+/- 124.8422	µg/mL	Unstressed
	Purity 99%			+/- 156.9968	µg/mL	Stressed

Solvent: Methylene Chloride
CAS # 75-09-2
Purity 99%

Tech Tips:
Due to the limited solubility of p-terphenyl-d14 in methanol, we do not recommend that this mixture be diluted in methanol.

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

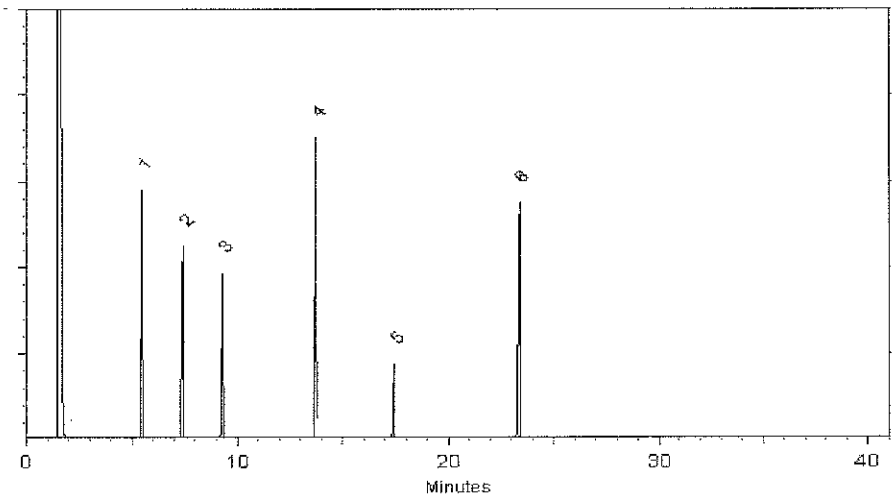
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Rebecca Lawver

Jennifer L. Pollino - QC Analyst

Date Mixed: 11-Jun-2014 **Balance:** 1128360905

Date Passed: 23-Jun-2014

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

Method 8270C SIM

Semivolatile Organic Compounds (GC/MS SIM) by Method 8270C (SIM)

FORM II
GC/MS SEMI VOA SURROGATE RECOVERY

Lab Name: TestAmerica Sacramento Job No.: 320-25962-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): HP-5MS ID: 0.25(mm)

Client Sample ID	Lab Sample ID	NBZ #
MEAFF-MRD-1A01-0217	320-25962-1	61
MEAFF-MRD-1A01P-0217	320-25962-2	63
	MB 320-152172/1-A	63
	LCS 320-152172/2-A	73
	LCSD 320-152172/3-A	61

	QC LIMITS
NBZ = Nitrobenzene-d5	42-91

Column to be used to flag recovery values

FORM II WS-MS-0011

FORM III
GC/MS SEMI VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Sacramento Job No.: 320-25962-1

SDG No.:

Matrix: Water Level: Low Lab File ID: S030602.D

Lab ID: LCS 320-152172/2-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,4-Dioxane	10.0	2.90	29	12-52	M

Column to be used to flag recovery and RPD values

FORM III WS-MS-0011

FORM III
GC/MS SEMI VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: TestAmerica Sacramento Job No.: 320-25962-1

SDG No.:

Matrix: Water Level: Low Lab File ID: S030603.D

Lab ID: LCSD 320-152172/3-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,4-Dioxane	10.0	2.61	26	11	20	12-52	M

Column to be used to flag recovery and RPD values

FORM III WS-MS-0011

FORM IV
GC/MS SEMI VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Sacramento Job No.: 320-25962-1

SDG No.:

Lab File ID: S030601.D Lab Sample ID: MB 320-152172/1-A

Matrix: Water Date Extracted: 02/24/2017 15:44

Instrument ID: SV1 Date Analyzed: 03/06/2017 11:24

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 320-152172/2-A	S030602.D	03/06/2017 11:46
	LCSD 320-152172/3-A	S030603.D	03/06/2017 12:08
MEAFF-MRD-1A01-0217	320-25962-1	S030614.D	03/06/2017 16:12
MEAFF-MRD-1A01P-0217	320-25962-2	S030615.D	03/06/2017 16:34

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Sacramento Job No.: 320-25962-1

SDG No.:

Sample No.: ICIS 320-151686/5 Date Analyzed: 02/22/2017 11:03

Instrument ID: SV1 GC Column: HP-5MS ID: 0.25(mm)

Lab File ID (Standard): 14D0222E.D Heated Purge: (Y/N) N

Calibration ID: 28577

		DCBd4					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		786305	7.20				
UPPER LIMIT		1572610	7.70				
LOWER LIMIT		393153	6.70				
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 320-151686/9		879747	7.20				
CCV 320-153398/2		703077	7.20				
MB 320-152172/1-A		732550	7.20				
LCS 320-152172/2-A		735352	7.20				
LCSD 320-152172/3-A		633054	7.20				
320-25962-1	MEAFF-MRD-1A01-0217	645375	7.20				
320-25962-2	MEAFF-MRD-1A01P-0217	651413	7.20				

DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII WS-MS-0011

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento | Job No.: 320-25962-1

SDG No.:

Client Sample ID: MEAFF-MRD-1A01-0217 | Lab Sample ID: 320-25962-1

Matrix: Water | Lab File ID: S030614.D

Analysis Method: WS-MS-0011 | Date Collected: 02/21/2017 15:55

Extract. Method: 3510C | Date Extracted: 02/24/2017 15:44

Sample wt/vol: 1049(mL) | Date Analyzed: 03/06/2017 16:12

Con. Extract Vol.: 1.0(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 153398 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
123-91-1	1,4-Dioxane	0.48	U	0.95	0.48	0.19

CAS NO.	SURROGATE	%REC	Q	LIMITS
4165-60-0	Nitrobenzene-d5	61		42-91

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNA\Sacramento\ChromData\SV1\20170306-40510.b\S030614.D
Lims ID: 320-25962-A-1-A
Client ID: MEAFF-MRD-1A01-0217
Sample Type: Client
Inject. Date: 06-Mar-2017 16:12:30 ALS Bottle#: 14 Worklist Smp#: 16
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 320-25962-a-1-a
Misc. Info.: 320-0040510-016
Operator ID: Instrument ID: SV1

Method: \\ChromNA\Sacramento\ChromData\SV1\20170306-40510.b\1,4-DIoxane.m
Limit Group: MSS - 8270SIM 14DX - ICAL
Last Update: 06-Mar-2017 16:36:07 Calib Date: 22-Feb-2017 12:09:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\SV1\20170222-40122.b\14D0222H.D

Column 1 : HP-5MS (0.25 mm) Det: MS SCAN
Process Host: XAWRK027

First Level Reviewer: onishim Date: 06-Mar-2017 16:36:14

Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Ratio Range	Ratio	Flags
1 1,4-Dioxane									
58		3.346				ND			
88		3.346							
* 2 1,4-Dichlorobenzene-d4									
152	7.197	7.197	0.000	100	645375	10.0	80- 120	100	
150	7.197	7.197	0.000		999300		135- 175	155	
115	7.197	7.197	0.000		362846		36.9- 76.9	56.2	
$ 3 Nitrobenzene-d5									
82	8.059	8.060	-0.001	98	239530	3.07	80- 120	100	
128	8.059	8.060	-0.001		126981		33.6- 73.6	53.0	
54	8.051	8.060	-0.009		137682		37.4- 77.4	57.5	

Reagents:

MS8270IS_00016 Amount Added: 5.00 Units: uL Run Reagent

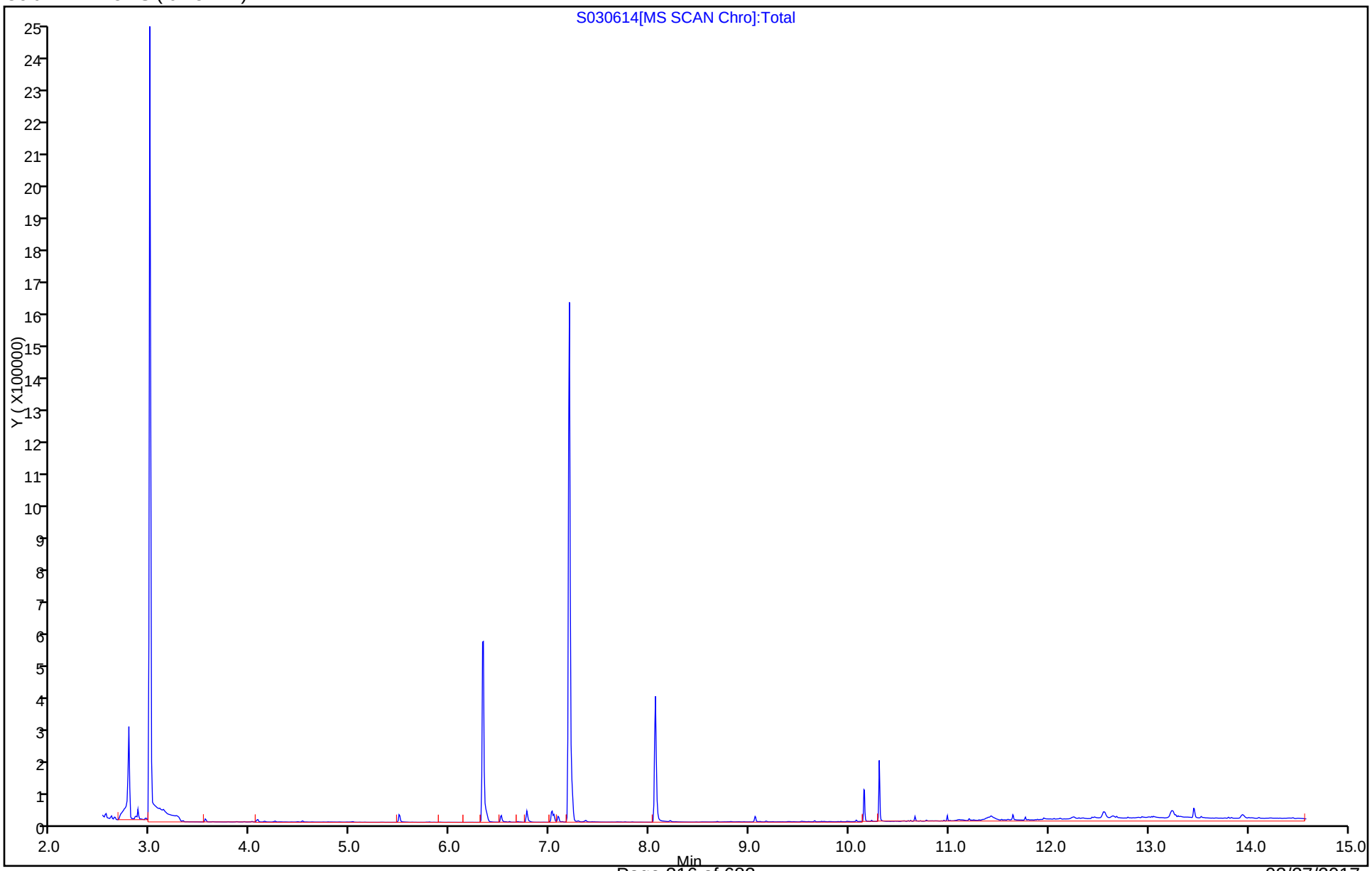
Report Date: 06-Mar-2017 16:36:14 Chrom Revision: 2.2 03-Feb-2017 15:35:04

TestAmerica Sacramento

Data File: \\ChromNA\Sacramento\ChromData\SV1\20170306-40510.b\S030614.D

Injection Date:	06-Mar-2017 16:12:30	Instrument ID:	SV1	Operator ID:	
Lims ID:	320-25962-A-1-A	Lab Sample ID:	320-25962-1	Worklist Smp#:	16
Client ID:	MEAFF-MRD-1A01-0217				
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	1,4-DIoxane	Limit Group:	MSS - 8270SIM 14DX - ICAL		

Column: HP-5MS (0.25 mm)



TestAmerica Sacramento
Recovery Report

Data File:	\\ChromNA\Sacramento\ChromData\SV1\20170306-40510.b\S030614.D				
Lims ID:	320-25962-A-1-A				
Client ID:	MEAFF-MRD-1A01-0217				
Sample Type:	Client				
Inject. Date:	06-Mar-2017 16:12:30	ALS Bottle#:	14	Worklist Smp#:	16
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	320-25962-a-1-a				
Misc. Info.:	320-0040510-016				
Operator ID:		Instrument ID:	SV1		
Method:	\\ChromNA\Sacramento\ChromData\SV1\20170306-40510.b\1,4-DIoxane.m				
Limit Group:	MSS - 8270SIM 14DX - ICAL				
Last Update:	06-Mar-2017 16:36:07	Calib Date:	22-Feb-2017 12:09:30		
Integrator:	RTE	ID Type:	RT Order ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Sacramento\ChromData\SV1\20170222-40122.b\14D0222H.D				
Column 1 :	HP-5MS (0.25 mm)		Det: MS SCAN		
Process Host:	XAWRK027				
First Level Reviewer: onishim		Date:	06-Mar-2017 16:36:14		

Compound	Amount Added	Amount Recovered	% Rec.
$ 3 Nitrobenzene-d5	5.00	3.07	61.46

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento | Job No.: 320-25962-1

SDG No.:

Client Sample ID: MEAFF-MRD-1A01P-0217 | Lab Sample ID: 320-25962-2

Matrix: Water | Lab File ID: S030615.D

Analysis Method: WS-MS-0011 | Date Collected: 02/21/2017 15:55

Extract. Method: 3510C | Date Extracted: 02/24/2017 15:44

Sample wt/vol: 1035.2(mL) | Date Analyzed: 03/06/2017 16:34

Con. Extract Vol.: 1.0(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 153398 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
123-91-1	1,4-Dioxane	0.48	U	0.97	0.48	0.19

CAS NO.	SURROGATE	%REC	Q	LIMITS
4165-60-0	Nitrobenzene-d5	63		42-91

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNA\Sacramento\ChromData\SV1\20170306-40510.b\S030615.D
Lims ID: 320-25962-A-2-A
Client ID: MEAFF-MRD-1A01P-0217
Sample Type: Client
Inject. Date: 06-Mar-2017 16:34:30 ALS Bottle#: 15 Worklist Smp#: 17
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 320-25962-a-2-a
Misc. Info.: 320-0040510-017
Operator ID: Instrument ID: SV1

Method: \\ChromNA\Sacramento\ChromData\SV1\20170306-40510.b\1,4-DIoxane.m
Limit Group: MSS - 8270SIM 14DX - ICAL
Last Update: 06-Mar-2017 17:49:24 Calib Date: 22-Feb-2017 12:09:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\SV1\20170222-40122.b\14D0222H.D

Column 1 : HP-5MS (0.25 mm) Det: MS SCAN
Process Host: XAWRK027

First Level Reviewer: onishim Date: 06-Mar-2017 16:52:03

Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Ratio Range	Ratio	Flags
1 1,4-Dioxane									
58		3.346				ND			
88		3.346							
* 2 1,4-Dichlorobenzene-d4									
152	7.197	7.197	0.000	100	651413	10.0	80- 120	100	
150	7.197	7.197	0.000		1011225		135- 175	155	
115	7.197	7.197	0.000		366944		36.9- 76.9	56.3	
$ 3 Nitrobenzene-d5									
82	8.059	8.060	-0.001	98	248872	3.16	80- 120	100	
128	8.059	8.060	-0.001		130489		33.6- 73.6	52.4	
54	8.059	8.060	-0.001		142313		37.4- 77.4	57.2	

Reagents:

MS8270IS_00016 Amount Added: 5.00 Units: uL Run Reagent

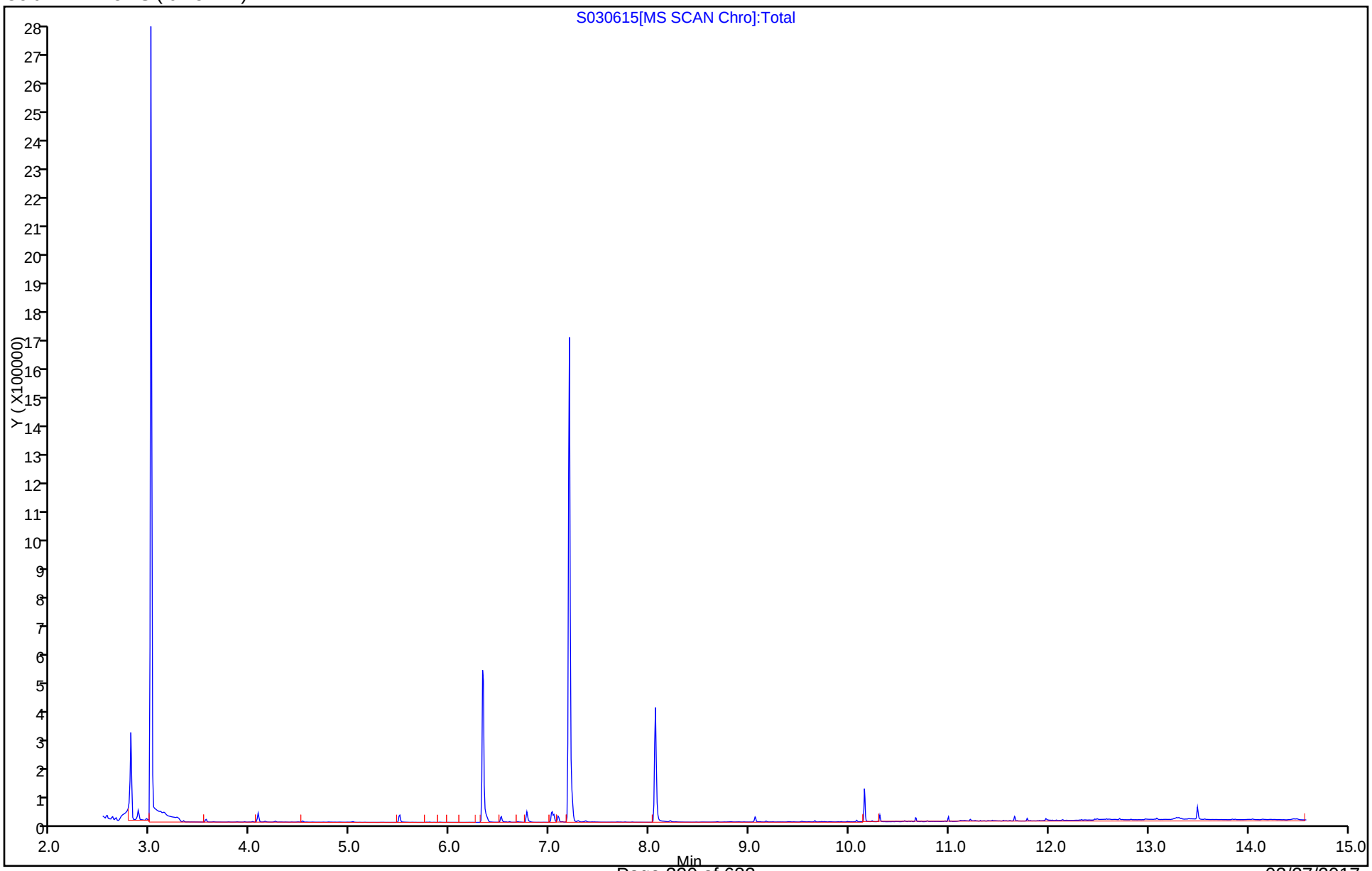
Report Date: 06-Mar-2017 16:52:03 Chrom Revision: 2.2 03-Feb-2017 15:35:04

TestAmerica Sacramento

Data File: \\ChromNA\Sacramento\ChromData\SV1\20170306-40510.b\S030615.D

Injection Date:	06-Mar-2017 16:34:30	Instrument ID:	SV1	Operator ID:	
Lims ID:	320-25962-A-2-A	Lab Sample ID:	320-25962-2	Worklist Smp#:	17
Client ID:	MEAFF-MRD-1A01P-0217				
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	1,4-DIoxane	Limit Group:	MSS - 8270SIM 14DX - ICAL		

Column: HP-5MS (0.25 mm)



TestAmerica Sacramento
Recovery Report

Data File:	\\ChromNA\Sacramento\ChromData\SV1\20170306-40510.b\S030615.D				
Lims ID:	320-25962-A-2-A				
Client ID:	MEAFF-MRD-1A01P-0217				
Sample Type:	Client				
Inject. Date:	06-Mar-2017 16:34:30	ALS Bottle#:	15	Worklist Smp#:	17
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	320-25962-a-2-a				
Misc. Info.:	320-0040510-017				
Operator ID:		Instrument ID:	SV1		
Method:	\\ChromNA\Sacramento\ChromData\SV1\20170306-40510.b\1,4-DIoxane.m				
Limit Group:	MSS - 8270SIM 14DX - ICAL				
Last Update:	06-Mar-2017 17:49:24	Calib Date:	22-Feb-2017 12:09:30		
Integrator:	RTE	ID Type:	RT Order ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Sacramento\ChromData\SV1\20170222-40122.b\14D0222H.D				
Column 1 :	HP-5MS (0.25 mm)		Det: MS SCAN		
Process Host:	XAWRK027				
First Level Reviewer: onishim		Date:	06-Mar-2017 16:52:03		

Compound	Amount Added	Amount Recovered	% Rec.
$ 3 Nitrobenzene-d5	5.00	3.16	63.27

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Sacramento Job No.: 320-25962-1 Analy Batch No.: 151686

SDG No.:

Instrument ID: SV1 GC Column: HP-5MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/22/2017 09:35 Calibration End Date: 02/22/2017 12:09 Calibration ID: 28577

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 320-151686/1	14D0222A.D
Level 2	IC 320-151686/2	14D0222B.D
Level 3	IC 320-151686/3	14D0222C.D
Level 4	IC 320-151686/4	14D0222D.D
Level 5	ICIS 320-151686/5	14D0222E.D
Level 6	IC 320-151686/6	14D0222F.D
Level 7	IC 320-151686/7	14D0222G.D
Level 8	IC 320-151686/8	14D0222H.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 7	LVL 3 LVL 8	LVL 4	LVL 5		B	M1	M2								
1,4-Dioxane	0.4455 0.3906	0.3950 0.4282	0.3860 0.3515	0.4401	0.3728	Ave		0.4012				8.4		15.0			
Nitrobenzene-d5	1.2661 1.2121	1.1089 1.3702	1.1243 1.1151	1.3085	1.1565	Ave		1.2077				8.2		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Sacramento Job No.: 320-25962-1 Analy Batch No.: 151686

SDG No.:

Instrument ID: SV1 GC Column: HP-5MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/22/2017 09:35 Calibration End Date: 02/22/2017 12:09 Calibration ID: 28577

Calibration Files:

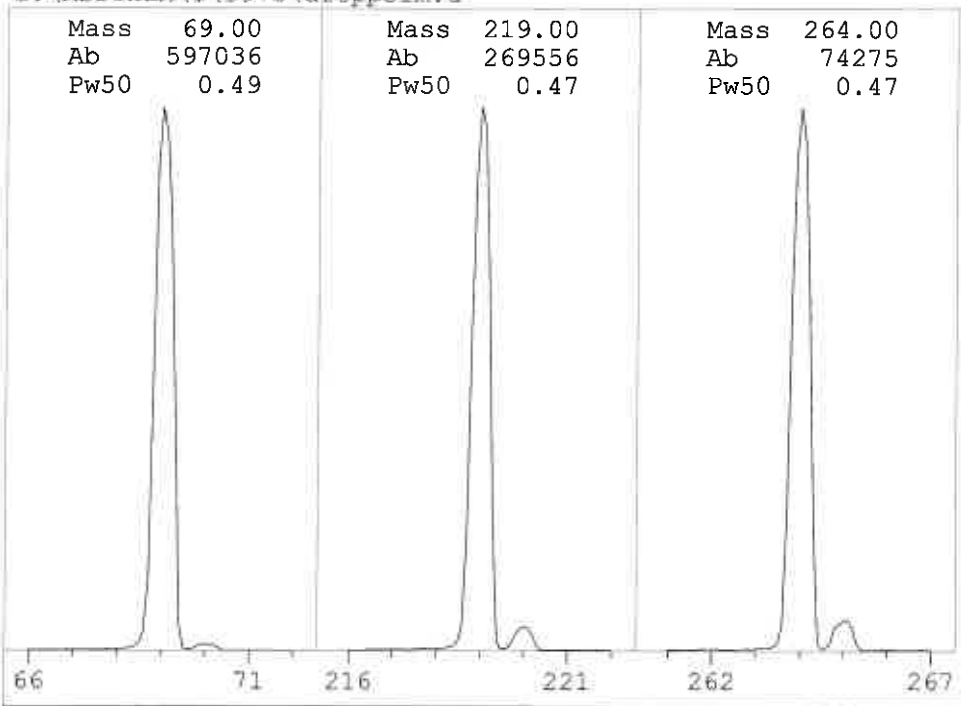
LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 320-151686/1	14D0222A.D
Level 2	IC 320-151686/2	14D0222B.D
Level 3	IC 320-151686/3	14D0222C.D
Level 4	IC 320-151686/4	14D0222D.D
Level 5	ICIS 320-151686/5	14D0222E.D
Level 6	IC 320-151686/6	14D0222F.D
Level 7	IC 320-151686/7	14D0222G.D
Level 8	IC 320-151686/8	14D0222H.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
1,4-Dioxane	DCBd 4	Ave	15367 570238	28517 1391248	59554 2749219	150814	293131	0.500 20.0	1.00 50.0	2.00 100	5.00	10.0
Nitrobenzene-d5	DCBd 4	Ave	43667 1769342	80062 4451578	173471 8721763	448379	909372	0.500 20.0	1.00 50.0	2.00 100	5.00	10.0

Curve Type Legend:
Ave = Average ISTD

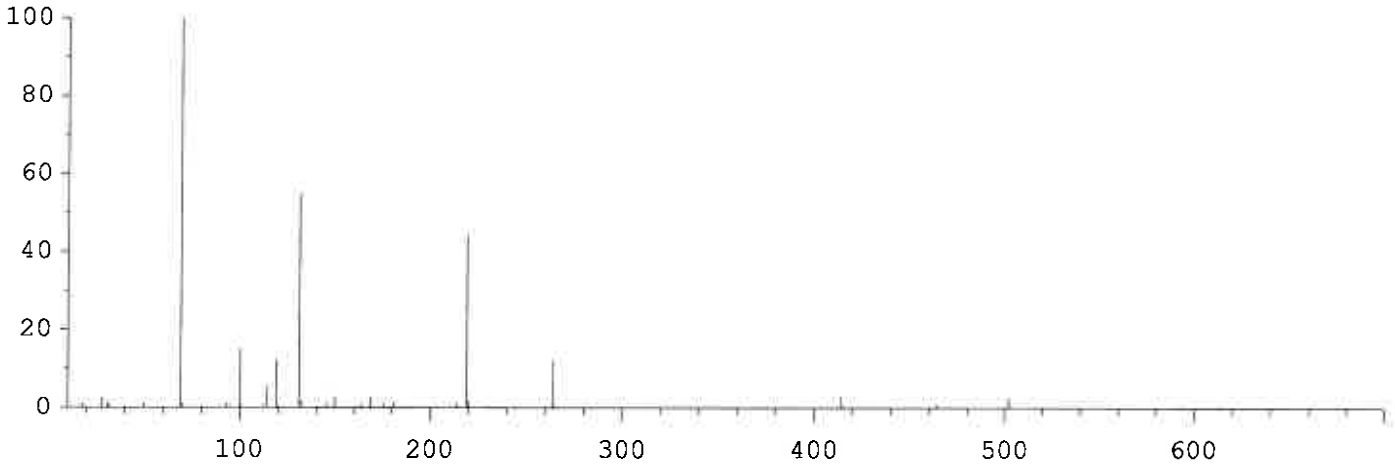
Wed Feb 22 09:33:16 2017
C:\MSDCHEM\1\5973\dftppsim.u

Instrument: SV1



Ion Pol	POS	MassGain	-384
		MassOffs	-12
Emission	34.6	AmuGain	1578
EIEnrgy	69.9	AmuOffs	134
Filament	1	Wid219	-0.035
		DC Pol	POS
Repeller	28.28		
IonFcus	75.0	HEDEnab	ON
EntLens	0.0	EMVolts	1047
EntOffs	VAR		
		Samples	8
PFTBA	OPEN	Averages	3
		Stepsize	0.10
Zones:			
MS Source	250	TurboSpd	100
MS Quad	150		

Scan: 10.00 - 700.00 Samples: 8 Thresh: 100 Step: 0.10
126 peaks Base: 69.00 Abundance: 484096



Mass	Abund	Rel Abund	Iso Mass	Iso Abund	Iso Ratio
69.00	484096	100.00	70.10	5442	1.12
219.00	215424	44.50	220.00	9518	4.42
264.00	59680	12.33	265.00	3715	6.22

Air/Water Check: H2O~0.93% N2~2.53% O2~0.67% CO2~0.07% N2/H2O~272.84%

Column Flow: Front: 1.4 Back: 0 ml/min. Interface Temp: 250

Ramp Criteria:
Ion Focus Maximum 90 volts using ion 264; EM Gain 158740
Repeller Maximum 35 volts using ion 219;

MassGain Values @Samples: -384@3 -384@2 -384@1 -384@0 -384@FS

TARGET MASS:	50	69	131	219	414	502	800
Amu Offset:	134.0	134.0	134.0	134.0	134.0	134.0	134.0
Entrance Lens Offset:	14.6	12.0	13.3	12.5	13.8	12.8	12.8
Target Abund(%):	1.0	100.0	55.0	45.0	3.0	2.0	
Actual Tune Abund(%):	1.0	100.0	55.0	44.5	3.0	2.4	

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNA\Sacramento\ChromData\SV1\20170222-40122.b\14D0222A.D
Lims ID: IC CS-1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 22-Feb-2017 09:35:30 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: IC CS-1 14D
Operator ID: Instrument ID: SV1
Sublist: chrom-1,4-DIoxane*sub8

Method: \\ChromNA\Sacramento\ChromData\SV1\20170222-40122.b\1,4-DIoxane.m
Limit Group: MSS - 8270SIM 14DX - ICAL
Last Update: 22-Feb-2017 14:19:26 Calib Date: 22-Feb-2017 12:09:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\SV1\20170222-40122.b\14D0222H.D

Column 1 : HP-5MS (0.25 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: onishim Date: 22-Feb-2017 10:04:37

Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Ratio Range	Ratio	S/N	Flags
1 1,4-Dioxane											M
58	3.355	3.354	0.001	78	15367	0.5000	0.5552	80- 120	100	13377	M
88	3.355	3.354	0.001		19805			92- 132	129		
* 2 1,4-Dichlorobenzene-d4											
152	7.197	7.197	0.000	99	689814	10.0	10.0	80- 120	100		
150	7.197	7.197	0.000		1067566			136- 176	155		
115	7.197	7.197	0.000		393942			37.1- 77.1	57.1		
$ 3 Nitrobenzene-d5											M
82	8.059	8.059	0.000	100	43667	0.5000	0.5242	80- 120	100		M
128	8.059	8.059	0.000		20703			29.8- 69.8	47.4		
54	8.059	8.059	0.000		25267			38.3- 78.3	57.9		

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

MS14DL1_00011 Amount Added: 1.00 Units: mL

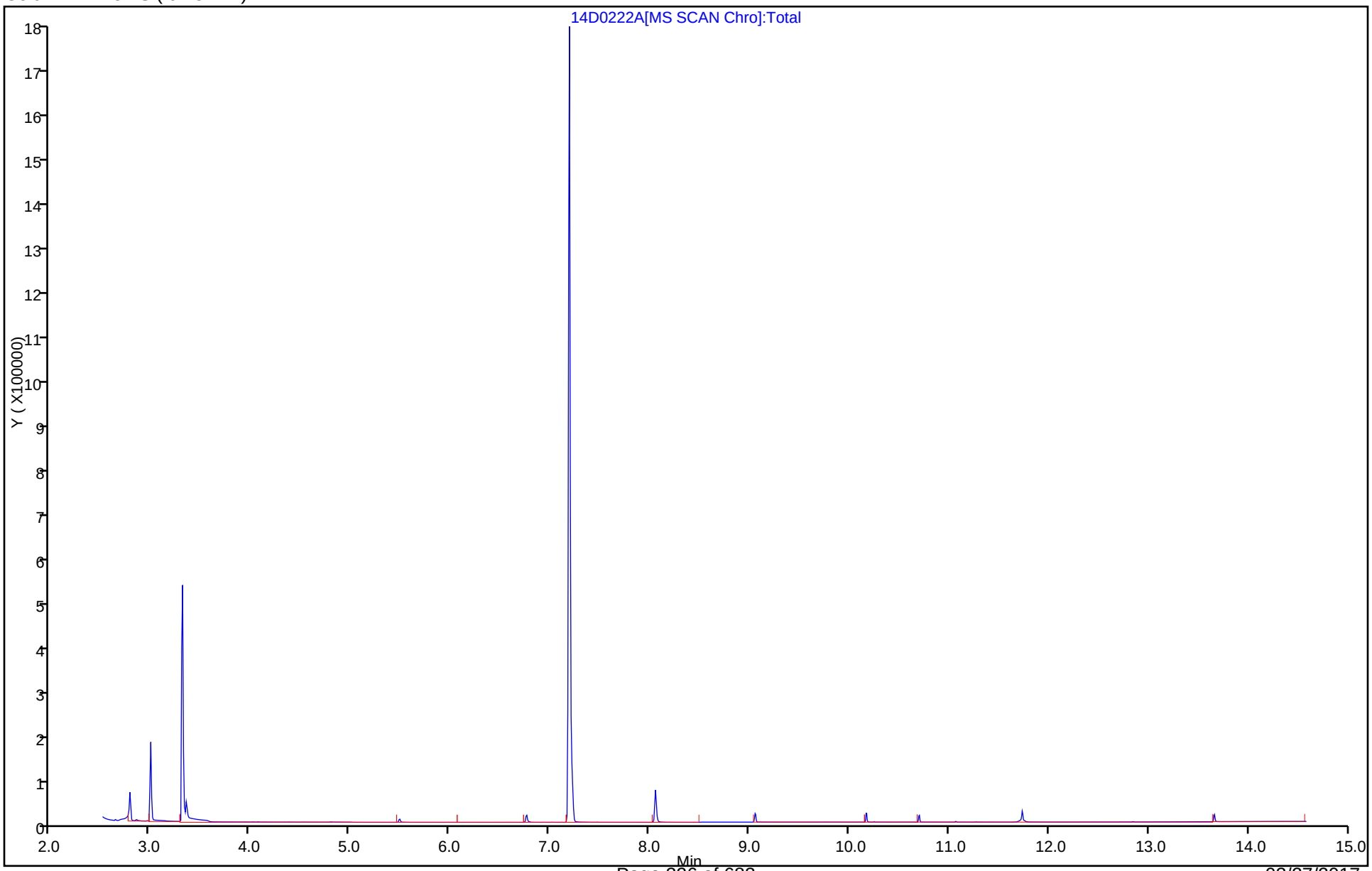
Report Date: 22-Feb-2017 14:19:27 Chrom Revision: 2.2 03-Feb-2017 15:35:04

TestAmerica Sacramento

Data File: \\ChromNA\Sacramento\ChromData\SV1\20170222-40122.b\14D0222A.D

Injection Date:	22-Feb-2017 09:35:30	Instrument ID:	SV1	Operator ID:	
Lims ID:	IC CS-1			Worklist Smp#:	1
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	1,4-DIoxane	Limit Group:	MSS - 8270SIM 14DX - ICAL		

Column: HP-5MS (0.25 mm)



Manual Integration/User Assign Peak Report

TestAmerica Sacramento

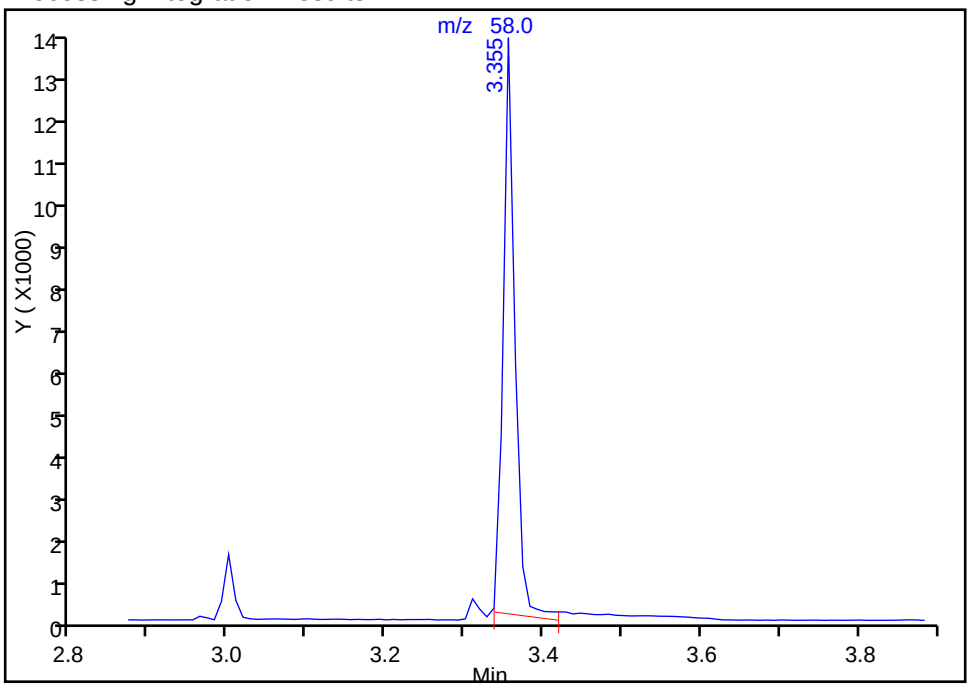
Data File: \\ChromNA\Sacramento\ChromData\SV1\20170222-40122.b\14D0222A.D
Injection Date: 22-Feb-2017 09:35:30 Instrument ID: SV1
Lims ID: IC CS-1
Client ID:
Operator ID: ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 1,4-DIoxane Limit Group: MSS - 8270SIM 14DX - ICAL
Column: HP-5MS (0.25 mm) Detector MS SCAN

1 1,4-Dioxane, CAS: 123-91-1

Signal: 1

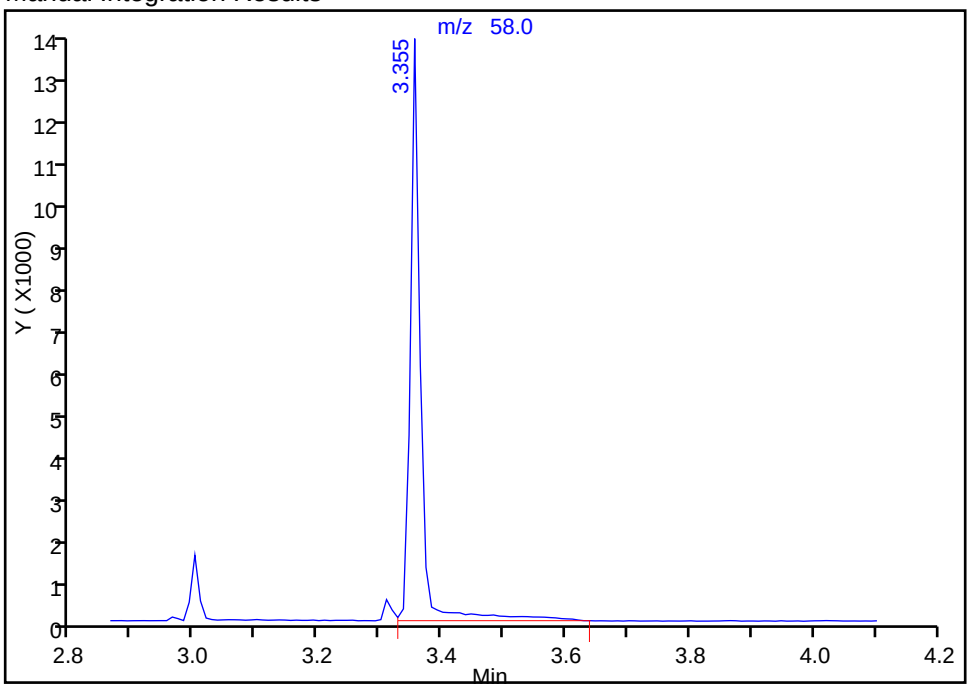
Processing Integration Results

RT: 3.36
Area: 13722
Amount: 0.500000
Amount Units: ug/ml



Manual Integration Results

RT: 3.36
Area: 15367
Amount: 0.555238
Amount Units: ug/ml



Reviewer: onishim, 22-Feb-2017 14:19:26
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

TestAmerica Sacramento

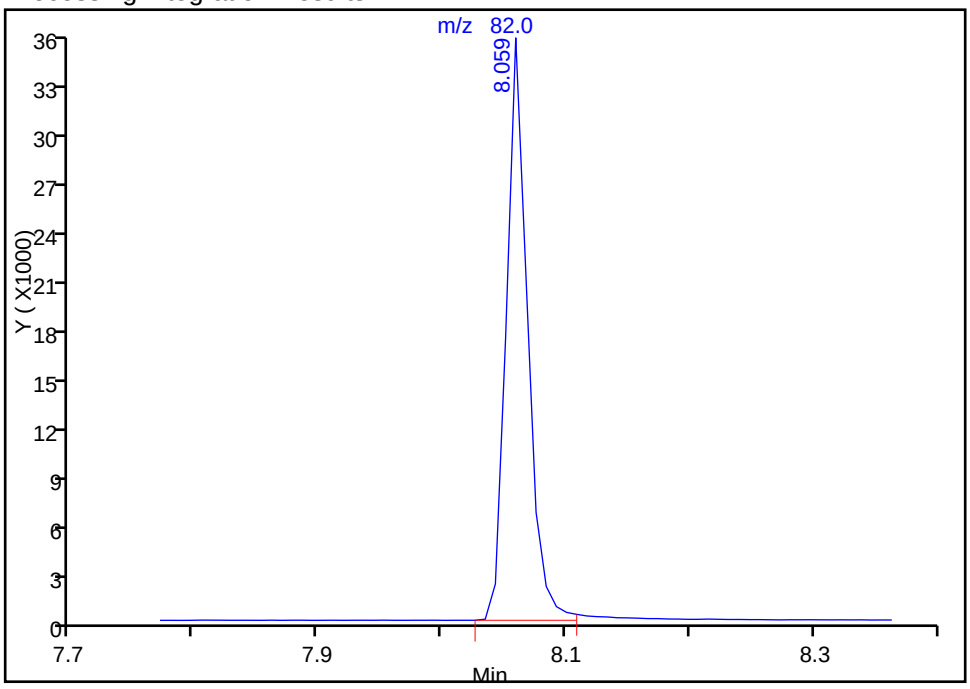
Data File:	\\ChromNA\Sacramento\ChromData\SV1\20170222-40122.b\14D0222A.D				
Injection Date:	22-Feb-2017 09:35:30	Instrument ID:	SV1		
Lims ID:	IC CS-1				
Client ID:					
Operator ID:		ALS Bottle#:	1	Worklist Smp#:	1
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	1,4-DIoxane	Limit Group:	MSS - 8270SIM 14DX - ICAL		
Column:	HP-5MS (0.25 mm)	Detector	MS SCAN		

$ 3 Nitrobenzene-d5, CAS: 4165-60-0

Signal: 1

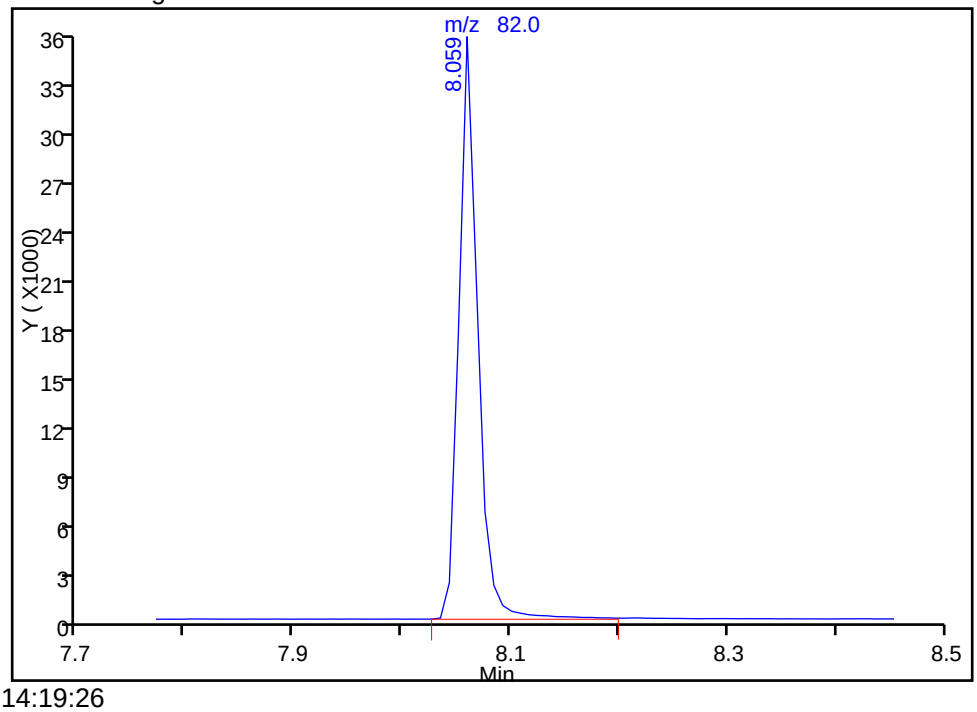
Processing Integration Results

RT: 8.06
Area: 42828
Amount: 0.500000
Amount Units: ug/ml



Manual Integration Results

RT: 8.06
Area: 43667
Amount: 0.524163
Amount Units: ug/ml



Reviewer: onishim, 22-Feb-2017 14:19:26

Audit Action: Manually Integrated Audit Reason: Peak Tail

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNA\Sacramento\ChromData\SV1\20170222-40122.b\14D0222B.D
Lims ID: IC CS-2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 22-Feb-2017 09:56:30 ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: IC CS-2 14D
Operator ID: Instrument ID: SV1
Sublist: chrom-1,4-DIoxane*sub8

Method: \\ChromNA\Sacramento\ChromData\SV1\20170222-40122.b\1,4-DIoxane.m
Limit Group: MSS - 8270SIM 14DX - ICAL
Last Update: 22-Feb-2017 14:19:27 Calib Date: 22-Feb-2017 12:09:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\SV1\20170222-40122.b\14D0222H.D

Column 1 : HP-5MS (0.25 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: onishim Date: 22-Feb-2017 10:17:50

Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Ratio Range	Ratio	Flags
1 1,4-Dioxane										M
58	3.355	3.354	0.001	97	28517	1.00	0.9844	80- 120	100	M
88	3.364	3.354	0.010		33413			92- 132	117	
* 2 1,4-Dichlorobenzene-d4										
152	7.197	7.197	0.000	100	721993	10.0	10.0	80- 120	100	
150	7.197	7.197	0.000		1123841			136- 176	156	
115	7.197	7.197	0.000		416847			37.1- 77.1	57.7	
$ 3 Nitrobenzene-d5										M
82	8.060	8.059	0.001	99	80062	1.00	0.9182	80- 120	100	M
128	8.060	8.059	0.001		38136			29.8- 69.8	47.6	
54	8.060	8.059	0.001		46077			38.3- 78.3	57.6	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

MS14DL2_00010 Amount Added: 1.00 Units: mL

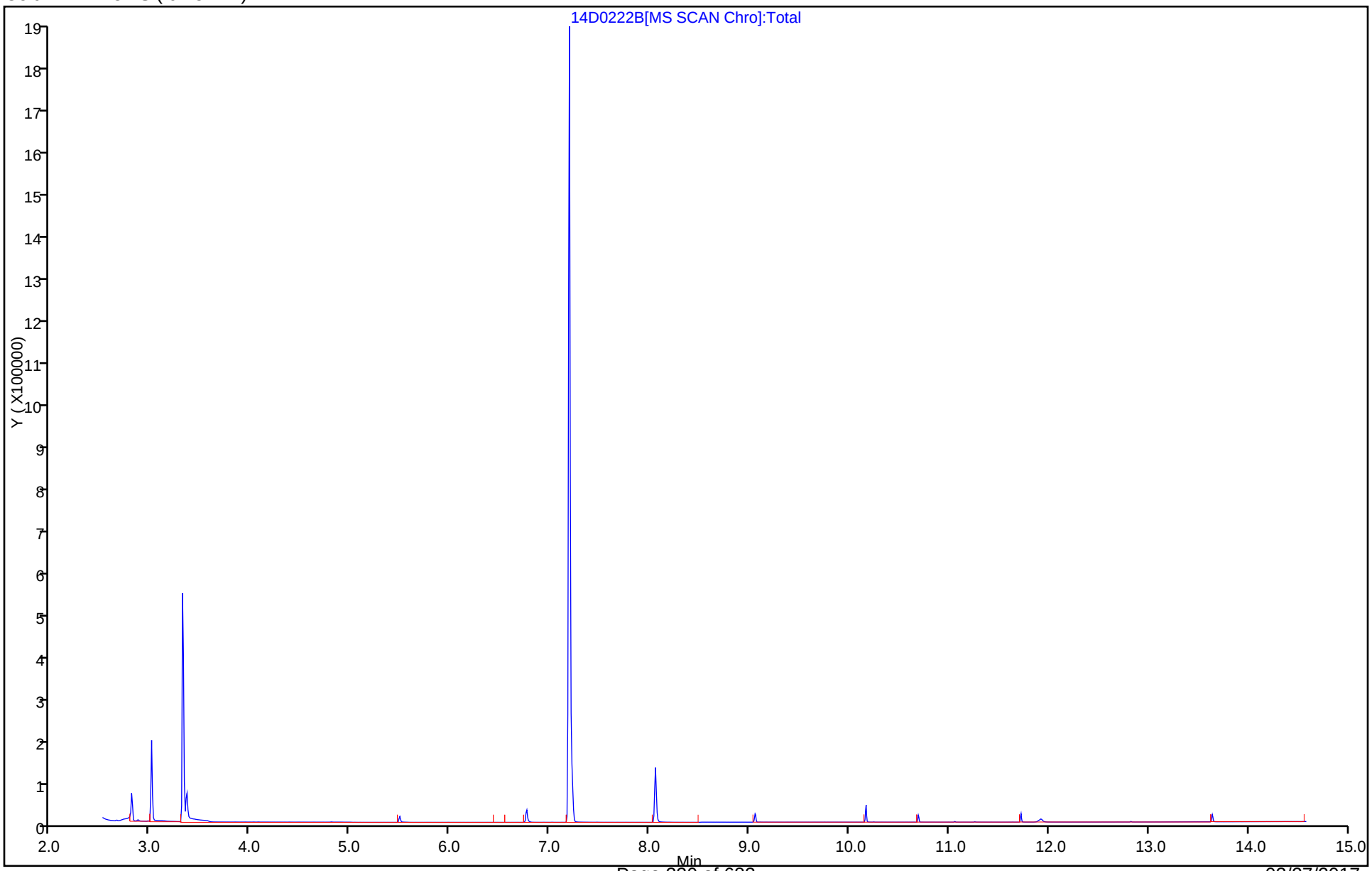
Report Date: 22-Feb-2017 14:19:28 Chrom Revision: 2.2 03-Feb-2017 15:35:04

TestAmerica Sacramento

Data File: \\ChromNA\Sacramento\ChromData\SV1\20170222-40122.b\14D0222B.D

Injection Date:	22-Feb-2017 09:56:30	Instrument ID:	SV1	Operator ID:	
Lims ID:	IC CS-2			Worklist Smp#:	2
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	1,4-DIoxane	Limit Group:	MSS - 8270SIM 14DX - ICAL		

Column: HP-5MS (0.25 mm)



Manual Integration/User Assign Peak Report

TestAmerica Sacramento

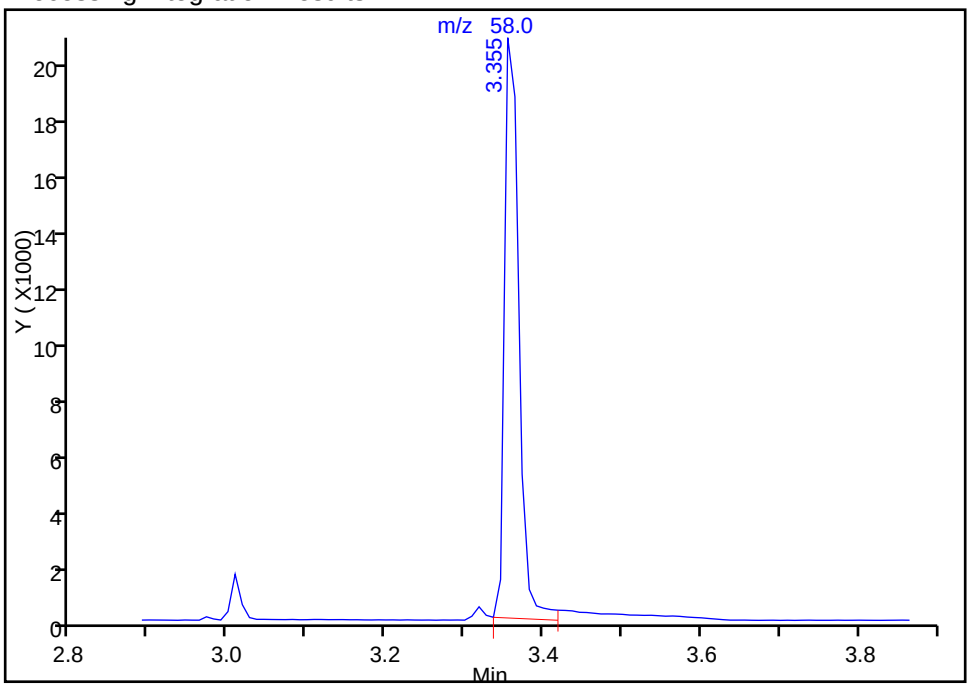
Data File: \\ChromNA\Sacramento\ChromData\SV1\20170222-40122.b\14D0222B.D
Injection Date: 22-Feb-2017 09:56:30 Instrument ID: SV1
Lims ID: IC CS-2
Client ID:
Operator ID: ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 1,4-DIoxane Limit Group: MSS - 8270SIM 14DX - ICAL
Column: HP-5MS (0.25 mm) Detector MS SCAN

1 1,4-Dioxane, CAS: 123-91-1

Signal: 1

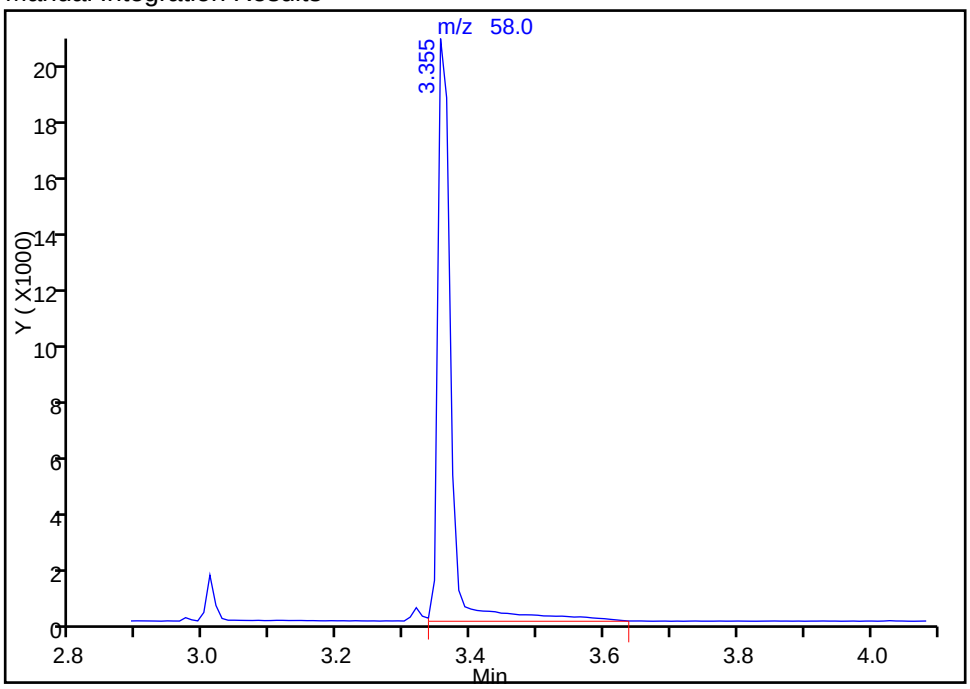
Processing Integration Results

RT: 3.35
Area: 25950
Amount: 0.893015
Amount Units: ug/ml



Manual Integration Results

RT: 3.35
Area: 28517
Amount: 0.984448
Amount Units: ug/ml



Reviewer: onishim, 22-Feb-2017 14:19:27
Audit Action: Manually Integrated Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

TestAmerica Sacramento

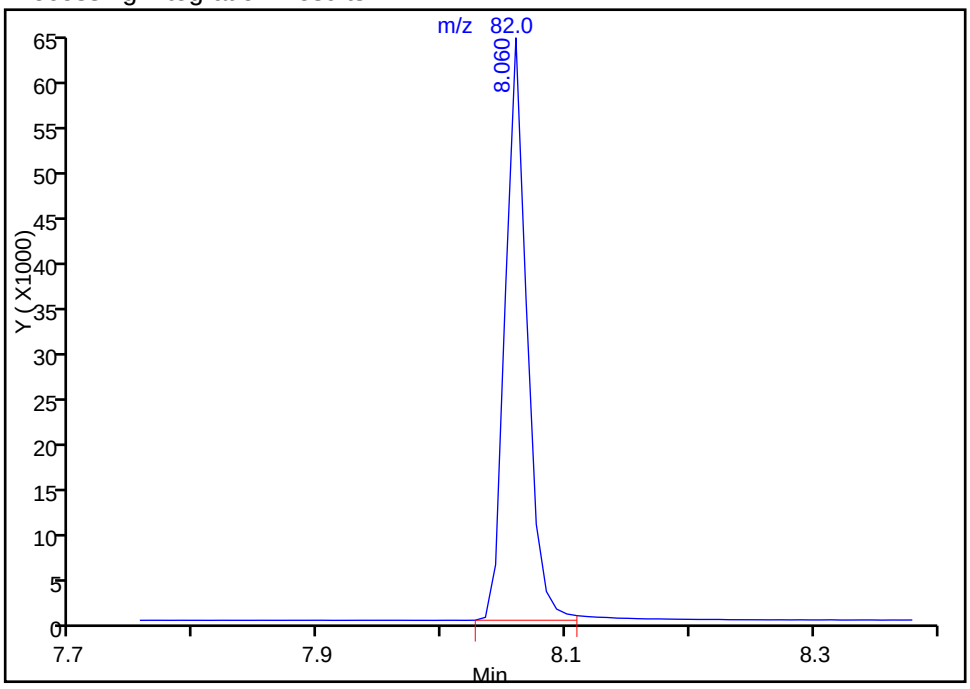
Data File: \\ChromNA\Sacramento\ChromData\SV1\20170222-40122.b\14D0222B.D
Injection Date: 22-Feb-2017 09:56:30 Instrument ID: SV1
Lims ID: IC CS-2
Client ID:
Operator ID: ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 1,4-DIoxane Limit Group: MSS - 8270SIM 14DX - ICAL
Column: HP-5MS (0.25 mm) Detector MS SCAN

$ 3 Nitrobenzene-d5, CAS: 4165-60-0

Signal: 1

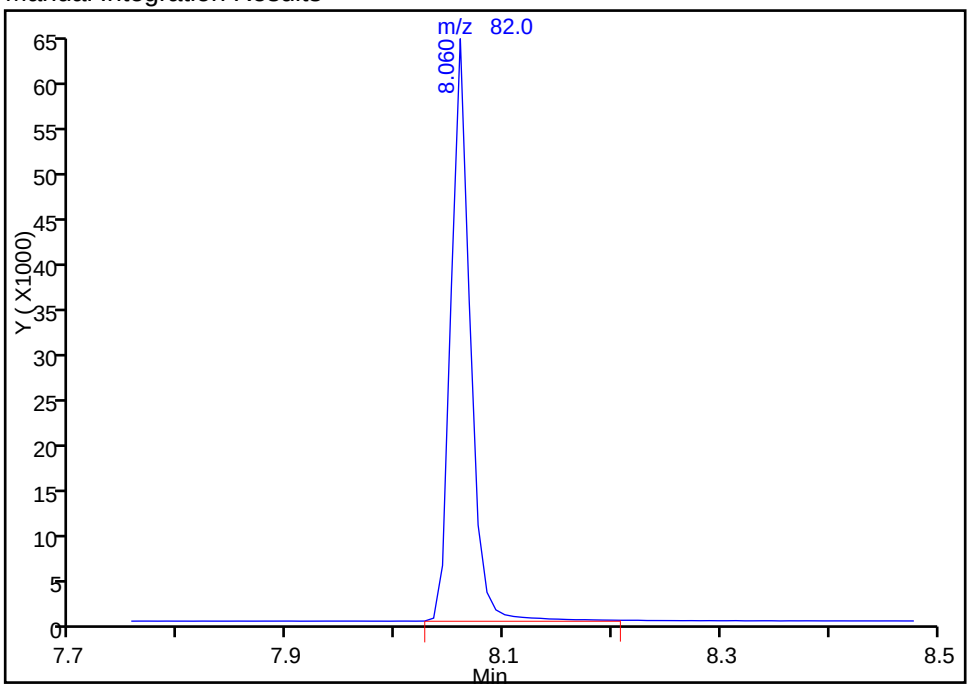
Processing Integration Results

RT: 8.06
Area: 78635
Amount: 0.924884
Amount Units: ug/ml



Manual Integration Results

RT: 8.06
Area: 80062
Amount: 0.918203
Amount Units: ug/ml



Reviewer: onishim, 22-Feb-2017 14:19:27
Audit Action: Manually Integrated Audit Reason: Poor chromatography

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNA\Sacramento\ChromData\SV1\20170222-40122.b\14D0222C.D
Lims ID: IC CS-3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 22-Feb-2017 10:19:30 ALS Bottle#: 3 Worklist Smp#: 3
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: IC CS-3 14D
Operator ID: Instrument ID: SV1
Sublist: chrom-1,4-DIoxane*sub8

Method: \\ChromNA\Sacramento\ChromData\SV1\20170222-40122.b\1,4-DIoxane.m
Limit Group: MSS - 8270SIM 14DX - ICAL
Last Update: 22-Feb-2017 14:19:28 Calib Date: 22-Feb-2017 12:09:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\SV1\20170222-40122.b\14D0222H.D

Column 1 : HP-5MS (0.25 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: onishim Date: 22-Feb-2017 10:46:45

Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Ratio Range	Ratio	Flags
1 1,4-Dioxane										M
58	3.357	3.354	0.003	97	59554	2.00	1.92	80- 120	100	M
88	3.366	3.354	0.012		69299			92- 132	116	
* 2 1,4-Dichlorobenzene-d4										
152	7.197	7.197	0.000	100	771483	10.0	10.0	80- 120	100	
150	7.197	7.197	0.000		1199044			136- 176	155	
115	7.197	7.197	0.000		444192			37.1- 77.1	57.6	
$ 3 Nitrobenzene-d5										M
82	8.060	8.059	0.001	97	173471	2.00	1.86	80- 120	100	M
128	8.060	8.059	0.001		83892			29.8- 69.8	48.4	
54	8.060	8.059	0.001		99669			38.3- 78.3	57.5	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

MS14DL3_00010 Amount Added: 1.00 Units: mL

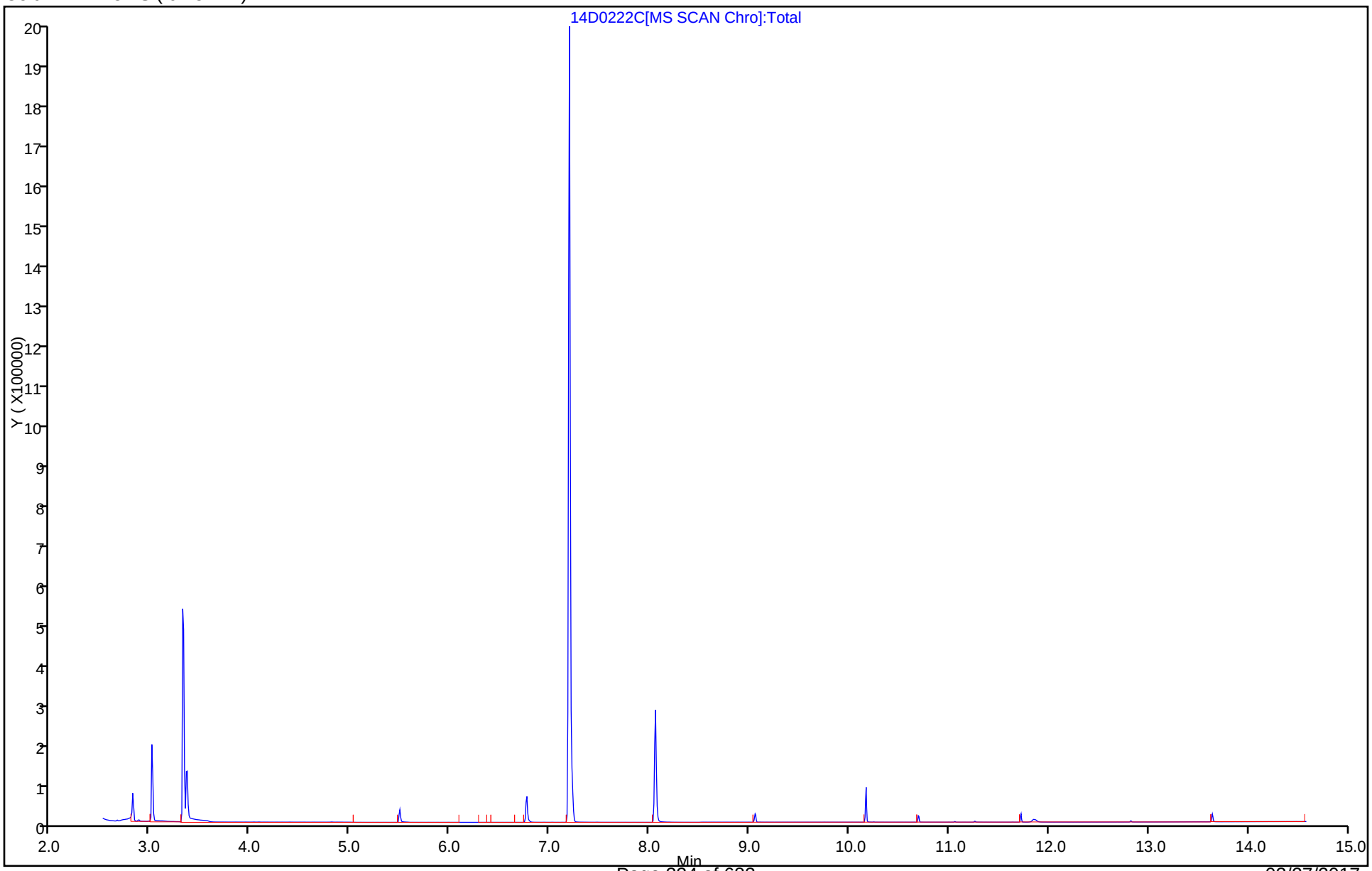
Report Date: 22-Feb-2017 14:19:28 Chrom Revision: 2.2 03-Feb-2017 15:35:04

TestAmerica Sacramento

Data File: \\ChromNA\Sacramento\ChromData\SV1\20170222-40122.b\14D0222C.D

Injection Date:	22-Feb-2017 10:19:30	Instrument ID:	SV1	Operator ID:	
Lims ID:	IC CS-3			Worklist Smp#:	3
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	1,4-DIoxane	Limit Group:	MSS - 8270SIM 14DX - ICAL		

Column: HP-5MS (0.25 mm)



Manual Integration/User Assign Peak Report

TestAmerica Sacramento

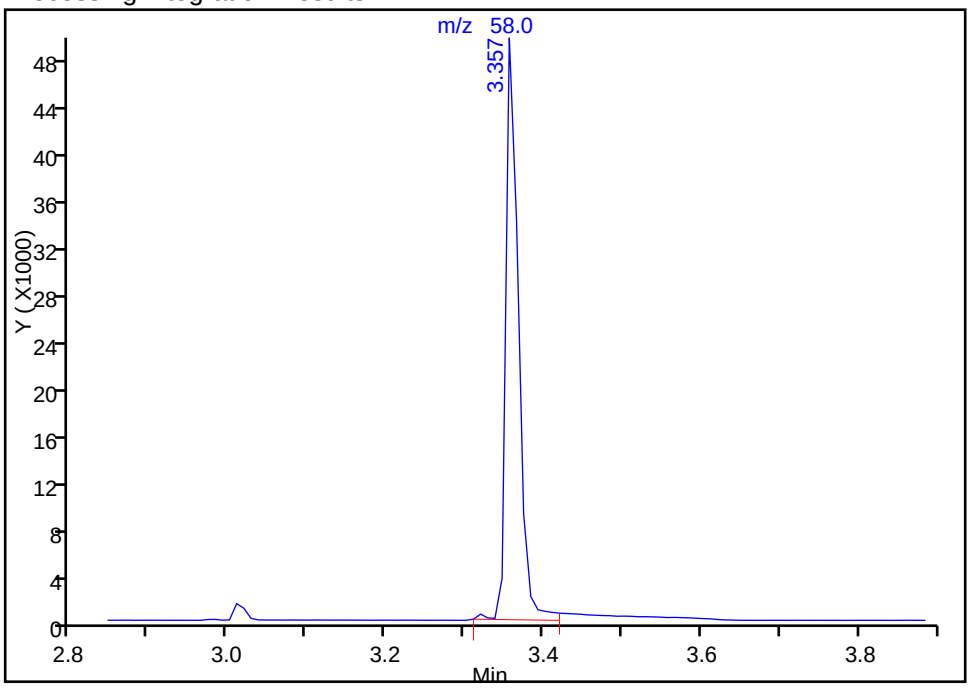
Data File: \\ChromNA\Sacramento\ChromData\SV1\20170222-40122.b\14D0222C.D
Injection Date: 22-Feb-2017 10:19:30 Instrument ID: SV1
Lims ID: IC CS-3
Client ID:
Operator ID: ALS Bottle#: 3 Worklist Smp#: 3
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 1,4-DIoxane Limit Group: MSS - 8270SIM 14DX - ICAL
Column: HP-5MS (0.25 mm) Detector MS SCAN

1 1,4-Dioxane, CAS: 123-91-1

Signal: 1

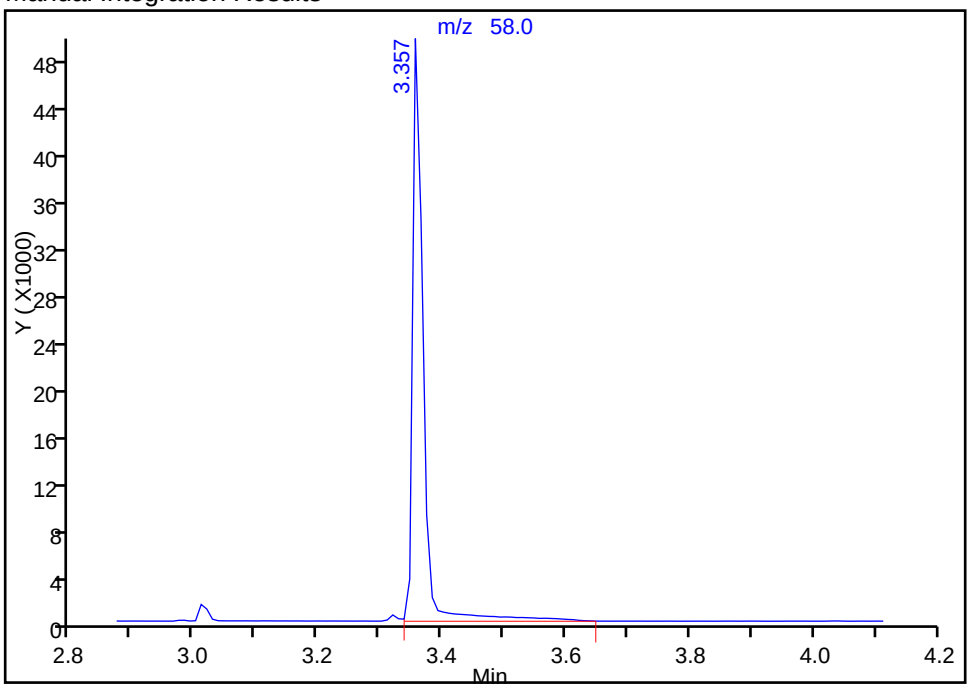
Processing Integration Results

RT: 3.36
Area: 55647
Amount: 1.801497
Amount Units: ug/ml



Manual Integration Results

RT: 3.36
Area: 59554
Amount: 1.924007
Amount Units: ug/ml



Reviewer: onishim, 22-Feb-2017 14:19:28
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

TestAmerica Sacramento

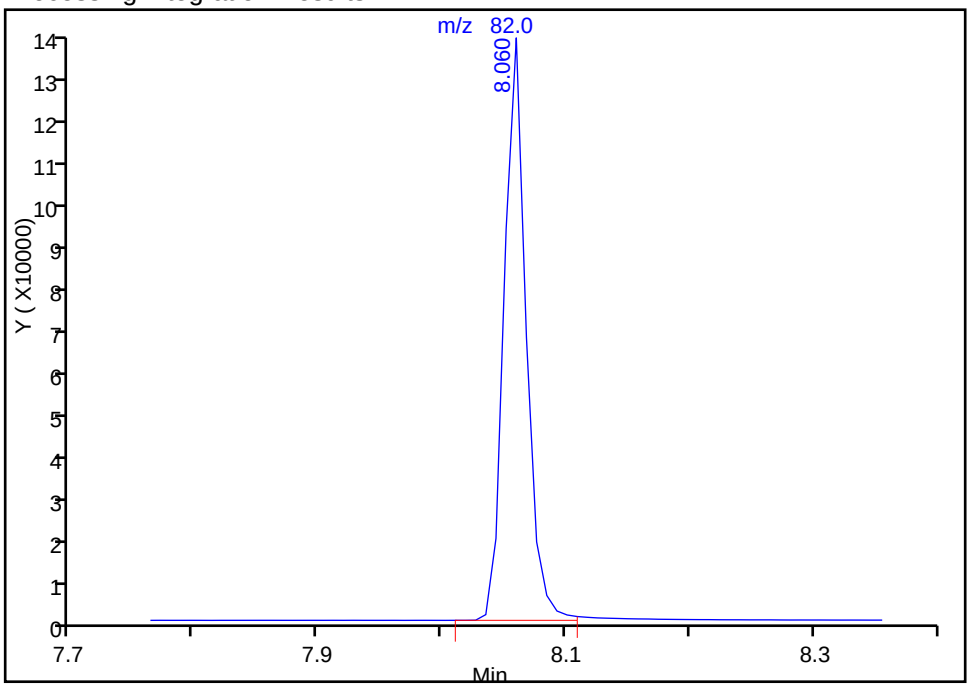
Data File: \\ChromNA\Sacramento\ChromData\SV1\20170222-40122.b\14D0222C.D
Injection Date: 22-Feb-2017 10:19:30 Instrument ID: SV1
Lims ID: IC CS-3
Client ID:
Operator ID: ALS Bottle#: 3 Worklist Smp#: 3
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 1,4-DIoxane Limit Group: MSS - 8270SIM 14DX - ICAL
Column: HP-5MS (0.25 mm) Detector MS SCAN

$ 3 Nitrobenzene-d5, CAS: 4165-60-0

Signal: 1

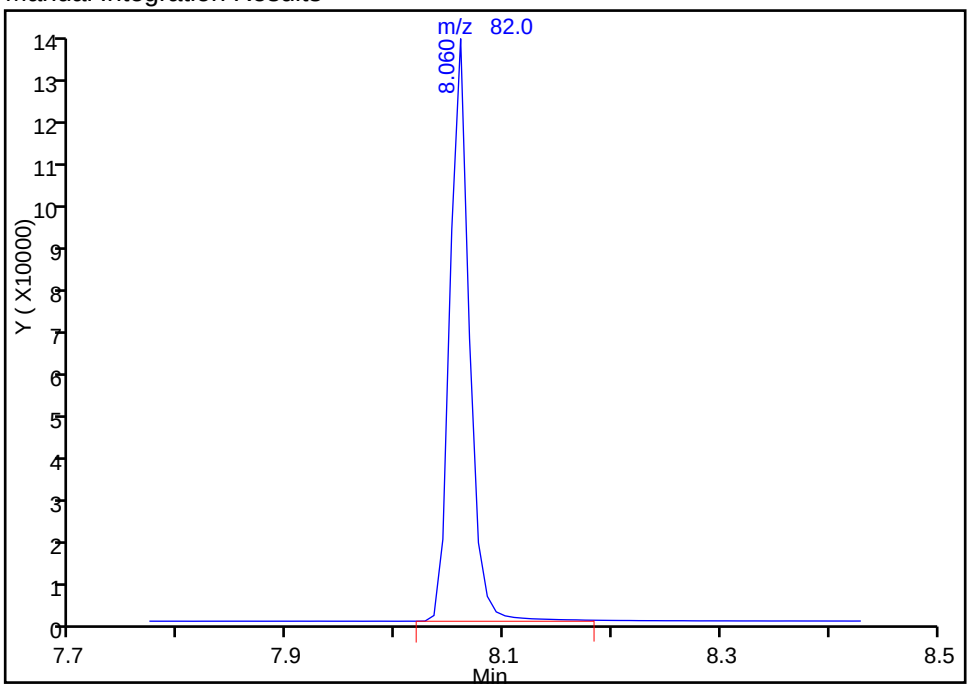
Processing Integration Results

RT: 8.06
Area: 171502
Amount: 1.912842
Amount Units: ug/ml



Manual Integration Results

RT: 8.06
Area: 173471
Amount: 1.861855
Amount Units: ug/ml



Reviewer: onishim, 22-Feb-2017 14:19:28
Audit Action: Manually Integrated Audit Reason: Peak Tail

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNA\Sacramento\ChromData\SV1\20170222-40122.b\14D0222D.D
Lims ID: IC CS-4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 22-Feb-2017 10:41:30 ALS Bottle#: 4 Worklist Smp#: 4
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: IC CS-4 14D
Operator ID: Instrument ID: SV1
Sublist: chrom-1,4-DIoxane*sub8

Method: \\ChromNA\Sacramento\ChromData\SV1\20170222-40122.b\1,4-DIoxane.m
Limit Group: MSS - 8270SIM 14DX - ICAL
Last Update: 22-Feb-2017 14:19:29 Calib Date: 22-Feb-2017 12:09:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\SV1\20170222-40122.b\14D0222H.D

Column 1 : HP-5MS (0.25 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: onishim Date: 22-Feb-2017 11:21:20

Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Ratio Range	Ratio	Flags
1 1,4-Dioxane										M
58	3.345	3.354	-0.009	96	150814	5.00	5.48	80- 120	100	M
88	3.354	3.354	0.000		168162			92- 132	112	
* 2 1,4-Dichlorobenzene-d4										
152	7.197	7.197	0.000	100	685347	10.0	10.0	80- 120	100	
150	7.197	7.197	0.000		1065860			136- 176	156	
115	7.197	7.197	0.000		391582			37.1- 77.1	57.1	
$ 3 Nitrobenzene-d5										
82	8.060	8.059	0.001	97	448379	5.00	5.42	80- 120	100	
128	8.060	8.059	0.001		223263			29.8- 69.8	49.8	
54	8.051	8.059	-0.008		261235			38.3- 78.3	58.3	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

MS14DL4_00010 Amount Added: 1.00 Units: mL

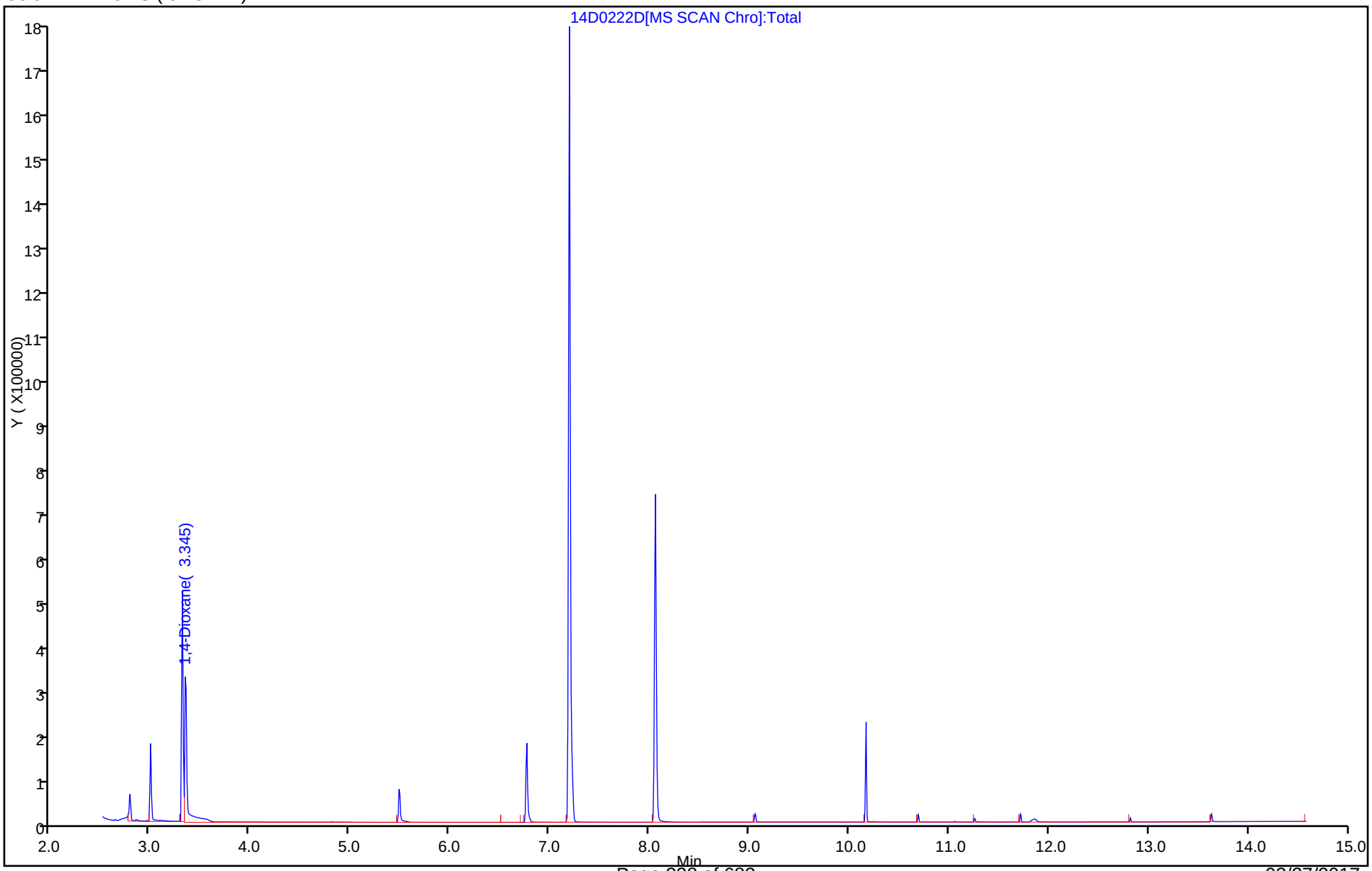
Report Date: 22-Feb-2017 14:19:29 Chrom Revision: 2.2 03-Feb-2017 15:35:04

TestAmerica Sacramento

Data File: \\ChromNA\Sacramento\ChromData\SV1\20170222-40122.b\14D0222D.D

Injection Date:	22-Feb-2017 10:41:30	Instrument ID:	SV1	Operator ID:	
Lims ID:	IC CS-4			Worklist Smp#:	4
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	1,4-DIoxane	Limit Group:	MSS - 8270SIM 14DX - ICAL		

Column: HP-5MS (0.25 mm)



Manual Integration/User Assign Peak Report

TestAmerica Sacramento

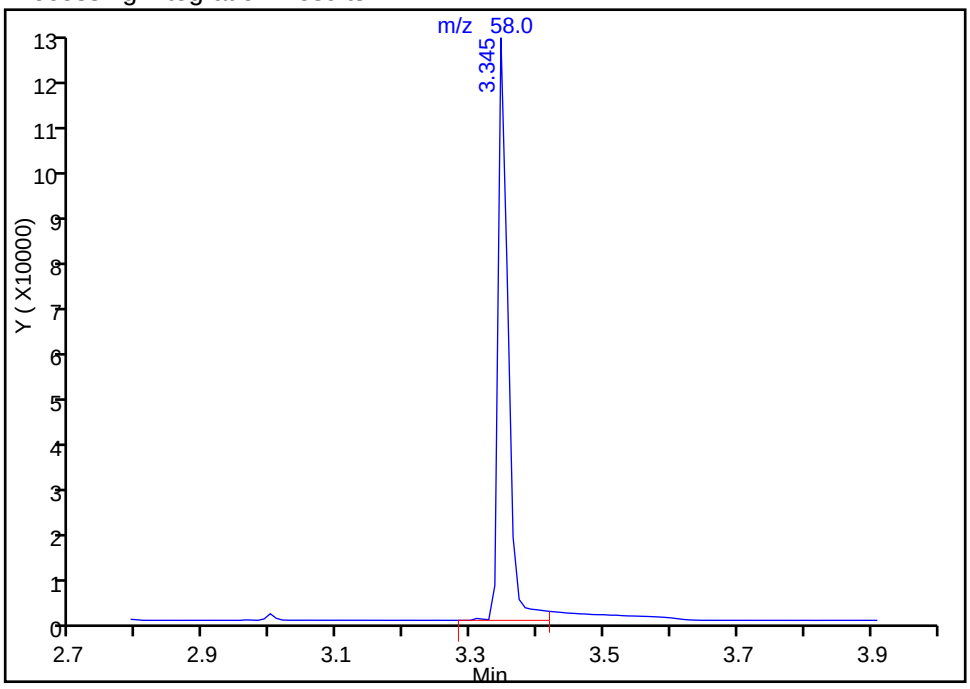
Data File: \\ChromNA\Sacramento\ChromData\SV1\20170222-40122.b\14D0222D.D
Injection Date: 22-Feb-2017 10:41:30 Instrument ID: SV1
Lims ID: IC CS-4
Client ID:
Operator ID: ALS Bottle#: 4 Worklist Smp#: 4
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 1,4-DIoxane Limit Group: MSS - 8270SIM 14DX - ICAL
Column: HP-5MS (0.25 mm) Detector MS SCAN

1 1,4-Dioxane, CAS: 123-91-1

Signal: 1

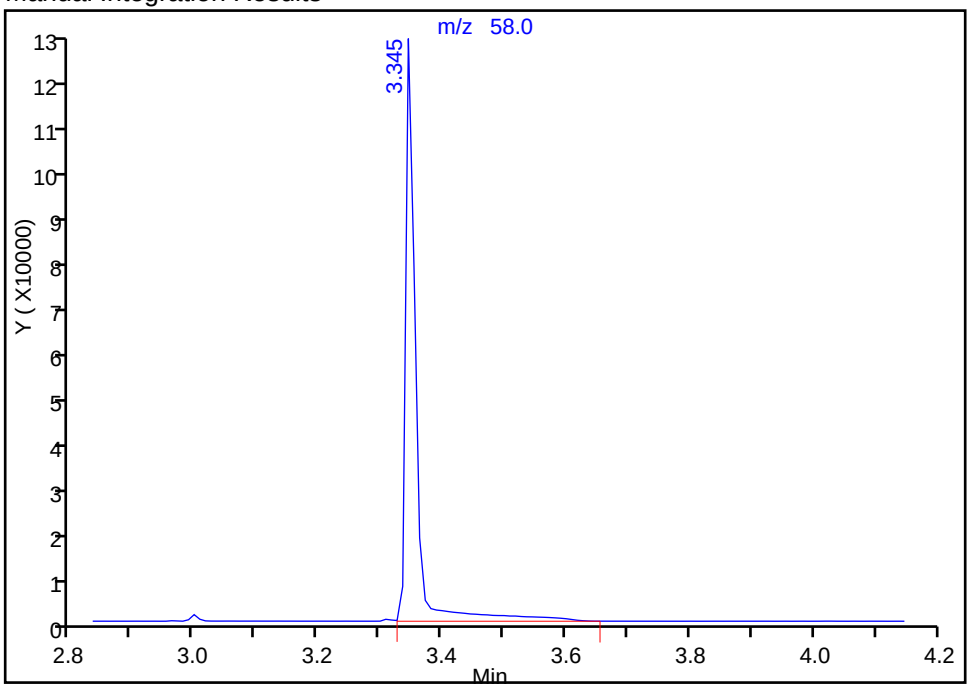
Processing Integration Results

RT: 3.35
Area: 137931
Amount: 4.941853
Amount Units: ug/ml



Manual Integration Results

RT: 3.35
Area: 150814
Amount: 5.484704
Amount Units: ug/ml



Reviewer: onishim, 22-Feb-2017 14:19:29
Audit Action: Manually Integrated Audit Reason: Poor chromatography

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNA\Sacramento\ChromData\SV1\20170222-40122.b\14D0222E.D
Lims ID: ICIS CS-5
Client ID:
Sample Type: ICIS Calib Level: 5
Inject. Date: 22-Feb-2017 11:03:30 ALS Bottle#: 5 Worklist Smp#: 5
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: ICIS CS-5 14D
Operator ID: Instrument ID: SV1
Sublist: chrom-1,4-DIoxane*sub8

Method: \\ChromNA\Sacramento\ChromData\SV1\20170222-40122.b\1,4-DIoxane.m
Limit Group: MSS - 8270SIM 14DX - ICAL
Last Update: 22-Feb-2017 14:19:30 Calib Date: 22-Feb-2017 12:09:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\SV1\20170222-40122.b\14D0222H.D

Column 1 : HP-5MS (0.25 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: onishim Date: 22-Feb-2017 11:21:43

Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Ratio Range	Ratio	S/N	Flags
1 1,4-Dioxane											M
58	3.354	3.354	0.000	81	293131	10.0	9.29	80- 120	100	145920	M
88	3.354	3.354	0.000		351365			92- 132	120		
* 2 1,4-Dichlorobenzene-d4											
152	7.197	7.197	0.000	100	786305	10.0	10.0	80- 120	100		
150	7.197	7.197	0.000		1219926			136- 176	155		
115	7.197	7.197	0.000		448437			37.1- 77.1	57.0		
$ 3 Nitrobenzene-d5											
82	8.059	8.059	0.000	99	909372	10.0	9.58	80- 120	100		
128	8.059	8.059	0.000		466333			29.8- 69.8	51.3		
54	8.051	8.059	-0.008		534392			38.3- 78.3	58.8		

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

MS14DL5_00010 Amount Added: 1.00 Units: mL

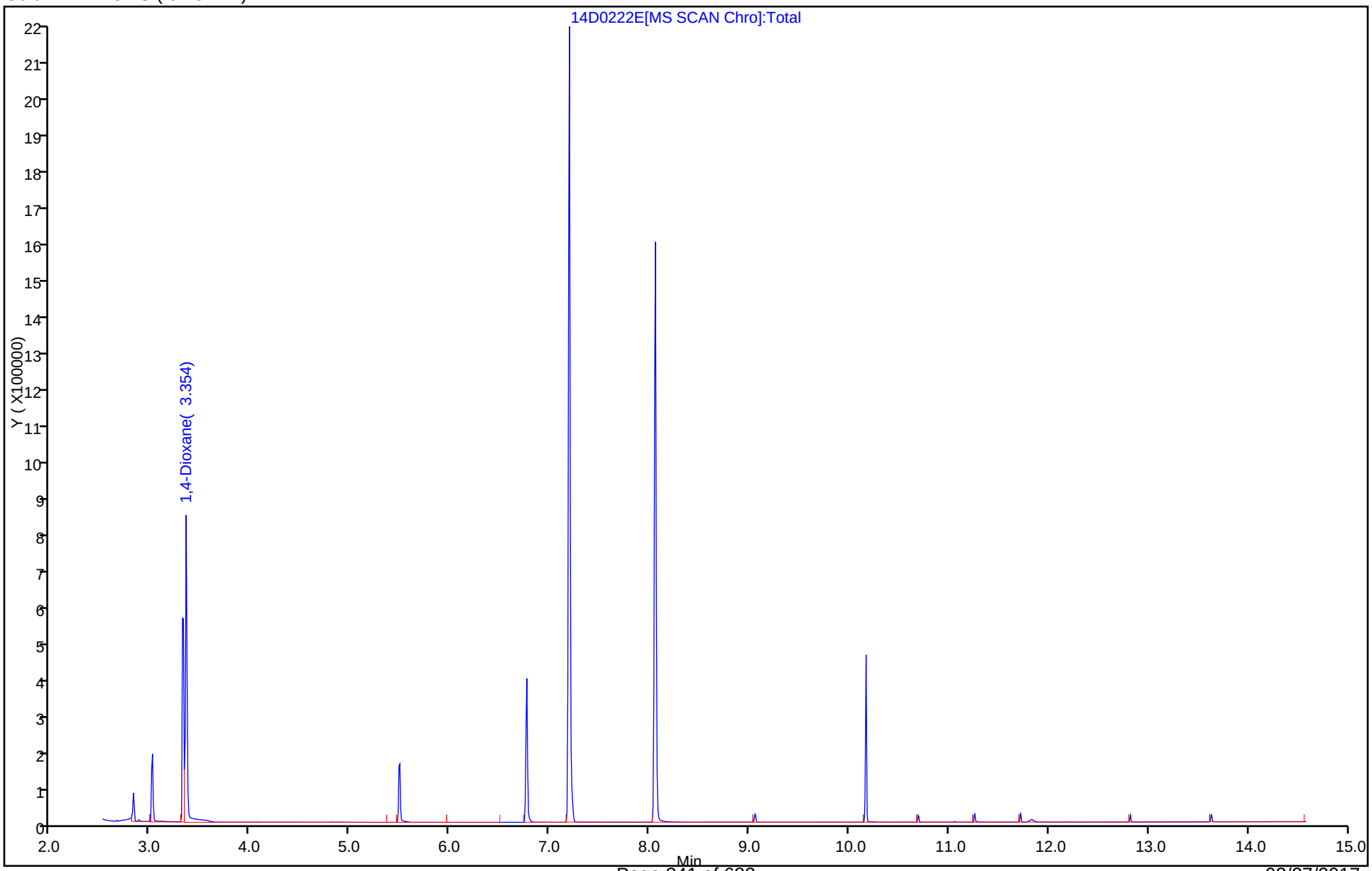
Report Date: 22-Feb-2017 14:19:30 Chrom Revision: 2.2 03-Feb-2017 15:35:04

TestAmerica Sacramento

Data File: \\ChromNA\Sacramento\ChromData\SV1\20170222-40122.b\14D0222E.D

Injection Date:	22-Feb-2017 11:03:30	Instrument ID:	SV1	Operator ID:	
Lims ID:	ICIS CS-5			Worklist Smp#:	5
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	1,4-DIoxane	Limit Group:	MSS - 8270SIM 14DX - ICAL		

Column: HP-5MS (0.25 mm)



Manual Integration/User Assign Peak Report

TestAmerica Sacramento

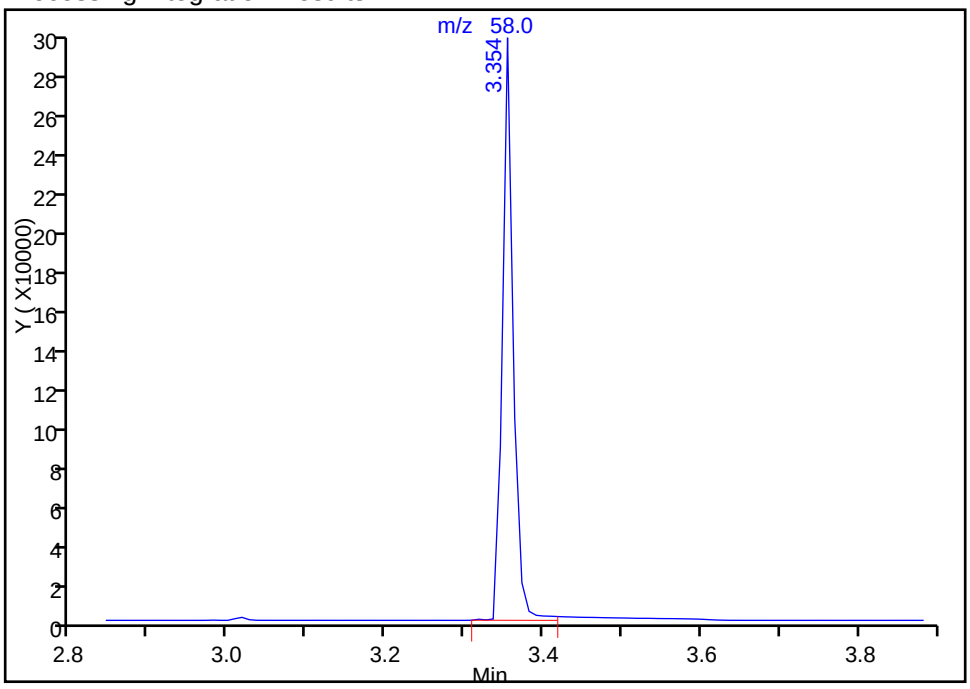
Data File: \\ChromNA\Sacramento\ChromData\SV1\20170222-40122.b\14D0222E.D
Injection Date: 22-Feb-2017 11:03:30 Instrument ID: SV1
Lims ID: ICIS CS-5
Client ID:
Operator ID: ALS Bottle#: 5 Worklist Smp#: 5
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 1,4-DIoxane Limit Group: MSS - 8270SIM 14DX - ICAL
Column: HP-5MS (0.25 mm) Detector MS SCAN

1 1,4-Dioxane, CAS: 123-91-1

Signal: 1

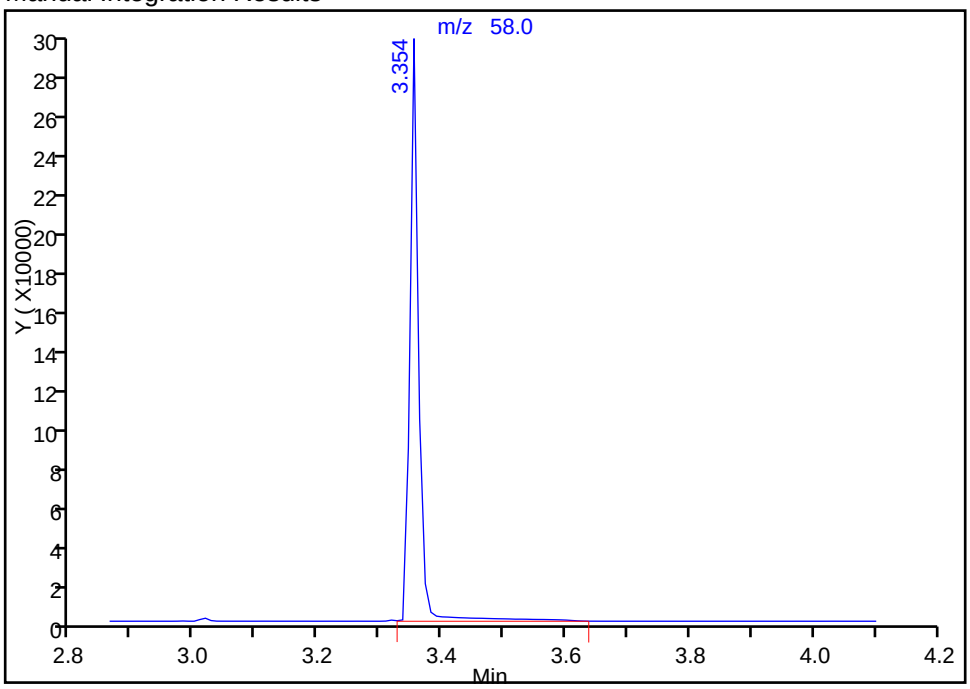
Processing Integration Results

RT: 3.35
Area: 280244
Amount: 8.808838
Amount Units: ug/ml



Manual Integration Results

RT: 3.35
Area: 293131
Amount: 9.291648
Amount Units: ug/ml



Reviewer: onishim, 22-Feb-2017 14:19:30
Audit Action: Manually Integrated Audit Reason: Poor chromatography

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNA\Sacramento\ChromData\SV1\20170222-40122.b\14D0222F.D
Lims ID: IC CS-6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 22-Feb-2017 11:25:30 ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: IC CS-6 14D
Operator ID: Instrument ID: SV1
Sublist: chrom-1,4-DIoxane*sub8

Method: \\ChromNA\Sacramento\ChromData\SV1\20170222-40122.b\1,4-DIoxane.m
Limit Group: MSS - 8270SIM 14DX - ICAL
Last Update: 22-Feb-2017 14:19:31 Calib Date: 22-Feb-2017 12:09:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\SV1\20170222-40122.b\14D0222H.D

Column 1 : HP-5MS (0.25 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: onishim Date: 22-Feb-2017 11:46:54

Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Ratio Range	Ratio	Flags
1 1,4-Dioxane										M
58	3.355	3.354	0.001	100	570238	20.0	19.5	80- 120	100	M
88	3.364	3.354	0.010		655548			92- 132	115	
* 2 1,4-Dichlorobenzene-d4										
152	7.197	7.197	0.000	100	729888	10.0	10.0	80- 120	100	
150	7.197	7.197	0.000		1138534			136- 176	156	
115	7.197	7.197	0.000		417127			37.1- 77.1	57.1	
$ 3 Nitrobenzene-d5										
82	8.059	8.059	0.000	96	1769342	20.0	20.1	80- 120	100	
128	8.068	8.059	0.009		911496			29.8- 69.8	51.5	
54	8.059	8.059	0.000		1041598			38.3- 78.3	58.9	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

MS14DL6_00010 Amount Added: 1.00 Units: mL

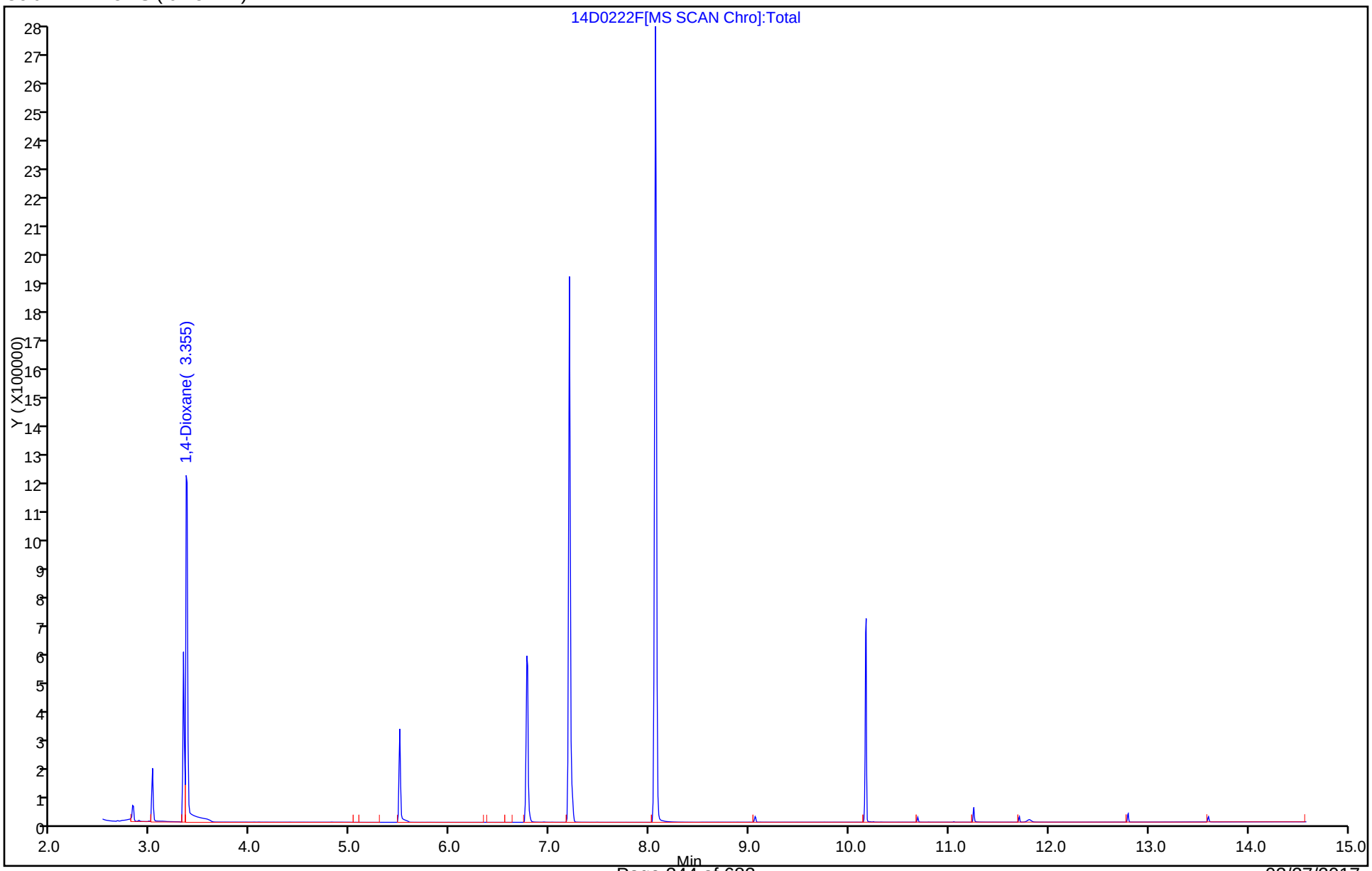
Report Date: 22-Feb-2017 14:19:31 Chrom Revision: 2.2 03-Feb-2017 15:35:04

TestAmerica Sacramento

Data File: \\ChromNA\Sacramento\ChromData\SV1\20170222-40122.b\14D0222F.D

Injection Date:	22-Feb-2017 11:25:30	Instrument ID:	SV1	Operator ID:	
Lims ID:	IC CS-6			Worklist Smp#:	6
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	1,4-DIoxane	Limit Group:	MSS - 8270SIM 14DX - ICAL		

Column: HP-5MS (0.25 mm)



Manual Integration/User Assign Peak Report

TestAmerica Sacramento

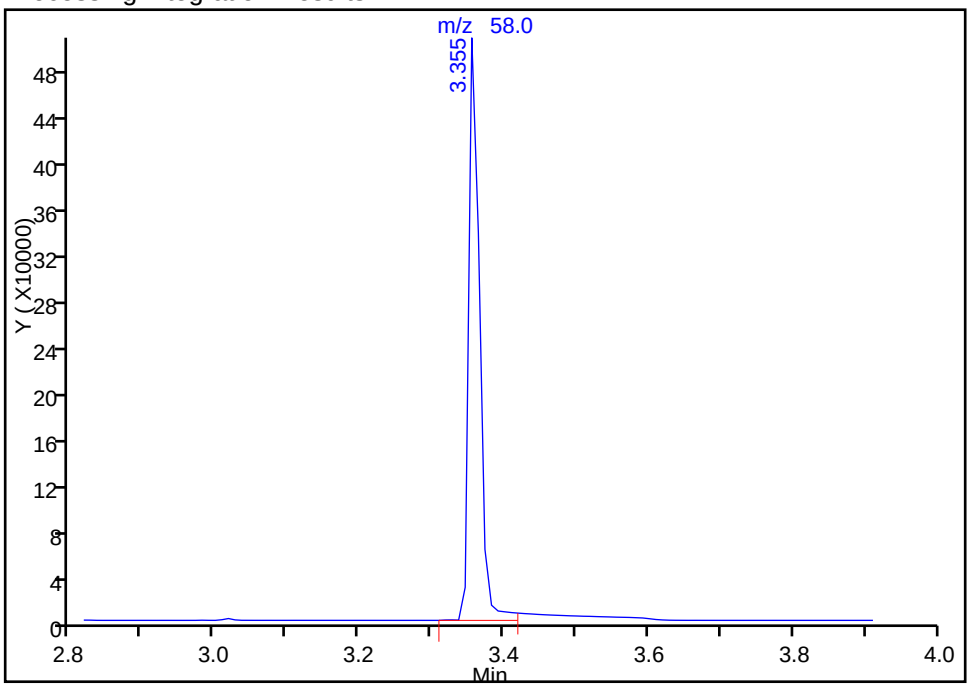
Data File: \\ChromNA\Sacramento\ChromData\SV1\20170222-40122.b\14D0222F.D
Injection Date: 22-Feb-2017 11:25:30 Instrument ID: SV1
Lims ID: IC CS-6
Client ID:
Operator ID: ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 1,4-DIoxane Limit Group: MSS - 8270SIM 14DX - ICAL
Column: HP-5MS (0.25 mm) Detector MS SCAN

1 1,4-Dioxane, CAS: 123-91-1

Signal: 1

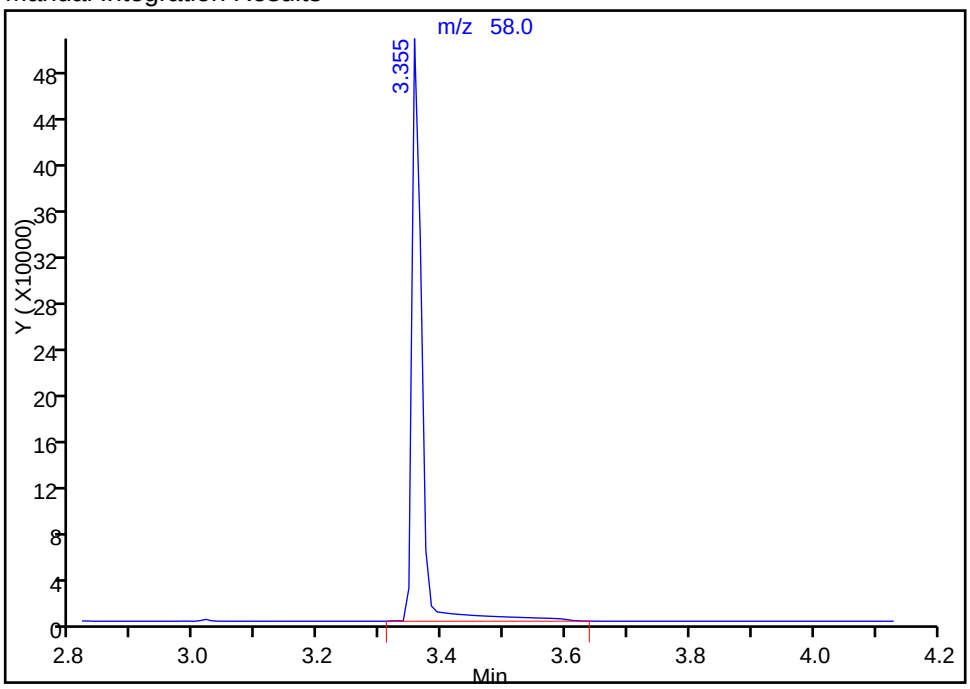
Processing Integration Results

RT: 3.36
Area: 530709
Amount: 18.155454
Amount Units: ug/ml



Manual Integration Results

RT: 3.36
Area: 570238
Amount: 19.472510
Amount Units: ug/ml



Reviewer: onishim, 22-Feb-2017 14:19:30
Audit Action: Manually Integrated Audit Reason: Poor chromatography

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNA\Sacramento\ChromData\SV1\20170222-40122.b\14D0222G.D
Lims ID: IC CS-7
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 22-Feb-2017 11:47:30 ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: IC CS-7 14D
Operator ID: Instrument ID: SV1
Sublist: chrom-1,4-DIoxane*sub8

Method: \\ChromNA\Sacramento\ChromData\SV1\20170222-40122.b\1,4-DIoxane.m
Limit Group: MSS - 8270SIM 14DX - ICAL
Last Update: 22-Feb-2017 14:19:31 Calib Date: 22-Feb-2017 12:09:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\SV1\20170222-40122.b\14D0222H.D

Column 1 : HP-5MS (0.25 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: onishim Date: 22-Feb-2017 12:18:18

Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Ratio Range	Ratio	Flags
1 1,4-Dioxane										M
58	3.355	3.354	0.001	90	1391248	50.0	53.4	80- 120	100	M
88	3.364	3.354	0.010		1577040			92- 132	113	
* 2 1,4-Dichlorobenzene-d4										
152	7.198	7.197	0.001	100	649782	10.0	10.0	80- 120	100	
150	7.198	7.197	0.001		1006292			136- 176	155	
115	7.198	7.197	0.001		370252			37.1- 77.1	57.0	
$ 3 Nitrobenzene-d5										
82	8.068	8.059	0.009	97	4451578	50.0	56.7	80- 120	100	
128	8.068	8.059	0.009		2303805			29.8- 69.8	51.8	
54	8.068	8.059	0.009		2601883			38.3- 78.3	58.4	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

MS14DL7_00010 Amount Added: 1.00 Units: mL

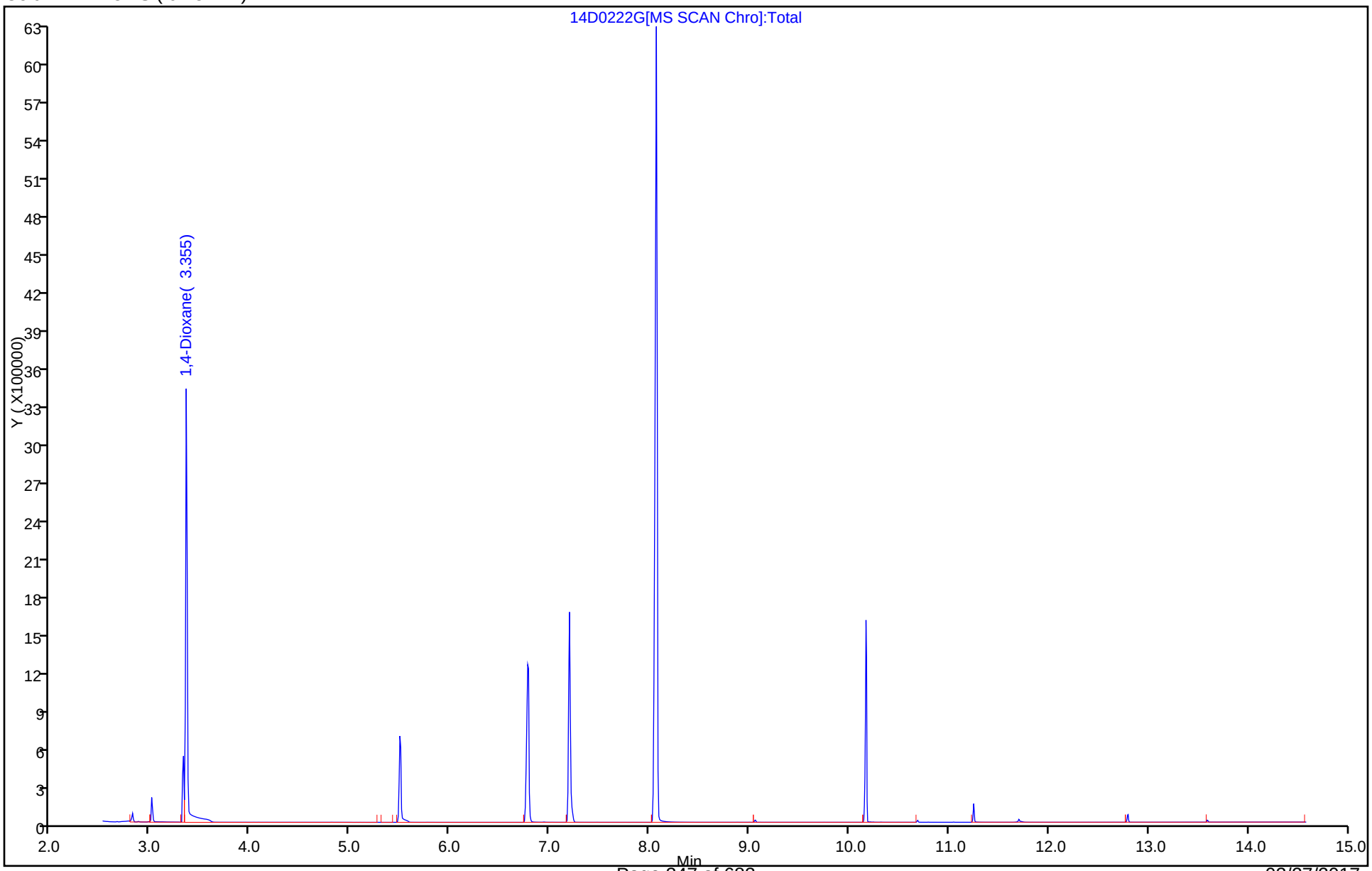
Report Date: 22-Feb-2017 14:19:32 Chrom Revision: 2.2 03-Feb-2017 15:35:04

TestAmerica Sacramento

Data File: \\ChromNA\Sacramento\ChromData\SV1\20170222-40122.b\14D0222G.D

Injection Date:	22-Feb-2017 11:47:30	Instrument ID:	SV1	Operator ID:	
Lims ID:	IC CS-7			Worklist Smp#:	7
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	1,4-DIoxane	Limit Group:	MSS - 8270SIM 14DX - ICAL		

Column: HP-5MS (0.25 mm)



Manual Integration/User Assign Peak Report

TestAmerica Sacramento

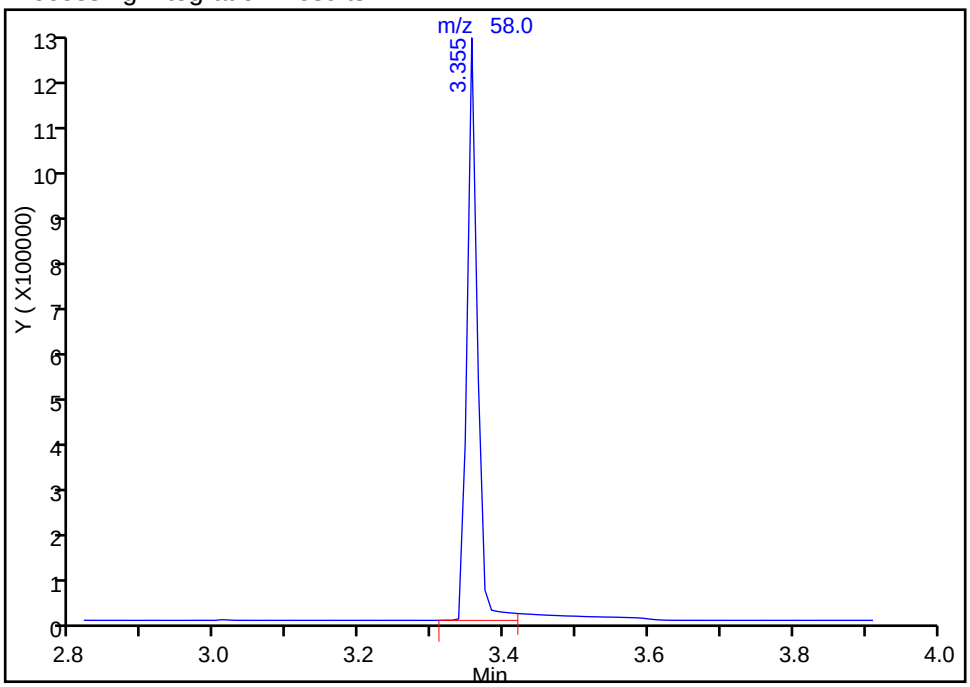
Data File:	\\ChromNA\Sacramento\ChromData\SV1\20170222-40122.b\14D0222G.D				
Injection Date:	22-Feb-2017 11:47:30	Instrument ID:	SV1		
Lims ID:	IC CS-7				
Client ID:					
Operator ID:		ALS Bottle#:	7	Worklist Smp#:	7
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	1,4-DIoxane	Limit Group:	MSS - 8270SIM 14DX - ICAL		
Column:	HP-5MS (0.25 mm)	Detector	MS SCAN		

1 1,4-Dioxane, CAS: 123-91-1

Signal: 1

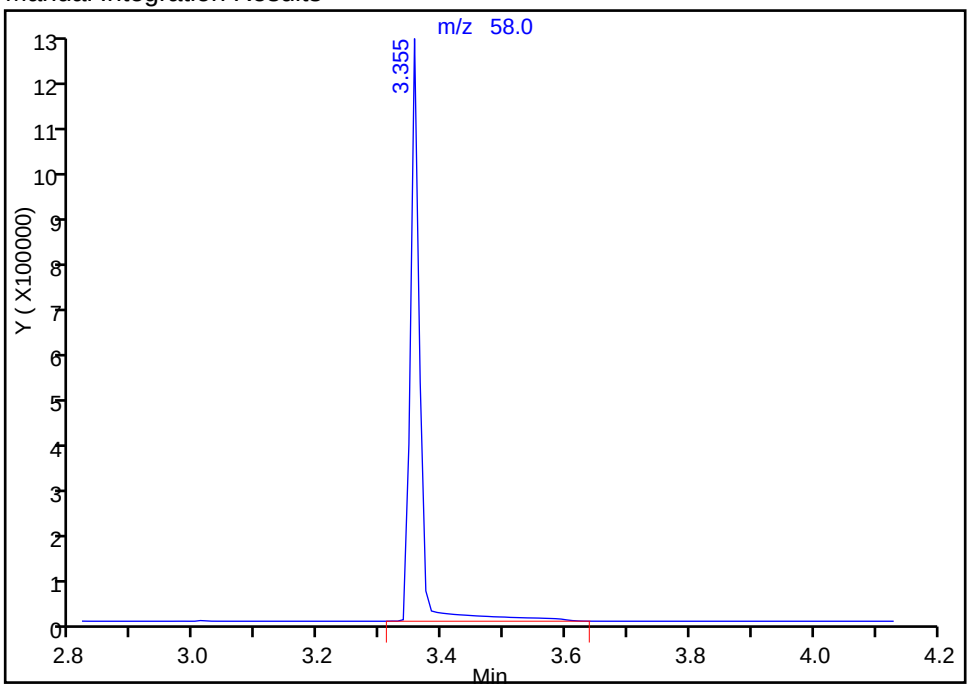
Processing Integration Results

RT: 3.36
Area: 1295874
Amount: 49.348837
Amount Units: ug/ml



Manual Integration Results

RT: 3.36
Area: 1391248
Amount: 53.365292
Amount Units: ug/ml



Reviewer: onishim, 22-Feb-2017 14:19:31

Audit Action: Manually Integrated Audit Reason: Poor chromatography

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNA\Sacramento\ChromData\SV1\20170222-40122.b\14D0222H.D
Lims ID: IC CS-8
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 22-Feb-2017 12:09:30 ALS Bottle#: 8 Worklist Smp#: 8
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: IC CS-8 14D
Operator ID: Instrument ID: SV1
Sublist: chrom-1,4-DIoxane*sub8

Method: \\ChromNA\Sacramento\ChromData\SV1\20170222-40122.b\1,4-DIoxane.m
Limit Group: MSS - 8270SIM 14DX - ICAL
Last Update: 22-Feb-2017 14:19:32 Calib Date: 22-Feb-2017 12:09:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\SV1\20170222-40122.b\14D0222H.D

Column 1 : HP-5MS (0.25 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: onishim Date: 22-Feb-2017 12:42:13

Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Ratio Range	Ratio	Flags
1 1,4-Dioxane										M
58	3.365	3.354	0.011	73	2749219	100.0	87.6	80- 120	100	M
88	3.365	3.354	0.011		3047664			92- 132	111	
* 2 1,4-Dichlorobenzene-d4										
152	7.198	7.197	0.001	99	782185	10.0	10.0	80- 120	100	
150	7.198	7.197	0.001		1219969			136- 176	156	
115	7.198	7.197	0.001		445630			37.1- 77.1	57.0	
$ 3 Nitrobenzene-d5										
82	8.085	8.059	0.026	98	8721763	100.0	92.3	80- 120	100	
128	8.085	8.059	0.026		4541021			29.8- 69.8	52.1	
54	8.077	8.059	0.018		5217430			38.3- 78.3	59.8	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

MS14DL8_00005 Amount Added: 1.00 Units: mL

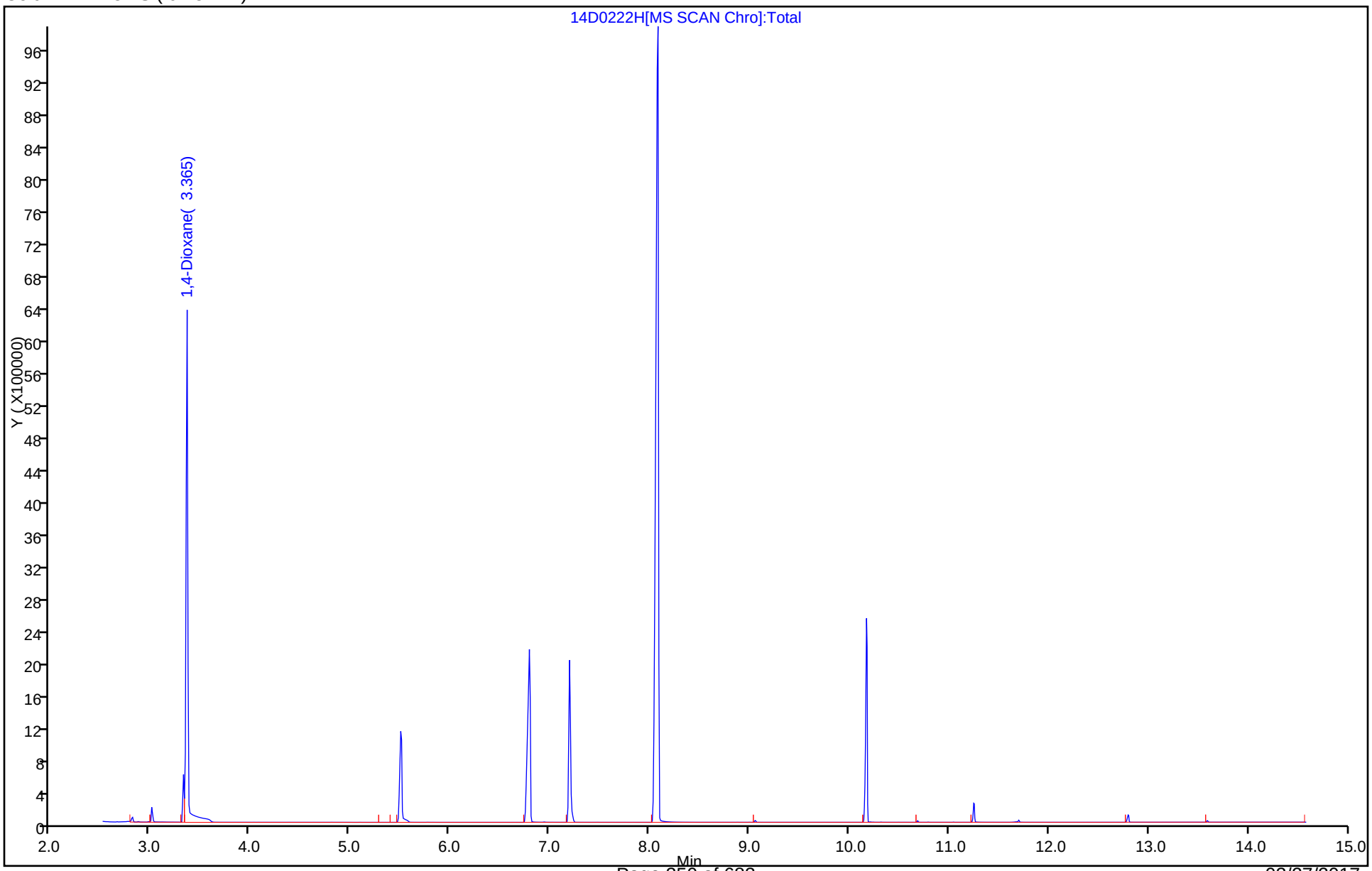
Report Date: 22-Feb-2017 14:19:33 Chrom Revision: 2.2 03-Feb-2017 15:35:04

TestAmerica Sacramento

Data File: \\ChromNA\Sacramento\ChromData\SV1\20170222-40122.b\14D0222H.D

Injection Date:	22-Feb-2017 12:09:30	Instrument ID:	SV1	Operator ID:	
Lims ID:	IC CS-8			Worklist Smp#:	8
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	1,4-DIoxane	Limit Group:	MSS - 8270SIM 14DX - ICAL		

Column: HP-5MS (0.25 mm)



Manual Integration/User Assign Peak Report

TestAmerica Sacramento

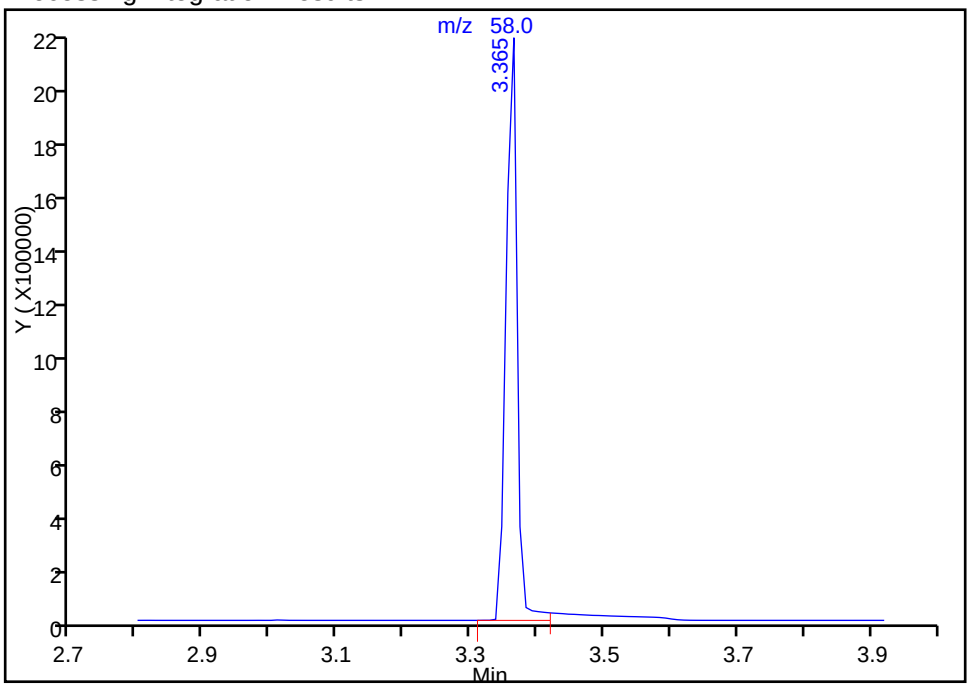
Data File:	\\ChromNA\Sacramento\ChromData\SV1\20170222-40122.b\14D0222H.D				
Injection Date:	22-Feb-2017 12:09:30	Instrument ID:	SV1		
Lims ID:	IC CS-8				
Client ID:					
Operator ID:		ALS Bottle#:	8	Worklist Smp#:	8
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	1,4-DIoxane	Limit Group:	MSS - 8270SIM 14DX - ICAL		
Column:	HP-5MS (0.25 mm)	Detector	MS SCAN		

1 1,4-Dioxane, CAS: 123-91-1

Signal: 1

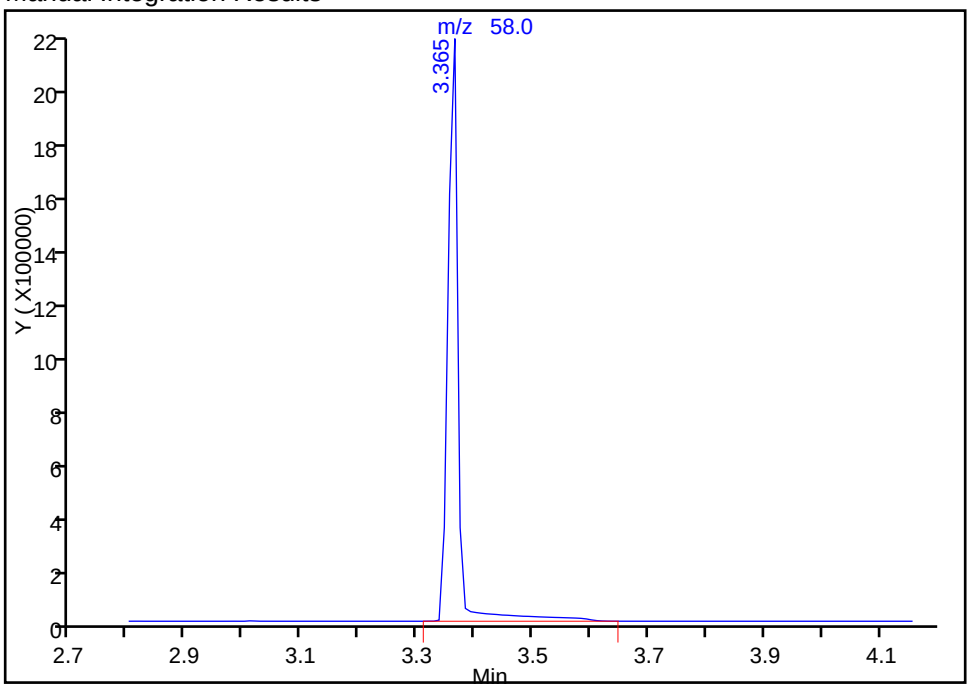
Processing Integration Results

RT: 3.36
Area: 2566879
Amount: 82.391732
Amount Units: ug/ml



Manual Integration Results

RT: 3.36
Area: 2749219
Amount: 87.603583
Amount Units: ug/ml



Reviewer: onishim, 22-Feb-2017 14:19:32

Audit Action: Manually Integrated Audit Reason: Poor chromatography

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Sacramento Job No.: 320-25962-1

SDG No.:

Lab Sample ID: ICV 320-151686/9 Calibration Date: 02/22/2017 12:31

Instrument ID: SV1 Calib Start Date: 02/22/2017 09:35

GC Column: HP-5MS ID: 0.25(mm) Calib End Date: 02/22/2017 12:09

Lab File ID: 14D0222.D Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.4012	0.3365		8.39	10.0	-16.1	30.0
Nitrobenzene-d5	Ave	1.208	1.092		9.04	10.0	-9.6	

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNA\Sacramento\ChromData\SV1\20170222-40122.b\14D0222.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 22-Feb-2017 12:31:30 ALS Bottle#: 9 Worklist Smp#: 9
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: ICV 14D
Operator ID: Instrument ID: SV1
Sublist:

Method: \\ChromNA\Sacramento\ChromData\SV1\20170222-40122.b\1,4-DIoxane.m
Limit Group: MSS - 8270SIM 14DX - ICAL
Last Update: 22-Feb-2017 14:19:32 Calib Date: 22-Feb-2017 12:09:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\SV1\20170222-40122.b\14D0222H.D

Column 1 : HP-5MS (0.25 mm) Det: MS SCAN
Process Host: XAWRK015

Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Ratio Range	Ratio	S/N	Flags
1 1,4-Dioxane											
58	3.371	3.354	0.017	62	295999	10.0	8.39	80- 120	100	1939	
88	3.371	3.354	0.017		362512			92- 132	122		
* 2 1,4-Dichlorobenzene-d4											
152	7.198	7.197	0.001	100	879747	10.0	10.0	80- 120	100		
150	7.198	7.197	0.001		1372333			136- 176	156		
115	7.198	7.197	0.001		505357			37.1- 77.1	57.4		
$ 3 Nitrobenzene-d5											
82	8.060	8.059	0.001	99	960674	10.0	9.04	80- 120	100		
128	8.060	8.059	0.001		494326			29.8- 69.8	51.5		
54	8.052	8.059	-0.007		562315			38.3- 78.3	58.5		

Reagents:

MS14DICV_00004 Amount Added: 1.00 Units: mL

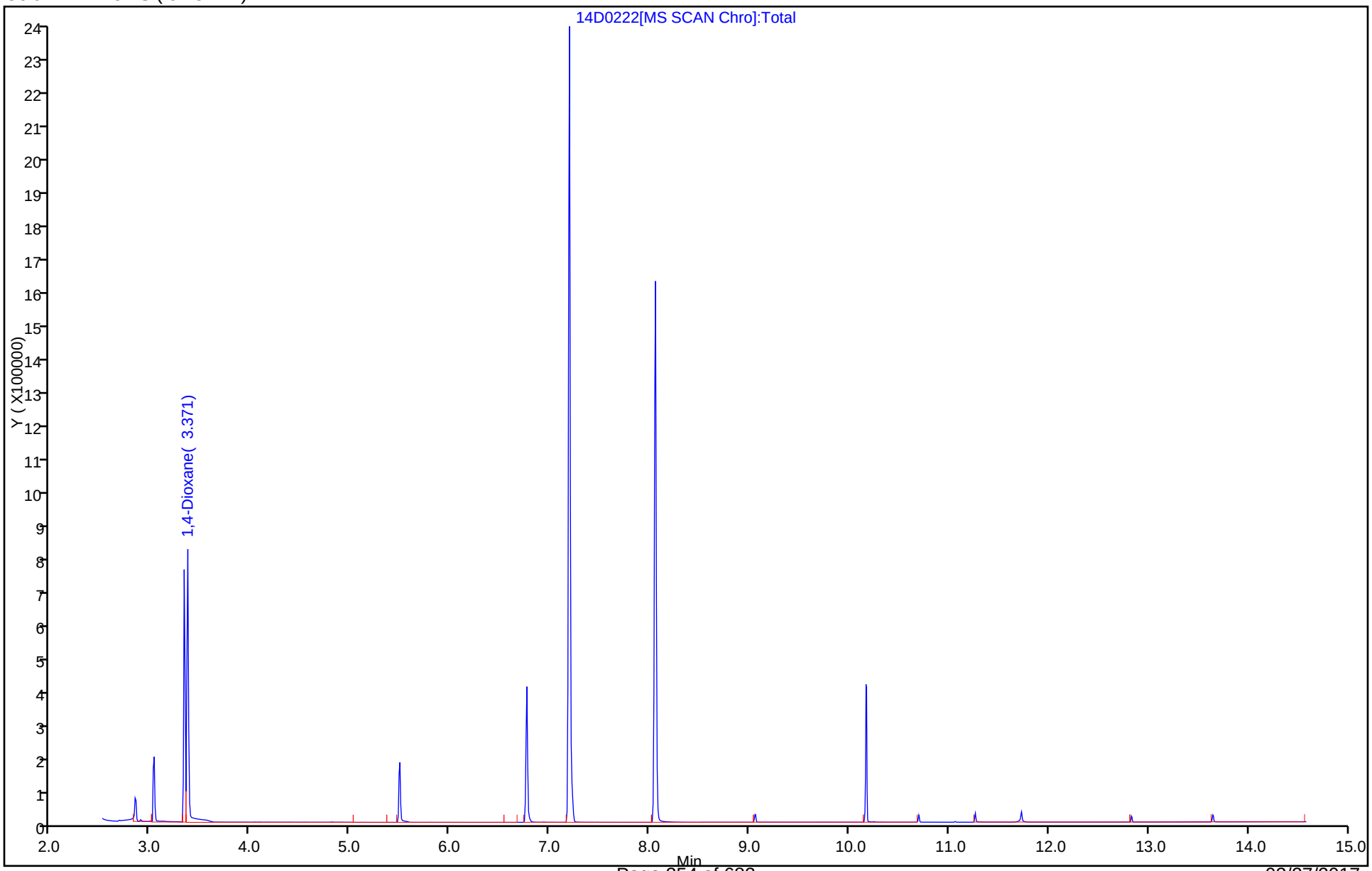
Report Date: 22-Feb-2017 14:22:06 Chrom Revision: 2.2 03-Feb-2017 15:35:04

TestAmerica Sacramento

Data File: \\ChromNA\Sacramento\ChromData\SV1\20170222-40122.b\14D0222.D

Injection Date:	22-Feb-2017 12:31:30	Instrument ID:	SV1	Operator ID:	
Lims ID:	ICV			Worklist Smp#:	9
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	1,4-DIoxane	Limit Group:	MSS - 8270SIM 14DX - ICAL		

Column: HP-5MS (0.25 mm)



FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Sacramento Job No.: 320-25962-1

SDG No.:

Lab Sample ID: CCV 320-153398/2 Calibration Date: 03/06/2017 10:55

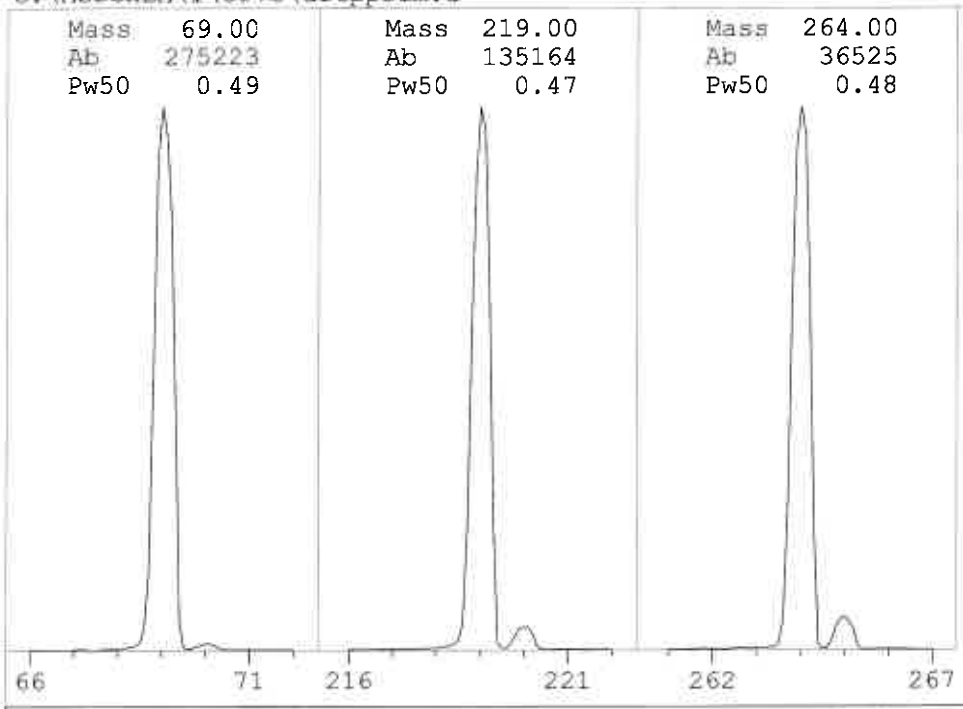
Instrument ID: SV1 Calib Start Date: 02/22/2017 09:35

GC Column: HP-5MS ID: 0.25(mm) Calib End Date: 02/22/2017 12:09

Lab File ID: 14D0306.D Conc. Units: ug/mL

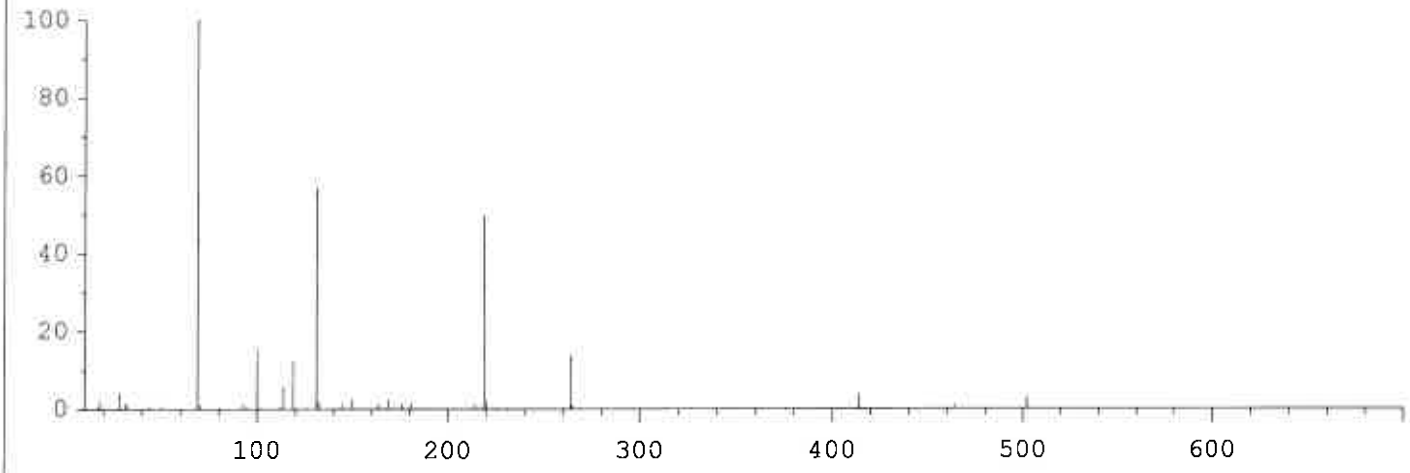
ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.4012	0.3740		9.32	10.0	-6.8	30.0
Nitrobenzene-d5	Ave	1.208	1.205		9.98	10.0	-0.2	30.0

Mon Mar 06 10:19:50 2017 Instrument: SV1
C:\MSDCHEM\1\5973\dftppsim.u



Ion Pol	POS	MassGain	-384
		MassOffs	-12
Emission	34.6	AmuGain	1578
EIEnrgy	69.9	AmuOffs	134
Filament	1	Wid219	-0.035
		DC Pol	POS
Repeller	28.28		
IonFcus	75.0	HEDEnab	ON
EntLens	0.0	EMVolts	1047
EntOffs	VAR		
		Samples	8
PFTBA	OPEN	Averages	3
		Stepsize	0.10
Zones:			
MS Source	250	TurboSpd	100
MS Quad	150		

Scan: 10.00 - 700.00 Samples: 8 Thresh: 100 Step: 0.10
92 peaks Base: 69.00 Abundance: 204160



Mass	Abund	Rel Abund	Iso Mass	Iso Abund	Iso Ratio
69.00	204160	100.00	70.00	2378	1.16
219.00	101784	49.86	220.00	4731	4.65
264.00	28440	13.93	265.00	1699	5.97

Air/Water Check: H2O~2.11% N2~3.90% O2~1.17% CO2~0.77% N2/H2O~185.24%

Column Flow: Front: 1.4 Back: 0 ml/min. Interface Temp: 250

Ramp Criteria:
Ion Focus Maximum 90 volts using ion 264; EM Gain 90130
Repeller Maximum 35 volts using ion 219;

MassGain Values @Samples: -384@3 -384@2 -384@1 -384@0 -384@FS

TARGET MASS:	50	69	131	219	414	502	800
Amu Offset:	134.0	134.0	134.0	134.0	134.0	134.0	134.0
Entrance Lens Offset:	14.6	12.0	13.3	12.5	13.8	12.8	12.8
Target Abund(%):	1.0	100.0	55.0	45.0	3.0	2.0	
Actual Tune Abund(%):	0.9	100.0	56.7	49.9	3.7	2.9	

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNA\Sacramento\ChromData\SV1\20170306-40510.b\14D0306.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 06-Mar-2017 10:55:30 ALS Bottle#: 96 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: CCV 14D
Operator ID: Instrument ID: SV1
Sublist: chrom-1,4-DIoxane*sub8

Method: \\ChromNA\Sacramento\ChromData\SV1\20170306-40510.b\1,4-DIoxane.m
Limit Group: MSS - 8270SIM 14DX - ICAL
Last Update: 06-Mar-2017 11:21:38 Calib Date: 22-Feb-2017 12:09:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\SV1\20170222-40122.b\14D0222H.D

Column 1 : HP-5MS (0.25 mm) Det: MS SCAN
Process Host: XAWRK027

First Level Reviewer: onishim Date: 06-Mar-2017 11:21:38

Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Ratio Range	Ratio	S/N	Flags
1 1,4-Dioxane											M
58	3.346	3.346	0.000	68	262972	10.0	9.32	80- 120	100	60496	M
88	3.355	3.346	0.009		301608			95- 135	115		
* 2 1,4-Dichlorobenzene-d4											
152	7.197	7.197	0.000	100	703077	10.0	10.0	80- 120	100		
150	7.197	7.197	0.000		1092614			135- 175	155		
115	7.189	7.197	-0.008		399733			36.9- 76.9	56.9		
$ 3 Nitrobenzene-d5											
82	8.060	8.060	0.000	100	847331	10.0	9.98	80- 120	100		
128	8.060	8.060	0.000		453767			33.6- 73.6	53.6		
54	8.052	8.060	-0.008		486515			37.4- 77.4	57.4		

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

MS14DL5_00010 Amount Added: 1.00 Units: mL

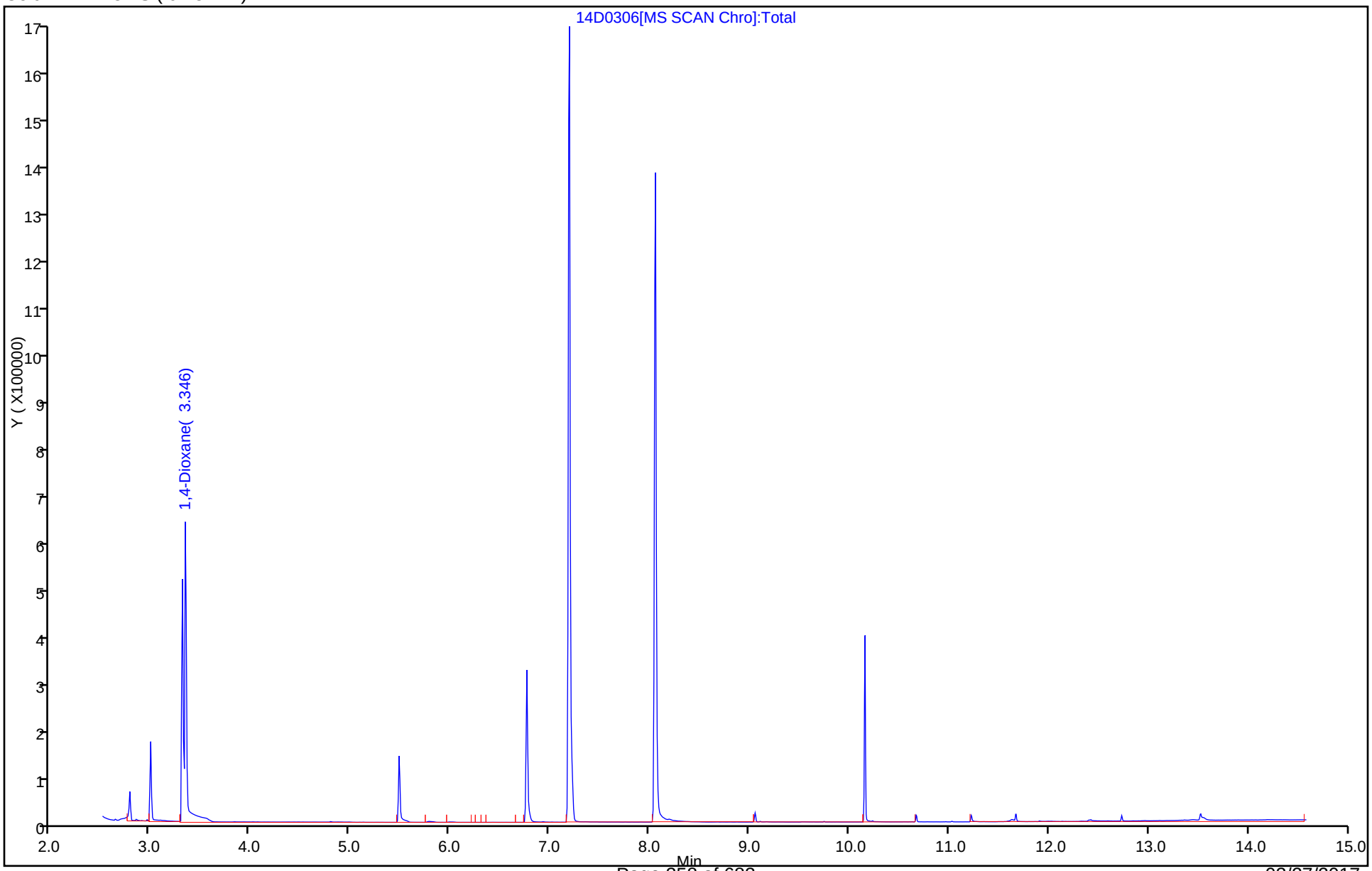
Report Date: 06-Mar-2017 11:21:38 Chrom Revision: 2.2 03-Feb-2017 15:35:04

TestAmerica Sacramento

Data File: \\ChromNA\Sacramento\ChromData\SV1\20170306-40510.b\14D0306.D

Injection Date:	06-Mar-2017 10:55:30	Instrument ID:	SV1	Operator ID:	
Lims ID:	CCV			Worklist Smp#:	2
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	96
Method:	1,4-DIoxane	Limit Group:	MSS - 8270SIM 14DX - ICAL		

Column: HP-5MS (0.25 mm)



Manual Integration/User Assign Peak Report

TestAmerica Sacramento

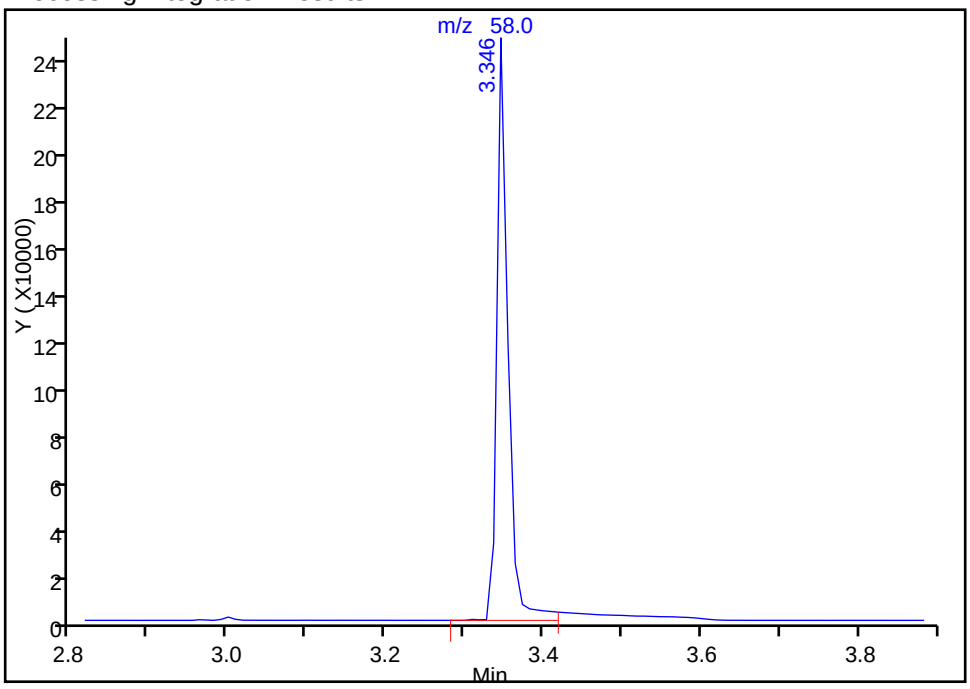
Data File:	\\ChromNA\Sacramento\ChromData\SV1\20170306-40510.b\14D0306.D				
Injection Date:	06-Mar-2017 10:55:30	Instrument ID:	SV1		
Lims ID:	CCV				
Client ID:					
Operator ID:		ALS Bottle#:	96	Worklist Smp#:	2
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	1,4-DIoxane	Limit Group:	MSS - 8270SIM 14DX - ICAL		
Column:	HP-5MS (0.25 mm)	Detector	MS SCAN		

1 1,4-Dioxane, CAS: 123-91-1

Signal: 1

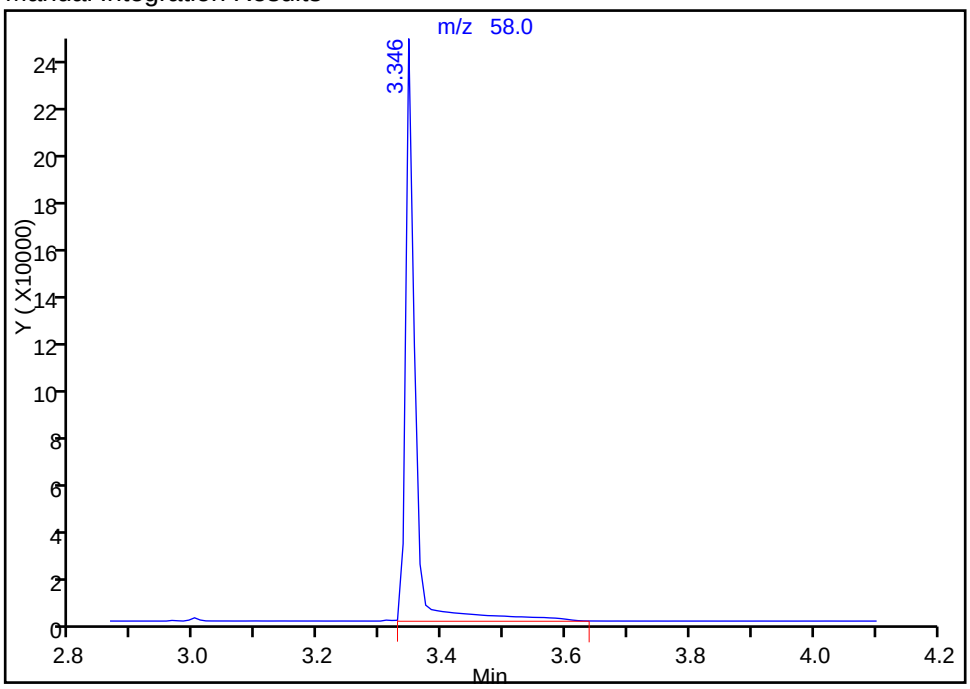
Processing Integration Results

RT: 3.35
Area: 240446
Amount: 8.523867
Amount Units: ug/ml



Manual Integration Results

RT: 3.35
Area: 262972
Amount: 9.322419
Amount Units: ug/ml



Reviewer: onishim, 06-Mar-2017 11:21:06

Audit Action: Manually Integrated Audit Reason: Peak Tail

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento | Job No.: 320-25962-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 320-152172/1-A

Matrix: Water | Lab File ID: S030601.D

Analysis Method: WS-MS-0011 | Date Collected:

Extract. Method: 3510C | Date Extracted: 02/24/2017 15:44

Sample wt/vol: 1000(mL) | Date Analyzed: 03/06/2017 11:24

Con. Extract Vol.: 1.0(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 153398 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
123-91-1	1,4-Dioxane	0.50	U	1.0	0.50	0.20

CAS NO.	SURROGATE	%REC	Q	LIMITS
4165-60-0	Nitrobenzene-d5	63		42-91

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNA\Sacramento\ChromData\SV1\20170306-40510.b\S030601.D
Lims ID: MB 320-152172/1-A
Client ID:
Sample Type: MB
Inject. Date: 06-Mar-2017 11:24:30 ALS Bottle#: 1 Worklist Smp#: 3
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: mb 320-152172/1-a
Operator ID: Instrument ID: SV1

Method: \\ChromNA\Sacramento\ChromData\SV1\20170306-40510.b\1,4-DIoxane.m
Limit Group: MSS - 8270SIM 14DX - ICAL
Last Update: 06-Mar-2017 11:42:21 Calib Date: 22-Feb-2017 12:09:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\SV1\20170222-40122.b\14D0222H.D

Column 1 : HP-5MS (0.25 mm) Det: MS SCAN
Process Host: XAWRK027

First Level Reviewer: onishim Date: 06-Mar-2017 11:42:38

Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Ratio Range	Ratio	Flags
1 1,4-Dioxane										
58		3.346					ND			
88		3.346								
* 2 1,4-Dichlorobenzene-d4										
152	7.197	7.197	0.000	100	732550	10.0	10.0	80- 120	100	
150	7.197	7.197	0.000		1135427			135- 175	155	
115	7.189	7.197	-0.008		415403			36.9- 76.9	56.7	
$ 3 Nitrobenzene-d5										
82	8.060	8.060	0.000	100	280005	5.00	3.17	80- 120	100	
128	8.060	8.060	0.000		147620			33.6- 73.6	52.7	
54	8.052	8.060	-0.008		154628			37.4- 77.4	55.2	

Reagents:

MS8270IS_00016 Amount Added: 5.00 Units: uL Run Reagent

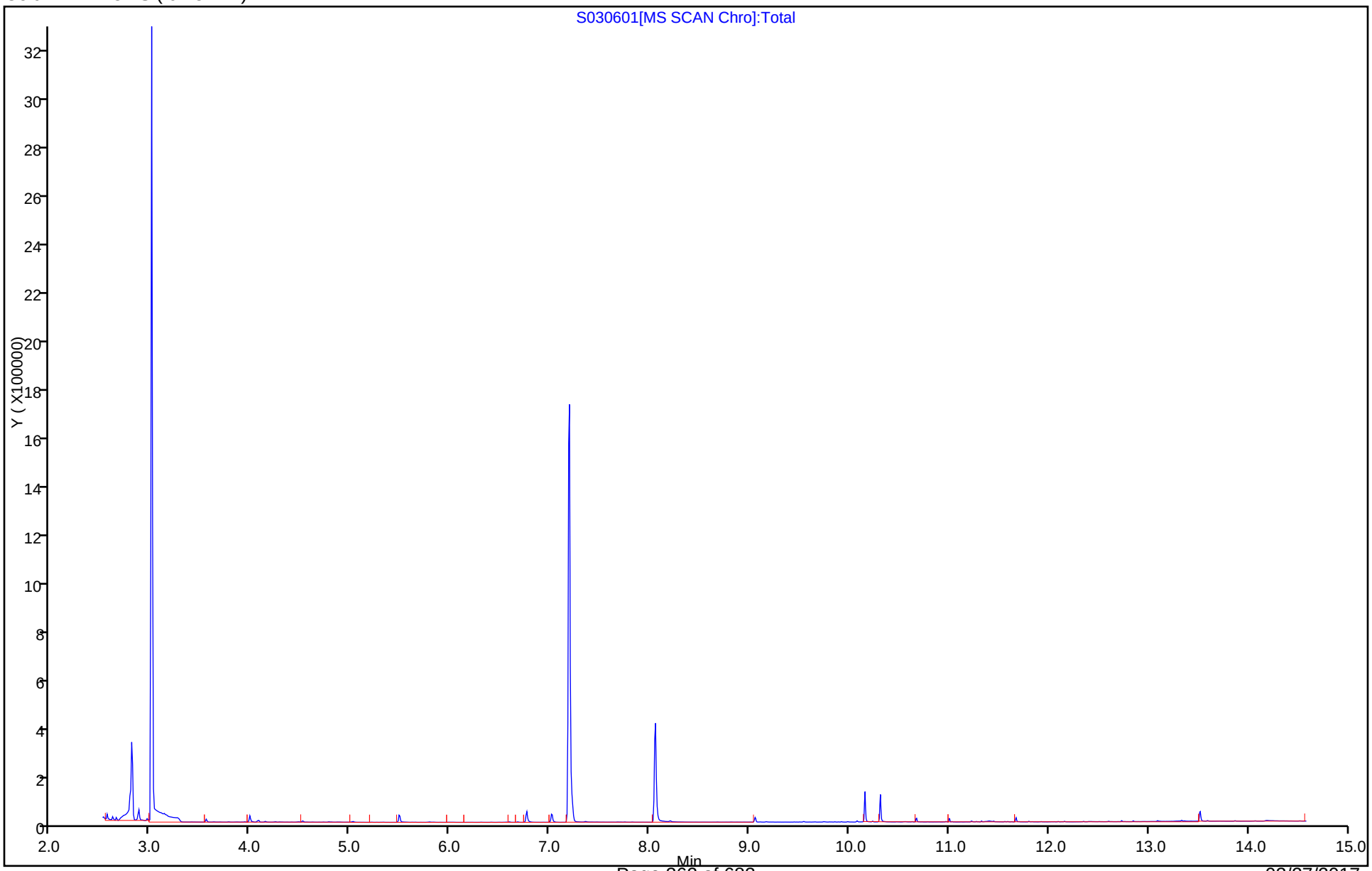
Report Date: 06-Mar-2017 11:42:39 Chrom Revision: 2.2 03-Feb-2017 15:35:04

TestAmerica Sacramento

Data File: \\ChromNA\Sacramento\ChromData\SV1\20170306-40510.b\S030601.D

Injection Date:	06-Mar-2017 11:24:30	Instrument ID:	SV1	Operator ID:	
Lims ID:	MB 320-152172/1-A			Worklist Smp#:	3
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	1,4-DIoxane	Limit Group:	MSS - 8270SIM 14DX - ICAL		

Column: HP-5MS (0.25 mm)



TestAmerica Sacramento
Recovery Report

Data File: \\ChromNA\Sacramento\ChromData\SV1\20170306-40510.b\S030601.D
Lims ID: MB 320-152172/1-A
Client ID:
Sample Type: MB
Inject. Date: 06-Mar-2017 11:24:30 ALS Bottle#: 1 Worklist Smp#: 3
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: mb 320-152172/1-a
Operator ID: Instrument ID: SV1

Method: \\ChromNA\Sacramento\ChromData\SV1\20170306-40510.b\1,4-DIoxane.m
Limit Group: MSS - 8270SIM 14DX - ICAL
Last Update: 06-Mar-2017 11:42:21 Calib Date: 22-Feb-2017 12:09:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\SV1\20170222-40122.b\14D0222H.D

Column 1 : HP-5MS (0.25 mm) Det: MS SCAN
Process Host: XAWRK027

First Level Reviewer: onishim Date: 06-Mar-2017 11:42:38

Compound	Amount Added	Amount Recovered	% Rec.
$ 3 Nitrobenzene-d5	5.00	3.17	63.30

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento | Job No.: 320-25962-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 320-152172/2-A

Matrix: Water | Lab File ID: S030602.D

Analysis Method: WS-MS-0011 | Date Collected:

Extract. Method: 3510C | Date Extracted: 02/24/2017 15:44

Sample wt/vol: 1000(mL) | Date Analyzed: 03/06/2017 11:46

Con. Extract Vol.: 1.0(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 153398 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
123-91-1	1,4-Dioxane	2.90	M	1.0	0.50	0.20

CAS NO.	SURROGATE	%REC	Q	LIMITS
4165-60-0	Nitrobenzene-d5	73		42-91

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNA\Sacramento\ChromData\SV1\20170306-40510.b\S030602.D
Lims ID: LCS 320-152172/2-A
Client ID:
Sample Type: LCS
Inject. Date: 06-Mar-2017 11:46:30 ALS Bottle#: 2 Worklist Smp#: 4
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: lcs 320-152172/2-a
Operator ID: Instrument ID: SV1

Method: \\ChromNA\Sacramento\ChromData\SV1\20170306-40510.b\1,4-DIoxane.m
Limit Group: MSS - 8270SIM 14DX - ICAL
Last Update: 06-Mar-2017 12:15:34 Calib Date: 22-Feb-2017 12:09:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\SV1\20170222-40122.b\14D0222H.D

Column 1 : HP-5MS (0.25 mm) Det: MS SCAN
Process Host: XAWRK027

First Level Reviewer: onishim Date: 06-Mar-2017 12:15:34

Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Ratio Range	Ratio	Flags
1 1,4-Dioxane										M
58	3.354	3.346	0.008	73	85505	10.0	2.90	80- 120	100	M
88	3.354	3.346	0.008		98174			95- 135	115	
* 2 1,4-Dichlorobenzene-d4										
152	7.197	7.197	0.000	100	735352	10.0	10.0	80- 120	100	
150	7.197	7.197	0.000		1135204			135- 175	154	
115	7.197	7.197	0.000		413831			36.9- 76.9	56.3	
$ 3 Nitrobenzene-d5										
82	8.059	8.060	-0.001	98	323348	5.00	3.64	80- 120	100	
128	8.059	8.060	-0.001		156430			33.6- 73.6	48.4	
54	8.051	8.060	-0.009		182998			37.4- 77.4	56.6	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

MS8270IS_00016 Amount Added: 5.00 Units: uL Run Reagent

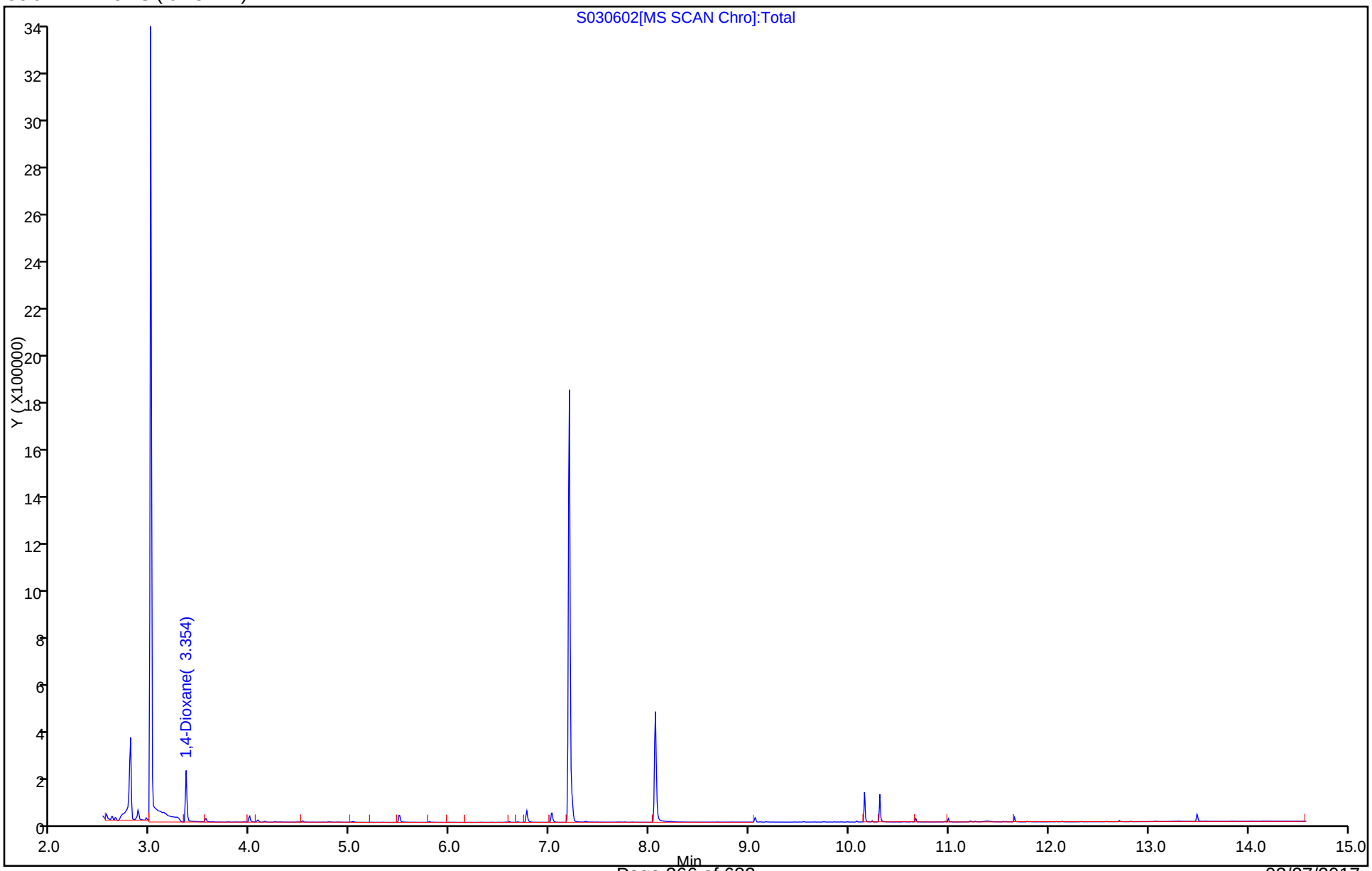
Report Date: 06-Mar-2017 12:15:35 Chrom Revision: 2.2 03-Feb-2017 15:35:04

TestAmerica Sacramento

Data File: \\ChromNA\Sacramento\ChromData\SV1\20170306-40510.b\S030602.D

Injection Date:	06-Mar-2017 11:46:30	Instrument ID:	SV1	Operator ID:	
Lims ID:	LCS 320-152172/2-A			Worklist Smp#:	4
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	1,4-DIoxane	Limit Group:	MSS - 8270SIM 14DX - ICAL		

Column: HP-5MS (0.25 mm)



TestAmerica Sacramento
Recovery Report

Data File:	\\ChromNA\Sacramento\ChromData\SV1\20170306-40510.b\S030602.D				
Lims ID:	LCS 320-152172/2-A				
Client ID:					
Sample Type:	LCS				
Inject. Date:	06-Mar-2017 11:46:30	ALS Bottle#:	2	Worklist Smp#:	4
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	lcs 320-152172/2-a				
Operator ID:		Instrument ID:	SV1		
Method:	\\ChromNA\Sacramento\ChromData\SV1\20170306-40510.b\1,4-DIoxane.m				
Limit Group:	MSS - 8270SIM 14DX - ICAL				
Last Update:	06-Mar-2017 12:15:34	Calib Date:	22-Feb-2017 12:09:30		
Integrator:	RTE	ID Type:	RT Order ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Sacramento\ChromData\SV1\20170222-40122.b\14D0222H.D				
Column 1 :	HP-5MS (0.25 mm)		Det: MS SCAN		
Process Host:	XAWRK027				

First Level Reviewer: onishim Date: 06-Mar-2017 12:15:34

Compound	Amount Added	Amount Recovered	% Rec.
$ 3 Nitrobenzene-d5	5.00	3.64	72.82

Manual Integration/User Assign Peak Report

TestAmerica Sacramento

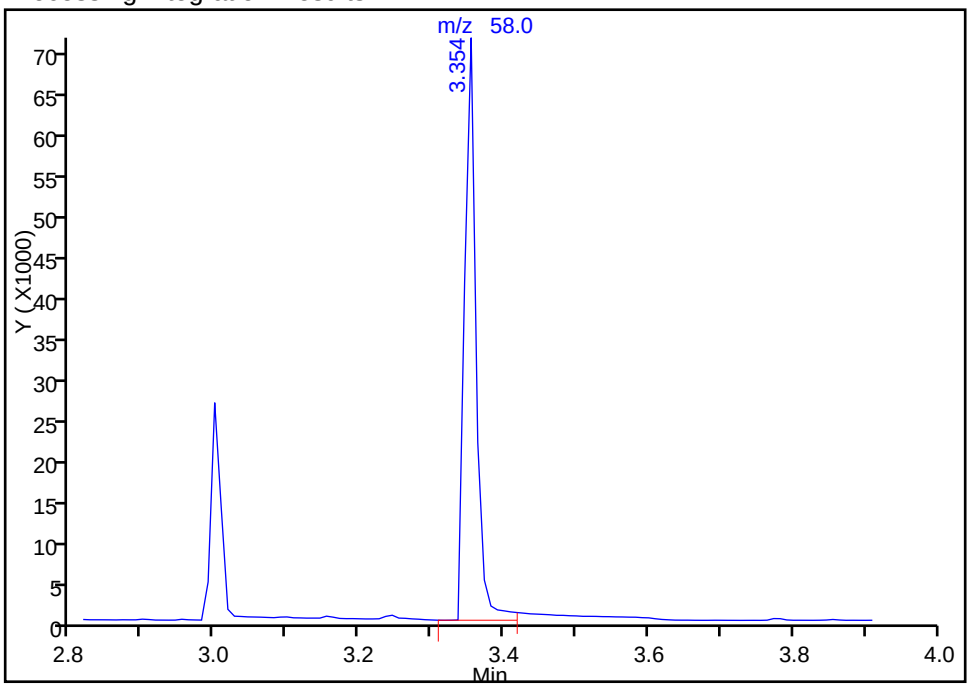
Data File: \\ChromNA\Sacramento\ChromData\SV1\20170306-40510.b\S030602.D
Injection Date: 06-Mar-2017 11:46:30 Instrument ID: SV1
Lims ID: LCS 320-152172/2-A
Client ID:
Operator ID: ALS Bottle#: 2 Worklist Smp#: 4
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 1,4-DIoxane Limit Group: MSS - 8270SIM 14DX - ICAL
Column: HP-5MS (0.25 mm) Detector MS SCAN

1 1,4-Dioxane, CAS: 123-91-1

Signal: 1

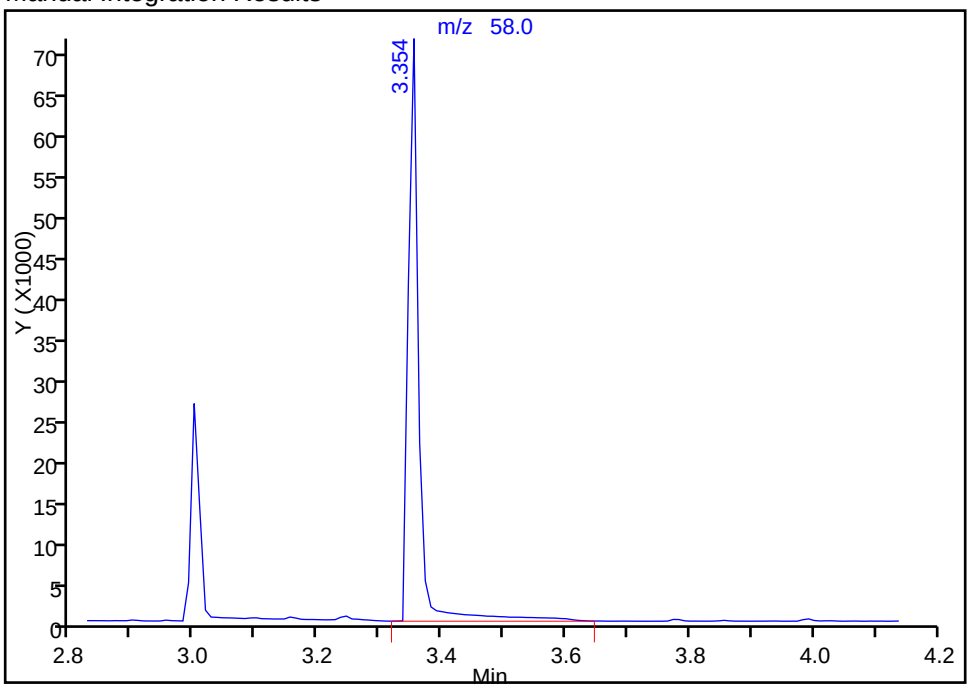
Processing Integration Results

RT: 3.35
Area: 79339
Amount: 2.689140
Amount Units: ug/ml



Manual Integration Results

RT: 3.35
Area: 85505
Amount: 2.898133
Amount Units: ug/ml



Reviewer: onishim, 06-Mar-2017 12:15:30
Audit Action: Manually Integrated Audit Reason: Peak Tail

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento | Job No.: 320-25962-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCSD 320-152172/3-A

Matrix: Water | Lab File ID: S030603.D

Analysis Method: WS-MS-0011 | Date Collected:

Extract. Method: 3510C | Date Extracted: 02/24/2017 15:44

Sample wt/vol: 1000(mL) | Date Analyzed: 03/06/2017 12:08

Con. Extract Vol.: 1.0(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 153398 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
123-91-1	1,4-Dioxane	2.61	M	1.0	0.50	0.20

CAS NO.	SURROGATE	%REC	Q	LIMITS
4165-60-0	Nitrobenzene-d5	61		42-91

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNA\Sacramento\ChromData\SV1\20170306-40510.b\S030603.D
Lims ID: LCSD 320-152172/3-A
Client ID:
Sample Type: LCSD
Inject. Date: 06-Mar-2017 12:08:30 ALS Bottle#: 3 Worklist Smp#: 5
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: lcsd 320-152172/3-a
Operator ID: Instrument ID: SV1

Method: \\ChromNA\Sacramento\ChromData\SV1\20170306-40510.b\1,4-DIoxane.m
Limit Group: MSS - 8270SIM 14DX - ICAL
Last Update: 06-Mar-2017 13:09:41 Calib Date: 22-Feb-2017 12:09:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\SV1\20170222-40122.b\14D0222H.D

Column 1 : HP-5MS (0.25 mm) Det: MS SCAN
Process Host: XAWRK027

First Level Reviewer: onishim Date: 06-Mar-2017 13:09:41

Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Ratio Range	Ratio	Flags
1 1,4-Dioxane										M
58	3.347	3.346	0.001	97	66257	10.0	2.61	80- 120	100	M
88	3.356	3.346	0.010		75198			95- 135	113	
* 2 1,4-Dichlorobenzene-d4										
152	7.197	7.197	0.000	100	633054	10.0	10.0	80- 120	100	
150	7.197	7.197	0.000		980713			135- 175	155	
115	7.197	7.197	0.000		353270			36.9- 76.9	55.8	
$ 3 Nitrobenzene-d5										
82	8.060	8.060	0.000	96	232924	5.00	3.05	80- 120	100	
128	8.060	8.060	0.000		121512			33.6- 73.6	52.2	
54	8.060	8.060	0.000		134153			37.4- 77.4	57.6	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

MS8270IS_00016 Amount Added: 5.00 Units: uL Run Reagent

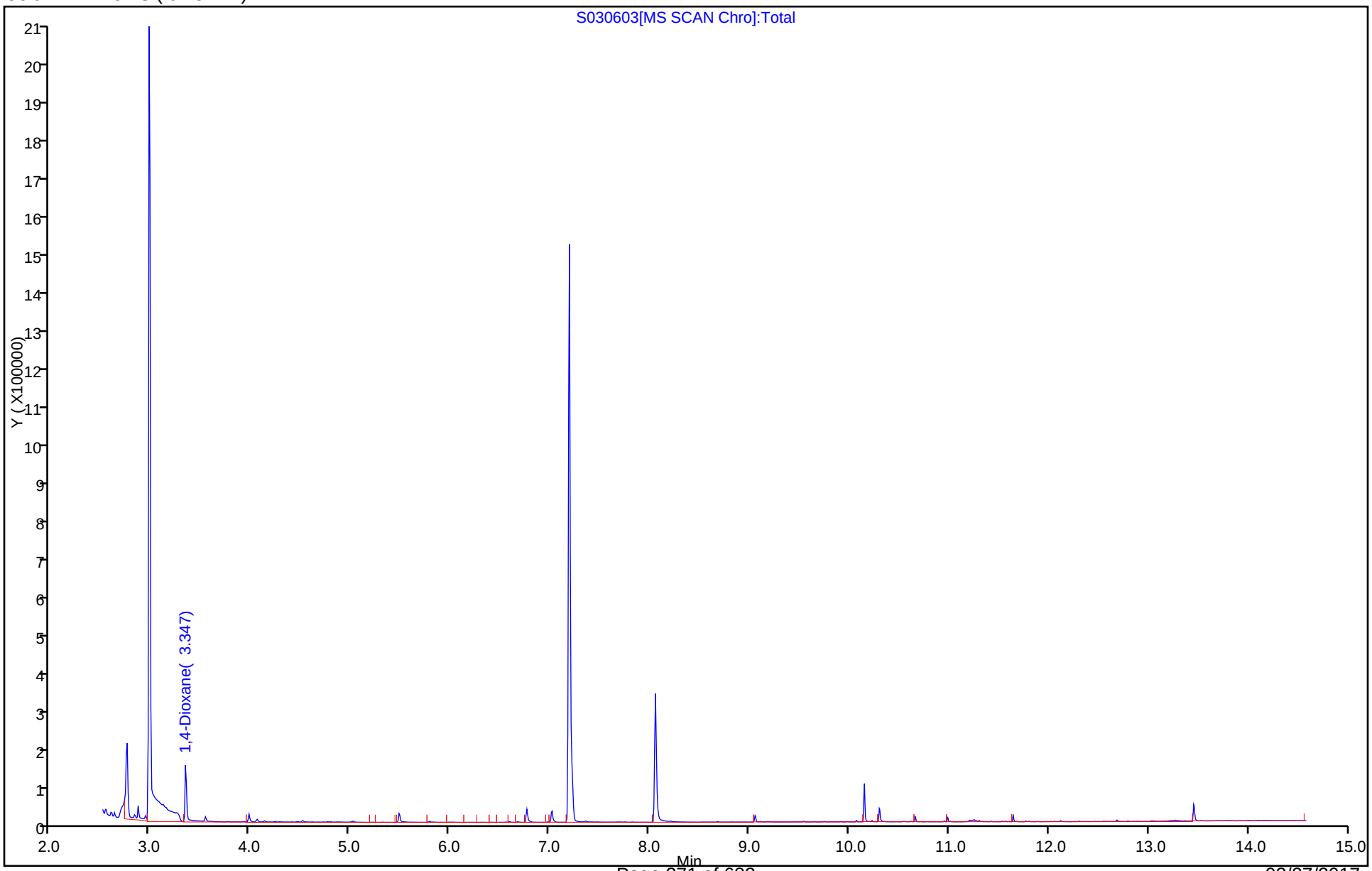
Report Date: 06-Mar-2017 13:09:42 Chrom Revision: 2.2 03-Feb-2017 15:35:04

TestAmerica Sacramento

Data File: \\ChromNA\Sacramento\ChromData\SV1\20170306-40510.b\S030603.D

Injection Date:	06-Mar-2017 12:08:30	Instrument ID:	SV1	Operator ID:	
Lims ID:	LCSD 320-152172/3-A			Worklist Smp#:	5
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	1,4-DIoxane	Limit Group:	MSS - 8270SIM 14DX - ICAL		

Column: HP-5MS (0.25 mm)



TestAmerica Sacramento
Recovery Report

Data File:	\\ChromNA\Sacramento\ChromData\SV1\20170306-40510.b\S030603.D				
Lims ID:	LCSD 320-152172/3-A				
Client ID:					
Sample Type:	LCSD				
Inject. Date:	06-Mar-2017 12:08:30	ALS Bottle#:	3	Worklist Smp#:	5
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	lcsd 320-152172/3-a				
Operator ID:		Instrument ID:	SV1		
Method:	\\ChromNA\Sacramento\ChromData\SV1\20170306-40510.b\1,4-DIoxane.m				
Limit Group:	MSS - 8270SIM 14DX - ICAL				
Last Update:	06-Mar-2017 13:09:41	Calib Date:	22-Feb-2017 12:09:30		
Integrator:	RTE	ID Type:	RT Order ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Sacramento\ChromData\SV1\20170222-40122.b\14D0222H.D				
Column 1 :	HP-5MS (0.25 mm)		Det: MS SCAN		
Process Host:	XAWRK027				

First Level Reviewer: onishim Date: 06-Mar-2017 13:09:41

Compound	Amount Added	Amount Recovered	% Rec.
$ 3 Nitrobenzene-d5	5.00	3.05	60.93

Manual Integration/User Assign Peak Report

TestAmerica Sacramento

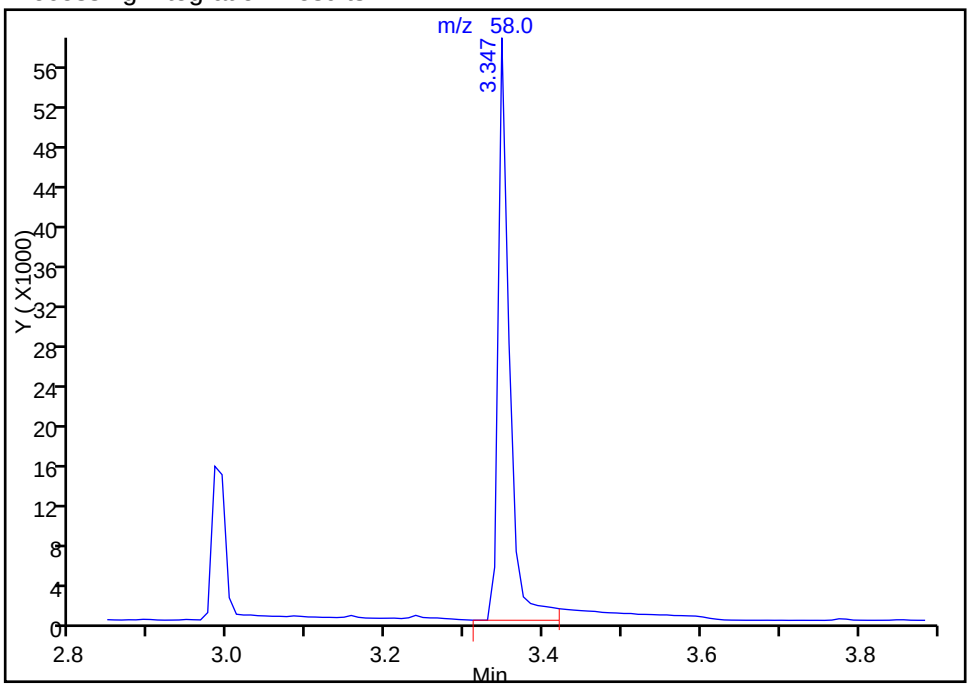
Data File: \\ChromNA\Sacramento\ChromData\SV1\20170306-40510.b\S030603.D
Injection Date: 06-Mar-2017 12:08:30 Instrument ID: SV1
Lims ID: LCSD 320-152172/3-A
Client ID:
Operator ID: ALS Bottle#: 3 Worklist Smp#: 5
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 1,4-DIoxane Limit Group: MSS - 8270SIM 14DX - ICAL
Column: HP-5MS (0.25 mm) Detector MS SCAN

1 1,4-Dioxane, CAS: 123-91-1

Signal: 1

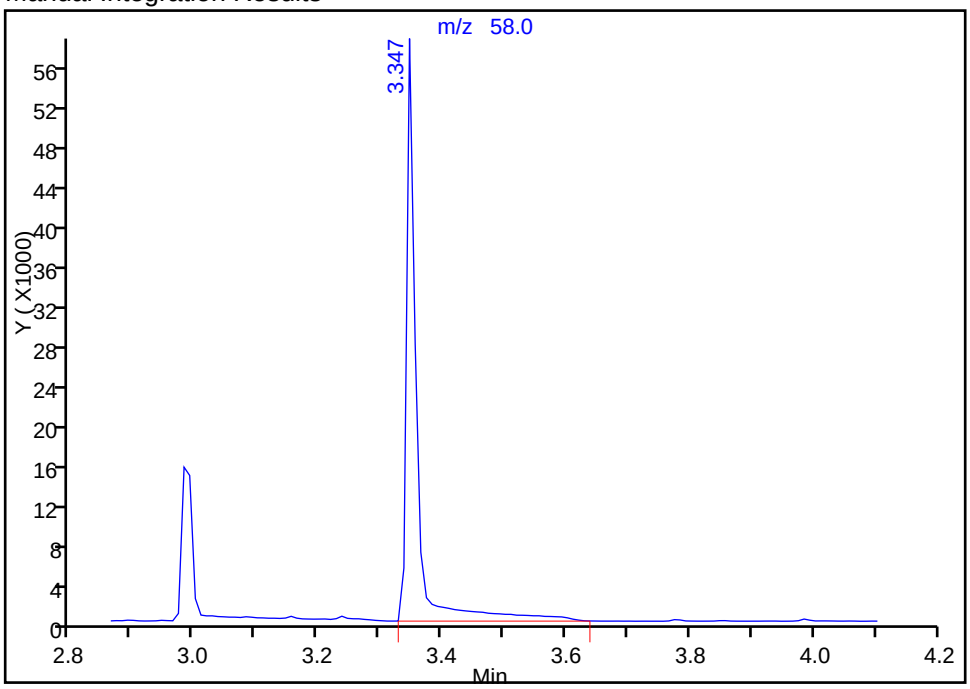
Processing Integration Results

RT: 3.35
Area: 58749
Amount: 2.313033
Amount Units: ug/ml



Manual Integration Results

RT: 3.35
Area: 66257
Amount: 2.608633
Amount Units: ug/ml



Reviewer: onishim, 06-Mar-2017 13:09:38
Audit Action: Manually Integrated Audit Reason: Peak Tail

GC/MS SEMI VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Sacramento Job No.: 320-25962-1

SDG No.:

Instrument ID: SV1 Start Date: 02/22/2017 09:35

Analysis Batch Number: 151686 End Date: 02/22/2017 12:31

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
IC 320-151686/1		02/22/2017 09:35	1	14D0222A.D	HP-5MS 0.25(mm)
IC 320-151686/2		02/22/2017 09:56	1	14D0222B.D	HP-5MS 0.25(mm)
IC 320-151686/3		02/22/2017 10:19	1	14D0222C.D	HP-5MS 0.25(mm)
IC 320-151686/4		02/22/2017 10:41	1	14D0222D.D	HP-5MS 0.25(mm)
ICIS 320-151686/5		02/22/2017 11:03	1	14D0222E.D	HP-5MS 0.25(mm)
IC 320-151686/6		02/22/2017 11:25	1	14D0222F.D	HP-5MS 0.25(mm)
IC 320-151686/7		02/22/2017 11:47	1	14D0222G.D	HP-5MS 0.25(mm)
IC 320-151686/8		02/22/2017 12:09	1	14D0222H.D	HP-5MS 0.25(mm)
ICV 320-151686/9		02/22/2017 12:31	1	14D0222.D	HP-5MS 0.25(mm)

GC/MS SEMI VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Sacramento Job No.: 320-25962-1

SDG No.:

Instrument ID: SV1 Start Date: 03/06/2017 10:55

Analysis Batch Number: 153398 End Date: 03/07/2017 00:17

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 320-153398/2		03/06/2017 10:55	1	14D0306.D	HP-5MS 0.25(mm)
MB 320-152172/1-A		03/06/2017 11:24	1	S030601.D	HP-5MS 0.25(mm)
LCS 320-152172/2-A		03/06/2017 11:46	1	S030602.D	HP-5MS 0.25(mm)
LCSD 320-152172/3-A		03/06/2017 12:08	1	S030603.D	HP-5MS 0.25(mm)
ZZZZZ		03/06/2017 12:30	1		HP-5MS 0.25(mm)
ZZZZZ		03/06/2017 12:53	1		HP-5MS 0.25(mm)
ZZZZZ		03/06/2017 13:15	1		HP-5MS 0.25(mm)
ZZZZZ		03/06/2017 13:37	1		HP-5MS 0.25(mm)
ZZZZZ		03/06/2017 13:59	1		HP-5MS 0.25(mm)
ZZZZZ		03/06/2017 14:21	1		HP-5MS 0.25(mm)
ZZZZZ		03/06/2017 14:43	1		HP-5MS 0.25(mm)
ZZZZZ		03/06/2017 15:05	1		HP-5MS 0.25(mm)
ZZZZZ		03/06/2017 15:27	1		HP-5MS 0.25(mm)
ZZZZZ		03/06/2017 15:50	1		HP-5MS 0.25(mm)
320-25962-1		03/06/2017 16:12	1	S030614.D	HP-5MS 0.25(mm)
320-25962-2		03/06/2017 16:34	1	S030615.D	HP-5MS 0.25(mm)
CCV 320-153398/18		03/06/2017 16:56	1		HP-5MS 0.25(mm)
ZZZZZ		03/06/2017 17:18	1		HP-5MS 0.25(mm)
ZZZZZ		03/06/2017 17:40	1		HP-5MS 0.25(mm)
ZZZZZ		03/06/2017 18:02	1		HP-5MS 0.25(mm)
ZZZZZ		03/06/2017 18:24	1		HP-5MS 0.25(mm)
ZZZZZ		03/06/2017 18:46	1		HP-5MS 0.25(mm)
ZZZZZ		03/06/2017 19:08	1		HP-5MS 0.25(mm)
ZZZZZ		03/06/2017 19:31	1		HP-5MS 0.25(mm)
ZZZZZ		03/06/2017 19:53	1		HP-5MS 0.25(mm)
ZZZZZ		03/06/2017 20:15	1		HP-5MS 0.25(mm)
ZZZZZ		03/06/2017 20:37	1		HP-5MS 0.25(mm)
ZZZZZ		03/06/2017 20:59	1		HP-5MS 0.25(mm)
ZZZZZ		03/06/2017 21:21	1		HP-5MS 0.25(mm)
ZZZZZ		03/06/2017 21:43	1		HP-5MS 0.25(mm)
ZZZZZ		03/06/2017 22:05	1		HP-5MS 0.25(mm)
ZZZZZ		03/06/2017 22:27	1		HP-5MS 0.25(mm)
ZZZZZ		03/06/2017 22:49	1		HP-5MS 0.25(mm)
ZZZZZ		03/06/2017 23:11	1		HP-5MS 0.25(mm)
ZZZZZ		03/06/2017 23:33	1		HP-5MS 0.25(mm)
ZZZZZ		03/06/2017 23:55	1		HP-5MS 0.25(mm)
ZZZZZ		03/07/2017 00:17	1		HP-5MS 0.25(mm)

GC/MS SEMI VOA BATCH WORKSHEET

Lab Name: TestAmerica Sacramento Job No.: 320-25962-1

SDG No.:

Batch Number: 152172 Batch Start Date: 02/24/17 15:44 Batch Analyst: Rafieefar, Sina

Batch Method: 3510C Batch End Date: 03/04/17 19:32

Lab Sample ID	Client Sample ID	Method Chain	Basis	ReceivedpH	GrossWeight	TareWeight	InitialAmount	FinalAmount	MS14DSP 00030
MB 320-152172/1		3510C, WS-MS-0011		8 SU			1000 mL	1.0 mL	
LCS 320-152172/2		3510C, WS-MS-0011		8 SU			1000 mL	1.0 mL	500 uL
LCSD 320-152172/3		3510C, WS-MS-0011		8 SU			1000 mL	1.0 mL	500 uL
320-25962-A-1	MEAFF-MRD-1A01-0217	3510C, WS-MS-0011	T	7 SU	1556.1 g	507.15 g	1049 mL	1.0 mL	
320-25962-A-2	MEAFF-MRD-1A01P-0217	3510C, WS-MS-0011	T	7 SU	1554.9 g	519.71 g	1035.2 mL	1.0 mL	

Lab Sample ID	Client Sample ID	Method Chain	Basis	MS14DSU 00003					
MB 320-152172/1		3510C, WS-MS-0011		0.5 mL					
LCS 320-152172/2		3510C, WS-MS-0011		0.5 mL					
LCSD 320-152172/3		3510C, WS-MS-0011		0.5 mL					
320-25962-A-1	MEAFF-MRD-1A01-0217	3510C, WS-MS-0011	T	0.5 mL					
320-25962-A-2	MEAFF-MRD-1A01P-0217	3510C, WS-MS-0011	T	0.5 mL					

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.

GC/MS SEMI VOA BATCH WORKSHEET

Lab Name: TestAmerica Sacramento Job No.: 320-25962-1

SDG No.:

Batch Number: 152172 Batch Start Date: 02/24/17 15:44 Batch Analyst: Rafieefar, Sina

Batch Method: 3510C Batch End Date: 03/04/17 19:32

Batch Notes	
Balance ID	QA-036
Analyst ID - Concentration	KD: RD 3.4.17
Na2SO4 ID	SS_00345; 00346
Oven, Bath or Block Temperature 1	70-75 C
Pipette ID	K35057E
Prep Solvent ID	0000154525
Prep Solvent Name	DCM
Prep Solvent Volume Used	180 mL
Person's name who did the prep	SR/AAR 02/24/2017
Analyst ID - Reagent Drop Witness	AAR 2/24/17
Analyst ID - Reagent Drop	SR 2/24/17
Sufficient volume for MS/MSD?	NO
Vial ID	16293128; FV 1 mL RD 3.4.17
Water Bath ID	BT_019; 021

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.

Method PFC DOD

Perfluronated Hydrocarbons (LC/MS) by Method PFC_DOD

FORM II
LCMS SURROGATE RECOVERY

Lab Name: TestAmerica Sacramento Job No.: 320-25962-1

SDG No.:

Matrix: Solid Level: Low

GC Column (1): GeminiC18 3 ID: 3 (mm)

Client Sample ID	Lab Sample ID	PFHxS #	PFOA #	PFOS #
MEAFF-PWMA-SB01-0001	320-25962-4	95	111	55
MEAFF-PWMA-SB01-0001 DL	320-25962-4 DL	122	136	90
MEAFF-PWMA-SB01-0204	320-25962-5	95 M	101 M	56 M
	MB 320-152015/1-A	113	121	95
	LCS 320-152015/2-A	101	106	91

	QC LIMITS
PFHxS = 18O2 PFHxS	25-150
PFOA = 13C4 PFOA	25-150
PFOS = 13C4 PFOS	25-150

Column to be used to flag recovery values

FORM II 537 (Modified)

FORM II
LCMS SURROGATE RECOVERY

Lab Name: TestAmerica Sacramento Job No.: 320-25962-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): GeminiC18 3 ID: 3 (mm)

Client Sample ID	Lab Sample ID	PFHxS #	PFOA #	PFOS #
MEAFF-EB01-022117-SO	320-25962-3	141	152 Q	135
	MB 320-152587/1-A	145	158 Q	138
	LCS 320-152587/2-A	136	142	133
	LCSD 320-152587/3-A	140	142	135

	QC LIMITS
PFHxS = 18O2 PFHxS	25-150
PFOA = 13C4 PFOA	25-150
PFOS = 13C4 PFOS	25-150

Column to be used to flag recovery values

FORM II 537 (Modified)

FORM III
LCMS LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Sacramento Job No.: 320-25962-1

SDG No.:

Matrix: Solid Level: Low Lab File ID: 2017.03.03A_006.d

Lab ID: LCS 320-152015/2-A Client ID:

COMPOUND	SPIKE ADDED (ug/Kg)	LCS CONCENTRATION (ug/Kg)	LCS % REC	QC LIMITS REC	#
Perfluorooctanoic acid (PFOA)	4.00	4.09	102	60-140	
Perfluorooctanesulfonic acid (PFOS)	3.71	3.96	107	60-140	
13C4 PFOA	10.0	10.6	106	25-150	
13C4 PFOS	9.56	8.68	91	25-150	
Perfluorobutanesulfonic acid (PFBS)	3.54	3.95	112	50-150	
18O2 PFHxS	9.46	9.59	101	25-150	

Column to be used to flag recovery and RPD values

FORM III 537 (Modified)

FORM III
LCMS LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Sacramento Job No.: 320-25962-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 2017.03.02A_005.d

Lab ID: LCS 320-152587/2-A Client ID:

COMPOUND	SPIKE ADDED (ng/L)	LCS CONCENTRATION (ng/L)	LCS % REC	QC LIMITS REC	#
Perfluorooctanoic acid (PFOA)	40.0	38.6	97	60-140	
Perfluorooctanesulfonic acid (PFOS)	37.1	35.6	96	60-140	
13C4 PFOA	100	142	142	25-150	
13C4 PFOS	95.6	127	133	25-150	
Perfluorobutanesulfonic acid (PFBS)	35.4	39.5	112	50-150	
18O2 PFHxS	94.6	129	136	25-150	

Column to be used to flag recovery and RPD values

FORM III 537 (Modified)

FORM III
LCMS LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: TestAmerica Sacramento Job No.: 320-25962-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 2017.03.02A_006.d

Lab ID: LCSD 320-152587/3-A Client ID:

COMPOUND	SPIKE ADDED (ng/L)	LCSD CONCENTRATION (ng/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Perfluorooctanoic acid (PFOA)	40.0	38.5	96	0	30	60-140	
Perfluorooctanesulfonic acid (PFOS)	37.1	35.6	96	0	30	60-140	M
13C4 PFOA	100	142	142			25-150	
13C4 PFOS	95.6	129	135			25-150	
Perfluorobutanesulfonic acid (PFBS)	35.4	40.3	114	2	30	50-150	M
18O2 PFHxS	94.6	132	140			25-150	

Column to be used to flag recovery and RPD values

FORM III 537 (Modified)

FORM IV
LCMS METHOD BLANK SUMMARY

Lab Name: TestAmerica Sacramento Job No.: 320-25962-1

SDG No.:

Lab File ID: 2017.03.01A_003.d Lab Sample ID: MB 320-152015/1-A

Matrix: Solid Date Extracted: 02/23/2017 17:22

Instrument ID: A8_N Date Analyzed: 03/01/2017 18:37

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
MEAFF-PWMA-SB01-0001	320-25962-4	2017.03.01A_012.d	03/01/2017 19:45
MEAFF-PWMA-SB01-0204	320-25962-5	2017.03.01A_014.d	03/01/2017 20:00
	LCS 320-152015/2-A	2017.03.03A_006.d	03/03/2017 09:37
MEAFF-PWMA-SB01-0001 DL	320-25962-4 DL	2017.03.03A_008.d	03/03/2017 09:53

FORM IV
LCMS METHOD BLANK SUMMARY

Lab Name: TestAmerica Sacramento Job No.: 320-25962-1

SDG No.:

Lab File ID: 2017.03.02A_004.d Lab Sample ID: MB 320-152587/1-A

Matrix: Water Date Extracted: 02/28/2017 16:42

Instrument ID: A8_N Date Analyzed: 03/02/2017 10:35

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 320-152587/2-A	2017.03.02A 005.d	03/02/2017 10:42
	LCSD 320-152587/3-A	2017.03.02A 006.d	03/02/2017 10:50
MEAFF-EB01-022117-SO	320-25962-3	2017.03.02A _009.d	03/02/2017 11:12

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 320-25962-1

SDG No.:

Client Sample ID: MEAFF-EB01-022117-SO Lab Sample ID: 320-25962-3

Matrix: Water Lab File ID: 2017.03.02A_009.d

Analysis Method: 537 (Modified) Date Collected: 02/21/2017 13:25

Extraction Method: 3535 Date Extracted: 02/28/2017 16:42

Sample wt/vol: 279.3(mL) Date Analyzed: 03/02/2017 11:12

Con. Extract Vol.: 0.50(mL) Dilution Factor: 1

Injection Volume: 2(uL) GC Column: GeminiC18 3x100 ID: 3(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 152836 Units: ng/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
335-67-1	Perfluorooctanoic acid (PFOA)	1.8	U M	2.2	1.8	0.67
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	2.7	U	3.6	2.7	1.1
375-73-5	Perfluorobutanesulfonic acid (PFBS)	1.8	U	2.2	1.8	0.82

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL00990	13C4 PFOA	152	Q	25-150
STL00991	13C4 PFOS	135		25-150
STL00994	18O2 PFHxS	141		25-150

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNa\Sacramento\ChromData\A8_N\20170302-40393.b\2017.03.02A_009.d
Lims ID: 320-25962-A-3-A
Client ID: MEAFF-EB01-022117-SO
Sample Type: Client
Inject. Date: 02-Mar-2017 11:12:49 ALS Bottle#: 6 Worklist Smp#: 18
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-25962-a-3-a
Misc. Info.: Plate: 1 Rack: 5
Operator ID: A8-PC\A8 Instrument ID: A8_N

Method: \\ChromNa\Sacramento\ChromData\A8_N\20170302-40393.b\A8_N.m
Limit Group: LC PFC_DOD ICAL
Last Update: 27-Mar-2017 09:39:03 Calib Date: 01-Mar-2017 11:53:47
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A8_N\20170301-40358.b\2017.03.01CURVE_009.d

Column 1 : Det: EXP1
Process Host: XAWRK006

First Level Reviewer: chandrasenas Date: 27-Mar-2017 09:38:49

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 11 18O2 PFHxS										
403.00 > 84.00	2.476	2.483	-0.007		19426601	66.8		141	483360	
D 14 13C4 PFOA										
417.00 > 372.00	2.826	2.834	-0.008		15544173	75.8		152	565368	
15 Perfluorooctanoic acid										M
413.00 > 369.00	2.819	2.834	-0.015	1.000	33557	0.1057			233	M
413.00 > 169.00	2.834	2.834	0.0	1.006	17258		1.94(0.90-1.10)		758	M
D 18 13C4 PFOS										
503.00 > 80.00	3.193	3.202	-0.009		15629147	64.7		135	486927	

QC Flag Legend

Review Flags
M - Manually Integrated

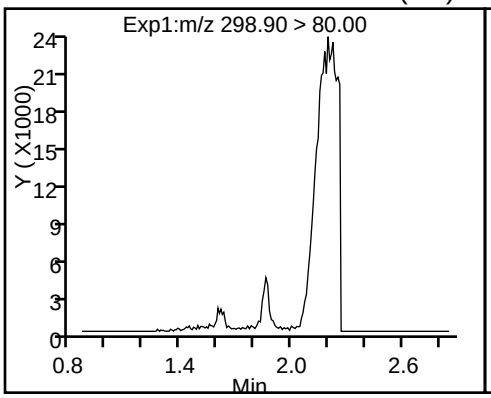
Report Date: 27-Mar-2017 09:39:03 Chrom Revision: 2.2 13-Mar-2017 15:50:30

TestAmerica Sacramento

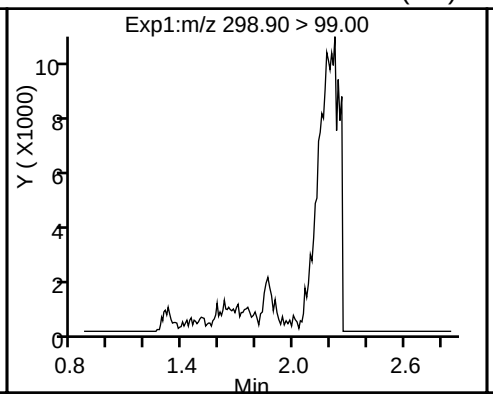
Data File: \\ChromNa\Sacramento\ChromData\A8_N\20170302-40393.b\2017.03.02A_009.d

Injection Date:	02-Mar-2017 11:12:49	Instrument ID:	A8_N		
Lims ID:	320-25962-A-3-A	Lab Sample ID:	320-25962-3		
Client ID:	MEAFF-EB01-022117-SO				
Operator ID:	A8-PC\A8	ALS Bottle#:	6	Worklist Smp#:	18
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	A8_N	Limit Group:	LC PFC_DOD ICAL		

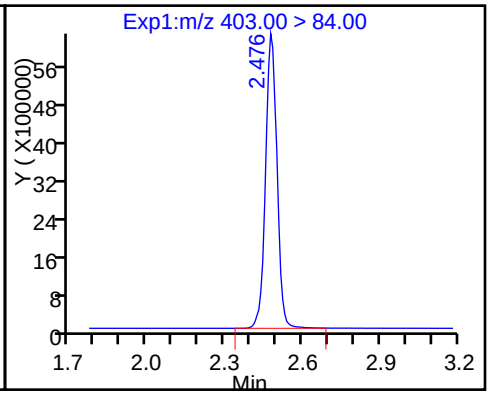
5 Perfluorobutanesulfonic acid (ND)



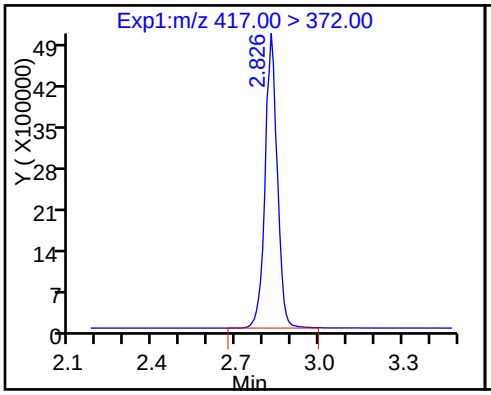
5 Perfluorobutanesulfonic acid (ND)



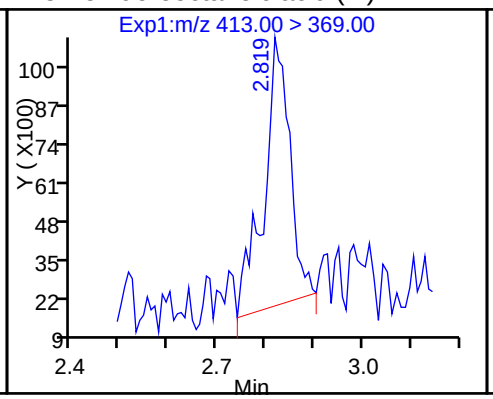
D 11 18O2 PFHxS



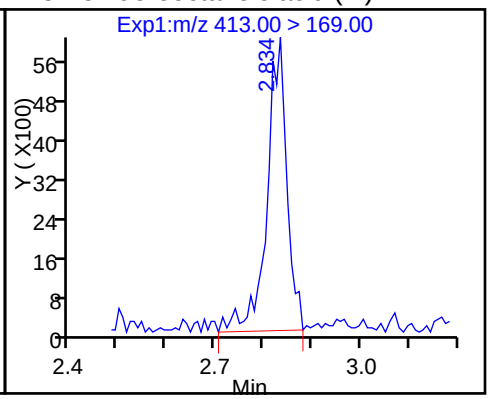
D 14 13C4 PFOA



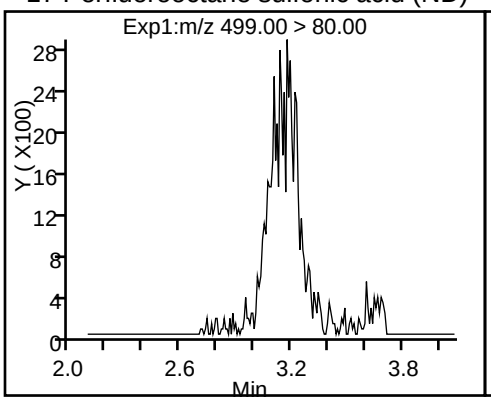
15 Perfluorooctanoic acid (M)



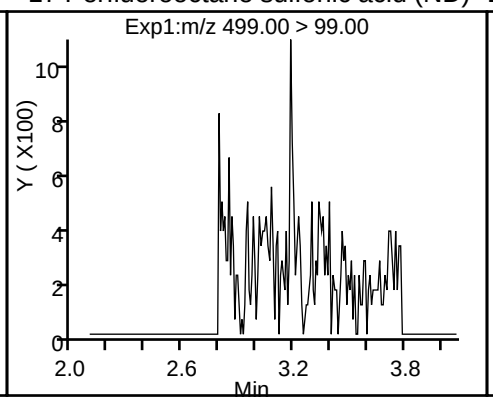
15 Perfluorooctanoic acid (M)



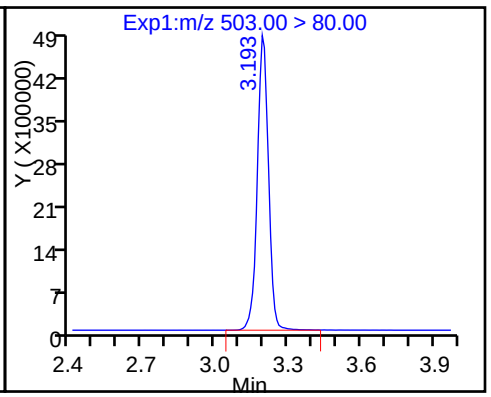
17 Perfluorooctane sulfonic acid (ND)



17 Perfluorooctane sulfonic acid (ND)



D 18 13C4 PFOS



Manual Integration/User Assign Peak Report

TestAmerica Sacramento

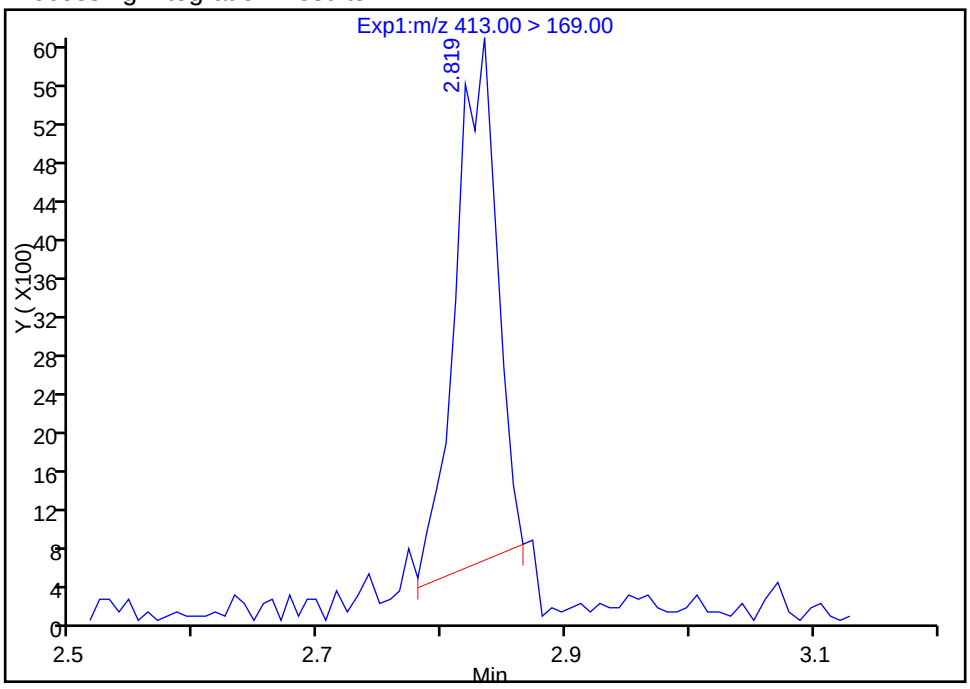
Data File:	\\ChromNa\Sacramento\ChromData\A8_N\20170302-40393.b\2017.03.02A_009.d				
Injection Date:	02-Mar-2017 11:12:49	Instrument ID:	A8_N		
Lims ID:	320-25962-A-3-A	Lab Sample ID:	320-25962-3		
Client ID:	MEAFF-EB01-022117-SO				
Operator ID:	A8-PC\A8	ALS Bottle#:	6	Worklist Smp#:	18
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	A8_N	Limit Group:	LC PFC_DOD ICAL		
Column:		Detector	EXP1		

15 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 2

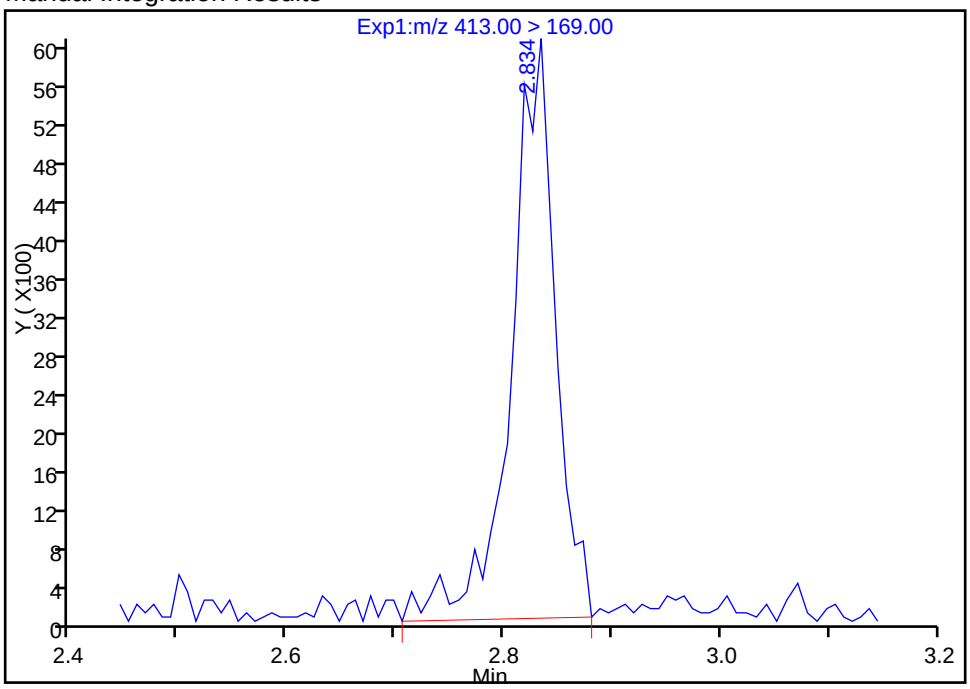
Processing Integration Results

RT: 2.82
Area: 12639
Amount: 0.170860
Amount Units: ng/ml



Manual Integration Results

RT: 2.83
Area: 17258
Amount: 0.105653
Amount Units: ng/ml



Reviewer: chandrasenas, 27-Mar-2017 09:38:57

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Sacramento

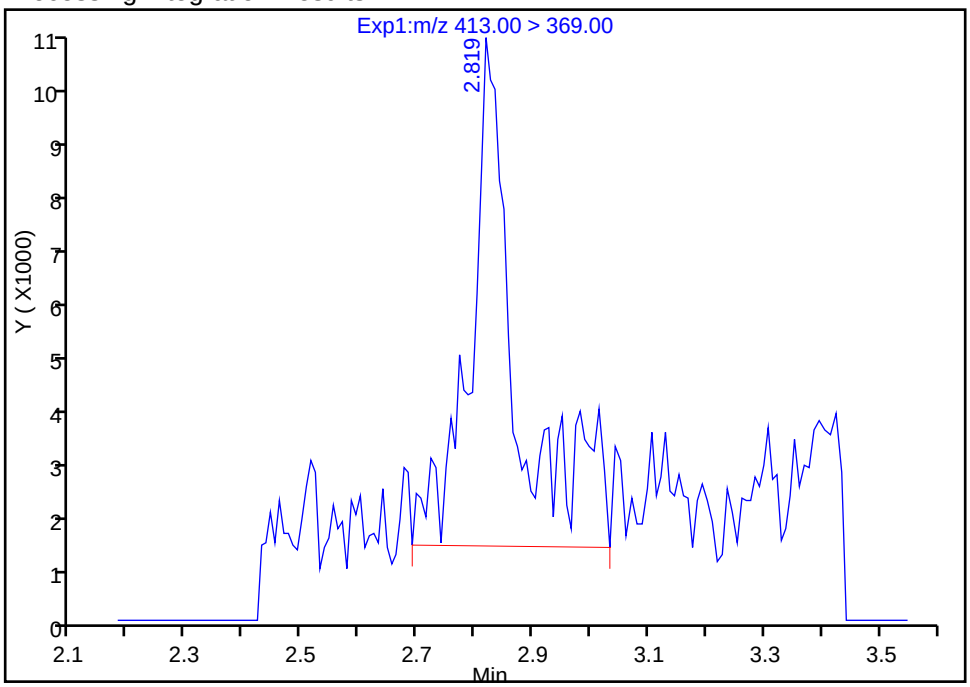
Data File:	\\ChromNa\Sacramento\ChromData\A8_N\20170302-40393.b\2017.03.02A_009.d				
Injection Date:	02-Mar-2017 11:12:49	Instrument ID:	A8_N		
Lims ID:	320-25962-A-3-A	Lab Sample ID:	320-25962-3		
Client ID:	MEAFF-EB01-022117-SO				
Operator ID:	A8-PC\A8	ALS Bottle#:	6	Worklist Smp#:	18
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	A8_N	Limit Group:	LC PFC_DOD ICAL		
Column:		Detector	EXP1		

15 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

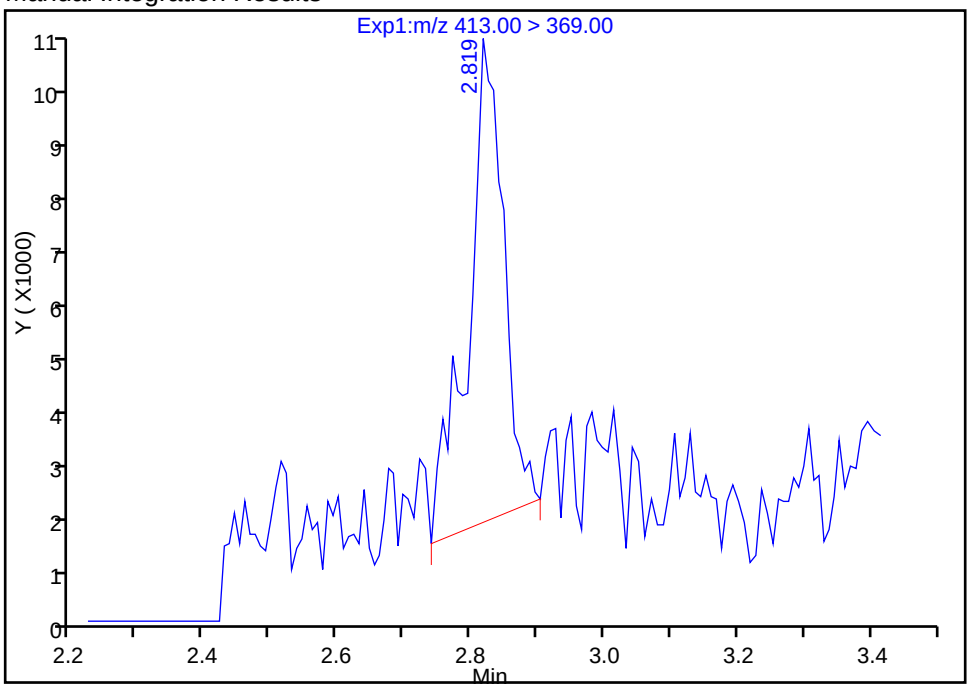
Processing Integration Results

RT: 2.82
Area: 54268
Amount: 0.170860
Amount Units: ng/ml



Manual Integration Results

RT: 2.82
Area: 33557
Amount: 0.105653
Amount Units: ng/ml



Reviewer: westendorfc, 27-Mar-2017 09:38:57
Audit Action: Manually Integrated Audit Reason: Baseline

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento | Job No.: 320-25962-1

SDG No.:

Client Sample ID: MEAFF-PWMA-SB01-0001 | Lab Sample ID: 320-25962-4

Matrix: Solid | Lab File ID: 2017.03.01A_012.d

Analysis Method: 537 (Modified) | Date Collected: 02/21/2017 13:35

Extraction Method: SHAKE | Date Extracted: 02/23/2017 17:22

Sample wt/vol: 5.05(g) | Date Analyzed: 03/01/2017 19:45

Con. Extract Vol.: 1.00(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: GeminiC18 3x100 ID: 3(mm)

% Moisture: 13.3 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 152825 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
335-67-1	Perfluorooctanoic acid (PFOA)	27		0.57	0.34	0.12
1763-23-1	*Perfluorooctanesulfonic acid (PFOS)*	*220*	*E*	*0.57*	0.34	*0.14*
375-73-5	Perfluorobutanesulfonic acid (PFBS)	2.0	M	0.46	0.34	0.12

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL00990	13C4 PFOA	111		25-150
STL00991	13C4 PFOS	55		25-150
STL00994	18O2 PFHxS	95		25-150

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNa\Sacramento\ChromData\A8_N\20170302-40391.b\2017.03.01A_012.d
Lims ID: 320-25962-A-4-A
Client ID: MEAFF-PWMA-SB01-0001
Sample Type: Client
Inject. Date: 01-Mar-2017 19:45:09 ALS Bottle#: 34 Worklist Smp#: 12
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-25962-a-4-a
Misc. Info.: Plate: 1 Rack: 3
Operator ID: A8-PC\A8 Instrument ID: A8_N

Method: \\ChromNa\Sacramento\ChromData\A8_N\20170302-40391.b\A8_N.m
Limit Group: LC PFC_DOD ICAL
Last Update: 27-Mar-2017 10:46:21 Calib Date: 01-Mar-2017 11:53:47
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A8_N\20170301-40358.b\2017.03.01CURVE_009.d

Column 1 : Det: EXP1
Process Host: XAWRK006

First Level Reviewer: chandrasenas Date: 02-Mar-2017 11:57:36

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
5 Perfluorobutanesulfonic acid										M
298.90 > 80.00	1.853	1.842	0.011	1.000	3433347	8.64				
298.90 > 99.00	1.843	1.842	0.001	0.995	1375930		2.50(0.00-0.00)			M
D 11 18O2 PFHxS										
403.00 > 84.00	2.448	2.446	0.002		13119483	45.1		95.3	4093240	
D 14 13C4 PFOA										
417.00 > 372.00	2.798	2.781	0.017		11404479	55.6		111	53547	
15 Perfluorooctanoic acid										
413.00 > 369.00	2.798	2.789	0.009	1.000	27600971	118.4			333236	
413.00 > 169.00	2.768	2.789	-0.021	0.989	18204621		1.52(0.90-1.10)		106037	
17 Perfluorooctane sulfonic acid										E
499.00 > 80.00	3.056	3.044	0.012	1.000	127288452	980.5			180622	E
499.00 > 99.00	3.163	3.044	0.119	1.035	38031970		3.35(0.90-1.10)		968871	
D 18 13C4 PFOS										
503.00 > 80.00	3.163	3.154	0.009		6309611	26.1		54.6	578390	

QC Flag Legend

Processing Flags
E - Exceeded Maximum Amount
Review Flags
M - Manually Integrated

Report Date: 27-Mar-2017 10:46:23 Chrom Revision: 2.2 13-Mar-2017 15:50:30

TestAmerica Sacramento

Data File: \\ChromNa\Sacramento\ChromData\A8_N\20170302-40391.b\2017.03.01A_012.d

Injection Date: 01-Mar-2017 19:45:09 Instrument ID: A8_N

Lims ID: 320-25962-A-4-A Lab Sample ID: 320-25962-4

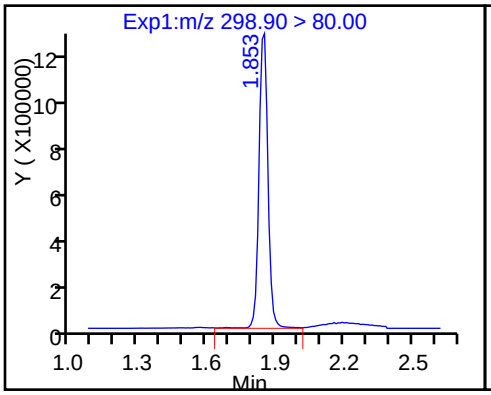
Client ID: MEAFF-PWMA-SB01-0001

Operator ID: A8-PC\A8 ALS Bottle#: 34 Worklist Smp#: 12

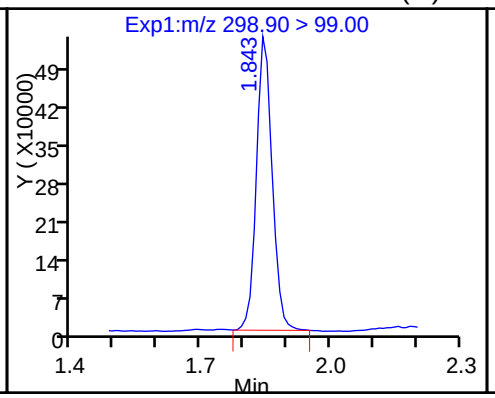
Injection Vol: 2.0 ul Dil. Factor: 1.0000

Method: A8_N Limit Group: LC PFC_DOD ICAL

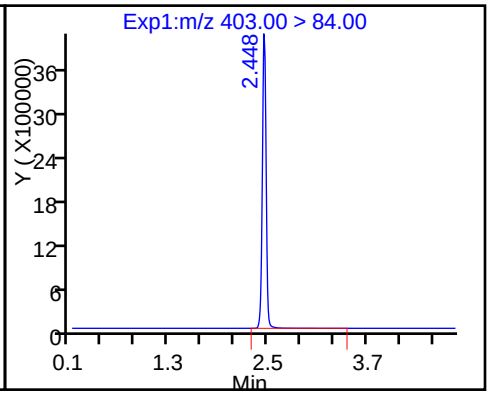
5 Perfluorobutanesulfonic acid



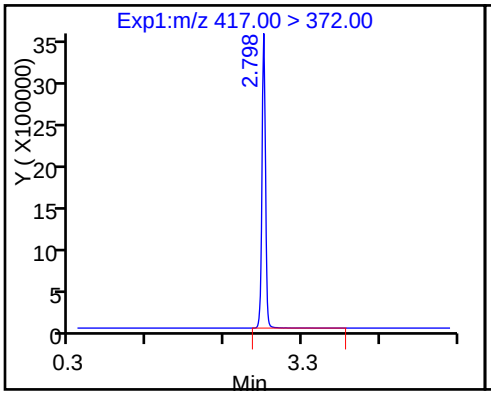
5 Perfluorobutanesulfonic acid (M)



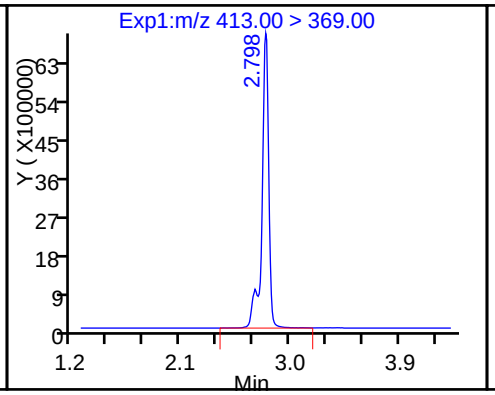
D 11 18O2 PFHxS



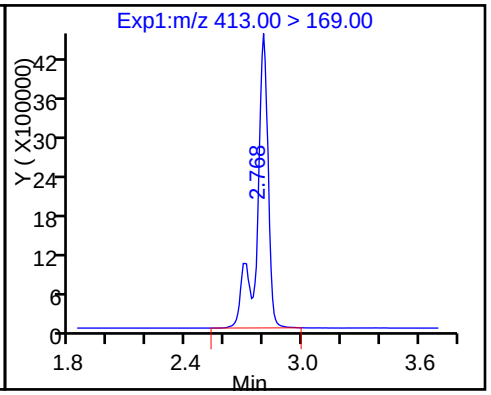
D 14 13C4 PFOA



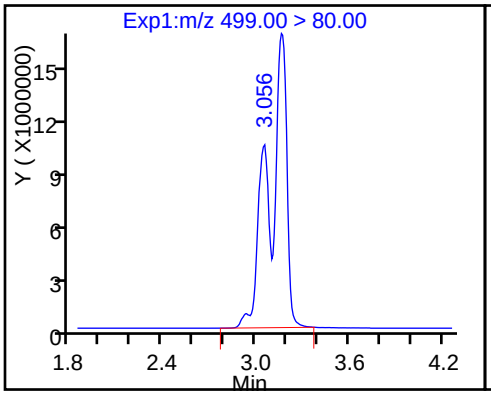
15 Perfluorooctanoic acid



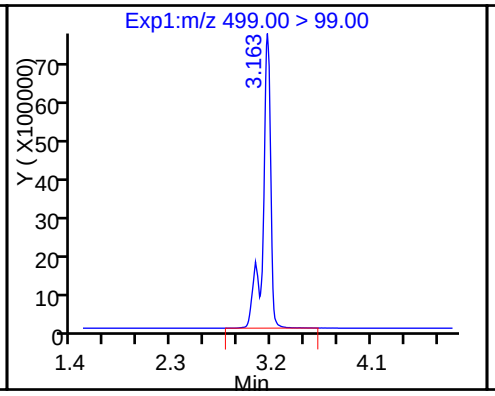
15 Perfluorooctanoic acid



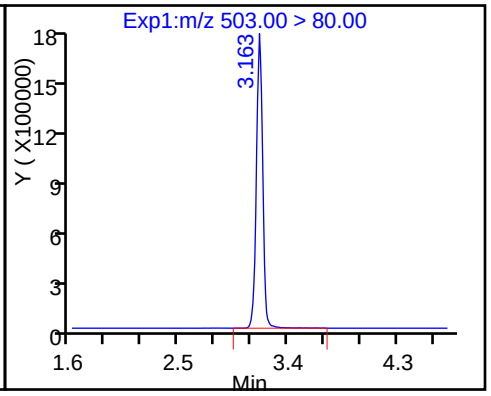
17 Perfluorooctane sulfonic acid



17 Perfluorooctane sulfonic acid



D 18 13C4 PFOS



Manual Integration/User Assign Peak Report

TestAmerica Sacramento

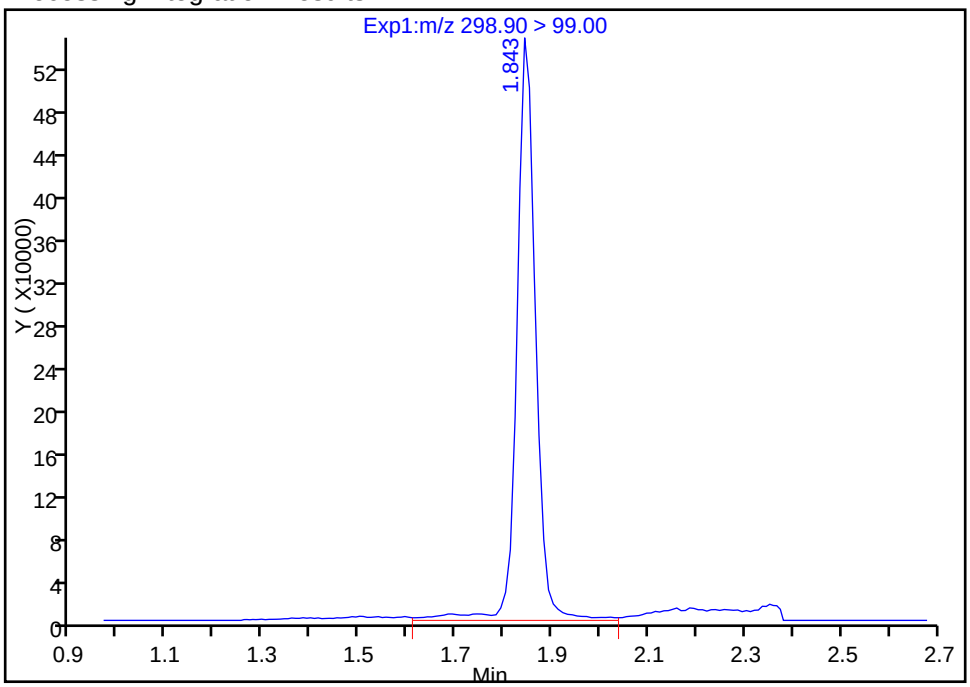
Data File:	\\ChromNa\Sacramento\ChromData\A8_N\20170302-40391.b\2017.03.01A_012.d				
Injection Date:	01-Mar-2017 19:45:09	Instrument ID:	A8_N		
Lims ID:	320-25962-A-4-A	Lab Sample ID:	320-25962-4		
Client ID:	MEAFF-PWMA-SB01-0001				
Operator ID:	A8-PC\A8	ALS Bottle#:	34	Worklist Smp#:	12
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	A8_N	Limit Group:	LC PFC_DOD ICAL		
Column:		Detector	EXP1		

5 Perfluorobutanesulfonic acid, CAS: 375-73-5

Signal: 2

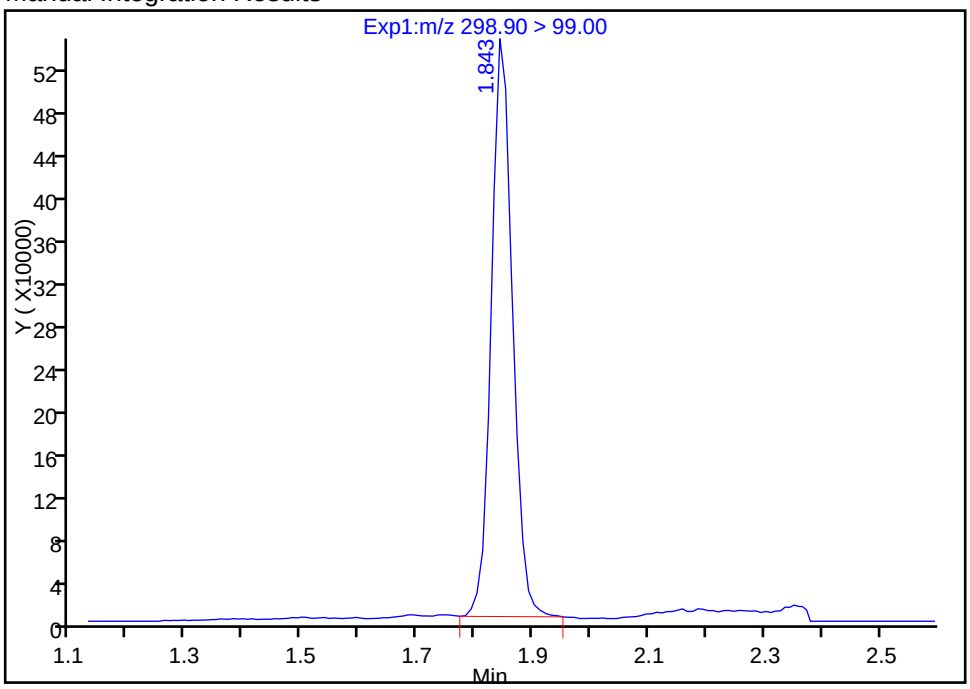
Processing Integration Results

RT: 1.84
Area: 1482806
Amount: 8.641032
Amount Units: ng/ml



Manual Integration Results

RT: 1.84
Area: 1375930
Amount: 8.641032
Amount Units: ng/ml



Reviewer: chandrasenas, 27-Mar-2017 10:46:05

Audit Action: Manually Integrated Audit Reason: Baseline

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento | Job No.: 320-25962-1

SDG No.:

Client Sample ID: MEAFF-PWMA-SB01-0001 DL | Lab Sample ID: 320-25962-4 DL

Matrix: Solid | Lab File ID: 2017.03.03A_008.d

Analysis Method: 537 (Modified) | Date Collected: 02/21/2017 13:35

Extraction Method: SHAKE | Date Extracted: 02/23/2017 17:22

Sample wt/vol: 5.05(g) | Date Analyzed: 03/03/2017 09:53

Con. Extract Vol.: 1.00(mL) | Dilution Factor: 10

Injection Volume: 2(uL) | GC Column: GeminiC18 3x100 ID: 3(mm)

% Moisture: 13.3 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 153020 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
335-67-1	*Perfluorooctanoic acid (PFOA)*	*28*	*D M*	*5.7*	3.4	*1.2*
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	270	D	5.7	3.4	1.4
375-73-5	*Perfluorobutanesulfonic acid (PFBS)*	*1.6*	*J D M*	*4.6*	3.4	*1.2*

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL00990	13C4 PFOA	136		25-150
STL00991	13C4 PFOS	90		25-150
STL00994	18O2 PFHxS	122		25-150

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNa\Sacramento\ChromData\A8_N\20170303-40441.b\2017.03.03A_008.d
Lims ID: 320-25962-A-4-A
Client ID: MEAFF-PWMA-SB01-0001
Sample Type: Client
Inject. Date: 03-Mar-2017 09:53:01 ALS Bottle#: 3 Worklist Smp#: 8
Injection Vol: 2.0 ul Dil. Factor: 10.0000
Sample Info: 320-25962-a-4-a 10X
Misc. Info.: Plate: 1 Rack: 5
Operator ID: A8-PC\A8 Instrument ID: A8_N

Method: \\ChromNa\Sacramento\ChromData\A8_N\20170303-40441.b\A8_N.m
Limit Group: LC PFC_DOD ICAL
Last Update: 27-Mar-2017 10:05:12 Calib Date: 01-Mar-2017 11:53:47
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A8_N\20170301-40358.b\2017.03.01CURVE_009.d

Column 1 : Det: EXP1
Process Host: XAWRK006

First Level Reviewer: chandrasenas Date: 03-Mar-2017 10:12:23

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
5 Perfluorobutanesulfonic acid										M
298.90 > 80.00	1.861	1.863	-0.002	1.000	346390	0.6817				M
298.90 > 99.00	1.861	1.863	-0.002	1.000	139062		2.49(0.00-0.00)			M
D 11 18O2 PFHxS										
403.00 > 84.00	2.479	2.492	-0.013		1677682	5.77		12.2	141375	
D 14 13C4 PFOA										
417.00 > 372.00	2.830	2.850	-0.020		1391780	6.79		13.6	94090	
15 Perfluorooctanoic acid										M
413.00 > 369.00	2.830	2.850	-0.020	1.000	3532944	12.4			32623	M
413.00 > 169.00	2.822	2.850	-0.028	0.997	2244241		1.57(0.90-1.10)		72928	M
17 Perfluorooctane sulfonic acid										
499.00 > 80.00	3.084	3.106	-0.022	1.000	25733476	120.4			189163	
499.00 > 99.00	3.205	3.106	0.099	1.039	6301949		4.08(0.90-1.10)		6832	
D 18 13C4 PFOS										
503.00 > 80.00	3.205	3.228	-0.023		1038648	4.30		9.0	56982	

QC Flag Legend

Review Flags
M - Manually Integrated

Report Date: 27-Mar-2017 10:05:38 Chrom Revision: 2.2 13-Mar-2017 15:50:30

TestAmerica Sacramento

Data File: \\ChromNa\Sacramento\ChromData\A8_N\20170303-40441.b\2017.03.03A_008.d

Injection Date: 03-Mar-2017 09:53:01 Instrument ID: A8_N

Lims ID: 320-25962-A-4-A Lab Sample ID: 320-25962-4

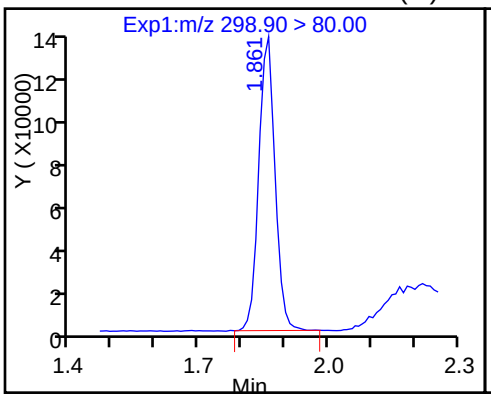
Client ID: MEAFF-PWMA-SB01-0001

Operator ID: A8-PC\A8 ALS Bottle#: 3 Worklist Smp#: 8

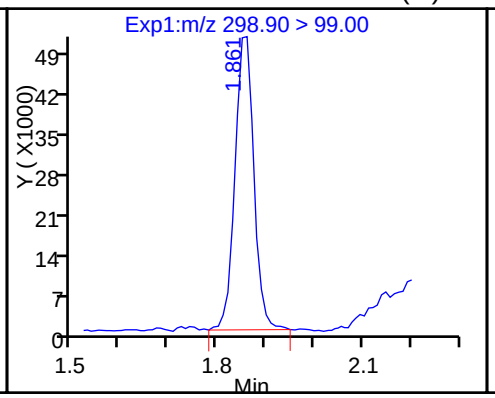
Injection Vol: 2.0 ul Dil. Factor: 10.0000

Method: A8_N Limit Group: LC PFC_DOD ICAL

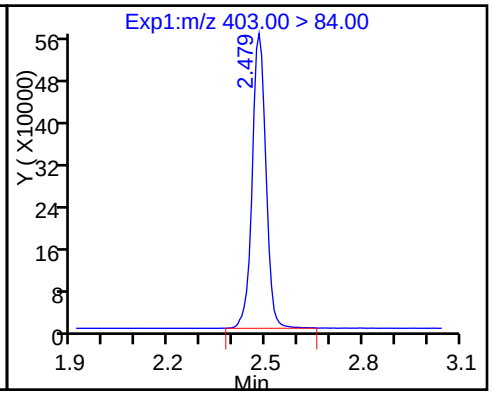
5 Perfluorobutanesulfonic acid (M)



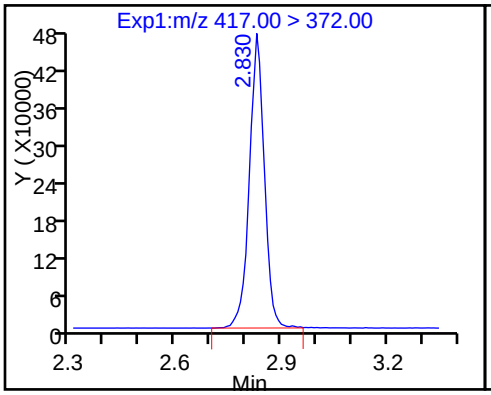
5 Perfluorobutanesulfonic acid (M)



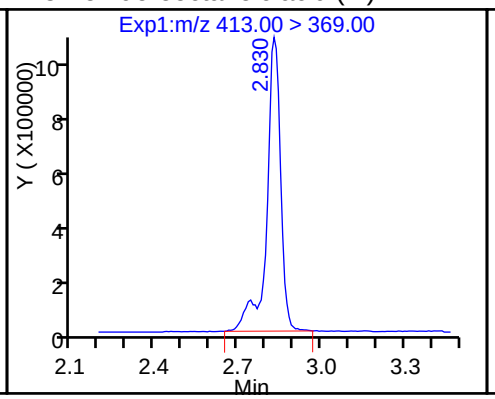
D 11 18O2 PFHxS



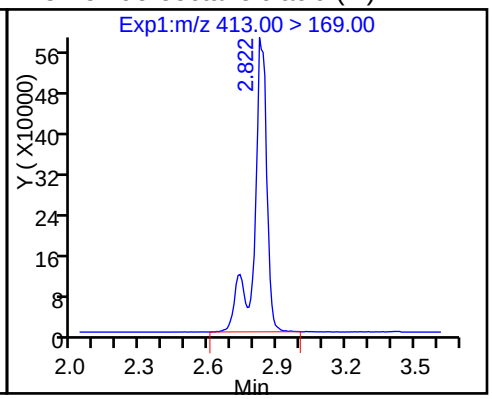
D 14 13C4 PFOA



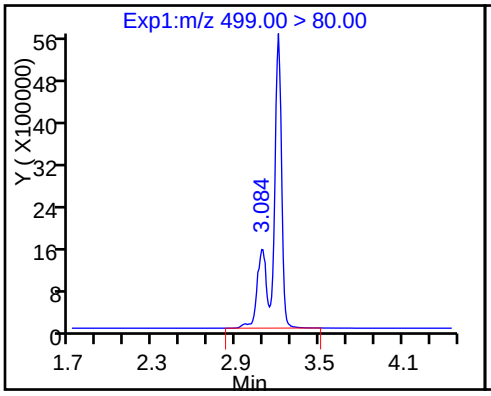
15 Perfluorooctanoic acid (M)



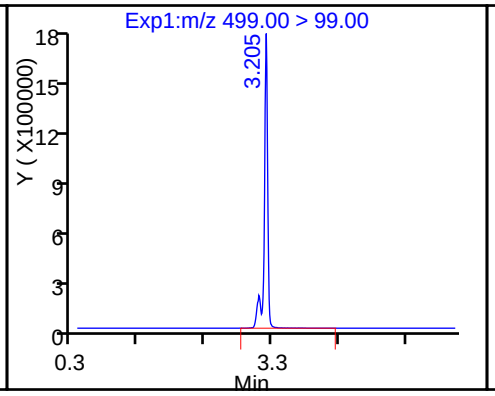
15 Perfluorooctanoic acid (M)



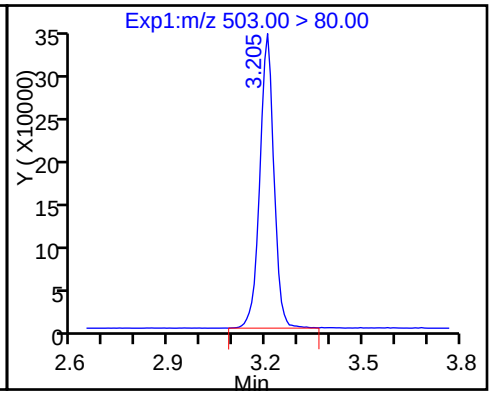
17 Perfluorooctane sulfonic acid



17 Perfluorooctane sulfonic acid



D 18 13C4 PFOS



Manual Integration/User Assign Peak Report

TestAmerica Sacramento

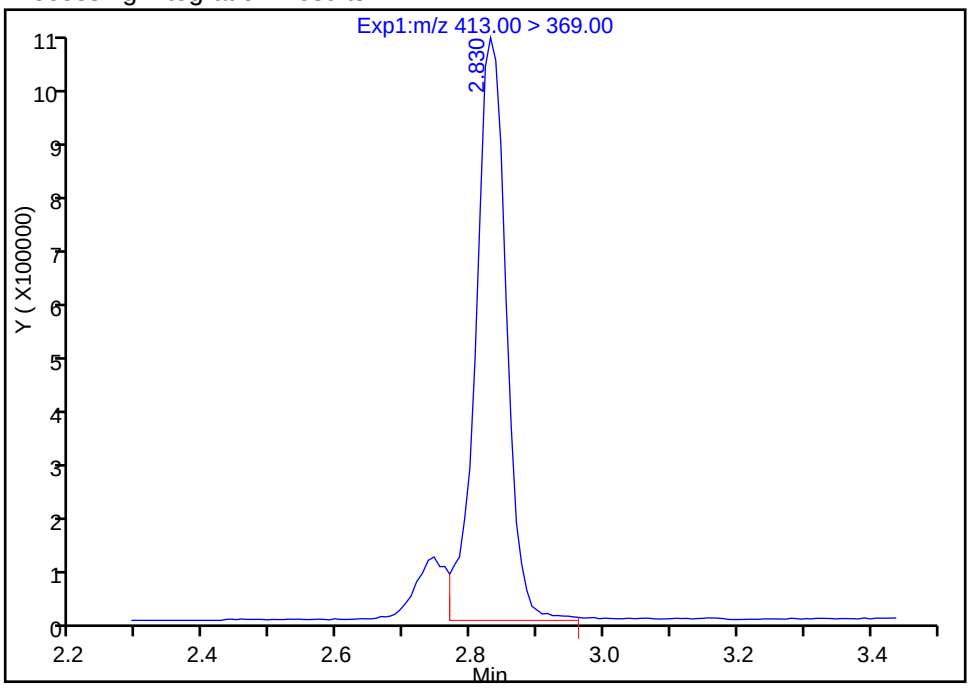
Data File:	\\ChromNa\Sacramento\ChromData\A8_N\20170303-40441.b\2017.03.03A_008.d				
Injection Date:	03-Mar-2017 09:53:01	Instrument ID:	A8_N		
Lims ID:	320-25962-A-4-A	Lab Sample ID:	320-25962-4		
Client ID:	MEAFF-PWMA-SB01-0001				
Operator ID:	A8-PC\A8	ALS Bottle#:	3	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	A8_N	Limit Group:	LC PFC_DOD ICAL		
Column:		Detector	EXP1		

15 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

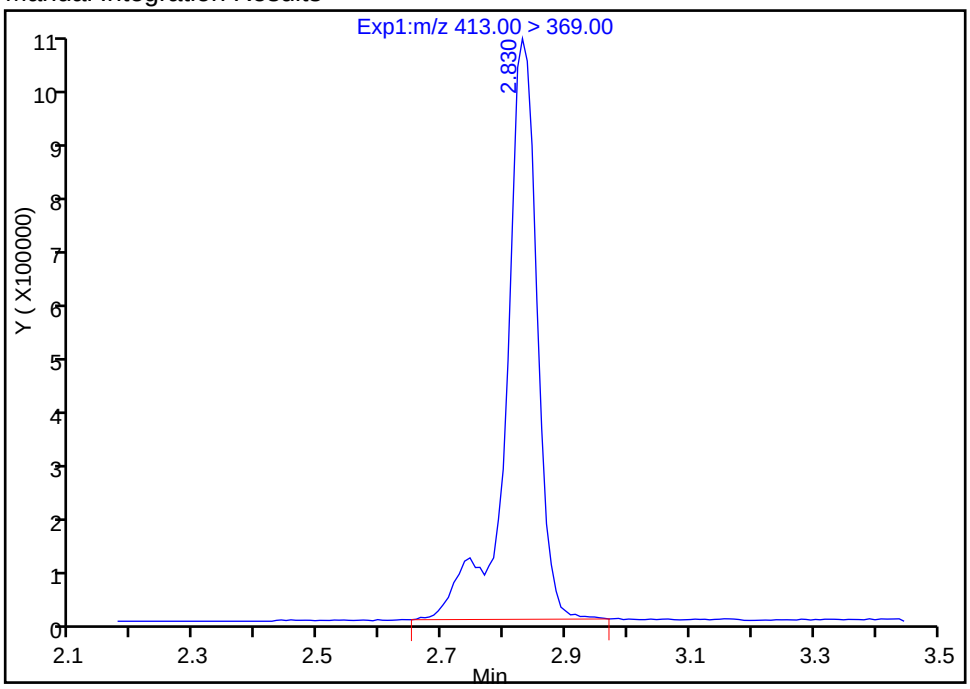
Processing Integration Results

RT: 2.83
Area: 3239854
Amount: 11.392502
Amount Units: ng/ml



Manual Integration Results

RT: 2.83
Area: 3532944
Amount: 12.423113
Amount Units: ng/ml



Reviewer: chandrasenas, 27-Mar-2017 10:05:37

Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

TestAmerica Sacramento

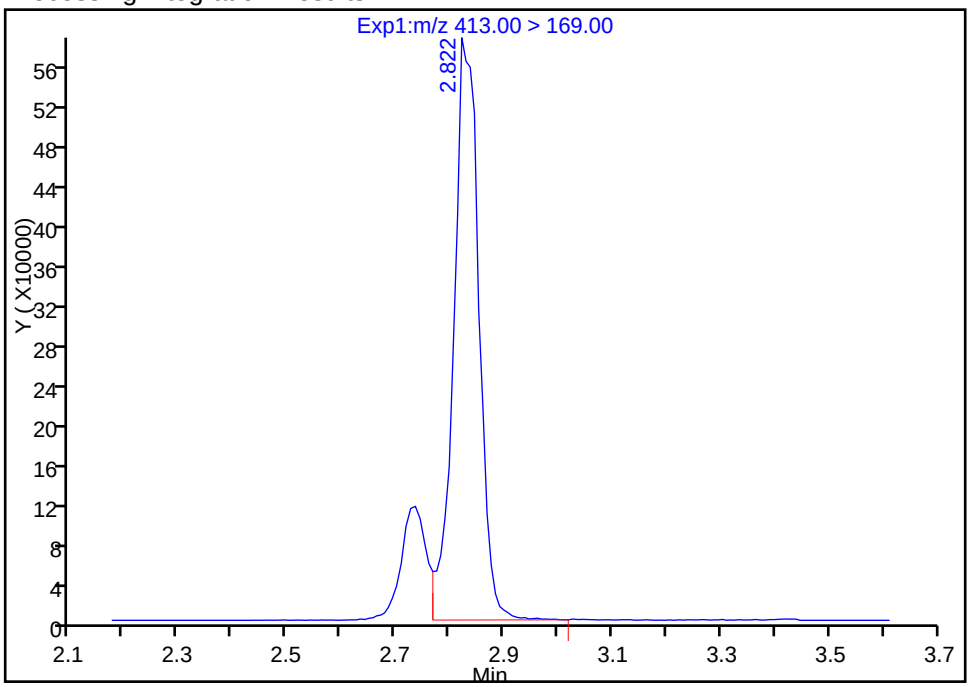
Data File:	\\ChromNa\Sacramento\ChromData\A8_N\20170303-40441.b\2017.03.03A_008.d				
Injection Date:	03-Mar-2017 09:53:01	Instrument ID:	A8_N		
Lims ID:	320-25962-A-4-A	Lab Sample ID:	320-25962-4		
Client ID:	MEAFF-PWMA-SB01-0001				
Operator ID:	A8-PC\A8	ALS Bottle#:	3	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	A8_N	Limit Group:	LC PFC_DOD ICAL		
Column:		Detector	EXP1		

15 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 2

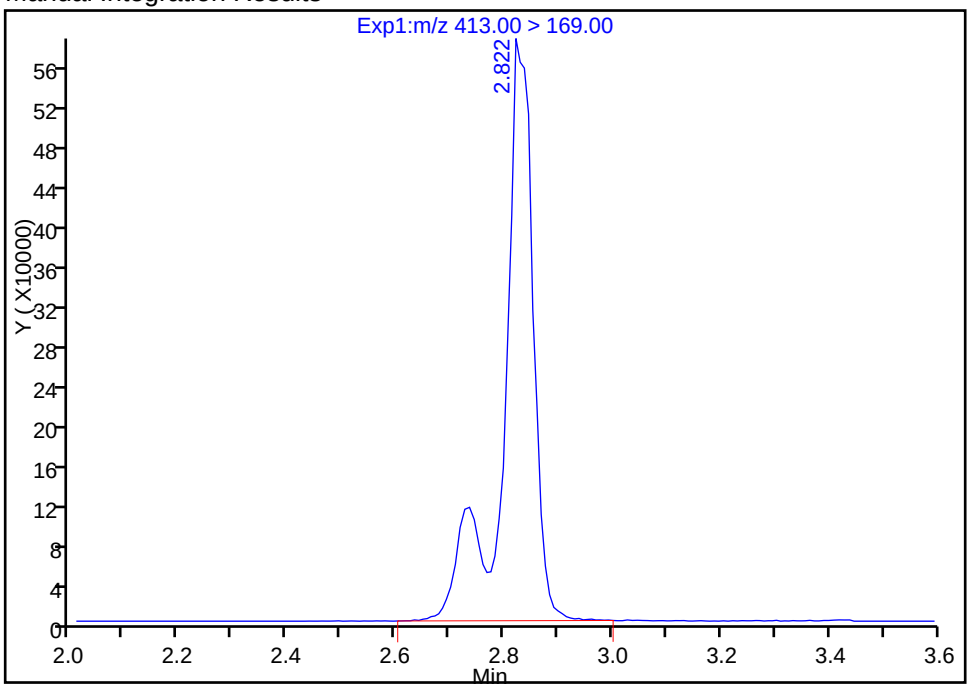
Processing Integration Results

RT: 2.82
Area: 1883631
Amount: 11.392502
Amount Units: ng/ml



Manual Integration Results

RT: 2.82
Area: 2244241
Amount: 12.423113
Amount Units: ng/ml



Reviewer: chandrasenas, 27-Mar-2017 10:05:37

Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

TestAmerica Sacramento

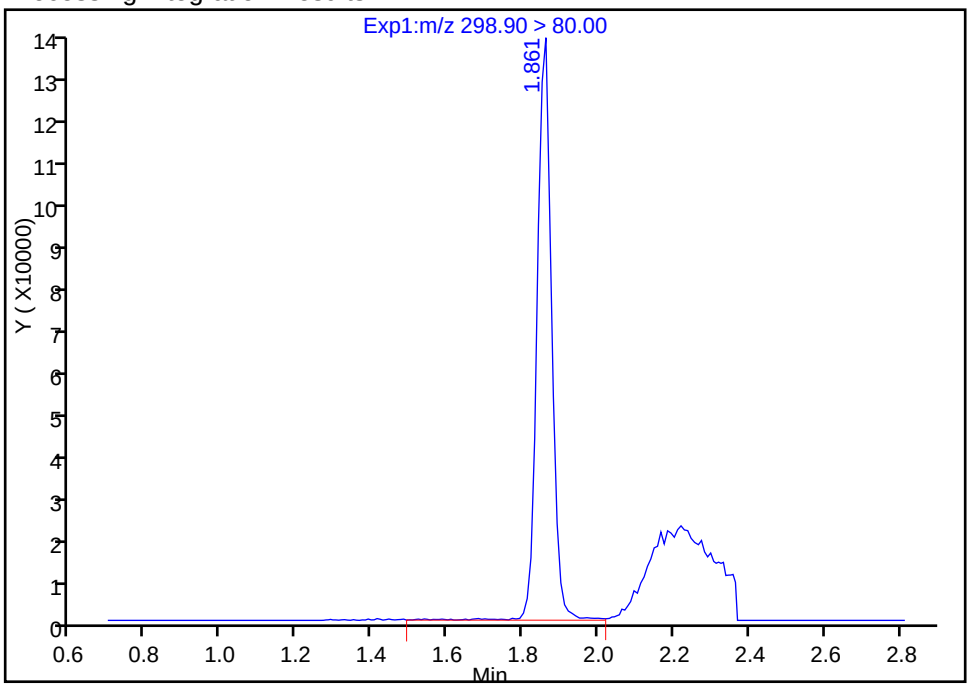
Data File:	\\ChromNa\Sacramento\ChromData\A8_N\20170303-40441.b\2017.03.03A_008.d				
Injection Date:	03-Mar-2017 09:53:01	Instrument ID:	A8_N		
Lims ID:	320-25962-A-4-A	Lab Sample ID:	320-25962-4		
Client ID:	MEAFF-PWMA-SB01-0001				
Operator ID:	A8-PC\A8	ALS Bottle#:	3	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	A8_N	Limit Group:	LC PFC_DOD ICAL		
Column:		Detector	EXP1		

5 Perfluorobutanesulfonic acid, CAS: 375-73-5

Signal: 1

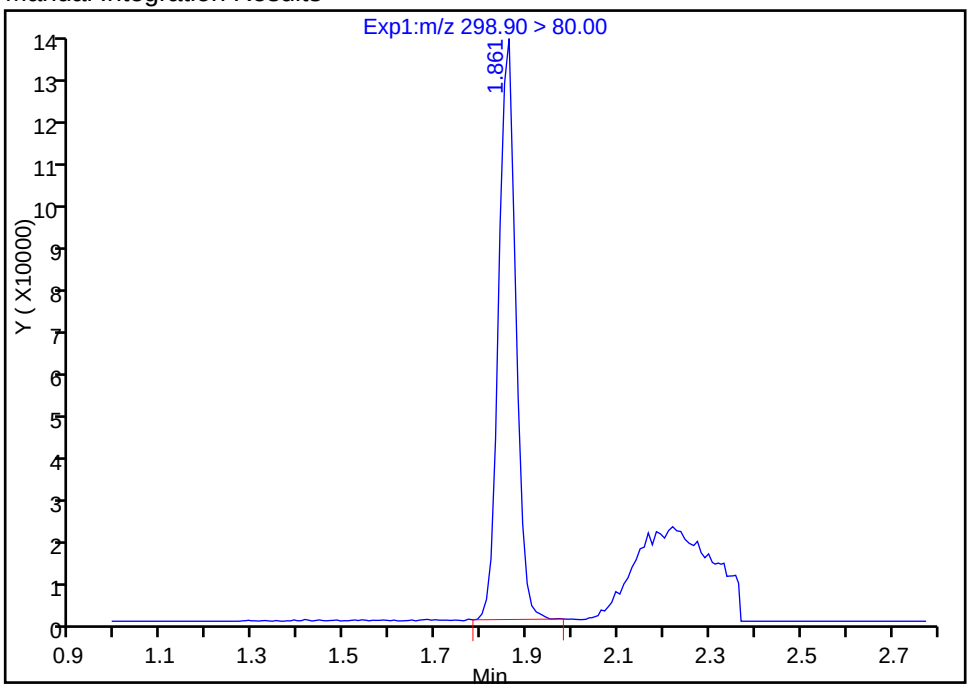
Processing Integration Results

RT: 1.86
Area: 354631
Amount: 0.697962
Amount Units: ng/ml



Manual Integration Results

RT: 1.86
Area: 346390
Amount: 0.681742
Amount Units: ng/ml



Reviewer: chandrasenas, 27-Mar-2017 10:05:37

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

TestAmerica Sacramento

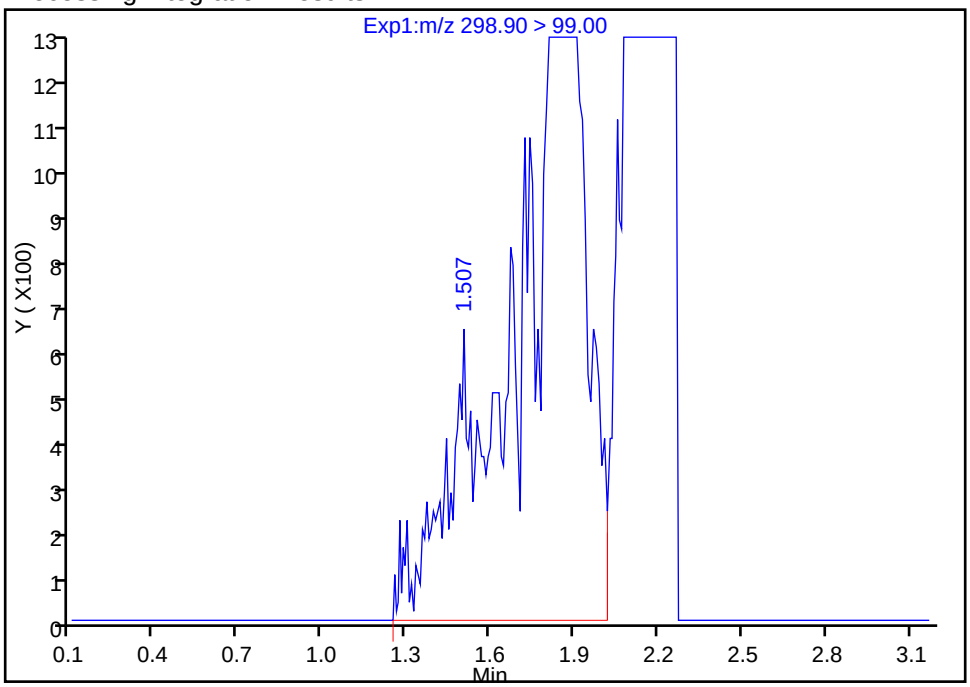
Data File:	\\ChromNa\Sacramento\ChromData\A8_N\20170303-40441.b\2017.03.03A_008.d				
Injection Date:	03-Mar-2017 09:53:01	Instrument ID:	A8_N		
Lims ID:	320-25962-A-4-A	Lab Sample ID:	320-25962-4		
Client ID:	MEAFF-PWMA-SB01-0001				
Operator ID:	A8-PC\A8	ALS Bottle#:	3	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	A8_N	Limit Group:	LC PFC_DOD ICAL		
Column:		Detector	EXP1		

5 Perfluorobutanesulfonic acid, CAS: 375-73-5

Signal: 2

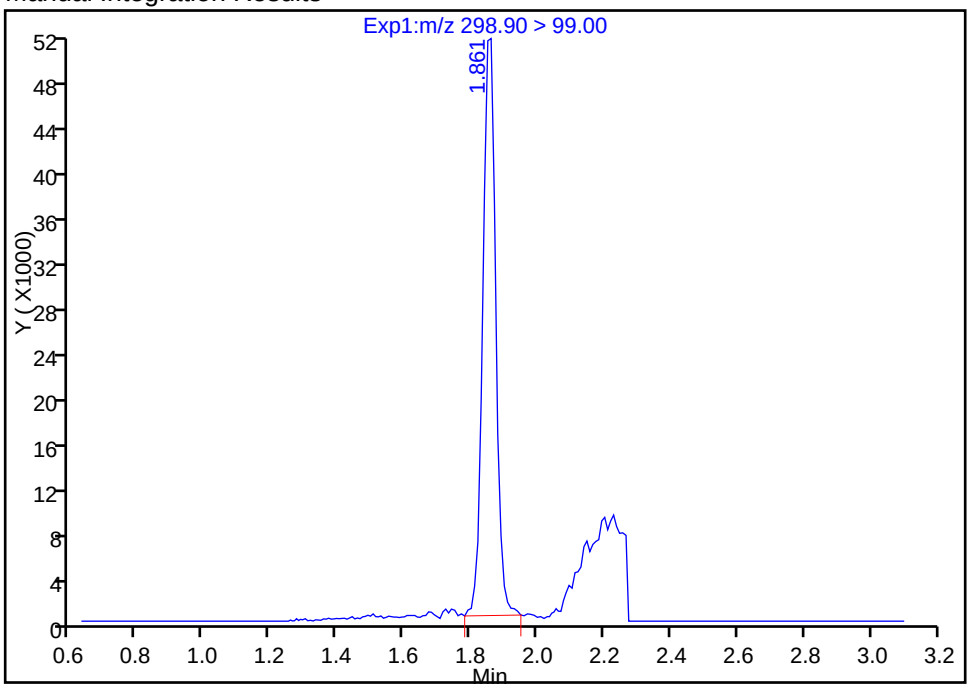
Processing Integration Results

RT: 1.51
Area: 158226
Amount: 0.697962
Amount Units: ng/ml



Manual Integration Results

RT: 1.86
Area: 139062
Amount: 0.681742
Amount Units: ng/ml



Reviewer: chandrasenas, 27-Mar-2017 10:05:37

Audit Action: Manually Integrated Audit Reason: Baseline

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 320-25962-1

SDG No.:

Client Sample ID: MEAFF-PWMA-SB01-0204 Lab Sample ID: 320-25962-5

Matrix: Solid Lab File ID: 2017.03.01A_014.d

Analysis Method: 537 (Modified) Date Collected: 02/21/2017 13:40

Extraction Method: SHAKE Date Extracted: 02/23/2017 17:22

Sample wt/vol: 4.97(g) Date Analyzed: 03/01/2017 20:00

Con. Extract Vol.: 1.00(mL) Dilution Factor: 1

Injection Volume: 2(uL) GC Column: GeminiC18 3x100 ID: 3(mm)

% Moisture: 14.7 GPC Cleanup:(Y/N) N

Analysis Batch No.: 152825 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
335-67-1	Perfluorooctanoic acid (PFOA)	5.5	M	0.59	0.35	0.12
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	30	M	0.59	0.35	0.15
375-73-5	Perfluorobutanesulfonic acid (PFBS)	0.95	M	0.47	0.35	0.12

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL00990	13C4 PFOA	101	M	25-150
STL00991	13C4 PFOS	56	M	25-150
STL00994	18O2 PFHxS	95	M	25-150

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNa\Sacramento\ChromData\A8_N\20170302-40391.b\2017.03.01A_014.d
Lims ID: 320-25962-A-5-A
Client ID: MEAFF-PWMA-SB01-0204
Sample Type: Client
Inject. Date: 01-Mar-2017 20:00:07 ALS Bottle#: 35 Worklist Smp#: 14
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-25962-a-5-a
Misc. Info.: Plate: 1 Rack: 3
Operator ID: A8-PC\A8 Instrument ID: A8_N

Method: \\ChromNa\Sacramento\ChromData\A8_N\20170302-40391.b\A8_N.m
Limit Group: LC PFC_DOD ICAL
Last Update: 27-Mar-2017 10:47:39 Calib Date: 01-Mar-2017 11:53:47
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A8_N\20170301-40358.b\2017.03.01CURVE_009.d

Column 1 : Det: EXP1
Process Host: XAWRK006

First Level Reviewer: chandrasenas Date: 02-Mar-2017 11:59:44

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
5 Perfluorobutanesulfonic acid										M
298.90 > 80.00	1.863	1.843	0.019	1.000	1596752	4.02				M
298.90 > 99.00	1.853	1.843	0.010	0.995	629507		2.54(0.00-0.00)			M
D 11 18O2 PFHxS										M
403.00 > 84.00	2.460	2.453	0.007		13105479	45.1		95.2	630139	M
D 14 13C4 PFOA										M
417.00 > 372.00	2.810	2.795	0.015		10347854	50.5		101	362362	M
15 Perfluorooctanoic acid										M
413.00 > 369.00	2.810	2.803	0.007	1.000	4923243	23.3			43483	M
413.00 > 169.00	2.802	2.803	-0.001	0.997	3302845		1.49(0.90-1.10)		76697	M
17 Perfluorooctane sulfonic acid										M
499.00 > 80.00	3.168	3.160	0.008	1.000	16734295	125.3			423876	M
499.00 > 99.00	3.176	3.160	0.016	1.002	3964078		4.22(0.90-1.10)		101946	M
D 18 13C4 PFOS										M
503.00 > 80.00	3.168	3.160	0.008		6493324	26.9		56.2	295762	M

QC Flag Legend

Review Flags
M - Manually Integrated

Report Date: 27-Mar-2017 10:47:39 Chrom Revision: 2.2 13-Mar-2017 15:50:30

TestAmerica Sacramento

Data File: \\ChromNa\Sacramento\ChromData\A8_N\20170302-40391.b\2017.03.01A_014.d

Injection Date: 01-Mar-2017 20:00:07 Instrument ID: A8_N

Lims ID: 320-25962-A-5-A Lab Sample ID: 320-25962-5

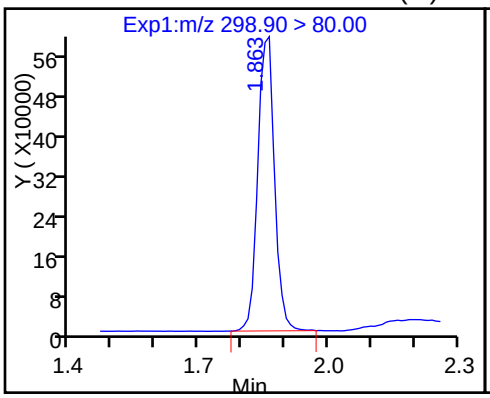
Client ID: MEAFF-PWMA-SB01-0204

Operator ID: A8-PC\A8 ALS Bottle#: 35 Worklist Smp#: 14

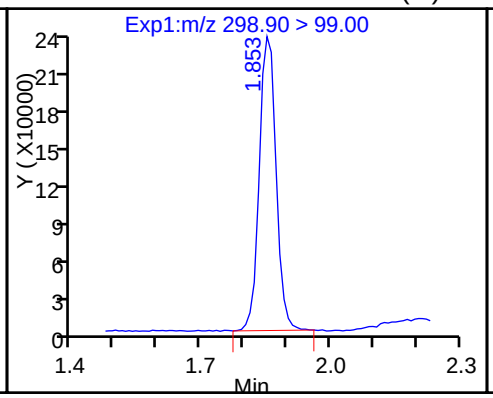
Injection Vol: 2.0 ul Dil. Factor: 1.0000

Method: A8_N Limit Group: LC PFC_DOD ICAL

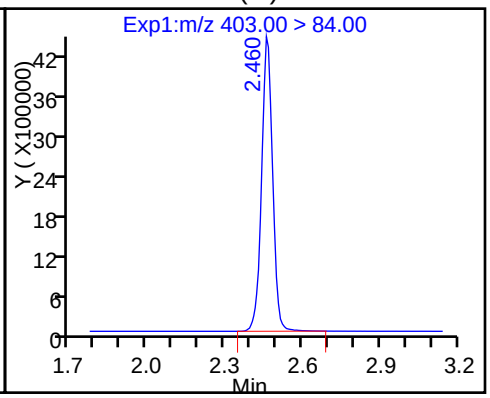
5 Perfluorobutanesulfonic acid (M)



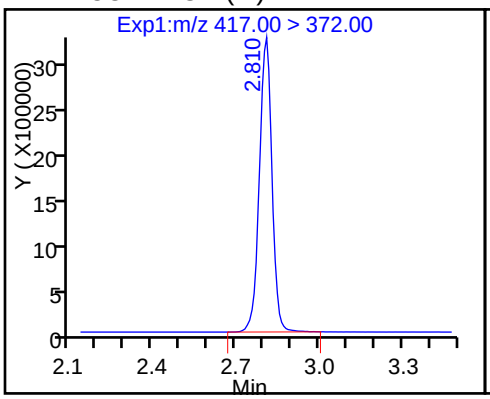
5 Perfluorobutanesulfonic acid (M)



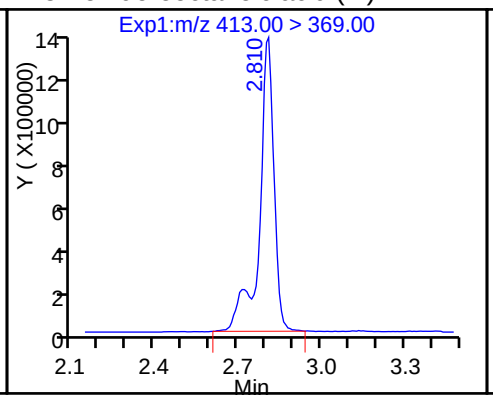
D 11 18O2 PFHxS (M)



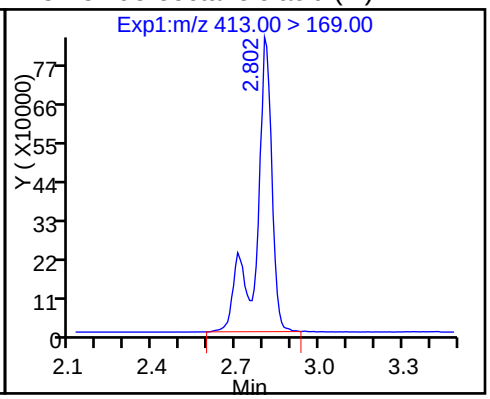
D 14 13C4 PFOA (M)



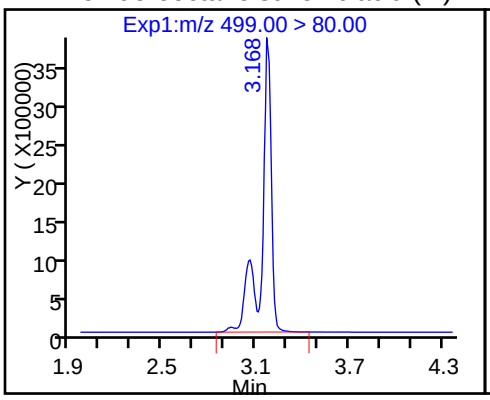
15 Perfluorooctanoic acid (M)



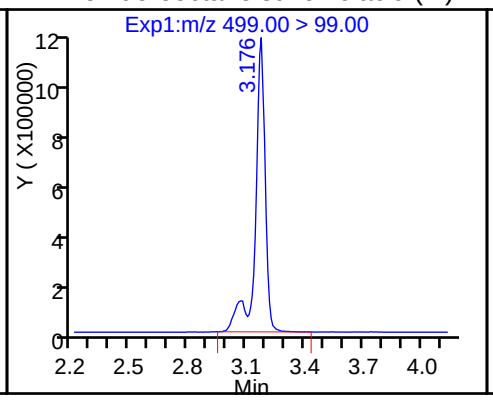
15 Perfluorooctanoic acid (M)



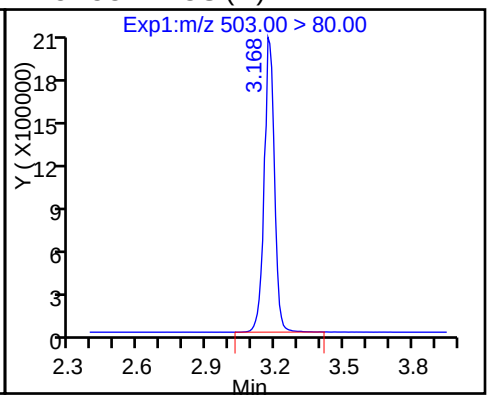
17 Perfluorooctane sulfonic acid (M)



17 Perfluorooctane sulfonic acid (M)



D 18 13C4 PFOS (M)



Manual Integration/User Assign Peak Report

TestAmerica Sacramento

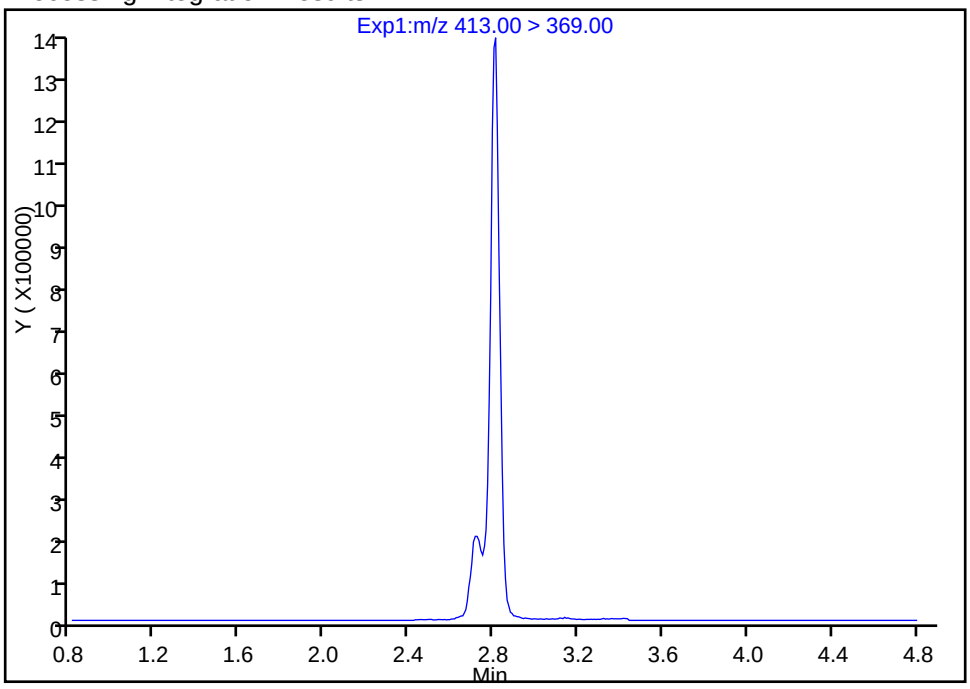
Data File:	\\ChromNa\Sacramento\ChromData\A8_N\20170302-40391.b\2017.03.01A_014.d				
Injection Date:	01-Mar-2017 20:00:07	Instrument ID:	A8_N		
Lims ID:	320-25962-A-5-A	Lab Sample ID:	320-25962-5		
Client ID:	MEAFF-PWMA-SB01-0204				
Operator ID:	A8-PC\A8	ALS Bottle#:	35	Worklist Smp#:	14
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	A8_N	Limit Group:	LC PFC_DOD ICAL		
Column:		Detector	EXP1		

15 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

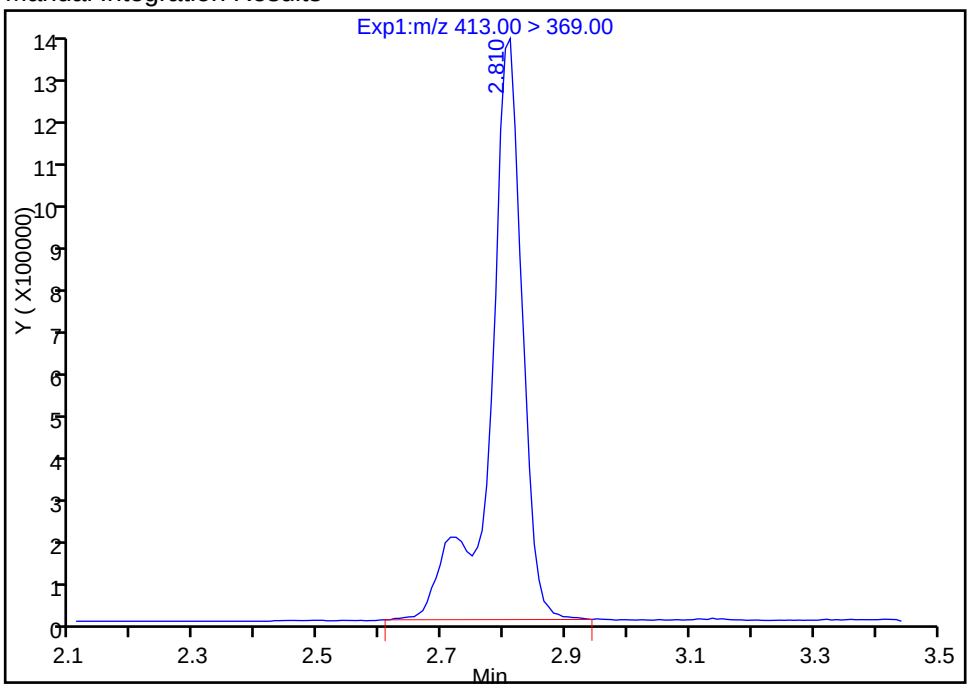
Not Detected
Expected RT: 2.80

Processing Integration Results



Manual Integration Results

RT: 2.81
Area: 4923243
Amount: 23.284411
Amount Units: ng/ml



Reviewer: chandrasenas, 27-Mar-2017 10:46:25
Audit Action: Assigned Compound ID Audit Reason:

Manual Integration/User Assign Peak Report

TestAmerica Sacramento

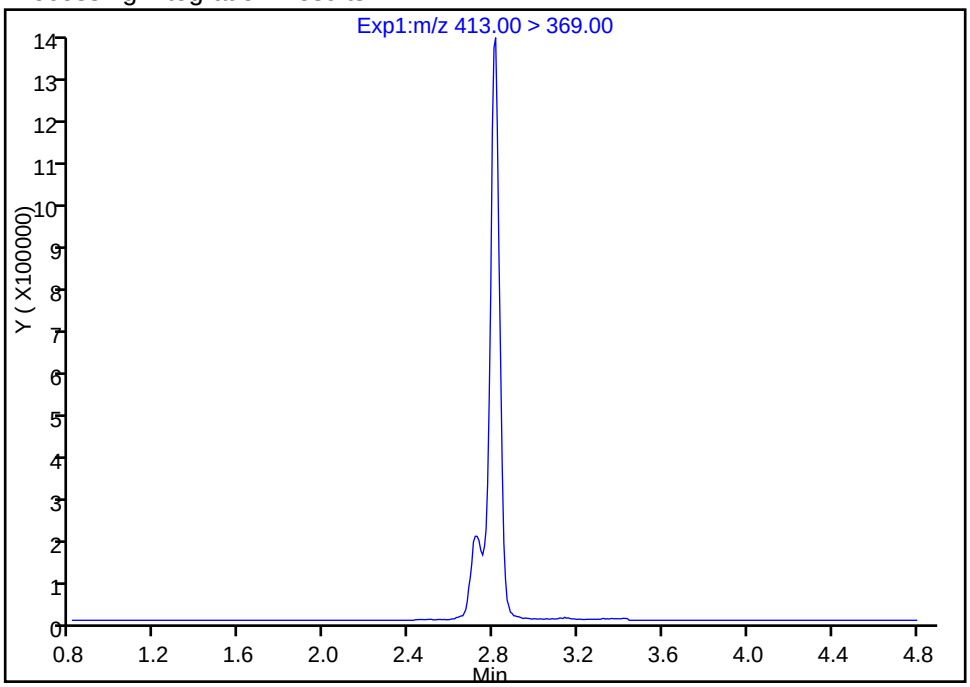
Data File:	\\ChromNa\Sacramento\ChromData\A8_N\20170302-40391.b\2017.03.01A_014.d				
Injection Date:	01-Mar-2017 20:00:07	Instrument ID:	A8_N		
Lims ID:	320-25962-A-5-A	Lab Sample ID:	320-25962-5		
Client ID:	MEAFF-PWMA-SB01-0204				
Operator ID:	A8-PC\A8	ALS Bottle#:	35	Worklist Smp#:	14
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	A8_N	Limit Group:	LC PFC_DOD ICAL		
Column:		Detector	EXP1		

15 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

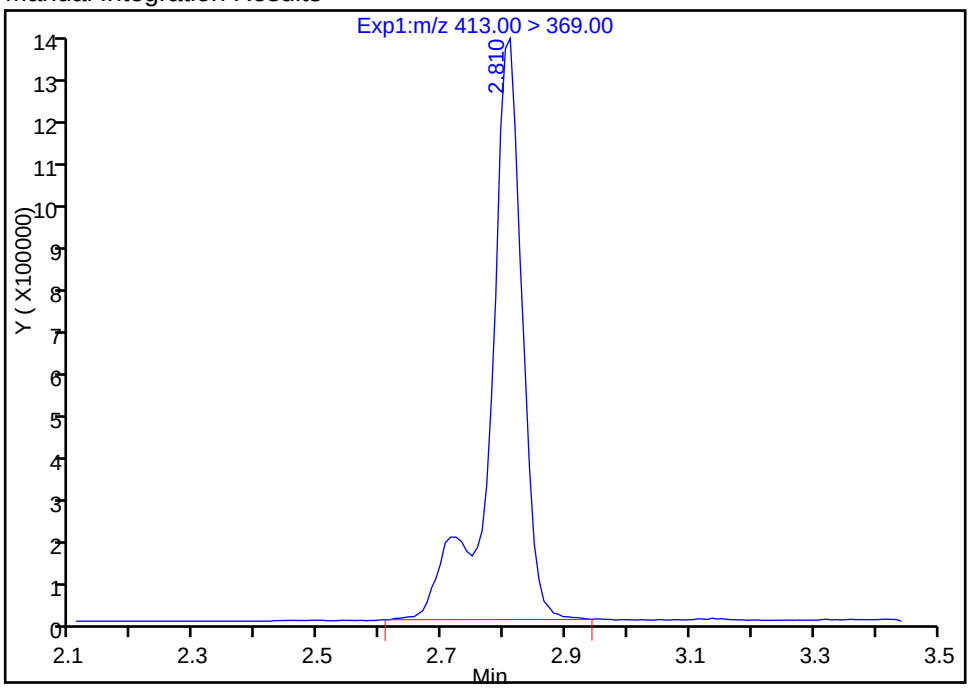
Processing Integration Results

Not Detected
Expected RT: 2.80



Manual Integration Results

RT: 2.81
Area: 4923243
Amount: 23.284411
Amount Units: ng/ml



Reviewer: chandrasenas, 27-Mar-2017 10:46:25
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

TestAmerica Sacramento

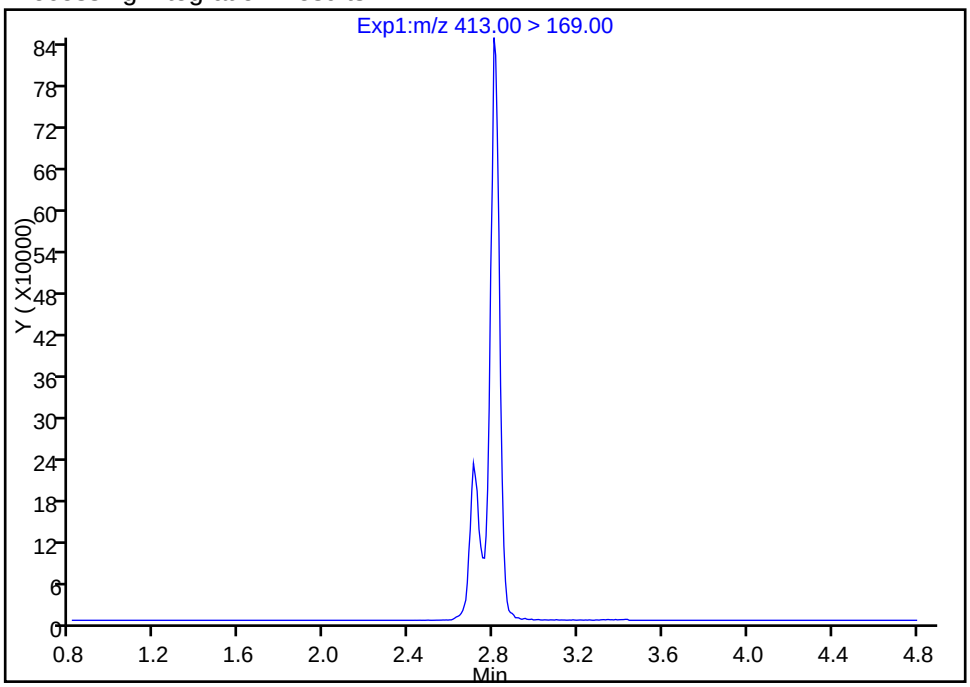
Data File:	\\ChromNa\Sacramento\ChromData\A8_N\20170302-40391.b\2017.03.01A_014.d				
Injection Date:	01-Mar-2017 20:00:07	Instrument ID:	A8_N		
Lims ID:	320-25962-A-5-A	Lab Sample ID:	320-25962-5		
Client ID:	MEAFF-PWMA-SB01-0204				
Operator ID:	A8-PC\A8	ALS Bottle#:	35	Worklist Smp#:	14
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	A8_N	Limit Group:	LC PFC_DOD ICAL		
Column:		Detector	EXP1		

15 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 2

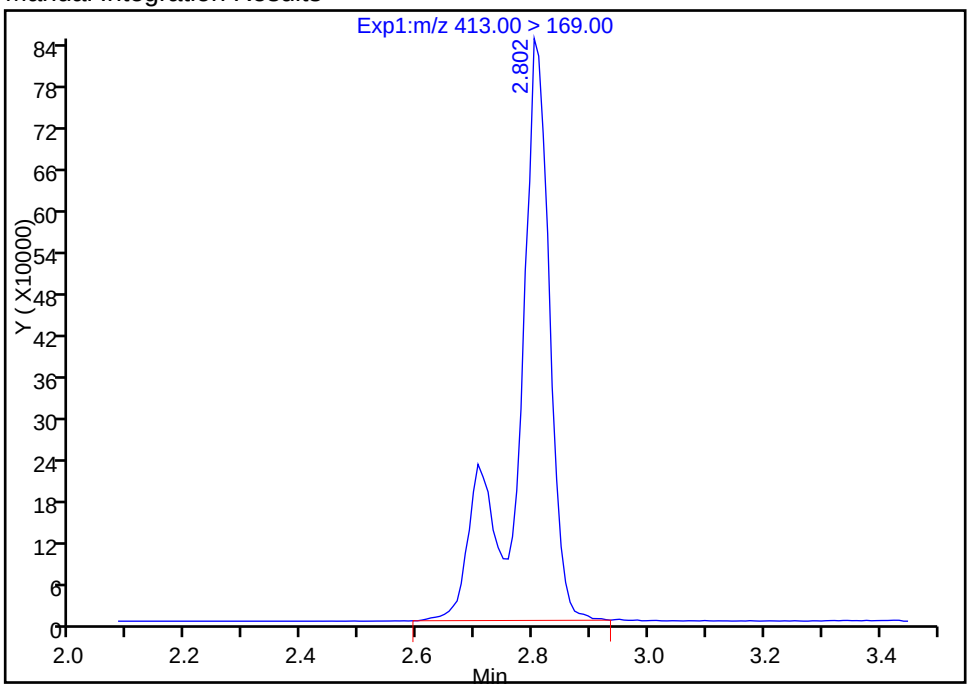
Not Detected
Expected RT: 2.80

Processing Integration Results



Manual Integration Results

RT: 2.80
Area: 3302845
Amount: 23.284411
Amount Units: ng/ml



Reviewer: chandrasenas, 27-Mar-2017 10:46:25
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

TestAmerica Sacramento

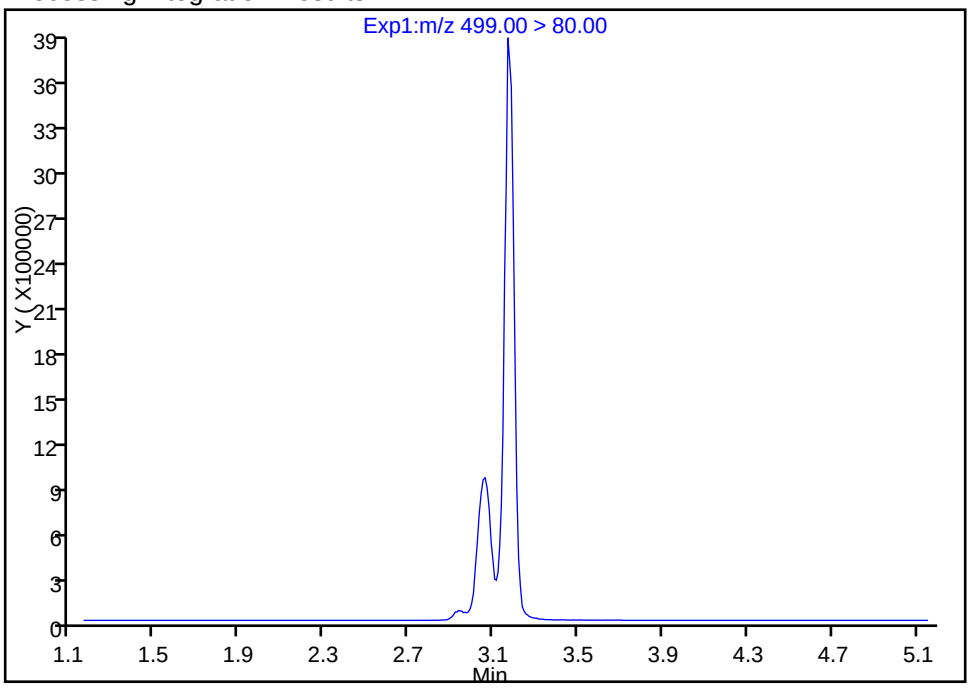
Data File:	\\ChromNa\Sacramento\ChromData\A8_N\20170302-40391.b\2017.03.01A_014.d				
Injection Date:	01-Mar-2017 20:00:07	Instrument ID:	A8_N		
Lims ID:	320-25962-A-5-A	Lab Sample ID:	320-25962-5		
Client ID:	MEAFF-PWMA-SB01-0204				
Operator ID:	A8-PC\A8	ALS Bottle#:	35	Worklist Smp#:	14
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	A8_N	Limit Group:	LC PFC_DOD ICAL		
Column:		Detector	EXP1		

17 Perfluorooctane sulfonic acid, CAS: 1763-23-1

Signal: 1

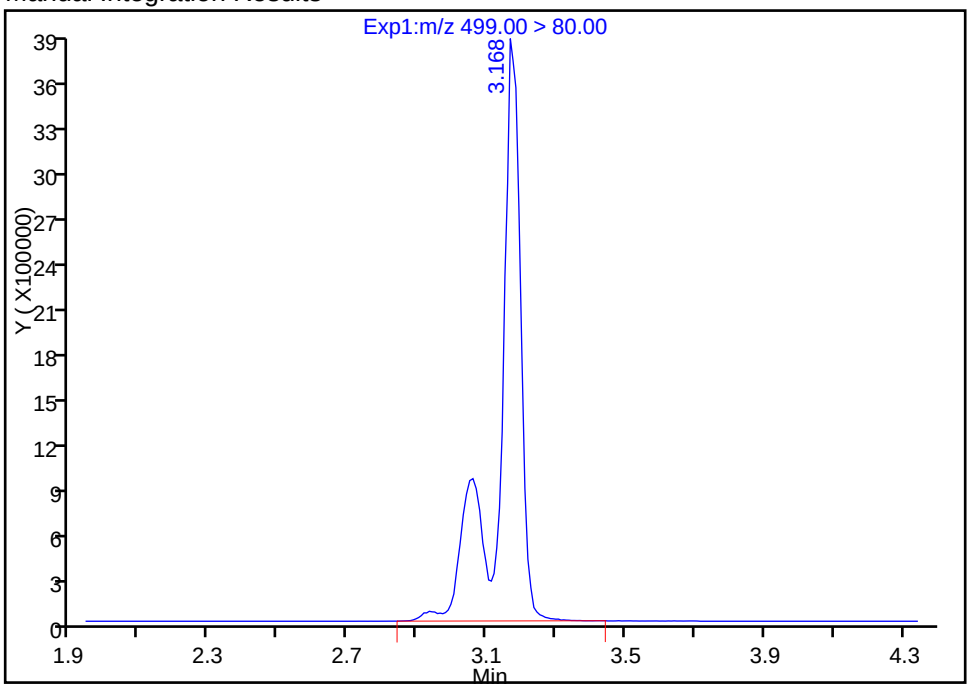
Processing Integration Results

Not Detected
Expected RT: 3.16



Manual Integration Results

RT: 3.17
Area: 16734295
Amount: 125.2569
Amount Units: ng/ml



Reviewer: chandrasenas, 27-Mar-2017 10:46:25
Audit Action: Assigned Compound ID Audit Reason:

Manual Integration/User Assign Peak Report

TestAmerica Sacramento

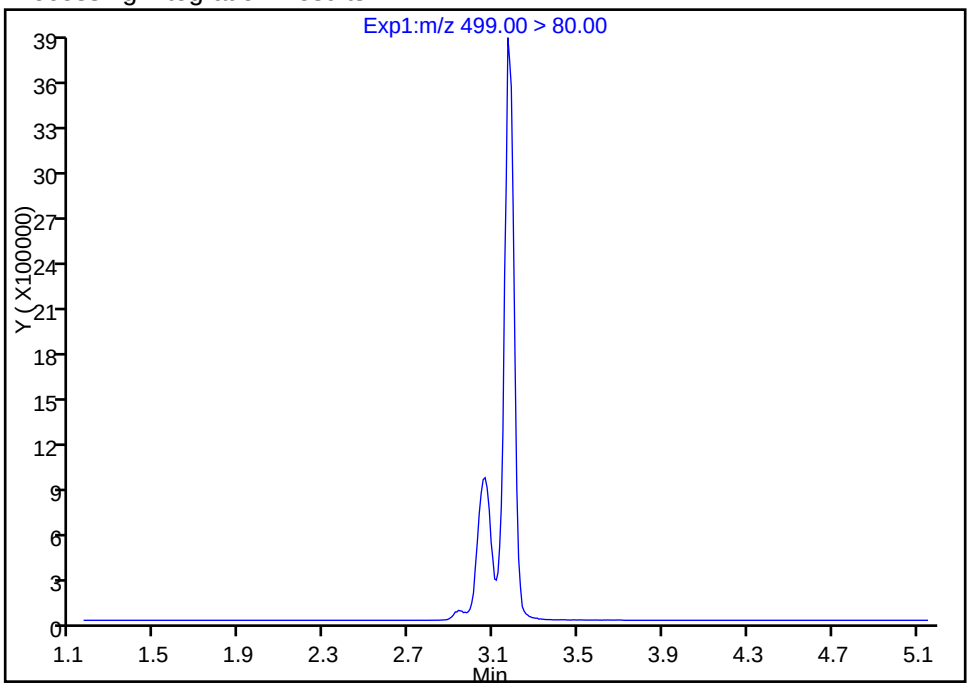
Data File:	\\ChromNa\Sacramento\ChromData\A8_N\20170302-40391.b\2017.03.01A_014.d				
Injection Date:	01-Mar-2017 20:00:07	Instrument ID:	A8_N		
Lims ID:	320-25962-A-5-A	Lab Sample ID:	320-25962-5		
Client ID:	MEAFF-PWMA-SB01-0204				
Operator ID:	A8-PC\A8	ALS Bottle#:	35	Worklist Smp#:	14
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	A8_N	Limit Group:	LC PFC_DOD ICAL		
Column:		Detector	EXP1		

17 Perfluorooctane sulfonic acid, CAS: 1763-23-1

Signal: 1

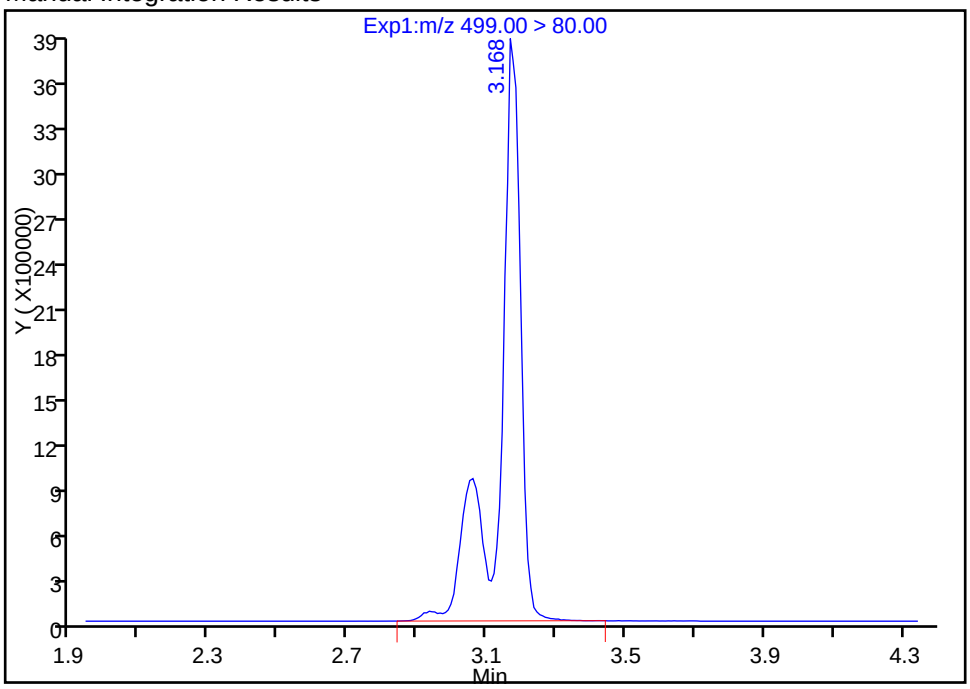
Processing Integration Results

Not Detected
Expected RT: 3.16



Manual Integration Results

RT: 3.17
Area: 16734295
Amount: 125.2569
Amount Units: ng/ml



Reviewer: chandrasenas, 27-Mar-2017 10:46:25
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

TestAmerica Sacramento

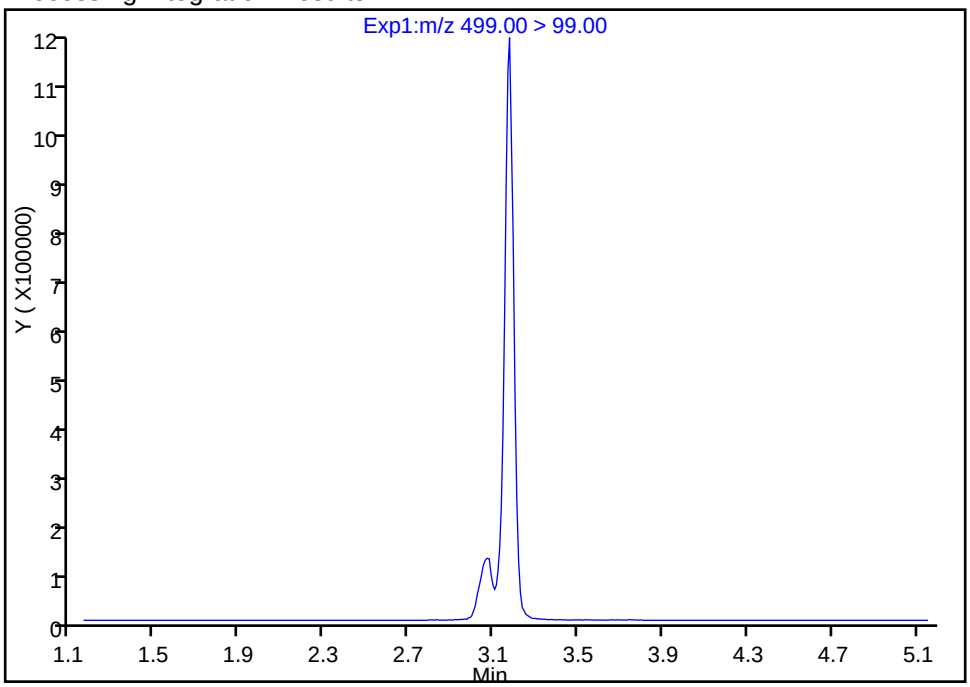
Data File:	\\ChromNa\Sacramento\ChromData\A8_N\20170302-40391.b\2017.03.01A_014.d				
Injection Date:	01-Mar-2017 20:00:07	Instrument ID:	A8_N		
Lims ID:	320-25962-A-5-A	Lab Sample ID:	320-25962-5		
Client ID:	MEAFF-PWMA-SB01-0204				
Operator ID:	A8-PC\A8	ALS Bottle#:	35	Worklist Smp#:	14
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	A8_N	Limit Group:	LC PFC_DOD ICAL		
Column:		Detector	EXP1		

17 Perfluorooctane sulfonic acid, CAS: 1763-23-1

Signal: 2

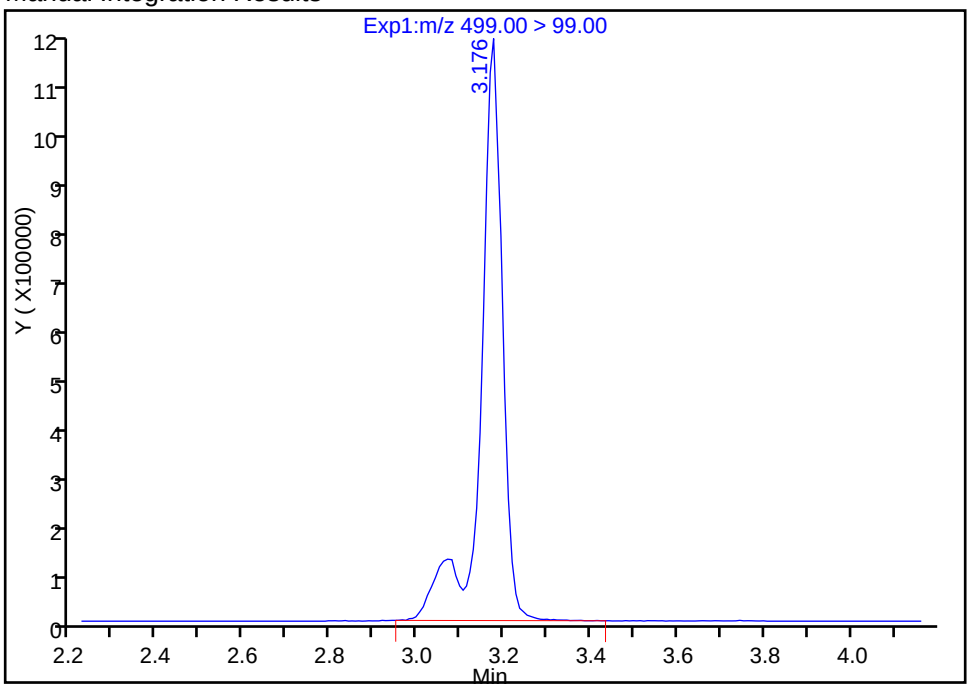
Processing Integration Results

Not Detected
Expected RT: 3.16



Manual Integration Results

RT: 3.18
Area: 3964078
Amount: 125.2569
Amount Units: ng/ml



Reviewer: chandrasenas, 27-Mar-2017 10:46:25
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

TestAmerica Sacramento

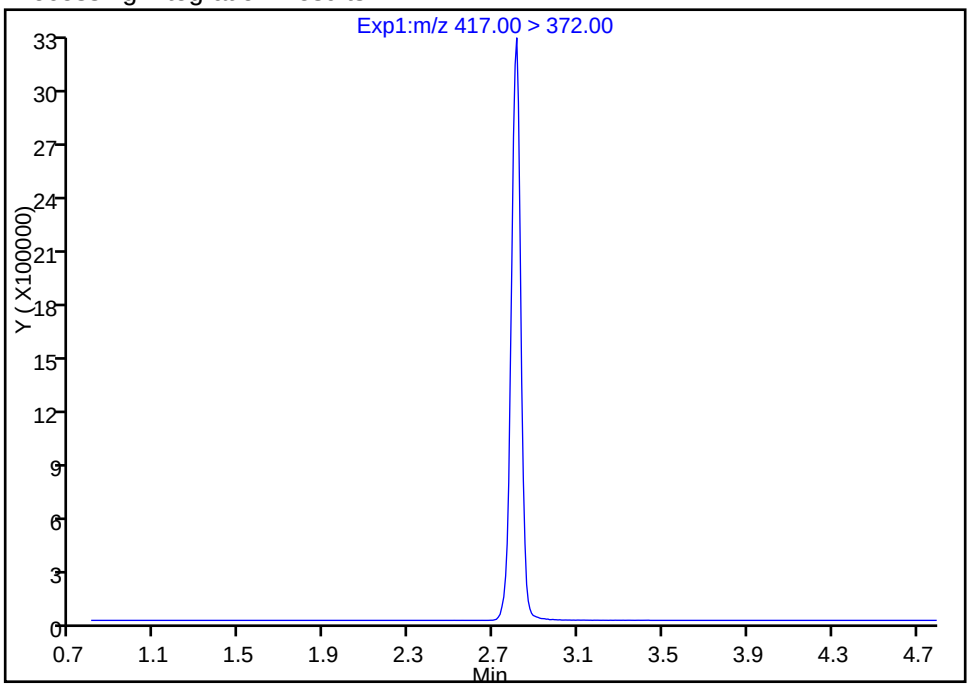
Data File:	\\ChromNa\Sacramento\ChromData\A8_N\20170302-40391.b\2017.03.01A_014.d				
Injection Date:	01-Mar-2017 20:00:07	Instrument ID:	A8_N		
Lims ID:	320-25962-A-5-A	Lab Sample ID:	320-25962-5		
Client ID:	MEAFF-PWMA-SB01-0204				
Operator ID:	A8-PC\A8	ALS Bottle#:	35	Worklist Smp#:	14
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	A8_N	Limit Group:	LC PFC_DOD ICAL		
Column:		Detector	EXP1		

D 14 13C4 PFOA, CAS: STL00990

Signal: 1

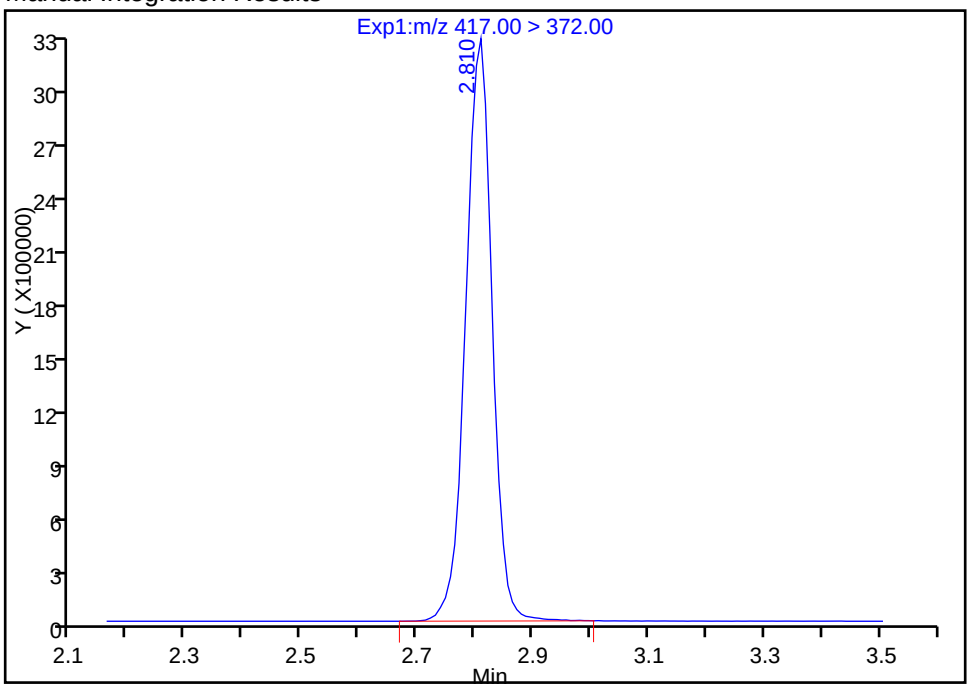
Processing Integration Results

Not Detected
Expected RT: 2.80



Manual Integration Results

RT: 2.81
Area: 10347854
Amount: 50.488911
Amount Units: ng/ml



Reviewer: chandrasenas, 27-Mar-2017 10:46:25
Audit Action: Assigned Compound ID Audit Reason:

Manual Integration/User Assign Peak Report

TestAmerica Sacramento

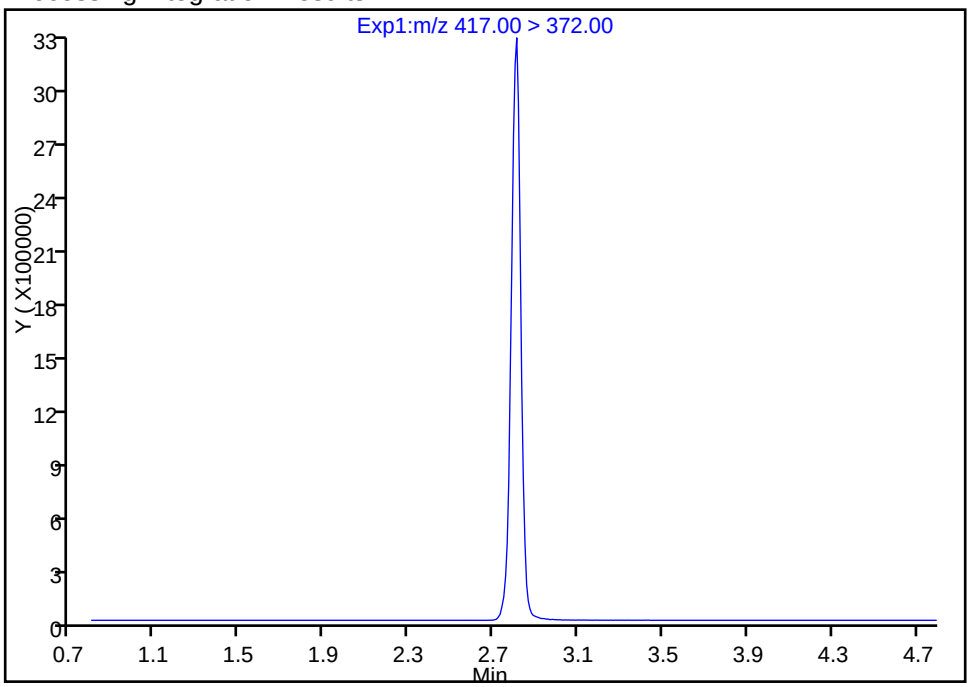
Data File:	\\ChromNa\Sacramento\ChromData\A8_N\20170302-40391.b\2017.03.01A_014.d				
Injection Date:	01-Mar-2017 20:00:07	Instrument ID:	A8_N		
Lims ID:	320-25962-A-5-A	Lab Sample ID:	320-25962-5		
Client ID:	MEAFF-PWMA-SB01-0204				
Operator ID:	A8-PC\A8	ALS Bottle#:	35	Worklist Smp#:	14
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	A8_N	Limit Group:	LC PFC_DOD ICAL		
Column:		Detector	EXP1		

D 14 13C4 PFOA, CAS: STL00990

Signal: 1

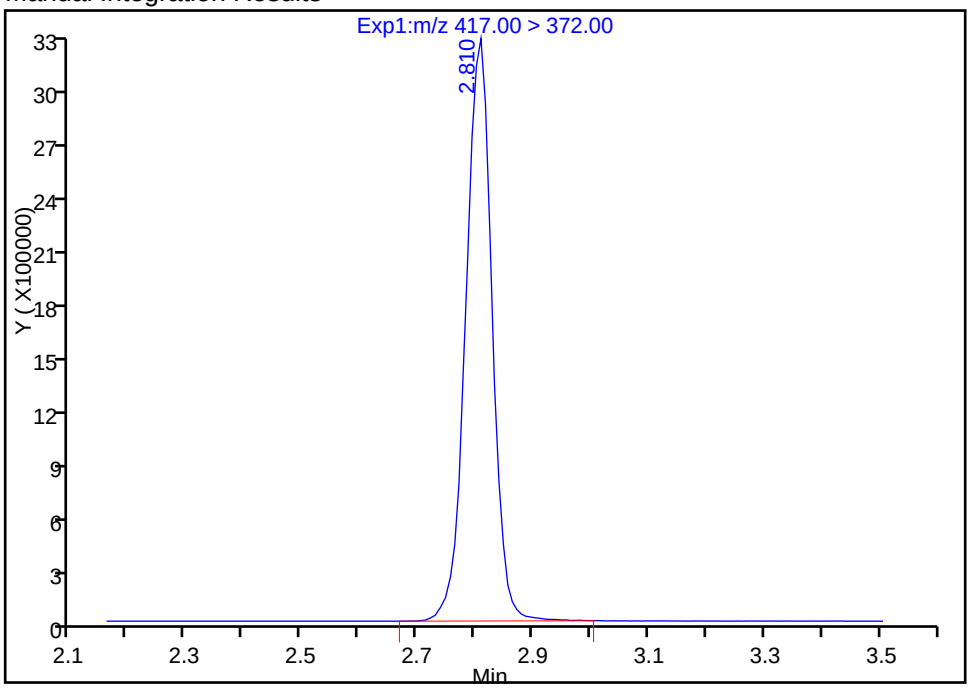
Processing Integration Results

Not Detected
Expected RT: 2.80



Manual Integration Results

RT: 2.81
Area: 10347854
Amount: 50.488911
Amount Units: ng/ml



Reviewer: chandrasenas, 27-Mar-2017 10:46:25
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

TestAmerica Sacramento

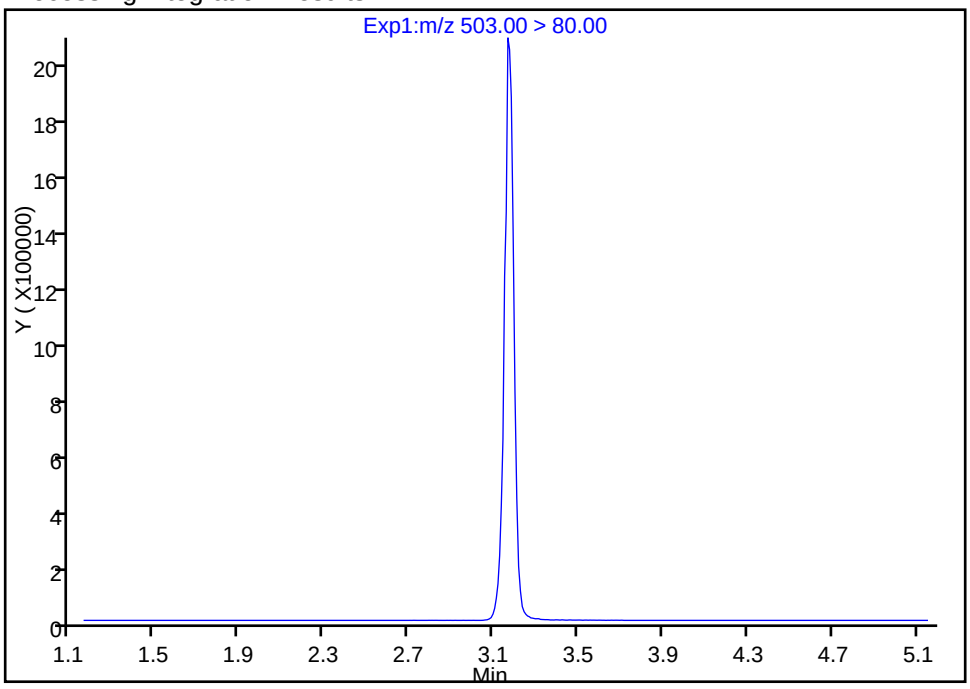
Data File:	\\ChromNa\Sacramento\ChromData\A8_N\20170302-40391.b\2017.03.01A_014.d				
Injection Date:	01-Mar-2017 20:00:07	Instrument ID:	A8_N		
Lims ID:	320-25962-A-5-A	Lab Sample ID:	320-25962-5		
Client ID:	MEAFF-PWMA-SB01-0204				
Operator ID:	A8-PC\A8	ALS Bottle#:	35	Worklist Smp#:	14
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	A8_N	Limit Group:	LC PFC_DOD ICAL		
Column:		Detector	EXP1		

D 18 13C4 PFOS, CAS: STL00991

Signal: 1

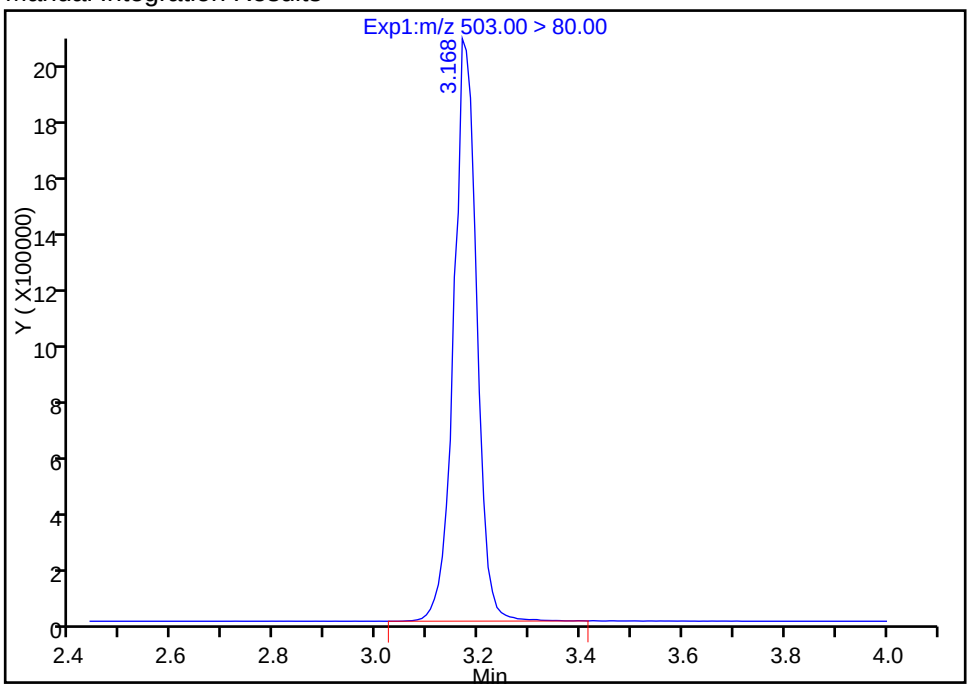
Processing Integration Results

Not Detected
Expected RT: 3.16



Manual Integration Results

RT: 3.17
Area: 6493324
Amount: 26.872223
Amount Units: ng/ml



Reviewer: chandrasenas, 27-Mar-2017 10:46:25
Audit Action: Assigned Compound ID Audit Reason:

Manual Integration/User Assign Peak Report

TestAmerica Sacramento

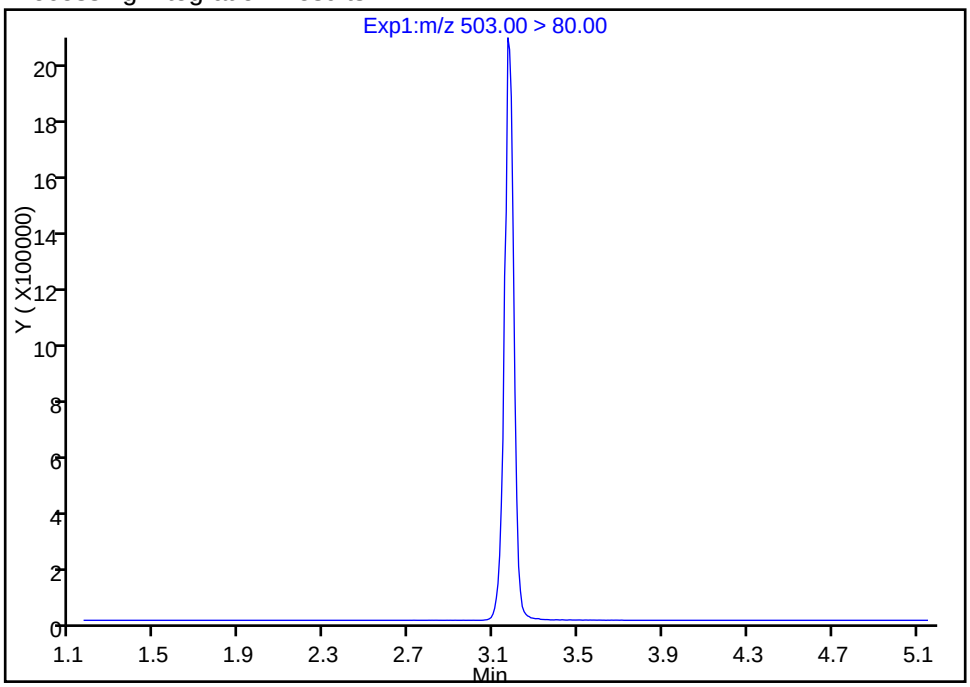
Data File:	\\ChromNa\Sacramento\ChromData\A8_N\20170302-40391.b\2017.03.01A_014.d				
Injection Date:	01-Mar-2017 20:00:07	Instrument ID:	A8_N		
Lims ID:	320-25962-A-5-A	Lab Sample ID:	320-25962-5		
Client ID:	MEAFF-PWMA-SB01-0204				
Operator ID:	A8-PC\A8	ALS Bottle#:	35	Worklist Smp#:	14
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	A8_N	Limit Group:	LC PFC_DOD ICAL		
Column:		Detector	EXP1		

D 18 13C4 PFOS, CAS: STL00991

Signal: 1

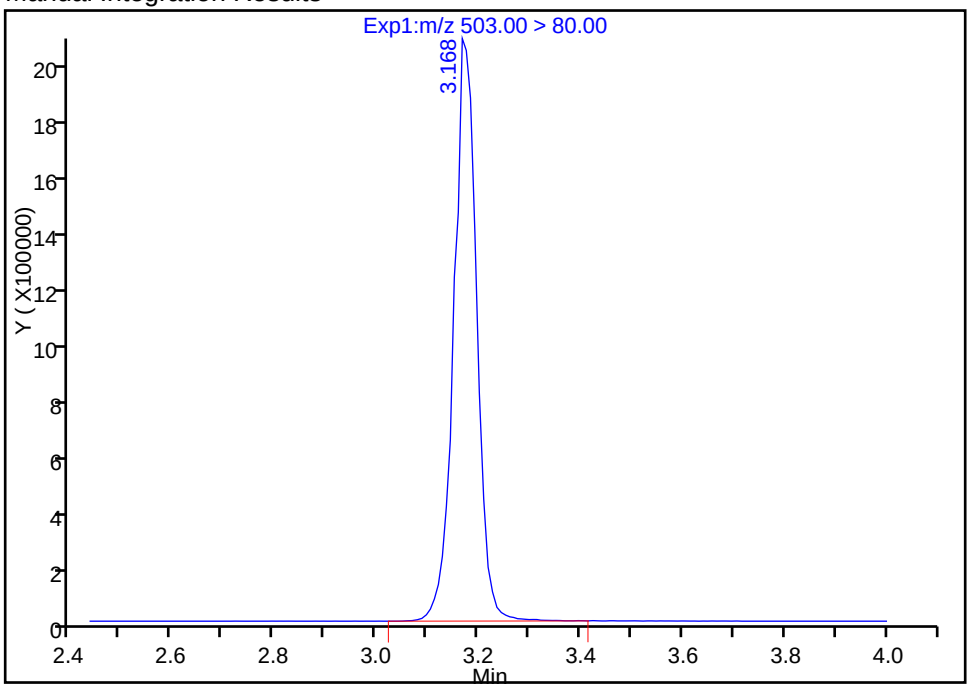
Processing Integration Results

Not Detected
Expected RT: 3.16



Manual Integration Results

RT: 3.17
Area: 6493324
Amount: 26.872223
Amount Units: ng/ml



Reviewer: chandrasenas, 27-Mar-2017 10:46:25
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

TestAmerica Sacramento

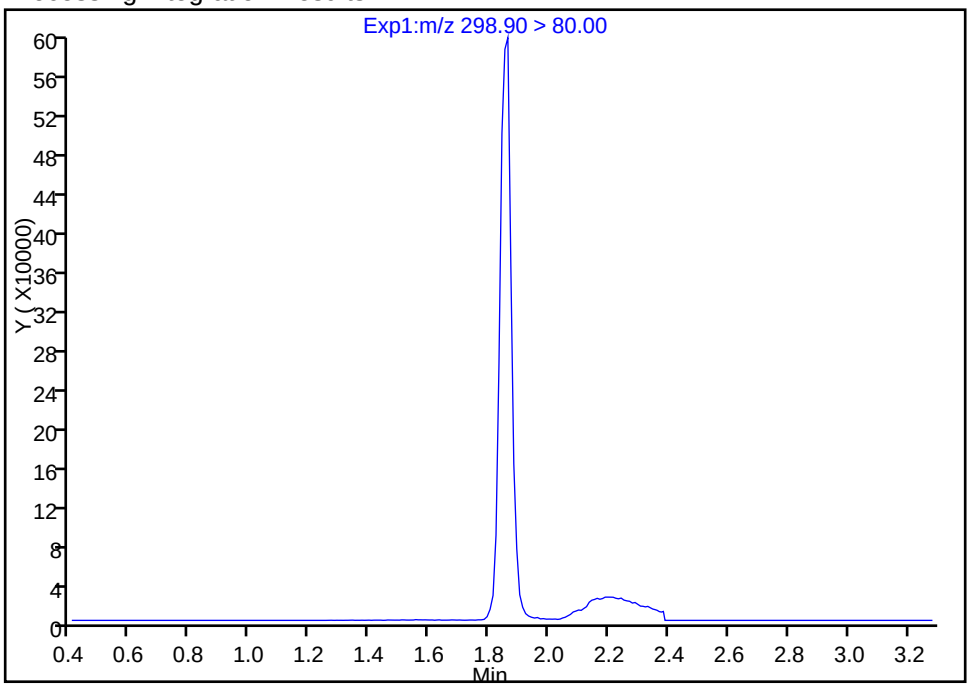
Data File:	\\ChromNa\Sacramento\ChromData\A8_N\20170302-40391.b\2017.03.01A_014.d				
Injection Date:	01-Mar-2017 20:00:07	Instrument ID:	A8_N		
Lims ID:	320-25962-A-5-A	Lab Sample ID:	320-25962-5		
Client ID:	MEAFF-PWMA-SB01-0204				
Operator ID:	A8-PC\A8	ALS Bottle#:	35	Worklist Smp#:	14
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	A8_N	Limit Group:	LC PFC_DOD ICAL		
Column:		Detector	EXP1		

5 Perfluorobutanesulfonic acid, CAS: 375-73-5

Signal: 1

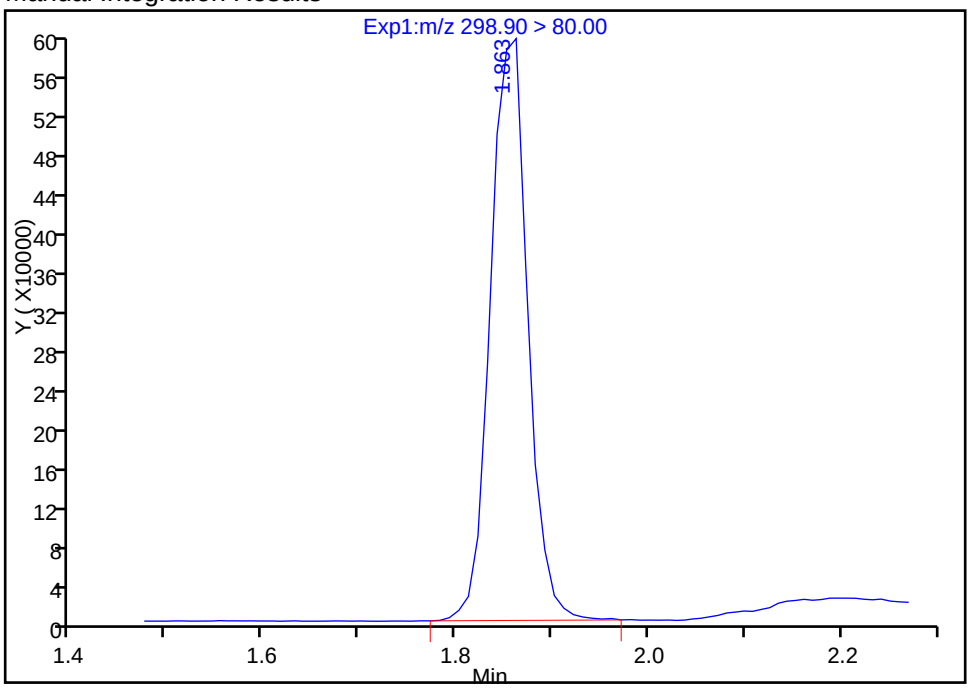
Processing Integration Results

Not Detected
Expected RT: 1.84



Manual Integration Results

RT: 1.86
Area: 1596752
Amount: 4.022993
Amount Units: ng/ml



Reviewer: chandrasenas, 27-Mar-2017 10:47:22
Audit Action: Manually Integrated Audit Reason: Assign Peak

Manual Integration/User Assign Peak Report

TestAmerica Sacramento

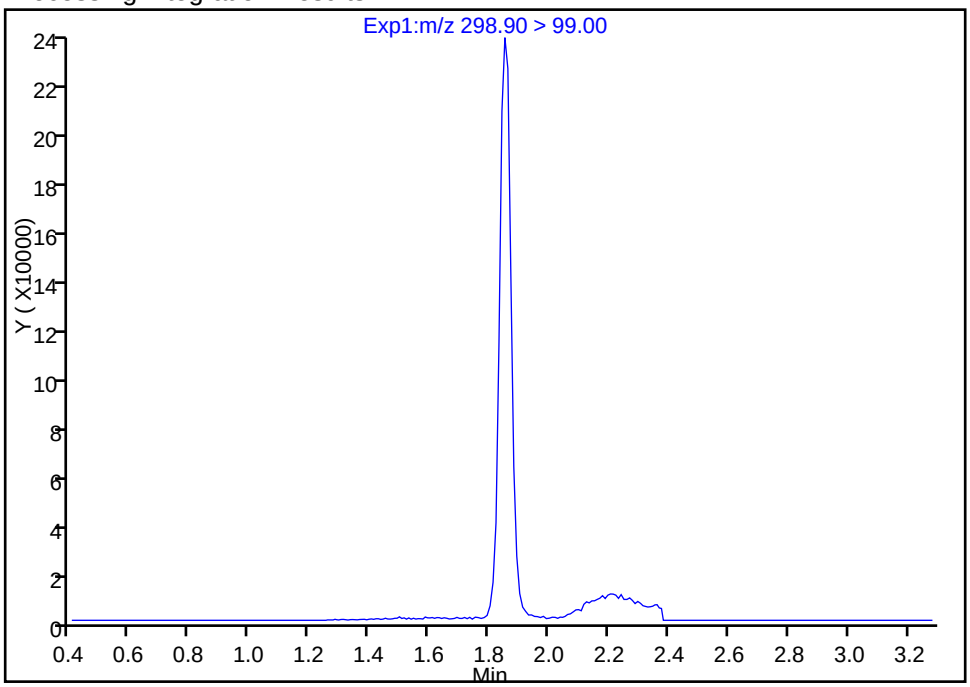
Data File:	\\ChromNa\Sacramento\ChromData\A8_N\20170302-40391.b\2017.03.01A_014.d				
Injection Date:	01-Mar-2017 20:00:07	Instrument ID:	A8_N		
Lims ID:	320-25962-A-5-A	Lab Sample ID:	320-25962-5		
Client ID:	MEAFF-PWMA-SB01-0204				
Operator ID:	A8-PC\A8	ALS Bottle#:	35	Worklist Smp#:	14
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	A8_N	Limit Group:	LC PFC_DOD ICAL		
Column:		Detector	EXP1		

5 Perfluorobutanesulfonic acid, CAS: 375-73-5

Signal: 2

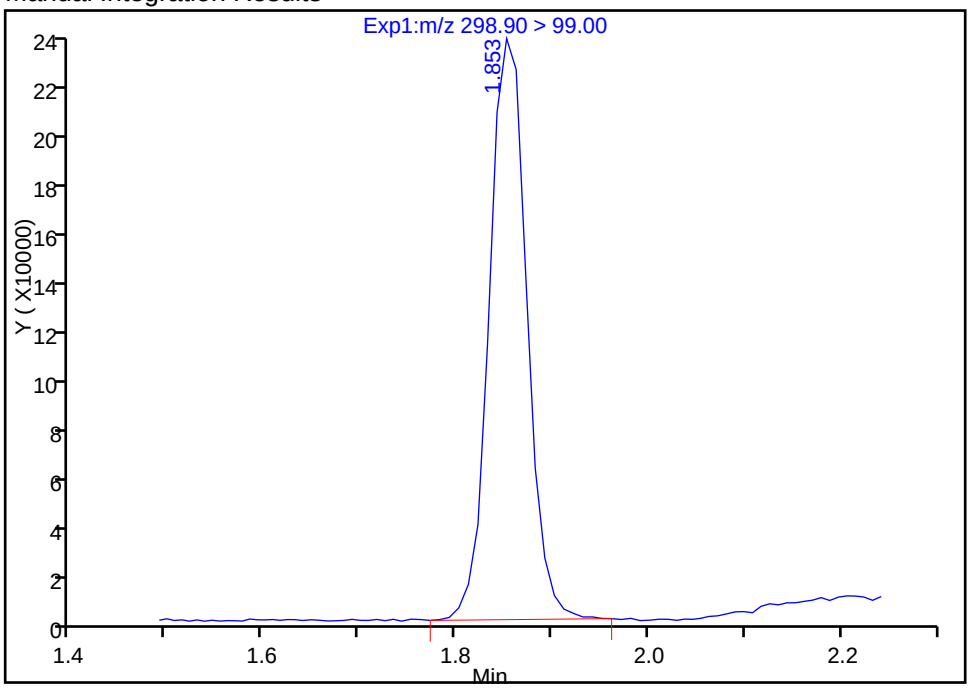
Processing Integration Results

Not Detected
Expected RT: 1.84



Manual Integration Results

RT: 1.85
Area: 629507
Amount: 4.022993
Amount Units: ng/ml



Reviewer: chandrasenas, 27-Mar-2017 10:47:30
Audit Action: Manually Integrated Audit Reason: Assign Peak

Manual Integration/User Assign Peak Report

TestAmerica Sacramento

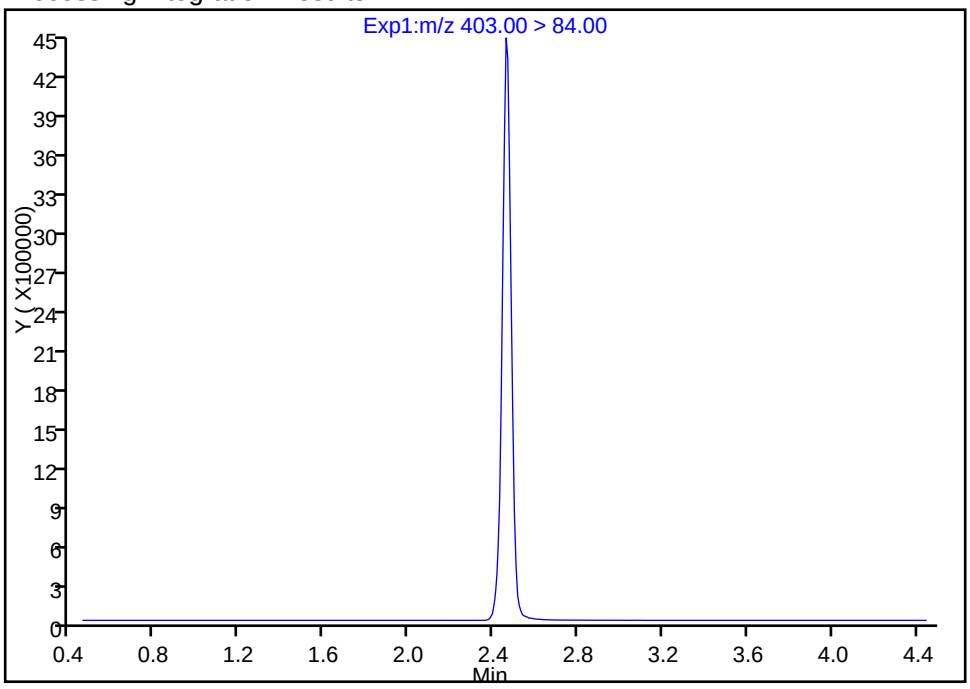
Data File:	\\ChromNa\Sacramento\ChromData\A8_N\20170302-40391.b\2017.03.01A_014.d				
Injection Date:	01-Mar-2017 20:00:07	Instrument ID:	A8_N		
Lims ID:	320-25962-A-5-A	Lab Sample ID:	320-25962-5		
Client ID:	MEAFF-PWMA-SB01-0204				
Operator ID:	A8-PC\A8	ALS Bottle#:	35	Worklist Smp#:	14
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	A8_N	Limit Group:	LC PFC_DOD ICAL		
Column:		Detector	EXP1		

D 11 18O2 PFHxS, CAS: STL00994

Signal: 1

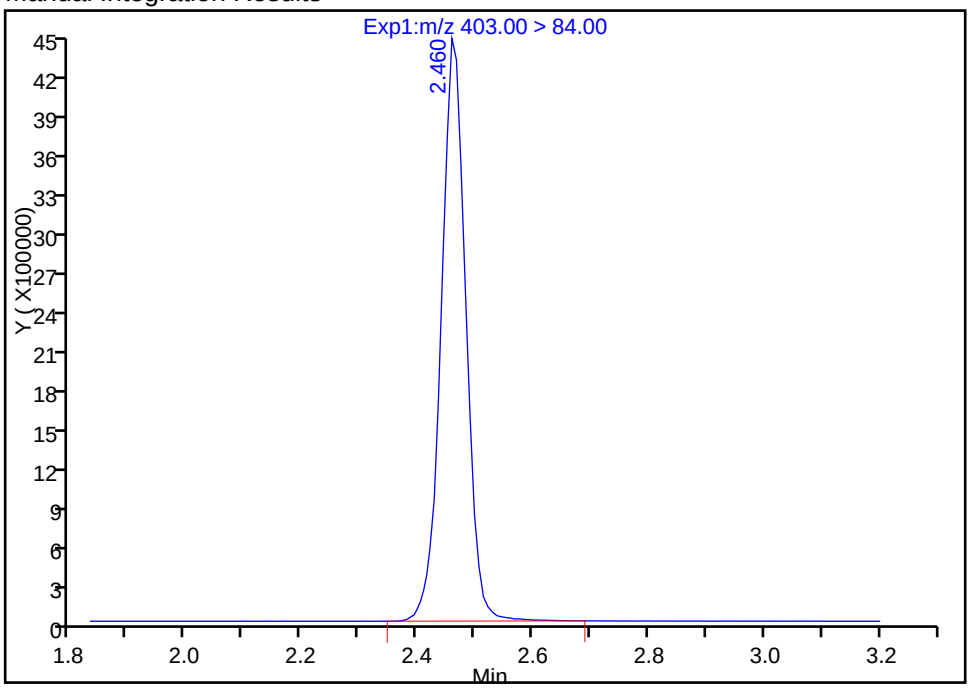
Processing Integration Results

Not Detected
Expected RT: 2.45



Manual Integration Results

RT: 2.46
Area: 13105479
Amount: 45.051611
Amount Units: ng/ml



Reviewer: chandrasenas, 27-Mar-2017 10:47:16
Audit Action: Manually Integrated Audit Reason: Assign Peak

FORM VI
LCMS BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RETENTION TIME SUMMARY

Lab Name: TestAmerica Sacramento Job No.: 320-25962-1 Analy Batch No.: 152681

SDG No.:

Instrument ID: A8_N GC Column: GeminiC18 3 ID: 3(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/01/2017 11:08 Calibration End Date: 03/01/2017 11:46 Calibration ID: 28659

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 320-152681/2	2017.03.01CURVE_003.d
Level 2	IC 320-152681/3	2017.03.01CURVE_004.d
Level 3	IC 320-152681/4	2017.03.01CURVE_005.d
Level 4	IC 320-152681/5	2017.03.01CURVE_006.d
Level 5	IC 320-152681/6	2017.03.01CURVE_007.d
Level 6	IC 320-152681/7	2017.03.01CURVE_008.d

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6					RT WINDOW	AVG RT
Perfluorobutanoic acid (PFBA)	1.563	1.562	1.555	1.562	1.554	1.554					1.308 - 1.808	1.558
Perfluoropentanoic acid (PFPeA)	1.843	1.842	1.833	1.841	1.831	1.822					1.585 - 2.085	1.835
Perfluorobutanesulfonic acid (PFBS)	1.883	1.872	1.873	1.871	1.871	1.861					1.692 - 2.052	1.872
Perfluorohexanoic acid (PFHxA)	2.139	2.145	2.129	2.134	2.127	2.122					1.883 - 2.383	2.133
Perfluoroheptanoic acid (PFHpA)	2.491	2.484	2.471	2.471	2.466	2.461					2.224 - 2.724	2.474
Perfluorohexanesulfonic acid (PFHxS)	+++++	2.500	2.456	2.487	2.481	2.478					2.235 - 2.735	2.480
6:2FTS	2.833	2.818	2.798	2.806	2.793	2.797					2.557 - 3.057	2.808
Perfluorooctanoic acid (PFOA)	+++++	2.841	2.829	2.837	2.824	2.820					2.585 - 3.085	2.830
Perfluoroheptanesulfonic Acid (PFHpS)	2.856	2.857	2.845	2.837	2.831	2.828					2.592 - 3.092	2.842
Perfluorooctanesulfonic acid (PFOS)	3.227	3.105	3.171	3.093	3.087	3.186					2.895 - 3.395	3.145
Perfluorononanoic acid (PFNA)	3.218	3.209	3.205	3.205	3.191	3.186					2.952 - 3.452	3.202
8:2FTS	3.569	3.561	3.539	3.539	3.543	3.523					3.296 - 3.796	3.546
Perfluorodecanoic acid (PFDA)	3.578	3.569	3.556	3.556	3.552	3.548					3.310 - 3.810	3.560
Perfluorooctane Sulfonamide (FOSA)	3.569	3.561	3.556	3.565	3.560	3.557					3.311 - 3.811	3.561
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	3.723	3.723	3.707	3.717	3.702	3.707					3.463 - 3.963	3.713
Perfluorodecanesulfonic acid (PFDS)	3.886	3.876	3.861	3.862	3.859	3.853					3.616 - 4.116	3.866
Perfluoroundecanoic acid (PFUnA)	3.894	3.885	3.878	3.879	3.867	3.862					3.628 - 4.128	3.878
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	3.903	3.885	3.878	3.888	3.876	3.871					3.633 - 4.133	3.884
MeFOSA	4.055	4.064	4.056	4.059	4.058	4.051					3.807 - 4.307	4.057
Perfluorododecanoic acid (PFDoA)	4.176	4.175	4.161	4.165	4.157	4.138					3.912 - 4.412	4.162
N-EtFOSA-M	4.247	4.246	4.237	4.249	4.241	4.236					3.992 - 4.492	4.243
Perfluorotridecanoic Acid (PFTriA)	4.447	4.430	4.421	4.418	4.418	4.407					4.174 - 4.674	4.424
Perfluorotetradecanoic acid (PFTeA)	4.679	4.667	4.655	4.652	4.651	4.635					4.407 - 4.907	4.657
Perfluoro-n-hexadecanoic acid (PFHxDA)	+++++	5.070	5.057	5.057	5.049	5.046					4.809 - 5.309	5.056
Perfluoro-n-octadecanoic acid (PFODA)	5.428	5.414	5.398	5.398	5.383	5.375					5.149 - 5.649	5.399
13C4 PFBA	1.563	1.554	1.555	1.554	1.546	1.546					1.303 - 1.803	1.553
13C5-PFPeA	1.843	1.842	1.833	1.832	1.821	1.822					1.582 - 2.082	1.832
13C2 PFHxA	2.147	2.136	2.138	2.134	2.127	2.122					1.884 - 2.384	2.134
13C4-PFHpA	2.491	2.484	2.471	2.479	2.466	2.461					2.225 - 2.725	2.475
18O2 PFHxS	2.498	2.500	2.487	2.487	2.481	2.478					2.239 - 2.739	2.489
M2-6:2FTS	2.817	2.810	2.806	2.814	2.793	2.789					2.555 - 3.055	2.805
13C4 PFOA	2.848	2.849	2.829	2.837	2.824	2.820					2.585 - 3.085	2.835
13C4 PFOS	3.218	3.218	3.196	3.205	3.199	3.186					2.954 - 3.454	3.204

FORM VI
LCMS BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RETENTION TIME SUMMARY

Lab Name: TestAmerica Sacramento Job No.: 320-25962-1 Analy Batch No.: 152681

SDG No.:

Instrument ID: A8_N GC Column: GeminiC18 3 ID: 3(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/01/2017 11:08 Calibration End Date: 03/01/2017 11:46 Calibration ID: 28659

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6					RT WINDOW	AVG RT
13C5 PFNA	3.218	3.218	3.205	3.214	3.199	3.195					2.958 - 3.458	3.208
M2-8:2FTS	3.569	3.553	3.548	3.539	3.535	3.523					3.295 - 3.795	3.545
13C8 FOSA	3.561	3.561	3.556	3.565	3.560	3.548					3.309 - 3.809	3.559
13C2 PFDA	3.569	3.569	3.556	3.565	3.552	3.548					3.310 - 3.810	3.560
d3-NMeFOSAA	3.723	3.723	3.707	3.707	3.702	3.696					3.460 - 3.960	3.710
d5-NEtFOSAA	3.894	3.885	3.869	3.870	3.867	3.862					3.625 - 4.125	3.875
13C2 PFUnA	3.894	3.885	3.869	3.879	3.867	3.862					3.626 - 4.126	3.876
d-N-MeFOSA-M	4.055	4.055	4.047	4.050	4.048	4.042					3.800 - 4.300	4.050
13C2 PFDoA	4.176	4.175	4.161	4.165	4.157	4.152					3.914 - 4.414	4.164
d-N-EtFOSA-M	4.238	4.237	4.228	4.240	4.241	4.227					3.985 - 4.485	4.235
13C2-PFTeDA	4.679	4.667	4.655	4.652	4.641	4.635					4.405 - 4.905	4.655
13C2-PFHxDA	5.077	5.070	5.057	5.057	5.049	5.035					4.807 - 5.307	5.058

FORM VI
LCMS BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Sacramento Job No.: 320-25962-1 Analy Batch No.: 152681

SDG No.:

Instrument ID: A8_N GC Column: GeminiC18 3 ID: 3(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/01/2017 11:08 Calibration End Date: 03/01/2017 11:46 Calibration ID: 28659

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 320-152681/2	2017.03.01CURVE_003.d
Level 2	IC 320-152681/3	2017.03.01CURVE_004.d
Level 3	IC 320-152681/4	2017.03.01CURVE_005.d
Level 4	IC 320-152681/5	2017.03.01CURVE_006.d
Level 5	IC 320-152681/6	2017.03.01CURVE_007.d
Level 6	IC 320-152681/7	2017.03.01CURVE_008.d

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5	LVL 2 LVL 6	LVL 3	LVL 4		B	M1	M2								
13C4 PFBA	295570 298823	282103 245371	289131	342453	Ave		292241.860				10.7		50.0			
13C5-PFPeA	243840 228800	230536 186413	230743	272822	Ave		232192.393				12.0		50.0			
13C2 PFHxA	216513 214399	203387 180899	205221	244884	Ave		210883.903				9.9		50.0			
13C4-PFHpA	196625 198881	194053 153158	196340	218699	Ave		192959.403				11.1		50.0			
18O2 PFHxS	303886 295000	286708 235682	287749	336370	Ave		290899.232				11.2		50.0			
M2-6:2FTS	77170 76852	74128 71775	76996	86146	Ave		77177.6947				6.3		50.0			
13C4 PFOA	218643 200396	211258 153770	209474	236176	Ave		204953.003				13.6		50.0			
13C4 PFOS	248546 248262	230373 208908	237852	275881	Ave		241637.026				9.2		50.0			
13C5 PFNA	187340 178740	181023 139672	176430	203992	Ave		177866.177				11.9		50.0			
M2-8:2FTS	96352 91038	94980 76400	95104	101739	Ave		92601.9868				9.3		50.0			
13C8 FOSA	389836 371174	361792 303762	377175	397768	Ave		366917.947				9.1		50.0			
13C2 PFDA	175335 161485	171862 124531	173776	193236	Ave		166704.327				13.8		50.0			
d3-NMeFOSAA	80206 88198	79979 82300	85034	95399	Ave		85185.7867				6.9		50.0			
d5-NEtFOSAA	85322 82165	81954 62458	86013	90318	Ave		81371.4600				12.0		50.0			
13C2 PFUnA	144662 128397	134819 95431	134602	146921	Ave		130805.323				14.3		50.0			

Note: The M1 coefficient is the same as Ave CF for an Ave curve type.

FORM VI
LCMS BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Sacramento Job No.: 320-25962-1 Analy Batch No.: 152681

SDG No.:

Instrument ID: A8_N GC Column: GeminiC18 3 ID: 3(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/01/2017 11:08 Calibration End Date: 03/01/2017 11:46 Calibration ID: 28659

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5	LVL 2 LVL 6	LVL 3	LVL 4		B	M1	M2								
d-N-MeFOSA-M	86833 90989	81090 88671	88728	91589	Ave		87983.4500				4.3		50.0			
13C2 PFDoA	134509 123176	120646 106418	126789	132125	Ave		123944.073				8.1		50.0			
d-N-EtFOSA-M	83930 87690	78408 88518	85474	87472	Ave		85248.5033				4.4		50.0			
13C2-PFTeDA	274175 265148	246188 227078	269935	272468	Ave		259165.203				7.2		50.0			
13C2-PFHxDA	131614 132135	114843 117588	127568	126617	Ave		125060.687				5.8		50.0			

Note: The M1 coefficient is the same as Ave CF for an Ave curve type.

FORM VI
LCMS BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Sacramento Job No.: 320-25962-1 Analy Batch No.: 152681

SDG No.:

Instrument ID: A8_N GC Column: GeminiC18 3 ID: 3(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/01/2017 11:08 Calibration End Date: 03/01/2017 11:46 Calibration ID: 28659

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								
Perfluorobutanoic acid (PFBA)	0.8141 0.7696	0.8385	0.8902	0.8682	0.9030	AveID		0.8473				5.9		35.0			
Perfluoropentanoic acid (PFPeA)	1.0168 0.8556	1.0140	1.0095	0.9684	1.0070	AveID		0.9785				6.4		35.0			
Perfluorobutanesulfonic acid (PFBS)	1.4512 1.1477	1.4372	1.5643	1.5194	1.4753	AveID		1.4325				10.3		50.0			
Perfluorohexanoic acid (PFHxA)	0.8937 0.8394	0.9003	0.9420	0.8558	0.9058	AveID		0.8895				4.1		35.0			
Perfluoroheptanoic acid (PFHpA)	1.0535 0.9266	0.9536	0.9588	0.9499	0.9613	AveID		0.9673				4.5		35.0			
Perfluorohexanesulfonic acid (PFHxS)	+++++ 0.9823	1.1299	1.0303	0.9734	1.0264	AveID		1.0284				6.0		35.0			
6:2FTS	1.1310 0.8276	1.0222	0.9530	0.9038	0.8939	L2ID	0.1204	0.8859							0.9980		0.9900
Perfluorooctanoic acid (PFOA)	+++++ 0.9671	1.0714	1.0527	0.9847	1.0323	AveID		1.0217				4.3		35.0			
Perfluoroheptanesulfonic Acid (PFHpS)	0.9372 0.9122	1.0436	1.1203	1.0793	1.0932	AveID		1.0310				8.4		50.0			
Perfluorooctanesulfonic acid (PFOS)	0.9378 1.0254	0.9696	0.9901	0.9549	1.0231	AveID		0.9835				3.7		35.0			
Perfluorononanoic acid (PFNA)	0.8479 0.9328	0.8440	0.9730	0.8905	0.9356	AveID		0.9040				5.8		35.0			
8:2FTS	1.0958 0.8348	0.9785	0.9767	0.9909	0.9344	L2ID	0.0783	0.9239							0.9960		0.9900
Perfluorodecanoic acid (PFDA)	0.8578 0.9743	0.8868	0.9034	0.8481	0.9635	AveID		0.9057				5.8		35.0			
Perfluorooctane Sulfonamide (FOSA)	0.8943 0.7850	0.9384	0.9267	0.9035	0.9430	AveID		0.8985				6.5		35.0			
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	1.0472 0.9897	0.9816	0.9980	0.8887	0.9213	AveID		0.9711				5.9		35.0			
Perfluorodecanesulfonic acid (PFDS)	0.5889 0.6126	0.5647	0.6260	0.5646	0.6173	AveID		0.5957				4.5		50.0			
Perfluoroundecanoic acid (PFUnA)	1.1887 0.9783	1.0233	1.0049	0.8914	0.9951	AveID		1.0136				9.6		35.0			
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	0.9144 0.9531	0.9405	0.8966	0.8892	0.8680	AveID		0.9103				3.5		35.0			
MeFOSA	1.0035 0.9709	0.9265	0.9122	0.9123	0.8877	AveID		0.9355				4.6		35.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
LCMS BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Sacramento Job No.: 320-25962-1 Analy Batch No.: 152681

SDG No.:

Instrument ID: A8_N GC Column: GeminiC18 3 ID: 3(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/01/2017 11:08 Calibration End Date: 03/01/2017 11:46 Calibration ID: 28659

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								
Perfluorododecanoic acid (PFDoA)	0.8688 0.9119	0.9386	0.9128	0.8906	0.9644	AveID		0.9145				3.7		35.0			
N-EtFOSA-M	1.0272 0.9831	1.0085	0.9951	0.9583	0.9298	AveID		0.9837				3.6		35.0			
Perfluorotridecanoic Acid (PFTriA)	0.8807 0.8636	0.8542	0.8873	0.8354	0.9194	AveID		0.8734				3.3		50.0			
Perfluorotetradecanoic acid (PFTeA)	1.9494 1.8544	1.9776	2.0893	1.8773	2.0509	AveID		1.9665				4.7		50.0			
Perfluoro-n-hexadecanoic acid (PFHxDA)	+++++ 0.9462	1.4217	1.0035	0.7837	0.9248	L1ID	0.3491	0.9270							0.9970		0.9900
Perfluoro-n-octadecanoic acid (PFODA)	0.6950 0.8378	0.6764	0.7116	0.6387	0.7456	AveID		0.7175				9.6		50.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
LCMS BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Sacramento Job No.: 320-25962-1 Analy Batch No.: 152681

SDG No.:

Instrument ID: A8_N GC Column: GeminiC18 3 ID: 3(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/01/2017 11:08 Calibration End Date: 03/01/2017 11:46 Calibration ID: 28659

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 320-152681/2	2017.03.01CURVE_003.d
Level 2	IC 320-152681/3	2017.03.01CURVE_004.d
Level 3	IC 320-152681/4	2017.03.01CURVE_005.d
Level 4	IC 320-152681/5	2017.03.01CURVE_006.d
Level 5	IC 320-152681/6	2017.03.01CURVE_007.d
Level 6	IC 320-152681/7	2017.03.01CURVE_008.d

ANALYTE	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
13C4 PFBA	Ave	14778495 12268568	14105138	14456536	17122661	14941160	50.0 50.0	50.0	50.0	50.0	50.0
13C5-PFPeA	Ave	12192014 9320645	11526786	11537165	13641103	11440005	50.0 50.0	50.0	50.0	50.0	50.0
13C2 PFHxA	Ave	10825655 9044966	10169363	10261028	12244217	10719942	50.0 50.0	50.0	50.0	50.0	50.0
13C4-PFHpA	Ave	9831264 7657909	9702633	9817002	10934944	9944069	50.0 50.0	50.0	50.0	50.0	50.0
18O2 PFHxS	Ave	14373798 11147782	13561303	13610529	15910284	13953506	47.3 47.3	47.3	47.3	47.3	47.3
M2-6:2FTS	Ave	3665572 3409307	3521088	3657293	4091935	3650448	47.5 47.5	47.5	47.5	47.5	47.5
13C4 PFOA	Ave	10932126 7688496	10562914	10473721	11808824	10019820	50.0 50.0	50.0	50.0	50.0	50.0
13C4 PFOS	Ave	11880498 9985826	11011810	11369327	13187105	11866933	47.8 47.8	47.8	47.8	47.8	47.8
13C5 PFNA	Ave	9367003 6983620	9051156	8821496	10199601	8936977	50.0 50.0	50.0	50.0	50.0	50.0
M2-8:2FTS	Ave	4615245 3659550	4549526	4555474	4873285	4360731	47.9 47.9	47.9	47.9	47.9	47.9
13C8 FOSA	Ave	19491823 15188110	18089578	18858766	19888389	18558718	50.0 50.0	50.0	50.0	50.0	50.0
13C2 PFDA	Ave	8766735 6226569	8593124	8688810	9661817	8074243	50.0 50.0	50.0	50.0	50.0	50.0
d3-NMeFOSAA	Ave	4010288 4115011	3998931	4251681	4769931	4409894	50.0 50.0	50.0	50.0	50.0	50.0
d5-NEtFOSAA	Ave	4266080 3122900	4097675	4300641	4515915	4108227	50.0 50.0	50.0	50.0	50.0	50.0
13C2 PFUnA	Ave	7233118 4771549	6740958	6730080	7346047	6419845	50.0 50.0	50.0	50.0	50.0	50.0
d-N-MeFOSA-M	Ave	4341649 4433562	4054503	4436424	4579449	4549448	50.0 50.0	50.0	50.0	50.0	50.0

FORM VI
LCMS BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Sacramento Job No.: 320-25962-1 Analy Batch No.: 152681

SDG No.:

Instrument ID: A8_N GC Column: GeminiC18 3 ID: 3(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/01/2017 11:08 Calibration End Date: 03/01/2017 11:46 Calibration ID: 28659

ANALYTE	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
13C2 PFDoA	Ave	6725474 5320903	6032319	6339474	6606261	6158791	50.0 50.0	50.0	50.0	50.0	50.0
d-N-EtFOSA-M	Ave	4196476 4425922	3920378	4273681	4373613	4384481	50.0 50.0	50.0	50.0	50.0	50.0
13C2-PFTeDA	Ave	13708730 11353892	12309406	13496732	13623388	13257413	50.0 50.0	50.0	50.0	50.0	50.0
13C2-PFHxDA	Ave	6580685 5879424	5742128	6378393	6330845	6606731	50.0 50.0	50.0	50.0	50.0	50.0

Curve Type Legend:
Ave = Average

FORM VI
LCMS BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Sacramento Job No.: 320-25962-1 Analy Batch No.: 152681

SDG No.:

Instrument ID: A8_N GC Column: GeminiC18 3 ID: 3(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/01/2017 11:08 Calibration End Date: 03/01/2017 11:46 Calibration ID: 28659

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 320-152681/2	2017.03.01CURVE_003.d
Level 2	IC 320-152681/3	2017.03.01CURVE_004.d
Level 3	IC 320-152681/4	2017.03.01CURVE_005.d
Level 4	IC 320-152681/5	2017.03.01CURVE_006.d
Level 5	IC 320-152681/6	2017.03.01CURVE_007.d
Level 6	IC 320-152681/7	2017.03.01CURVE_008.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
Perfluorobutanoic acid (PFBA)		AveID	120309 37767596	236552	1286888	5946494	13491384	0.500 200	1.00	5.00	20.0	50.0
Perfluoropentanoic acid (PFPeA)		AveID	123967 31900088	233761	1164625	5283919	11520213	0.500 200	1.00	5.00	20.0	50.0
Perfluorobutanesulfonic acid (PFBS)		AveID	194922 47824719	364249	1989498	9035699	19236596	0.442 177	0.884	4.42	17.7	44.2
Perfluorohexanoic acid (PFHxA)		AveID	96748 30367858	183108	966638	4191655	9710439	0.500 200	1.00	5.00	20.0	50.0
Perfluoroheptanoic acid (PFHpA)		AveID	103569 28382869	185040	941301	4154809	9559143	0.500 200	1.00	5.00	20.0	50.0
Perfluorohexanesulfonic acid (PFHxS)		AveID	+++++ 42133990	294799	1348890	5958886	13776740	+++++ 182	0.910	4.55	18.2	45.5
6:2FTS		L2ID	41369 11262289	71833	347809	1476276	3256270	0.474 190	0.948	4.74	19.0	47.4
Perfluorooctanoic acid (PFOA)		AveID	+++++ 29743583	226350	1102619	4651144	10343315	+++++ 200	1.00	5.00	20.0	50.0
Perfluoroheptanesulfonic Acid (PFHpS)		AveID	110873 36282267	228885	1268398	5669268	12919018	0.476 190	0.952	4.76	19.0	47.6
Perfluorooctanesulfonic acid (PFOS)		AveID	108156 39756569	207277	1092724	4889351	11786011	0.464 186	0.928	4.64	18.6	46.4
Perfluorononanoic acid (PFNA)		AveID	79419 26057481	152789	858327	3633207	8361339	0.500 200	1.00	5.00	20.0	50.0
8:2FTS		L2ID	50574 12220206	89032	444929	1931499	4074481	0.479 192	0.958	4.79	19.2	47.9
Perfluorodecanoic acid (PFDA)		AveID	75200 24265114	152408	784974	3277760	7779706	0.500 200	1.00	5.00	20.0	50.0
Perfluorooctane Sulfonamide (FOSA)		AveID	174325 47690261	339522	1747629	7187955	17500489	0.500 200	1.00	5.00	20.0	50.0
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)		AveID	41996 16290792	78506	424299	1695690	4062831	0.500 200	1.00	5.00	20.0	50.0
Perfluorodecanesulfonic acid (PFDS)		AveID	70554 24675284	125403	717648	3002868	7386234	0.482 193	0.964	4.82	19.3	48.2

FORM VI
LCMS BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Sacramento Job No.: 320-25962-1 Analy Batch No.: 152681

SDG No.:

Instrument ID: A8_N GC Column: GeminiC18 3 ID: 3(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/01/2017 11:08 Calibration End Date: 03/01/2017 11:46 Calibration ID: 28659

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
Perfluoroundecanoic acid (PFUnA)		AveID	85977 18672321	137967	676308	2619295	6388091	0.500 200	1.00	5.00	20.0	50.0
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)		AveID	39009 11906031	77078	385576	1606146	3565748	0.500 200	1.00	5.00	20.0	50.0
MeFOSA		AveID	43568 17219029	75129	404698	1671133	4038740	0.500 200	1.00	5.00	20.0	50.0
Perfluorododecanoic acid (PFDoA)		AveID	58428 19408225	113238	578671	2353395	5939325	0.500 200	1.00	5.00	20.0	50.0
N-EtFOSA-M		AveID	43107 17404238	79073	425282	1676481	4076562	0.500 200	1.00	5.00	20.0	50.0
Perfluorotridecanoic Acid (PFTriA)		AveID	59233 18379771	103052	562473	2207561	5662375	0.500 200	1.00	5.00	20.0	50.0
Perfluorotetradecanoic acid (PFTeA)		AveID	131104 39468467	238596	1324493	4960846	12631200	0.500 200	1.00	5.00	20.0	50.0
Perfluoro-n-hexadecanoic acid (PFHxDA)		L1ID	+++++ 20137749	171523	636153	2071027	5695645	+++++ 200	1.00	5.00	20.0	50.0
Perfluoro-n-octadecanoic acid (PFODA)		AveID	46744 17831844	81601	451116	1687895	4591929	0.500 200	1.00	5.00	20.0	50.0

Curve Type Legend:

AveID = Average isotope dilution
L1ID = Linear 1/conc IsoDil
L2ID = Linear 1/conc^2 IsoDil

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNa\Sacramento\ChromData\A8_N\20170301-40358.b\2017.03.01CURVE_003.d
Lims ID: IC L1 Full
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 01-Mar-2017 11:08:52 ALS Bottle#: 28 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: L1-FULL
Misc. Info.: Plate: 1 Rack: 1
Operator ID: A8-PC\A8 Instrument ID: A8_N
Sublist: chrom-A8_N*sub15

Method: \\ChromNa\Sacramento\ChromData\A8_N\20170301-40358.b\A8_N.m
Limit Group: LC PFC_DOD ICAL
Last Update: 01-Mar-2017 15:43:05 Calib Date: 01-Mar-2017 11:53:47
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A8_N\20170301-40358.b\2017.03.01CURVE_009.d

Column 1 : Det: EXP1
Process Host: XAWRK012

First Level Reviewer: chandrasenas Date: 01-Mar-2017 12:00:05

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C4 PFBA										
217.00 > 172.00	1.563	1.553	0.010		14778495	50.6		101	654817	
2 Perfluorobutyric acid										
212.90 > 169.00	1.563	1.558	0.005	1.000	120309	0.4804		96.1	1068	
D 3 13C5-PFPeA										
267.90 > 223.00	1.843	1.832	0.011		12192014	52.5		105	525740	
4 Perfluoropentanoic acid										
262.90 > 219.00	1.843	1.835	0.008	1.000	123967	0.5195		104	1065	
5 Perfluorobutanesulfonic acid										
298.90 > 80.00	1.883	1.872	0.011	1.000	194922	0.4478		101		
298.90 > 99.00	1.883	1.872	0.011	1.000	77860		2.50(0.00-0.00)	101		
6 Perfluorohexanoic acid										
313.00 > 269.00	2.139	2.133	0.006	1.000	96748	0.5024		100	3614	
D 7 13C2 PFHxA										
315.00 > 270.00	2.147	2.134	0.013		10825655	51.3		103	238427	
10 Perfluoroheptanoic acid										
363.00 > 319.00	2.491	2.474	0.017	1.000	103569	0.5446		109	891	
D 9 13C4-PFHpA										
367.00 > 322.00	2.491	2.475	0.016		9831264	50.9		102	345749	
8 Perfluorohexanesulfonic acid										M
399.00 > 80.00	2.506	2.485	0.021	1.000	182218	0.5830		128		M
D 11 18O2 PFHxS										
403.00 > 84.00	2.498	2.489	0.009		14373798	49.4		104	411887	
D 12 M2-6:2FTS										
429.00 > 409.00	2.817	2.805	0.012		3665572	47.5		100.0		
13 Sodium 1H,1H,2H,2H-perfluorooctane										
427.00 > 407.00	2.833	2.807	0.026	1.000	41369	0.4692		99.0		

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
15 Perfluorooctanoic acid										M
413.00 > 369.00	2.856	2.835	0.021	1.000	120388	0.5389		108	1162	
413.00 > 169.00	2.848	2.835	0.013	0.997	71985		1.67(0.90-1.10)	108	2853	M
D 14 13C4 PFOA										
417.00 > 372.00	2.848	2.835	0.013		10932126	53.3		107	336385	
16 Perfluoroheptanesulfonic Acid										
449.00 > 80.00	2.856	2.842	0.014	1.000	110873	0.4327		90.9		
17 Perfluorooctane sulfonic acid										M
499.00 > 80.00	3.227	3.145	0.082	1.000	108156	0.4425		95.4	8683	M
499.00 > 99.00	3.218	3.145	0.073	0.997	27348		3.95(0.90-1.10)	95.4	2308	
20 Perfluorononanoic acid										
463.00 > 419.00	3.218	3.202	0.016	1.000	79419	0.4690		93.8	1607	
D 18 13C4 PFOS										
503.00 > 80.00	3.218	3.204	0.014		11880498	49.2		103	335475	
D 19 13C5 PFNA										
468.00 > 423.00	3.218	3.208	0.010		9367003	52.7		105	245715	
D 26 M2-8:2FTS										
529.00 > 509.00	3.569	3.545	0.024		4615245	49.8		104		
25 Sodium 1H,1H,2H,2H-perfluorooctane										
527.00 > 507.00	3.569	3.546	0.023	1.000	50574	0.4834		101		
D 21 13C8 FOSA										
506.00 > 78.00	3.561	3.559	0.002		19491823	53.1		106	285934	
24 Perfluorodecanoic acid										
513.00 > 469.00	3.578	3.560	0.018	1.000	75200	0.4736		94.7	2610	
D 23 13C2 PFDA										
515.00 > 470.00	3.569	3.560	0.009		8766735	52.6		105	186190	
22 Perfluorooctane Sulfonamide										
498.00 > 78.00	3.569	3.561	0.008	1.000	174325	0.4977		99.5	18811	
D 27 d3-NMeFOSAA										
573.00 > 419.00	3.723	3.710	0.013		4010288	47.1		94.2		
28 N-methyl perfluorooctane sulfonami										
570.00 > 419.00	3.723	3.713	0.010	1.000	41996	0.5392		108		
29 Perfluorodecane Sulfonic acid										
599.00 > 80.00	3.886	3.866	0.020	1.000	70554	0.4765		98.9		
D 32 d5-NEtFOSAA										
589.00 > 419.00	3.894	3.875	0.019		4266080	52.4		105		
D 30 13C2 PFUnA										
565.00 > 520.00	3.894	3.876	0.018		7233118	55.3		111	181410	
31 Perfluoroundecanoic acid										
563.00 > 519.00	3.894	3.878	0.016	1.000	85977	0.5863		117	2231	
33 N-ethyl perfluorooctane sulfonamid										
584.00 > 419.00	3.903	3.883	0.020	1.002	39009	0.5023		100		
D 34 d-N-MeFOSA-M										
515.00 > 169.00	4.055	4.050	0.005		4341649	49.3		98.7		
35 MeFOSA										
512.00 > 169.00	4.055	4.057	-0.002	1.000	43568	0.5363		107		
37 Perfluorododecanoic acid										
613.00 > 569.00	4.176	4.162	0.014	1.000	58428	0.4750		95.0	471	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 36 13C2 PFDoA										
615.00 > 570.00	4.176	4.164	0.012		6725474	54.3		109	175924	
D 38 d-N-EtFOSA-M										
531.00 > 169.00	4.238	4.235	0.003		4196476	49.2		98.5		
39 N-ethylperfluoro-1-octanesulfonami										
526.00 > 169.00	4.247	4.242	0.005	1.000	43107	0.5221		104		
41 Perfluorotridecanoic acid										
663.00 > 619.00	4.447	4.424	0.023	1.000	59233	0.5042		101	1171	
D 43 13C2-PFTeDA										
715.00 > 670.00	4.679	4.655	0.024		13708730	52.9		106	527093	
42 Perfluorotetradecanoic acid										
712.50 > 668.90	4.679	4.657	0.022	1.000	131104	0.4956		99.1	372	
713.00 > 169.00	4.670	4.657	0.013	0.998	21850		6.00(0.00-0.00)	99.1	7867	
D 44 13C2-PFHxDA										
815.00 > 770.00	5.077	5.057	0.020		6580685	52.6		105	118608	
45 Perfluorohexadecanoic acid										
813.00 > 769.00	5.077	5.059	0.018	1.000	146592	0.7991		160	190	
46 Perfluorooctadecanoic acid										
913.00 > 869.00	5.428	5.399	0.029	1.000	46744	0.4843		96.9	91.5	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

LCPFC_FULL-L1_00001 Amount Added: 1.00 Units: mL

Report Date: 01-Mar-2017 15:43:05 Chrom Revision: 2.2 03-Feb-2017 15:35:04

TestAmerica Sacramento

Data File: \\ChromNa\Sacramento\ChromData\A8_N\20170301-40358.b\2017.03.01CURVE_003.d

Injection Date: 01-Mar-2017 11:08:52 Instrument ID: A8_N

Lims ID: IC L1 Full

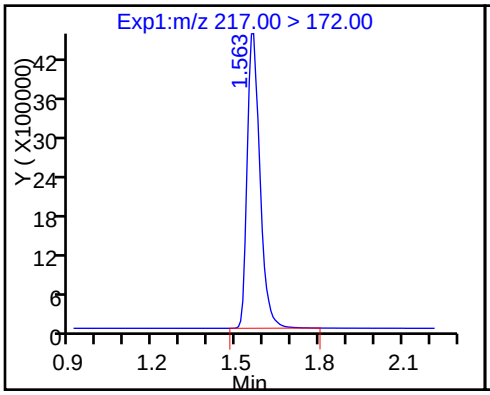
Client ID:

Operator ID: A8-PC\A8 ALS Bottle#: 28 Worklist Smp#: 2

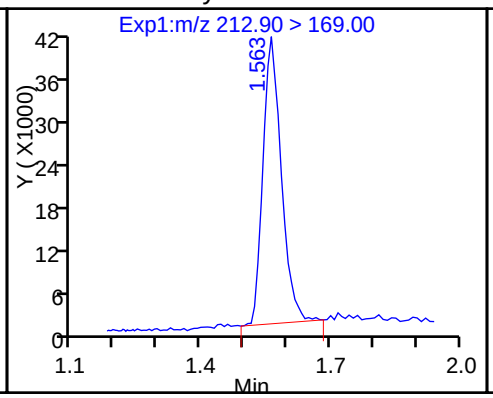
Injection Vol: 2.0 ul Dil. Factor: 1.0000

Method: A8_N Limit Group: LC PFC_DOD ICAL

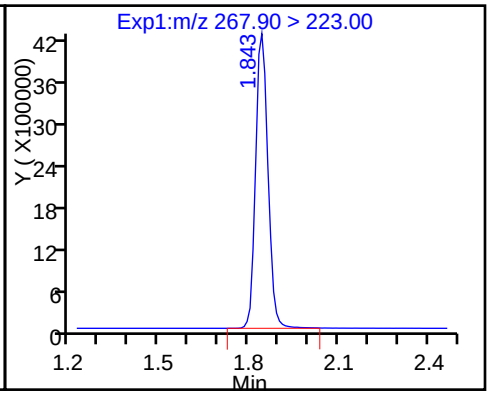
D 1 13C4 PFBA



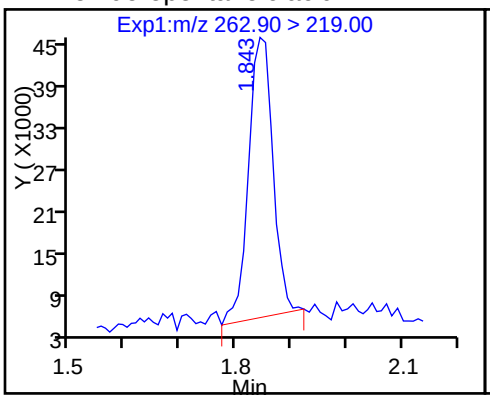
2 Perfluorobutyric acid



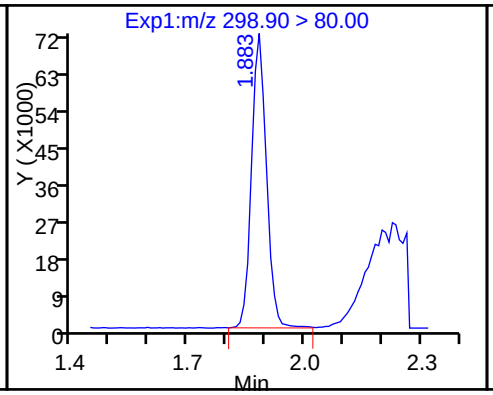
D 3 13C5-PFPeA



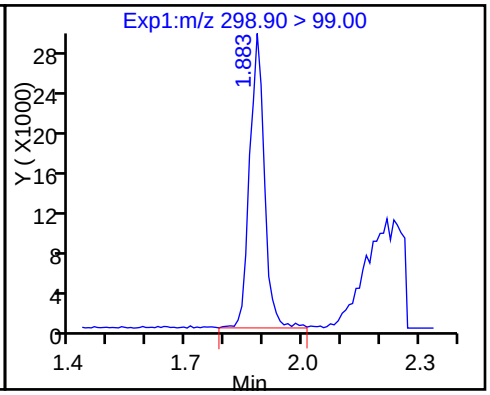
4 Perfluoropentanoic acid



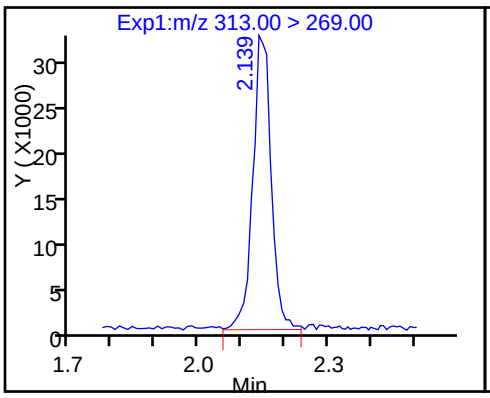
5 Perfluorobutanesulfonic acid



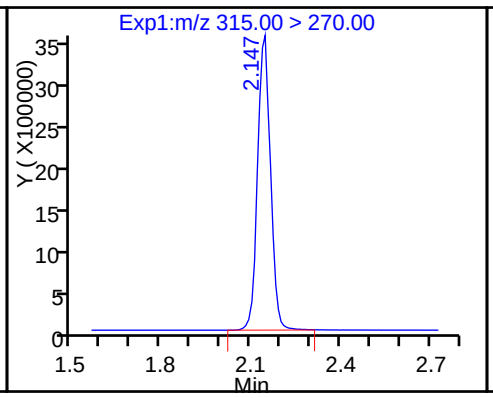
5 Perfluorobutanesulfonic acid



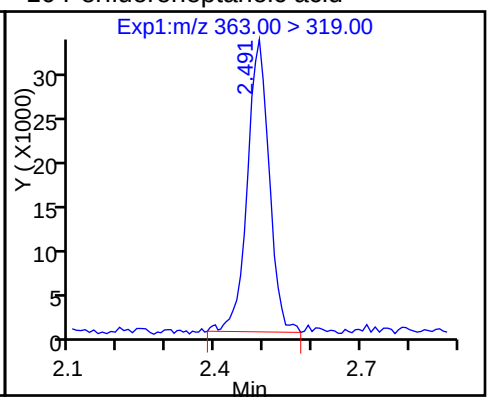
6 Perfluorohexanoic acid



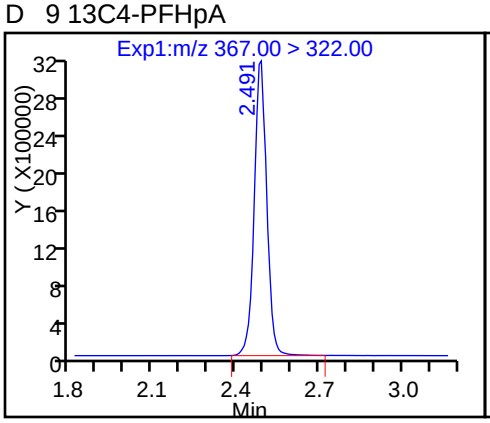
D 7 13C2 PFHxA



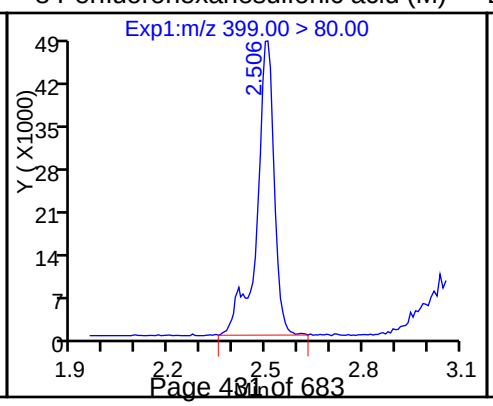
10 Perfluoroheptanoic acid



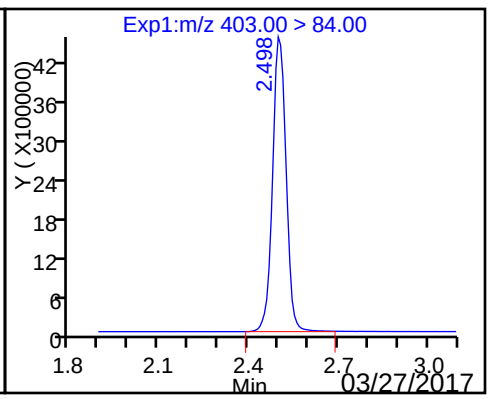
D 9 13C4-PFHpA



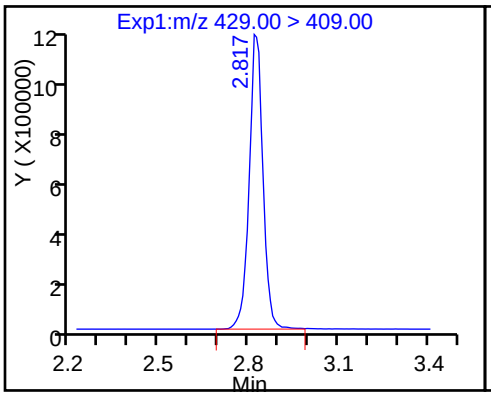
8 Perfluorohexanesulfonic acid (M)



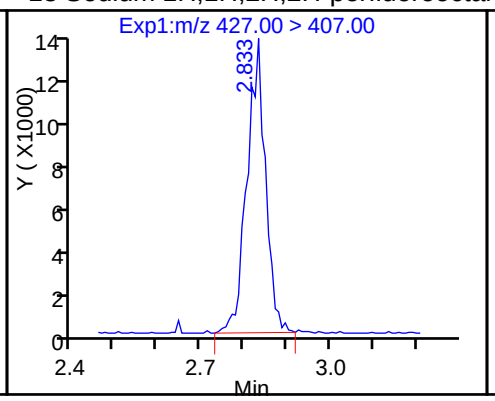
D 11 18O2 PFHxS



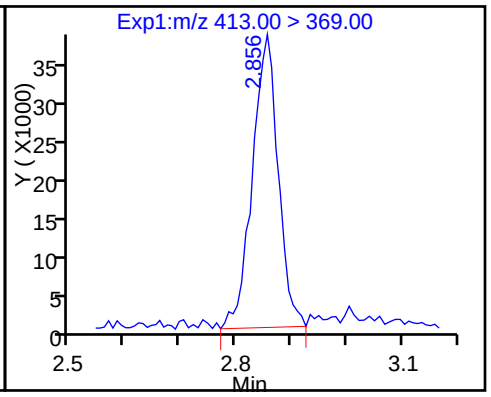
D 12 M2-6:2FTS



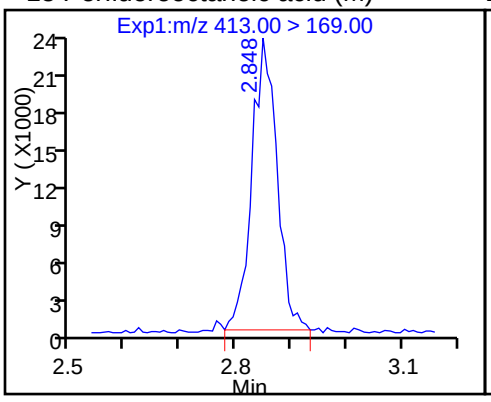
13 Sodium 1H,1H,2H,2H-perfluorooctane



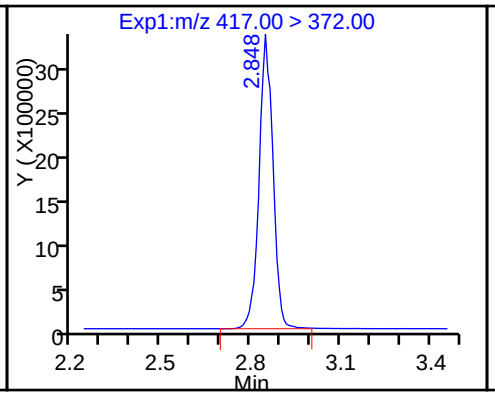
15 Perfluorooctanoic acid



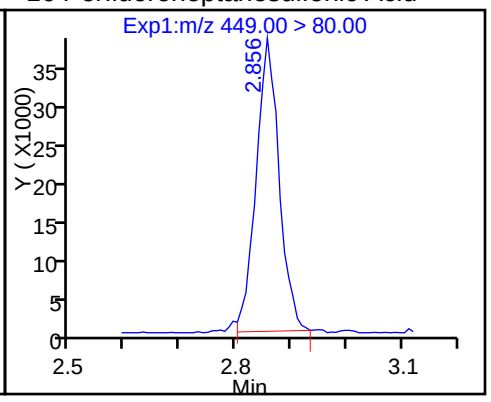
15 Perfluorooctanoic acid (M)



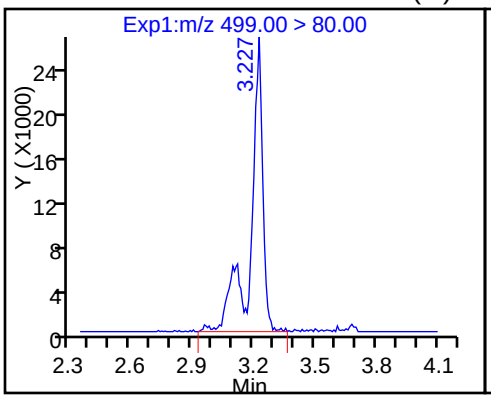
D 14 13C4 PFOA



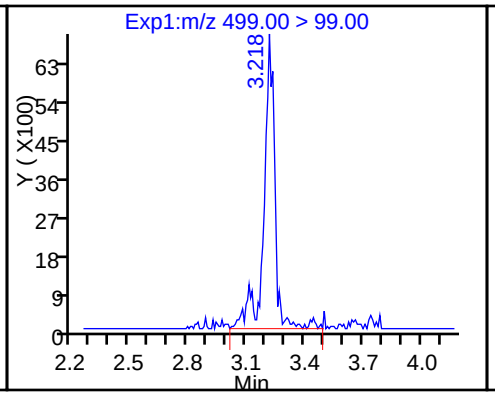
16 Perfluoroheptanesulfonic Acid



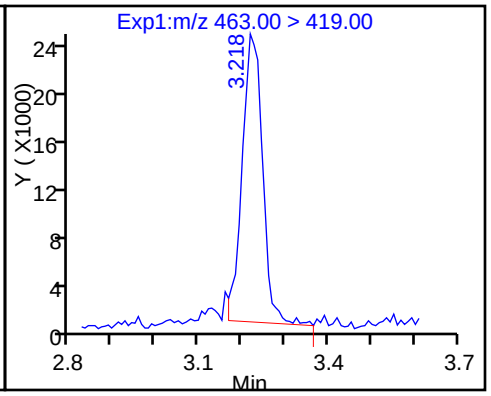
17 Perfluorooctane sulfonic acid (M)



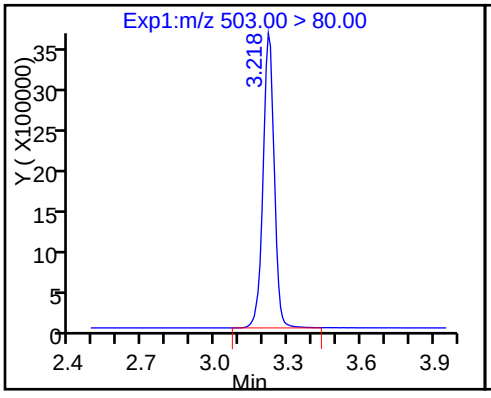
17 Perfluorooctane sulfonic acid



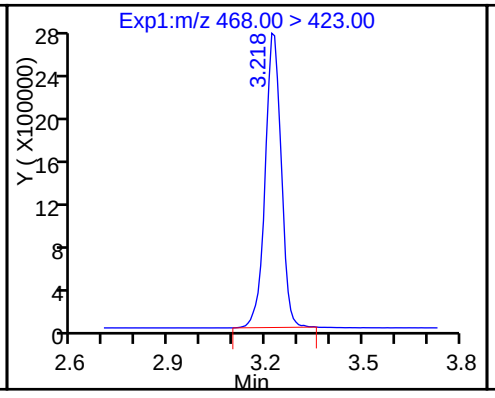
20 Perfluorononanoic acid



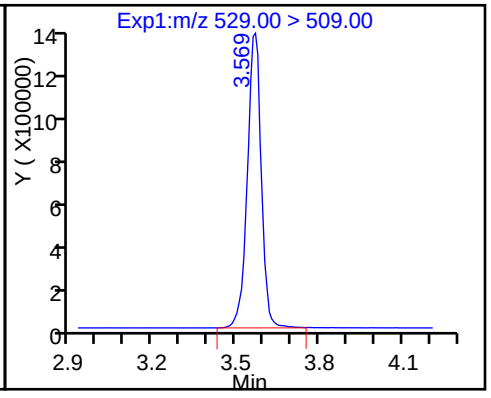
D 18 13C4 PFOS



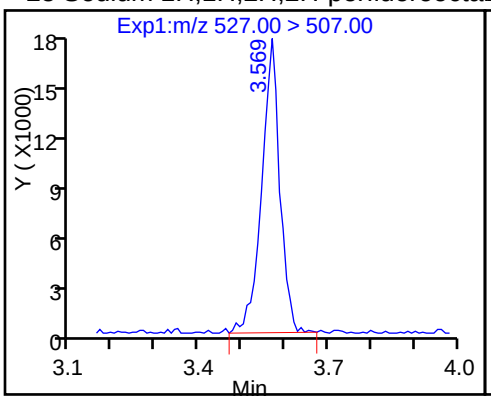
D 19 13C5 PFNA



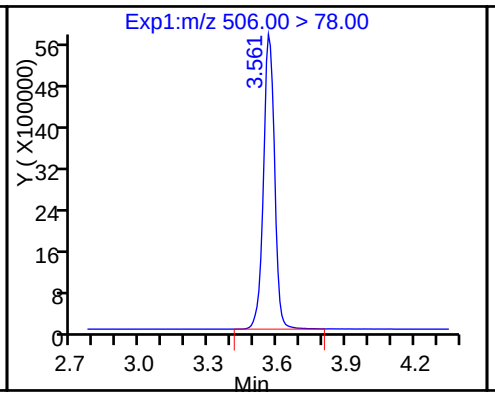
D 26 M2-8:2FTS



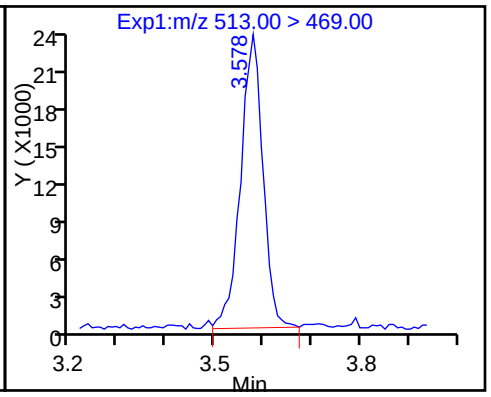
25 Sodium 1H,1H,2H,2H-perfluorooctane



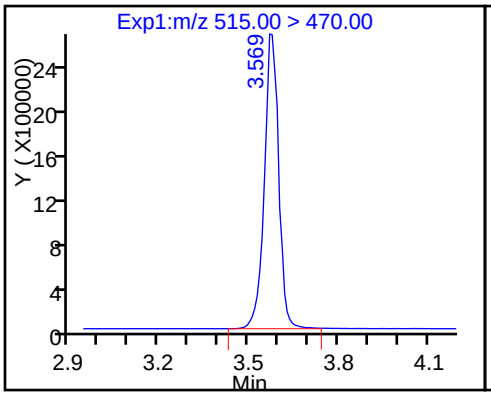
D 21 13C8 FOSA



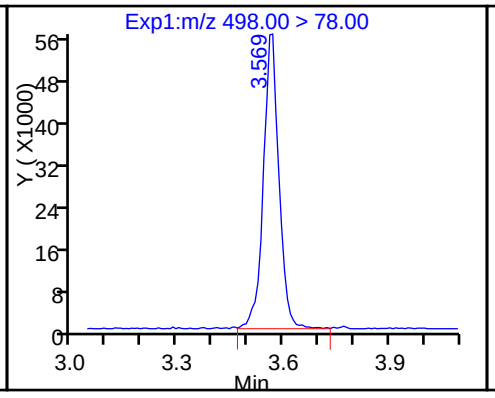
24 Perfluorodecanoic acid



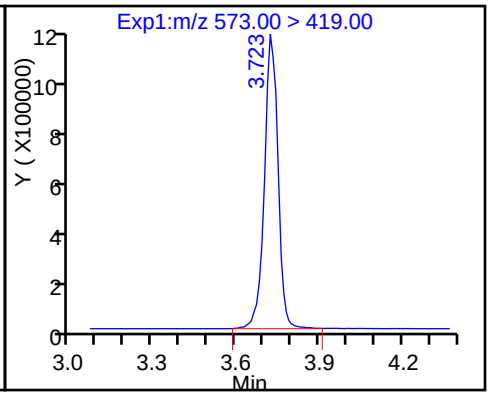
D 23 13C2 PFDA



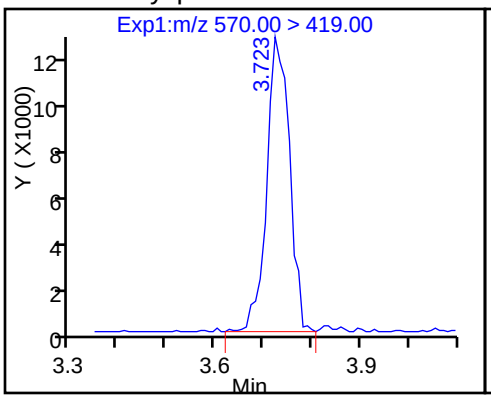
22 Perfluorooctane Sulfonamide



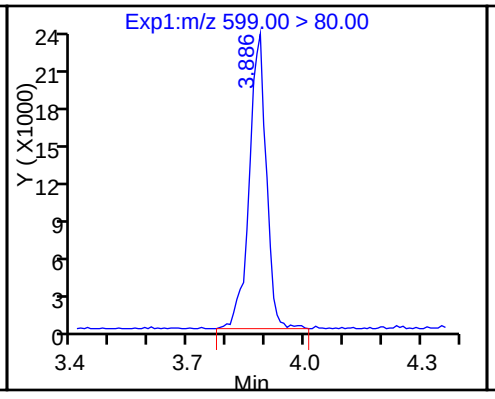
D 27 d3-NMeFOSAA



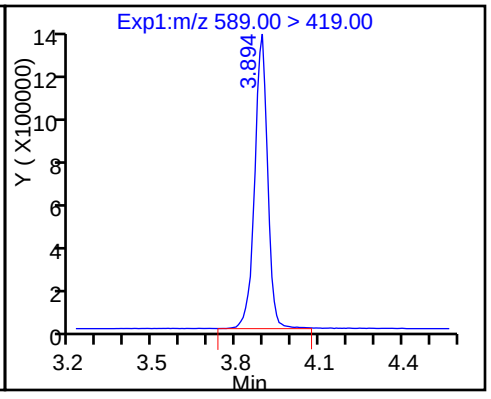
28 N-methyl perfluorooctane sulfonami



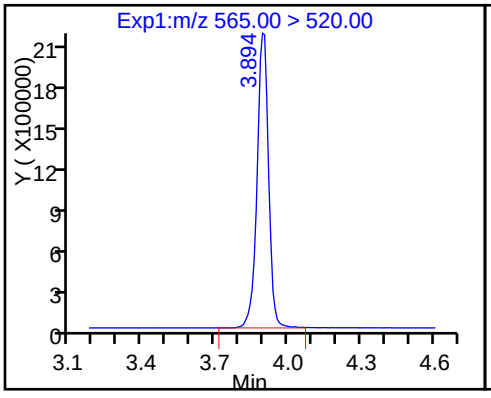
29 Perfluorodecane Sulfonic acid



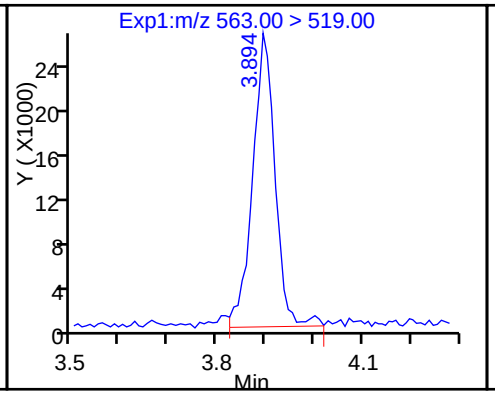
D 32 d5-NEtFOSAA



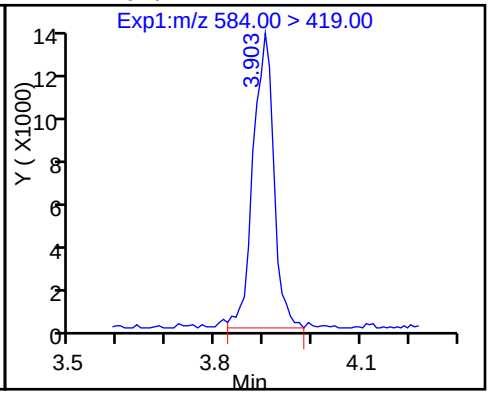
D 30 13C2 PFUnA



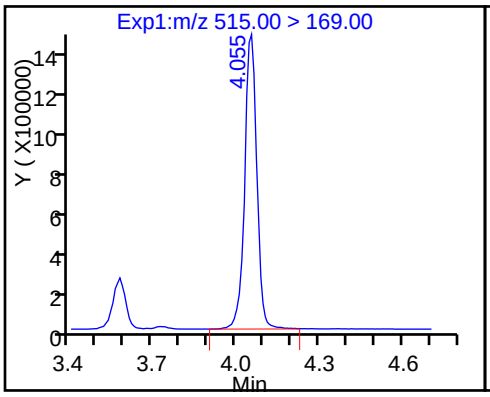
31 Perfluoroundecanoic acid



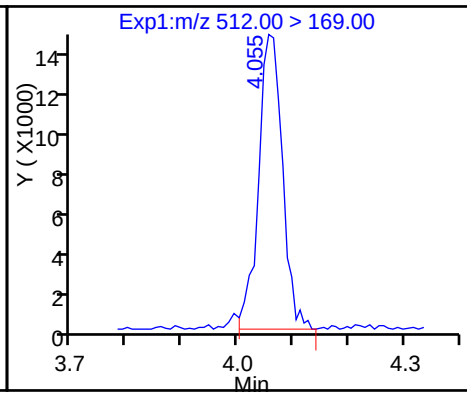
33 N-ethyl perfluorooctane sulfonamid



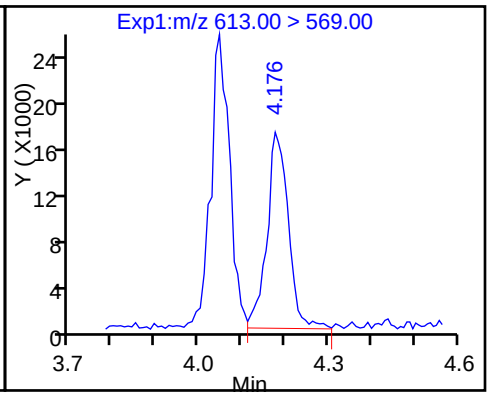
D 34 d-N-MeFOSA-M



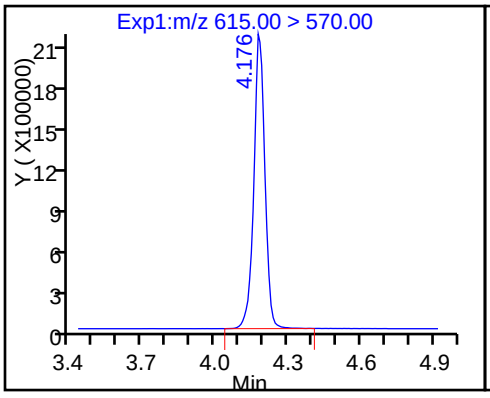
35 MeFOSA



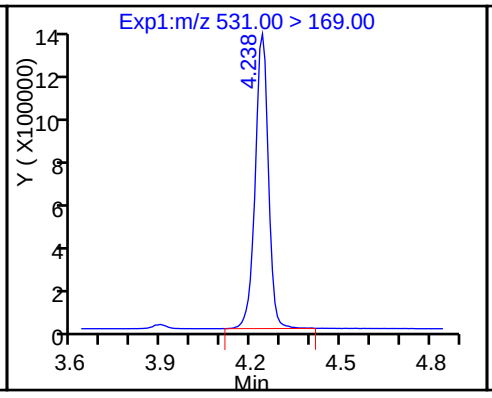
37 Perfluorododecanoic acid



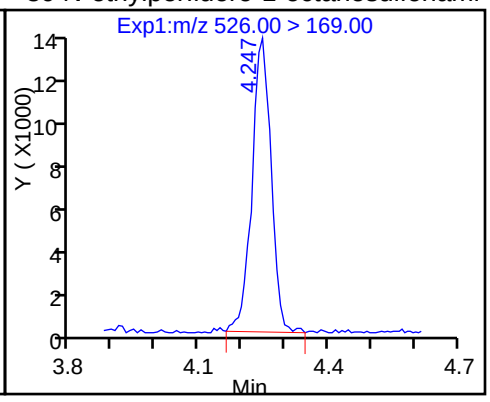
D 36 13C2 PFDoA



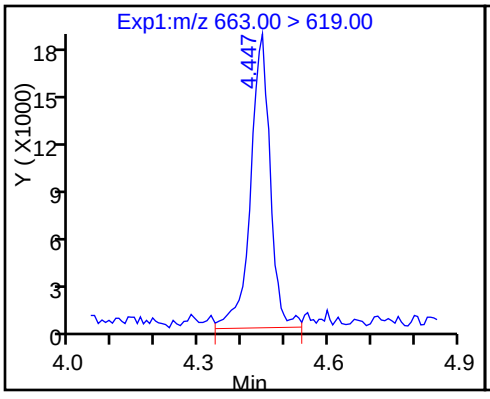
D 38 d-N-EtFOSA-M



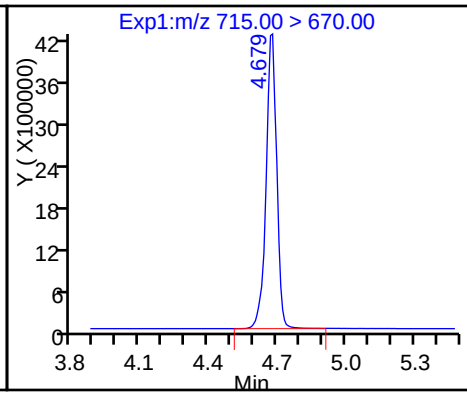
39 N-ethylperfluoro-1-octanesulfonami



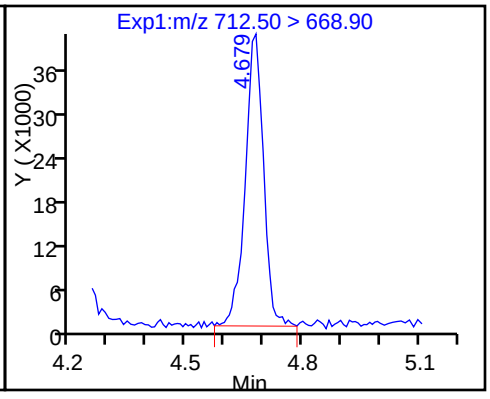
41 Perfluorotridecanoic acid



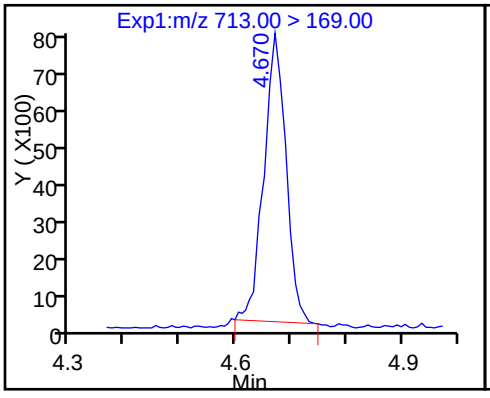
D 43 13C2-PFTeDA



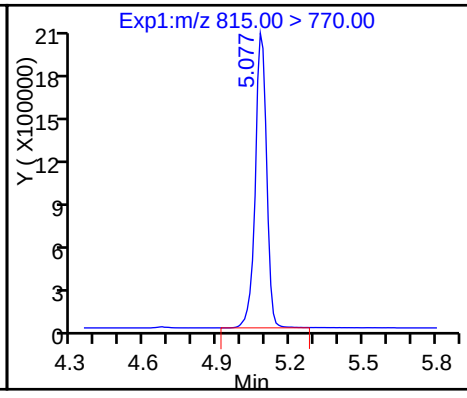
42 Perfluorotetradecanoic acid



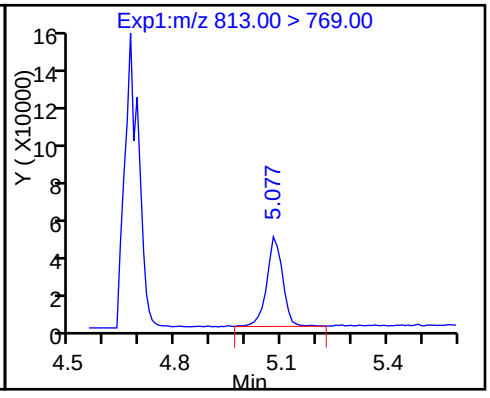
42 Perfluorotetradecanoic acid



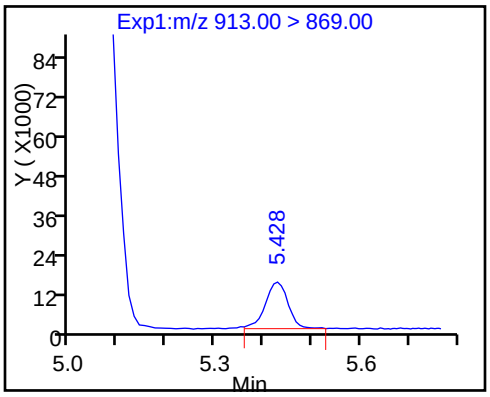
D 44 13C2-PFHxDA



45 Perfluorohexadecanoic acid



46 Perfluorooctadecanoic acid



Manual Integration/User Assign Peak Report

TestAmerica Sacramento

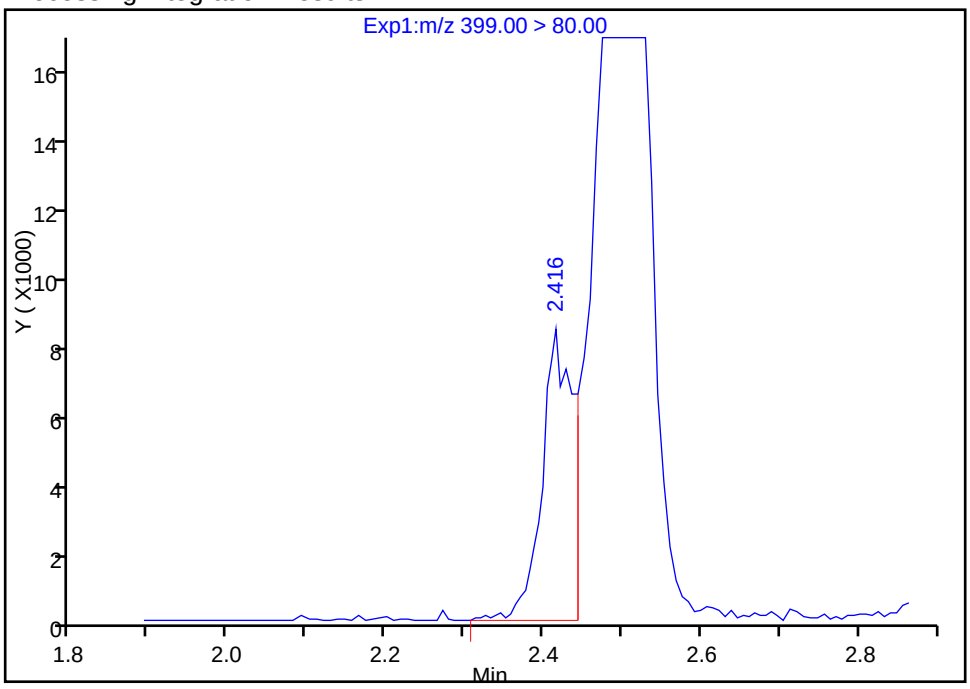
Data File: \\ChromNa\Sacramento\ChromData\A8_N\20170301-40358.b\2017.03.01CURVE_003.d
Injection Date: 01-Mar-2017 11:08:52 Instrument ID: A8_N
Lims ID: IC L1 Full
Client ID:
Operator ID: A8-PC\A8 ALS Bottle#: 28 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Method: A8_N Limit Group: LC PFC_DOD ICAL
Column: Detector EXP1

8 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

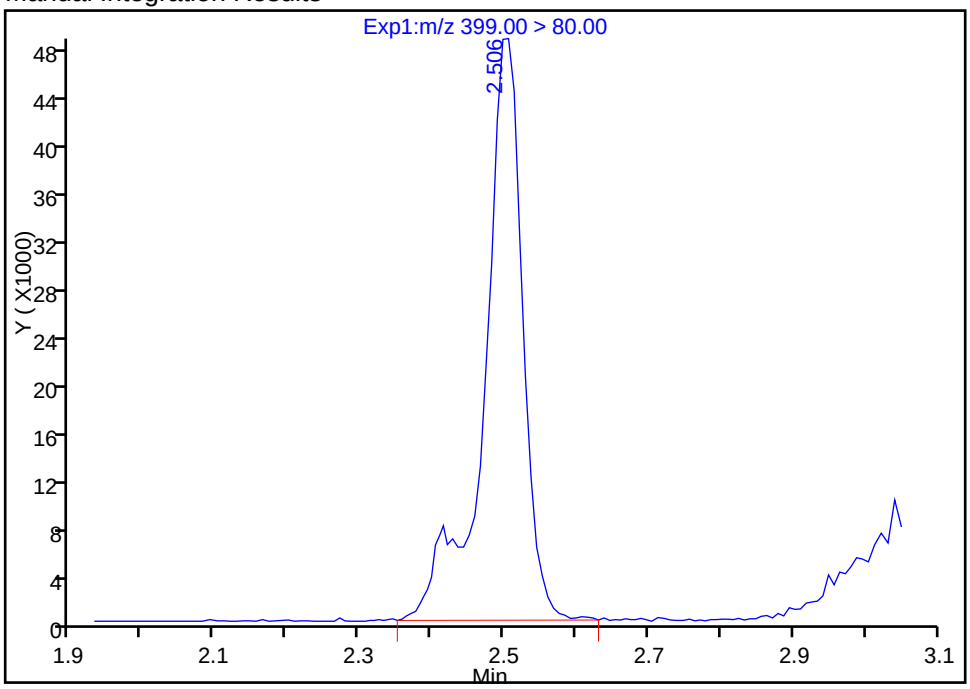
Processing Integration Results

RT: 2.42
Area: 21187
Amount: 0.082505
Amount Units: ng/ml



Manual Integration Results

RT: 2.51
Area: 182218
Amount: 0.583043
Amount Units: ng/ml



Reviewer: chandrasenas, 01-Mar-2017 15:43:05
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

TestAmerica Sacramento

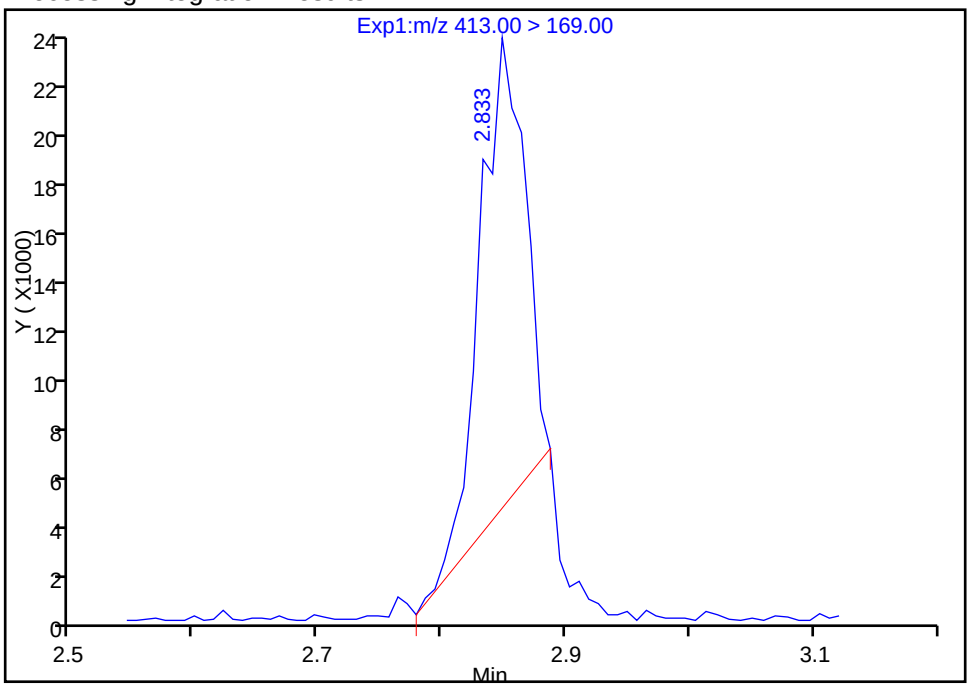
Data File: \\ChromNa\Sacramento\ChromData\A8_N\20170301-40358.b\2017.03.01CURVE_003.d
Injection Date: 01-Mar-2017 11:08:52 Instrument ID: A8_N
Lims ID: IC L1 Full
Client ID:
Operator ID: A8-PC\A8 ALS Bottle#: 28 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Method: A8_N Limit Group: LC PFC_DOD ICAL
Column: Detector EXP1

15 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 2

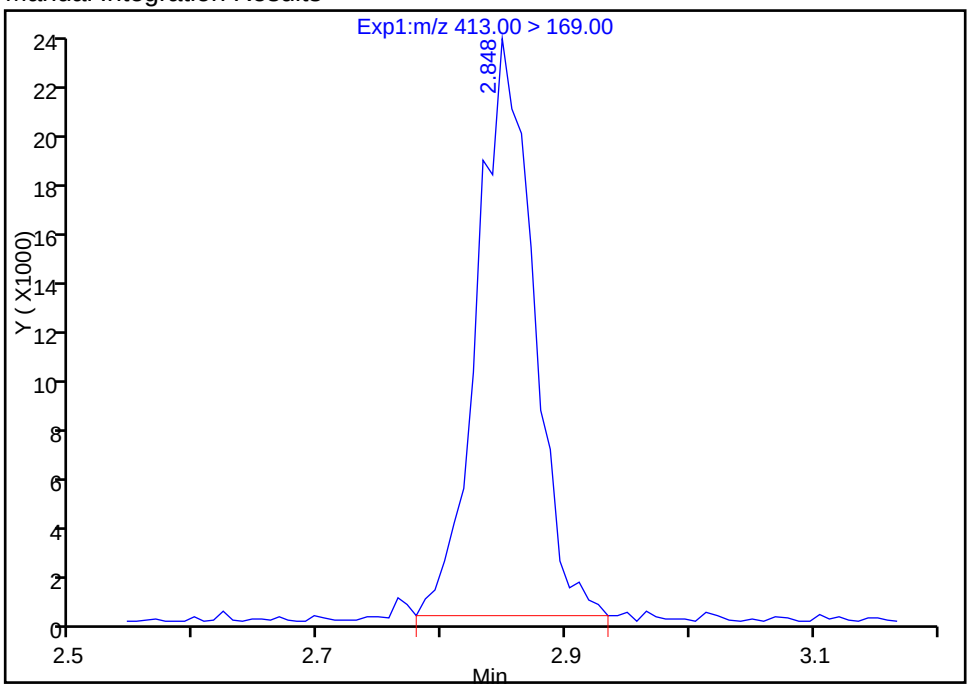
Processing Integration Results

RT: 2.83
Area: 46440
Amount: 0.535520
Amount Units: ng/ml



Manual Integration Results

RT: 2.85
Area: 71985
Amount: 0.538943
Amount Units: ng/ml



Reviewer: chandrasenas, 01-Mar-2017 15:43:05
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Sacramento

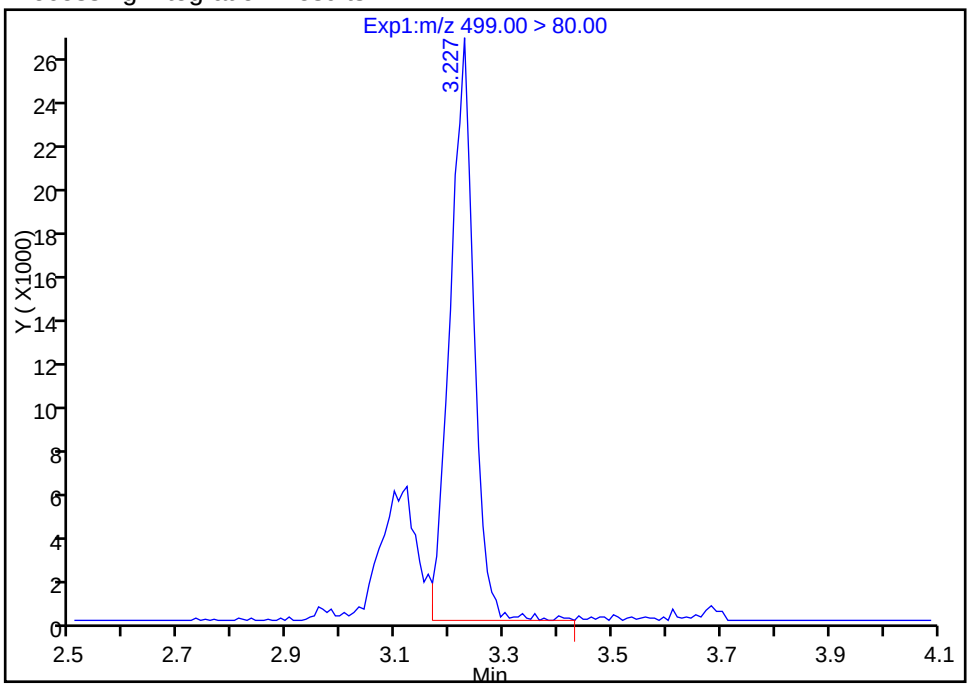
Data File: \\ChromNa\Sacramento\ChromData\A8_N\20170301-40358.b\2017.03.01CURVE_003.d
Injection Date: 01-Mar-2017 11:08:52 Instrument ID: A8_N
Lims ID: IC L1 Full
Client ID:
Operator ID: A8-PC\A8 ALS Bottle#: 28 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Method: A8_N Limit Group: LC PFC_DOD ICAL
Column: Detector EXP1

17 Perfluorooctane sulfonic acid, CAS: 1763-23-1

Signal: 1

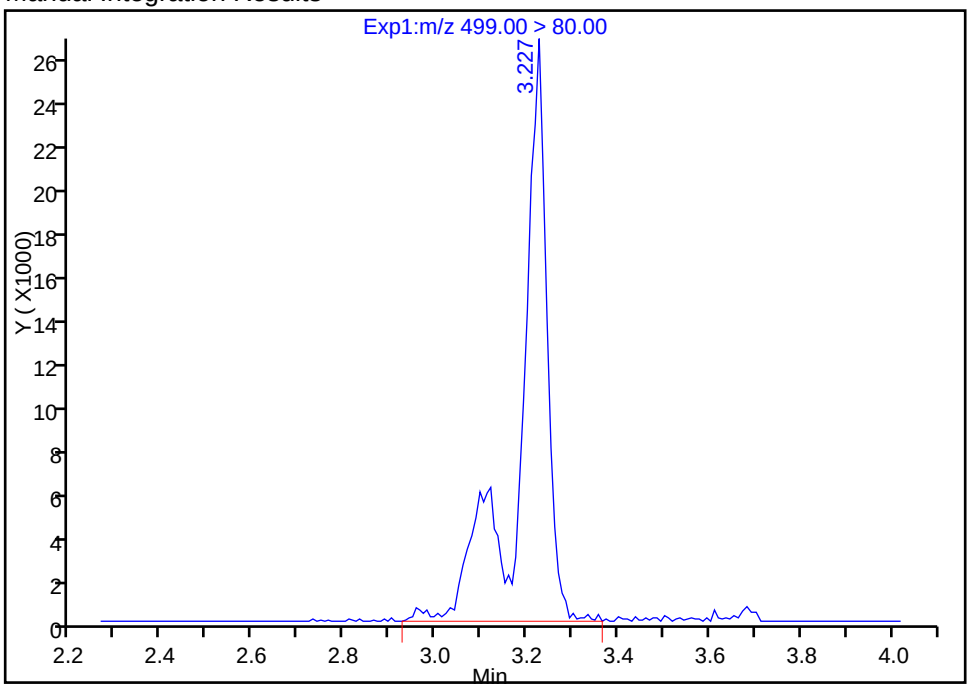
Processing Integration Results

RT: 3.23
Area: 79141
Amount: 0.356104
Amount Units: ng/ml



Manual Integration Results

RT: 3.23
Area: 108156
Amount: 0.442463
Amount Units: ng/ml



Reviewer: chandrasenas, 01-Mar-2017 15:43:05
Audit Action: Manually Integrated Audit Reason: Isomers

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNa\Sacramento\ChromData\A8_N\20170301-40358.b\2017.03.01CURVE_004.d
Lims ID: IC L2 Full
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 01-Mar-2017 11:16:22 ALS Bottle#: 29 Worklist Smp#: 3
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: L2-FULL
Misc. Info.: Plate: 1 Rack: 1
Operator ID: A8-PC\A8 Instrument ID: A8_N
Sublist: chrom-A8_N*sub15

Method: \\ChromNa\Sacramento\ChromData\A8_N\20170301-40358.b\A8_N.m
Limit Group: LC PFC_DOD ICAL
Last Update: 01-Mar-2017 15:43:08 Calib Date: 01-Mar-2017 11:53:47
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A8_N\20170301-40358.b\2017.03.01CURVE_009.d

Column 1 : Det: EXP1
Process Host: XAWRK012

First Level Reviewer: chandrasenas Date: 01-Mar-2017 12:00:43

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C4 PFBA										
217.00 > 172.00	1.554	1.553	0.001		14105138	48.3		96.5	750485	
2 Perfluorobutyric acid										
212.90 > 169.00	1.562	1.558	0.004	1.000	236552	0.9897		99.0	2199	
D 3 13C5-PFPeA										
267.90 > 223.00	1.842	1.832	0.010		11526786	49.6		99.3	662915	
4 Perfluoropentanoic acid										
262.90 > 219.00	1.842	1.835	0.007	1.000	233761	1.04		104	2126	
5 Perfluorobutanesulfonic acid										
298.90 > 80.00	1.872	1.872	0.0	1.000	364249	0.8869		100		
298.90 > 99.00	1.881	1.872	0.009	1.005	152095		2.39(0.00-0.00)	100		
6 Perfluorohexanoic acid										
313.00 > 269.00	2.145	2.133	0.012	1.000	183108	1.01		101	6537	
D 7 13C2 PFHxA										
315.00 > 270.00	2.136	2.134	0.002		10169363	48.2		96.4	286031	
10 Perfluoroheptanoic acid										
363.00 > 319.00	2.484	2.474	0.010	1.000	185040	0.9858		98.6	1690	
D 9 13C4-PFHpA										
367.00 > 322.00	2.484	2.475	0.009		9702633	50.3		101	436206	
8 Perfluorohexanesulfonic acid										
399.00 > 80.00	2.500	2.485	0.015	1.000	294799	1.00		110		
D 11 18O2 PFHxS										
403.00 > 84.00	2.500	2.489	0.011		13561303	46.6		98.6	442791	
D 12 M2-6:2FTS										
429.00 > 409.00	2.810	2.805	0.005		3521088	45.6		96.0		
13 Sodium 1H,1H,2H,2H-perfluorooctane										
427.00 > 407.00	2.818	2.807	0.011	1.000	71833	0.9579		101		

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 14 13C4 PFOA										
417.00 > 372.00	2.849	2.835	0.014		10562914	51.5		103	412762	
15 Perfluorooctanoic acid										
413.00 > 369.00	2.841	2.835	0.006	1.000	226350	1.05		105	2696	
413.00 > 169.00	2.849	2.835	0.014	1.003	125043		1.81(0.90-1.10)	105	5452	
16 Perfluoroheptanesulfonic Acid										
449.00 > 80.00	2.857	2.842	0.015	1.000	228885	0.9637		101		
17 Perfluorooctane sulfonic acid										
499.00 > 80.00	3.105	3.145	-0.040	1.000	207277	0.9149		98.6	3256	
499.00 > 99.00	3.105	3.145	-0.040	1.000	49944		4.15(0.90-1.10)	98.6	444	
20 Perfluorononanoic acid										
463.00 > 419.00	3.209	3.202	0.007	1.000	152789	0.9337		93.4	2607	
D 18 13C4 PFOS										
503.00 > 80.00	3.218	3.204	0.014		11011810	45.6		95.3	389996	
D 19 13C5 PFNA										
468.00 > 423.00	3.218	3.208	0.010		9051156	50.9		102	347551	
D 26 M2-8:2FTS										
529.00 > 509.00	3.553	3.545	0.008		4549526	49.1		103		
25 Sodium 1H,1H,2H,2H-perfluorooctane										
527.00 > 507.00	3.561	3.546	0.015	1.002	89032	0.9299		97.1		
D 21 13C8 FOSA										
506.00 > 78.00	3.561	3.559	0.002		18089578	49.3		98.6	237400	
D 23 13C2 PFDA										
515.00 > 470.00	3.569	3.560	0.009		8593124	51.5		103	177955	
24 Perfluorodecanoic acid										
513.00 > 469.00	3.569	3.560	0.009	1.000	152408	0.9792		97.9	5902	
22 Perfluorooctane Sulfonamide										
498.00 > 78.00	3.561	3.561	0.0	1.000	339522	1.04		104	20364	
D 27 d3-NMeFOSAA										
573.00 > 419.00	3.723	3.710	0.013		3998931	46.9		93.9		
28 N-methyl perfluorooctane sulfonami										
570.00 > 419.00	3.723	3.713	0.010	1.000	78506	1.01		101		
29 Perfluorodecane Sulfonic acid										
599.00 > 80.00	3.876	3.866	0.010	1.000	125403	0.9138		94.8		
D 32 d5-NEtFOSAA										
589.00 > 419.00	3.885	3.875	0.010		4097675	50.4		101		
D 30 13C2 PFUnA										
565.00 > 520.00	3.885	3.876	0.009		6740958	51.5		103	252062	
31 Perfluoroundecanoic acid										
563.00 > 519.00	3.885	3.878	0.007	1.000	137967	1.01		101	3114	
33 N-ethyl perfluorooctane sulfonamid										
584.00 > 419.00	3.885	3.883	0.002	1.000	77078	1.03		103		
D 34 d-N-MeFOSA-M										
515.00 > 169.00	4.055	4.050	0.005		4054503	46.1		92.2		
35 MeFOSA										
512.00 > 169.00	4.064	4.057	0.007	1.000	75129	0.99		99.0		
37 Perfluorododecanoic acid										
613.00 > 569.00	4.175	4.162	0.013	1.000	113238	1.03		103	1051	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 36 13C2 PFDoA										
615.00 > 570.00	4.175	4.164	0.011		6032319	48.7		97.3	172379	
D 38 d-N-EtFOSA-M										
531.00 > 169.00	4.237	4.235	0.002		3920378	46.0		92.0		
39 N-ethylperfluoro-1-octanesulfonami										
526.00 > 169.00	4.246	4.242	0.004	1.000	79073	1.03		103		
41 Perfluorotridecanoic acid										
663.00 > 619.00	4.430	4.424	0.006	1.000	103052	0.9780		97.8	2577	
D 43 13C2-PFTeDA										
715.00 > 670.00	4.667	4.655	0.012		12309406	47.5		95.0	383508	
42 Perfluorotetradecanoic acid										
712.50 > 668.90	4.667	4.657	0.010	1.000	238596	1.01		101	1077	
713.00 > 169.00	4.667	4.657	0.010	1.000	36141		6.60(0.00-0.00)	101	11217	
D 44 13C2-PFHxDA										
815.00 > 770.00	5.070	5.057	0.013		5742128	45.9		91.8	84169	
45 Perfluorohexadecanoic acid										
813.00 > 769.00	5.070	5.059	0.011	1.000	171523	1.16		116	217	
46 Perfluorooctadecanoic acid										
913.00 > 869.00	5.414	5.399	0.015	1.000	81601	0.9426		94.3	179	

Reagents:

LCPFC_FULL-L2_00001 Amount Added: 1.00 Units: mL

Report Date: 01-Mar-2017 15:43:08 Chrom Revision: 2.2 03-Feb-2017 15:35:04

TestAmerica Sacramento

Data File: \\ChromNa\Sacramento\ChromData\A8_N\20170301-40358.b\2017.03.01CURVE_004.d

Injection Date: 01-Mar-2017 11:16:22 Instrument ID: A8_N

Lims ID: IC L2 Full

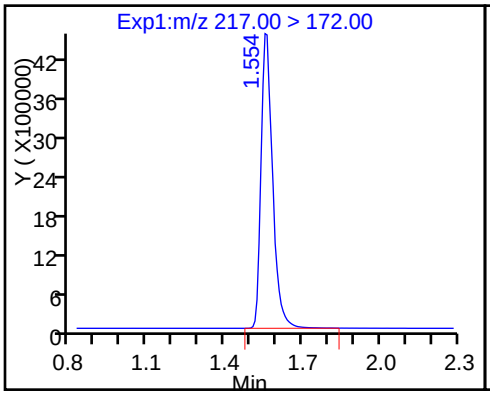
Client ID:

Operator ID: A8-PC\A8 ALS Bottle#: 29 Worklist Smp#: 3

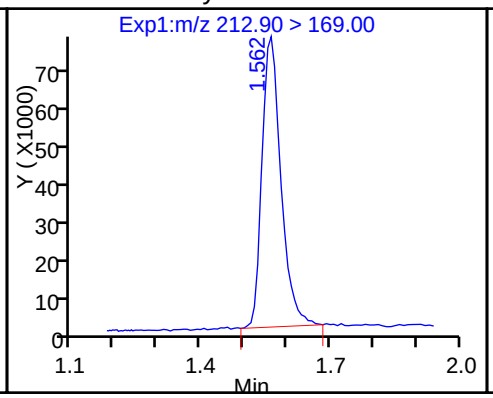
Injection Vol: 2.0 ul Dil. Factor: 1.0000

Method: A8_N Limit Group: LC PFC_DOD ICAL

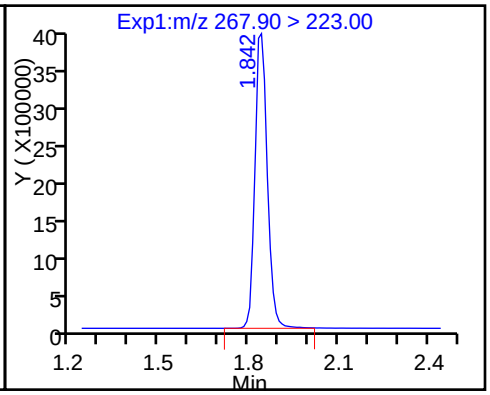
D 1 13C4 PFBA



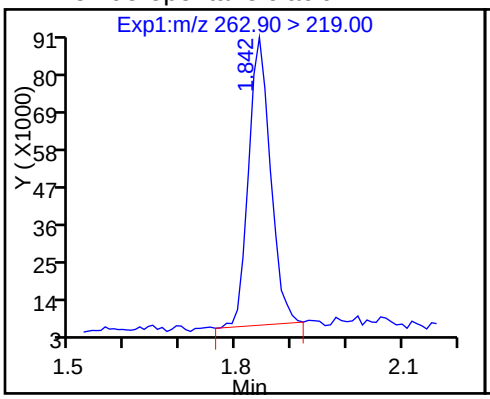
2 Perfluorobutyric acid



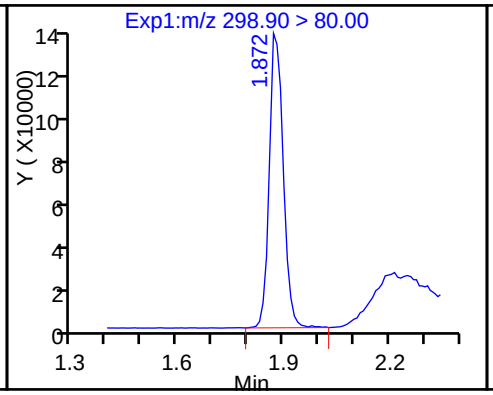
D 3 13C5-PFPeA



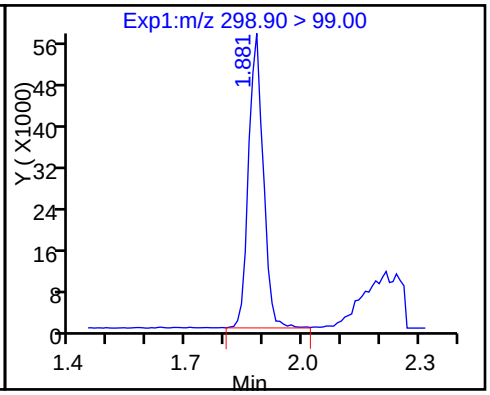
4 Perfluoropentanoic acid



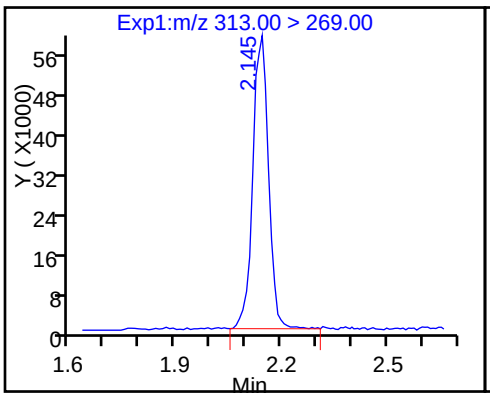
5 Perfluorobutanesulfonic acid



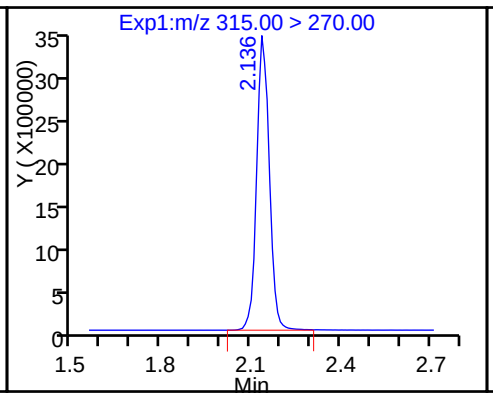
5 Perfluorobutanesulfonic acid



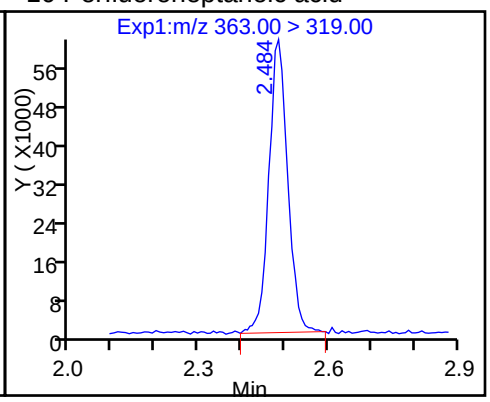
6 Perfluorohexanoic acid



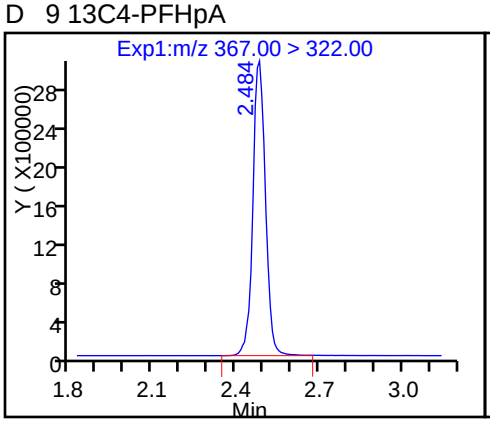
D 7 13C2 PFHxA



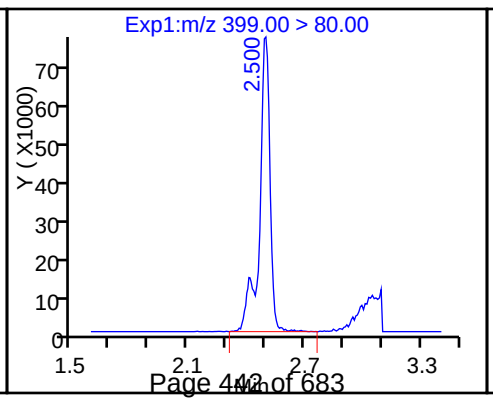
10 Perfluoroheptanoic acid



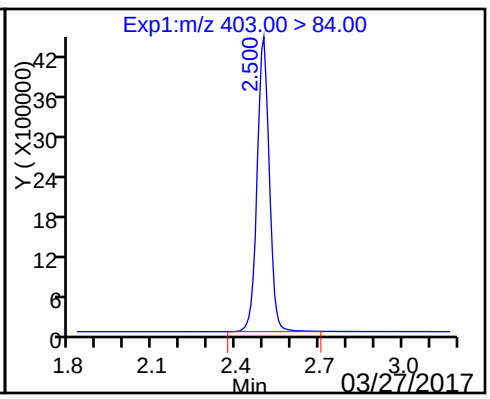
D 9 13C4-PFHpA



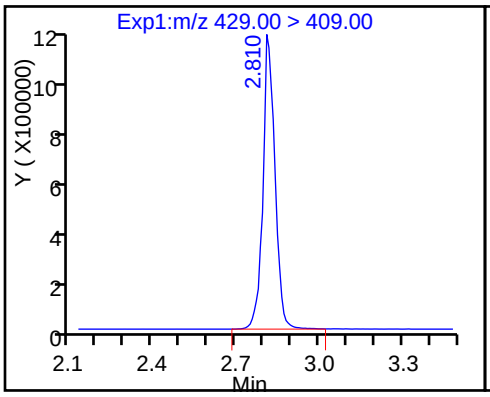
8 Perfluorohexanesulfonic acid



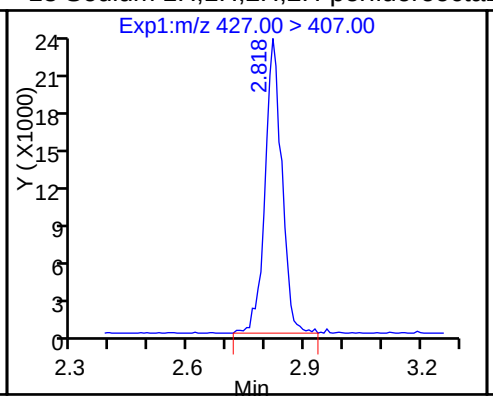
D 11 18O2 PFHxS



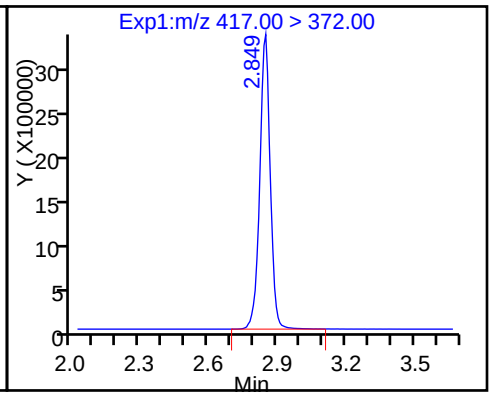
D 12 M2-6:2FTS



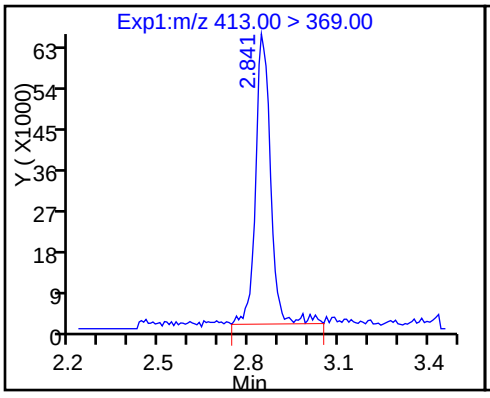
13 Sodium 1H,1H,2H,2H-perfluorooctane



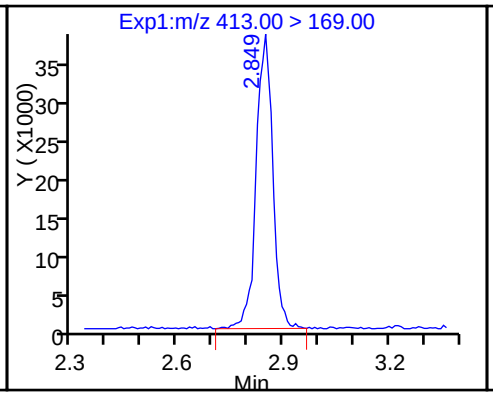
D 14 13C4 PFOA



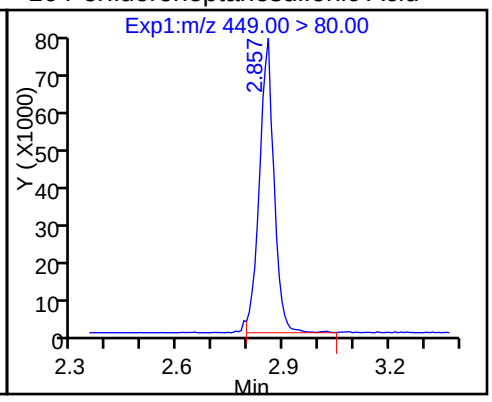
15 Perfluorooctanoic acid



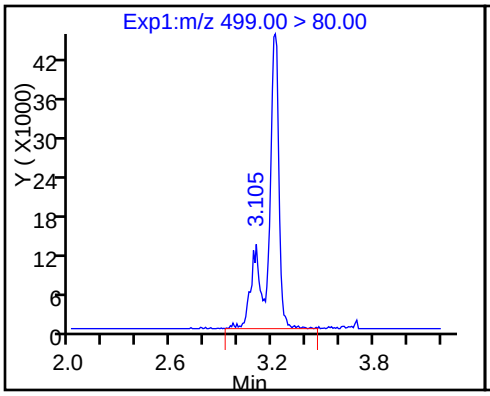
15 Perfluorooctanoic acid



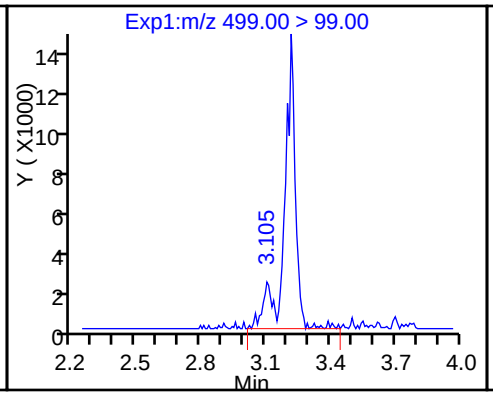
16 Perfluoroheptanesulfonic Acid



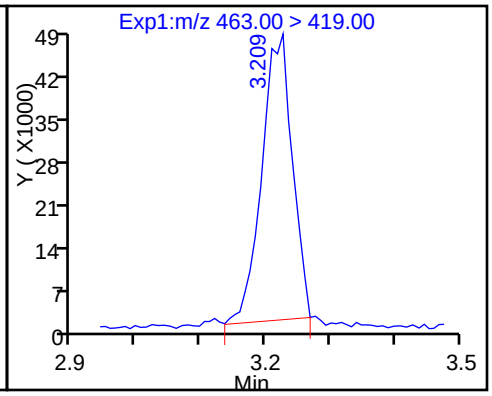
17 Perfluorooctane sulfonic acid



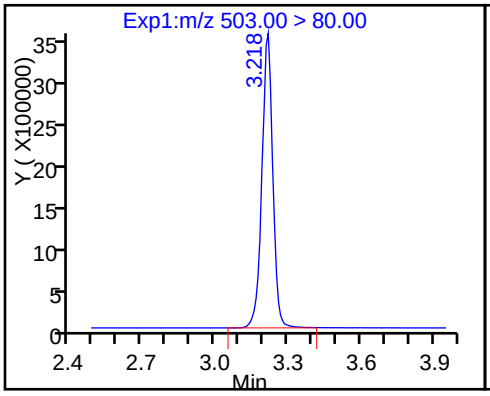
17 Perfluorooctane sulfonic acid



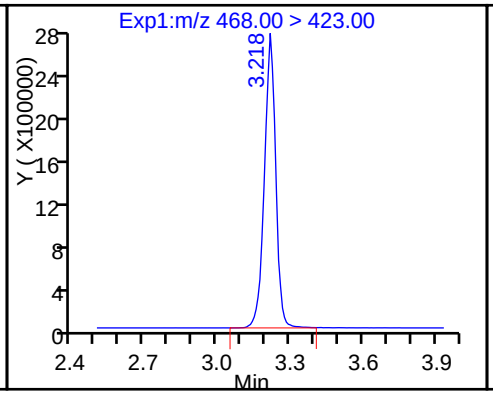
20 Perfluorononanoic acid



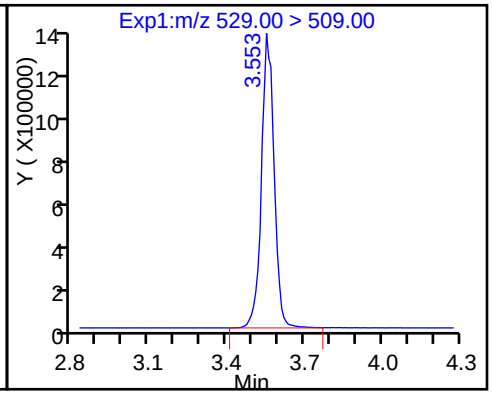
D 18 13C4 PFOS



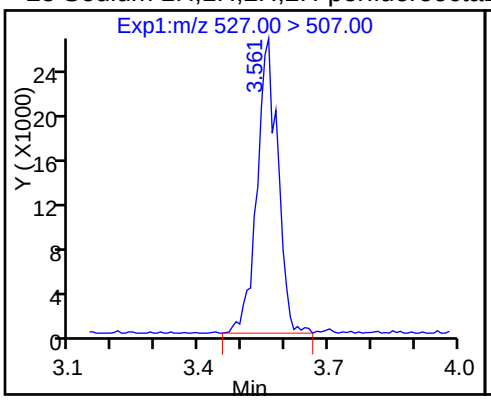
D 19 13C5 PFNA



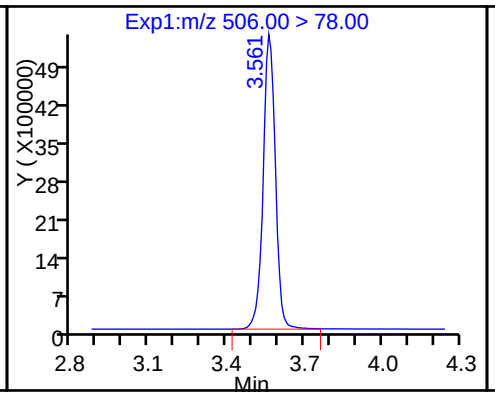
D 26 M2-8:2FTS



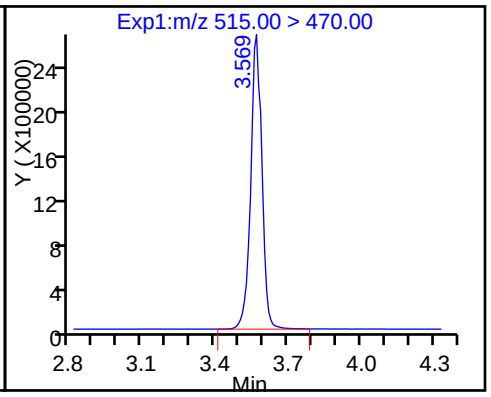
25 Sodium 1H,1H,2H,2H-perfluorooctane



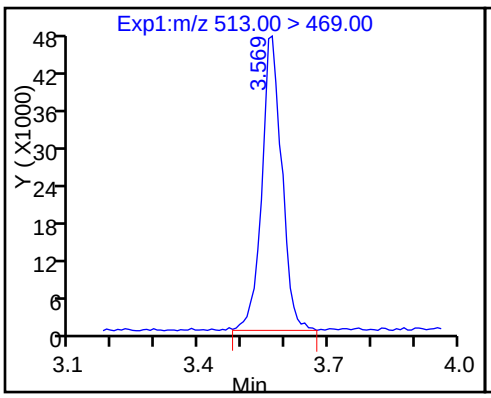
D 21 13C8 FOSA



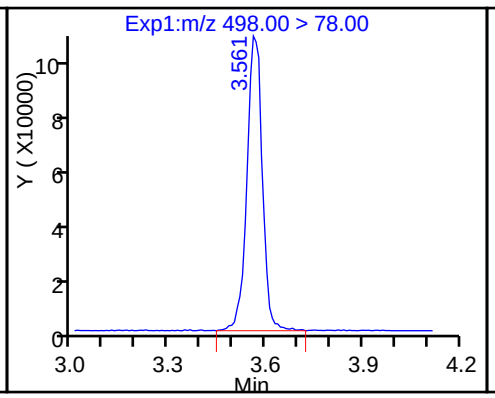
D 23 13C2 PFDA



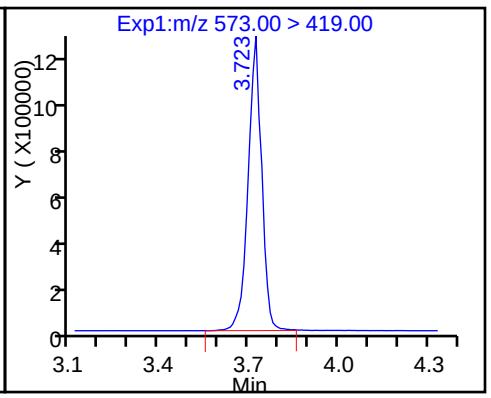
24 Perfluorodecanoic acid



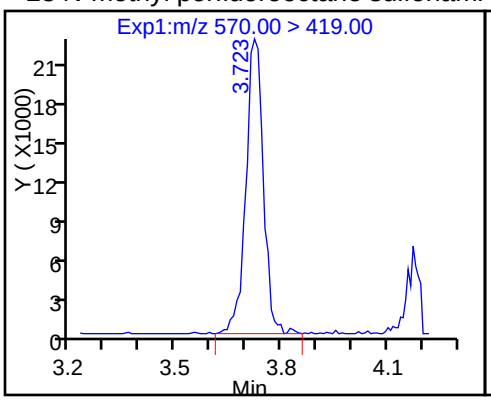
22 Perfluorooctane Sulfonamide



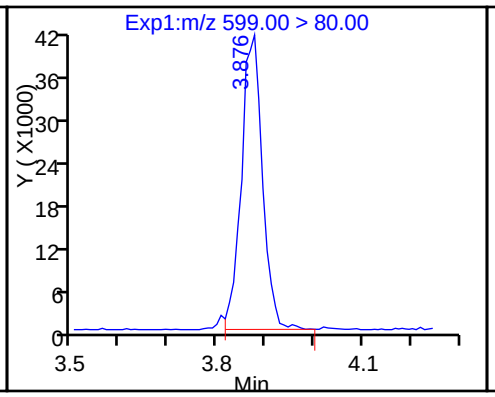
D 27 d3-NMeFOSAA



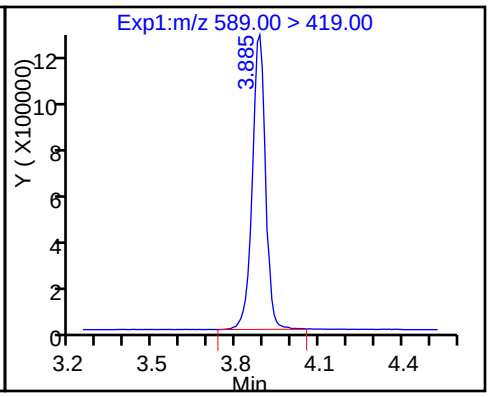
28 N-methyl perfluorooctane sulfonami



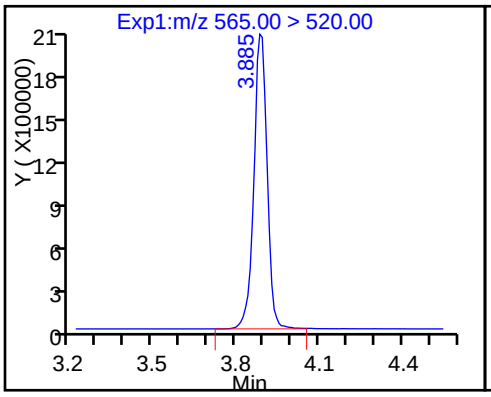
29 Perfluorodecane Sulfonic acid



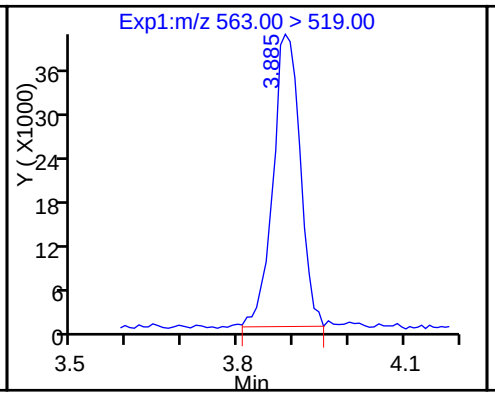
D 32 d5-NEtFOSAA



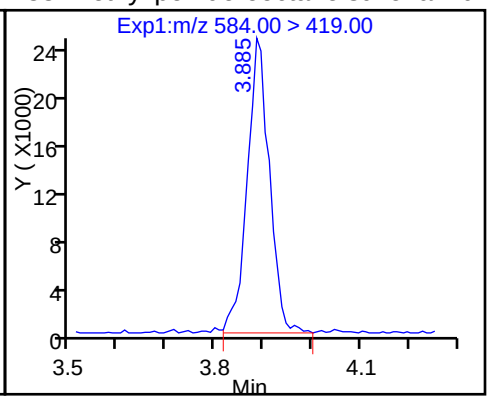
D 30 13C2 PFUnA



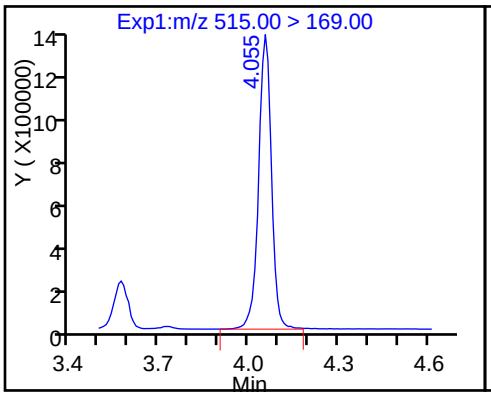
31 Perfluoroundecanoic acid



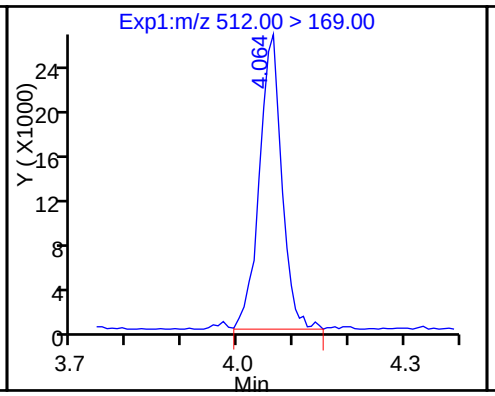
33 N-ethyl perfluorooctane sulfonamid



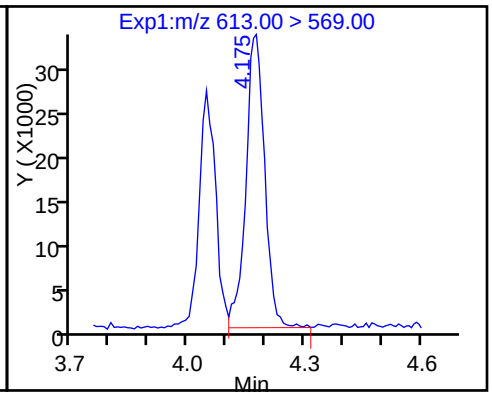
D 34 d-N-MeFOSA-M



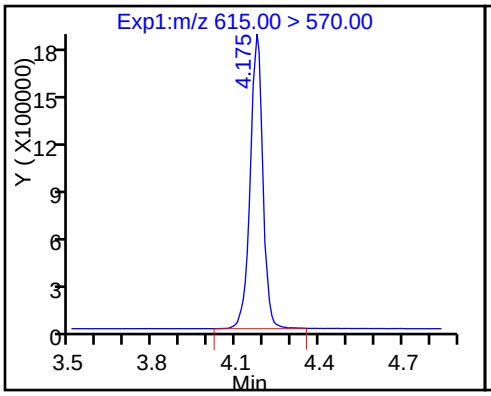
35 MeFOSA



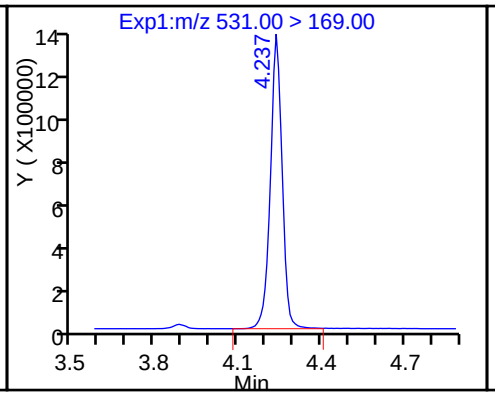
37 Perfluorododecanoic acid



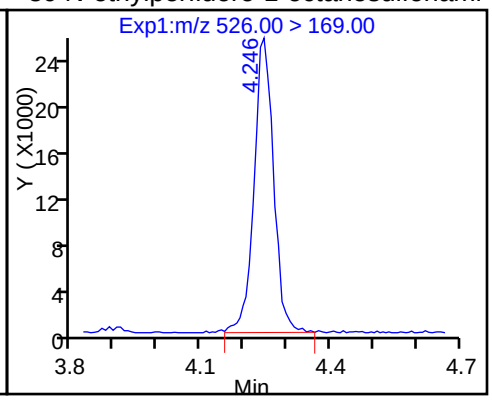
D 36 13C2 PFDoA



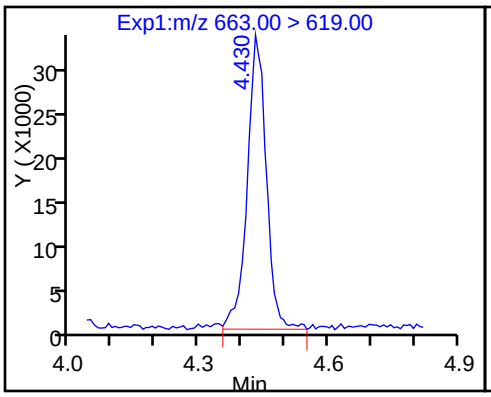
D 38 d-N-EtFOSA-M



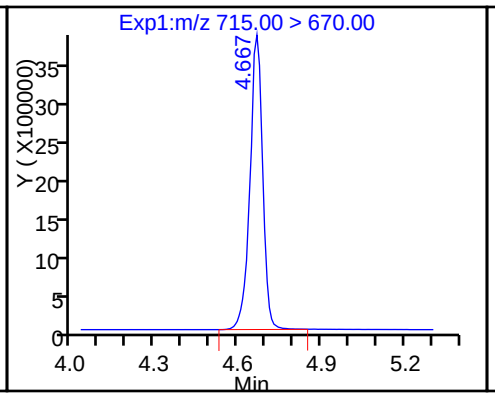
39 N-ethylperfluoro-1-octanesulfonami



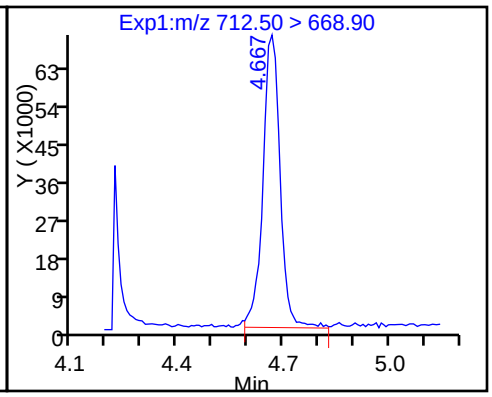
41 Perfluorotridecanoic acid



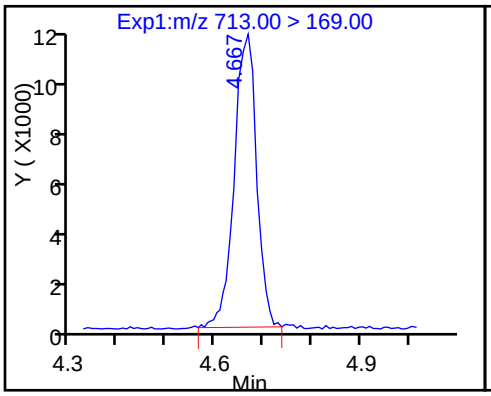
D 43 13C2-PFTeDA



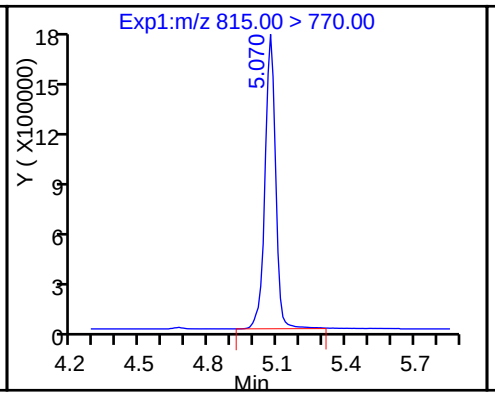
42 Perfluorotetradecanoic acid



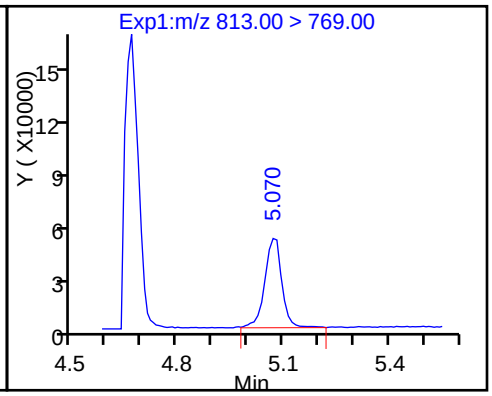
42 Perfluorotetradecanoic acid



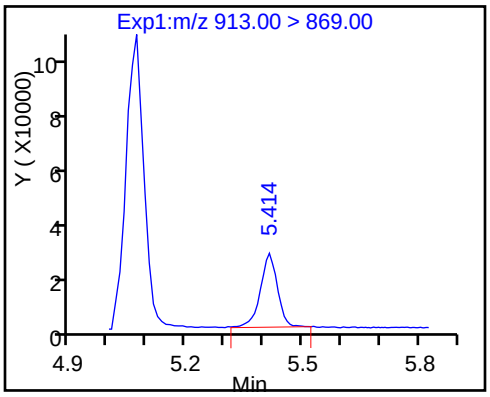
D 44 13C2-PFHxDA



45 Perfluorohexadecanoic acid



46 Perfluorooctadecanoic acid



TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNa\Sacramento\ChromData\A8_N\20170301-40358.b\2017.03.01CURVE_005.d
Lims ID: IC L3 Full
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 01-Mar-2017 11:23:51 ALS Bottle#: 30 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: L3-FULL
Misc. Info.: Plate: 1 Rack: 1
Operator ID: A8-PC\A8 Instrument ID: A8_N
Sublist: chrom-A8_N*sub15

Method: \\ChromNa\Sacramento\ChromData\A8_N\20170301-40358.b\A8_N.m
Limit Group: LC PFC_DOD ICAL
Last Update: 01-Mar-2017 15:43:10 Calib Date: 01-Mar-2017 11:53:47
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A8_N\20170301-40358.b\2017.03.01CURVE_009.d

Column 1 : Det: EXP1
Process Host: XAWRK012

First Level Reviewer: chandrasenas Date: 01-Mar-2017 12:01:48

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C4 PFBA										
217.00 > 172.00	1.555	1.553	0.002		14456536	49.5		98.9	922551	
2 Perfluorobutyric acid										
212.90 > 169.00	1.555	1.558	-0.003	1.000	1286888	5.25		105	14254	
D 3 13C5-PFPeA										
267.90 > 223.00	1.833	1.832	0.001		11537165	49.7		99.4	809835	
4 Perfluoropentanoic acid										
262.90 > 219.00	1.833	1.835	-0.002	1.000	1164625	5.16		103	11285	
5 Perfluorobutanesulfonic acid										
298.90 > 80.00	1.873	1.872	0.001	1.000	1989498	4.83		109		
298.90 > 99.00	1.873	1.872	0.001	1.000	781702		2.55(0.00-0.00)	109		
6 Perfluorohexanoic acid										
313.00 > 269.00	2.129	2.133	-0.004	1.000	966638	5.30		106	49503	
D 7 13C2 PFHxA										
315.00 > 270.00	2.138	2.134	0.004		10261028	48.7		97.3	342136	
10 Perfluoroheptanoic acid										
363.00 > 319.00	2.471	2.474	-0.003	1.000	941301	4.96		99.1	8016	
D 9 13C4-PFHpA										
367.00 > 322.00	2.471	2.475	-0.004		9817002	50.9		102	288379	
8 Perfluorohexanesulfonic acid										
399.00 > 80.00	2.456	2.485	-0.029	1.000	1348890	4.56		100		
D 11 18O2 PFHxS										
403.00 > 84.00	2.487	2.489	-0.002		13610529	46.8		98.9	351937	
D 12 M2-6:2FTS										
429.00 > 409.00	2.806	2.805	0.001		3657293	47.4		99.8		
13 Sodium 1H,1H,2H,2H-perfluorooctane										
427.00 > 407.00	2.798	2.807	-0.009	1.000	347809	4.96		105		

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
15 Perfluorooctanoic acid										M
413.00 > 369.00	2.829	2.835	-0.006	1.000	1102619	5.15		103	10643	M
413.00 > 169.00	2.829	2.835	-0.006	1.000	620161		1.78(0.90-1.10)	103	22054	M
D 14 13C4 PFOA										
417.00 > 372.00	2.829	2.835	-0.006		10473721	51.1		102	311740	
16 Perfluoroheptanesulfonic Acid										
449.00 > 80.00	2.845	2.842	0.003	1.000	1268398	5.17		109		
17 Perfluorooctane sulfonic acid										M
499.00 > 80.00	3.171	3.145	0.026	1.000	1092724	4.67		101	18758	
499.00 > 99.00	3.196	3.145	0.051	1.008	254615		4.29(0.90-1.10)	101	16421	M
20 Perfluorononanoic acid										
463.00 > 419.00	3.205	3.202	0.003	1.000	858327	5.38		108	23748	
D 18 13C4 PFOS										
503.00 > 80.00	3.196	3.204	-0.008		11369327	47.1		98.4	321748	
D 19 13C5 PFNA										
468.00 > 423.00	3.205	3.208	-0.003		8821496	49.6		99.2	242559	
D 26 M2-8:2FTS										
529.00 > 509.00	3.548	3.545	0.003		4555474	49.2		103		
25 Sodium 1H,1H,2H,2H-perfluorooctane										
527.00 > 507.00	3.539	3.546	-0.007	0.998	444929	4.98		104		
D 21 13C8 FOSA										
506.00 > 78.00	3.556	3.559	-0.003		18858766	51.4		103	371997	
24 Perfluorodecanoic acid										
513.00 > 469.00	3.556	3.560	-0.004	1.000	784974	4.99		99.8	29400	
D 23 13C2 PFDA										
515.00 > 470.00	3.556	3.560	-0.004		8688810	52.1		104	216415	
22 Perfluorooctane Sulfonamide										
498.00 > 78.00	3.556	3.561	-0.005	1.000	1747629	5.16		103	92835	
D 27 d3-NMeFOSAA										
573.00 > 419.00	3.707	3.710	-0.003		4251681	49.9		99.8		
28 N-methyl perfluorooctane sulfonami										
570.00 > 419.00	3.707	3.713	-0.006	1.000	424299	5.14		103		
29 Perfluorodecane Sulfonic acid										
599.00 > 80.00	3.861	3.866	-0.005	1.000	717648	5.07		105		
D 32 d5-NEtFOSAA										
589.00 > 419.00	3.869	3.875	-0.006		4300641	52.9		106		
D 30 13C2 PFUnA										
565.00 > 520.00	3.869	3.876	-0.007		6730080	51.5		103	147236	
31 Perfluoroundecanoic acid										
563.00 > 519.00	3.878	3.878	0.0	1.000	676308	4.96		99.1	20230	
33 N-ethyl perfluorooctane sulfonamid										
584.00 > 419.00	3.878	3.883	-0.005	1.002	385576	4.92		98.5		
D 34 d-N-MeFOSA-M										
515.00 > 169.00	4.047	4.050	-0.003		4436424	50.4		101		
35 MeFOSA										
512.00 > 169.00	4.056	4.057	-0.001	1.000	404698	4.88		97.5		
37 Perfluorododecanoic acid										
613.00 > 569.00	4.161	4.162	-0.001	1.000	578671	4.99		99.8	4705	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 36 13C2 PFDoA										
615.00 > 570.00	4.161	4.164	-0.003		6339474	51.1		102	145230	
D 38 d-N-EtFOSA-M										
531.00 > 169.00	4.228	4.235	-0.007		4273681	50.1		100		
39 N-ethylperfluoro-1-octanesulfonami										
526.00 > 169.00	4.237	4.242	-0.005	1.000	425282	5.06		101		
41 Perfluorotridecanoic acid										
663.00 > 619.00	4.421	4.424	-0.003	1.000	562473	5.08		102	11889	
D 43 13C2-PFTeDA										
715.00 > 670.00	4.655	4.655	0.0		13496732	52.1		104	332789	
42 Perfluorotetradecanoic acid										
712.50 > 668.90	4.655	4.657	-0.002	1.000	1324493	5.31		106	11007	
713.00 > 169.00	4.645	4.657	-0.012	0.998	177791		7.45(0.00-0.00)	106	28707	
D 44 13C2-PFHxDA										
815.00 > 770.00	5.057	5.057	0.0		6378393	51.0		102	93636	
45 Perfluorohexadecanoic acid										
813.00 > 769.00	5.057	5.059	-0.002	1.000	636153	5.04		101	676	
46 Perfluorooctadecanoic acid										
913.00 > 869.00	5.398	5.399	-0.001	1.000	451116	4.96		99.2	634	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

LCPFC_FULL-L3_00001 Amount Added: 1.00 Units: mL

Report Date: 01-Mar-2017 15:43:11 Chrom Revision: 2.2 03-Feb-2017 15:35:04

TestAmerica Sacramento

Data File: \\ChromNa\Sacramento\ChromData\A8_N\20170301-40358.b\2017.03.01CURVE_005.d

Injection Date: 01-Mar-2017 11:23:51 Instrument ID: A8_N

Lims ID: IC L3 Full

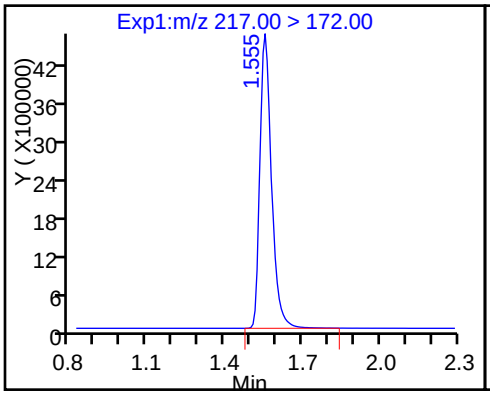
Client ID:

Operator ID: A8-PC\A8 ALS Bottle#: 30 Worklist Smp#: 4

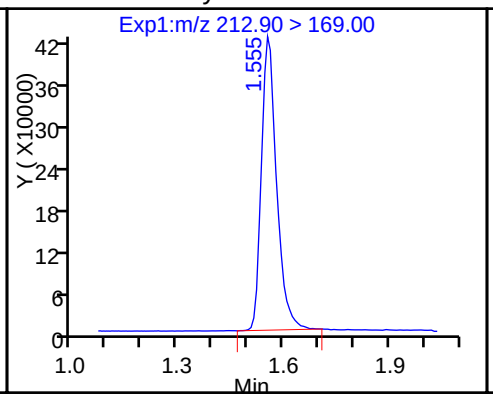
Injection Vol: 2.0 ul Dil. Factor: 1.0000

Method: A8_N Limit Group: LC PFC_DOD ICAL

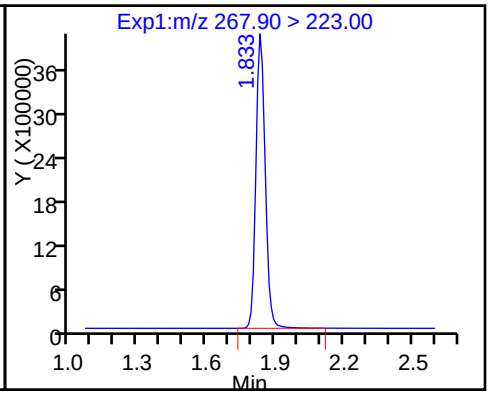
D 1 13C4 PFBA



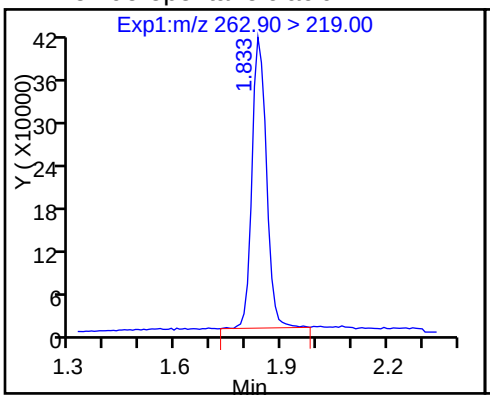
2 Perfluorobutyric acid



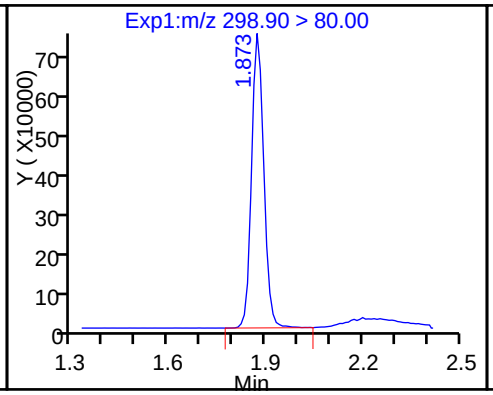
D 3 13C5-PFPeA



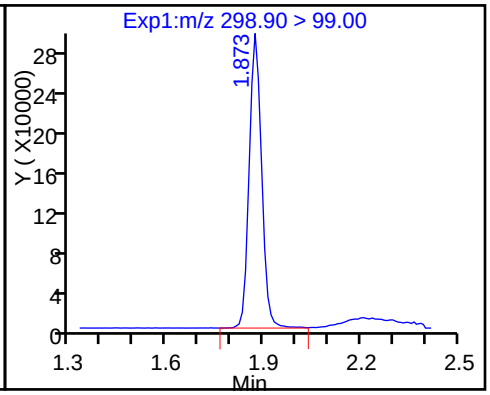
4 Perfluoropentanoic acid



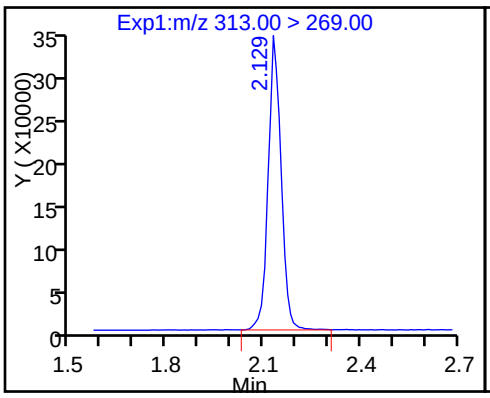
5 Perfluorobutanesulfonic acid



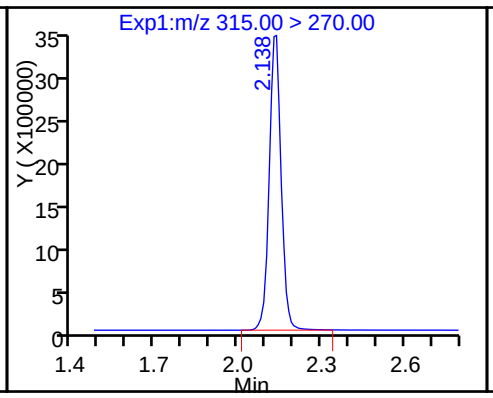
5 Perfluorobutanesulfonic acid



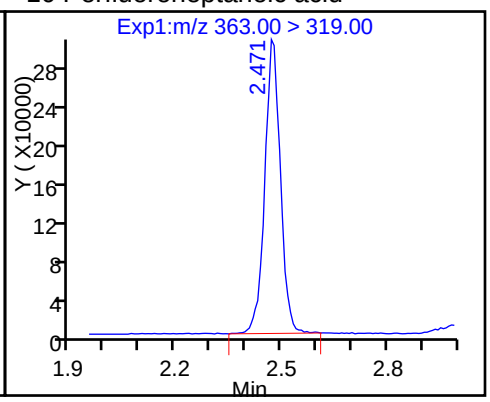
6 Perfluorohexanoic acid



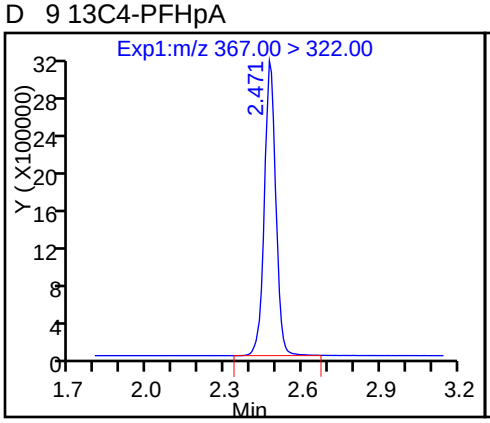
D 7 13C2 PFHxA



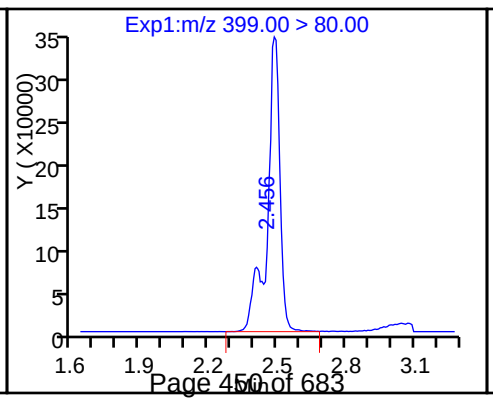
10 Perfluoroheptanoic acid



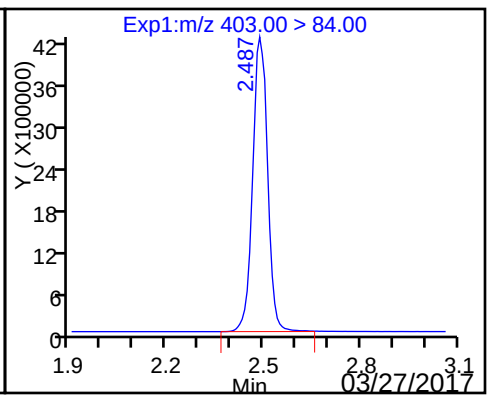
D 9 13C4-PFHpA



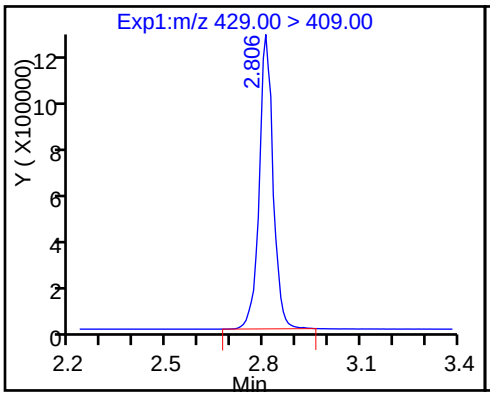
8 Perfluorohexanesulfonic acid



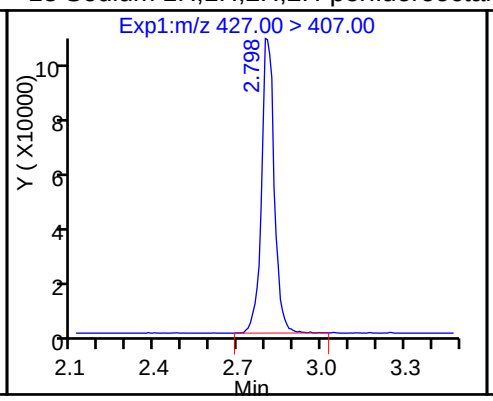
D 11 18O2 PFHxS



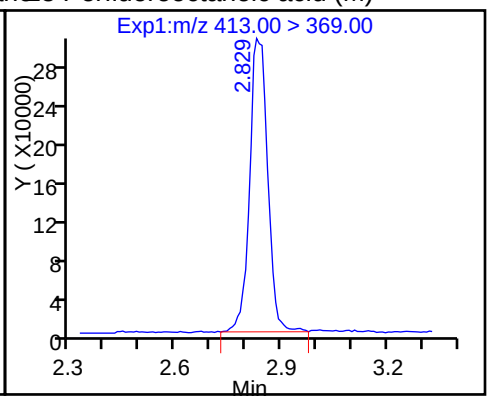
D 12 M2-6:2FTS



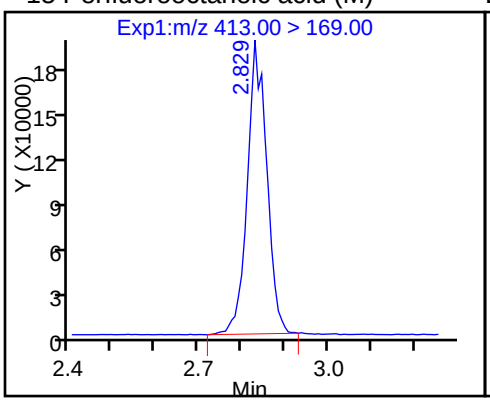
13 Sodium 1H,1H,2H,2H-perfluorooctane



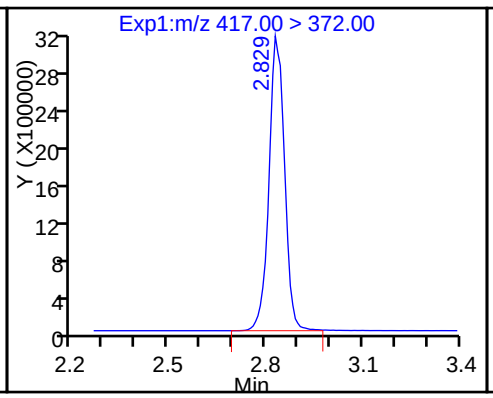
15 Perfluorooctanoic acid (M)



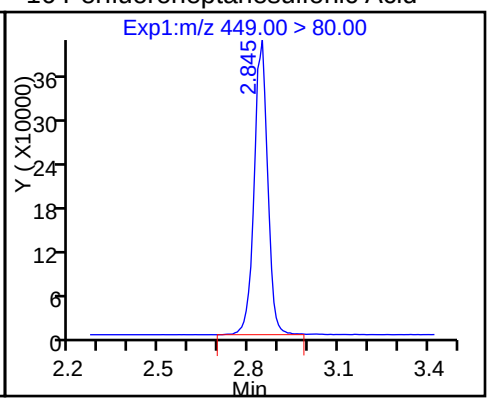
15 Perfluorooctanoic acid (M)



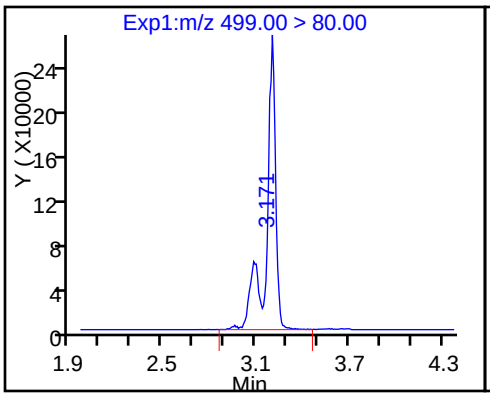
D 14 13C4 PFOA



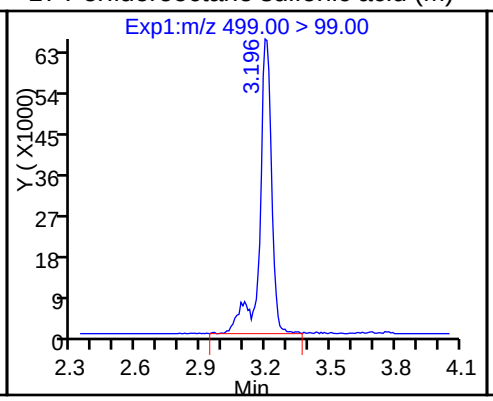
16 Perfluoroheptanesulfonic Acid



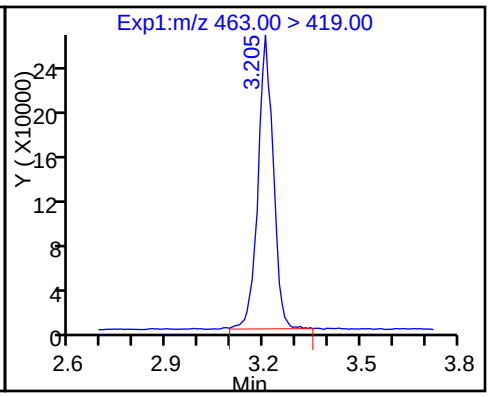
17 Perfluorooctane sulfonic acid



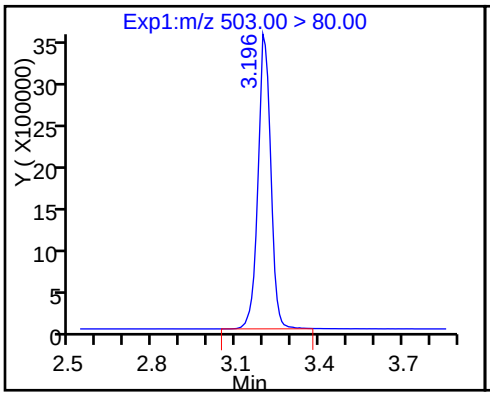
17 Perfluorooctane sulfonic acid (M)



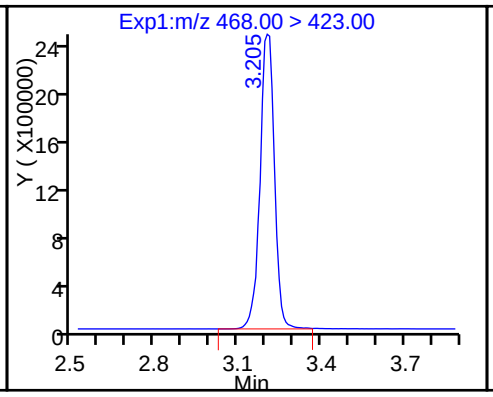
20 Perfluorononanoic acid



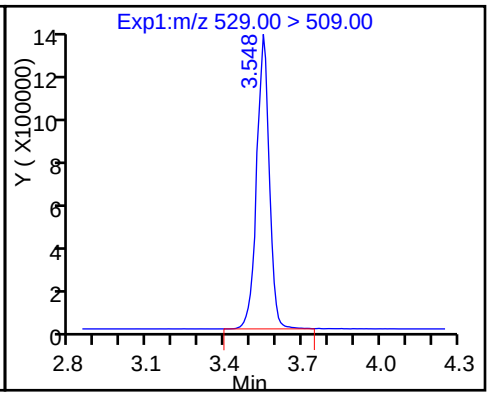
D 18 13C4 PFOS



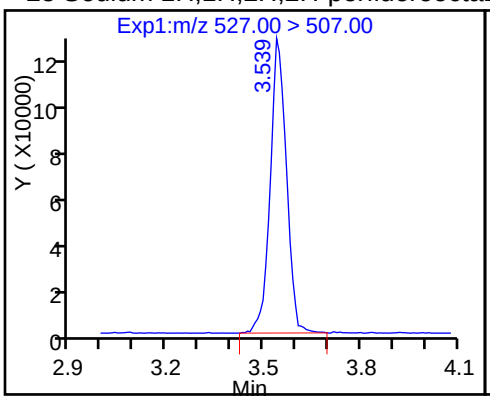
D 19 13C5 PFNA



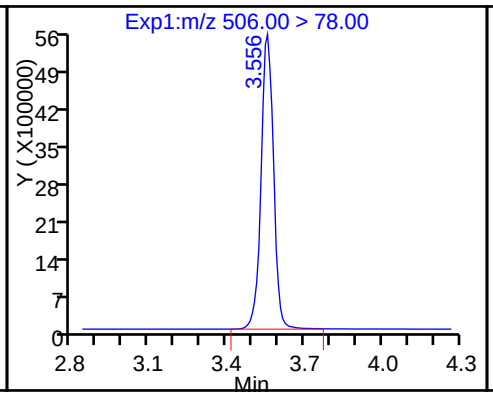
D 26 M2-8:2FTS



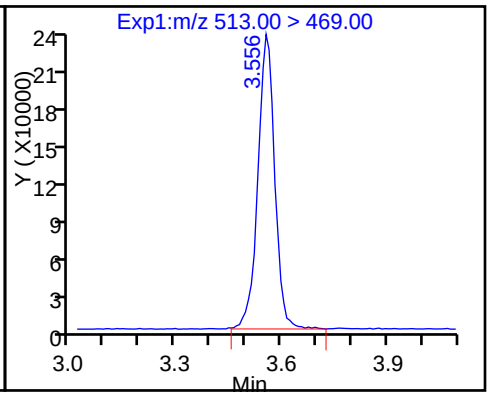
25 Sodium 1H,1H,2H,2H-perfluorooctane



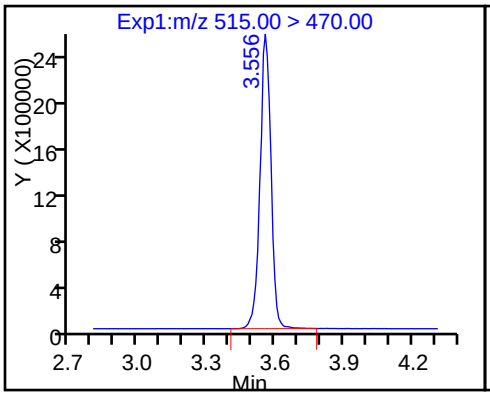
D 21 13C8 FOSA



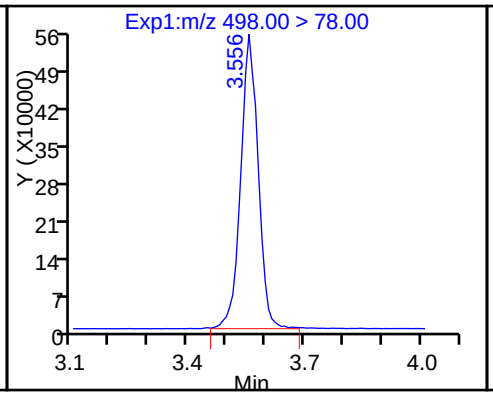
24 Perfluorodecanoic acid



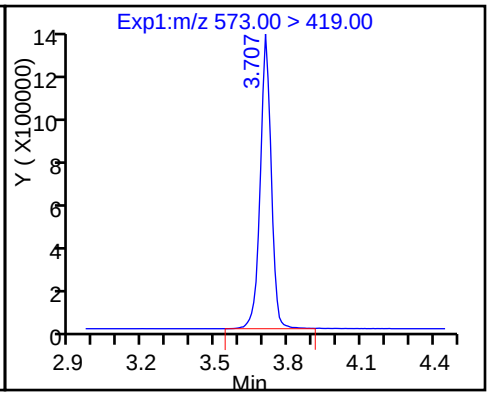
D 23 13C2 PFDA



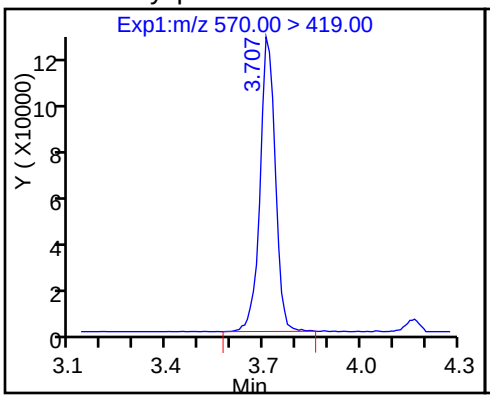
22 Perfluorooctane Sulfonamide



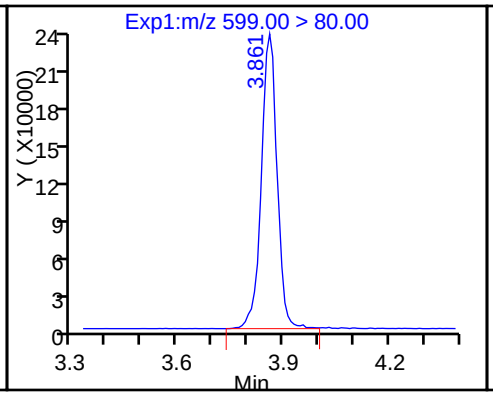
D 27 d3-NMeFOSAA



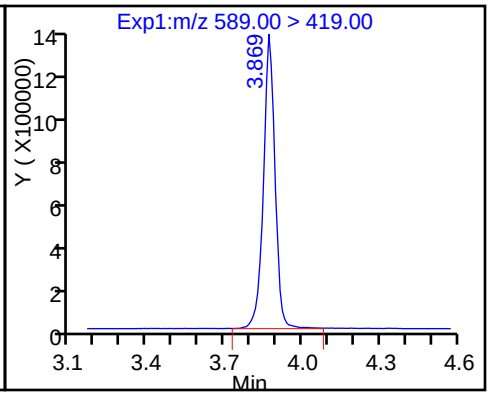
28 N-methyl perfluorooctane sulfonami



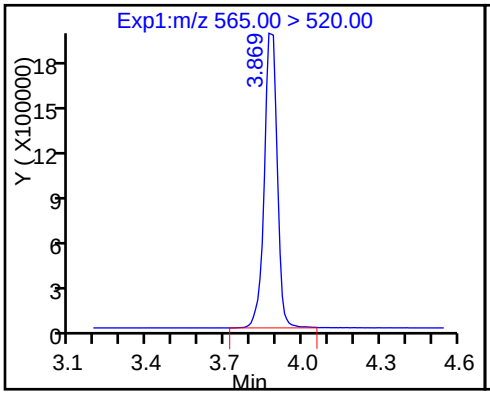
29 Perfluorodecane Sulfonic acid



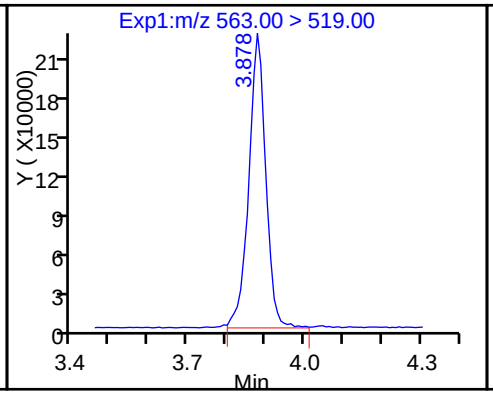
D 32 d5-NEtFOSAA



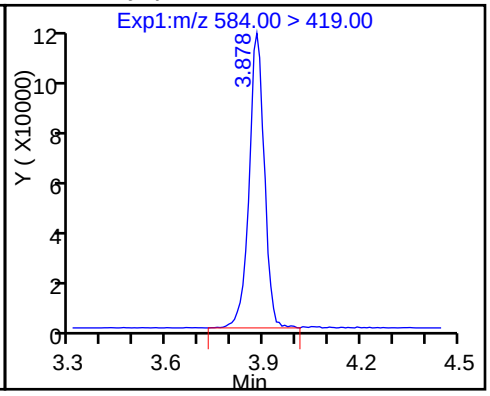
D 30 13C2 PFUnA



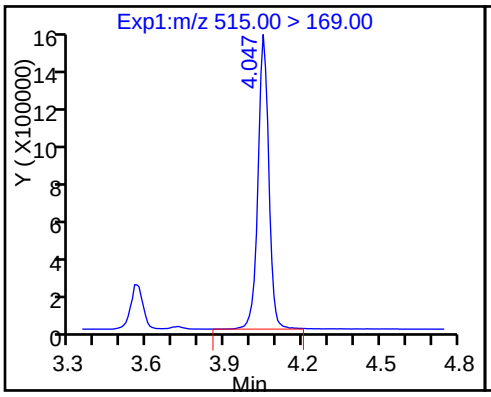
31 Perfluoroundecanoic acid



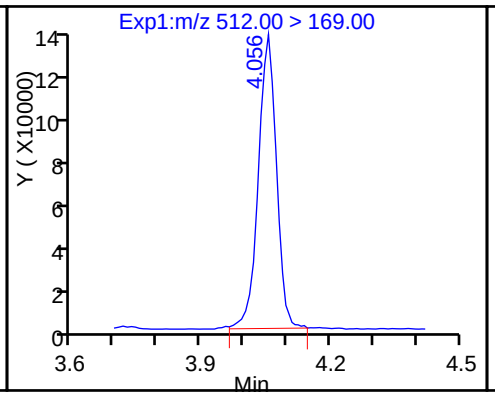
33 N-ethyl perfluorooctane sulfonamid



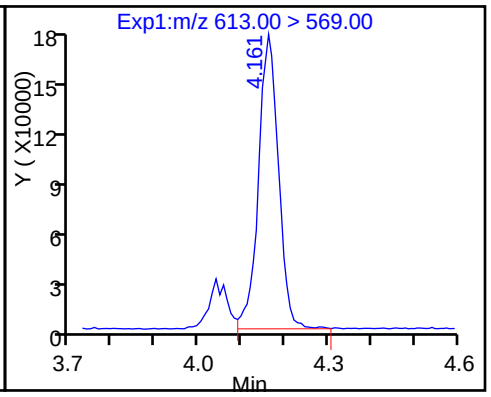
D 34 d-N-MeFOSA-M



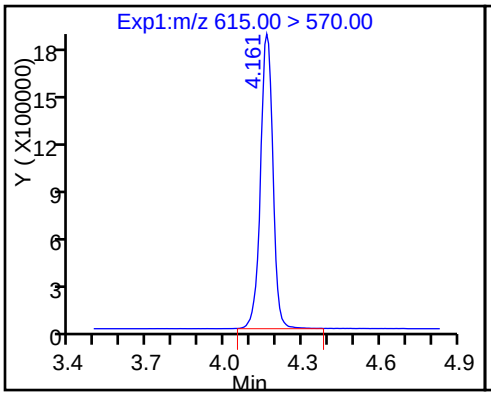
35 MeFOSA



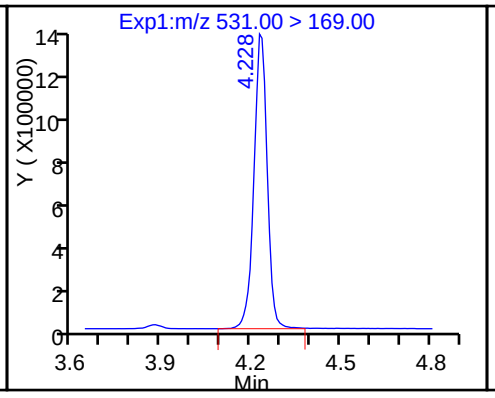
37 Perfluorododecanoic acid



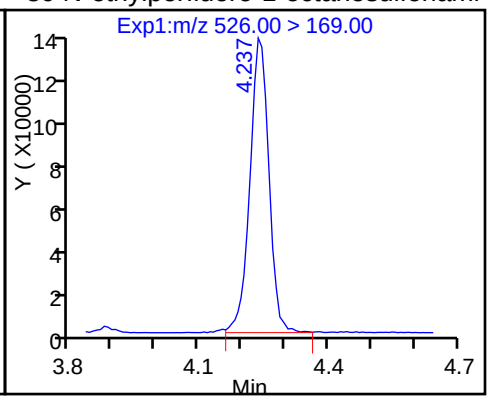
D 36 13C2 PFDoA



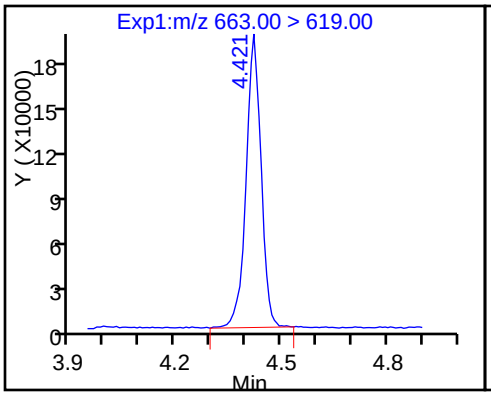
D 38 d-N-EtFOSA-M



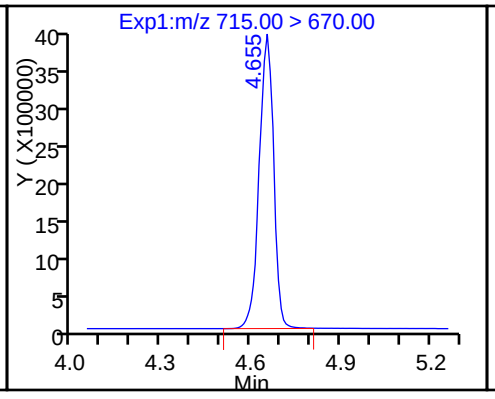
39 N-ethylperfluoro-1-octanesulfonami



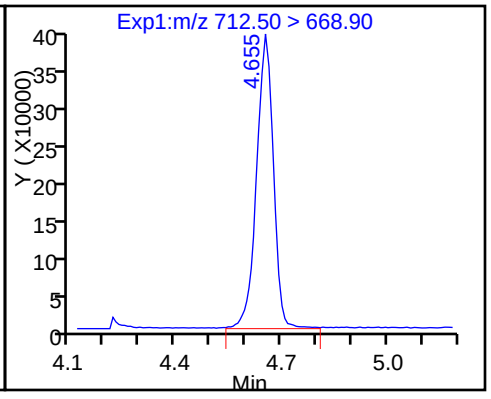
41 Perfluorotridecanoic acid



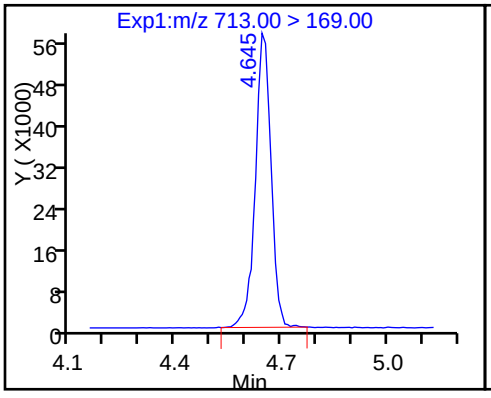
D 43 13C2-PFTeDA



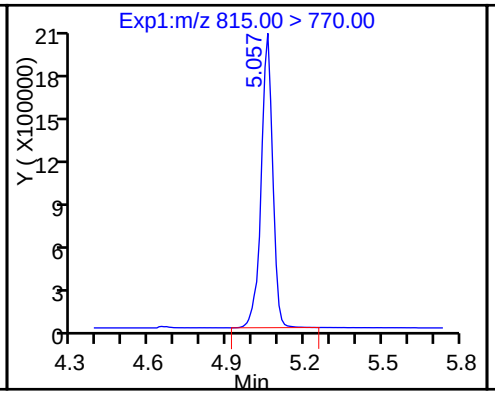
42 Perfluorotetradecanoic acid



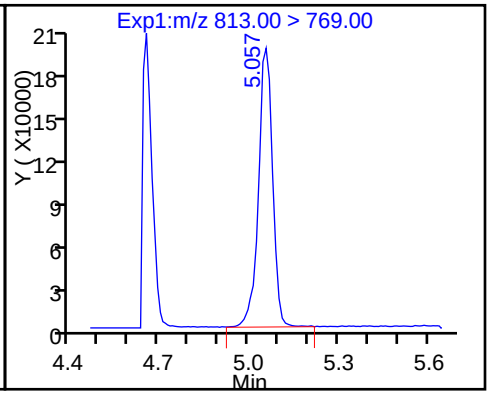
42 Perfluorotetradecanoic acid



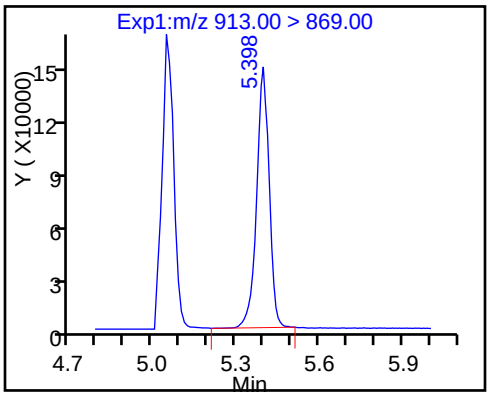
D 44 13C2-PFHxDA



45 Perfluorohexadecanoic acid



46 Perfluorooctadecanoic acid



Manual Integration/User Assign Peak Report

TestAmerica Sacramento

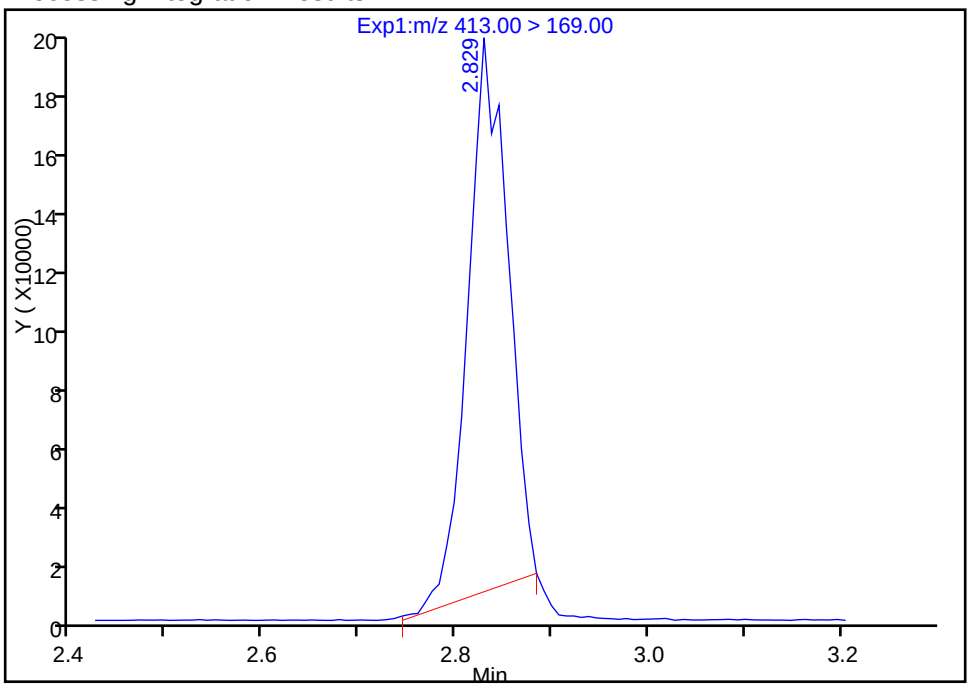
Data File: \\ChromNa\Sacramento\ChromData\A8_N\20170301-40358.b\2017.03.01CURVE_005.d
Injection Date: 01-Mar-2017 11:23:51 Instrument ID: A8_N
Lims ID: IC L3 Full
Client ID:
Operator ID: A8-PC\A8 ALS Bottle#: 30 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Method: A8_N Limit Group: LC PFC_DOD ICAL
Column: Detector EXP1

15 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 2

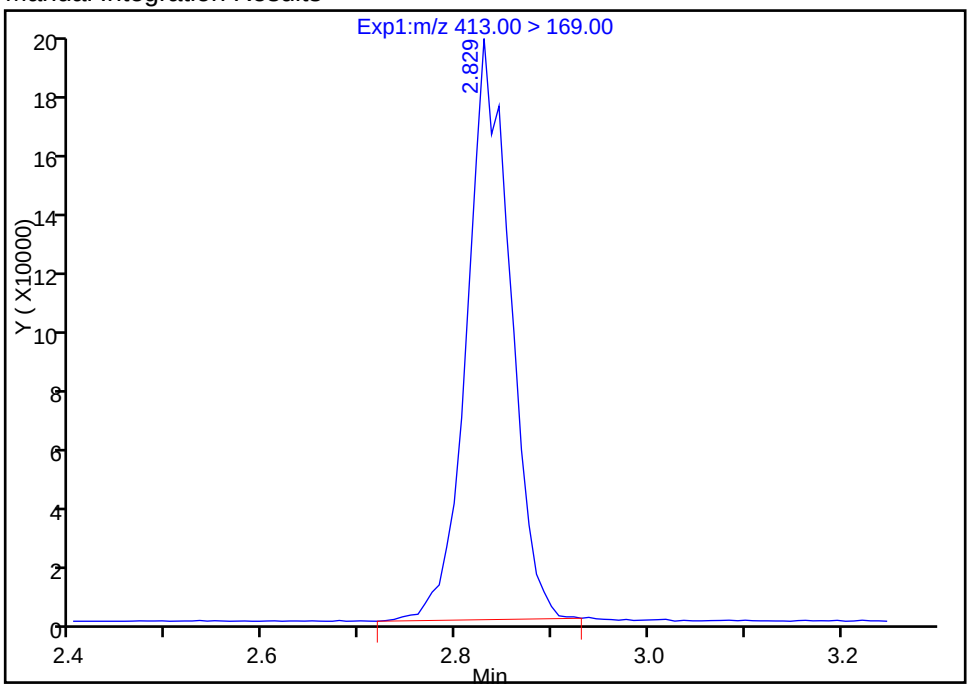
Processing Integration Results

RT: 2.83
Area: 545337
Amount: 5.278222
Amount Units: ng/ml



Manual Integration Results

RT: 2.83
Area: 620161
Amount: 5.152153
Amount Units: ng/ml



Reviewer: chandrasenas, 01-Mar-2017 15:43:10
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Sacramento

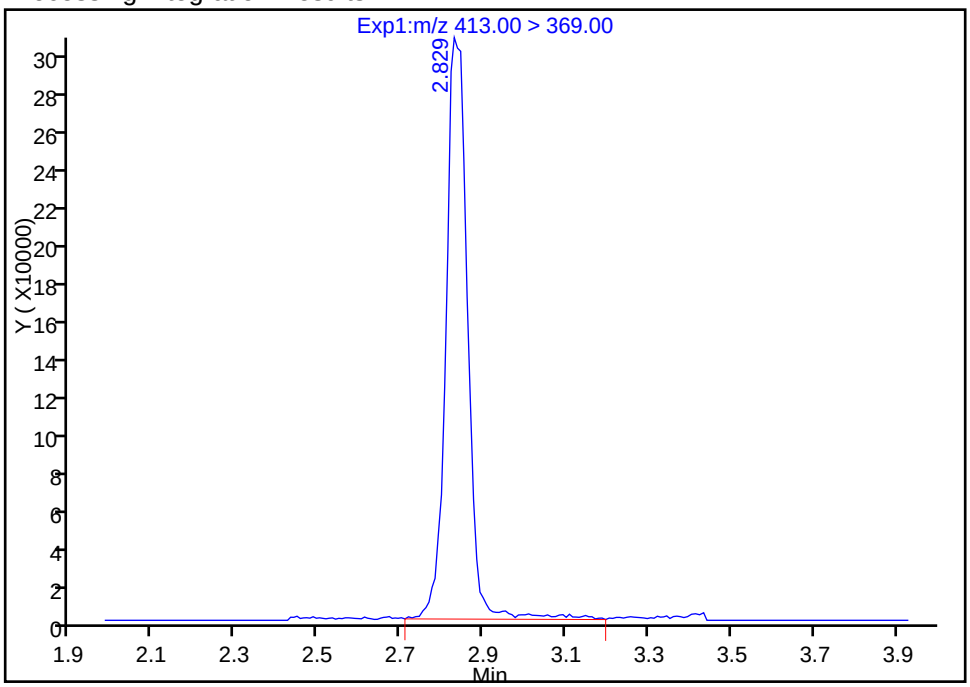
Data File: \\ChromNa\Sacramento\ChromData\A8_N\20170301-40358.b\2017.03.01CURVE_005.d
Injection Date: 01-Mar-2017 11:23:51 Instrument ID: A8_N
Lims ID: IC L3 Full
Client ID:
Operator ID: A8-PC\A8 ALS Bottle#: 30 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Method: A8_N Limit Group: LC PFC_DOD ICAL
Column: Detector EXP1

15 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

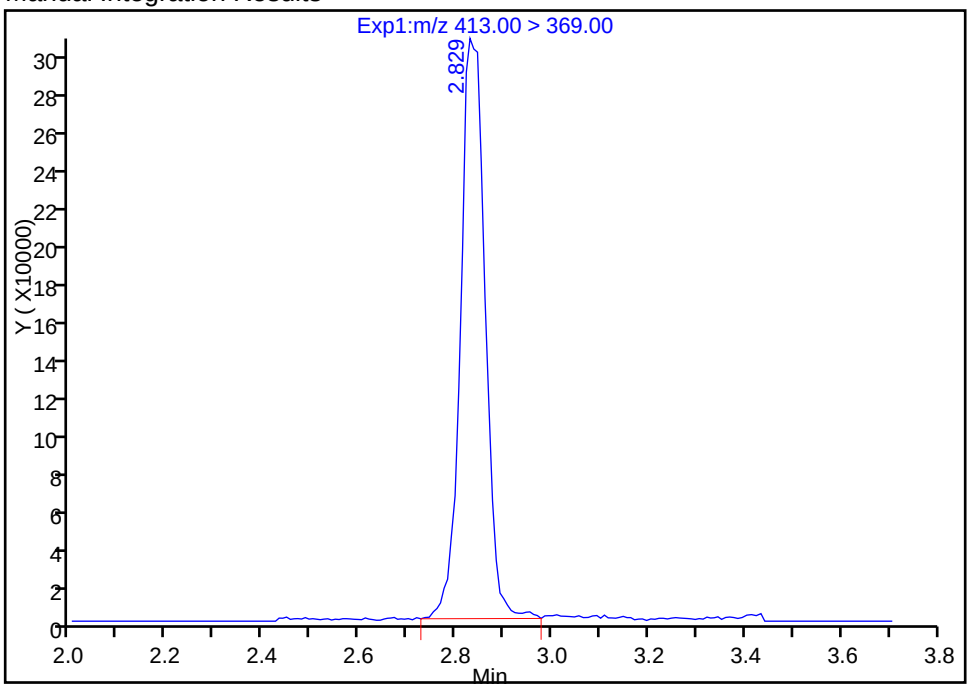
Processing Integration Results

RT: 2.83
Area: 1136820
Amount: 5.278222
Amount Units: ng/ml



Manual Integration Results

RT: 2.83
Area: 1102619
Amount: 5.152153
Amount Units: ng/ml



Reviewer: chandrasenas, 01-Mar-2017 15:43:10
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

TestAmerica Sacramento

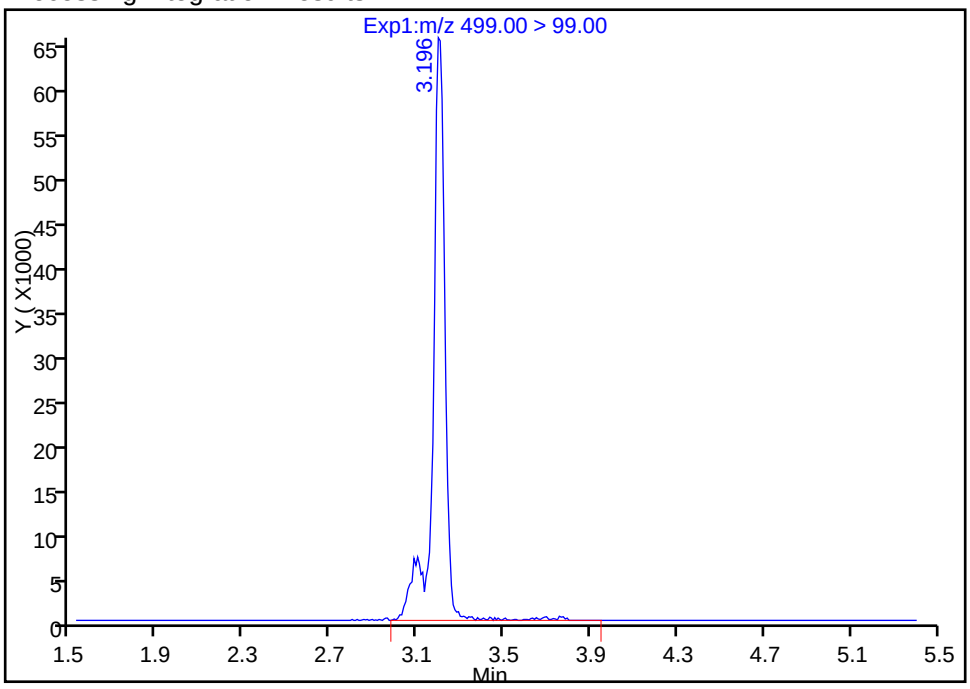
Data File: \\ChromNa\Sacramento\ChromData\A8_N\20170301-40358.b\2017.03.01CURVE_005.d
Injection Date: 01-Mar-2017 11:23:51 Instrument ID: A8_N
Lims ID: IC L3 Full
Client ID:
Operator ID: A8-PC\A8 ALS Bottle#: 30 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Method: A8_N Limit Group: LC PFC_DOD ICAL
Column: Detector EXP1

17 Perfluorooctane sulfonic acid, CAS: 1763-23-1

Signal: 2

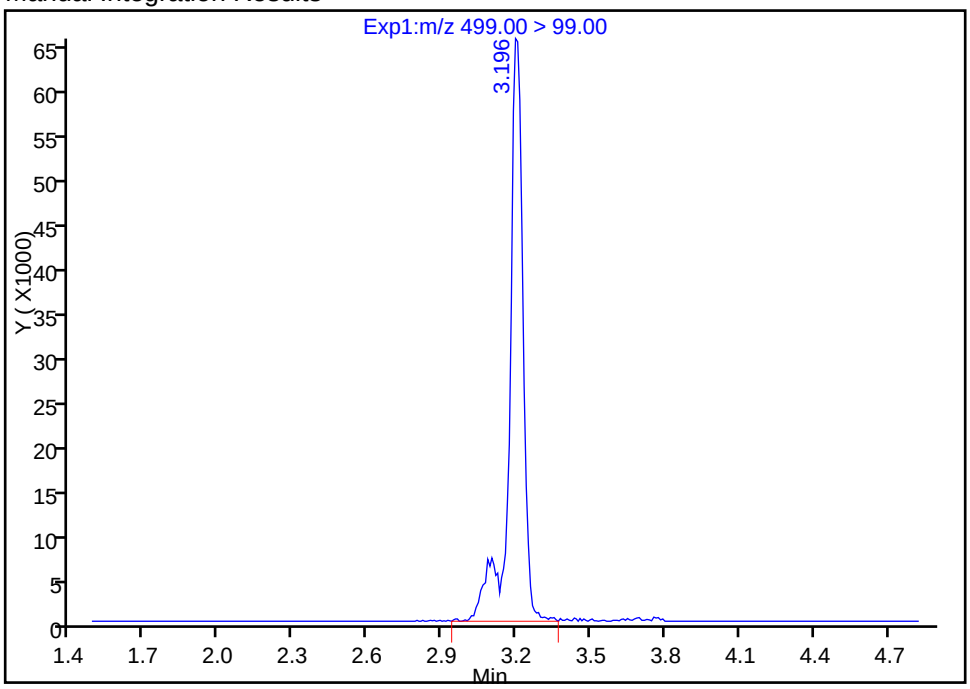
Processing Integration Results

RT: 3.20
Area: 258504
Amount: 4.907745
Amount Units: ng/ml



Manual Integration Results

RT: 3.20
Area: 254615
Amount: 4.671293
Amount Units: ng/ml



Reviewer: chandrasenas, 01-Mar-2017 15:43:10
Audit Action: Manually Integrated Audit Reason: Baseline

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNa\Sacramento\ChromData\A8_N\20170301-40358.b\2017.03.01CURVE_006.d
Lims ID: IC L4 Full
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 01-Mar-2017 11:31:20 ALS Bottle#: 31 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: L4-FULL
Misc. Info.: Plate: 1 Rack: 1
Operator ID: A8-PC\A8 Instrument ID: A8_N
Sublist: chrom-A8_N*sub15

Method: \\ChromNa\Sacramento\ChromData\A8_N\20170301-40358.b\A8_N.m
Limit Group: LC PFC_DOD ICAL
Last Update: 01-Mar-2017 15:43:13 Calib Date: 01-Mar-2017 11:53:47
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A8_N\20170301-40358.b\2017.03.01CURVE_009.d

Column 1 : Det: EXP1
Process Host: XAWRK012

First Level Reviewer: chandrasenas Date: 01-Mar-2017 11:58:53

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C4 PFBA										
217.00 > 172.00	1.554	1.553	0.001		17122661	58.6		117	1074272	
2 Perfluorobutyric acid										
212.90 > 169.00	1.562	1.558	0.004	1.000	5946494	20.5		102	65761	
D 3 13C5-PFPeA										
267.90 > 223.00	1.832	1.832	0.0		13641103	58.7		117	917353	
4 Perfluoropentanoic acid										
262.90 > 219.00	1.841	1.835	0.006	1.000	5283919	19.8		99.0	51812	
5 Perfluorobutanesulfonic acid										
298.90 > 80.00	1.871	1.872	-0.001	1.000	9035699	18.8		106		
298.90 > 99.00	1.871	1.872	-0.001	1.000	3688779		2.45(0.00-0.00)	106		
6 Perfluorohexanoic acid										
313.00 > 269.00	2.134	2.133	0.001	1.000	4191655	19.2		96.2	152557	
D 7 13C2 PFHxA										
315.00 > 270.00	2.134	2.134	0.0		12244217	58.1		116	400533	
10 Perfluoroheptanoic acid										
363.00 > 319.00	2.471	2.474	-0.003	1.000	4154809	19.6		98.2	36084	
D 9 13C4-PFHpA										
367.00 > 322.00	2.479	2.475	0.004		10934944	56.7		113	304443	
8 Perfluorohexanesulfonic acid										M
399.00 > 80.00	2.487	2.485	0.002	1.000	5958886	17.2		94.6		M
D 11 18O2 PFHxS										
403.00 > 84.00	2.487	2.489	-0.002		15910284	54.7		116	422002	
D 12 M2-6:2FTS										
429.00 > 409.00	2.814	2.805	0.009		4091935	53.0		112		
13 Sodium 1H,1H,2H,2H-perfluorooctane										
427.00 > 407.00	2.806	2.807	-0.001	1.000	1476276	19.2		101		

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 14 13C4 PFOA										
417.00 > 372.00	2.837	2.835	0.002		11808824	57.6		115	419758	
15 Perfluorooctanoic acid										
413.00 > 369.00	2.837	2.835	0.002	1.000	4651144	19.3		96.4	85963	
413.00 > 169.00	2.837	2.835	0.002	1.000	2647754		1.76(0.90-1.10)	96.4	107757	
16 Perfluoroheptanesulfonic Acid										
449.00 > 80.00	2.837	2.842	-0.005	1.000	5669268	19.9		105		
17 Perfluorooctane sulfonic acid										
499.00 > 80.00	3.093	3.145	-0.052	1.000	4889351	18.0		97.1	37486	
499.00 > 99.00	3.163	3.145	0.018	1.023	1125132		4.35(0.90-1.10)	97.1	16340	
20 Perfluorononanoic acid										
463.00 > 419.00	3.205	3.202	0.003	1.000	3633207	19.7		98.5	58134	
D 18 13C4 PFOS										
503.00 > 80.00	3.205	3.204	0.001		13187105	54.6		114	308342	
D 19 13C5 PFNA										
468.00 > 423.00	3.214	3.208	0.006		10199601	57.3		115	340360	
D 26 M2-8:2FTS										
529.00 > 509.00	3.539	3.545	-0.006		4873285	52.6		110		
25 Sodium 1H,1H,2H,2H-perfluorooctane										
527.00 > 507.00	3.539	3.546	-0.007	1.000	1931499	20.5		107		
D 21 13C8 FOSA										
506.00 > 78.00	3.565	3.559	0.006		19888389	54.2		108	344996	
D 23 13C2 PFDA										
515.00 > 470.00	3.565	3.560	0.005		9661817	58.0		116	234911	
24 Perfluorodecanoic acid										
513.00 > 469.00	3.556	3.560	-0.004	1.000	3277760	18.7		93.6	124974	
22 Perfluorooctane Sulfonamide										
498.00 > 78.00	3.565	3.561	0.004	1.000	7187955	20.1		101	199090	
D 27 d3-NMeFOSAA										
573.00 > 419.00	3.707	3.710	-0.003		4769931	56.0		112		
28 N-methyl perfluorooctane sulfonami										
570.00 > 419.00	3.717	3.713	0.004	1.003	1695690	18.3		91.5		
29 Perfluorodecane Sulfonic acid										
599.00 > 80.00	3.862	3.866	-0.004	1.000	3002868	18.3		94.8		
D 32 d5-NEtFOSAA										
589.00 > 419.00	3.870	3.875	-0.005		4515915	55.5		111		
D 30 13C2 PFUnA										
565.00 > 520.00	3.879	3.876	0.003		7346047	56.2		112	177174	
31 Perfluoroundecanoic acid										
563.00 > 519.00	3.879	3.878	0.001	1.000	2619295	17.6		87.9	88246	
33 N-ethyl perfluorooctane sulfonamid										
584.00 > 419.00	3.888	3.883	0.005	1.004	1606146	19.5		97.7		
D 34 d-N-MeFOSA-M										
515.00 > 169.00	4.050	4.050	0.0		4579449	52.0		104		
35 MeFOSA										
512.00 > 169.00	4.059	4.057	0.002	1.000	1671133	19.5		97.5		
37 Perfluorododecanoic acid										
613.00 > 569.00	4.165	4.162	0.003	1.000	2353395	19.5		97.4	29732	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 36 13C2 PFDoA										
615.00 > 570.00	4.165	4.164	0.001		6606261	53.3		107	130372	
D 38 d-N-EtFOSA-M										
531.00 > 169.00	4.240	4.235	0.005		4373613	51.3		103		
39 N-ethylperfluoro-1-octanesulfonami										
526.00 > 169.00	4.249	4.242	0.007	1.000	1676481	19.5		97.4		
41 Perfluorotridecanoic acid										
663.00 > 619.00	4.418	4.424	-0.006	1.000	2207561	19.1		95.6	38950	
D 43 13C2-PFTeDA										
715.00 > 670.00	4.652	4.655	-0.003		13623388	52.6		105	303779	
42 Perfluorotetradecanoic acid										
712.50 > 668.90	4.652	4.657	-0.005	1.000	4960846	19.1		95.5	38169	
713.00 > 169.00	4.652	4.657	-0.005	1.000	658342		7.54(0.00-0.00)	95.5	69558	
D 44 13C2-PFHxDA										
815.00 > 770.00	5.057	5.057	0.0		6330845	50.6		101	91907	
45 Perfluorohexadecanoic acid										
813.00 > 769.00	5.057	5.059	-0.002	1.000	2071027	16.5		82.7	2327	
46 Perfluorooctadecanoic acid										
913.00 > 869.00	5.398	5.399	-0.001	1.000	1687895	17.8		89.0	2245	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

LCPFC_FULL-L4_00001 Amount Added: 1.00 Units: mL

Report Date: 01-Mar-2017 15:43:14 Chrom Revision: 2.2 03-Feb-2017 15:35:04

TestAmerica Sacramento

Data File: \\ChromNa\Sacramento\ChromData\A8_N\20170301-40358.b\2017.03.01CURVE_006.d

Injection Date: 01-Mar-2017 11:31:20 Instrument ID: A8_N

Lims ID: IC L4 Full

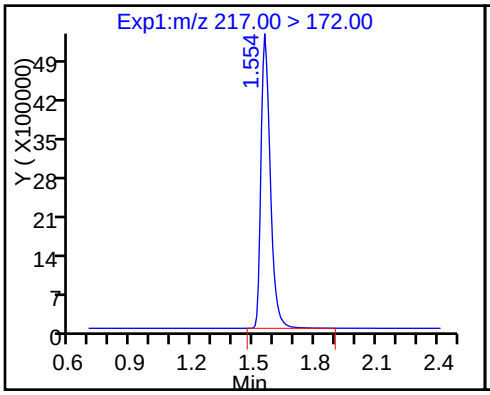
Client ID:

Operator ID: A8-PC\A8 ALS Bottle#: 31 Worklist Smp#: 5

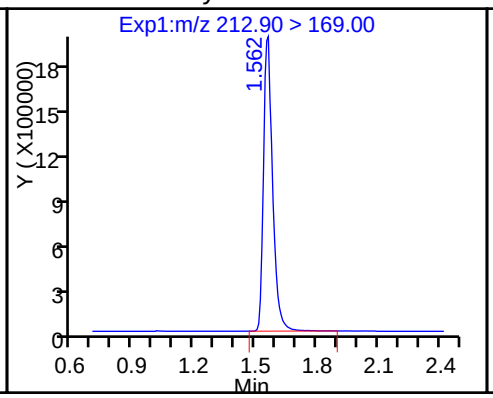
Injection Vol: 2.0 ul Dil. Factor: 1.0000

Method: A8_N Limit Group: LC PFC_DOD ICAL

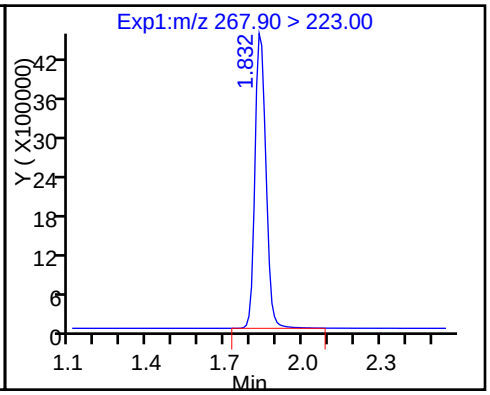
D 1 13C4 PFBA



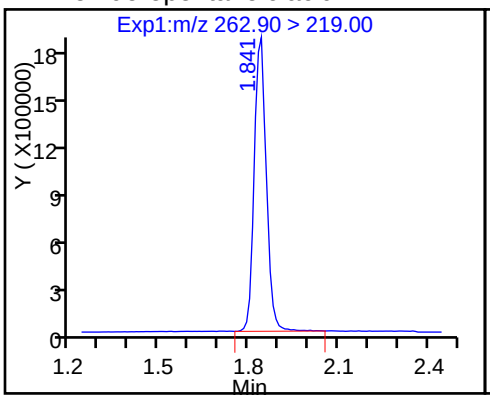
2 Perfluorobutyric acid



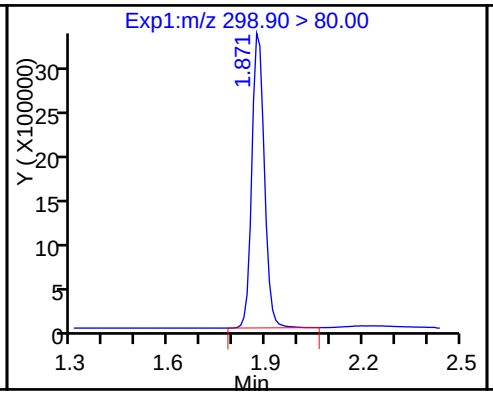
D 3 13C5-PFPeA



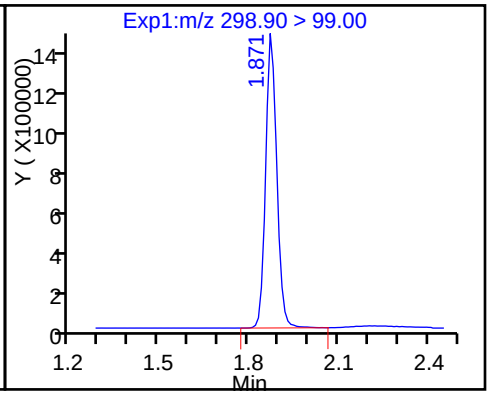
4 Perfluoropentanoic acid



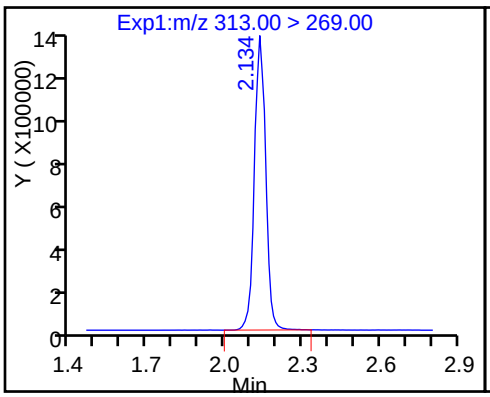
5 Perfluorobutanesulfonic acid



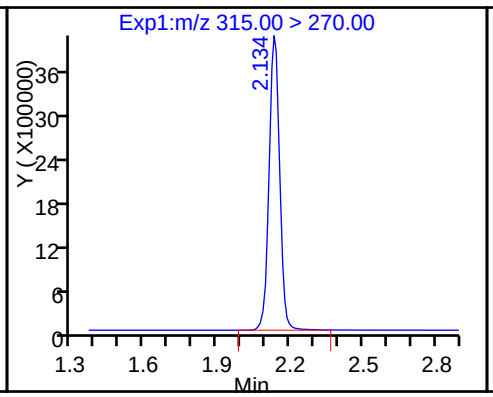
5 Perfluorobutanesulfonic acid



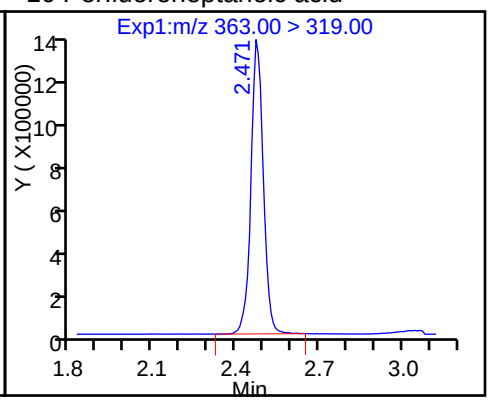
6 Perfluorohexanoic acid



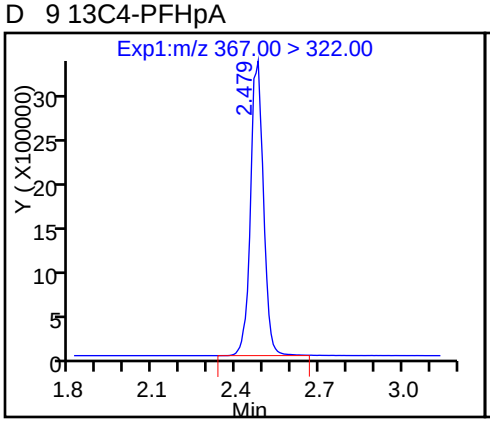
D 7 13C2 PFHxA



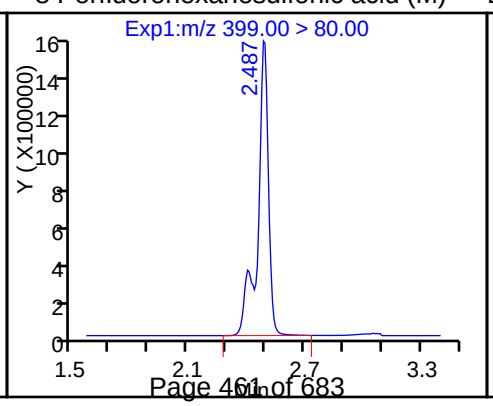
10 Perfluoroheptanoic acid



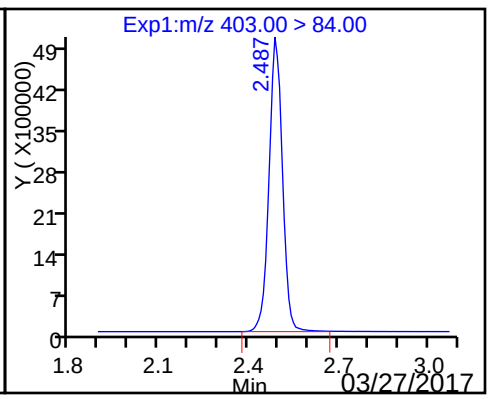
D 9 13C4-PFHpA



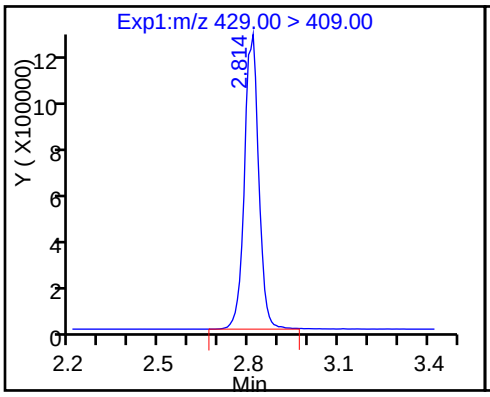
8 Perfluorohexanesulfonic acid (M)



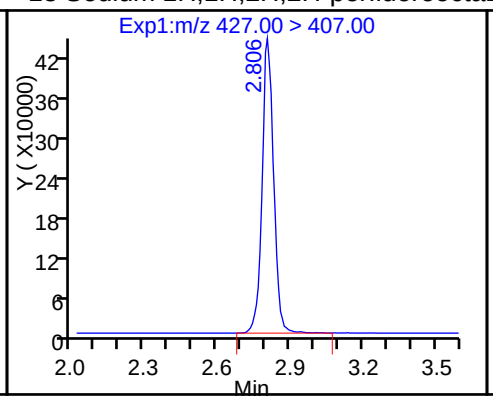
D 11 18O2 PFHxS



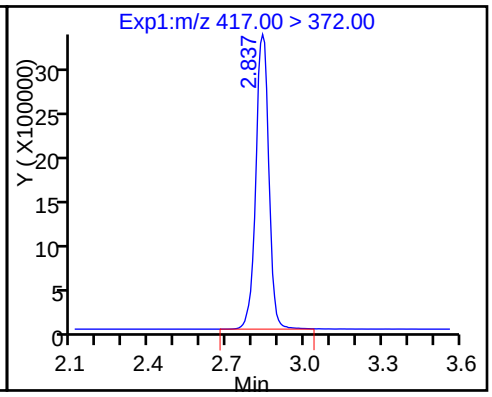
D 12 M2-6:2FTS



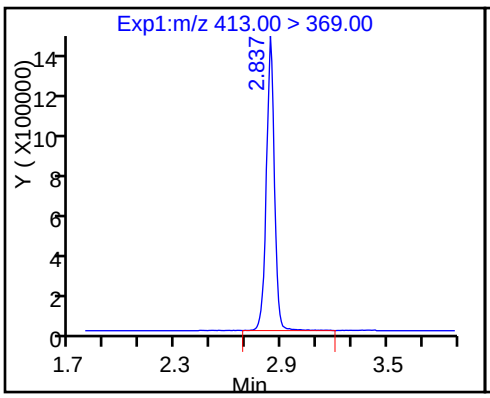
13 Sodium 1H,1H,2H,2H-perfluorooctane



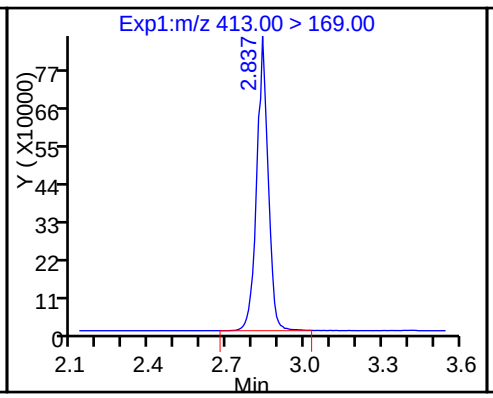
D 14 13C4 PFOA



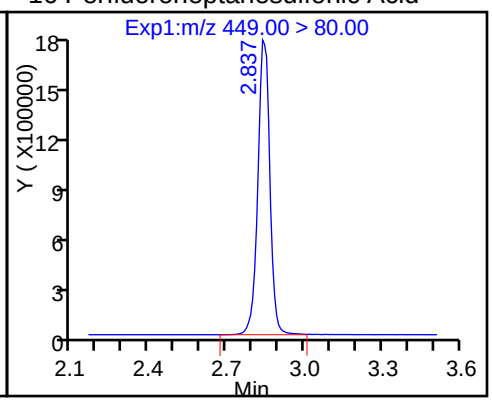
15 Perfluorooctanoic acid



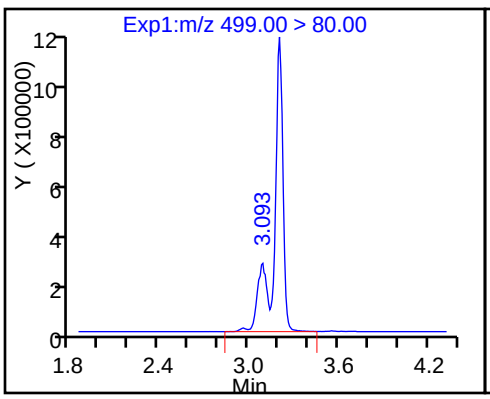
15 Perfluorooctanoic acid



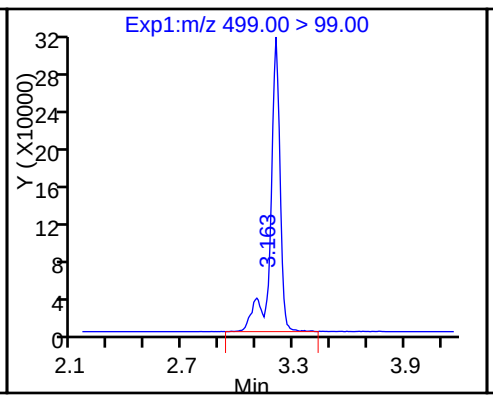
16 Perfluoroheptanesulfonic Acid



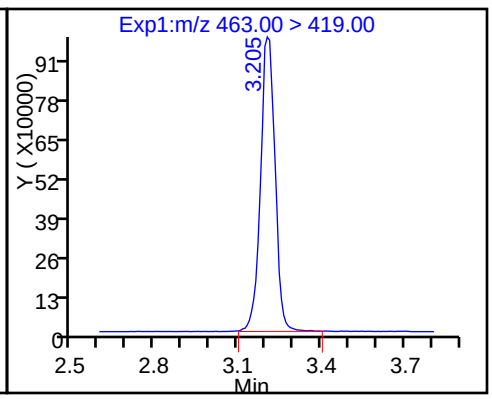
17 Perfluorooctane sulfonic acid



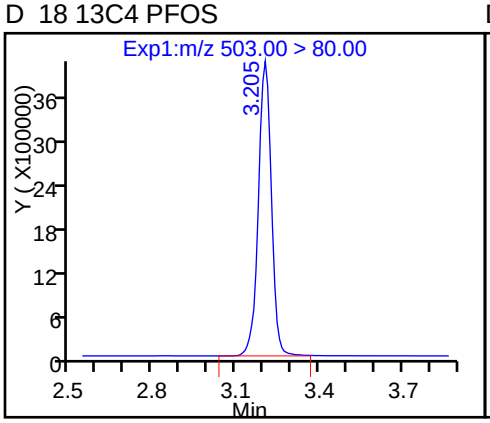
17 Perfluorooctane sulfonic acid



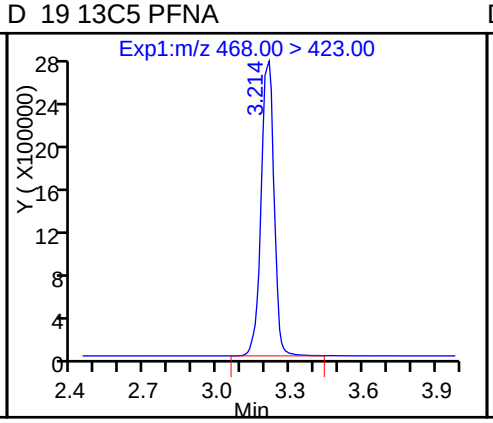
20 Perfluorononanoic acid



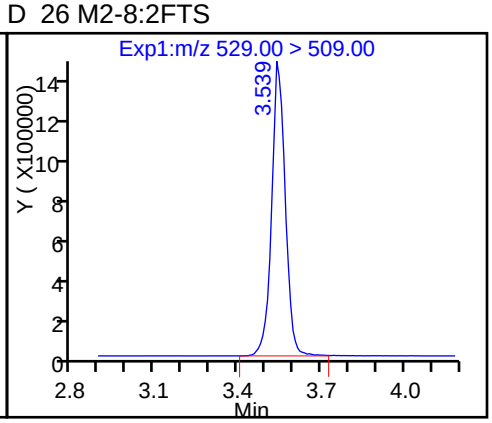
D 18 13C4 PFOS



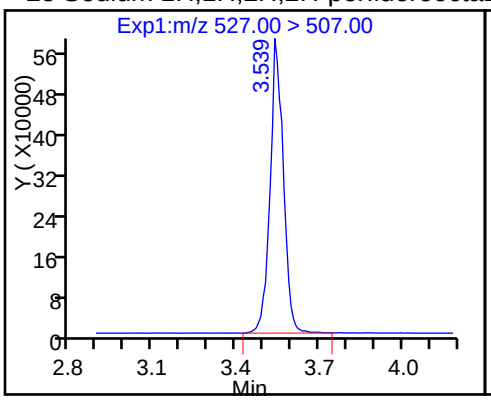
D 19 13C5 PFNA



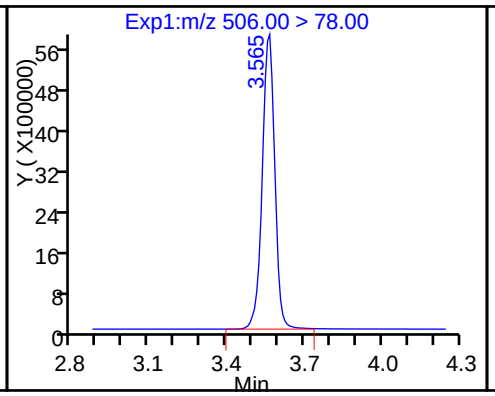
D 26 M2-8:2FTS



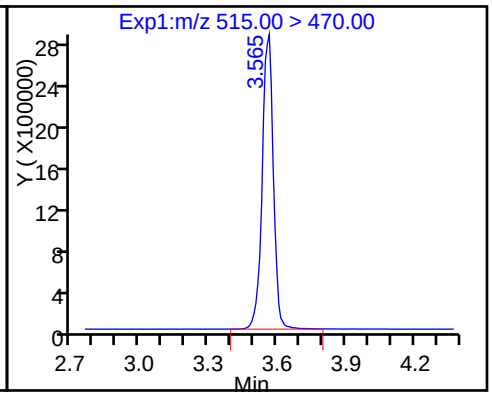
25 Sodium 1H,1H,2H,2H-perfluorooctane



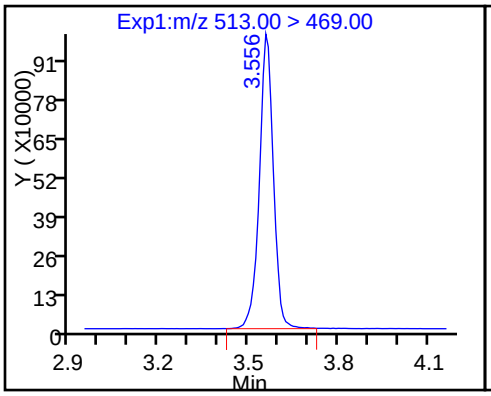
D 21 13C8 FOSA



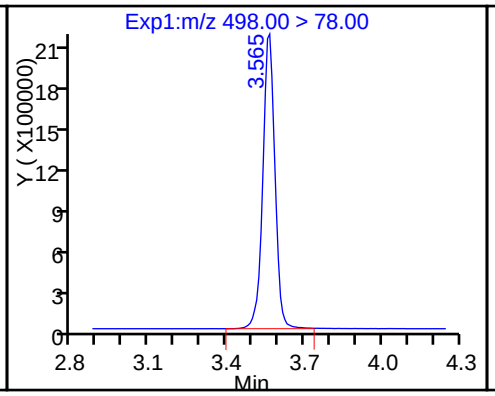
D 23 13C2 PFDA



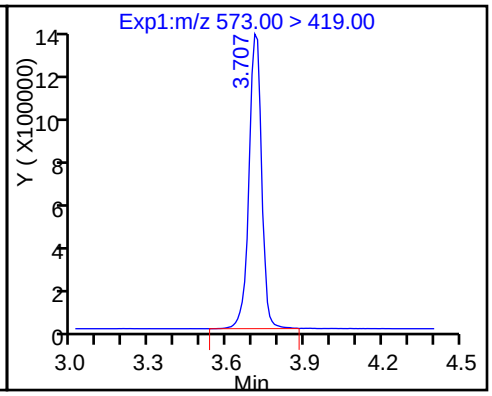
24 Perfluorodecanoic acid



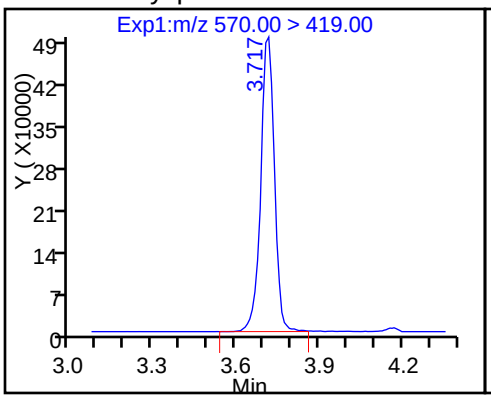
22 Perfluorooctane Sulfonamide



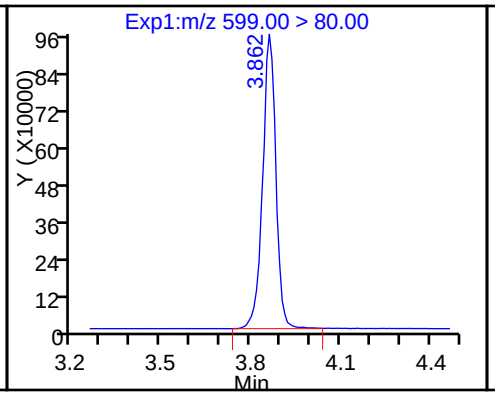
D 27 d3-NMeFOSAA



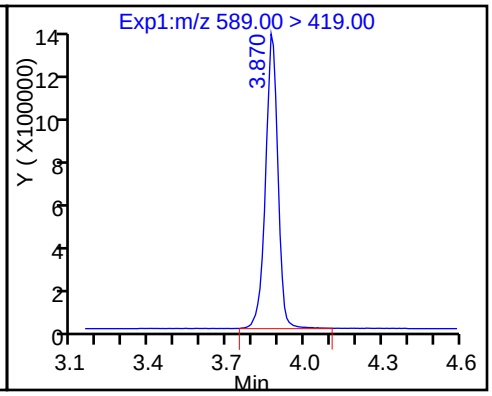
28 N-methyl perfluorooctane sulfonami



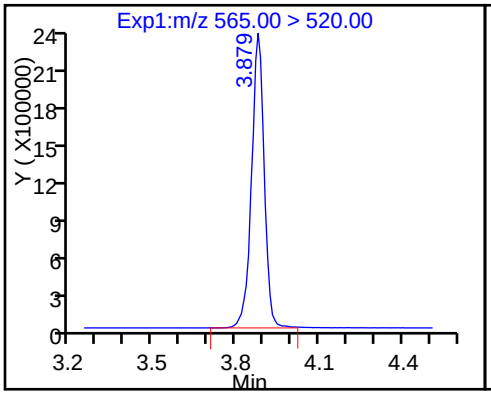
29 Perfluorodecane Sulfonic acid



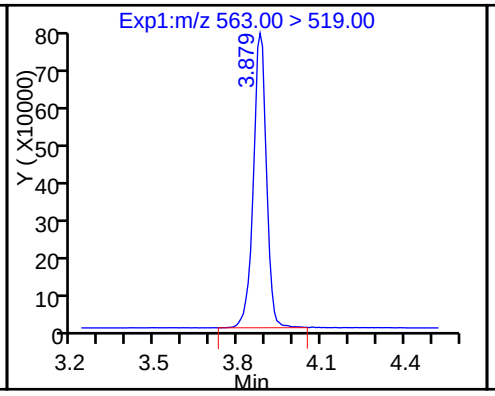
D 32 d5-NEtFOSAA



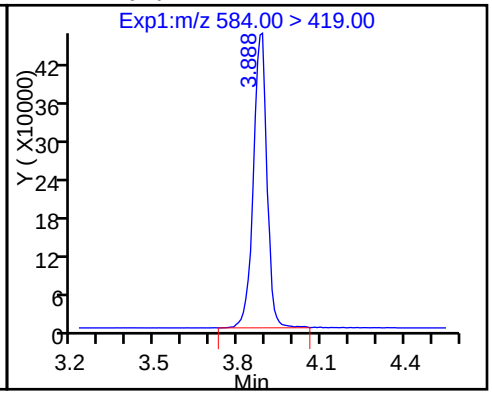
D 30 13C2 PFUnA



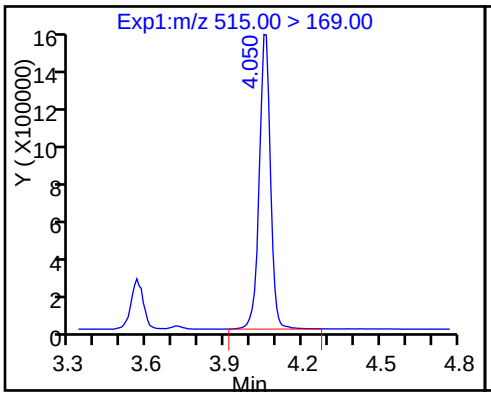
31 Perfluoroundecanoic acid



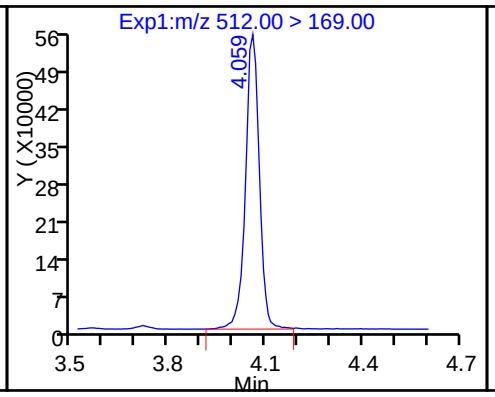
33 N-ethyl perfluorooctane sulfonamid



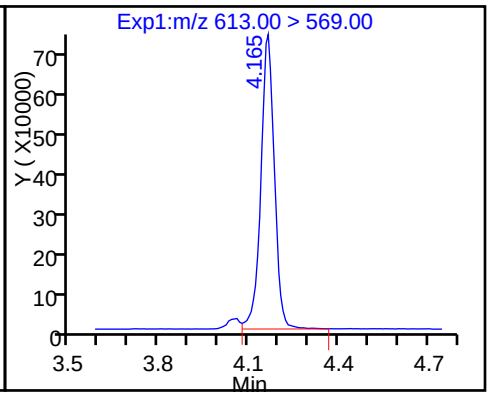
D 34 d-N-MeFOSA-M



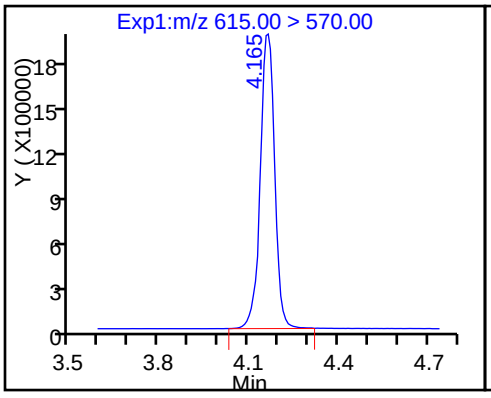
35 MeFOSA



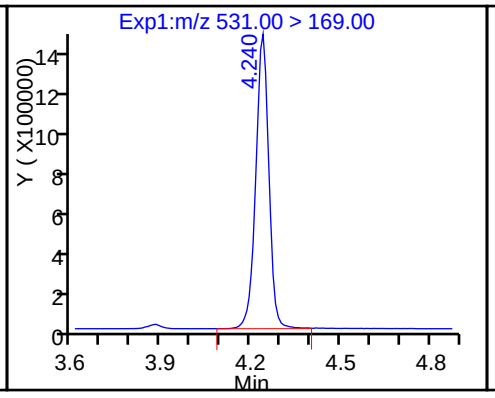
37 Perfluorododecanoic acid



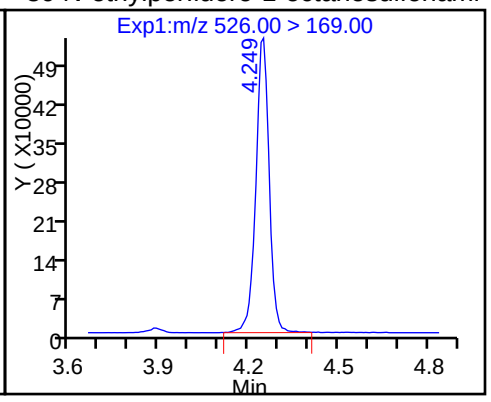
D 36 13C2 PFDoA



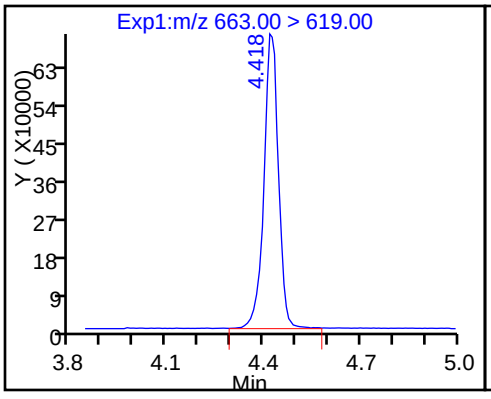
D 38 d-N-EtFOSA-M



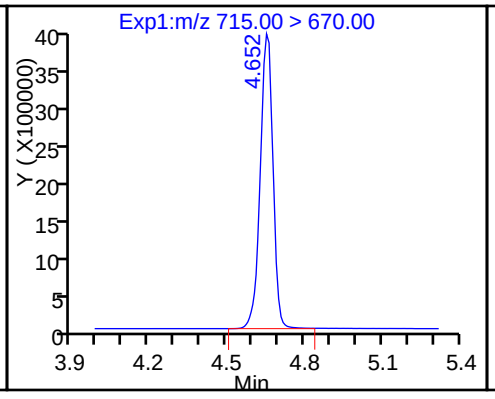
39 N-ethylperfluoro-1-octanesulfonami



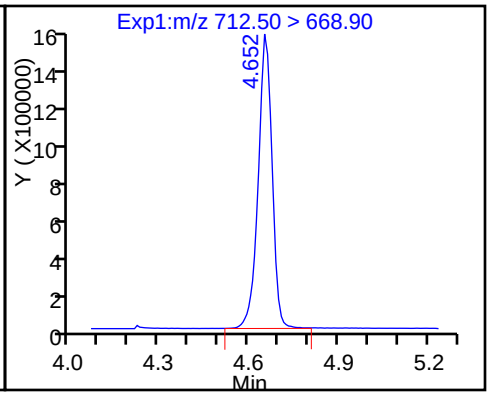
41 Perfluorotridecanoic acid



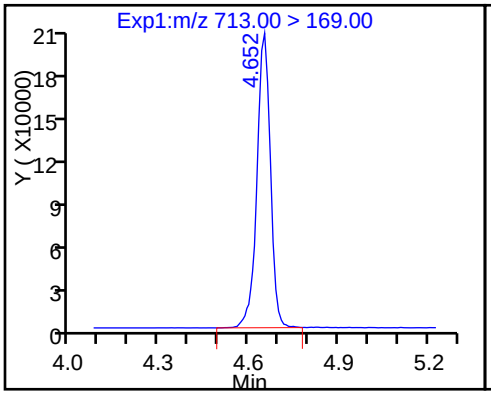
D 43 13C2-PFTeDA



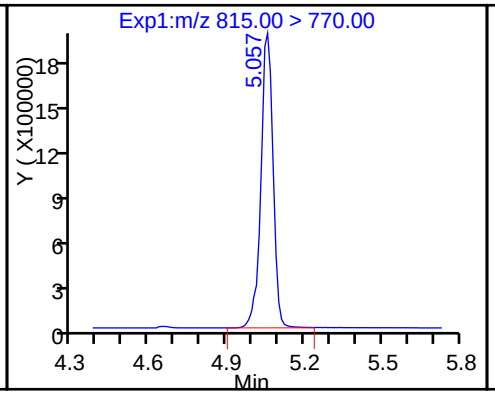
42 Perfluorotetradecanoic acid



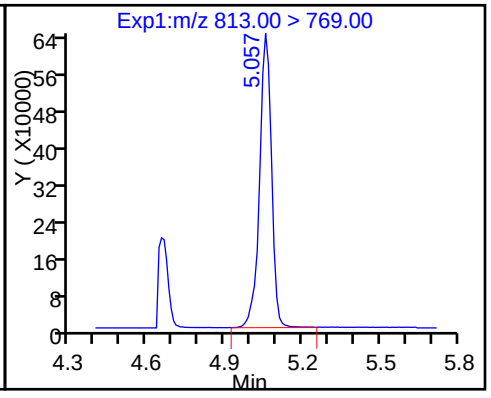
42 Perfluorotetradecanoic acid



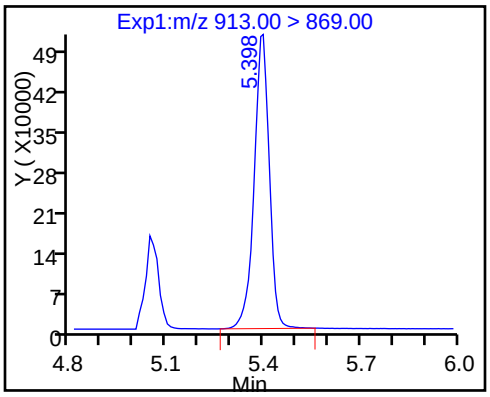
D 44 13C2-PFHxDA



45 Perfluorohexadecanoic acid



46 Perfluorooctadecanoic acid



Manual Integration/User Assign Peak Report

TestAmerica Sacramento

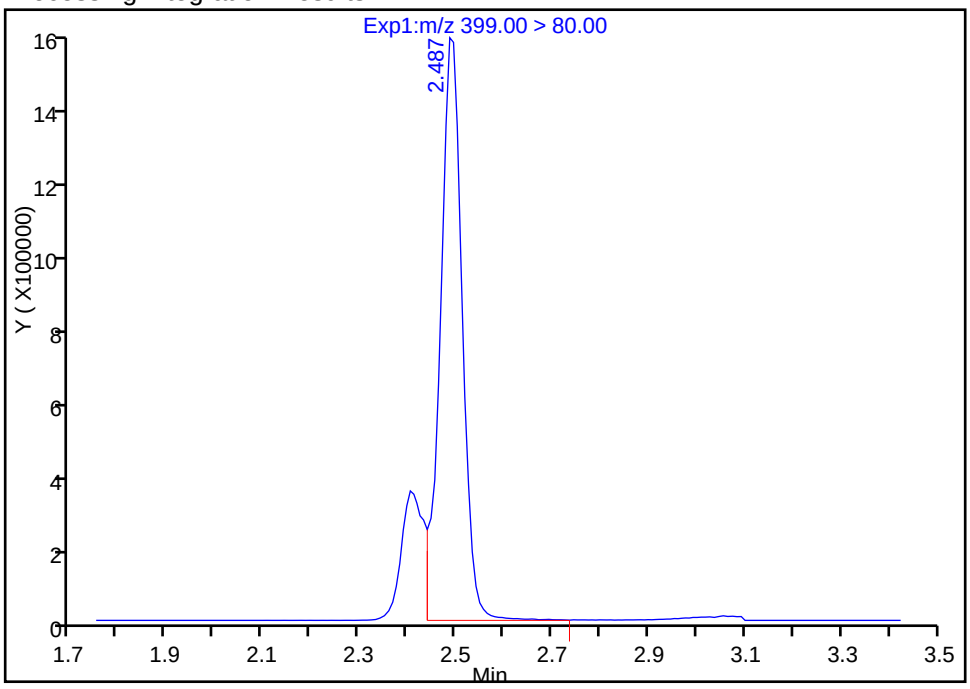
Data File: \\ChromNa\Sacramento\ChromData\A8_N\20170301-40358.b\2017.03.01CURVE_006.d
Injection Date: 01-Mar-2017 11:31:20 Instrument ID: A8_N
Lims ID: IC L4 Full
Client ID:
Operator ID: A8-PC\A8 ALS Bottle#: 31 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Method: A8_N Limit Group: LC PFC_DOD ICAL
Column: Detector EXP1

8 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

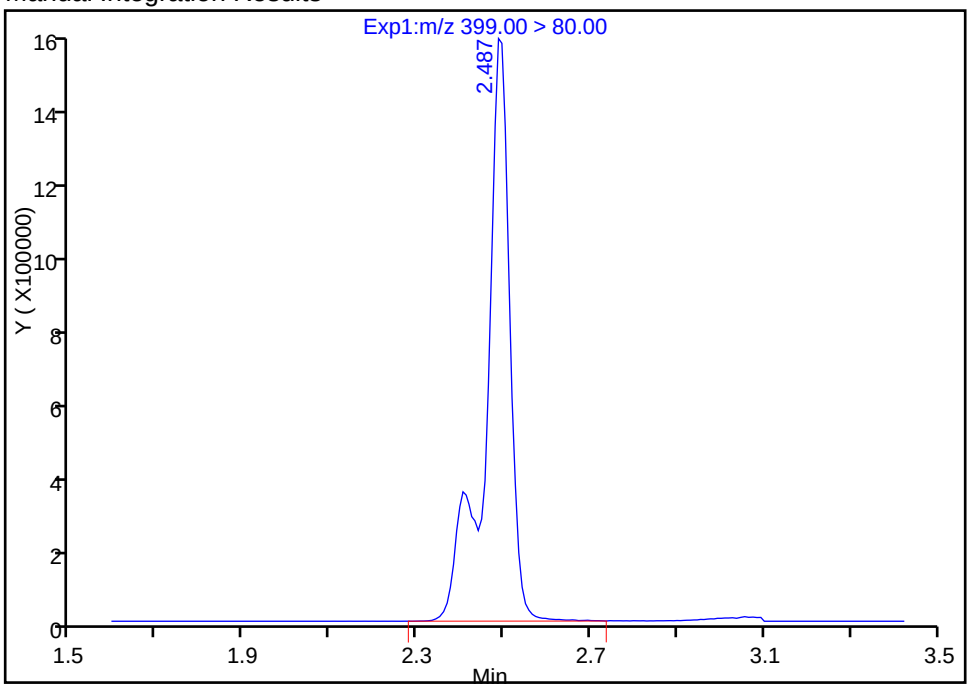
Processing Integration Results

RT: 2.49
Area: 4875110
Amount: 17.771425
Amount Units: ng/ml



Manual Integration Results

RT: 2.49
Area: 5958886
Amount: 17.225343
Amount Units: ng/ml



Reviewer: chandrasenas, 01-Mar-2017 15:43:13
Audit Action: Manually Integrated Audit Reason: Isomers

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNa\Sacramento\ChromData\A8_N\20170301-40358.b\2017.03.01CURVE_007.d
Lims ID: IC L5 Full
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 01-Mar-2017 11:38:49 ALS Bottle#: 32 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: L5-FULL
Misc. Info.: Plate: 1 Rack: 1
Operator ID: A8-PC\A8 Instrument ID: A8_N
Sublist: chrom-A8_N*sub15

Method: \\ChromNa\Sacramento\ChromData\A8_N\20170301-40358.b\A8_N.m
Limit Group: LC PFC_DOD ICAL
Last Update: 01-Mar-2017 15:43:16 Calib Date: 01-Mar-2017 11:53:47
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A8_N\20170301-40358.b\2017.03.01CURVE_009.d

Column 1 : Det: EXP1
Process Host: XAWRK012

First Level Reviewer: chandrasenas Date: 01-Mar-2017 12:02:47

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C4 PFBA										
217.00 > 172.00	1.546	1.553	-0.007		14941160	51.1		102	667479	
2 Perfluorobutyric acid										
212.90 > 169.00	1.554	1.558	-0.004	1.000	13491384	53.3		107	127406	
D 3 13C5-PFPeA										
267.90 > 223.00	1.821	1.832	-0.011		11440005	49.3		98.5	626699	
4 Perfluoropentanoic acid										
262.90 > 219.00	1.831	1.835	-0.004	1.000	11520213	51.5		103	120087	
5 Perfluorobutanesulfonic acid										
298.90 > 80.00	1.871	1.872	-0.001	1.000	19236596	45.5		103		
298.90 > 99.00	1.871	1.872	-0.001	1.000	8170789		2.35(0.00-0.00)	103		
6 Perfluorohexanoic acid										
313.00 > 269.00	2.127	2.133	-0.006	1.000	9710439	50.9		102	233505	
D 7 13C2 PFHxA										
315.00 > 270.00	2.127	2.134	-0.007		10719942	50.8		102	387004	
10 Perfluoroheptanoic acid										
363.00 > 319.00	2.466	2.474	-0.008	1.000	9559143	49.7		99.4	84389	
D 9 13C4-PFHpA										
367.00 > 322.00	2.466	2.475	-0.009		9944069	51.5		103	332028	
8 Perfluorohexanesulfonic acid										M
399.00 > 80.00	2.481	2.485	-0.004	1.000	13776740	45.4		99.8		M
D 11 18O2 PFHxS										
403.00 > 84.00	2.481	2.489	-0.008		13953506	48.0		101	272613	
D 12 M2-6:2FTS										
429.00 > 409.00	2.793	2.805	-0.012		3650448	47.3		99.6		
13 Sodium 1H,1H,2H,2H-perfluorooctane										
427.00 > 407.00	2.793	2.807	-0.014	1.000	3256270	47.7		101		

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
15 Perfluorooctanoic acid										
413.00 > 369.00	2.824	2.835	-0.011	1.000	10343315	50.5		101	113108	
413.00 > 169.00	2.824	2.835	-0.011	1.000	6136507		1.69(0.90-1.10)	101	139975	
D 14 13C4 PFOA										
417.00 > 372.00	2.824	2.835	-0.011		10019820	48.9		97.8	414712	
16 Perfluoroheptanesulfonic Acid										
449.00 > 80.00	2.831	2.842	-0.011	1.000	12919018	50.5		106		
17 Perfluorooctane sulfonic acid										
499.00 > 80.00	3.087	3.145	-0.058	1.000	11786011	48.3		104	66281	
499.00 > 99.00	3.199	3.145	0.054	1.037	2666087		4.42(0.90-1.10)	104	7715	
20 Perfluorononanoic acid										
463.00 > 419.00	3.191	3.202	-0.011	1.000	8361339	51.7		103	164244	
D 18 13C4 PFOS										
503.00 > 80.00	3.199	3.204	-0.005		11866933	49.1		103	197438	
D 19 13C5 PFNA										
468.00 > 423.00	3.199	3.208	-0.009		8936977	50.2		100	263744	
D 26 M2-8:2FTS										
529.00 > 509.00	3.535	3.545	-0.010		4360731	47.1		98.3		
25 Sodium 1H,1H,2H,2H-perfluorooctane										
527.00 > 507.00	3.543	3.546	-0.003	1.002	4074481	48.4		101		
D 21 13C8 FOSA										
506.00 > 78.00	3.560	3.559	0.001		18558718	50.6		101	247034	
24 Perfluorodecanoic acid										
513.00 > 469.00	3.552	3.560	-0.008	1.000	7779706	53.2		106	168568	
D 23 13C2 PFDA										
515.00 > 470.00	3.552	3.560	-0.008		8074243	48.4		96.9	187283	
22 Perfluorooctane Sulfonamide										
498.00 > 78.00	3.560	3.561	-0.001	1.000	17500489	52.5		105	422956	
D 27 d3-NMeFOSAA										
573.00 > 419.00	3.702	3.710	-0.008		4409894	51.8		104		
28 N-methyl perfluorooctane sulfonami										
570.00 > 419.00	3.702	3.713	-0.011	1.000	4062831	47.4		94.9		
29 Perfluorodecane Sulfonic acid										
599.00 > 80.00	3.859	3.866	-0.007	1.000	7386234	49.9		104		
D 32 d5-NEtFOSAA										
589.00 > 419.00	3.867	3.875	-0.008		4108227	50.5		101		
D 30 13C2 PFUnA										M
565.00 > 520.00	3.867	3.876	-0.009		6419845	49.1		98.2	215302	M
31 Perfluoroundecanoic acid										
563.00 > 519.00	3.867	3.878	-0.011	1.000	6388091	49.1		98.2	145481	
33 N-ethyl perfluorooctane sulfonamid										
584.00 > 419.00	3.876	3.883	-0.007	1.002	3565748	47.7		95.3		
D 34 d-N-MeFOSA-M										
515.00 > 169.00	4.048	4.050	-0.002		4549448	51.7		103		
35 MeFOSA										
512.00 > 169.00	4.058	4.057	0.001	1.000	4038740	47.4		94.9		
37 Perfluorododecanoic acid										
613.00 > 569.00	4.157	4.162	-0.005	1.000	5939325	52.7		105	93610	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 36 13C2 PFDoA										
615.00 > 570.00	4.157	4.164	-0.007		6158791	49.7		99.4	157158	
D 38 d-N-EtFOSA-M										
531.00 > 169.00	4.241	4.235	0.006		4384481	51.4		103		
39 N-ethylperfluoro-1-octanesulfonami										
526.00 > 169.00	4.241	4.242	-0.001	1.000	4076562	47.3		94.5		
41 Perfluorotridecanoic acid										
663.00 > 619.00	4.418	4.424	-0.006	1.000	5662375	52.6		105	111159	
D 43 13C2-PFTeDA										
715.00 > 670.00	4.641	4.655	-0.014		13257413	51.2		102	430727	
42 Perfluorotetradecanoic acid										
712.50 > 668.90	4.651	4.657	-0.006	1.000	12631200	52.1		104	118223	
713.00 > 169.00	4.651	4.657	-0.006	1.000	1664503		7.59(0.00-0.00)	104	123601	
D 44 13C2-PFHxDA										
815.00 > 770.00	5.049	5.057	-0.008		6606731	52.8		106	93567	
45 Perfluorohexadecanoic acid										
813.00 > 769.00	5.049	5.059	-0.010	1.000	5695645	49.5		99.0	5357	
46 Perfluorooctadecanoic acid										
913.00 > 869.00	5.383	5.399	-0.016	1.000	4591929	52.0		104	6139	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

LCPFC_FULL-L5_00001 Amount Added: 1.00 Units: mL

Report Date: 01-Mar-2017 15:43:16 Chrom Revision: 2.2 03-Feb-2017 15:35:04

TestAmerica Sacramento

Data File: \\ChromNa\Sacramento\ChromData\A8_N\20170301-40358.b\2017.03.01CURVE_007.d

Injection Date: 01-Mar-2017 11:38:49 Instrument ID: A8_N

Lims ID: IC L5 Full

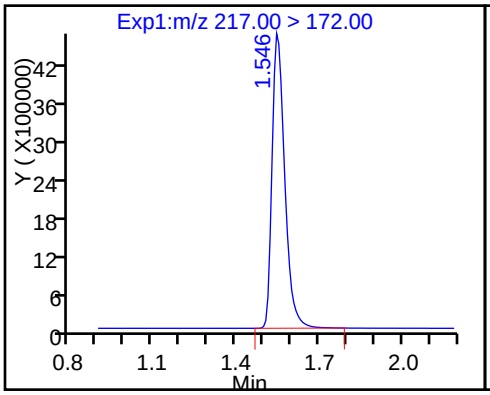
Client ID:

Operator ID: A8-PC\A8 ALS Bottle#: 32 Worklist Smp#: 6

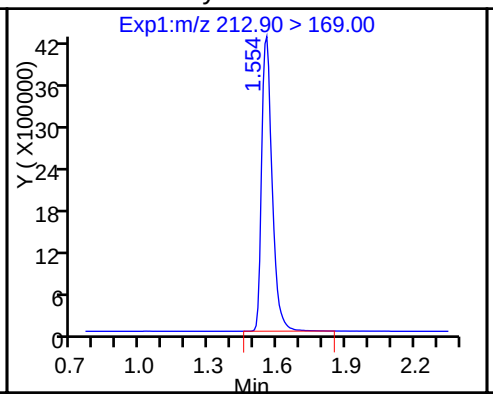
Injection Vol: 2.0 ul Dil. Factor: 1.0000

Method: A8_N Limit Group: LC PFC_DOD ICAL

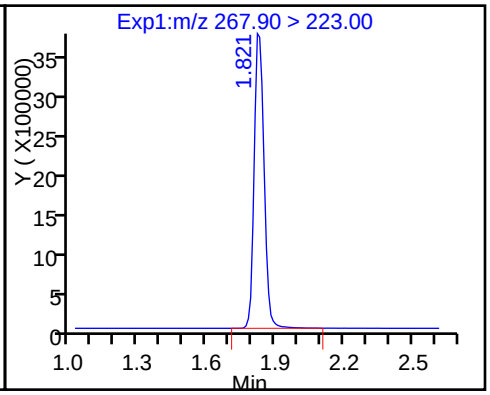
D 1 13C4 PFBA



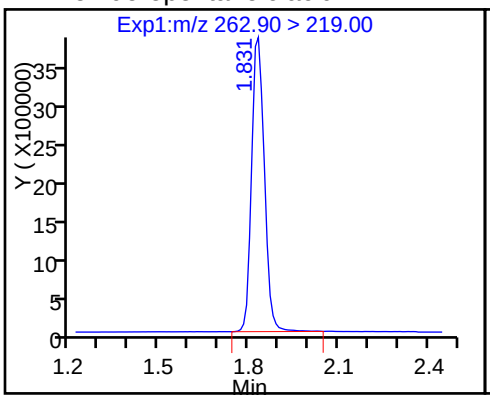
2 Perfluorobutyric acid



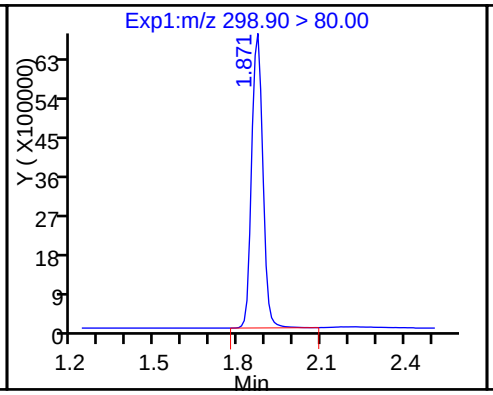
D 3 13C5-PFPeA



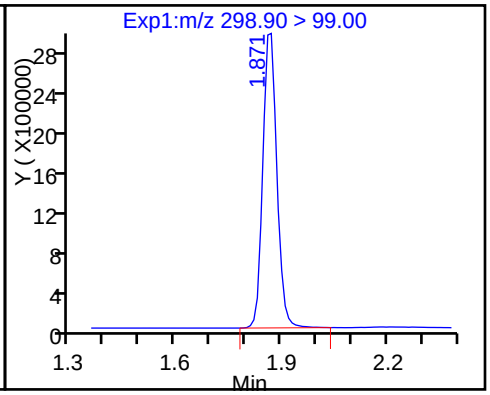
4 Perfluoropentanoic acid



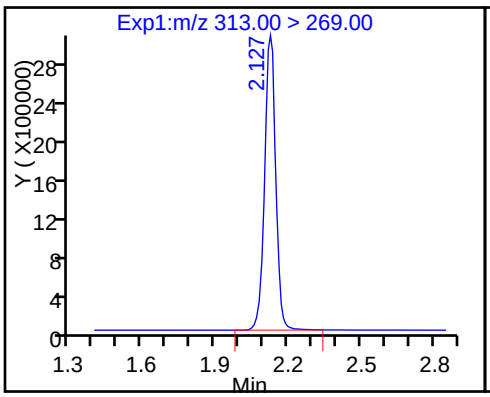
5 Perfluorobutanesulfonic acid



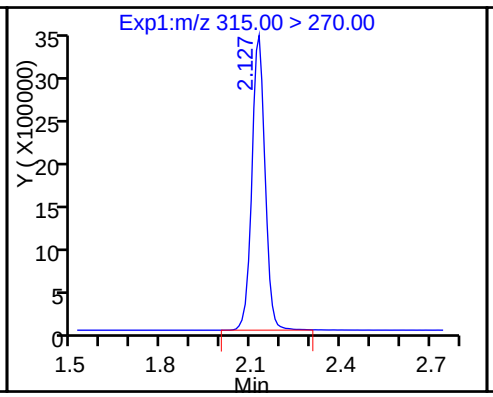
5 Perfluorobutanesulfonic acid



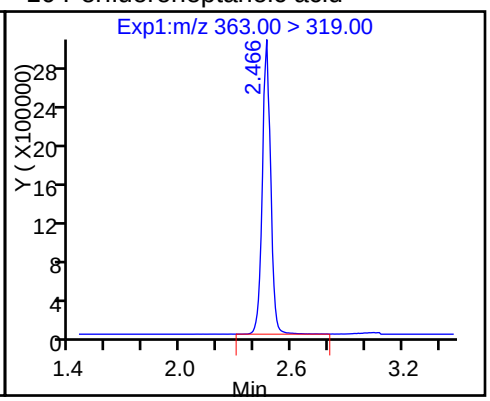
6 Perfluorohexanoic acid



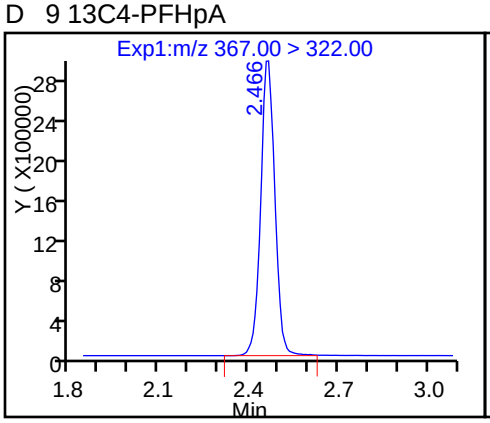
D 7 13C2 PFHxA



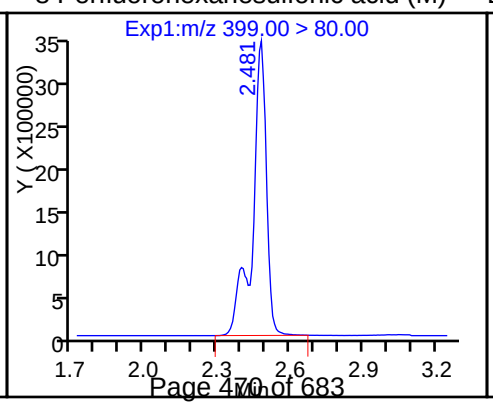
10 Perfluoroheptanoic acid



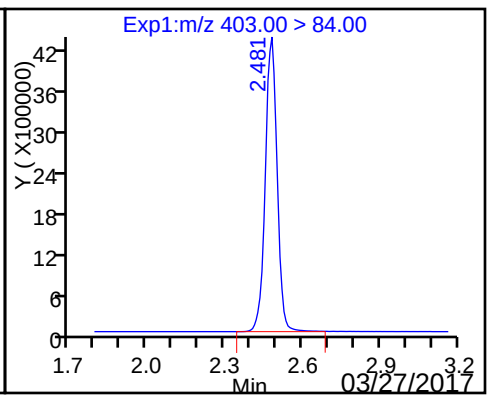
D 9 13C4-PFHpA



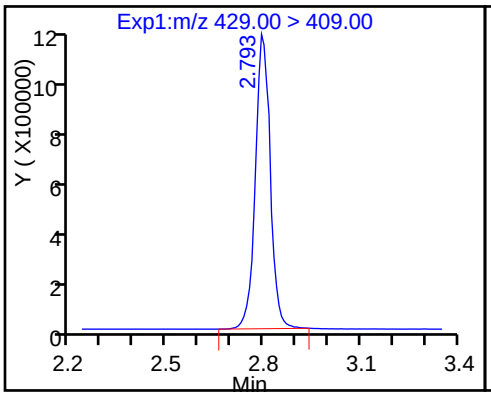
8 Perfluorohexanesulfonic acid (M)



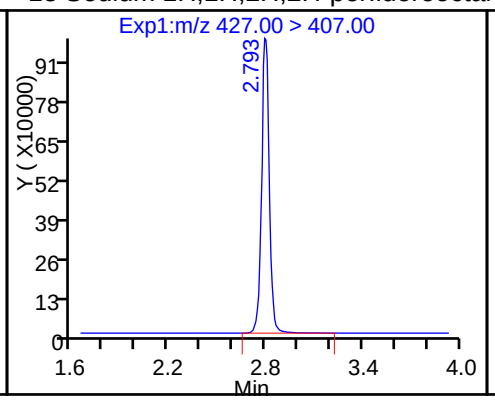
D 11 18O2 PFHxS



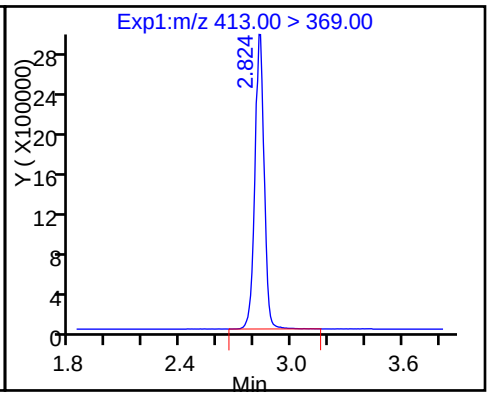
D 12 M2-6:2FTS



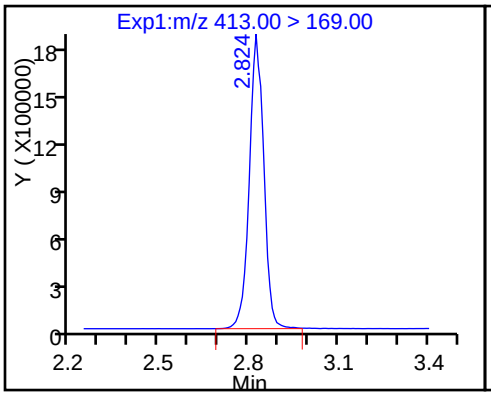
13 Sodium 1H,1H,2H,2H-perfluorooctane



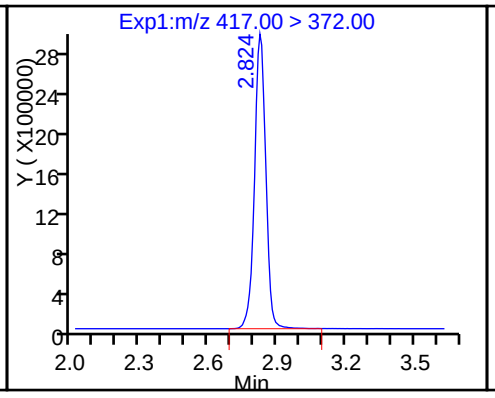
15 Perfluorooctanoic acid



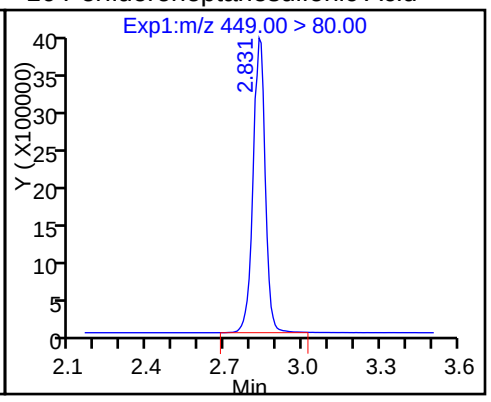
15 Perfluorooctanoic acid



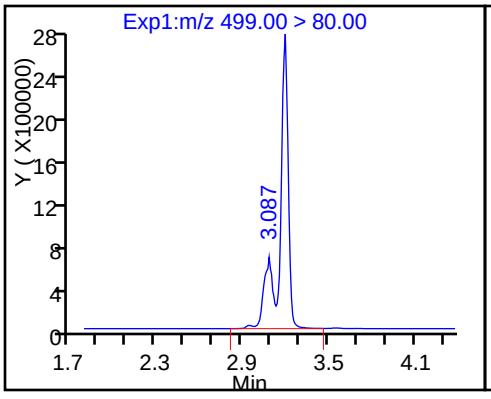
D 14 13C4 PFOA



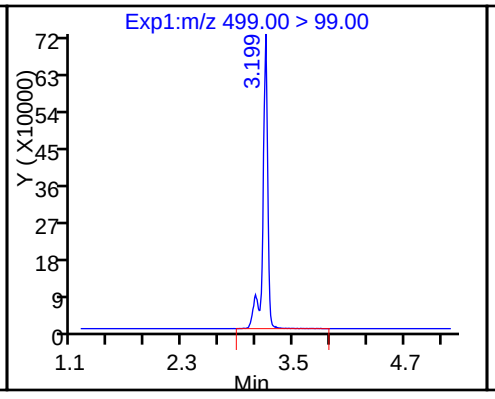
16 Perfluoroheptanesulfonic Acid



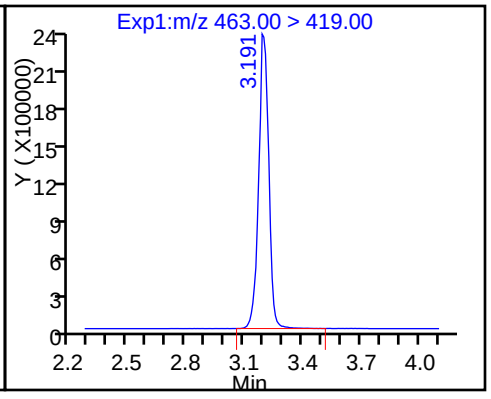
17 Perfluorooctane sulfonic acid



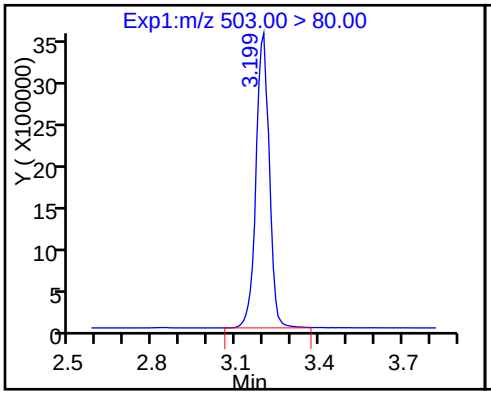
17 Perfluorooctane sulfonic acid



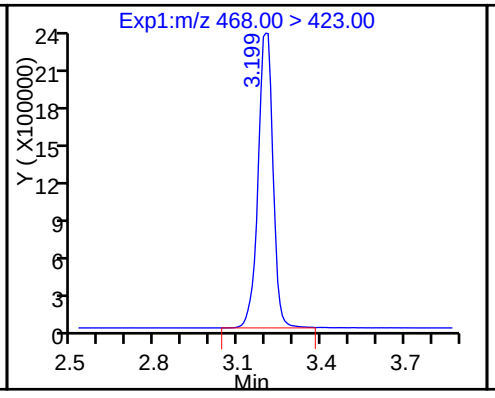
20 Perfluorononanoic acid



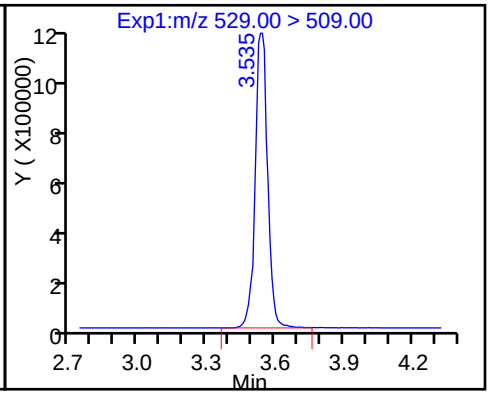
D 18 13C4 PFOS



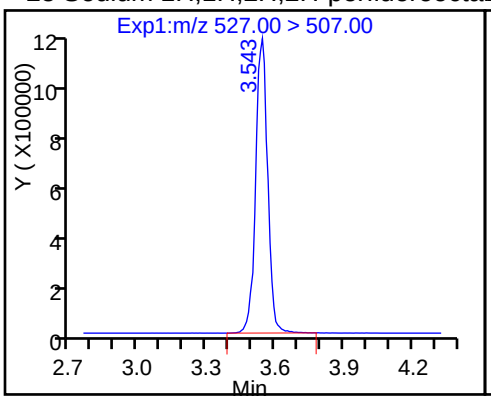
D 19 13C5 PFNA



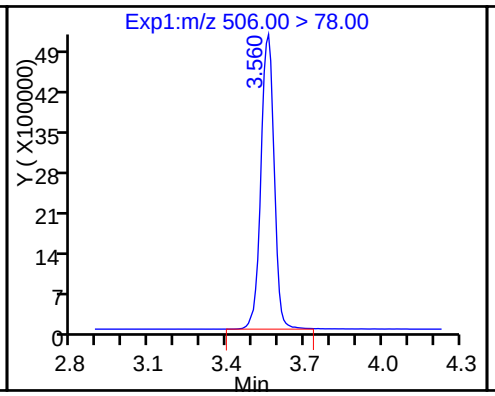
D 26 M2-8:2FTS



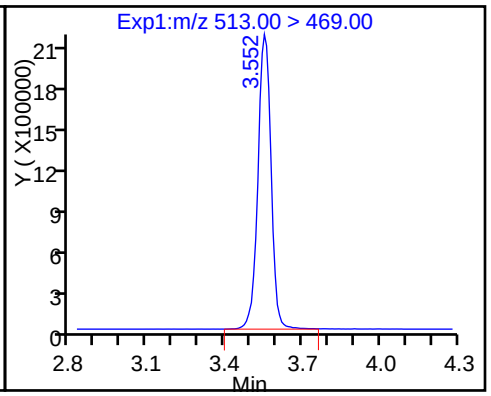
25 Sodium 1H,1H,2H,2H-perfluorooctane



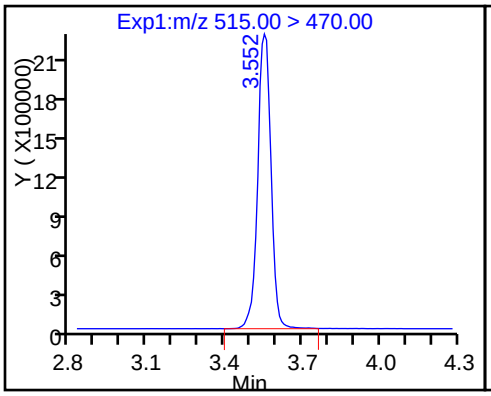
D 21 13C8 FOSA



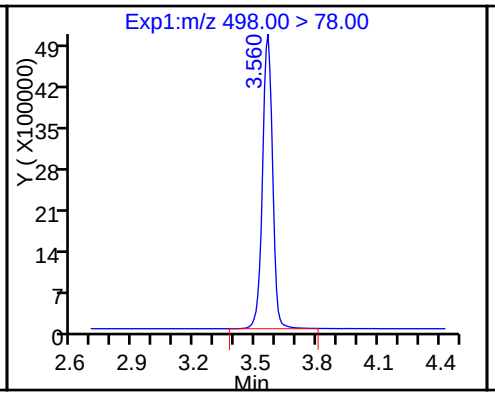
24 Perfluorodecanoic acid



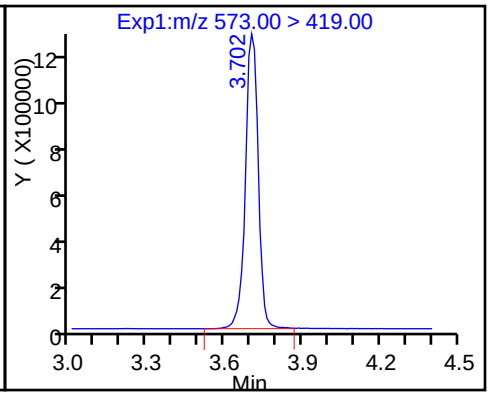
D 23 13C2 PFDA



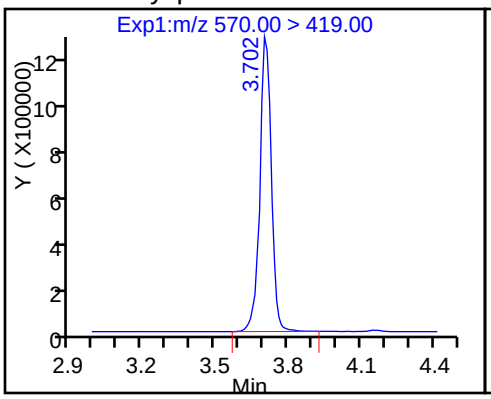
22 Perfluorooctane Sulfonamide



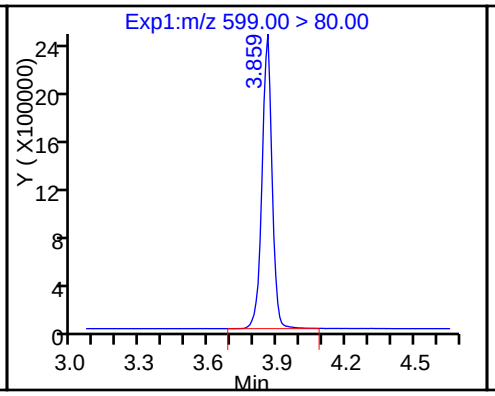
D 27 d3-NMeFOSAA



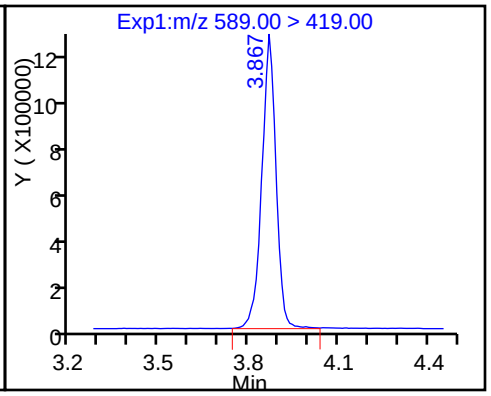
28 N-methyl perfluorooctane sulfonami



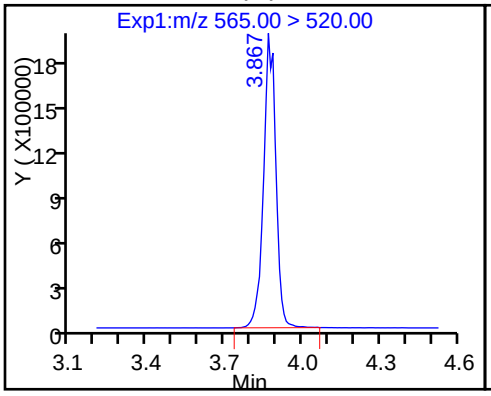
29 Perfluorodecane Sulfonic acid



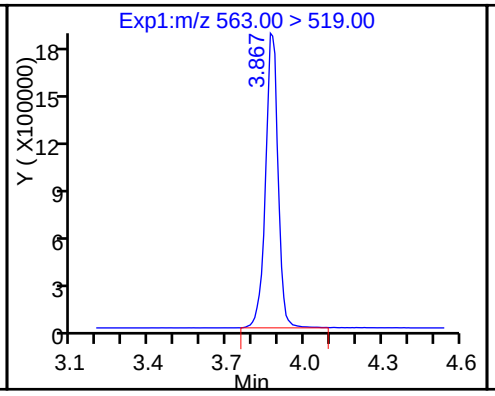
D 32 d5-NEtFOSAA



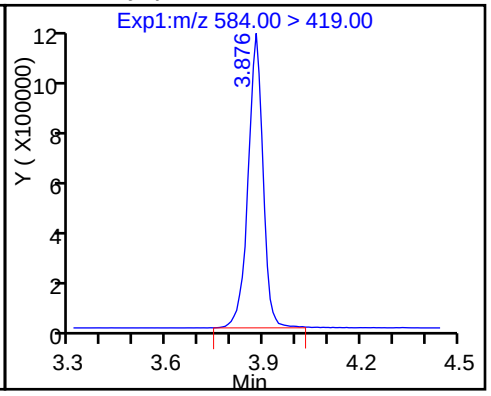
D 30 13C2 PFUnA (M)



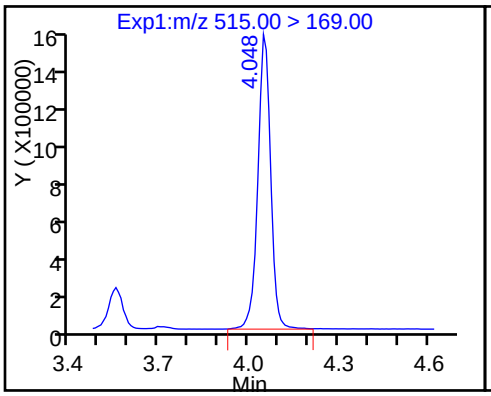
31 Perfluoroundecanoic acid



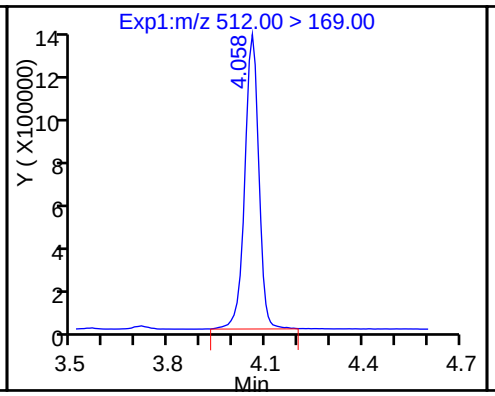
33 N-ethyl perfluorooctane sulfonamid



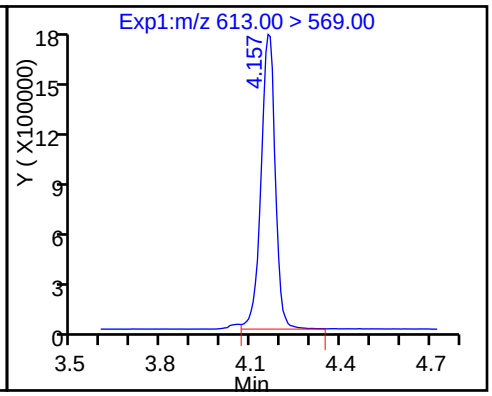
D 34 d-N-MeFOSA-M



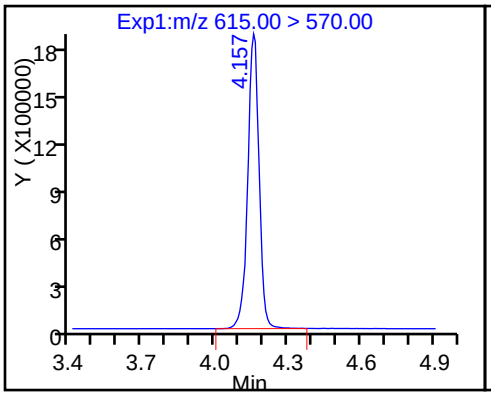
35 MeFOSA



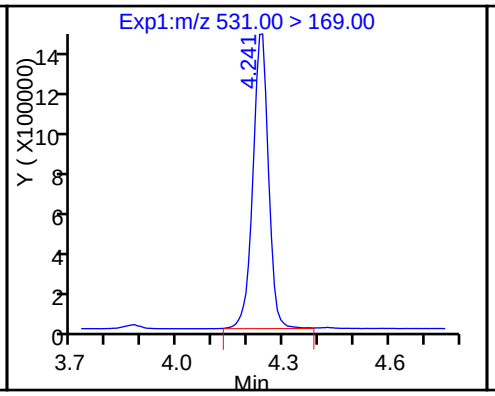
37 Perfluorododecanoic acid



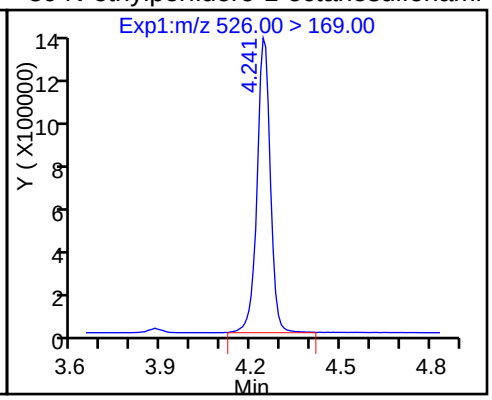
D 36 13C2 PFDoA



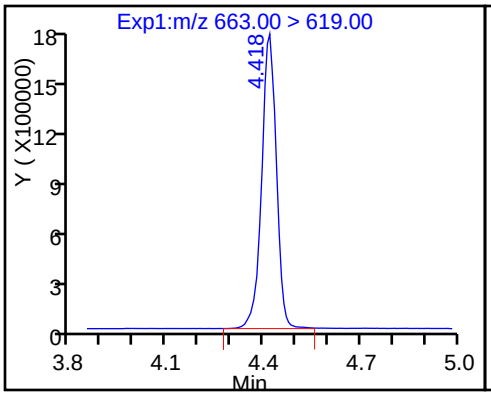
D 38 d-N-EtFOSA-M



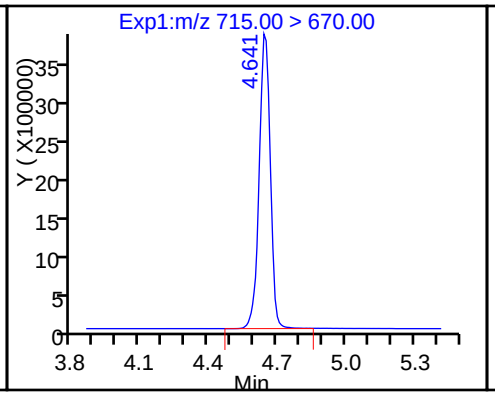
39 N-ethylperfluoro-1-octanesulfonami



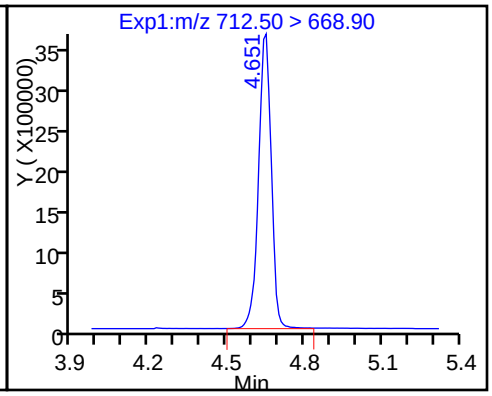
41 Perfluorotridecanoic acid



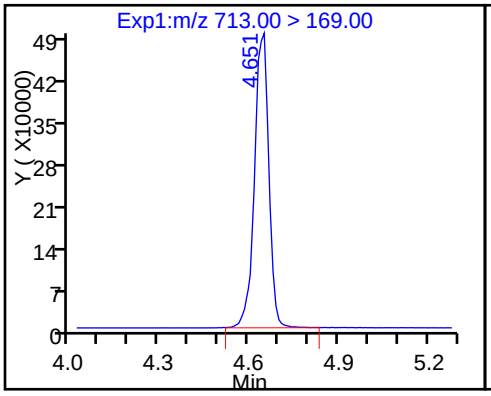
D 43 13C2-PFTeDA



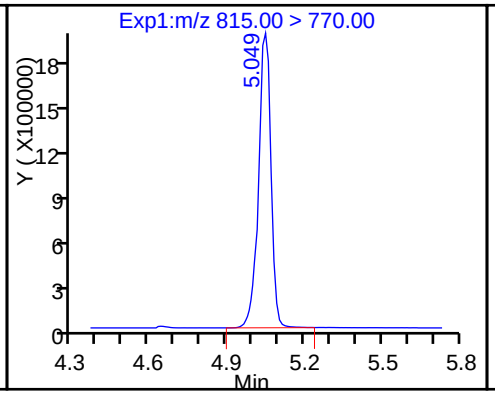
42 Perfluorotetradecanoic acid



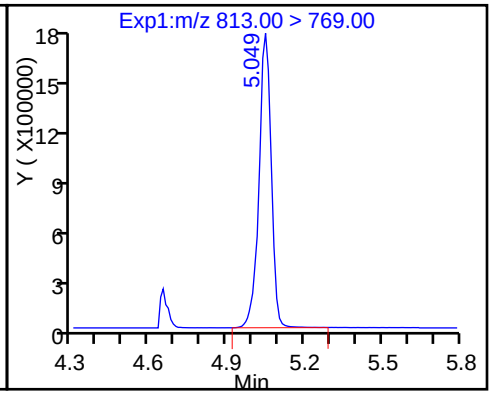
42 Perfluorotetradecanoic acid



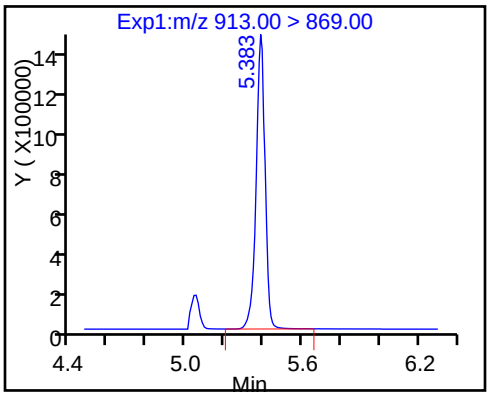
D 44 13C2-PFHxDA



45 Perfluorohexadecanoic acid



46 Perfluorooctadecanoic acid



Manual Integration/User Assign Peak Report

TestAmerica Sacramento

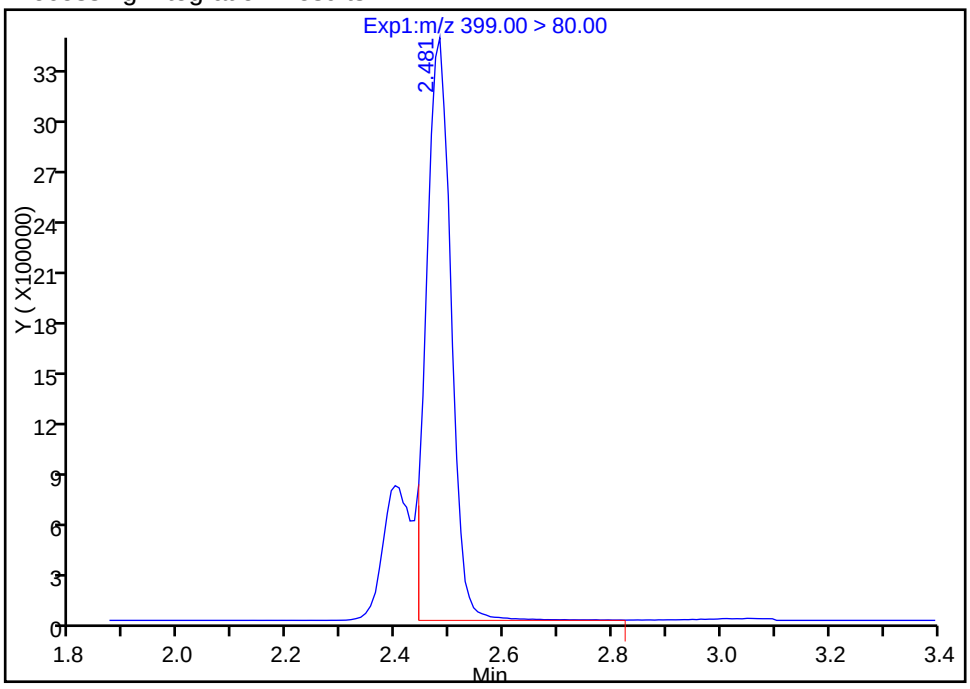
Data File: \\ChromNa\Sacramento\ChromData\A8_N\20170301-40358.b\2017.03.01CURVE_007.d
Injection Date: 01-Mar-2017 11:38:49 Instrument ID: A8_N
Lims ID: IC L5 Full
Client ID:
Operator ID: A8-PC\A8 ALS Bottle#: 32 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Method: A8_N Limit Group: LC PFC_DOD ICAL
Column: Detector EXP1

8 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

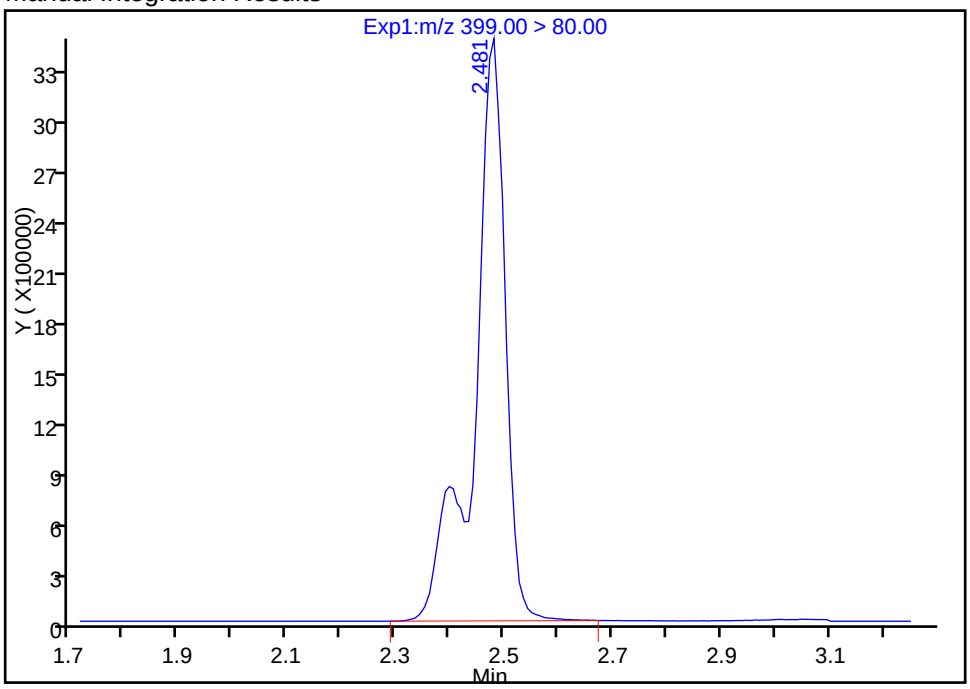
Processing Integration Results

RT: 2.48
Area: 10754320
Amount: 35.081839
Amount Units: ng/ml



Manual Integration Results

RT: 2.48
Area: 13776740
Amount: 45.409199
Amount Units: ng/ml



Reviewer: chandrasenas, 01-Mar-2017 15:43:15
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

TestAmerica Sacramento

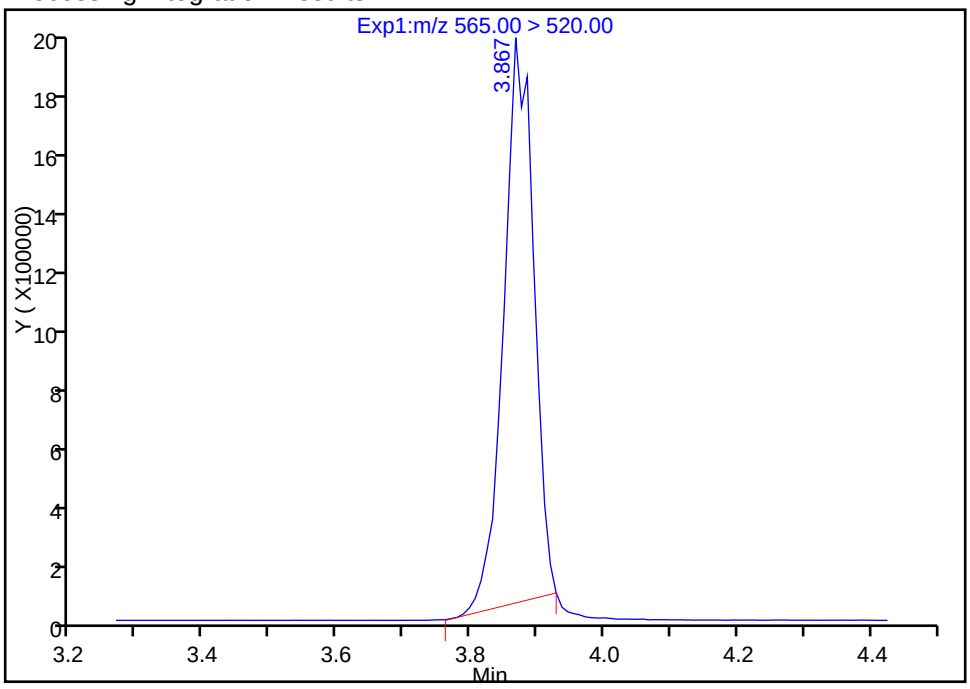
Data File: \\ChromNa\Sacramento\ChromData\A8_N\20170301-40358.b\2017.03.01CURVE_007.d
Injection Date: 01-Mar-2017 11:38:49 Instrument ID: A8_N
Lims ID: IC L5 Full
Client ID:
Operator ID: A8-PC\A8 ALS Bottle#: 32 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Method: A8_N Limit Group: LC PFC_DOD ICAL
Column: Detector EXP1

D 30 13C2 PFUnA, CAS: STL00997

Signal: 1

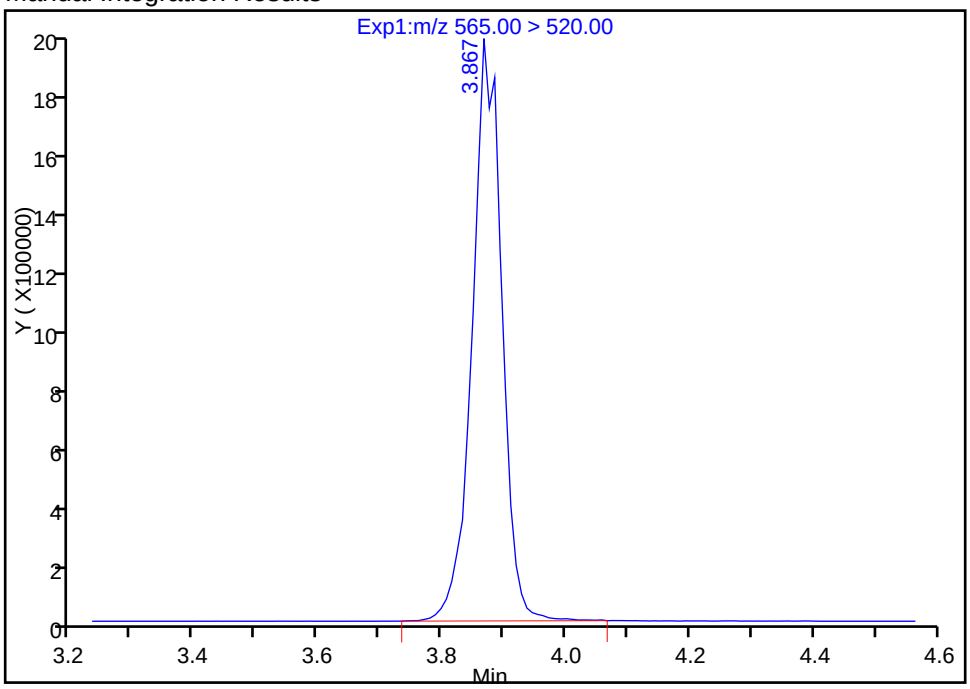
Processing Integration Results

RT: 3.87
Area: 5863845
Amount: 45.473087
Amount Units: ng/ml



Manual Integration Results

RT: 3.87
Area: 6419845
Amount: 49.079386
Amount Units: ng/ml



Reviewer: chandrasenas, 01-Mar-2017 15:43:15
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNa\Sacramento\ChromData\A8_N\20170301-40358.b\2017.03.01CURVE_008.d
Lims ID: IC L6 Full
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 01-Mar-2017 11:46:18 ALS Bottle#: 33 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: L6-FULL
Misc. Info.: Plate: 1 Rack: 1
Operator ID: A8-PC\A8 Instrument ID: A8_N
Sublist: chrom-A8_N*sub15

Method: \\ChromNa\Sacramento\ChromData\A8_N\20170301-40358.b\A8_N.m
Limit Group: LC PFC_DOD ICAL
Last Update: 01-Mar-2017 15:43:18 Calib Date: 01-Mar-2017 11:53:47
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A8_N\20170301-40358.b\2017.03.01CURVE_009.d

Column 1 : Det: EXP1
Process Host: XAWRK012

First Level Reviewer: chandrasenas Date: 01-Mar-2017 12:04:21

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C4 PFBA										
217.00 > 172.00	1.546	1.553	-0.007		12268568	42.0		84.0	717990	
2 Perfluorobutyric acid										
212.90 > 169.00	1.554	1.558	-0.004	1.000	37767596	181.7		90.8	312656	
D 3 13C5-PFPeA										
267.90 > 223.00	1.822	1.832	-0.010		9320645	40.1		80.3	792870	
4 Perfluoropentanoic acid										
262.90 > 219.00	1.822	1.835	-0.013	1.000	31900088	174.9		87.4	249960	
5 Perfluorobutanesulfonic acid										
298.90 > 80.00	1.861	1.872	-0.011	1.000	47824719	141.7		80.1		
298.90 > 99.00	1.861	1.872	-0.011	1.000	24392241		1.96(0.00-0.00)	80.1		
6 Perfluorohexanoic acid										
313.00 > 269.00	2.122	2.133	-0.011	1.000	30367858	188.7		94.4	703737	
D 7 13C2 PFHxA										
315.00 > 270.00	2.122	2.134	-0.012		9044966	42.9		85.8	272049	
10 Perfluoroheptanoic acid										
363.00 > 319.00	2.461	2.474	-0.013	1.000	28382869	191.6		95.8	225664	
D 9 13C4-PFHpA										
367.00 > 322.00	2.461	2.475	-0.014		7657909	39.7		79.4	207490	
8 Perfluorohexanesulfonic acid										
399.00 > 80.00	2.478	2.485	-0.007	1.000	42133990	173.8		95.5		
D 11 18O2 PFHxS										
403.00 > 84.00	2.478	2.489	-0.011		11147782	38.3		81.0	329095	
D 12 M2-6:2FTS										
429.00 > 409.00	2.789	2.805	-0.016		3409307	44.2		93.0		
13 Sodium 1H,1H,2H,2H-perfluorooctane										
427.00 > 407.00	2.797	2.807	-0.010	1.000	11262289	177.0		93.3		

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 14 13C4 PFOA										
417.00 > 372.00	2.820	2.835	-0.015		7688496	37.5		75.0	192123	
15 Perfluorooctanoic acid										
413.00 > 369.00	2.820	2.835	-0.015	1.000	29743583	189.3		94.7	342015	
413.00 > 169.00	2.813	2.835	-0.022	0.997	18781119		1.58(0.90-1.10)	94.7	380819	
16 Perfluoroheptanesulfonic Acid										
449.00 > 80.00	2.828	2.842	-0.014	1.000	36282267	168.5		88.5		
17 Perfluorooctane sulfonic acid										M
499.00 > 80.00	3.186	3.145	0.041	1.000	39756569	193.5		104	230631	M
499.00 > 99.00	3.195	3.145	0.050	1.003	9596909		4.14(0.90-1.10)	104	294050	M
20 Perfluorononanoic acid										
463.00 > 419.00	3.186	3.202	-0.016	1.000	26057481	206.4		103	338058	
D 18 13C4 PFOS										
503.00 > 80.00	3.186	3.204	-0.018		9985826	41.3		86.5	102426	
D 19 13C5 PFNA										
468.00 > 423.00	3.195	3.208	-0.013		6983620	39.3		78.5	207659	
D 26 M2-8:2FTS										M
529.00 > 509.00	3.523	3.545	-0.022		3659550	39.5		82.5		M
25 Sodium 1H,1H,2H,2H-perfluorooctane										
527.00 > 507.00	3.523	3.546	-0.023	1.000	12220206	173.0		90.3		
D 21 13C8 FOSA										
506.00 > 78.00	3.548	3.559	-0.011		15188110	41.4		82.8	281288	
D 23 13C2 PFDA										
515.00 > 470.00	3.548	3.560	-0.012		6226569	37.4		74.7	124238	
24 Perfluorodecanoic acid										
513.00 > 469.00	3.548	3.560	-0.012	1.000	24265114	215.2		108	364832	
22 Perfluorooctane Sulfonamide										
498.00 > 78.00	3.557	3.561	-0.004	1.000	47690261	174.7		87.4	485165	
D 27 d3-NMeFOSAA										
573.00 > 419.00	3.696	3.710	-0.014		4115011	48.3		96.6		
28 N-methyl perfluorooctane sulfonami										
570.00 > 419.00	3.707	3.713	-0.006	1.003	16290792	203.8		102		
29 Perfluorodecane Sulfonic acid										
599.00 > 80.00	3.853	3.866	-0.013	1.000	24675284	198.3		103		
D 32 d5-NEtFOSAA										
589.00 > 419.00	3.862	3.875	-0.013		3122900	38.4		76.8		
D 30 13C2 PFUnA										
565.00 > 520.00	3.862	3.876	-0.014		4771549	36.5		73.0	166160	
31 Perfluoroundecanoic acid										
563.00 > 519.00	3.862	3.878	-0.016	1.000	18672321	193.0		96.5	304259	
33 N-ethyl perfluorooctane sulfonamid										
584.00 > 419.00	3.871	3.883	-0.012	1.002	11906031	209.4		105		
D 34 d-N-MeFOSA-M										
515.00 > 169.00	4.042	4.050	-0.008		4433562	50.4		101		
35 MeFOSA										
512.00 > 169.00	4.051	4.057	-0.006	1.000	17219029	207.6		104		
37 Perfluorododecanoic acid										
613.00 > 569.00	4.138	4.162	-0.024	1.000	19408225	199.4		99.7	329427	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 36 13C2 PFDoA										M
615.00 > 570.00	4.152	4.164	-0.012		5320903	42.9		85.9	133785	M
D 38 d-N-EtFOSA-M										
531.00 > 169.00	4.227	4.235	-0.008		4425922	51.9		104		
39 N-ethylperfluoro-1-octanesulfonami										
526.00 > 169.00	4.236	4.242	-0.006	1.000	17404238	199.9		99.9		
41 Perfluorotridecanoic acid										
663.00 > 619.00	4.407	4.424	-0.017	1.000	18379771	197.7		98.9	284610	
D 43 13C2-PFTeDA										
715.00 > 670.00	4.635	4.655	-0.020		11353892	43.8		87.6	278458	
42 Perfluorotetradecanoic acid										
712.50 > 668.90	4.635	4.657	-0.022	1.000	39468467	188.6		94.3	283243	
713.00 > 169.00	4.635	4.657	-0.022	1.000	6001611		6.58(0.00-0.00)	94.3	215597	
D 44 13C2-PFHxDA										
815.00 > 770.00	5.035	5.057	-0.022		5879424	47.0		94.0	81025	
45 Perfluorohexadecanoic acid										
813.00 > 769.00	5.046	5.059	-0.013	1.000	20137749	203.8		102	23053	
46 Perfluorooctadecanoic acid										
913.00 > 869.00	5.375	5.399	-0.024	1.000	17831844	233.5		117	22435	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

LCPFC_FULL-L6_00002 Amount Added: 1.00 Units: mL

Report Date: 01-Mar-2017 15:43:19 Chrom Revision: 2.2 03-Feb-2017 15:35:04

TestAmerica Sacramento

Data File: \\ChromNa\Sacramento\ChromData\A8_N\20170301-40358.b\2017.03.01CURVE_008.d

Injection Date: 01-Mar-2017 11:46:18 Instrument ID: A8_N

Lims ID: IC L6 Full

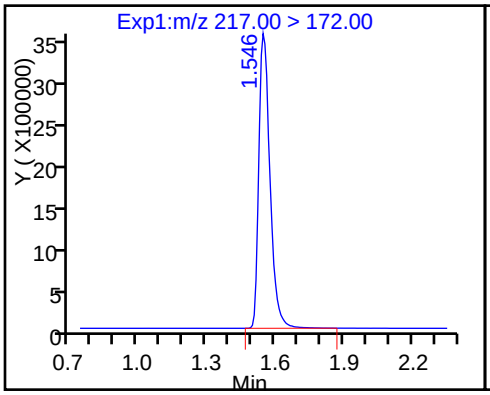
Client ID:

Operator ID: A8-PC\A8 ALS Bottle#: 33 Worklist Smp#: 7

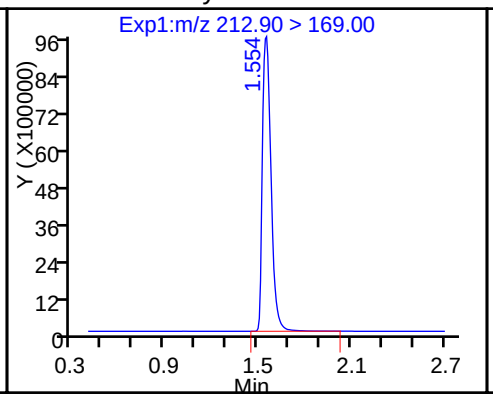
Injection Vol: 2.0 ul Dil. Factor: 1.0000

Method: A8_N Limit Group: LC PFC_DOD ICAL

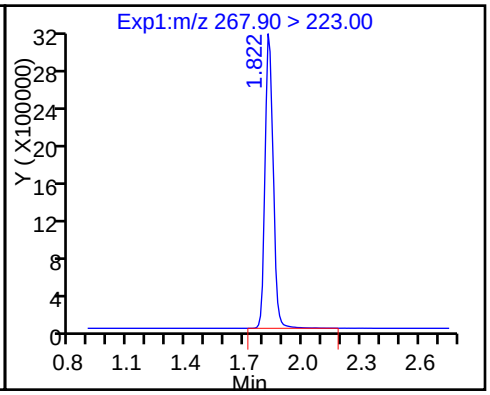
D 1 13C4 PFBA



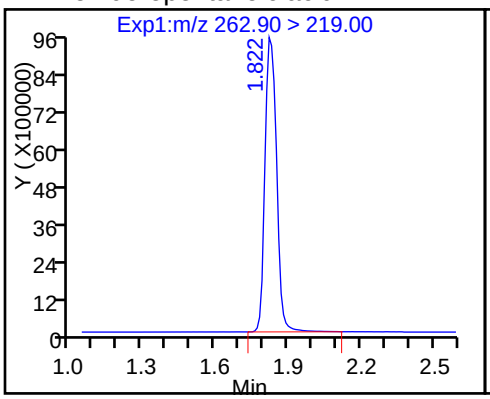
2 Perfluorobutyric acid



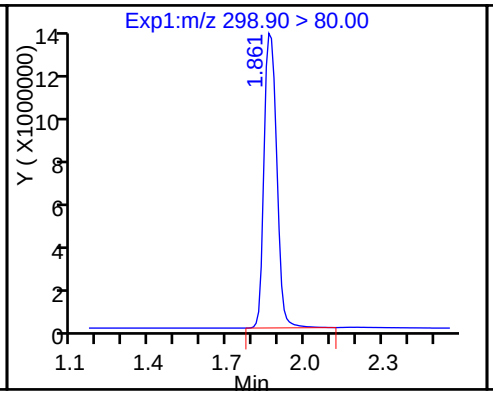
D 3 13C5-PFPeA



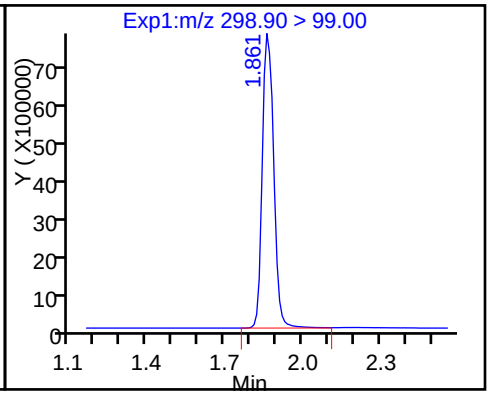
4 Perfluoropentanoic acid



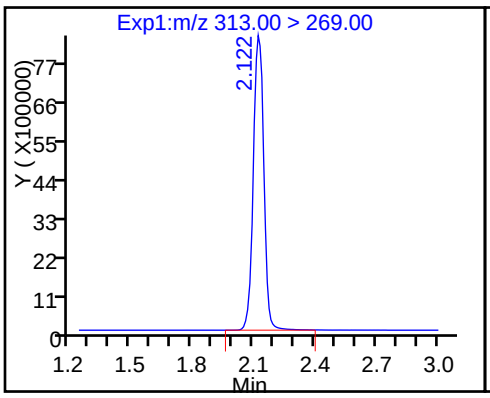
5 Perfluorobutanesulfonic acid



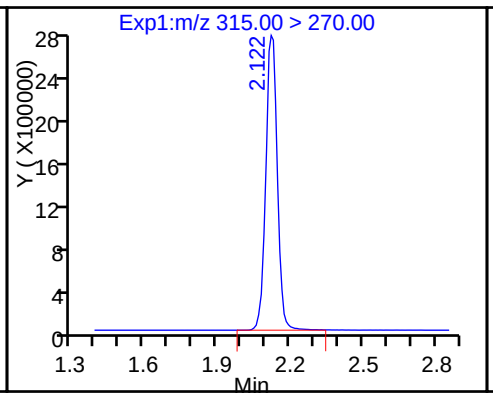
5 Perfluorobutanesulfonic acid



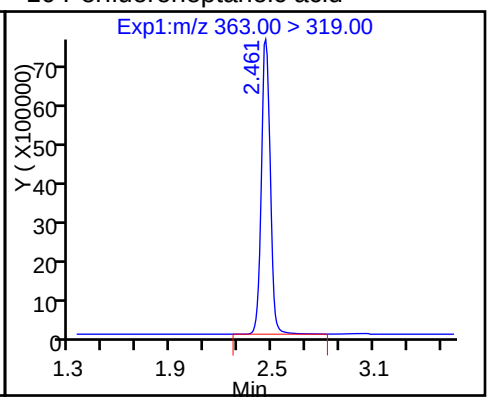
6 Perfluorohexanoic acid



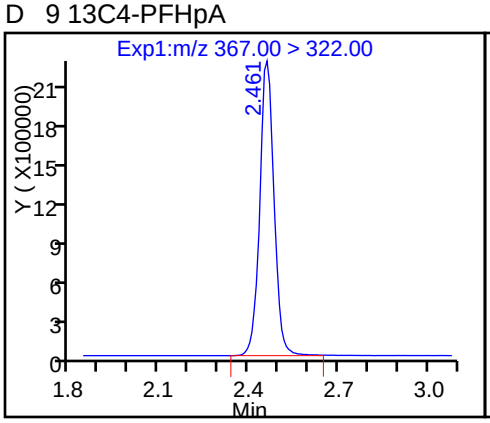
D 7 13C2 PFHxA



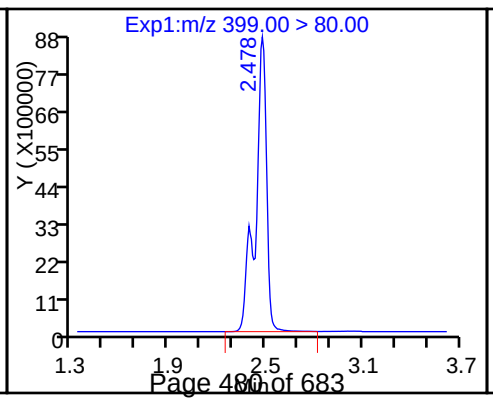
10 Perfluoroheptanoic acid



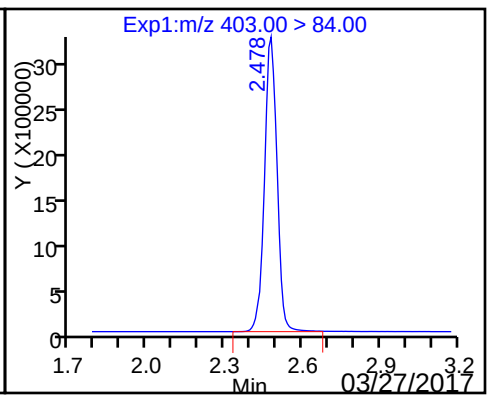
D 9 13C4-PFHpA



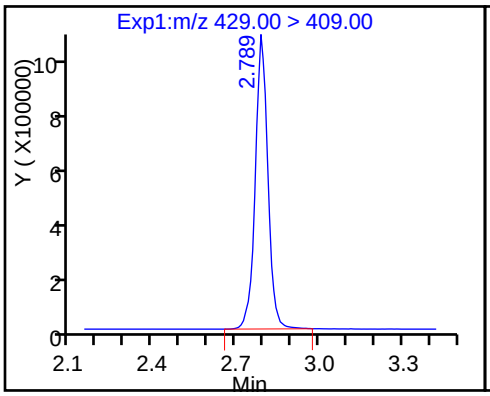
8 Perfluorohexanesulfonic acid



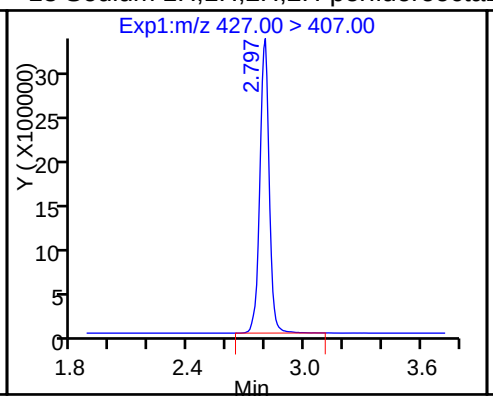
D 11 18O2 PFHxS



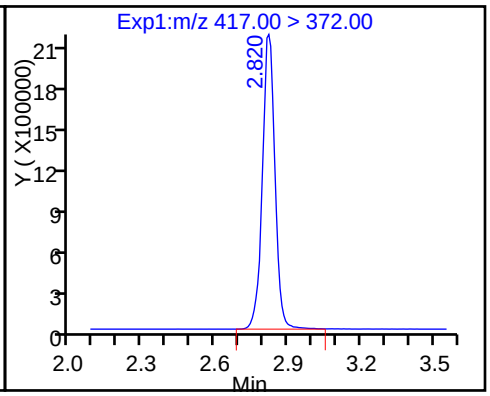
D 12 M2-6:2FTS



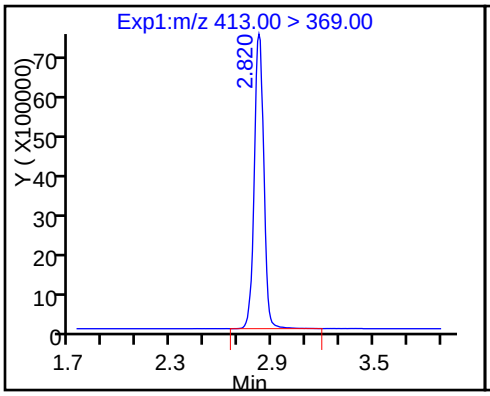
13 Sodium 1H,1H,2H,2H-perfluorooctane



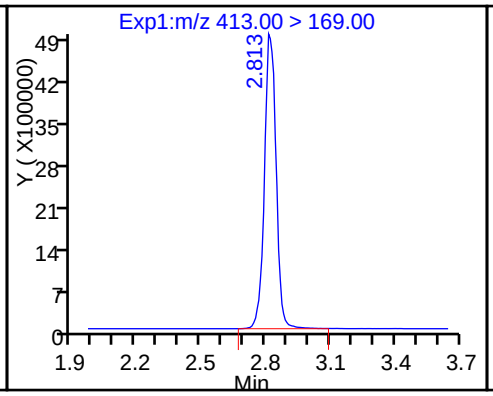
D 14 13C4 PFOA



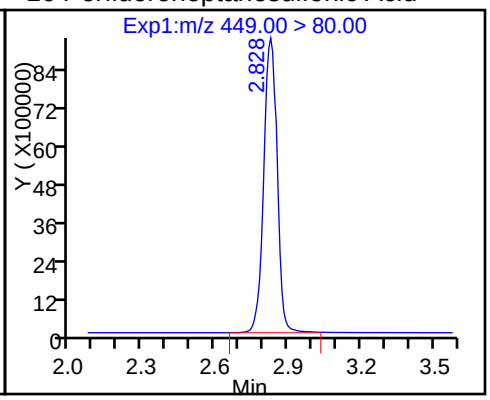
15 Perfluorooctanoic acid



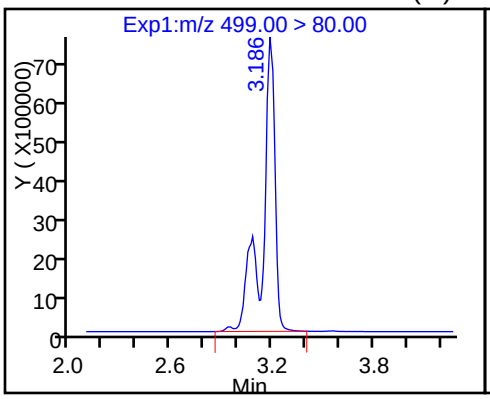
15 Perfluorooctanoic acid



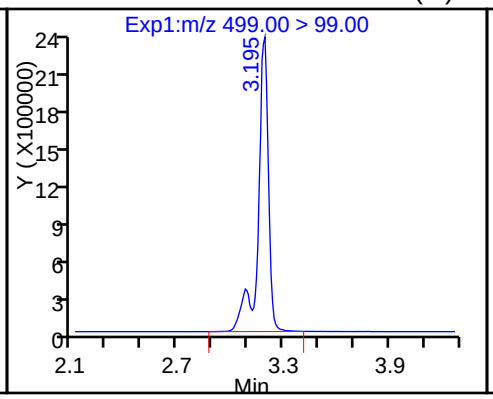
16 Perfluoroheptanesulfonic Acid



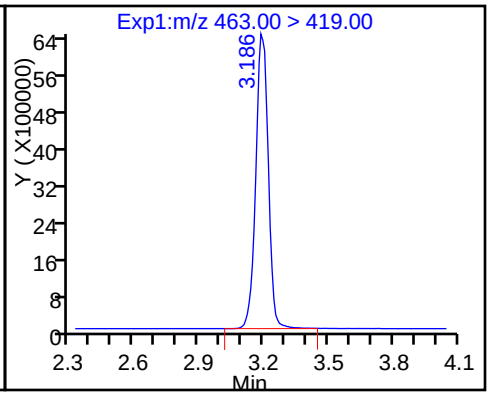
17 Perfluorooctane sulfonic acid (M)



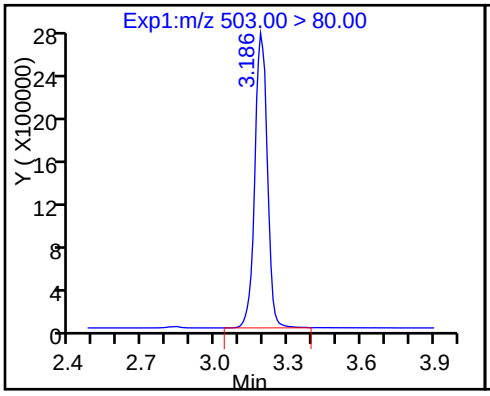
17 Perfluorooctane sulfonic acid (M)



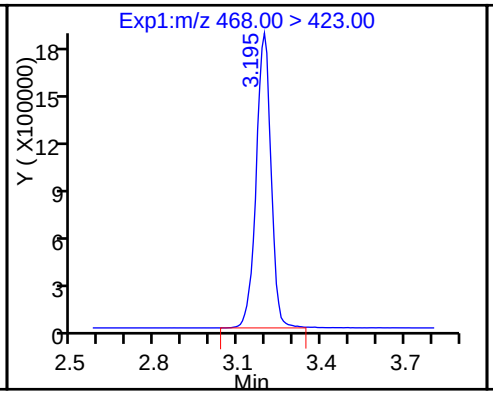
20 Perfluorononanoic acid



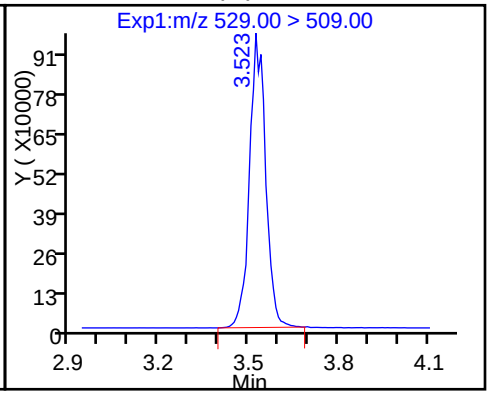
D 18 13C4 PFOS



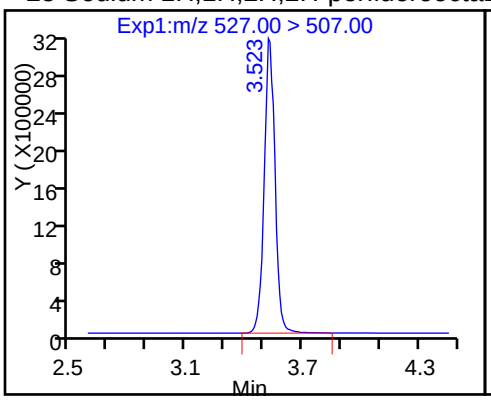
D 19 13C5 PFNA



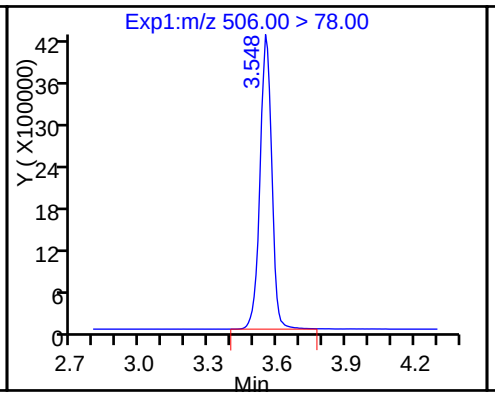
D 26 M2-8:2FTS (M)



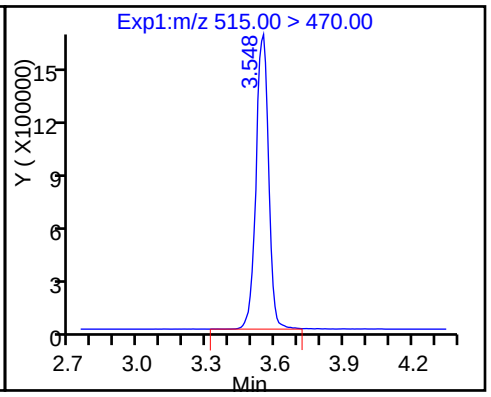
25 Sodium 1H,1H,2H,2H-perfluorooctane



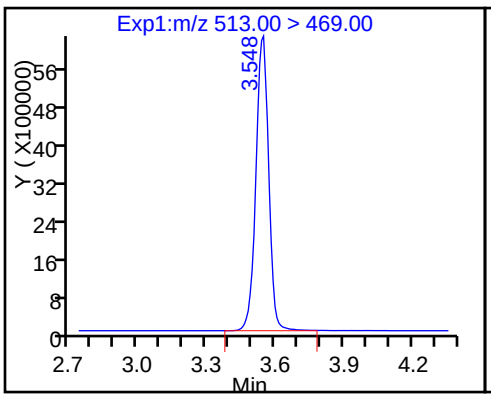
D 21 13C8 FOSA



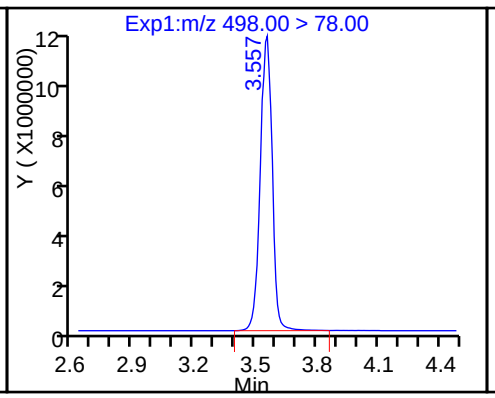
D 23 13C2 PFDA



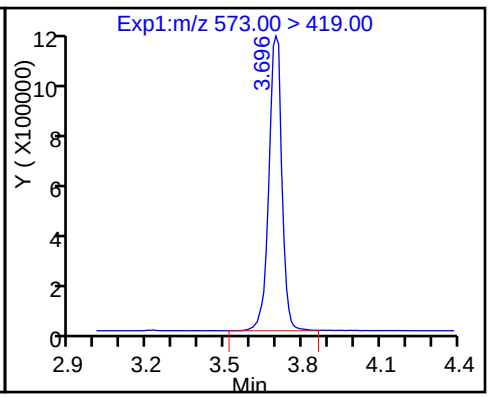
24 Perfluorodecanoic acid



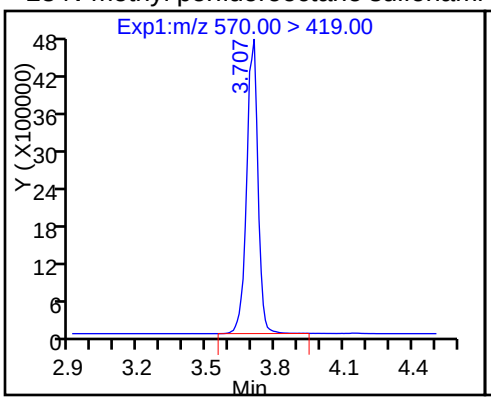
22 Perfluorooctane Sulfonamide



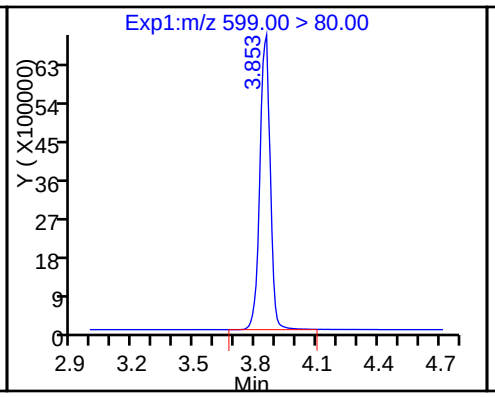
D 27 d3-NMeFOSAA



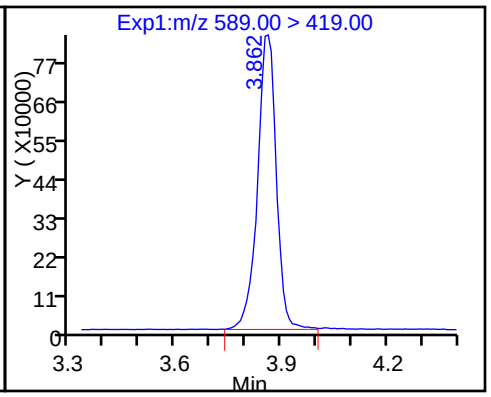
28 N-methyl perfluorooctane sulfonami



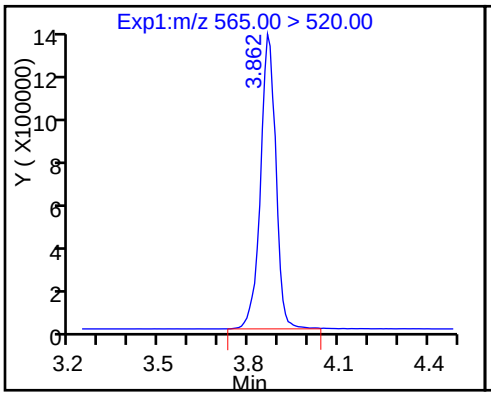
29 Perfluorodecane Sulfonic acid



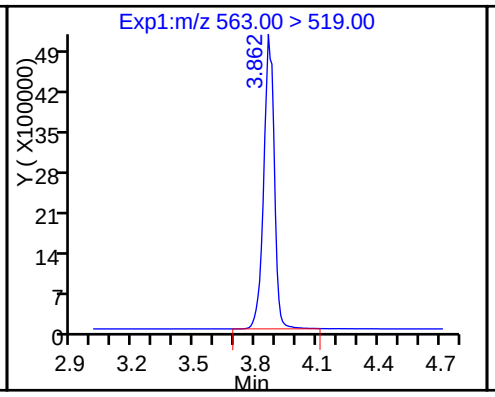
D 32 d5-NEtFOSAA



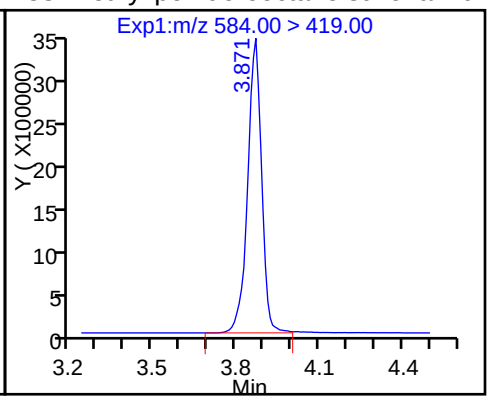
D 30 13C2 PFUnA



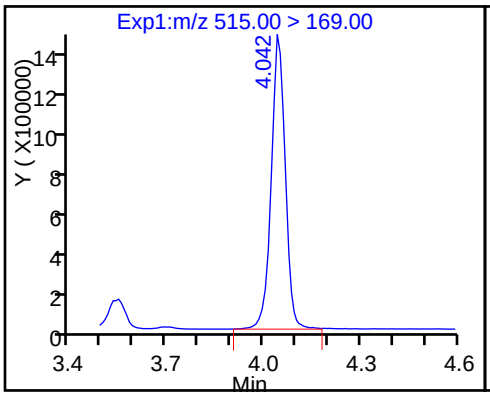
31 Perfluoroundecanoic acid



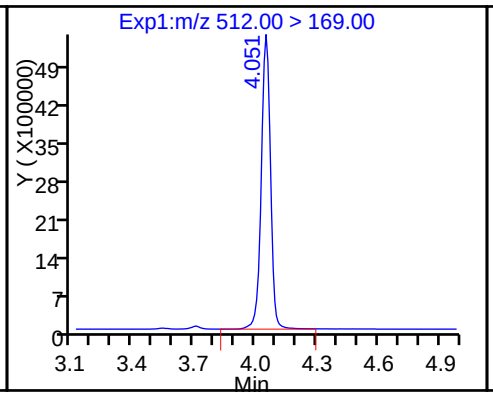
33 N-ethyl perfluorooctane sulfonamid



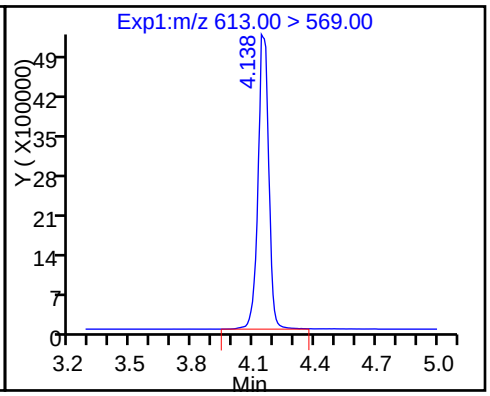
D 34 d-N-MeFOSA-M



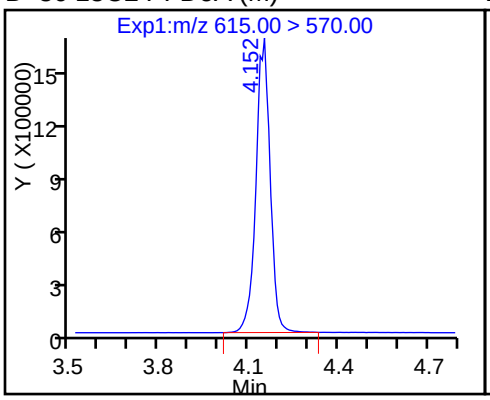
35 MeFOSA



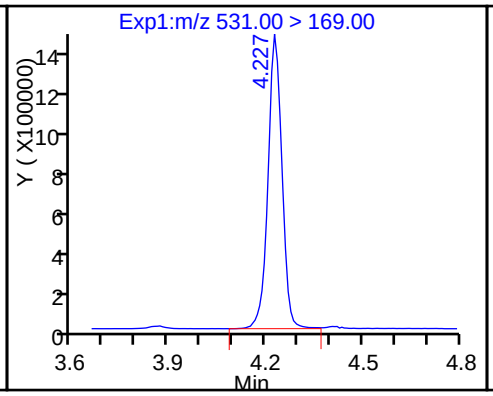
37 Perfluorododecanoic acid



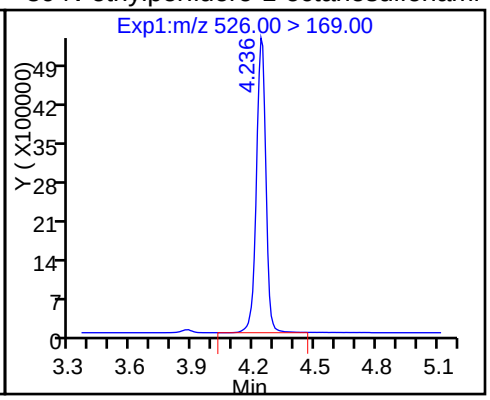
D 36 13C2 PFDoA (M)



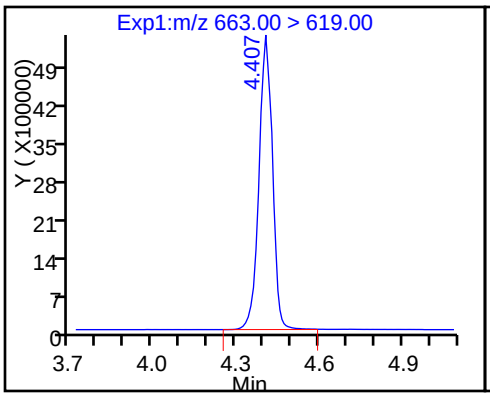
D 38 d-N-EtFOSA-M



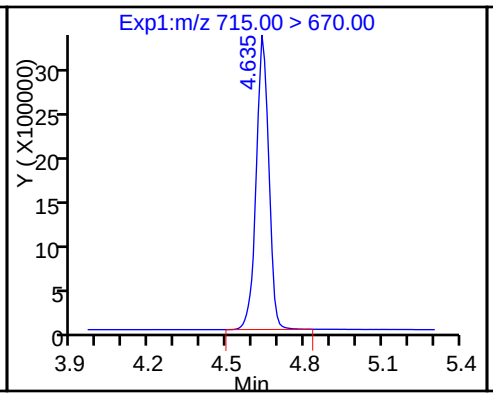
39 N-ethylperfluoro-1-octanesulfonami



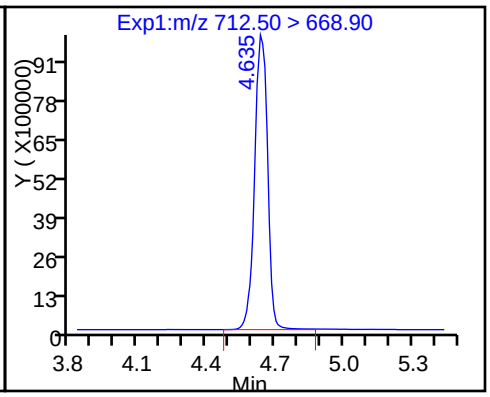
41 Perfluorotridecanoic acid



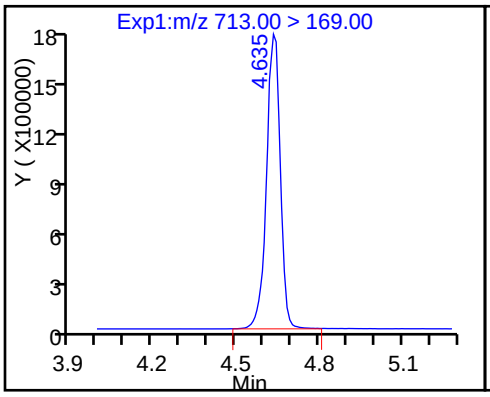
D 43 13C2-PFTeDA



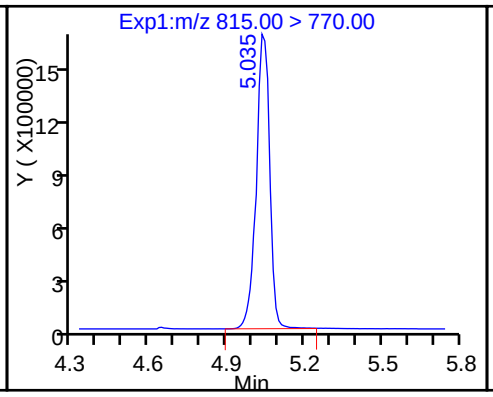
42 Perfluorotetradecanoic acid



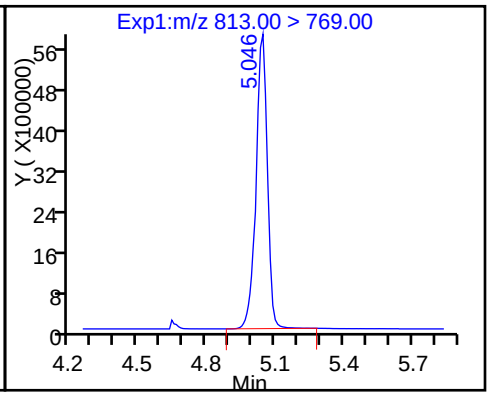
42 Perfluorotetradecanoic acid



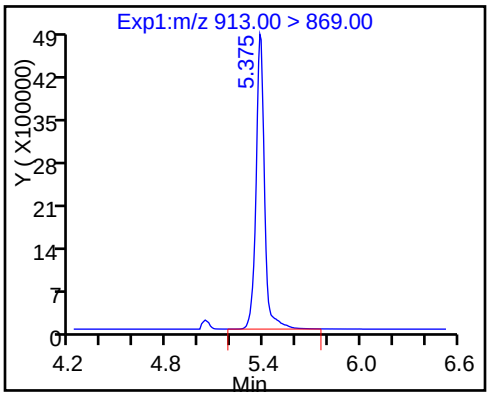
D 44 13C2-PFHxDA



45 Perfluorohexadecanoic acid



46 Perfluorooctadecanoic acid



Manual Integration/User Assign Peak Report

TestAmerica Sacramento

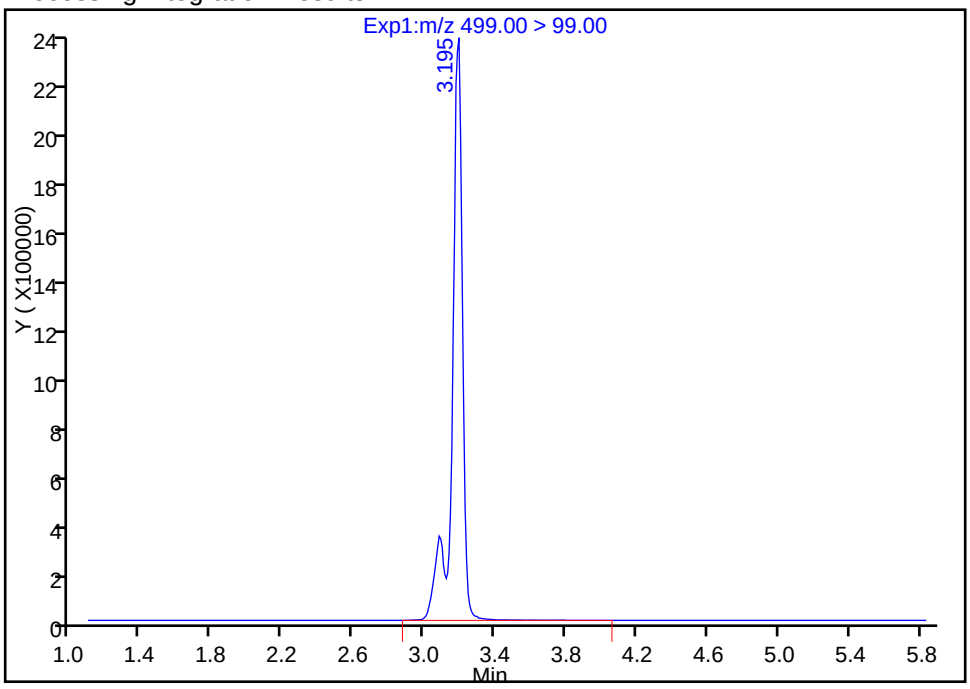
Data File: \\ChromNa\Sacramento\ChromData\A8_N\20170301-40358.b\2017.03.01CURVE_008.d
Injection Date: 01-Mar-2017 11:46:18 Instrument ID: A8_N
Lims ID: IC L6 Full
Client ID:
Operator ID: A8-PC\A8 ALS Bottle#: 33 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Method: A8_N Limit Group: LC PFC_DOD ICAL
Column: Detector EXP1

17 Perfluorooctane sulfonic acid, CAS: 1763-23-1

Signal: 2

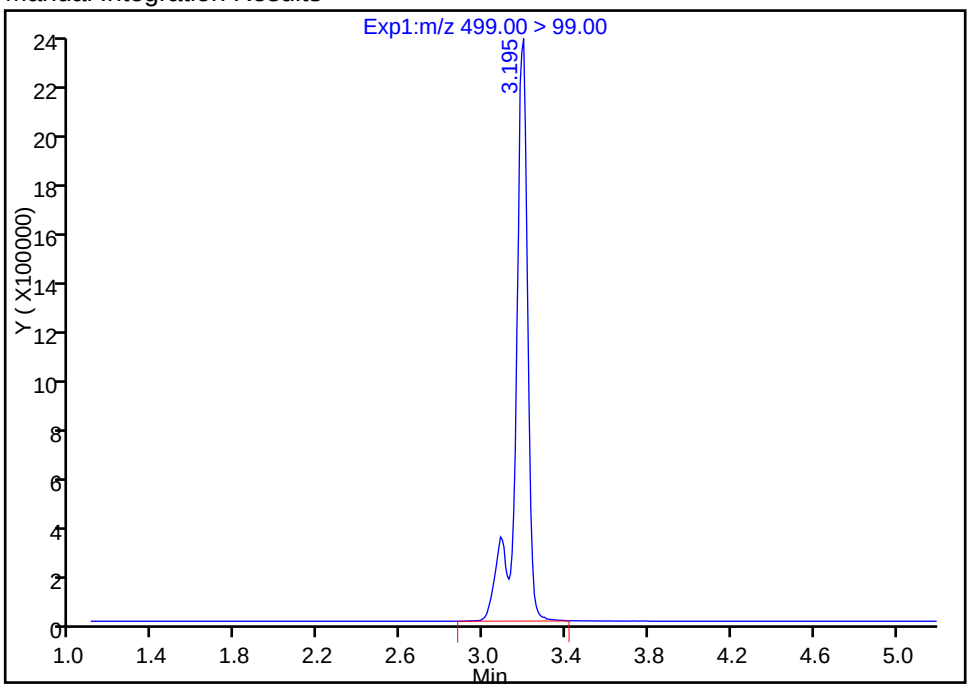
Processing Integration Results

RT: 3.19
Area: 9641533
Amount: 146.9287
Amount Units: ng/ml



Manual Integration Results

RT: 3.19
Area: 9596909
Amount: 193.5024
Amount Units: ng/ml



Reviewer: chandrasenas, 01-Mar-2017 15:43:18
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

TestAmerica Sacramento

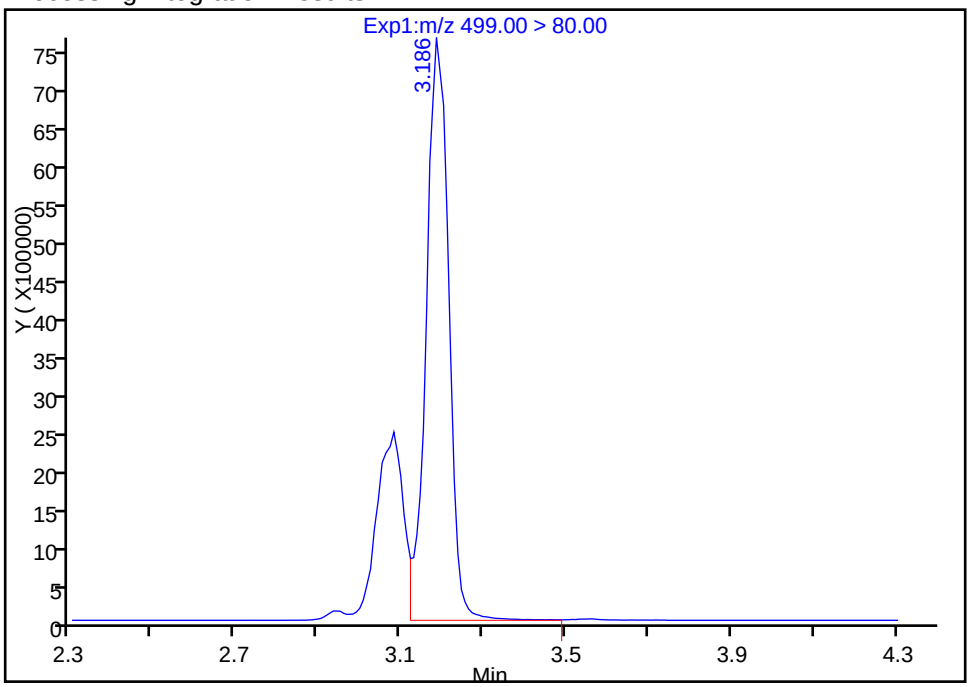
Data File: \\ChromNa\Sacramento\ChromData\A8_N\20170301-40358.b\2017.03.01CURVE_008.d
Injection Date: 01-Mar-2017 11:46:18 Instrument ID: A8_N
Lims ID: IC L6 Full
Client ID:
Operator ID: A8-PC\A8 ALS Bottle#: 33 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Method: A8_N Limit Group: LC PFC_DOD ICAL
Column: Detector EXP1

17 Perfluorooctane sulfonic acid, CAS: 1763-23-1

Signal: 1

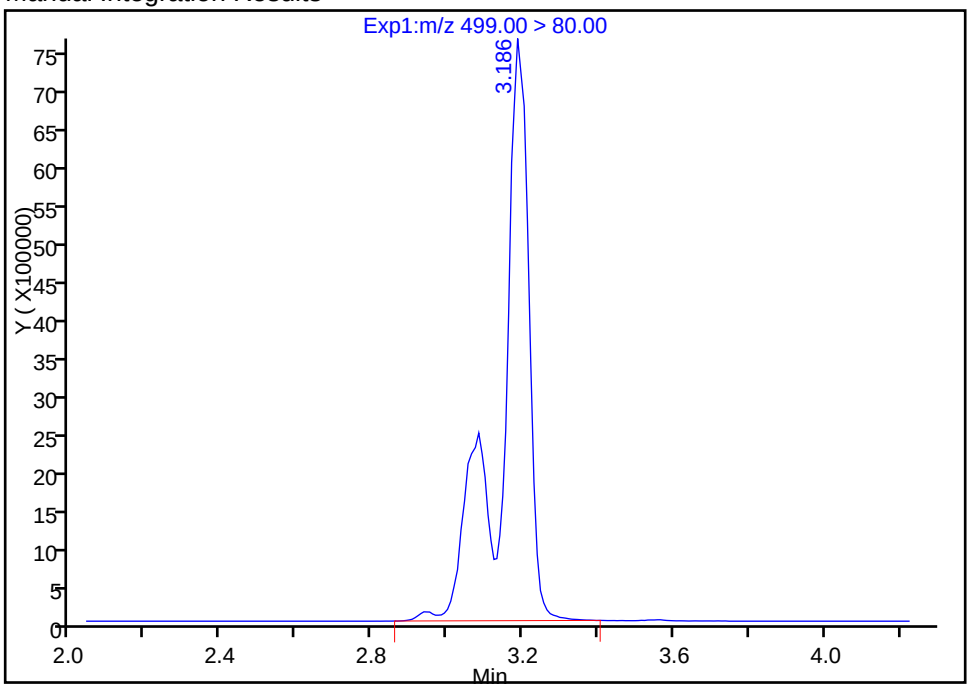
Processing Integration Results

RT: 3.19
Area: 28733218
Amount: 146.9287
Amount Units: ng/ml



Manual Integration Results

RT: 3.19
Area: 39756569
Amount: 193.5024
Amount Units: ng/ml



Reviewer: chandrasenas, 01-Mar-2017 15:43:18
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

TestAmerica Sacramento

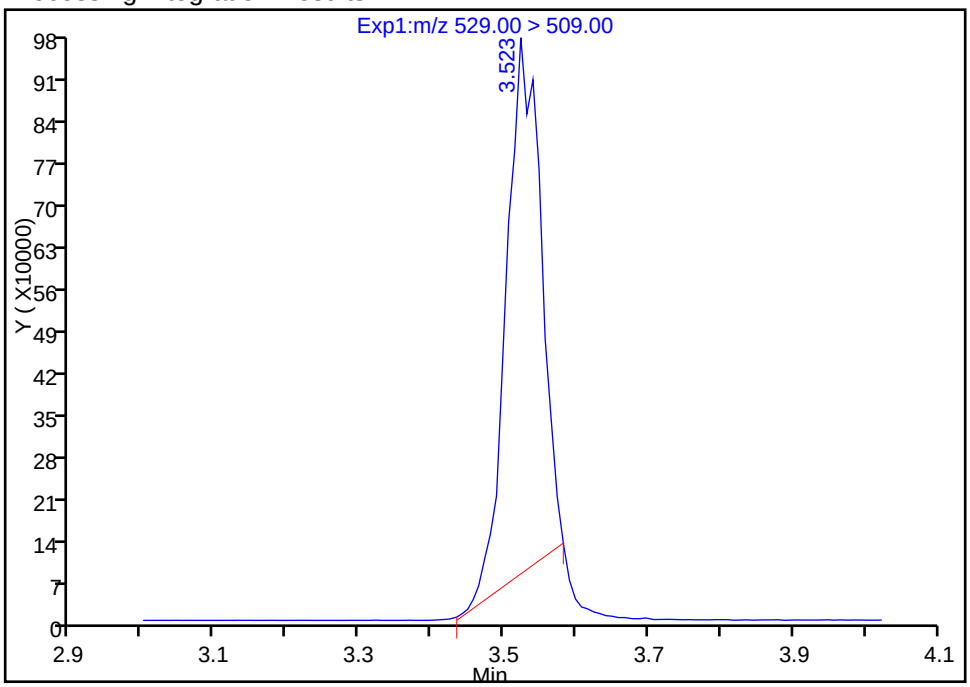
Data File: \\ChromNa\Sacramento\ChromData\A8_N\20170301-40358.b\2017.03.01CURVE_008.d
Injection Date: 01-Mar-2017 11:46:18 Instrument ID: A8_N
Lims ID: IC L6 Full
Client ID:
Operator ID: A8-PC\A8 ALS Bottle#: 33 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Method: A8_N Limit Group: LC PFC_DOD ICAL
Column: Detector EXP1

D 26 M2-8:2FTS, CAS: STL02280

Signal: 1

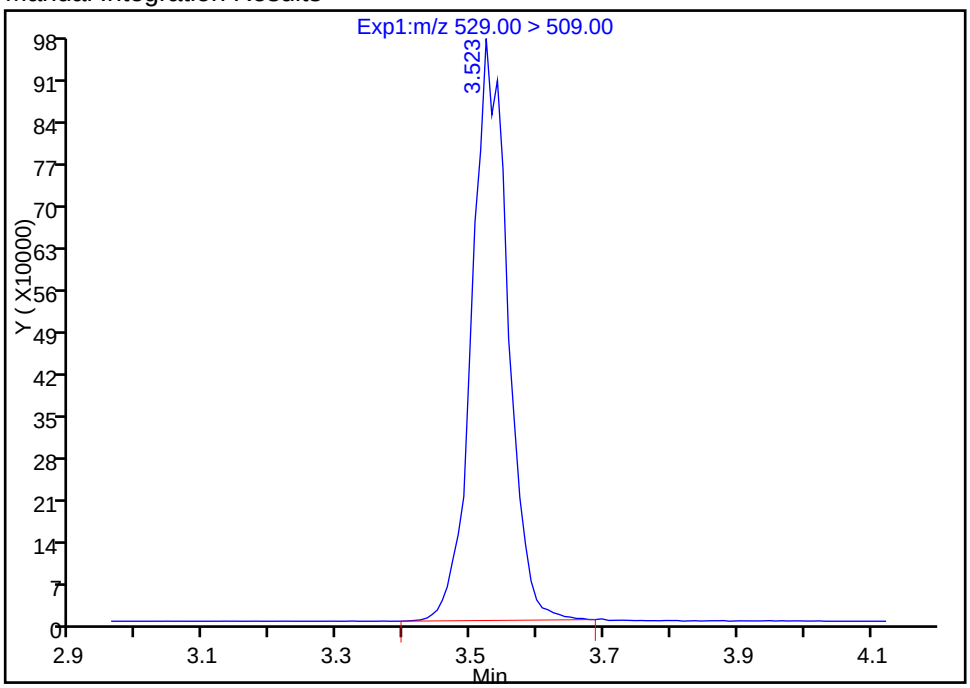
Processing Integration Results

RT: 3.52
Area: 2972144
Amount: 32.946881
Amount Units: ng/ml



Manual Integration Results

RT: 3.52
Area: 3659550
Amount: 39.519130
Amount Units: ng/ml



Reviewer: chandrasenas, 01-Mar-2017 15:43:18
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Sacramento

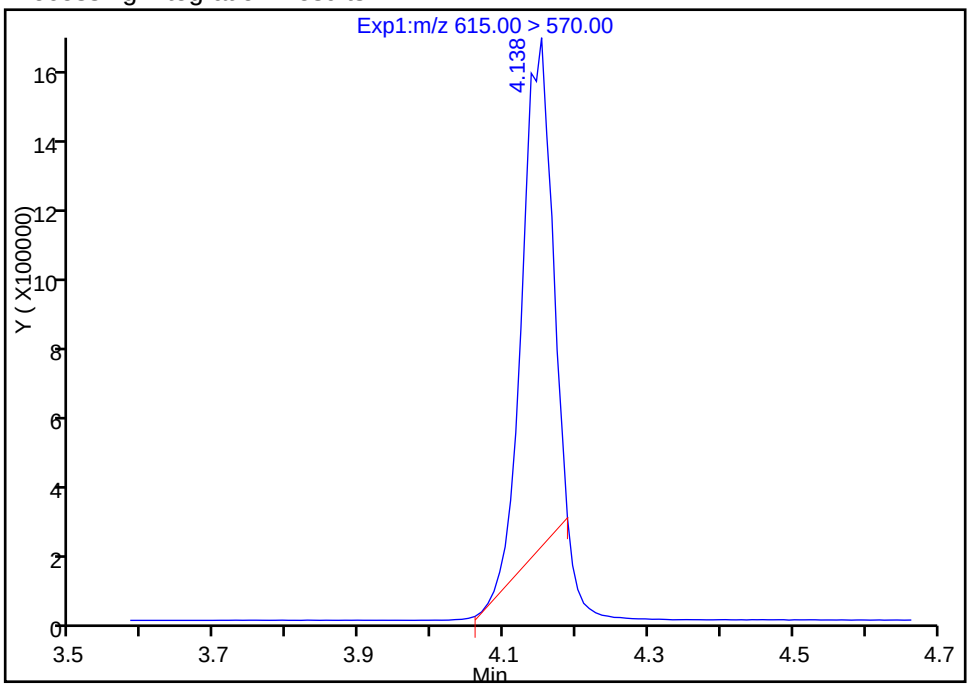
Data File: \\ChromNa\Sacramento\ChromData\A8_N\20170301-40358.b\2017.03.01CURVE_008.d
Injection Date: 01-Mar-2017 11:46:18 Instrument ID: A8_N
Lims ID: IC L6 Full
Client ID:
Operator ID: A8-PC\A8 ALS Bottle#: 33 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Method: A8_N Limit Group: LC PFC_DOD ICAL
Column: Detector EXP1

D 36 13C2 PFDoA, CAS: STL00998

Signal: 1

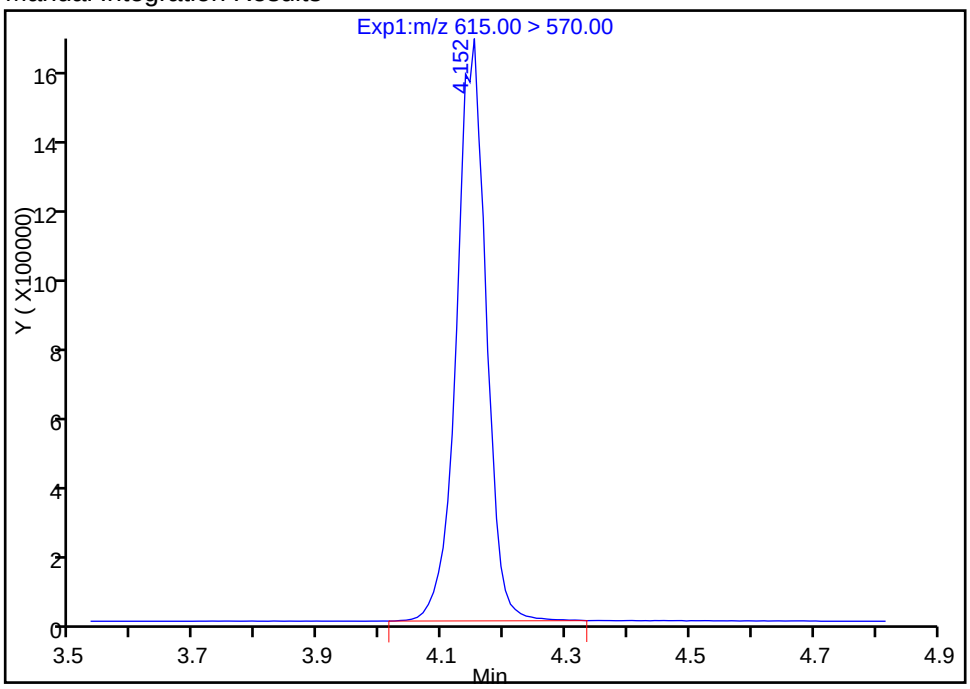
Processing Integration Results

RT: 4.14
Area: 3992056
Amount: 33.402250
Amount Units: ng/ml



Manual Integration Results

RT: 4.15
Area: 5320903
Amount: 42.929870
Amount Units: ng/ml



Reviewer: chandrasenas, 01-Mar-2017 15:43:18
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Sacramento Job No.: 320-25962-1

SDG No.:

Lab Sample ID: ICV 320-152681/13 Calibration Date: 03/01/2017 12:31

Instrument ID: A8_N Calib Start Date: 03/01/2017 11:08

GC Column: GeminiC18 3x100 ID: 3.00(mm) Calib End Date: 03/01/2017 11:46

Lab File ID: 2017.03.01CURVE_014.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorobutanoic acid (PFBA)	AveID	0.8473	0.9133		53.9	50.0	7.8	25.0
Perfluoropentanoic acid (PFPeA)	AveID	0.9785	1.035		52.9	50.0	5.7	25.0
Perfluorobutanesulfonic acid (PFBS)	AveID	1.433	1.526		47.1	44.3	6.5	25.0
Perfluorohexanoic acid (PFHxA)	AveID	0.8895	0.9703		54.5	50.0	9.1	25.0
Perfluoroheptanoic acid (PFHpA)	AveID	0.9673	1.045		54.0	50.0	8.0	25.0
Perfluorohexanesulfonic acid (PFHxS)	AveID	1.028	1.022		47.0	47.3	-0.6	25.0
6:2FTS	L2ID		0.9688		51.7	47.4	9.1	25.0
Perfluoroheptanesulfonic Acid (PFHpS)	AveID	1.031	1.089		50.3	47.6	5.6	25.0
Perfluorooctanoic acid (PFOA)	AveID	1.022	1.032		50.5	50.0	1.0	25.0
Perfluorononanoic acid (PFNA)	AveID	0.9040	1.016		56.2	50.0	12.4	25.0
Perfluorooctanesulfonic acid (PFOS)	AveID	0.9835	0.9166		44.5	47.8	-6.8	25.0
8:2FTS	L2ID		0.9785		50.6	47.9	5.7	25.0
Perfluorodecanoic acid (PFDA)	AveID	0.9057	0.9538		52.7	50.0	5.3	25.0
Perfluorooctane Sulfonamide (FOSA)	AveID	0.8985	0.9140		50.9	50.0	1.7	25.0
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	AveID	0.9711	1.014		52.2	50.0	4.4	25.0
Perfluorodecanesulfonic acid (PFDS)	AveID	0.5957	0.6364		51.6	48.3	6.8	25.0
Perfluoroundecanoic acid (PFUnA)	AveID	1.014	0.9789		48.3	50.0	-3.4	25.0
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	AveID	0.9103	0.998		54.8	50.0	9.7	25.0
MeFOSA	AveID	0.9355	0.9755		52.1	50.0	4.3	25.0
Perfluorododecanoic acid (PFDoA)	AveID	0.9145	0.9493		51.9	50.0	3.8	25.0
N-EtFOSA-M	AveID	0.9837	1.027		52.2	50.0	4.4	25.0
Perfluorotridecanoic Acid (PFTriA)	AveID	0.8734	0.9439		54.0	50.0	8.1	25.0
Perfluorotetradecanoic acid (PFTeA)	AveID	1.966	2.200		55.9	50.0	11.9	25.0
Perfluoro-n-hexadecanoic acid (PFHxDA)	L1ID		0.9762		52.3	50.0	4.6	25.0
Perfluoro-n-octadecanoic acid (PFODA)	AveID	0.7175	0.8478		59.1	50.0	18.2	25.0
13C4 PFBA	Ave	292242	262151		44.9	50.0	-10.3	50.0
13C5-PFPeA	Ave	232192	201954		43.5	50.0	-13.0	50.0
13C2 PFHxA	Ave	210884	190101		45.1	50.0	-9.9	50.0
13C4-PFHpA	Ave	192959	172560		44.7	50.0	-10.6	50.0
18O2 PFHxS	Ave	290899	261134		42.5	47.3	-10.2	50.0
M2-6:2FTS	Ave	77178	67962		41.8	47.5	-11.9	50.0

FORM VII 537 (Modified)

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Sacramento Job No.: 320-25962-1

SDG No.:

Lab Sample ID: ICV 320-152681/13 Calibration Date: 03/01/2017 12:31

Instrument ID: A8_N Calib Start Date: 03/01/2017 11:08

GC Column: GeminiC18 3x100 ID: 3.00(mm) Calib End Date: 03/01/2017 11:46

Lab File ID: 2017.03.01CURVE_014.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
13C4 PFOA	Ave	204953	183068		44.7	50.0	-10.7	50.0
13C4 PFOS	Ave	241637	218953		43.3	47.8	-9.4	50.0
13C5 PFNA	Ave	177866	156812		44.1	50.0	-11.8	50.0
M2-8:2FTS	Ave	92602	84040		43.5	47.9	-9.2	50.0
13C2 PFDA	Ave	166704	144616		43.4	50.0	-13.3	50.0
13C8 FOSA	Ave	366918	337473		46.0	50.0	-8.0	50.0
d3-NMeFOSAA	Ave	85186	77141		45.3	50.0	-9.4	50.0
d5-NEtFOSAA	Ave	81371	71203		43.8	50.0	-12.5	50.0
13C2 PFUnA	Ave	130805	114237		43.7	50.0	-12.7	50.0
d-N-MeFOSA-M	Ave	87983	80006		45.5	50.0	-9.1	50.0
13C2 PFDoA	Ave	123944	108741		43.9	50.0	-12.3	50.0
d-N-EtFOSA-M	Ave	85249	76986		45.2	50.0	-9.7	50.0
13C2-PFTeDA	Ave	259165	236701		45.7	50.0	-8.7	50.0
13C2-PFHxDA	Ave	125061	112974		45.2	50.0	-9.7	50.0

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNa\Sacramento\ChromData\A8_N\20170301-40358.b\2017.03.01CURVE_014.d
Lims ID: ICV Full
Client ID:
Sample Type: ICV
Inject. Date: 01-Mar-2017 12:31:14 ALS Bottle#: 36 Worklist Smp#: 13
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: ICV
Misc. Info.: Plate: 1 Rack: 1
Operator ID: A8-PC\A8 Instrument ID: A8_N
Sublist:

Method: \\ChromNa\Sacramento\ChromData\A8_N\20170301-40358.b\A8_N.m
Limit Group: LC PFC_DOD ICAL
Last Update: 01-Mar-2017 15:43:02 Calib Date: 01-Mar-2017 11:53:47
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A8_N\20170301-40358.b\2017.03.01CURVE_009.d

Column 1 : Det: EXP1
Process Host: XAWRK012

First Level Reviewer: chandrasenas Date: 01-Mar-2017 14:14:09

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C4 PFBA										
217.00 > 172.00	1.555	1.553	0.002		13107554	44.9		89.7	571827	
2 Perfluorobutyric acid										
212.90 > 169.00	1.555	1.558	-0.003	1.000	11971584	53.9			121786	
D 3 13C5-PFPeA										
267.90 > 223.00	1.833	1.832	0.001		10097715	43.5		87.0	496223	
4 Perfluoropentanoic acid										
262.90 > 219.00	1.833	1.835	-0.002	1.000	10448730	52.9			87028	
5 Perfluorobutanesulfonic acid										
298.90 > 80.00	1.873	1.872	0.001	1.000	17632155	47.1				
298.90 > 99.00	1.873	1.872	0.001	1.000	7534911		2.34(0.00-0.00)			
6 Perfluorohexanoic acid										
313.00 > 269.00	2.131	2.133	-0.002	1.000	9222580	54.5			268407	
D 7 13C2 PFHxA										
315.00 > 270.00	2.131	2.134	-0.003		9505049	45.1		90.1	530814	
10 Perfluoroheptanoic acid										
363.00 > 319.00	2.472	2.474	-0.002	1.000	9017371	54.0			66655	
D 9 13C4-PFHpA										
367.00 > 322.00	2.472	2.475	-0.003		8627993	44.7		89.4	271737	
8 Perfluorohexanesulfonic acid										
399.00 > 80.00	2.487	2.485	0.002	1.000	12611730	47.0				
D 11 18O2 PFHxS										
403.00 > 84.00	2.487	2.489	-0.002		12351647	42.5		89.8	385748	
D 12 M2-6:2FTS										
429.00 > 409.00	2.806	2.805	0.001		3228217	41.8		88.1		
13 Sodium 1H,1H,2H,2H-perfluorooctane										
427.00 > 407.00	2.814	2.807	0.007	1.000	3120919	51.7				

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
15 Perfluorooctanoic acid										
413.00 > 369.00	2.837	2.835	0.002	1.000	9449558	50.5			213564	
413.00 > 169.00	2.837	2.835	0.002	1.000	5623231		1.68(0.90-1.10)		140434	
D 14 13C4 PFOA										
417.00 > 372.00	2.837	2.835	0.002		9153420	44.7		89.3	333609	
16 Perfluoroheptanesulfonic Acid										
449.00 > 80.00	2.837	2.842	-0.005	1.000	11351727	50.3				
17 Perfluorooctane sulfonic acid										
499.00 > 80.00	3.205	3.145	0.060	1.000	9582813	44.5			334324	
499.00 > 99.00	3.205	3.145	0.060	1.000	2425871		3.95(0.90-1.10)		705291	
20 Perfluorononanoic acid										
463.00 > 419.00	3.205	3.202	0.003	1.000	7968593	56.2			153203	
D 18 13C4 PFOS										
503.00 > 80.00	3.196	3.204	-0.008		10465937	43.3		90.6	197571	
D 19 13C5 PFNA										
468.00 > 423.00	3.205	3.208	-0.003		7840582	44.1		88.2	207818	
D 26 M2-8:2FTS										
529.00 > 509.00	3.539	3.545	-0.006		4025496	43.5		90.8		
25 Sodium 1H,1H,2H,2H-perfluorooctane										
527.00 > 507.00	3.539	3.546	-0.007	1.000	3938788	50.6				
D 21 13C8 FOSA										
506.00 > 78.00	3.573	3.559	0.014		16873653	46.0		92.0	313140	
24 Perfluorodecanoic acid										
513.00 > 469.00	3.556	3.560	-0.004	1.000	6896912	52.7			187300	
D 23 13C2 PFDA										
515.00 > 470.00	3.556	3.560	-0.004		7230800	43.4		86.8	175077	
22 Perfluorooctane Sulfonamide										
498.00 > 78.00	3.573	3.561	0.012	1.000	15422698	50.9			322048	
D 27 d3-NMeFOSAA										
573.00 > 419.00	3.706	3.710	-0.004		3857056	45.3		90.6		
28 N-methyl perfluorooctane sulfonami										
570.00 > 419.00	3.706	3.713	-0.007	1.000	3910569	52.2				
29 Perfluorodecane Sulfonic acid										
599.00 > 80.00	3.862	3.866	-0.004	1.000	6723491	51.6				
D 32 d5-NEtFOSAA										
589.00 > 419.00	3.871	3.875	-0.004		3560139	43.8		87.5		
D 30 13C2 PFUnA										
565.00 > 520.00	3.880	3.876	0.004		5711825	43.7		87.3	216355	
31 Perfluoroundecanoic acid										
563.00 > 519.00	3.871	3.878	-0.007	1.000	5591035	48.3			127404	
33 N-ethyl perfluorooctane sulfonamid										
584.00 > 419.00	3.880	3.883	-0.003	1.002	3554390	54.8				
D 34 d-N-MeFOSA-M										
515.00 > 169.00	4.062	4.050	0.012		4000304	45.5		90.9		
35 MeFOSA										
512.00 > 169.00	4.070	4.057	0.013	1.000	3902092	52.1				
37 Perfluorododecanoic acid										
613.00 > 569.00	4.155	4.162	-0.007	1.000	5161221	51.9			95672	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 36 13C2 PFDoA										
615.00 > 570.00	4.155	4.164	-0.009		5437061	43.9		87.7	128920	
D 38 d-N-EtFOSA-M										
531.00 > 169.00	4.247	4.235	0.012		3849308	45.2		90.3		
39 N-ethylperfluoro-1-octanesulfonami										
526.00 > 169.00	4.256	4.242	0.014	1.000	3953838	52.2				
41 Perfluorotridecanoic acid										
663.00 > 619.00	4.417	4.424	-0.007	1.000	5131863	54.0			76799	
D 43 13C2-PFTeDA										
715.00 > 670.00	4.651	4.655	-0.004		11835060	45.7		91.3	267097	
42 Perfluorotetradecanoic acid										
712.50 > 668.90	4.651	4.657	-0.006	1.000	11961738	55.9			110355	
713.00 > 169.00	4.641	4.657	-0.016	0.998	1569975		7.62(0.00-0.00)		118035	
D 44 13C2-PFHxDA										
815.00 > 770.00	5.049	5.057	-0.008		5648694	45.2		90.3	81356	
45 Perfluorohexadecanoic acid										
813.00 > 769.00	5.049	5.059	-0.010	1.000	5307447	52.3			5849	
46 Perfluorooctadecanoic acid										
913.00 > 869.00	5.384	5.399	-0.015	1.000	4609565	59.1			5082	

Reagents:

LCPFCIC_FULL_00001 Amount Added: 1.00 Units: mL

Report Date: 01-Mar-2017 15:43:03 Chrom Revision: 2.2 03-Feb-2017 15:35:04

TestAmerica Sacramento

Data File: \\ChromNa\Sacramento\ChromData\A8_N\20170301-40358.b\2017.03.01CURVE_014.d

Injection Date: 01-Mar-2017 12:31:14 Instrument ID: A8_N

Lims ID: ICV Full

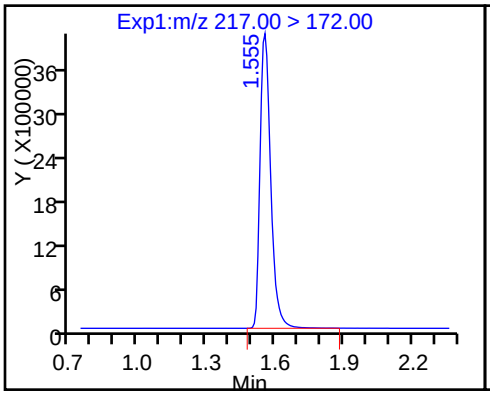
Client ID:

Operator ID: A8-PC\A8 ALS Bottle#: 36 Worklist Smp#: 13

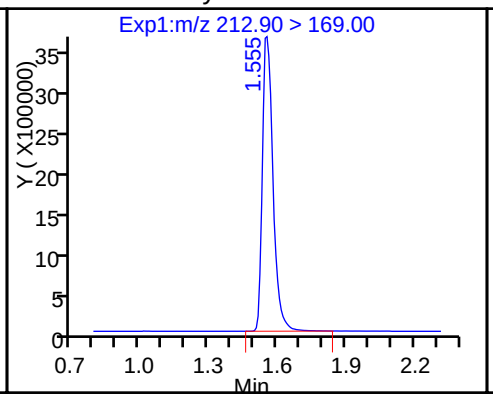
Injection Vol: 2.0 ul Dil. Factor: 1.0000

Method: A8_N Limit Group: LC PFC_DOD ICAL

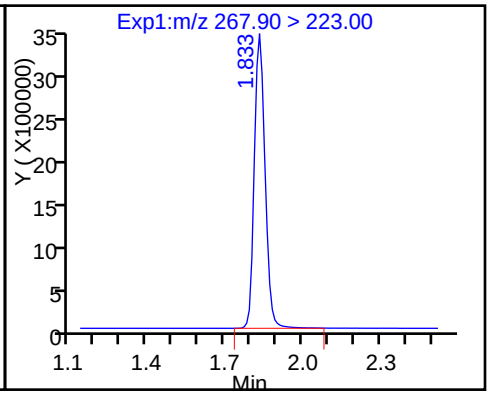
D 1 13C4 PFBA



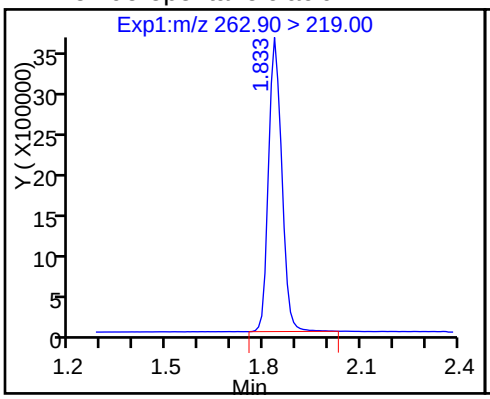
2 Perfluorobutyric acid



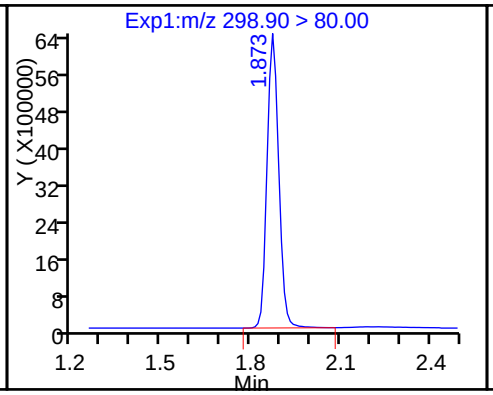
D 3 13C5-PFPeA



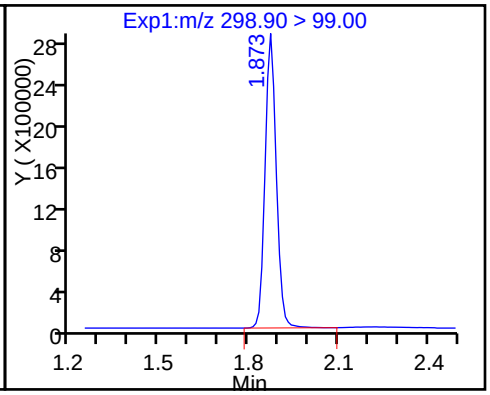
4 Perfluoropentanoic acid



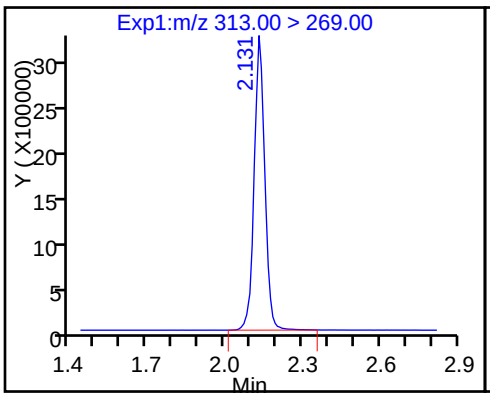
5 Perfluorobutanesulfonic acid



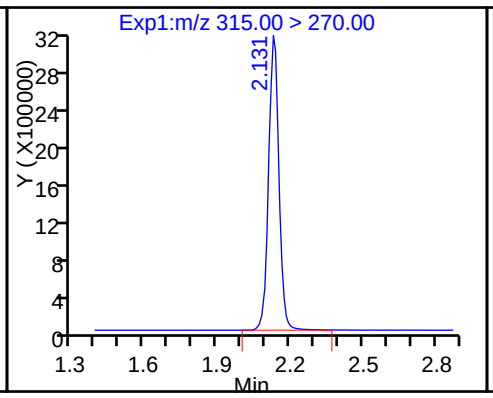
5 Perfluorobutanesulfonic acid



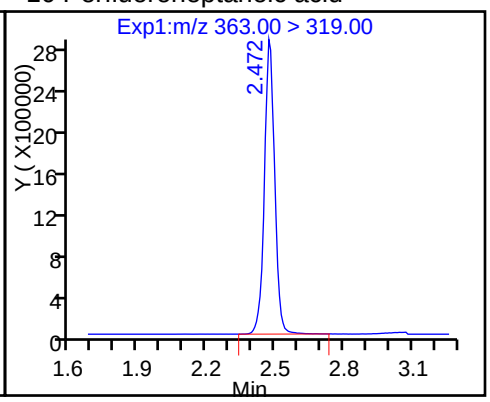
6 Perfluorohexanoic acid



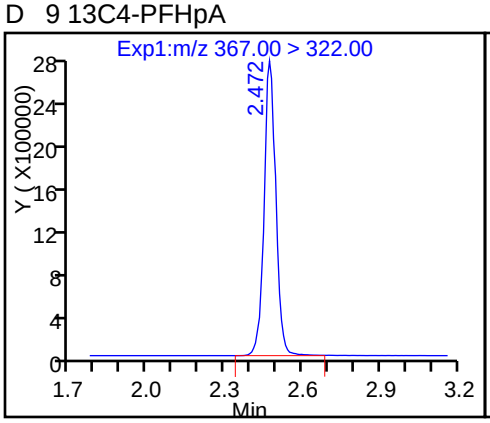
D 7 13C2 PFHxA



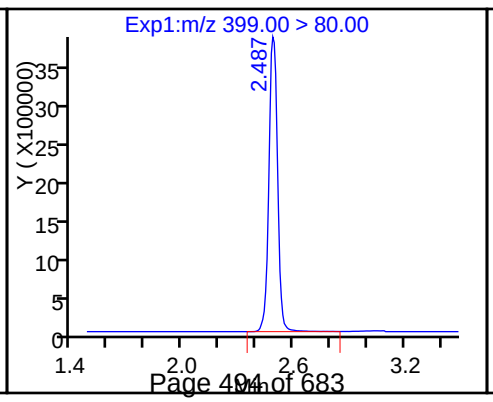
10 Perfluoroheptanoic acid



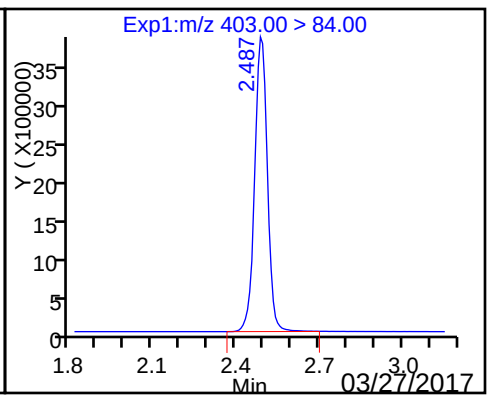
D 9 13C4-PFHpA



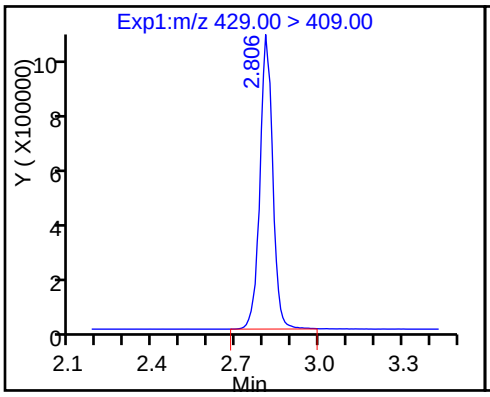
8 Perfluorohexanesulfonic acid



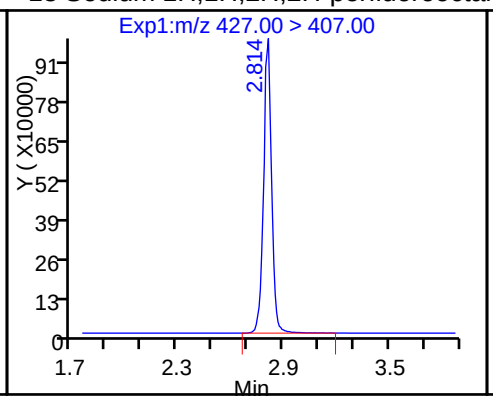
D 11 18O2 PFHxS



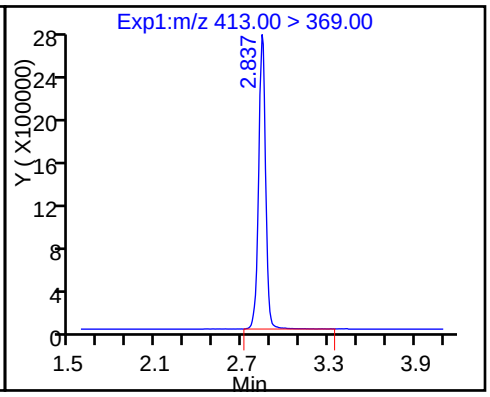
D 12 M2-6:2FTS



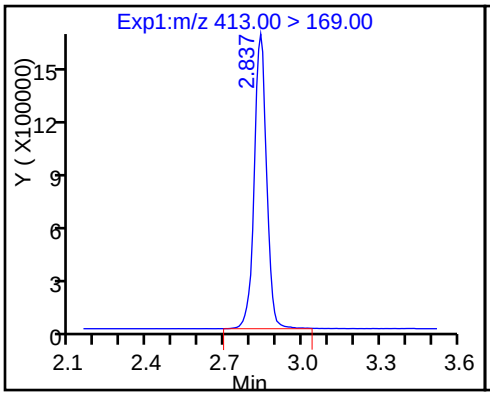
13 Sodium 1H,1H,2H,2H-perfluorooctane



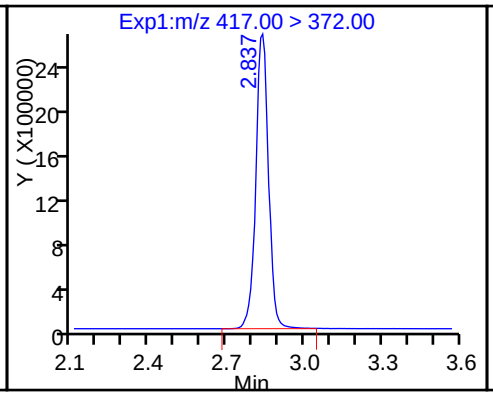
15 Perfluorooctanoic acid



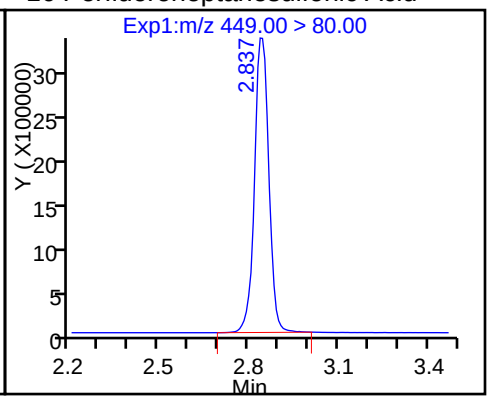
15 Perfluorooctanoic acid



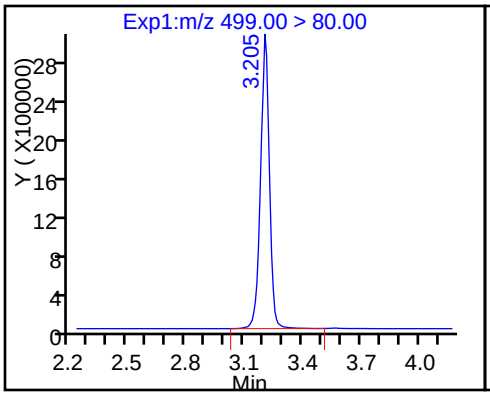
D 14 13C4 PFOA



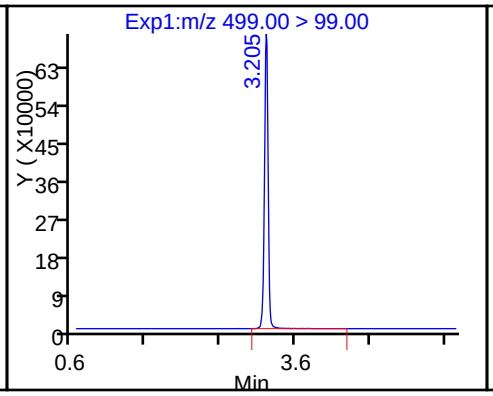
16 Perfluoroheptanesulfonic Acid



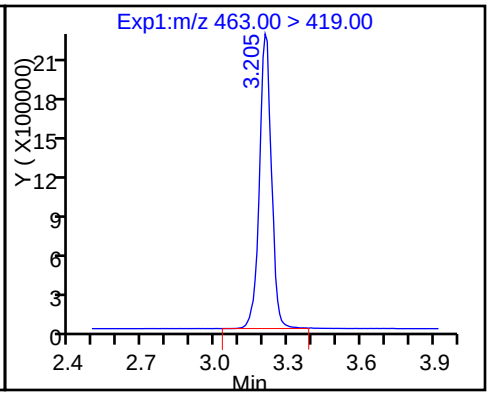
17 Perfluorooctane sulfonic acid



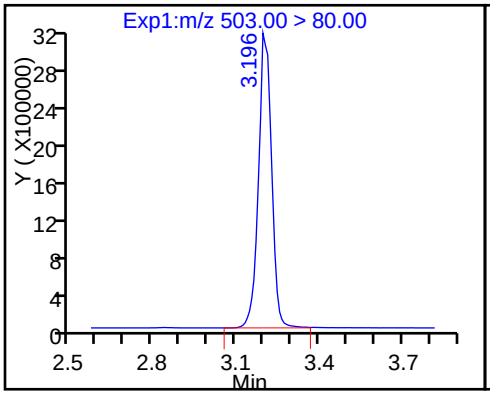
17 Perfluorooctane sulfonic acid



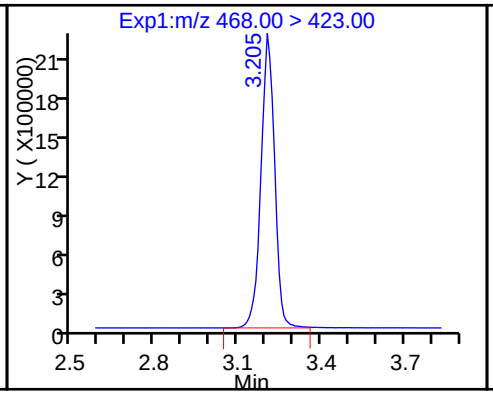
20 Perfluorononanoic acid



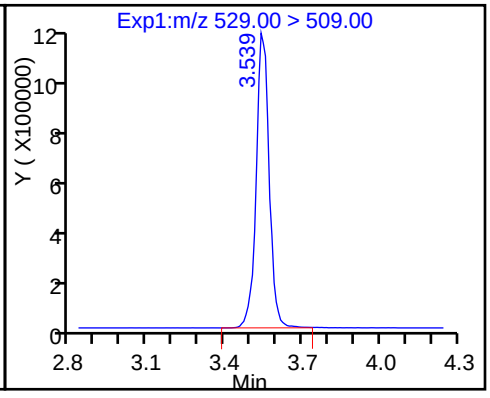
D 18 13C4 PFOS



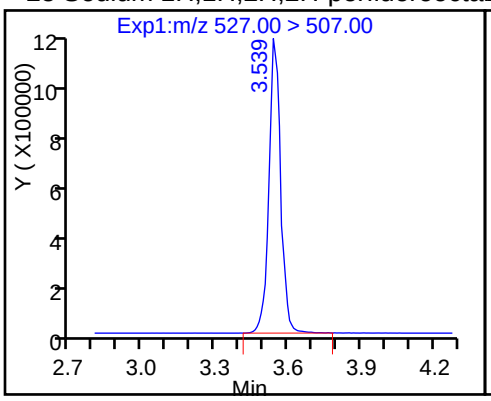
D 19 13C5 PFNA



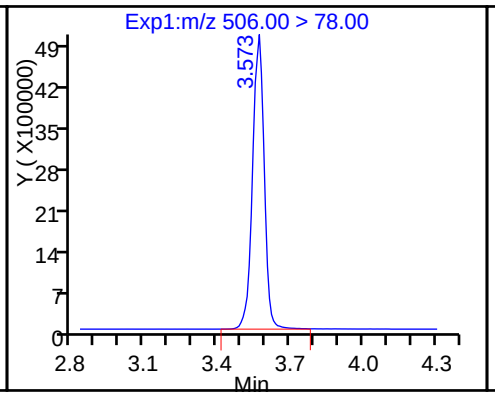
D 26 M2-8:2FTS



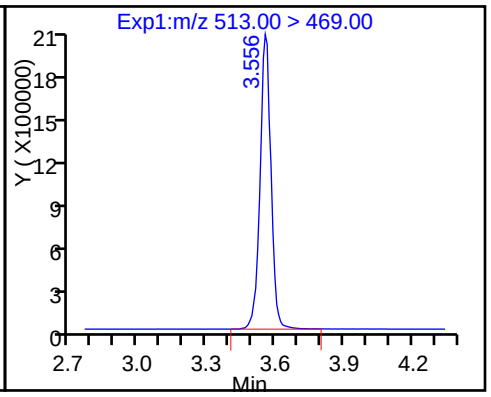
25 Sodium 1H,1H,2H,2H-perfluorooctane



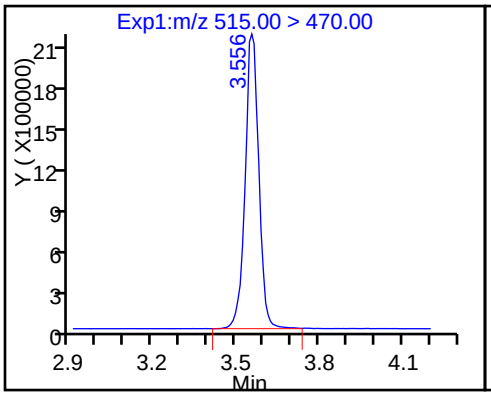
D 21 13C8 FOSA



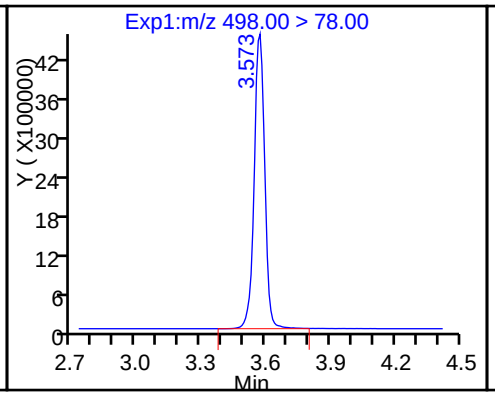
24 Perfluorodecanoic acid



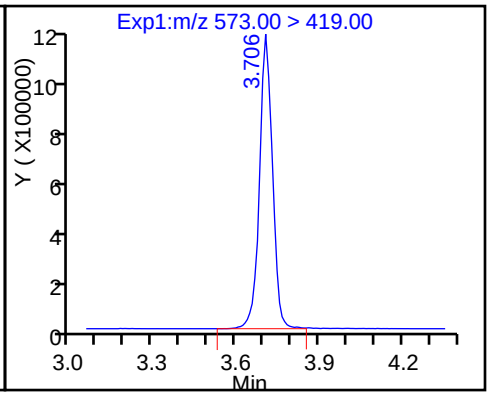
D 23 13C2 PFDA



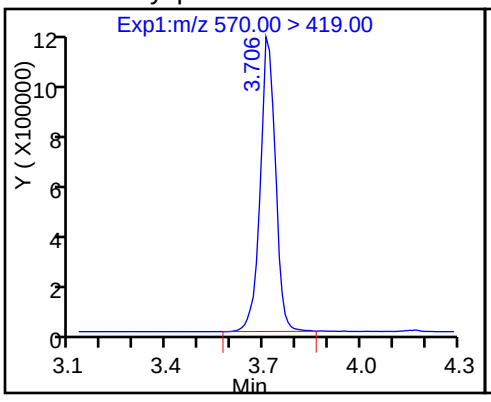
22 Perfluorooctane Sulfonamide



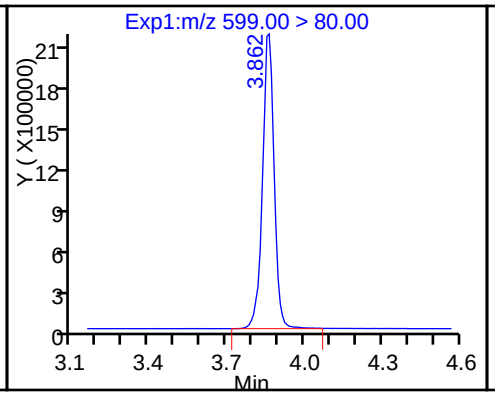
D 27 d3-NMeFOSAA



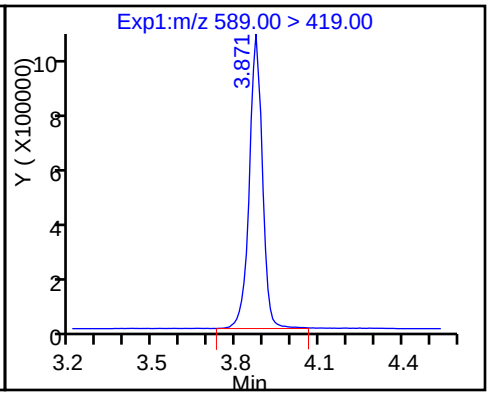
28 N-methyl perfluorooctane sulfonami



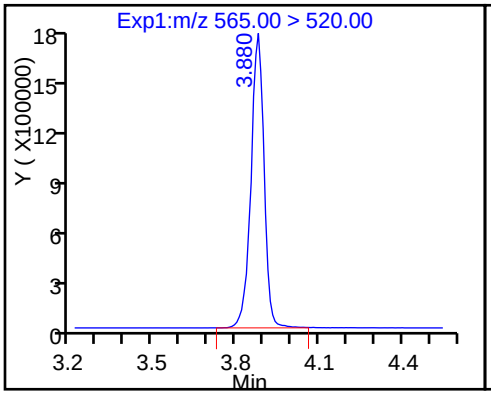
29 Perfluorodecane Sulfonic acid



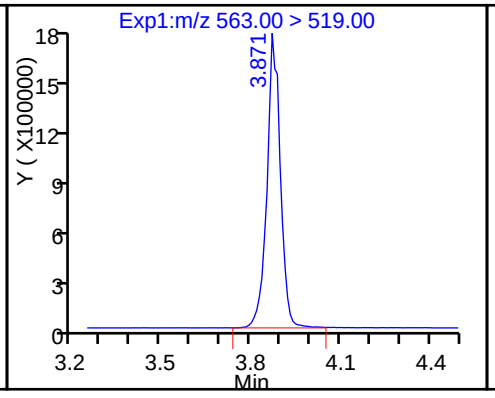
D 32 d5-NEtFOSAA



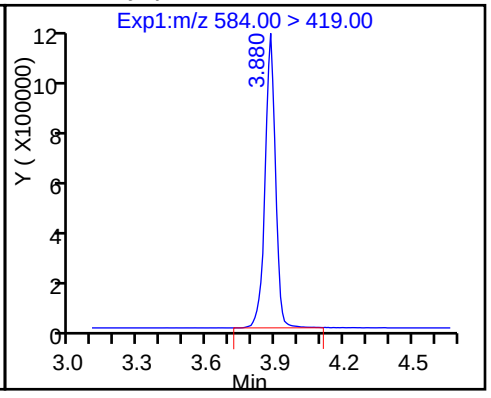
D 30 13C2 PFUnA



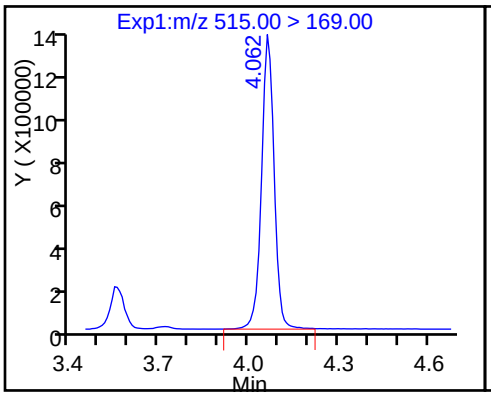
31 Perfluoroundecanoic acid



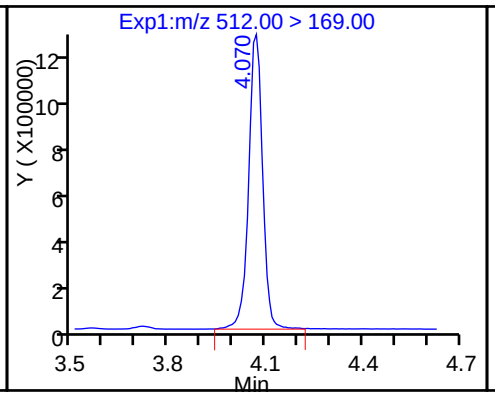
33 N-ethyl perfluorooctane sulfonamid



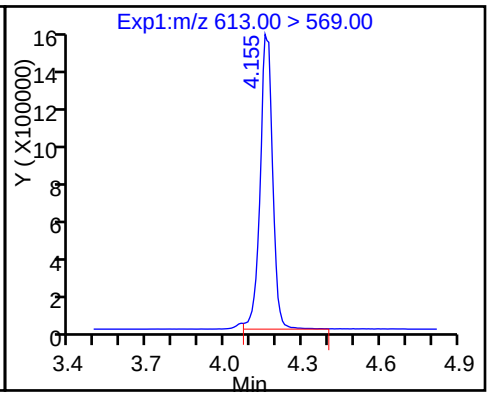
D 34 d-N-MeFOSA-M



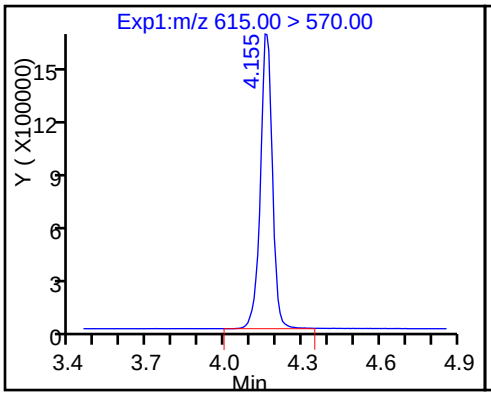
35 MeFOSA



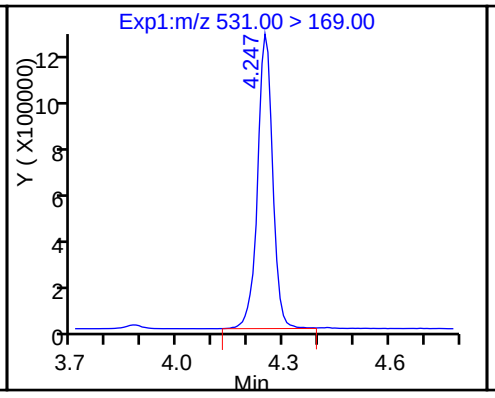
37 Perfluorododecanoic acid



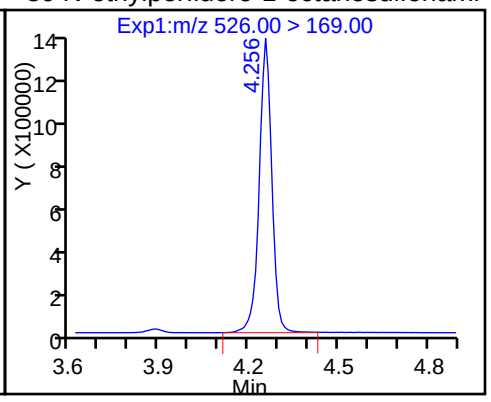
D 36 13C2 PFDoA



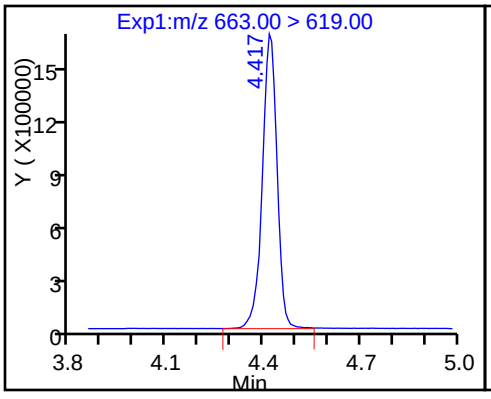
D 38 d-N-EtFOSA-M



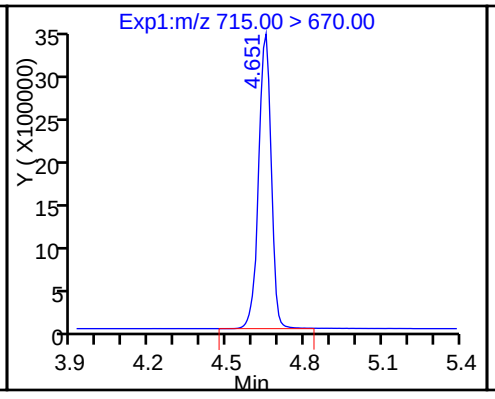
39 N-ethylperfluoro-1-octanesulfonami



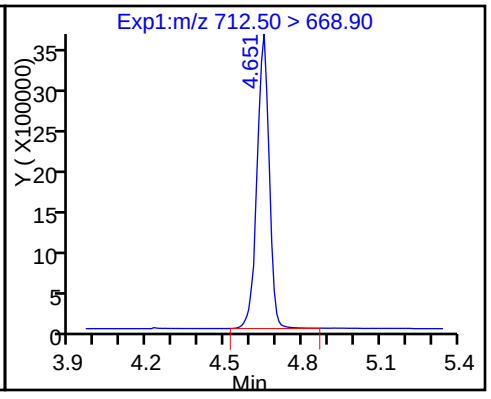
41 Perfluorotridecanoic acid



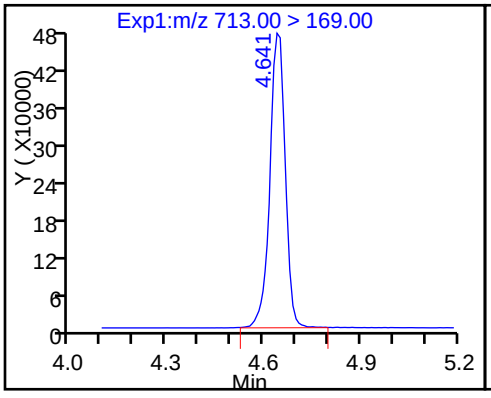
D 43 13C2-PFTeDA



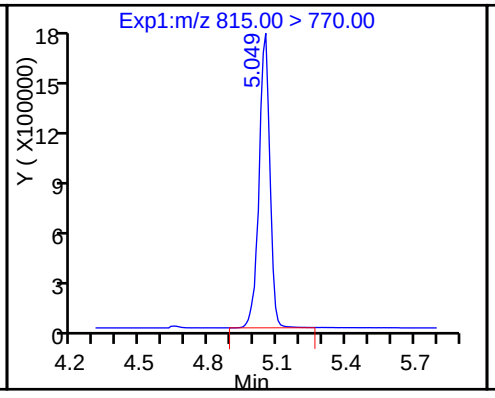
42 Perfluorotetradecanoic acid



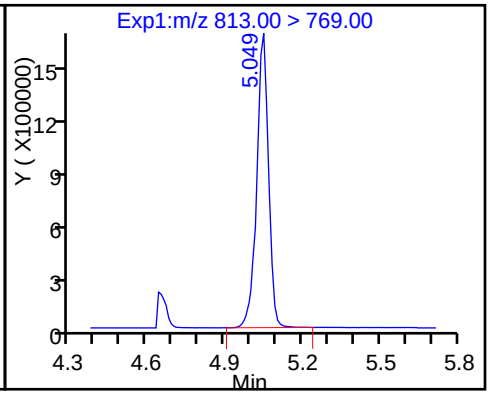
42 Perfluorotetradecanoic acid



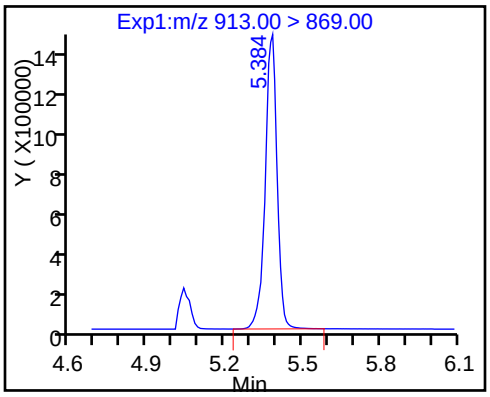
D 44 13C2-PFHxDA



45 Perfluorohexadecanoic acid



46 Perfluorooctadecanoic acid



FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Sacramento Job No.: 320-25962-1

SDG No.:

Lab Sample ID: CCV 320-152825/2 Calibration Date: 03/01/2017 18:30

Instrument ID: A8_N Calib Start Date: 03/01/2017 11:08

GC Column: GeminiC18 3x100 ID: 3.00(mm) Calib End Date: 03/01/2017 11:46

Lab File ID: 2017.03.01A_002.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorobutanoic acid (PFBA)	AveID	0.8473	0.9019		53.2	50.0	6.4	25.0
Perfluoropentanoic acid (PFPeA)	AveID	0.9785	1.021		52.2	50.0	4.4	25.0
Perfluorobutanesulfonic acid (PFBS)	AveID	1.433	1.437		44.4	44.2	0.3	25.0
Perfluorohexanoic acid (PFHxA)	AveID	0.8895	0.9052		50.9	50.0	1.8	25.0
Perfluoroheptanoic acid (PFHpA)	AveID	0.9673	0.997		51.5	50.0	3.0	25.0
Perfluorohexanesulfonic acid (PFHxS)	AveID	1.028	1.021		45.2	45.5	-0.7	25.0
6:2FTS	L2ID		0.8839		47.2	47.4	-0.5	25.0
Perfluorooctanoic acid (PFOA)	AveID	1.022	0.997		48.8	50.0	-2.4	25.0
Perfluoroheptanesulfonic Acid (PFHpS)	AveID	1.031	1.107		51.1	47.6	7.3	25.0
Perfluorooctanesulfonic acid (PFOS)	AveID	0.9835	1.027		48.5	46.4	4.5	25.0
Perfluorononanoic acid (PFNA)	AveID	0.9040	0.9616		53.2	50.0	6.4	25.0
8:2FTS	L2ID		0.9401		48.7	47.9	1.6	25.0
Perfluorodecanoic acid (PFDA)	AveID	0.9057	0.9723		53.7	50.0	7.4	25.0
Perfluorooctane Sulfonamide (FOSA)	AveID	0.8985	0.9268		51.6	50.0	3.1	25.0
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	AveID	0.9711	0.9417		48.5	50.0	-3.0	25.0
Perfluorodecanesulfonic acid (PFDS)	AveID	0.5957	0.6428		52.0	48.2	7.9	25.0
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	AveID	0.9103	0.8499		46.7	50.0	-6.6	25.0
Perfluoroundecanoic acid (PFUnA)	AveID	1.014	0.9670		47.7	50.0	-4.6	25.0
MeFOSA	AveID	0.9355	0.9040		48.3	50.0	-3.4	25.0
Perfluorododecanoic acid (PFDoA)	AveID	0.9145	0.9465		51.7	50.0	3.5	25.0
N-EtFOSA-M	AveID	0.9837	0.9425		47.9	50.0	-4.2	25.0
Perfluorotridecanoic Acid (PFTriA)	AveID	0.8734	0.8572		49.1	50.0	-1.9	25.0
Perfluorotetradecanoic acid (PFTeA)	AveID	1.966	1.882		47.8	50.0	-4.3	25.0
Perfluoro-n-hexadecanoic acid (PFHxDA)	L1ID		0.8963		48.0	50.0	-4.1	25.0
Perfluoro-n-octadecanoic acid (PFODA)	AveID	0.7175	0.8110		56.5	50.0	13.0	25.0
13C4 PFBA	Ave	292242	305833		52.3	50.0	4.7	50.0
13C5-PFPeA	Ave	232192	233513		50.3	50.0	0.6	50.0
13C2 PFHxA	Ave	210884	232333		55.1	50.0	10.2	50.0
13C4-PFHpA	Ave	192959	200675		52.0	50.0	4.0	50.0
18O2 PFHxS	Ave	290899	297910		48.4	47.3	2.4	50.0
M2-6:2FTS	Ave	77178	77773		47.9	47.5	0.8	50.0

FORM VII 537 (Modified)

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Sacramento Job No.: 320-25962-1

SDG No.:

Lab Sample ID: CCV 320-152825/2 Calibration Date: 03/01/2017 18:30

Instrument ID: A8_N Calib Start Date: 03/01/2017 11:08

GC Column: GeminiC18 3x100 ID: 3.00(mm) Calib End Date: 03/01/2017 11:46

Lab File ID: 2017.03.01A_002.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
13C4 PFOA	Ave	204953	205765		50.2	50.0	0.4	50.0
13C4 PFOS	Ave	241637	242782		48.0	47.8	0.5	50.0
13C5 PFNA	Ave	177866	178092		50.1	50.0	0.1	50.0
M2-8:2FTS	Ave	92602	90152		46.6	47.9	-2.6	50.0
13C2 PFDA	Ave	166704	168337		50.5	50.0	1.0	50.0
13C8 FOSA	Ave	366918	388296		52.9	50.0	5.8	50.0
d3-NMeFOSAA	Ave	85186	87945		51.6	50.0	3.2	50.0
13C2 PFUnA	Ave	130805	129221		49.4	50.0	-1.2	50.0
d5-NEtFOSAA	Ave	81371	82759		50.9	50.0	1.7	50.0
d-N-MeFOSA-M	Ave	87983	91639		52.1	50.0	4.2	50.0
13C2 PFDoA	Ave	123944	128228		51.7	50.0	3.5	50.0
d-N-EtFOSA-M	Ave	85249	89210		52.3	50.0	4.6	50.0
13C2-PFTeDA	Ave	259165	247478		47.7	50.0	-4.5	50.0
13C2-PFHxDA	Ave	125061	132882		53.1	50.0	6.3	50.0

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNa\Sacramento\ChromData\A8_N\20170302-40391.b\2017.03.01A_002.d
Lims ID: CCV L5
Client ID:
Sample Type: CCV
Inject. Date: 01-Mar-2017 18:30:08 ALS Bottle#: 32 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV L5
Misc. Info.: Plate: 1 Rack: 1
Operator ID: A8-PC\A8 Instrument ID: A8_N
Sublist: chrom-A8_N*sub14

Method: \\ChromNa\Sacramento\ChromData\A8_N\20170302-40391.b\A8_N.m
Limit Group: LC PFC_DOD ICAL
Last Update: 03-Mar-2017 10:36:39 Calib Date: 01-Mar-2017 11:53:47
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A8_N\20170301-40358.b\2017.03.01CURVE_009.d

Column 1 : Det: EXP1
Process Host: XAWRK033

First Level Reviewer: chandrasenas Date: 03-Mar-2017 10:36:39

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C4 PFBA										
217.00 > 172.00	1.531	1.531	0.0		15291644	52.3		105	790307	
2 Perfluorobutyric acid										
212.90 > 169.00	1.539	1.539	0.0	1.000	13791275	53.2		106	111105	
D 3 13C5-PFPeA										
267.90 > 223.00	1.802	1.802	0.0		11675664	50.3		101	804737	
4 Perfluoropentanoic acid										
262.90 > 219.00	1.812	1.812	0.0	1.000	11923860	52.2		104	113730	
5 Perfluorobutanesulfonic acid										
298.90 > 80.00	1.842	1.842	0.0	1.000	18927243	44.4		100		
298.90 > 99.00	1.851	1.842	0.009	1.005	8236953		2.30(0.00-0.00)			
6 Perfluorohexanoic acid										
313.00 > 269.00	2.099	2.099	0.0	1.000	10515574	50.9		102	280991	
D 7 13C2 PFHxA										
315.00 > 270.00	2.099	2.099	0.0		11616638	55.1		110	471963	
10 Perfluoroheptanoic acid										
363.00 > 319.00	2.423	2.423	0.0	1.000	9999598	51.5		103	83003	
D 9 13C4-PFHpA										M
367.00 > 322.00	2.423	2.423	0.0		10033733	52.0		104	301893	M
8 Perfluorohexanesulfonic acid										
399.00 > 80.00	2.446	2.446	0.0	1.000	13846110	45.2		99.3		
D 11 18O2 PFHxS										
403.00 > 84.00	2.446	2.446	0.0		14091161	48.4		102	391275	
13 Sodium 1H,1H,2H,2H-perfluorooctane										
427.00 > 407.00	2.759	2.759	0.0	1.000	3258333	47.2		99.5		
D 12 M2-6:2FTS										
429.00 > 409.00	2.759	2.759	0.0		3694195	47.9		101		

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 14 13C4 PFOA										
417.00 > 372.00	2.781	2.781	0.0		10288248	50.2		100	252930	
15 Perfluorooctanoic acid										M
413.00 > 369.00	2.789	2.789	0.0	1.000	10257380	48.8		97.6	141185	
413.00 > 169.00	2.797	2.789	0.008	1.003	6259833		1.64(0.90-1.10)		126675	M
16 Perfluoroheptanesulfonic Acid										
449.00 > 80.00	2.797	2.797	0.0	1.000	12787774	51.1		107		
17 Perfluorooctane sulfonic acid										
499.00 > 80.00	3.044	3.044	0.0	1.000	11572104	48.5		104	61689	
499.00 > 99.00	3.154	3.044	0.110	1.036	2640253		4.38(0.90-1.10)		180817	
D 18 13C4 PFOS										
503.00 > 80.00	3.154	3.154	0.0		11604982	48.0		100	217618	
D 19 13C5 PFNA										
468.00 > 423.00	3.154	3.154	0.0		8904578	50.1		100	271244	
20 Perfluorononanoic acid										
463.00 > 419.00	3.162	3.162	0.0	1.000	8562217	53.2		106	145661	
D 26 M2-8:2FTS										
529.00 > 509.00	3.492	3.492	0.0		4318288	46.6		97.4		
25 Sodium 1H,1H,2H,2H-perfluorooctane										
527.00 > 507.00	3.492	3.492	0.0	1.000	4059743	48.7		102		
24 Perfluorodecanoic acid										
513.00 > 469.00	3.501	3.501	0.0	1.000	8183461	53.7		107	283809	
D 23 13C2 PFDA										
515.00 > 470.00	3.501	3.501	0.0		8416874	50.5		101	173484	
D 21 13C8 FOSA										
506.00 > 78.00	3.534	3.534	0.0		19414800	52.9		106	359640	
22 Perfluorooctane Sulfonamide										
498.00 > 78.00	3.543	3.543	0.0	1.000	17992644	51.6		103	420984	
D 27 d3-NMeFOSAA										
573.00 > 419.00	3.653	3.653	0.0		4397246	51.6		103		
28 N-methyl perfluorooctane sulfonami										
570.00 > 419.00	3.662	3.662	0.0	1.003	4140719	48.5		97.0		
29 Perfluorodecane Sulfonic acid										
599.00 > 80.00	3.802	3.802	0.0	1.000	7521866	52.0		108		
D 32 d5-NEtFOSAA										
589.00 > 419.00	3.819	3.819	0.0		4137949	50.9		102		
D 30 13C2 PFUnA										
565.00 > 520.00	3.819	3.819	0.0		6461041	49.4		98.8	245271	
33 N-ethyl perfluorooctane sulfonamid										
584.00 > 419.00	3.828	3.828	0.0	1.002	3516621	46.7		93.4		
31 Perfluoroundecanoic acid										
563.00 > 519.00	3.828	3.828	0.0	1.000	6248076	47.7		95.4	115901	
D 34 d-N-MeFOSA-M										
515.00 > 169.00	4.041	4.041	0.0		4581934	52.1		104		
35 MeFOSA										
512.00 > 169.00	4.041	4.041	0.0	1.000	4142123	48.3		96.6		
37 Perfluorododecanoic acid										
613.00 > 569.00	4.105	4.105	0.0	1.000	6068148	51.7		103	149298	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 36 13C2 PFDoA										
615.00 > 570.00	4.105	4.105	0.0		6411396	51.7		103	146318	
D 38 d-N-EtFOSA-M										
531.00 > 169.00	4.219	4.219	0.0		4460493	52.3		105		
39 N-ethylperfluoro-1-octanesulfonami										
526.00 > 169.00	4.228	4.228	0.0	1.000	4204120	47.9		95.8		
41 Perfluorotridecanoic acid										
663.00 > 619.00	4.362	4.362	0.0	1.000	5496057	49.1		98.1	101961	
42 Perfluorotetradecanoic acid										
712.50 > 668.90	4.585	4.585	0.0	1.000	12065374	47.8		95.7	159386	
713.00 > 169.00	4.585	4.585	0.0	1.000	1665181		7.25(0.00-0.00)		185137	
D 43 13C2-PFTeDA										
715.00 > 670.00	4.591	4.591	0.0		12373891	47.7		95.5	450488	
D 44 13C2-PFHxDA										
815.00 > 770.00	4.977	4.977	0.0		6644092	53.1		106	186726	
45 Perfluorohexadecanoic acid										
813.00 > 769.00	4.977	4.977	0.0	1.000	5746463	48.0		95.9	67182	
46 Perfluorooctadecanoic acid										
913.00 > 869.00	5.306	5.306	0.0	1.000	5199459	56.5		113	24410	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

LCPFC_FULL-L5_00001 Amount Added: 1.00 Units: mL

Report Date: 03-Mar-2017 10:36:40 Chrom Revision: 2.2 03-Feb-2017 15:35:04

TestAmerica Sacramento

Data File: \\ChromNa\Sacramento\ChromData\A8_N\20170302-40391.b\2017.03.01A_002.d

Injection Date: 01-Mar-2017 18:30:08 Instrument ID: A8_N

Lims ID: CCV L5

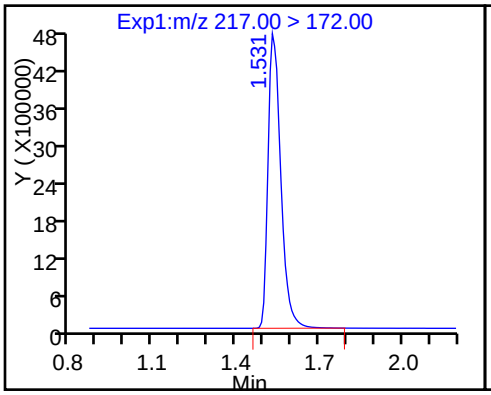
Client ID:

Operator ID: A8-PC\A8 ALS Bottle#: 32 Worklist Smp#: 2

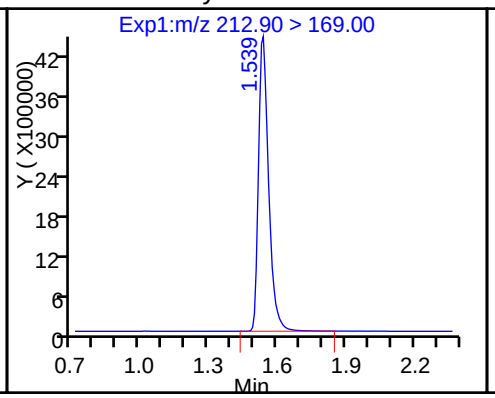
Injection Vol: 2.0 ul Dil. Factor: 1.0000

Method: A8_N Limit Group: LC PFC_DOD ICAL

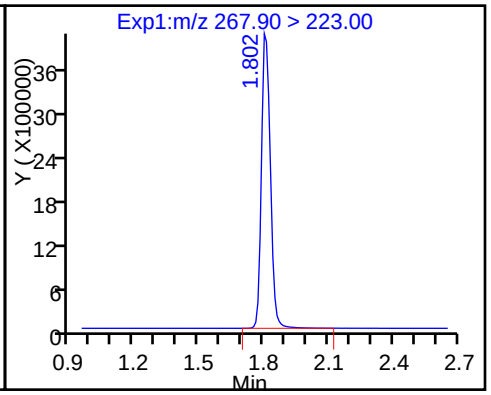
D 1 13C4 PFBA



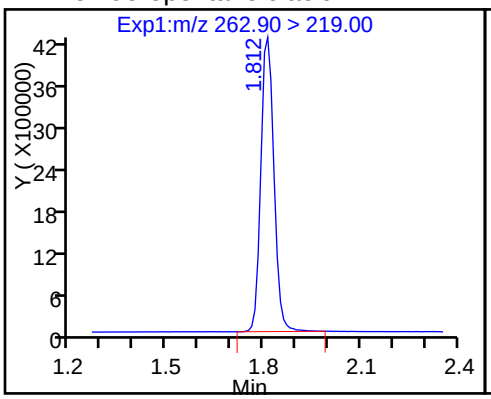
2 Perfluorobutyric acid



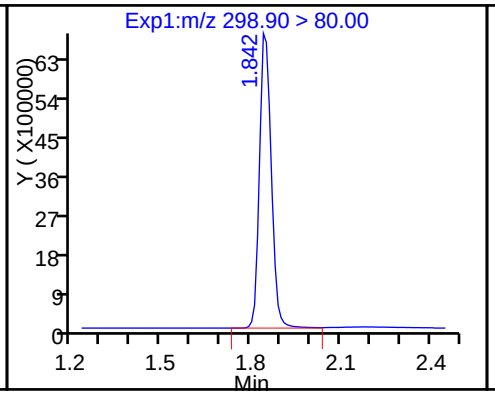
D 3 13C5-PFPeA



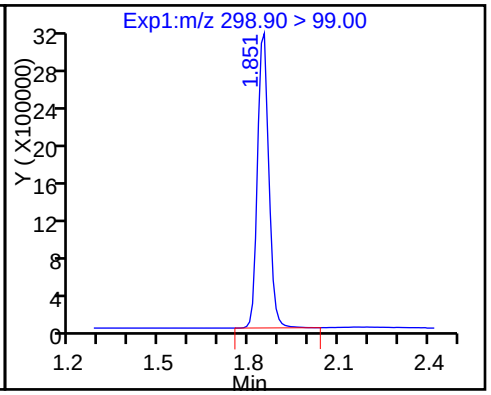
4 Perfluoropentanoic acid



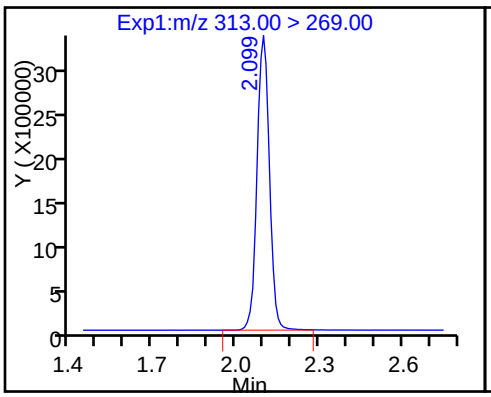
5 Perfluorobutanesulfonic acid



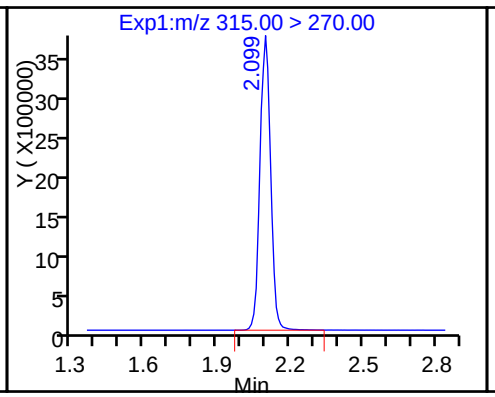
5 Perfluorobutanesulfonic acid



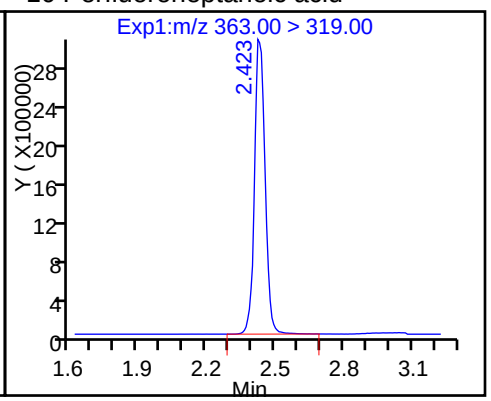
6 Perfluorohexanoic acid



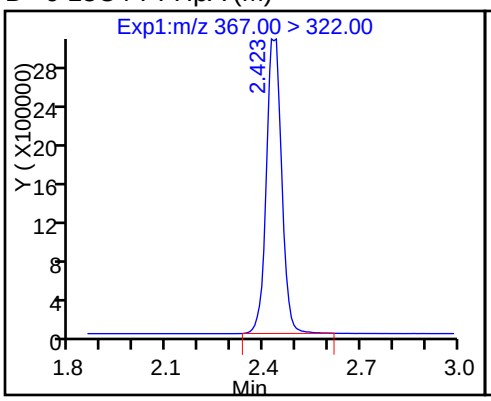
D 7 13C2 PFHxA



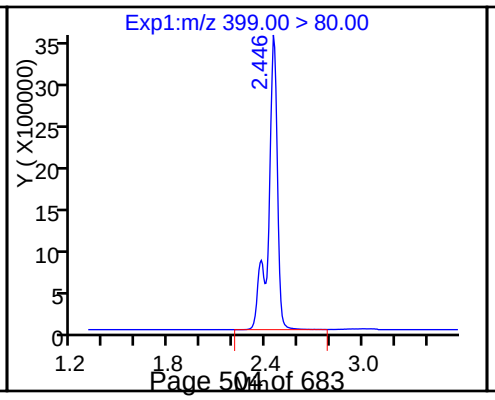
10 Perfluoroheptanoic acid



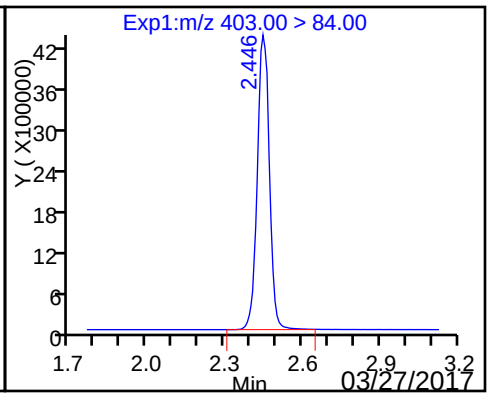
D 9 13C4-PFHpA (M)



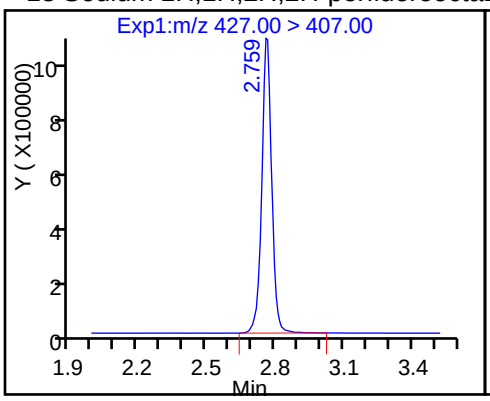
8 Perfluorohexanesulfonic acid



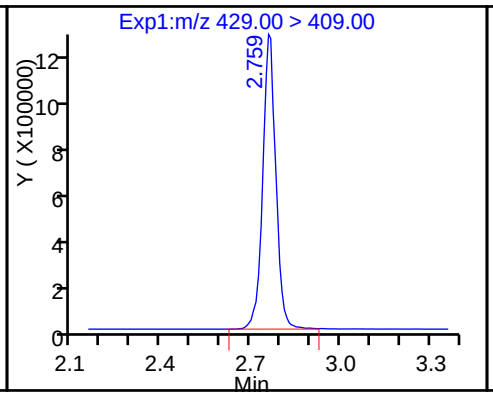
D 11 18O2 PFHxS



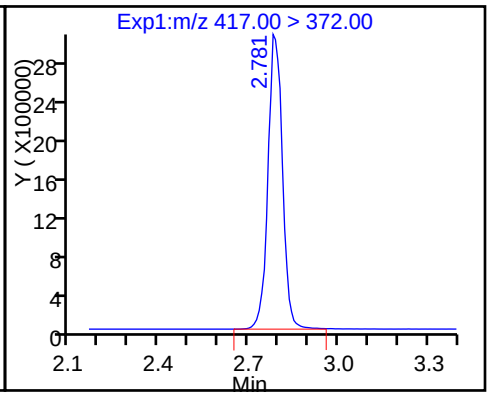
13 Sodium 1H,1H,2H,2H-perfluorooctane



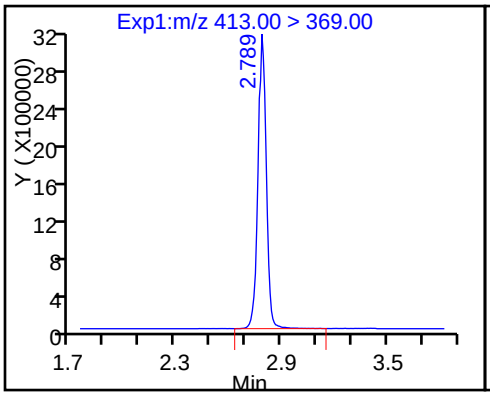
D 12 M2-6:2FTS



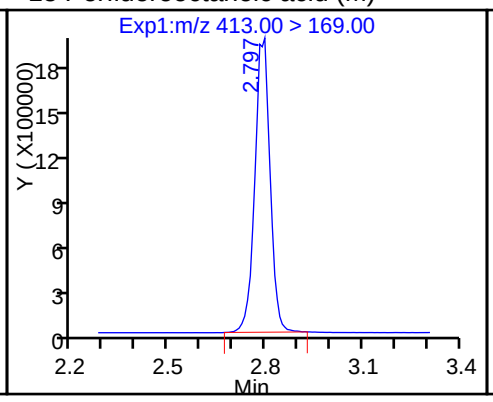
D 14 13C4 PFOA



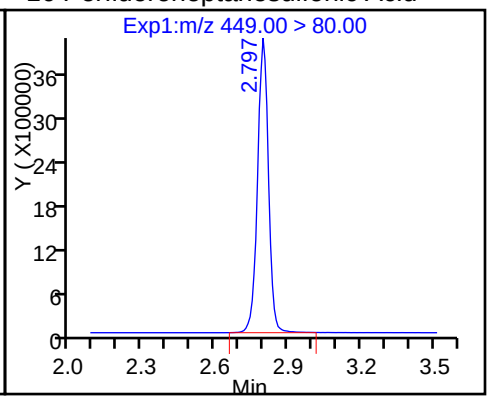
15 Perfluorooctanoic acid



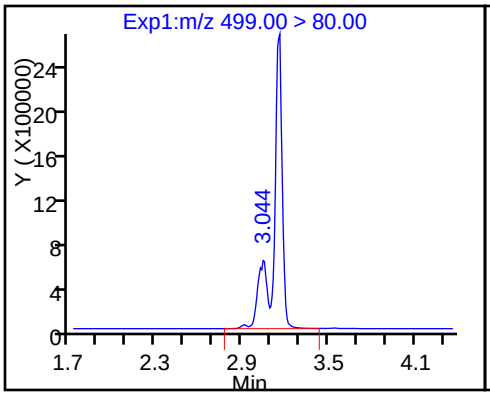
15 Perfluorooctanoic acid (M)



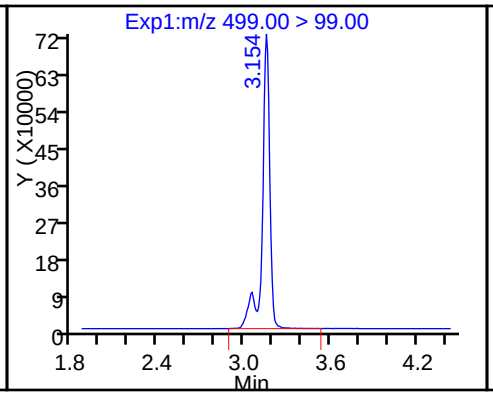
16 Perfluoroheptanesulfonic Acid



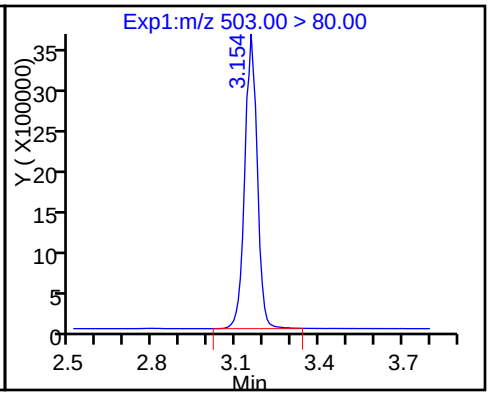
17 Perfluorooctane sulfonic acid



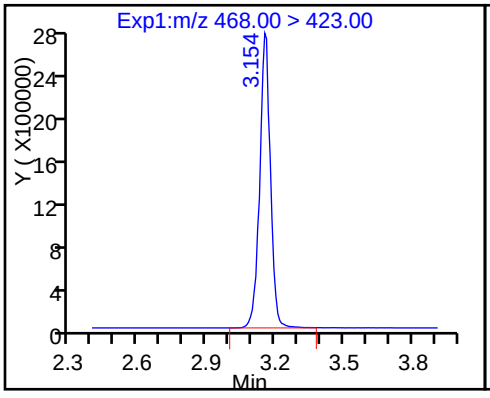
17 Perfluorooctane sulfonic acid



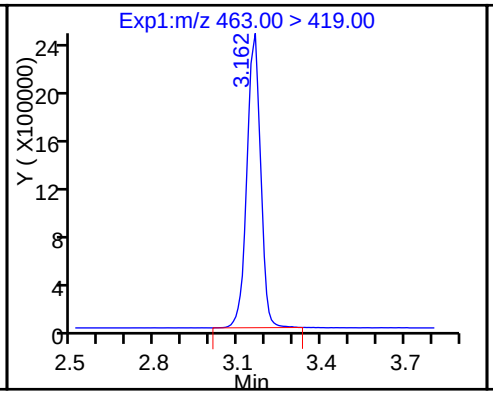
D 18 13C4 PFOS



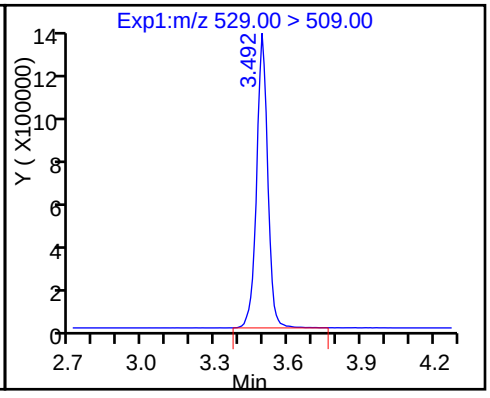
D 19 13C5 PFNA



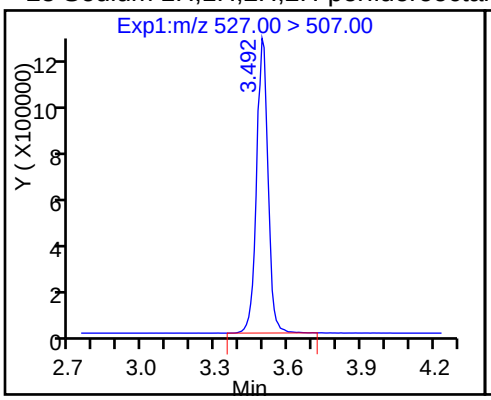
20 Perfluorononanoic acid



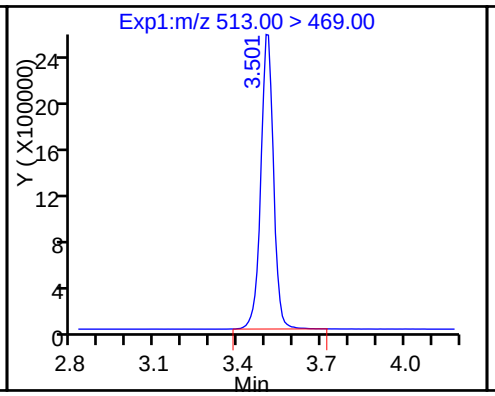
D 26 M2-8:2FTS



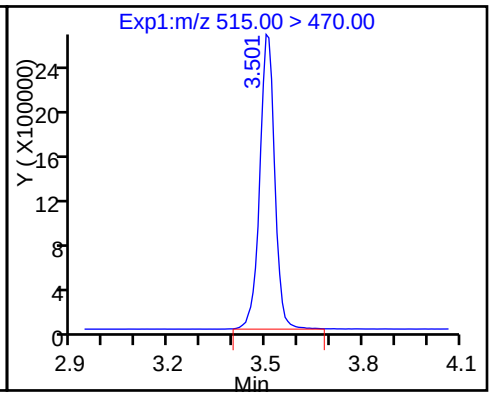
25 Sodium 1H,1H,2H,2H-perfluorooctane



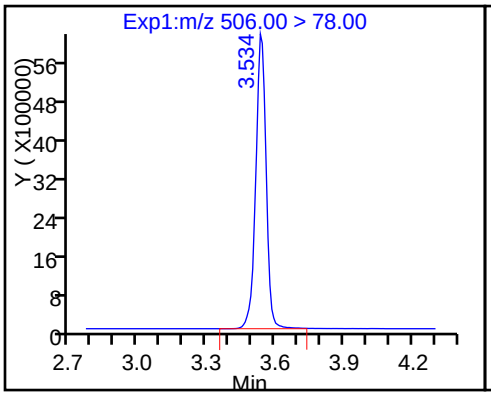
24 Perfluorodecanoic acid



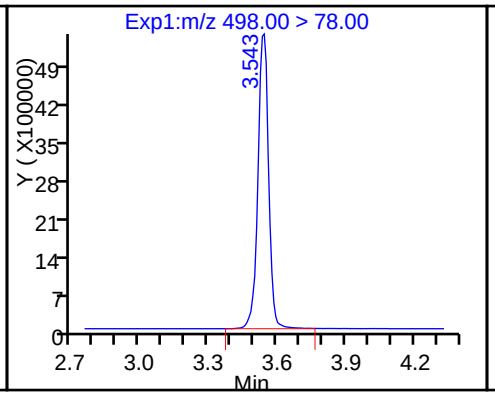
D 23 13C2 PFDA



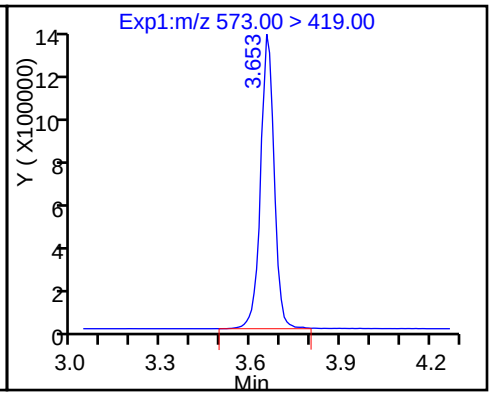
D 21 13C8 FOSA



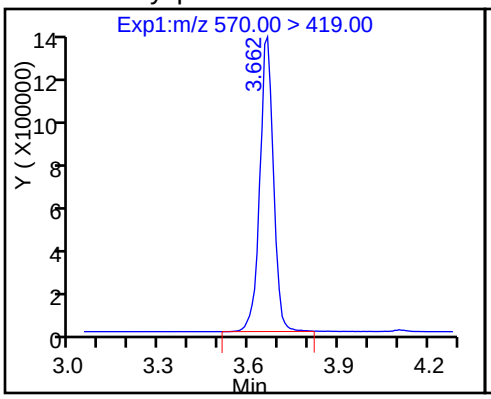
22 Perfluorooctane Sulfonamide



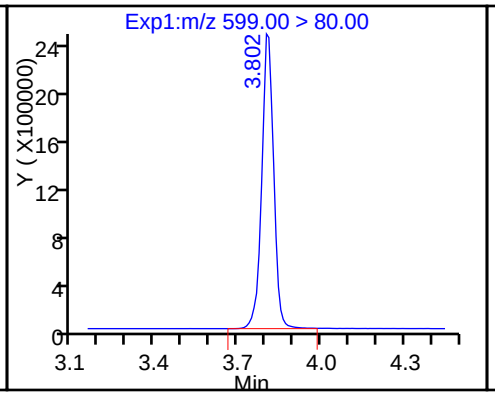
D 27 d3-NMeFOSAA



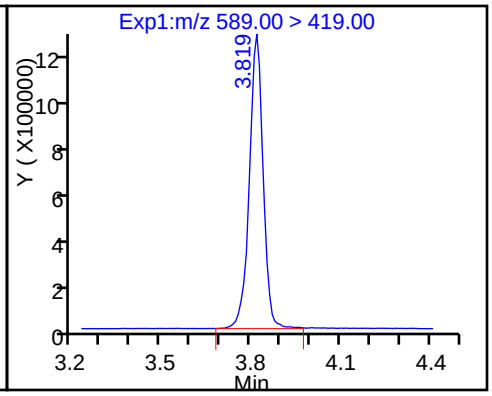
28 N-methyl perfluorooctane sulfonami



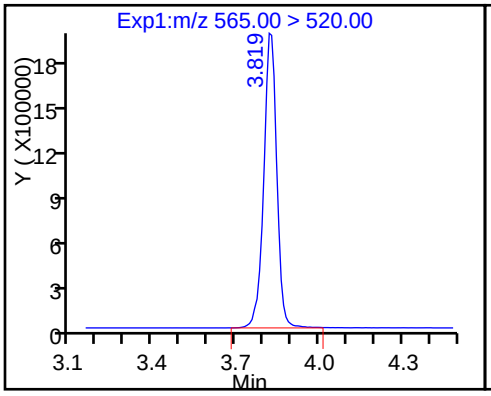
29 Perfluorodecane Sulfonic acid



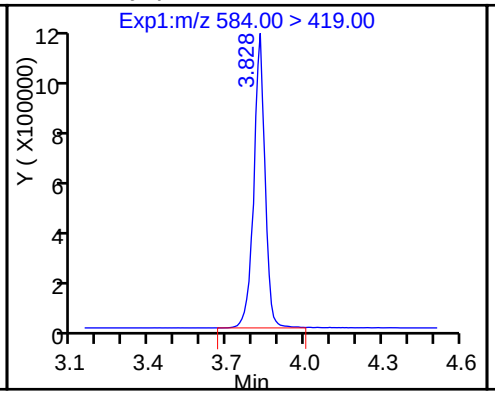
D 32 d5-NEtFOSAA



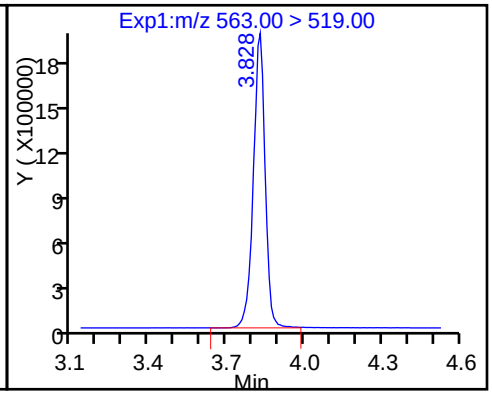
D 30 13C2 PFUnA



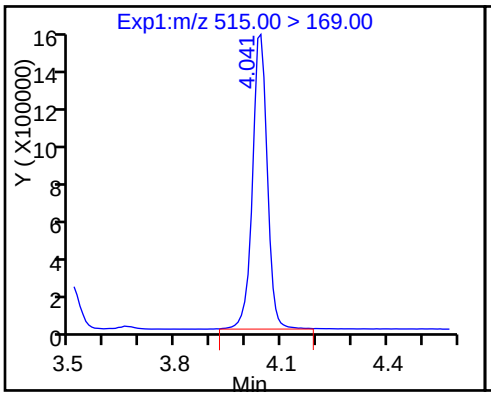
33 N-ethyl perfluorooctane sulfonamid



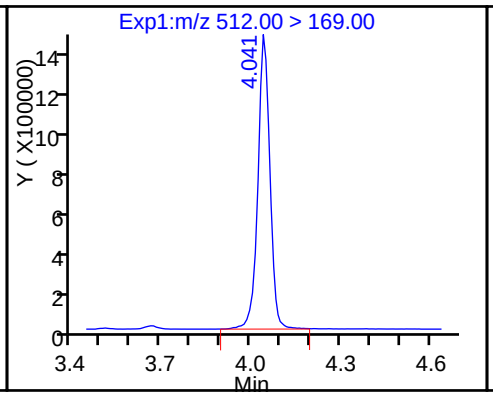
31 Perfluoroundecanoic acid



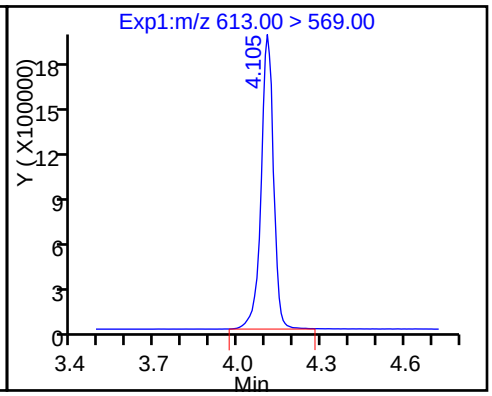
D 34 d-N-MeFOSA-M



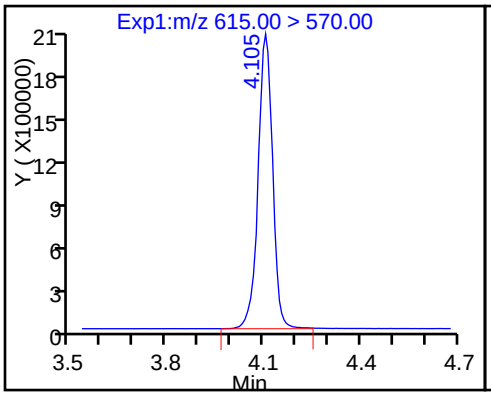
35 MeFOSA



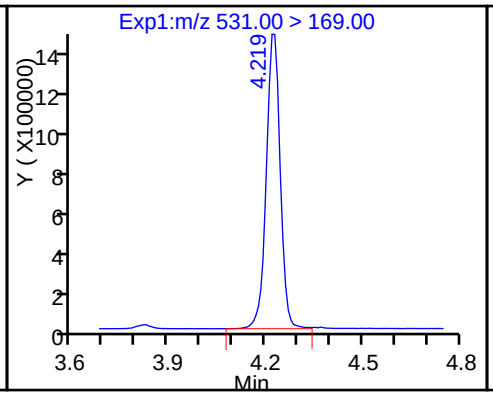
37 Perfluorododecanoic acid



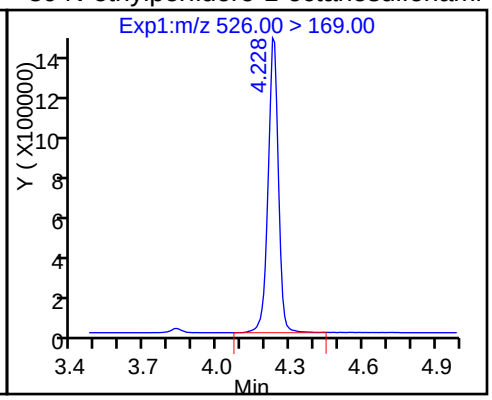
D 36 13C2 PFDoA



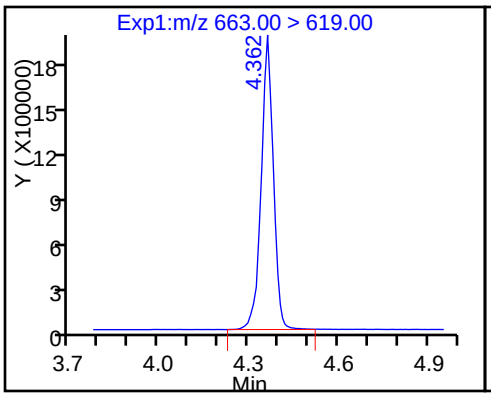
D 38 d-N-EtFOSA-M



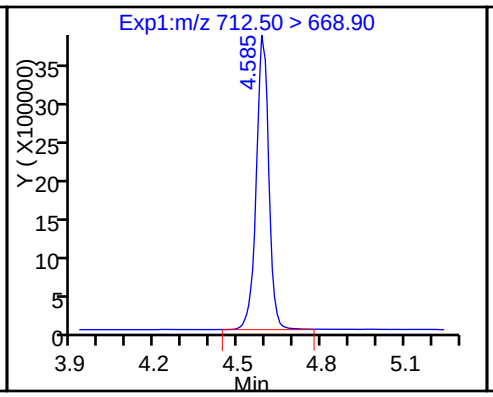
39 N-ethylperfluoro-1-octanesulfonami



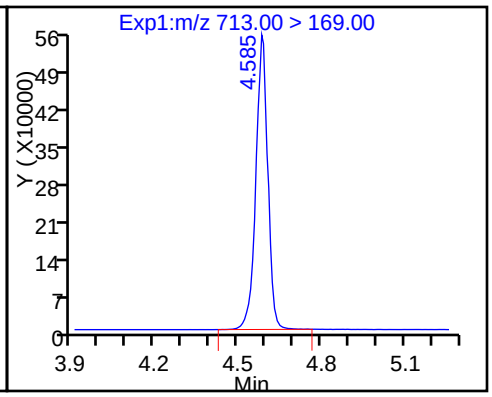
41 Perfluorotridecanoic acid



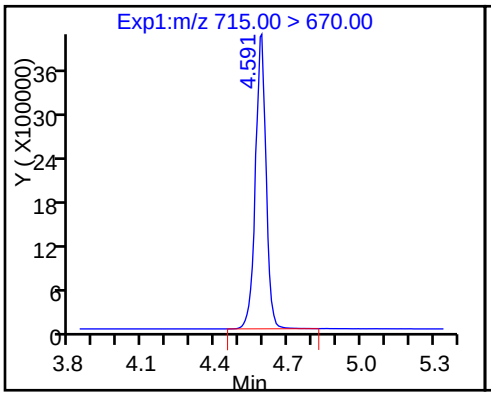
42 Perfluorotetradecanoic acid



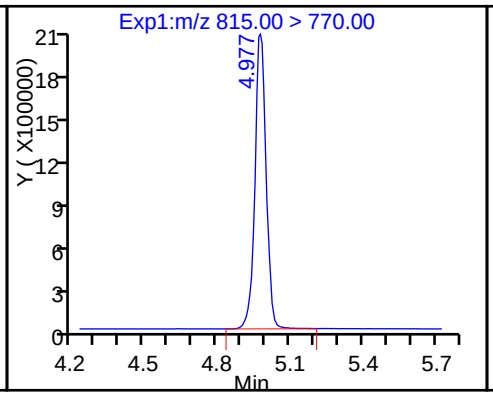
42 Perfluorotetradecanoic acid



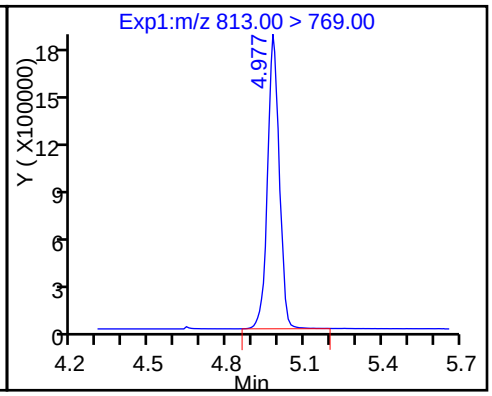
D 43 13C2-PFTeDA



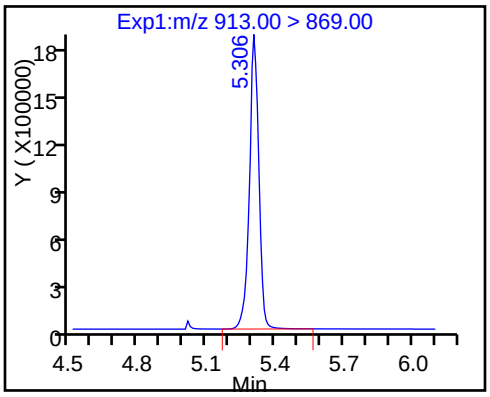
D 44 13C2-PFHxDA



45 Perfluorohexadecanoic acid



46 Perfluorooctadecanoic acid



Manual Integration/User Assign Peak Report

TestAmerica Sacramento

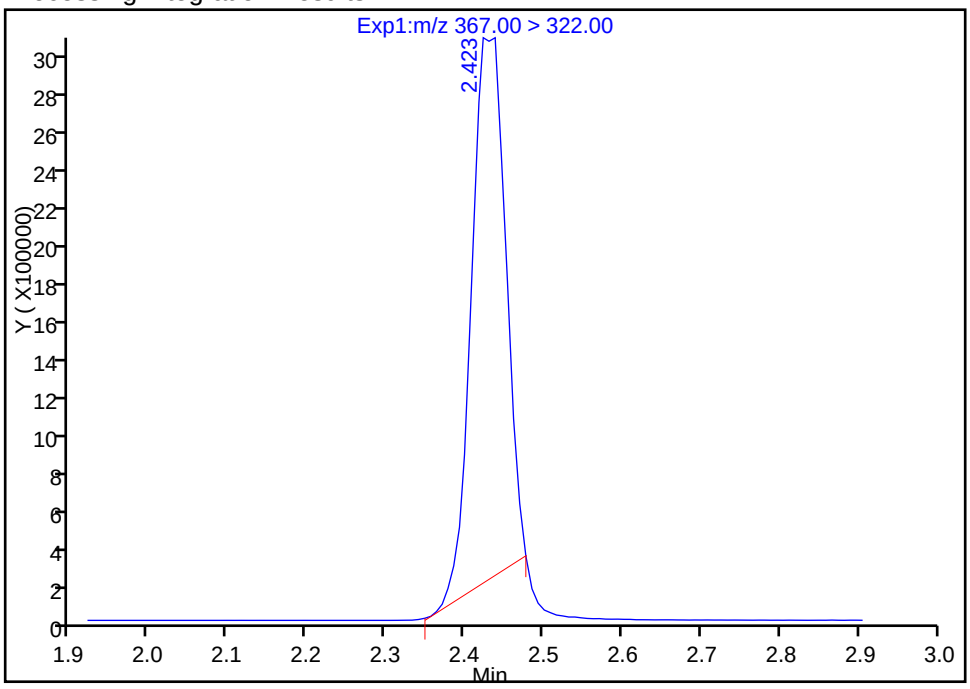
Data File: \\ChromNa\Sacramento\ChromData\A8_N\20170302-40391.b\2017.03.01A_002.d
Injection Date: 01-Mar-2017 18:30:08 Instrument ID: A8_N
Lims ID: CCV L5
Client ID:
Operator ID: A8-PC\A8 ALS Bottle#: 32 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Method: A8_N Limit Group: LC PFC_DOD ICAL
Column: Detector EXP1

D 9 13C4-PFHpA, CAS: STL01892

Signal: 1

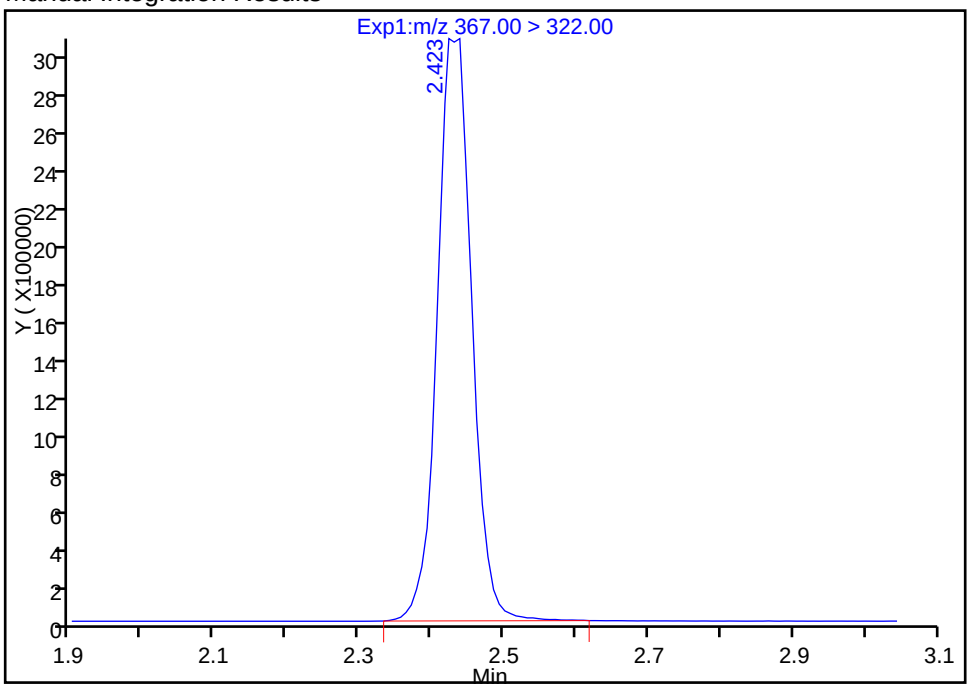
Processing Integration Results

RT: 2.42
Area: 8464923
Amount: 43.868932
Amount Units: ng/ml



Manual Integration Results

RT: 2.42
Area: 10033733
Amount: 51.999192
Amount Units: ng/ml



Reviewer: chandrasenas, 03-Mar-2017 10:36:22
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Sacramento

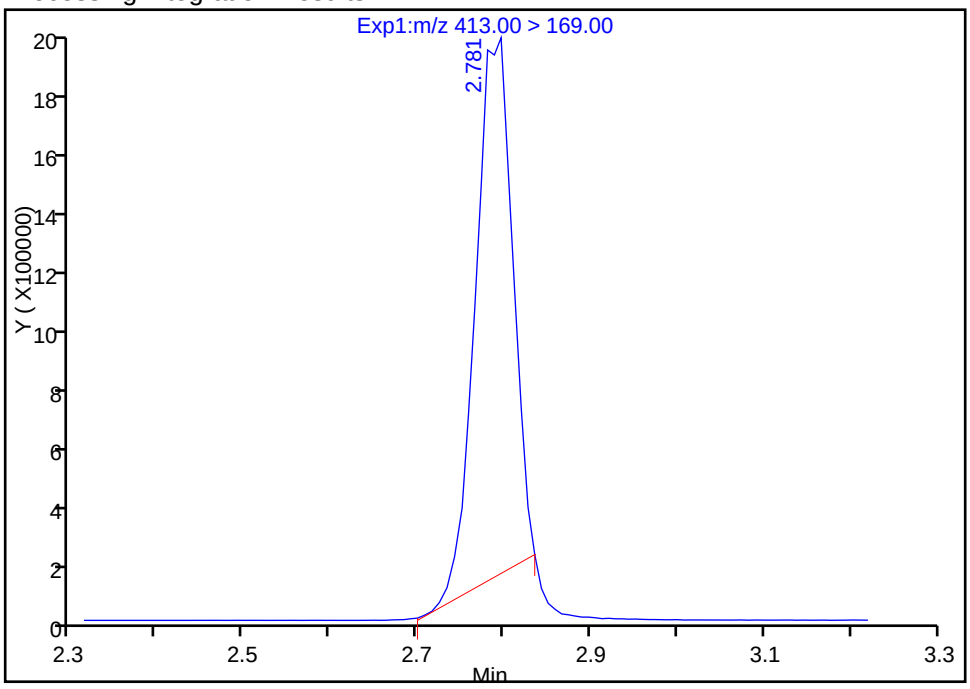
Data File: \\ChromNa\Sacramento\ChromData\A8_N\20170302-40391.b\2017.03.01A_002.d
Injection Date: 01-Mar-2017 18:30:08 Instrument ID: A8_N
Lims ID: CCV L5
Client ID:
Operator ID: A8-PC\A8 ALS Bottle#: 32 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Method: A8_N Limit Group: LC PFC_DOD ICAL
Column: Detector EXP1

15 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 2

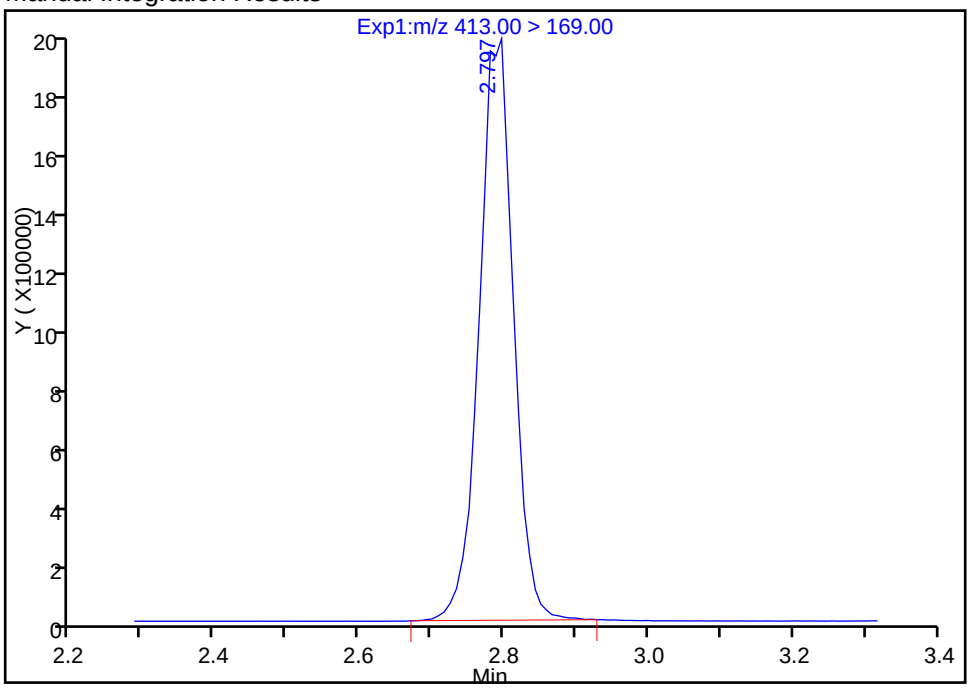
Processing Integration Results

RT: 2.78
Area: 5243931
Amount: 48.793200
Amount Units: ng/ml



Manual Integration Results

RT: 2.80
Area: 6259833
Amount: 48.793200
Amount Units: ng/ml



Reviewer: chandrasenas, 03-Mar-2017 10:36:31
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Sacramento Job No.: 320-25962-1

SDG No.:

Lab Sample ID: CCV 320-152825/13 Calibration Date: 03/01/2017 19:52

Instrument ID: A8_N Calib Start Date: 03/01/2017 11:08

GC Column: GeminiC18 3x100 ID: 3.00(mm) Calib End Date: 03/01/2017 11:46

Lab File ID: 2017.03.01A_013.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorobutanoic acid (PFBA)	AveID	0.8473	0.8801		20.8	20.0	3.9	25.0
Perfluoropentanoic acid (PFPeA)	AveID	0.9785	1.053		21.5	20.0	7.6	25.0
Perfluorobutanesulfonic acid (PFBS)	AveID	1.433	1.445		17.8	17.7	0.9	25.0
Perfluorohexanoic acid (PFHxA)	AveID	0.8895	0.8318		18.7	20.0	-6.5	25.0
Perfluoroheptanoic acid (PFHpA)	AveID	0.9673	0.9730		20.1	20.0	0.6	25.0
Perfluorohexanesulfonic acid (PFHxS)	AveID	1.028	0.9789		17.3	18.2	-4.8	25.0
6:2FTS	L2ID		0.9394		20.0	19.0	5.3	25.0
Perfluoroheptanesulfonic Acid (PFHpS)	AveID	1.031	1.052		19.4	19.0	2.1	25.0
Perfluorooctanoic acid (PFOA)	AveID	1.022	0.9592		18.8	20.0	-6.1	25.0
Perfluorooctanesulfonic acid (PFOS)	AveID	0.9835	0.9479		17.9	18.6	-3.6	25.0
Perfluorononanoic acid (PFNA)	AveID	0.9040	0.9114		20.2	20.0	0.8	25.0
8:2FTS	L2ID		0.9810		20.3	19.2	5.7	25.0
Perfluorodecanoic acid (PFDA)	AveID	0.9057	0.8826		19.5	20.0	-2.5	25.0
Perfluorooctane Sulfonamide (FOSA)	AveID	0.8985	0.8943		19.9	20.0	-0.5	25.0
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	AveID	0.9711	0.9230		19.0	20.0	-5.0	25.0
Perfluorodecanesulfonic acid (PFDS)	AveID	0.5957	0.5567		18.0	19.3	-6.5	25.0
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	AveID	0.9103	0.8923		19.6	20.0	-2.0	25.0
Perfluoroundecanoic acid (PFUnA)	AveID	1.014	0.9231		18.2	20.0	-8.9	25.0
MeFOSA	AveID	0.9355	0.9241		19.8	20.0	-1.2	25.0
Perfluorododecanoic acid (PFDoA)	AveID	0.9145	0.9024		19.7	20.0	-1.3	25.0
N-EtFOSA-M	AveID	0.9837	0.9637		19.6	20.0	-2.0	25.0
Perfluorotridecanoic Acid (PFTriA)	AveID	0.8734	0.8241		18.9	20.0	-5.6	25.0
Perfluorotetradecanoic acid (PFTeA)	AveID	1.966	1.805		18.4	20.0	-8.2	25.0
Perfluoro-n-hexadecanoic acid (PFHxDA)	L1ID		0.8488		17.9	20.0	-10.3	25.0
Perfluoro-n-octadecanoic acid (PFODA)	AveID	0.7175	0.6973		19.4	20.0	-2.8	25.0
13C4 PFBA	Ave	292242	327357		56.0	50.0	12.0	50.0
13C5-PFPeA	Ave	232192	251752		54.2	50.0	8.4	50.0
13C2 PFHxA	Ave	210884	246453		58.4	50.0	16.9	50.0
13C4-PFHpA	Ave	192959	220396		57.1	50.0	14.2	50.0
18O2 PFHxS	Ave	290899	321570		52.3	47.3	10.5	50.0
M2-6:2FTS	Ave	77178	82864		51.0	47.5	7.4	50.0

FORM VII 537 (Modified)

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Sacramento Job No.: 320-25962-1

SDG No.:

Lab Sample ID: CCV 320-152825/13 Calibration Date: 03/01/2017 19:52

Instrument ID: A8_N Calib Start Date: 03/01/2017 11:08

GC Column: GeminiC18 3x100 ID: 3.00(mm) Calib End Date: 03/01/2017 11:46

Lab File ID: 2017.03.01A_013.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
13C4 PFOA	Ave	204953	226776		55.3	50.0	10.6	50.0
13C4 PFOS	Ave	241637	270290		53.5	47.8	11.9	50.0
13C5 PFNA	Ave	177866	198108		55.7	50.0	11.4	50.0
M2-8:2FTS	Ave	92602	104749		54.2	47.9	13.1	50.0
13C2 PFDA	Ave	166704	184661		55.4	50.0	10.8	50.0
13C8 FOSA	Ave	366918	380009		51.8	50.0	3.6	50.0
d3-NMeFOSAA	Ave	85186	91057		53.4	50.0	6.9	50.0
13C2 PFUnA	Ave	130805	147897		56.5	50.0	13.1	50.0
d5-NEtFOSAA	Ave	81371	87716		53.9	50.0	7.8	50.0
d-N-MeFOSA-M	Ave	87983	89817		51.0	50.0	2.1	50.0
13C2 PFDoA	Ave	123944	134775		54.4	50.0	8.7	50.0
d-N-EtFOSA-M	Ave	85249	88338		51.8	50.0	3.6	50.0
13C2-PFTeDA	Ave	259165	268656		51.8	50.0	3.7	50.0
13C2-PFHxDA	Ave	125061	135101		54.0	50.0	8.0	50.0

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNa\Sacramento\ChromData\A8_N\20170302-40391.b\2017.03.01A_013.d
Lims ID: CCV L4
Client ID:
Sample Type: CCV
Inject. Date: 01-Mar-2017 19:52:38 ALS Bottle#: 31 Worklist Smp#: 13
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV L4
Misc. Info.: Plate: 1 Rack: 1
Operator ID: A8-PC\A8 Instrument ID: A8_N
Sublist: chrom-A8_N*sub14

Method: \\ChromNa\Sacramento\ChromData\A8_N\20170302-40391.b\A8_N.m
Limit Group: LC PFC_DOD ICAL
Last Update: 02-Mar-2017 11:58:56 Calib Date: 01-Mar-2017 11:53:47
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A8_N\20170301-40358.b\2017.03.01CURVE_009.d

Column 1 : Det: EXP1
Process Host: XAWRK026

First Level Reviewer: chandrasenas Date: 02-Mar-2017 11:58:27

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C4 PFBA										
217.00 > 172.00	1.531	1.531	0.0		16367861	56.0		112	2625642	
2 Perfluorobutyric acid										
212.90 > 169.00	1.531	1.531	0.0	1.000	5762327	20.8		104	71050	
D 3 13C5-PFPeA										
267.90 > 223.00	1.803	1.803	0.0		12587605	54.2		108	4513682	
4 Perfluoropentanoic acid										
262.90 > 219.00	1.803	1.803	0.0	1.000	5299626	21.5		108	0.0	
5 Perfluorobutanesulfonic acid										
298.90 > 80.00	1.843	1.843	0.0	1.000	8217309	17.8		101		
298.90 > 99.00	1.843	1.843	0.0	1.000	3338050		2.46(0.00-0.00)			
6 Perfluorohexanoic acid										
313.00 > 269.00	2.104	2.104	0.0	1.000	4099956	18.7		93.5	340413	
D 7 13C2 PFHxA										
315.00 > 270.00	2.104	2.104	0.0		12322654	58.4		117	49634	
10 Perfluoroheptanoic acid										
363.00 > 319.00	2.438	2.438	0.0	1.000	4288952	20.1		101	0.0	
D 9 13C4-PFHpA										
367.00 > 322.00	2.438	2.438	0.0		11019791	57.1		114	44777	
8 Perfluorohexanesulfonic acid										
399.00 > 80.00	2.453	2.453	0.0	1.000	5729249	17.3		95.2		
D 11 18O2 PFHxS										
403.00 > 84.00	2.453	2.453	0.0		15210268	52.3		111	77901	
13 Sodium 1H,1H,2H,2H-perfluorooctane										
427.00 > 407.00	2.765	2.765	0.0	1.000	1475869	20.0		105		
D 12 M2-6:2FTS										
429.00 > 409.00	2.765	2.765	0.0		3936046	51.0		107		

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 14 13C4 PFOA										
417.00 > 372.00	2.795	2.795	0.0		11338796	55.3		111	38553	
15 Perfluorooctanoic acid										
413.00 > 369.00	2.803	2.803	0.0	1.000	4350403	18.8		93.9	83918	
413.00 > 169.00	2.795	2.803	-0.008	0.997	2542444		1.71(0.90-1.10)		133928	
16 Perfluoroheptanesulfonic Acid										
449.00 > 80.00	2.803	2.803	0.0	1.000	5414797	19.4		102		
17 Perfluorooctane sulfonic acid										
499.00 > 80.00	3.160	3.160	0.0	1.000	4755396	17.9		96.4	163215	
499.00 > 99.00	3.168	3.160	0.008	1.002	1081657		4.40(0.90-1.10)		98639	
D 19 13C5 PFNA										
468.00 > 423.00	3.160	3.160	0.0		9905396	55.7		111	2900337	
D 18 13C4 PFOS										
503.00 > 80.00	3.160	3.160	0.0		12919857	53.5		112	809925	
20 Perfluorononanoic acid										
463.00 > 419.00	3.168	3.168	0.0	1.000	3611284	20.2		101	146472	
D 26 M2-8:2FTS										
529.00 > 509.00	3.499	3.499	0.0		5017455	54.2		113		
25 Sodium 1H,1H,2H,2H-perfluorooctane										
527.00 > 507.00	3.507	3.507	0.0	1.002	1968835	20.3		106		
24 Perfluorodecanoic acid										
513.00 > 469.00	3.516	3.516	0.0	1.000	3259630	19.5		97.5	256259	
D 23 13C2 PFDA										
515.00 > 470.00	3.516	3.516	0.0		9233050	55.4		111	988652	
D 21 13C8 FOSA										
506.00 > 78.00	3.533	3.533	0.0		19000473	51.8		104	5839150	
22 Perfluorooctane Sulfonamide										
498.00 > 78.00	3.541	3.541	0.0	1.000	6797066	19.9		99.5	2112732	
D 27 d3-NMeFOSAA										
573.00 > 419.00	3.670	3.670	0.0		4552857	53.4		107		
28 N-methyl perfluorooctane sulfonami										
570.00 > 419.00	3.680	3.680	0.0	1.003	1680869	19.0		95.0		
29 Perfluorodecane Sulfonic acid										
599.00 > 80.00	3.818	3.818	0.0	1.000	2901025	18.0		93.5		
D 32 d5-NEtFOSAA										
589.00 > 419.00	3.835	3.835	0.0		4385784	53.9		108		
D 30 13C2 PFUnA										
565.00 > 520.00	3.835	3.835	0.0		7394853	56.5		113	2304945	
33 N-ethyl perfluorooctane sulfonamid										
584.00 > 419.00	3.835	3.835	0.0	1.000	1565291	19.6		98.0		
31 Perfluoroundecanoic acid										
563.00 > 519.00	3.835	3.835	0.0	1.000	2730419	18.2		91.1	291761	
D 34 d-N-MeFOSA-M										
515.00 > 169.00	4.031	4.031	0.0		4490825	51.0		102		
35 MeFOSA										
512.00 > 169.00	4.040	4.040	0.0	1.000	1659923	19.8		98.8		
37 Perfluorododecanoic acid										
613.00 > 569.00	4.124	4.124	0.0	1.000	2432321	19.7		98.7	133943	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 36 13C2 PFDoA										
615.00 > 570.00	4.124	4.124	0.0		6738746	54.4		109	0.0	
D 38 d-N-EtFOSA-M										
531.00 > 169.00	4.216	4.216	0.0		4416876	51.8		104		
39 N-ethylperfluoro-1-octanesulfonami										
526.00 > 169.00	4.225	4.225	0.0	1.000	1702596	19.6		98.0		
41 Perfluorotridecanoic acid										
663.00 > 619.00	4.378	4.378	0.0	1.000	2221340	18.9		94.4	71092	
42 Perfluorotetradecanoic acid										
712.50 > 668.90	4.603	4.603	0.0	1.000	4864341	18.4		91.8	309249	
713.00 > 169.00	4.603	4.603	0.0	1.000	667481		7.29(0.00-0.00)		110215	
D 43 13C2-PFTeDA										
715.00 > 670.00	4.603	4.603	0.0		13432792	51.8		104	76917	
D 44 13C2-PFHxDA										
815.00 > 770.00	4.998	4.998	0.0		6755032	54.0		108	372647	
45 Perfluorohexadecanoic acid										
813.00 > 769.00	5.005	5.005	0.0	1.000	2287995	17.9		89.7	26840	
46 Perfluorooctadecanoic acid										
913.00 > 869.00	5.329	5.329	0.0	1.000	1879656	19.4		97.2	3296	

Reagents:

LCPFC_FULL-L4_00001 Amount Added: 1.00 Units: mL

Report Date: 02-Mar-2017 11:58:56 Chrom Revision: 2.2 03-Feb-2017 15:35:04

TestAmerica Sacramento

Data File: \\ChromNa\Sacramento\ChromData\A8_N\20170302-40391.b\2017.03.01A_013.d

Injection Date: 01-Mar-2017 19:52:38 Instrument ID: A8_N

Lims ID: CCV L4

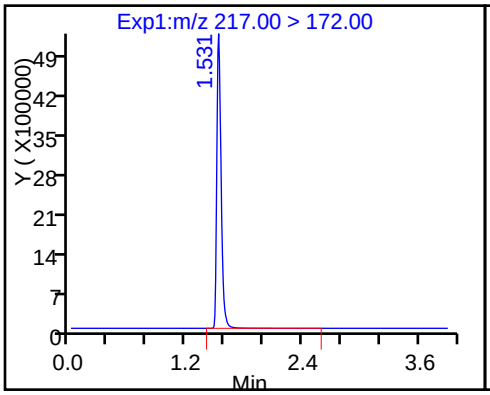
Client ID:

Operator ID: A8-PC\A8 ALS Bottle#: 31 Worklist Smp#: 13

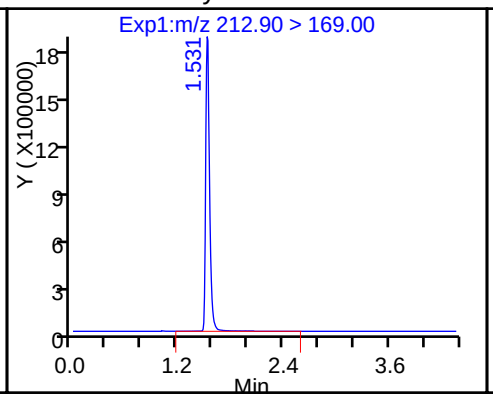
Injection Vol: 2.0 ul Dil. Factor: 1.0000

Method: A8_N Limit Group: LC PFC_DOD ICAL

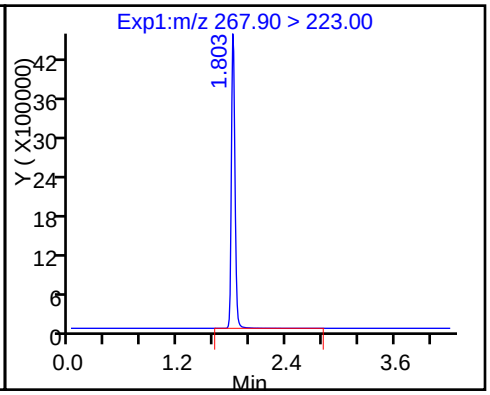
D 1 13C4 PFBA



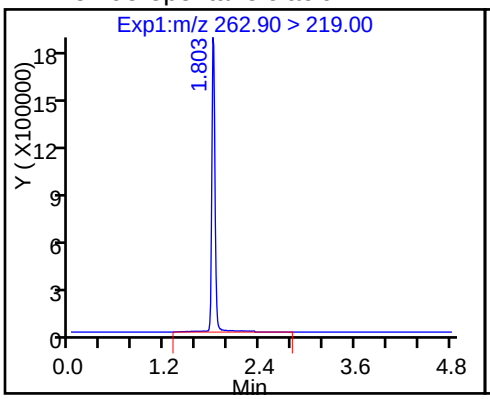
2 Perfluorobutyric acid



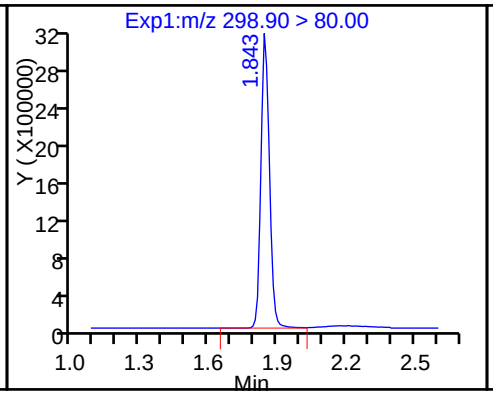
D 3 13C5-PFPeA



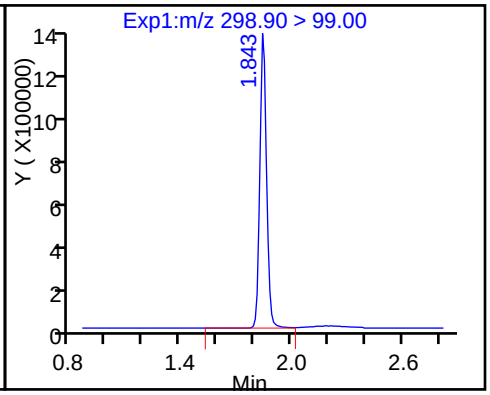
4 Perfluoropentanoic acid



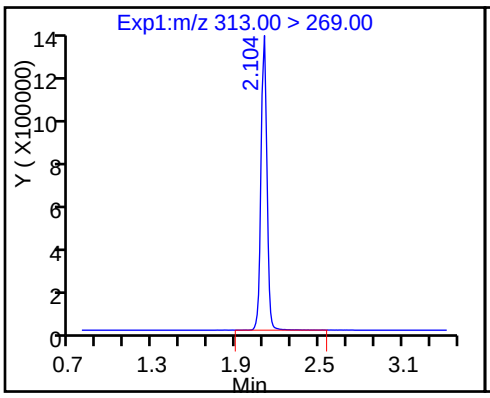
5 Perfluorobutanesulfonic acid



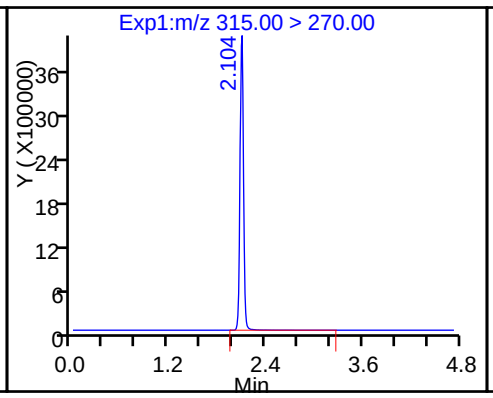
5 Perfluorobutanesulfonic acid



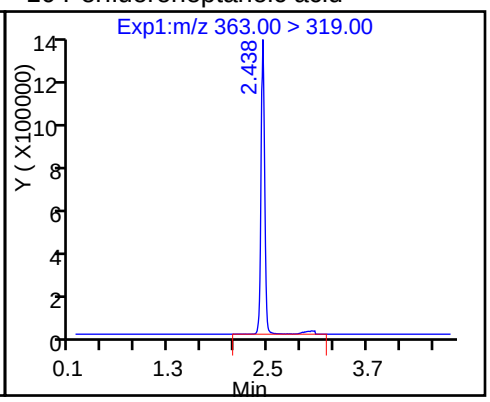
6 Perfluorohexanoic acid



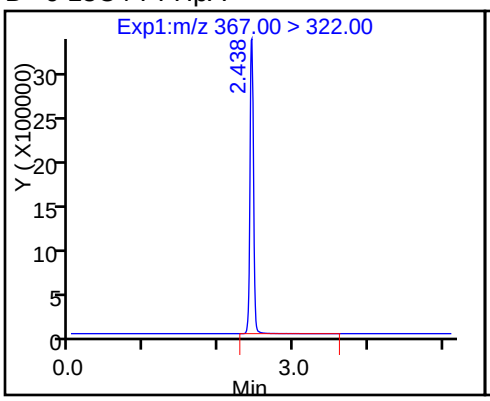
D 7 13C2 PFHxA



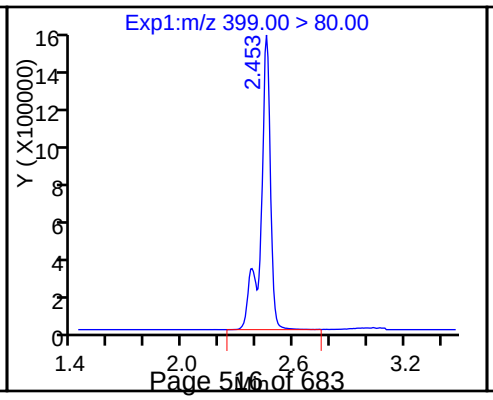
10 Perfluoroheptanoic acid



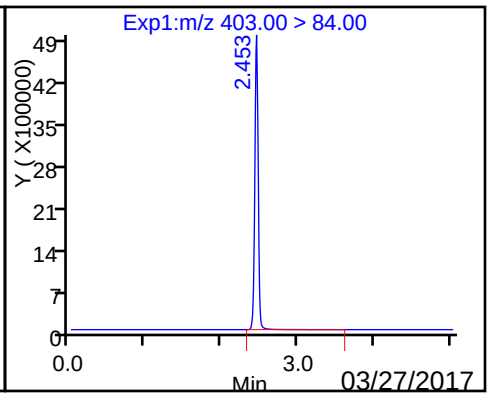
D 9 13C4-PFHpA



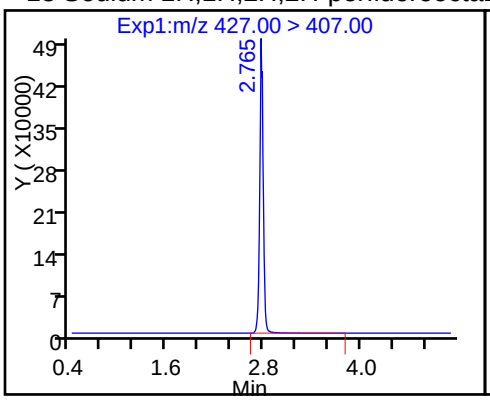
8 Perfluorohexanesulfonic acid



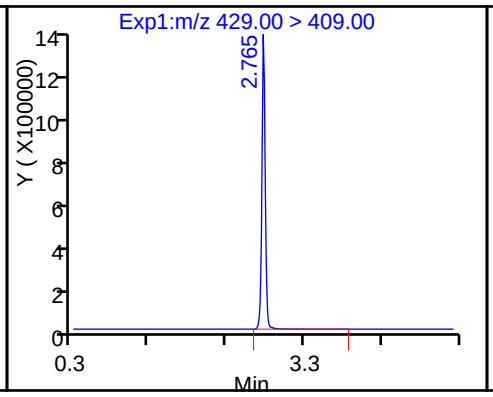
D 11 18O2 PFHxS



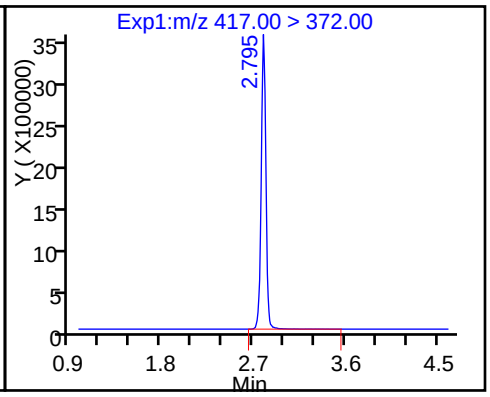
13 Sodium 1H,1H,2H,2H-perfluorooctane



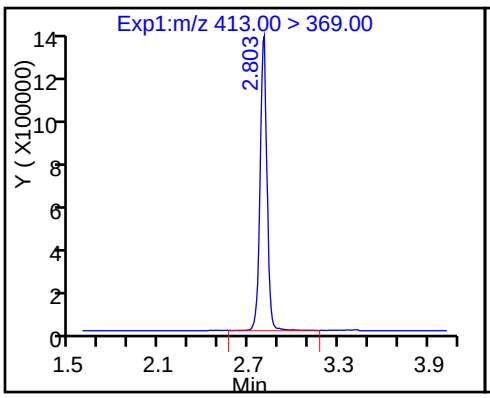
D 12 M2-6:2FTS



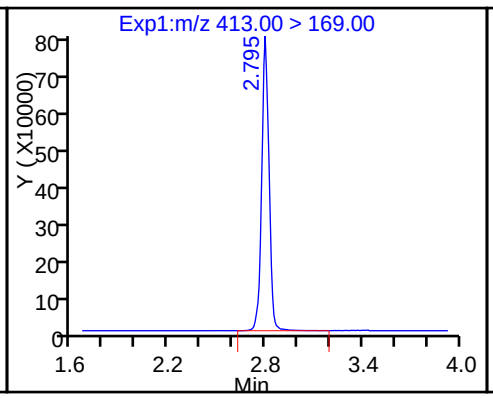
D 14 13C4 PFOA



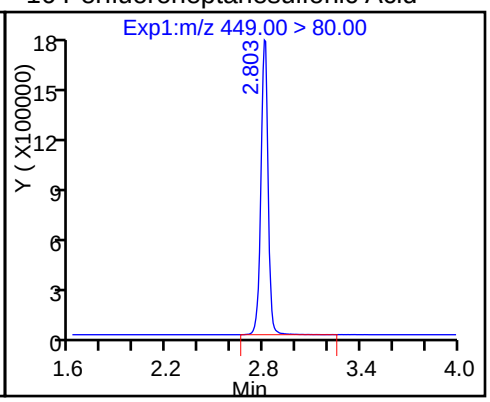
15 Perfluorooctanoic acid



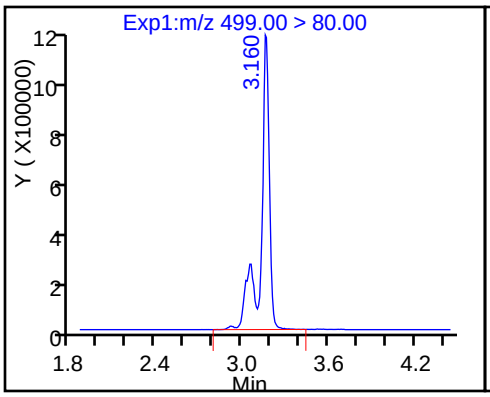
15 Perfluorooctanoic acid



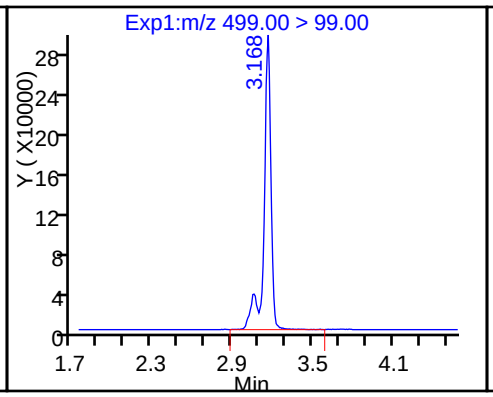
16 Perfluoroheptanesulfonic Acid



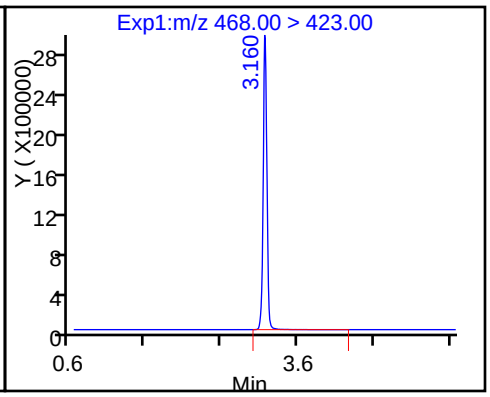
17 Perfluorooctane sulfonic acid



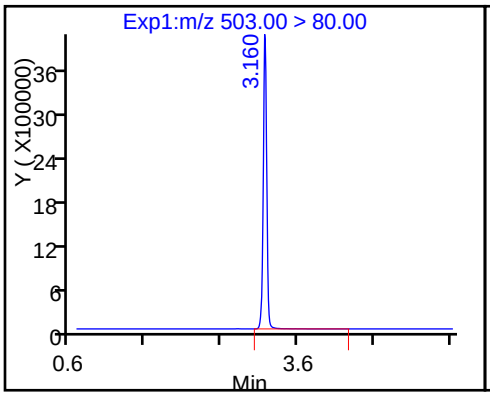
17 Perfluorooctane sulfonic acid



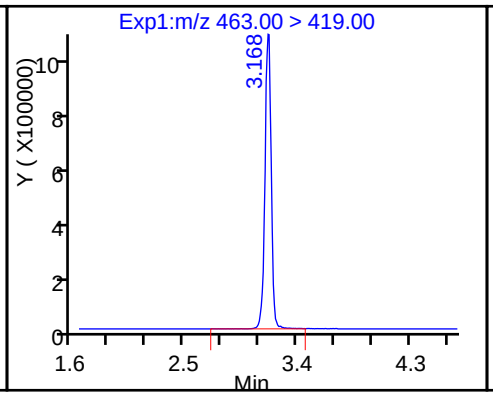
D 19 13C5 PFNA



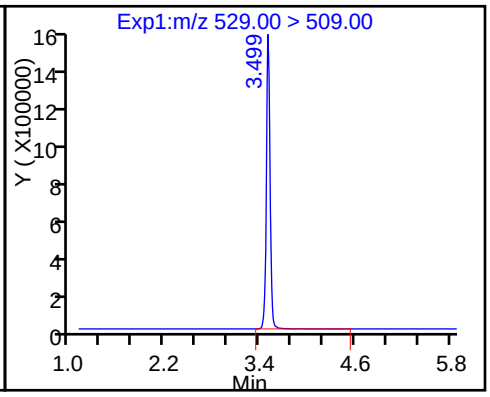
D 18 13C4 PFOS



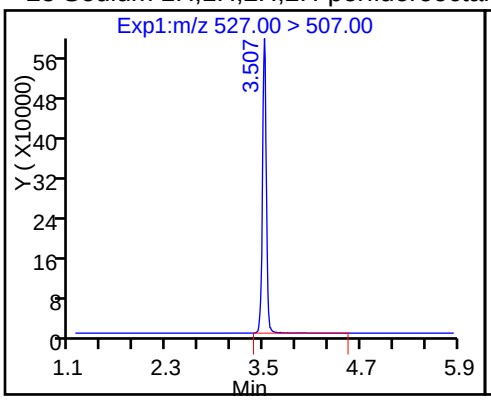
20 Perfluorononanoic acid



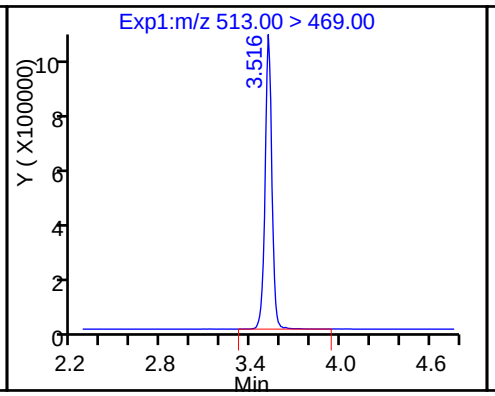
D 26 M2-8:2FTS



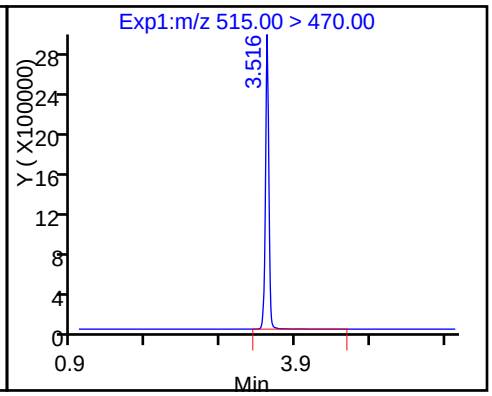
25 Sodium 1H,1H,2H,2H-perfluorooctane



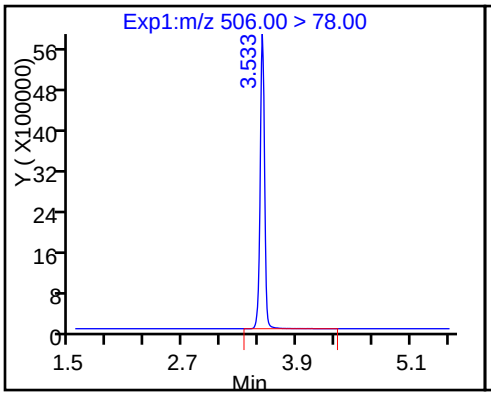
24 Perfluorodecanoic acid



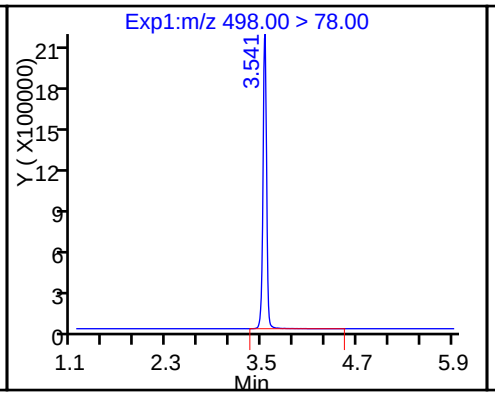
D 23 13C2 PFDA



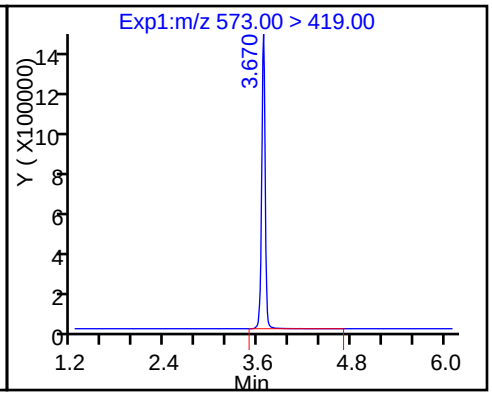
D 21 13C8 FOSA



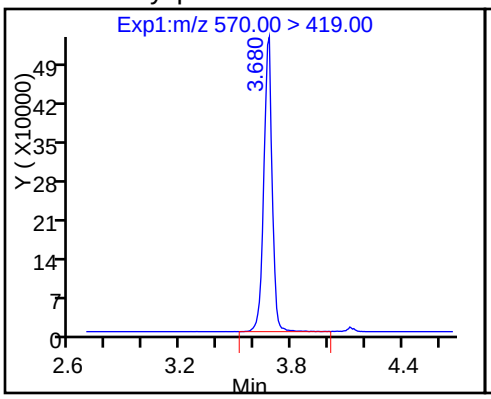
22 Perfluorooctane Sulfonamide



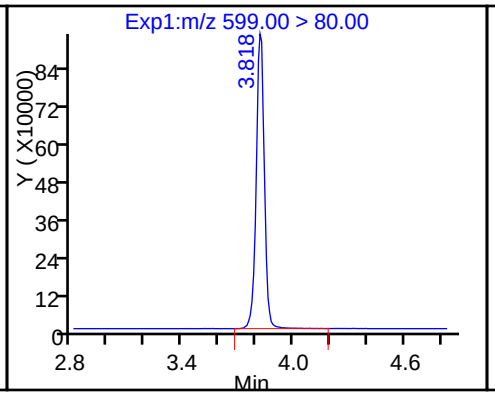
D 27 d3-NMeFOSAA



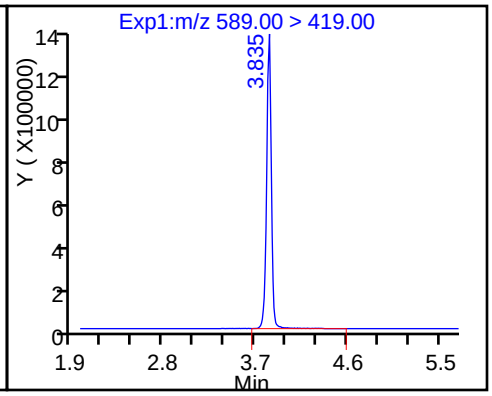
28 N-methyl perfluorooctane sulfonami



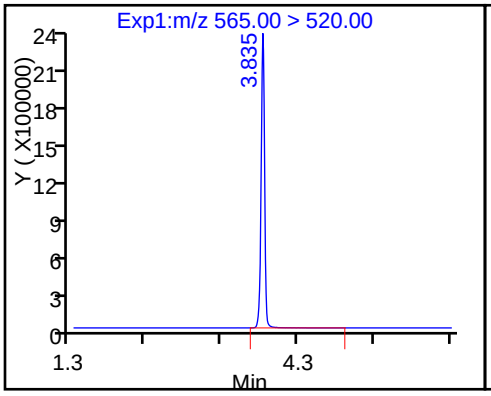
29 Perfluorodecane Sulfonic acid



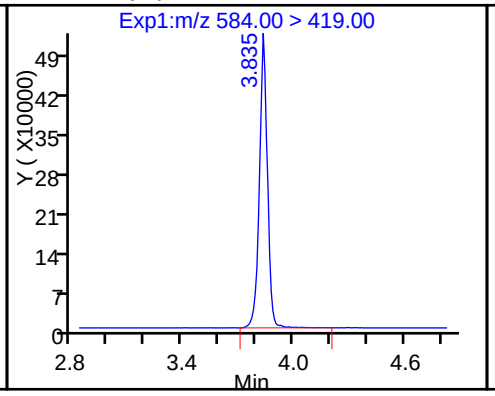
D 32 d5-NEtFOSAA



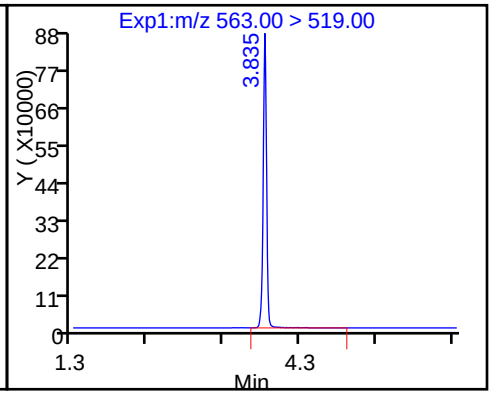
D 30 13C2 PFUnA



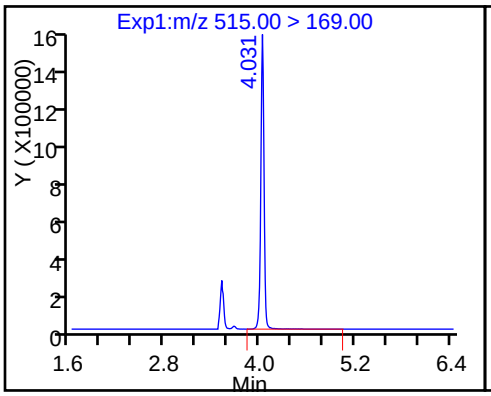
33 N-ethyl perfluorooctane sulfonamid



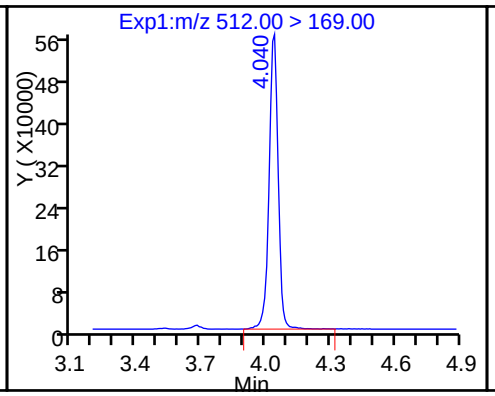
31 Perfluoroundecanoic acid



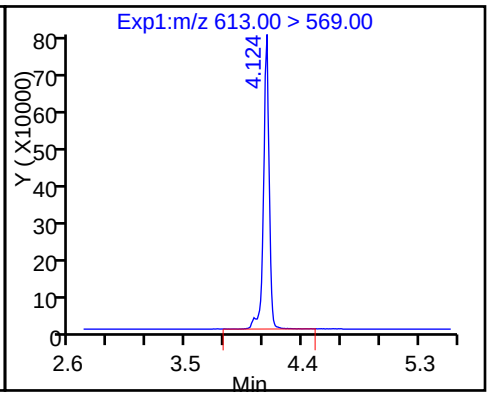
D 34 d-N-MeFOSA-M



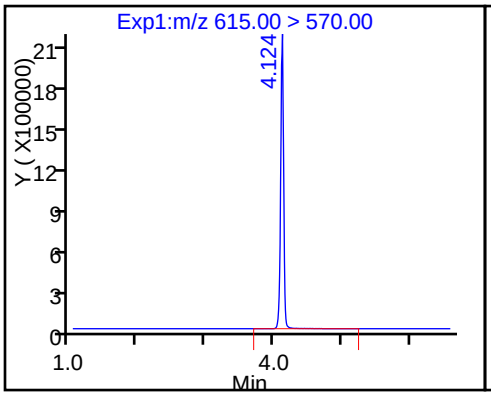
35 MeFOSA



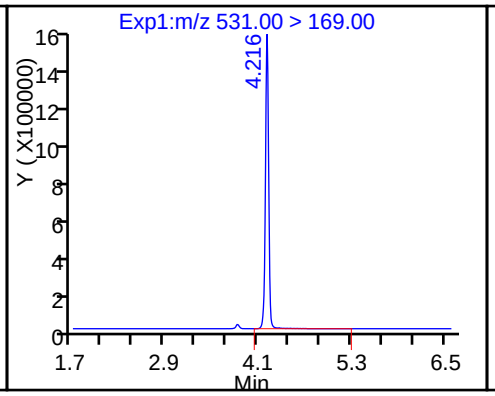
37 Perfluorododecanoic acid



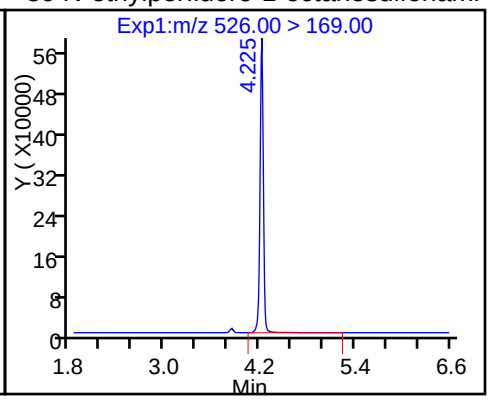
D 36 13C2 PFDoA



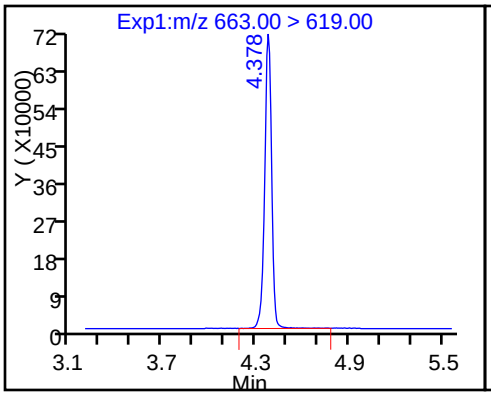
D 38 d-N-EtFOSA-M



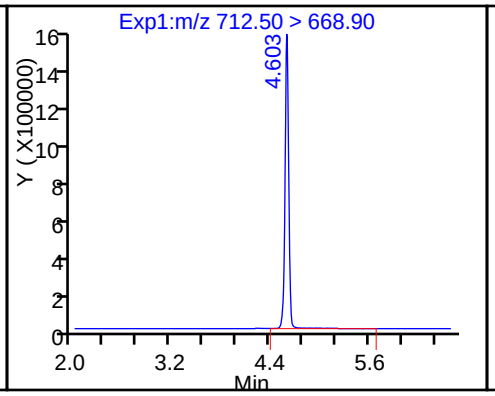
39 N-ethylperfluoro-1-octanesulfonami



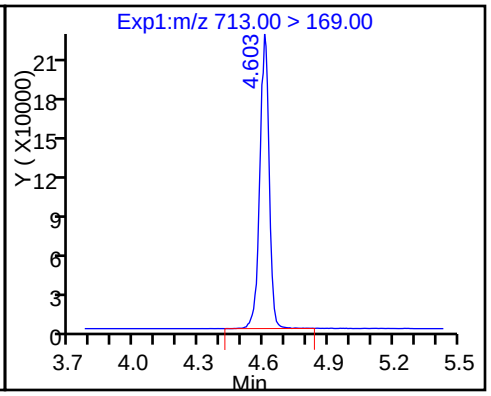
41 Perfluorotridecanoic acid



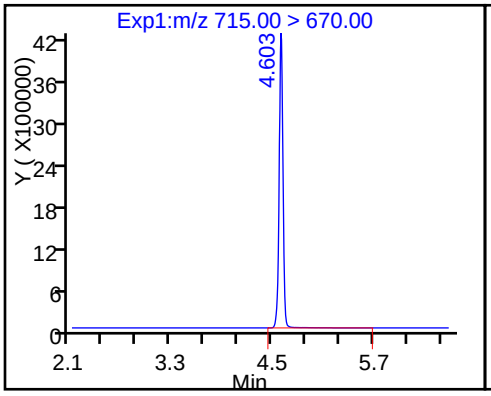
42 Perfluorotetradecanoic acid



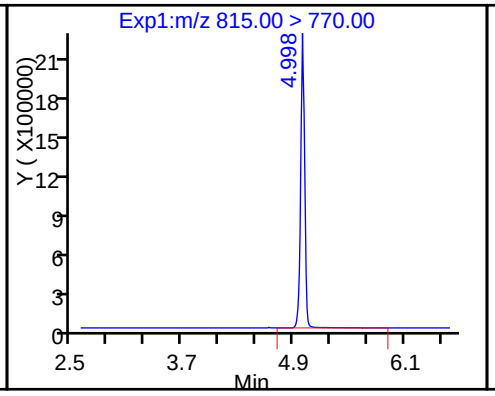
42 Perfluorotetradecanoic acid



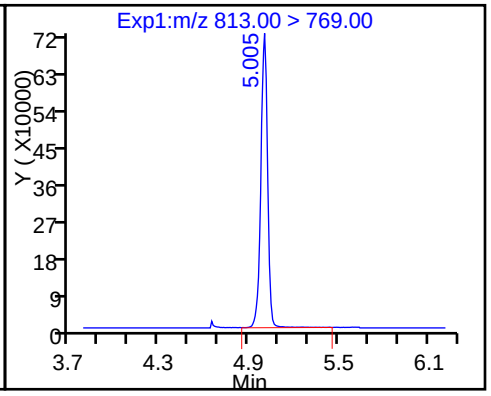
D 43 13C2-PFTeDA



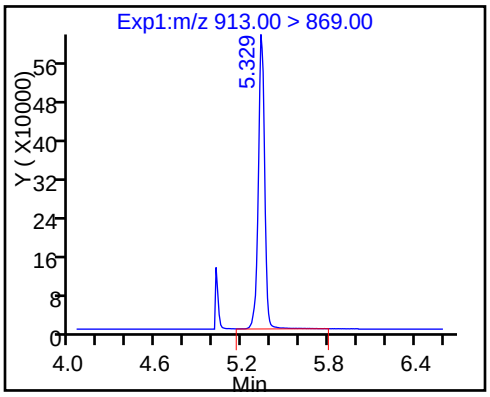
D 44 13C2-PFHxDA



45 Perfluorohexadecanoic acid



46 Perfluorooctadecanoic acid



FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Sacramento Job No.: 320-25962-1

SDG No.:

Lab Sample ID: CCV 320-152825/15 Calibration Date: 03/01/2017 20:07

Instrument ID: A8_N Calib Start Date: 03/01/2017 11:08

GC Column: GeminiC18 3x100 ID: 3.00(mm) Calib End Date: 03/01/2017 11:46

Lab File ID: 2017.03.01A_015.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorobutanoic acid (PFBA)	AveID	0.8473	0.9072		53.5	50.0	7.1	25.0
Perfluoropentanoic acid (PFPeA)	AveID	0.9785	1.021		52.1	50.0	4.3	25.0
Perfluorobutanesulfonic acid (PFBS)	AveID	1.433	1.479		45.6	44.2	3.2	25.0
Perfluorohexanoic acid (PFHxA)	AveID	0.8895	0.9249		52.0	50.0	4.0	25.0
Perfluoroheptanoic acid (PFHpA)	AveID	0.9673	0.995		51.4	50.0	2.9	25.0
Perfluorohexanesulfonic acid (PFHxS)	AveID	1.028	1.022		45.2	45.5	-0.6	25.0
6:2FTS	L2ID		0.9042		48.2	47.4	1.8	25.0
Perfluoroheptanesulfonic Acid (PFHpS)	AveID	1.031	1.080		49.9	47.6	4.8	25.0
Perfluorooctanoic acid (PFOA)	AveID	1.022	1.033		50.6	50.0	1.2	25.0
Perfluorooctanesulfonic acid (PFOS)	AveID	0.9835	1.003		47.3	46.4	2.0	25.0
Perfluorononanoic acid (PFNA)	AveID	0.9040	0.9672		53.5	50.0	7.0	25.0
8:2FTS	L2ID		0.9281		48.0	47.9	0.3	25.0
Perfluorodecanoic acid (PFDA)	AveID	0.9057	0.9288		51.3	50.0	2.6	25.0
Perfluorooctane Sulfonamide (FOSA)	AveID	0.8985	0.9427		52.5	50.0	4.9	25.0
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	AveID	0.9711	0.9458		48.7	50.0	-2.6	25.0
Perfluorodecanesulfonic acid (PFDS)	AveID	0.5957	0.6208		50.2	48.2	4.2	25.0
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	AveID	0.9103	0.8698		47.8	50.0	-4.4	25.0
Perfluoroundecanoic acid (PFUnA)	AveID	1.014	0.9445		46.6	50.0	-6.8	25.0
MeFOSA	AveID	0.9355	0.8880		47.5	50.0	-5.1	25.0
Perfluorododecanoic acid (PFDoA)	AveID	0.9145	0.9337		51.0	50.0	2.1	25.0
N-EtFOSA-M	AveID	0.9837	0.9239		47.0	50.0	-6.1	25.0
Perfluorotridecanoic Acid (PFTriA)	AveID	0.8734	0.9094		52.1	50.0	4.1	25.0
Perfluorotetradecanoic acid (PFTeA)	AveID	1.966	2.033		51.7	50.0	3.4	25.0
Perfluoro-n-hexadecanoic acid (PFHxDA)	L1ID		0.9815		52.6	50.0	5.1	25.0
Perfluoro-n-octadecanoic acid (PFODA)	AveID	0.7175	0.8053		56.1	50.0	12.2	25.0
13C4 PFBA	Ave	292242	296266		50.7	50.0	1.4	50.0
13C5-PFPeA	Ave	232192	233516		50.3	50.0	0.6	50.0
13C2 PFHxA	Ave	210884	217021		51.5	50.0	2.9	50.0
13C4-PFHpA	Ave	192959	200425		51.9	50.0	3.9	50.0
18O2 PFHxS	Ave	290899	289262		47.0	47.3	-0.6	50.0
M2-6:2FTS	Ave	77178	76416		47.0	47.5	-1.0	50.0

FORM VII 537 (Modified)

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Sacramento Job No.: 320-25962-1

SDG No.:

Lab Sample ID: CCV 320-152825/15 Calibration Date: 03/01/2017 20:07

Instrument ID: A8_N Calib Start Date: 03/01/2017 11:08

GC Column: GeminiC18 3x100 ID: 3.00(mm) Calib End Date: 03/01/2017 11:46

Lab File ID: 2017.03.01A_015.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
13C4 PFOA	Ave	204953	200587		48.9	50.0	-2.1	50.0
13C4 PFOS	Ave	241637	246851		48.8	47.8	2.2	50.0
13C5 PFNA	Ave	177866	178040		50.0	50.0	0.1	50.0
M2-8:2FTS	Ave	92602	91774		47.5	47.9	-0.9	50.0
13C2 PFDA	Ave	166704	169071		50.7	50.0	1.4	50.0
13C8 FOSA	Ave	366918	361250		49.2	50.0	-1.5	50.0
d3-NMeFOSAA	Ave	85186	86680		50.9	50.0	1.8	50.0
d5-NEtFOSAA	Ave	81371	81385		50.0	50.0	0.0	50.0
13C2 PFUnA	Ave	130805	133752		51.1	50.0	2.3	50.0
d-N-MeFOSA-M	Ave	87983	90859		51.6	50.0	3.3	50.0
13C2 PFDoA	Ave	123944	128992		52.0	50.0	4.1	50.0
d-N-EtFOSA-M	Ave	85249	88534		51.9	50.0	3.9	50.0
13C2-PFTeDA	Ave	259165	271375		52.4	50.0	4.7	50.0
13C2-PFHxDA	Ave	125061	145427		58.1	50.0	16.3	50.0

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNa\Sacramento\ChromData\A8_N\20170302-40391.b\2017.03.01A_015.d
Lims ID: CCV L5
Client ID:
Sample Type: CCV
Inject. Date: 01-Mar-2017 20:07:36 ALS Bottle#: 32 Worklist Smp#: 15
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV L5
Misc. Info.: Plate: 1 Rack: 1
Operator ID: A8-PC\A8 Instrument ID: A8_N
Sublist: chrom-A8_N*sub14

Method: \\ChromNa\Sacramento\ChromData\A8_N\20170302-40391.b\A8_N.m
Limit Group: LC PFC_DOD ICAL
Last Update: 27-Mar-2017 10:47:53 Calib Date: 01-Mar-2017 11:53:47
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A8_N\20170301-40358.b\2017.03.01CURVE_009.d

Column 1 : Det: EXP1
Process Host: XAWRK006

First Level Reviewer: chandrasenas Date: 02-Mar-2017 12:00:57

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C4 PFBA										
217.00 > 172.00	1.531	1.531	0.0		14813319	50.7		101	2325230	
2 Perfluorobutyric acid										
212.90 > 169.00	1.531	1.531	0.0	1.000	13438968	53.5		107	143152	
D 3 13C5-PFPeA										
267.90 > 223.00	1.813	1.813	0.0		11675783	50.3		101	4139636	
4 Perfluoropentanoic acid										
262.90 > 219.00	1.813	1.813	0.0	1.000	11915949	52.1		104	0.0	
5 Perfluorobutanesulfonic acid										
298.90 > 80.00	1.853	1.853	0.0	1.000	18910023	45.6		103		
298.90 > 99.00	1.843	1.853	-0.010	0.995	8008219		2.36(0.00-0.00)			
6 Perfluorohexanoic acid										
313.00 > 269.00	2.106	2.106	0.0	1.000	10035545	52.0		104	0.0	
D 7 13C2 PFHxA										
315.00 > 270.00	2.106	2.106	0.0		10851049	51.5		103	3636723	
10 Perfluoroheptanoic acid										
363.00 > 319.00	2.439	2.439	0.0	1.000	9971245	51.4		103	0.0	
D 9 13C4-PFHpA										
367.00 > 322.00	2.439	2.439	0.0		10021259	51.9		104	1525878	
8 Perfluorohexanesulfonic acid										
399.00 > 80.00	2.455	2.455	0.0	1.000	13450312	45.2		99.4		
D 11 18O2 PFHxS										
403.00 > 84.00	2.455	2.455	0.0		13682092	47.0		99.4	76709	
13 Sodium 1H,1H,2H,2H-perfluorooctane										
427.00 > 407.00	2.778	2.778	0.0	1.000	3275130	48.2		102		
D 12 M2-6:2FTS										
429.00 > 409.00	2.778	2.778	0.0		3629749	47.0		99.0		

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 14 13C4 PFOA										
417.00 > 372.00	2.801	2.801	0.0		10029337	48.9		97.9	760729	
15 Perfluorooctanoic acid										
413.00 > 369.00	2.808	2.808	0.0	1.000	10365184	50.6		101	1001166	
413.00 > 169.00	2.801	2.808	-0.007	0.997	6007892		1.73(0.90-1.10)		1803917	
16 Perfluoroheptanesulfonic Acid										
449.00 > 80.00	2.808	2.808	0.0	1.000	12695285	49.9		105		
17 Perfluorooctane sulfonic acid										
499.00 > 80.00	3.174	3.174	0.0	1.000	11487351	47.3		102	54160	
499.00 > 99.00	3.174	3.174	0.0	1.000	2593396		4.43(0.90-1.10)		177475	
D 18 13C4 PFOS										
503.00 > 80.00	3.174	3.174	0.0		11799466	48.8		102	530675	
D 19 13C5 PFNA										
468.00 > 423.00	3.183	3.183	0.0		8901985	50.0		100	2482123	
20 Perfluorononanoic acid										
463.00 > 419.00	3.183	3.183	0.0	1.000	8610300	53.5		107	2441245	
D 26 M2-8:2FTS										
529.00 > 509.00	3.517	3.517	0.0		4395979	47.5		99.1		
25 Sodium 1H,1H,2H,2H-perfluorooctane										
527.00 > 507.00	3.517	3.517	0.0	1.000	4080027	48.0		100		
24 Perfluorodecanoic acid										
513.00 > 469.00	3.534	3.534	0.0	1.000	7851741	51.3		103	816218	
D 23 13C2 PFDA										
515.00 > 470.00	3.534	3.534	0.0		8453566	50.7		101	440045	
D 21 13C8 FOSA										
506.00 > 78.00	3.550	3.550	0.0		18062502	49.2		98.5	1770217	
22 Perfluorooctane Sulfonamide										
498.00 > 78.00	3.550	3.550	0.0	1.000	17027201	52.5		105	2605904	
D 27 d3-NMeFOSAA										
573.00 > 419.00	3.681	3.681	0.0		4334002	50.9		102		
28 N-methyl perfluorooctane sulfonami										
570.00 > 419.00	3.690	3.690	0.0	1.003	4098919	48.7		97.4		
29 Perfluorodecane Sulfonic acid										
599.00 > 80.00	3.836	3.836	0.0	1.000	7385934	50.2		104		
D 32 d5-NEtFOSAA										
589.00 > 419.00	3.844	3.844	0.0		4069260	50.0		100		
D 30 13C2 PFUnA										
565.00 > 520.00	3.853	3.853	0.0		6687581	51.1		102	2130561	
33 N-ethyl perfluorooctane sulfonamid										
584.00 > 419.00	3.853	3.853	0.0	1.002	3539483	47.8		95.6		
31 Perfluoroundecanoic acid										
563.00 > 519.00	3.853	3.853	0.0	1.000	6316213	46.6		93.2	986858	
D 34 d-N-MeFOSA-M										
515.00 > 169.00	4.050	4.050	0.0		4542931	51.6		103		
35 MeFOSA										
512.00 > 169.00	4.050	4.050	0.0	1.000	4034267	47.5		94.9		
37 Perfluorododecanoic acid										
613.00 > 569.00	4.134	4.134	0.0	1.000	6021767	51.0		102	0.0	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 36 13C2 PFDoA										
615.00 > 570.00	4.134	4.134	0.0		6449591	52.0		104	0.0	
D 38 d-N-EtFOSA-M										
531.00 > 169.00	4.230	4.230	0.0		4426698	51.9		104		
39 N-ethylperfluoro-1-octanesulfonami										
526.00 > 169.00	4.239	4.239	0.0	1.000	4089665	47.0		93.9		
41 Perfluorotridecanoic acid										
663.00 > 619.00	4.391	4.391	0.0	1.000	5865313	52.1		104	372527	
42 Perfluorotetradecanoic acid										
712.50 > 668.90	4.620	4.620	0.0	1.000	13110684	51.7		103	551795	
713.00 > 169.00	4.620	4.620	0.0	1.000	1714075		7.65(0.00-0.00)		551532	
D 43 13C2-PFTeDA										
715.00 > 670.00	4.626	4.626	0.0		13568728	52.4		105	78350	
D 44 13C2-PFHxDA										
815.00 > 770.00	5.018	5.018	0.0		7271368	58.1		116	171179	
45 Perfluorohexadecanoic acid										
813.00 > 769.00	5.018	5.018	0.0	1.000	6330366	52.6		105	10485	
46 Perfluorooctadecanoic acid										
913.00 > 869.00	5.347	5.347	0.0	1.000	5193814	56.1		112	6049	

Reagents:

LCPFC_FULL-L5_00001 Amount Added: 1.00 Units: mL

Report Date: 27-Mar-2017 10:47:55 Chrom Revision: 2.2 13-Mar-2017 15:50:30

TestAmerica Sacramento

Data File: \\ChromNa\Sacramento\ChromData\A8_N\20170302-40391.b\2017.03.01A_015.d

Injection Date: 01-Mar-2017 20:07:36 Instrument ID: A8_N

Lims ID: CCV L5

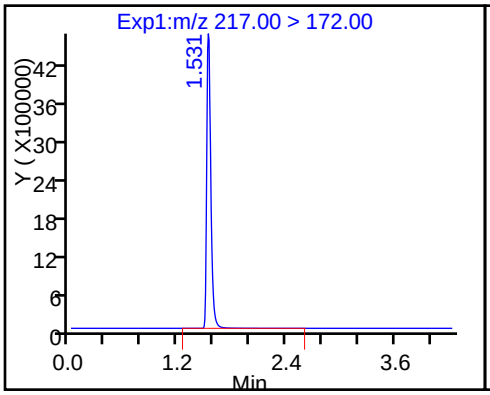
Client ID:

Operator ID: A8-PC\A8 ALS Bottle#: 32 Worklist Smp#: 15

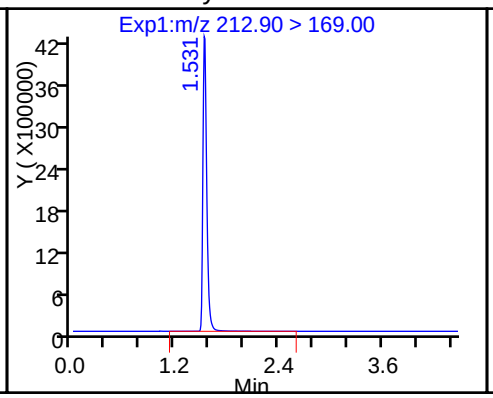
Injection Vol: 2.0 ul Dil. Factor: 1.0000

Method: A8_N Limit Group: LC PFC_DOD ICAL

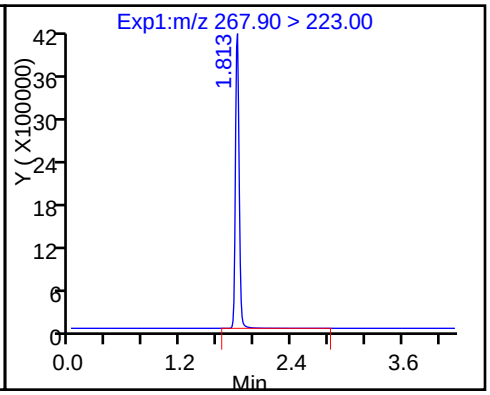
D 1 13C4 PFBA



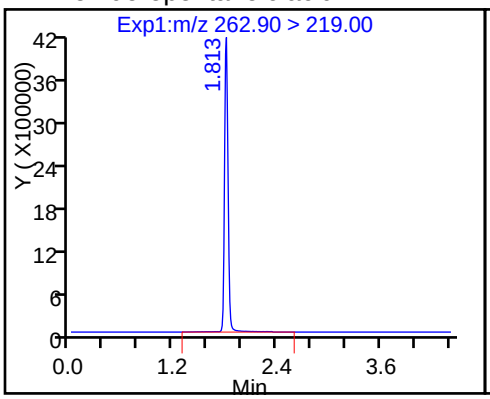
2 Perfluorobutyric acid



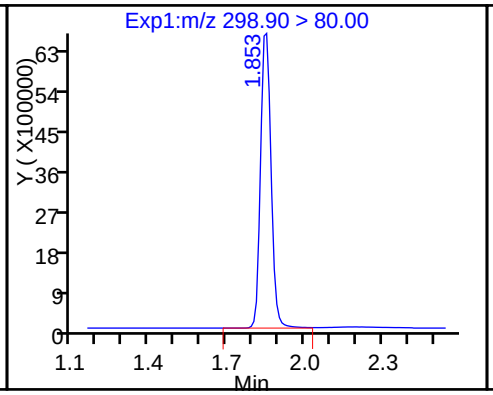
D 3 13C5-PFPeA



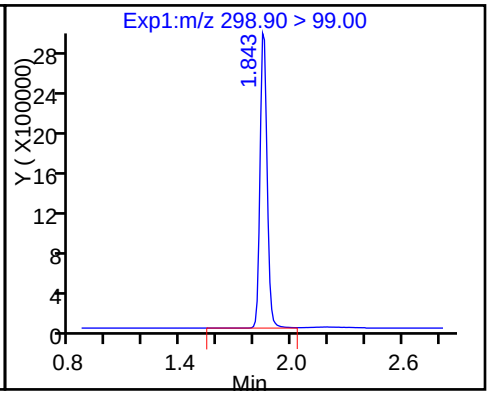
4 Perfluoropentanoic acid



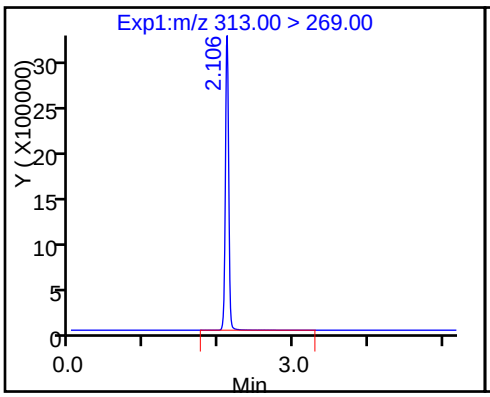
5 Perfluorobutanesulfonic acid



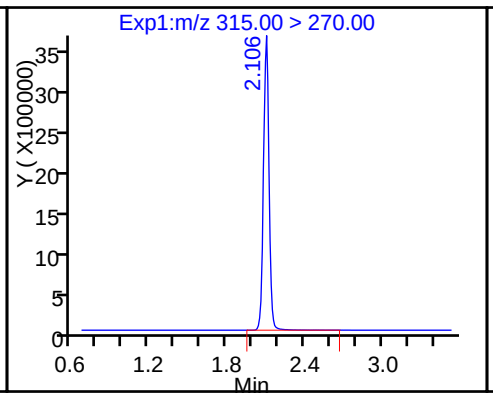
5 Perfluorobutanesulfonic acid



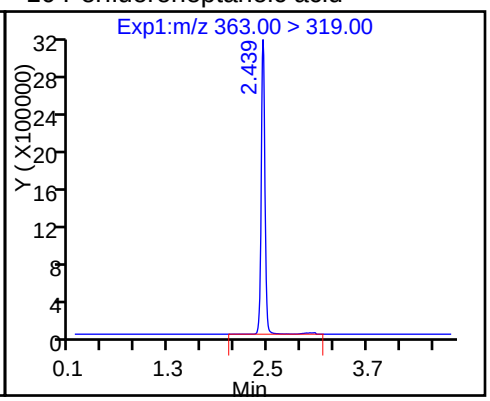
6 Perfluorohexanoic acid



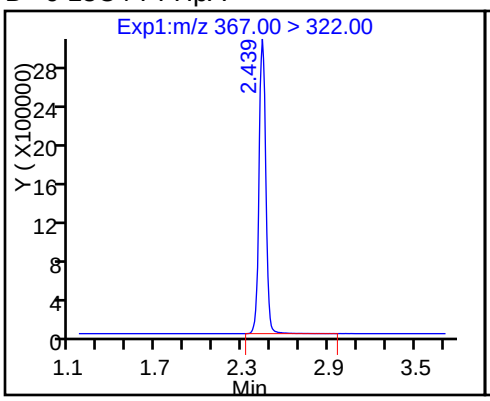
D 7 13C2 PFHxA



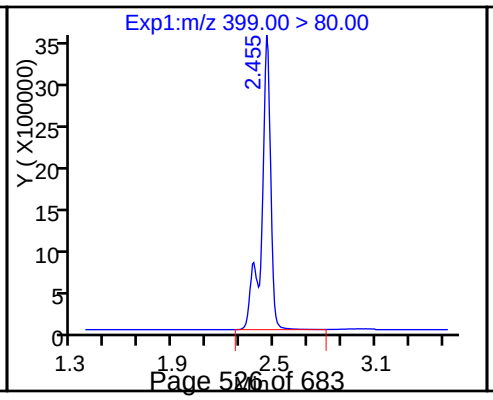
10 Perfluoroheptanoic acid



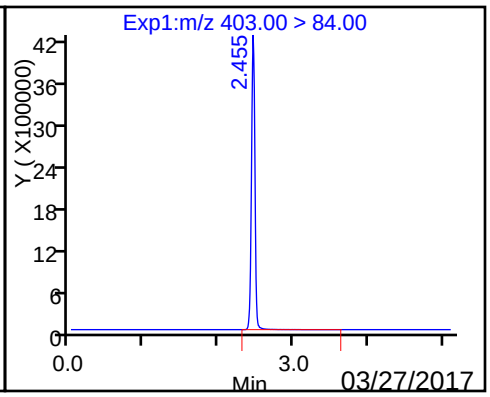
D 9 13C4-PFHpA



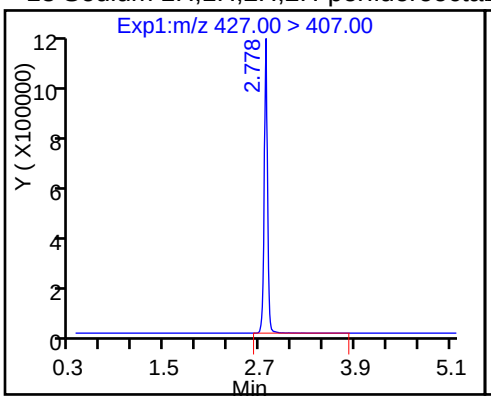
8 Perfluorohexanesulfonic acid



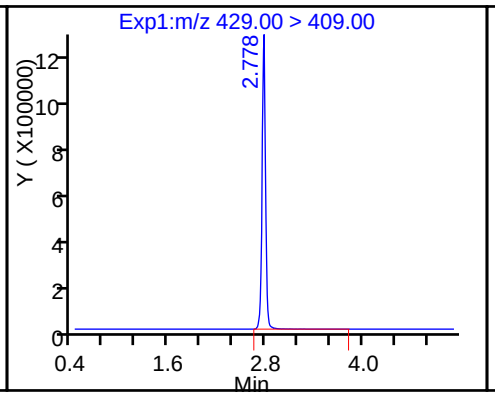
D 11 18O2 PFHxS



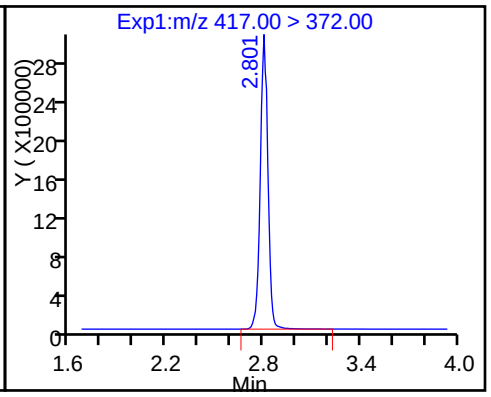
13 Sodium 1H,1H,2H,2H-perfluorooctane



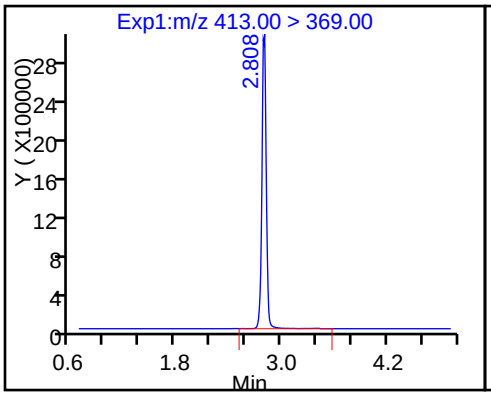
D 12 M2-6:2FTS



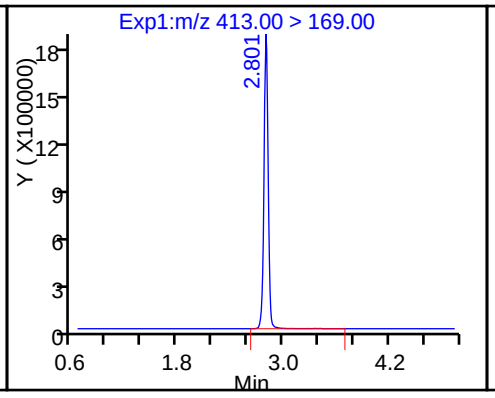
D 14 13C4 PFOA



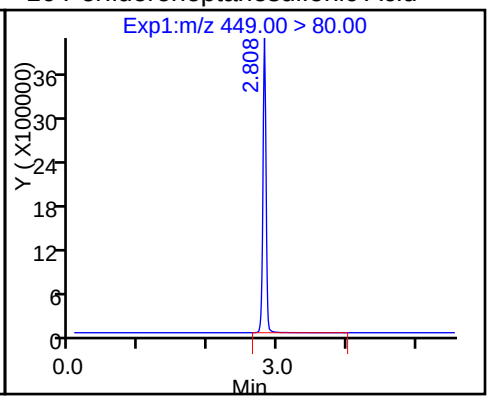
15 Perfluorooctanoic acid



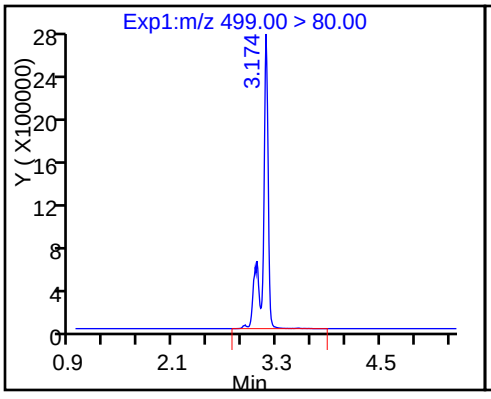
15 Perfluorooctanoic acid



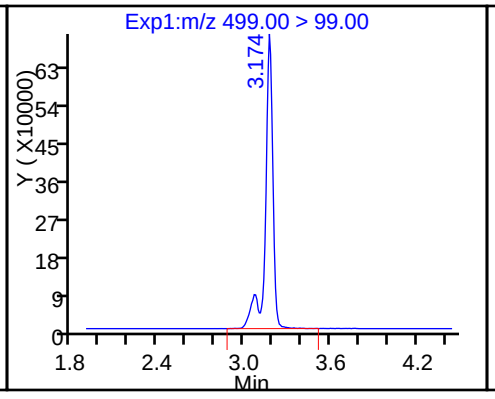
16 Perfluoroheptanesulfonic Acid



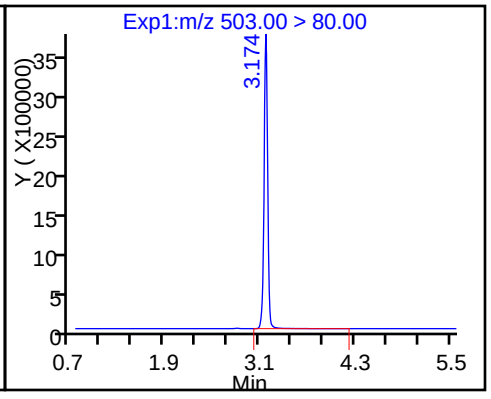
17 Perfluorooctane sulfonic acid



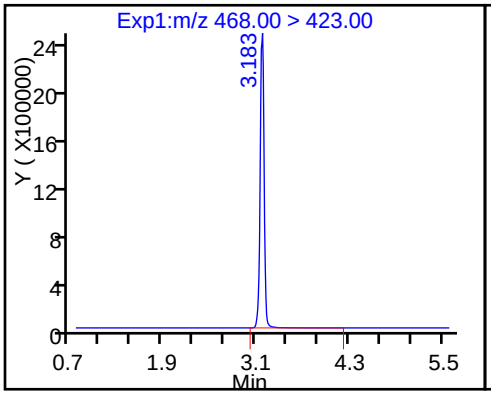
17 Perfluorooctane sulfonic acid



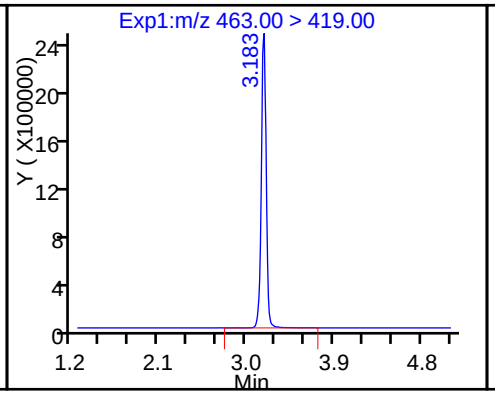
D 18 13C4 PFOS



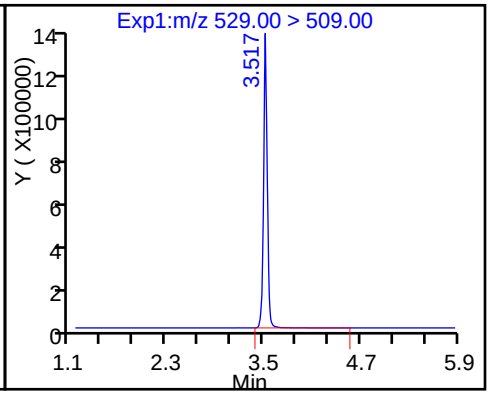
D 19 13C5 PFNA



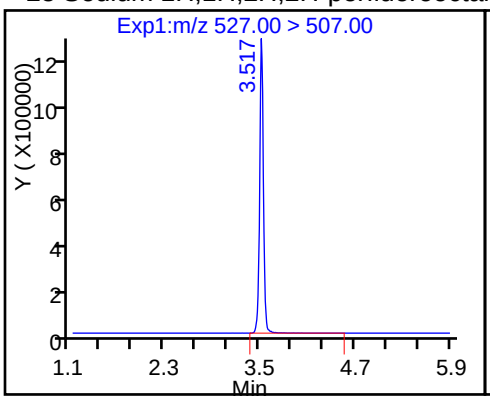
20 Perfluorononanoic acid



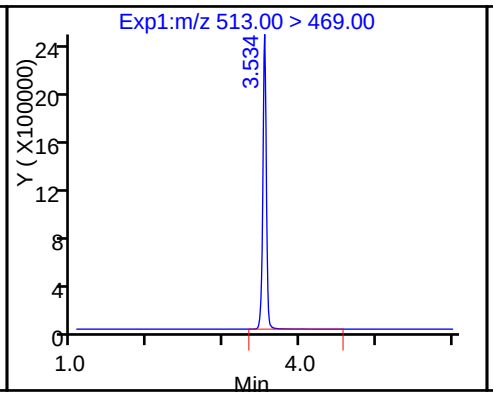
D 26 M2-8:2FTS



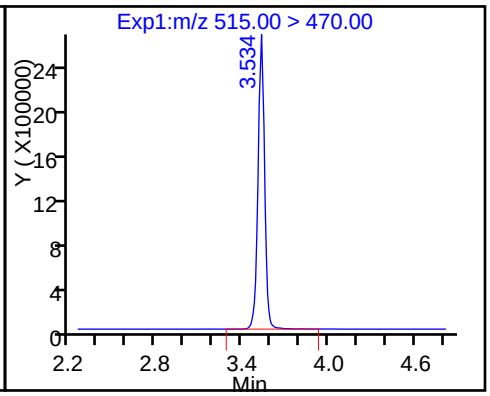
25 Sodium 1H,1H,2H,2H-perfluorooctane



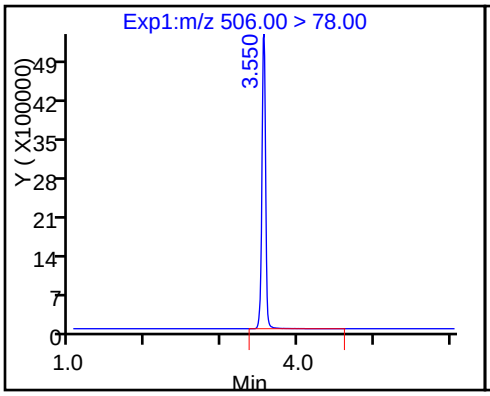
24 Perfluorodecanoic acid



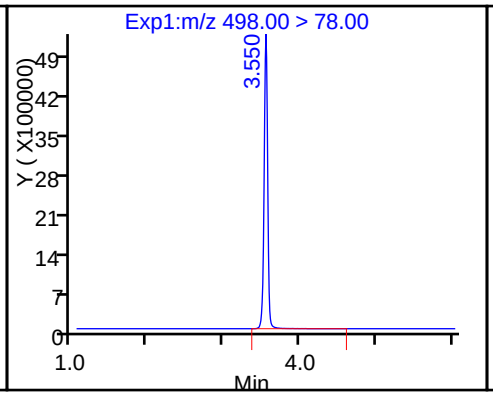
D 23 13C2 PFDA



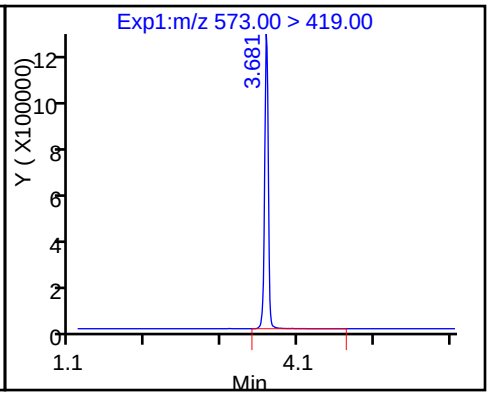
D 21 13C8 FOSA



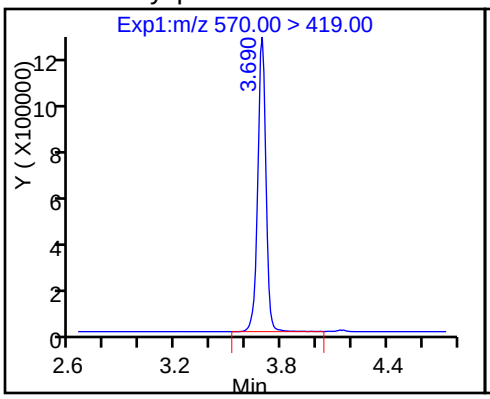
22 Perfluorooctane Sulfonamide



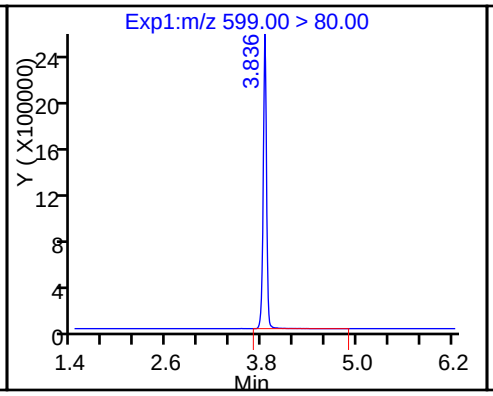
D 27 d3-NMeFOSAA



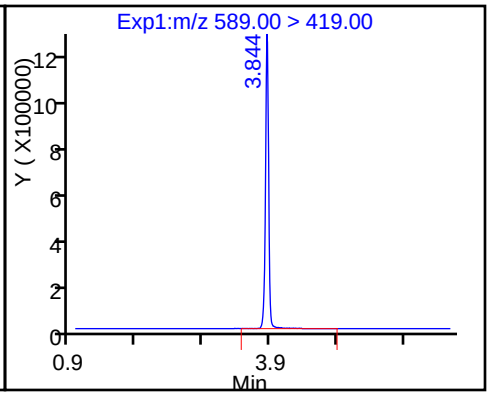
28 N-methyl perfluorooctane sulfonami



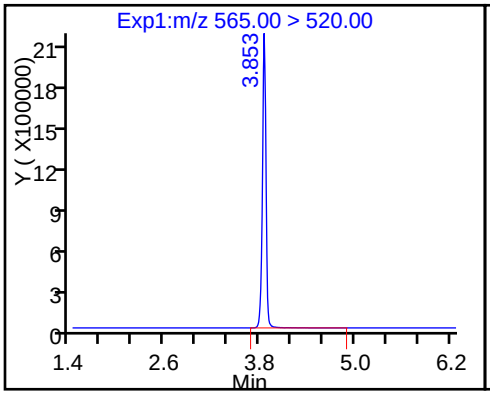
29 Perfluorodecane Sulfonic acid



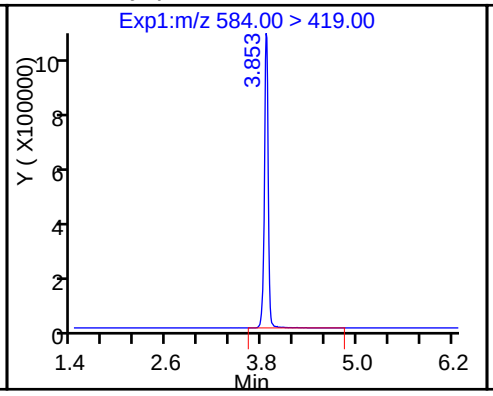
D 32 d5-NEtFOSAA



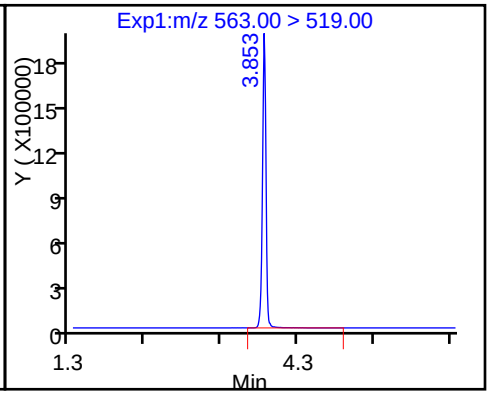
D 30 13C2 PFUnA



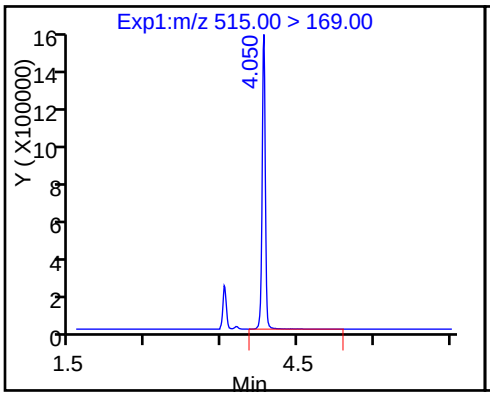
33 N-ethyl perfluorooctane sulfonamid



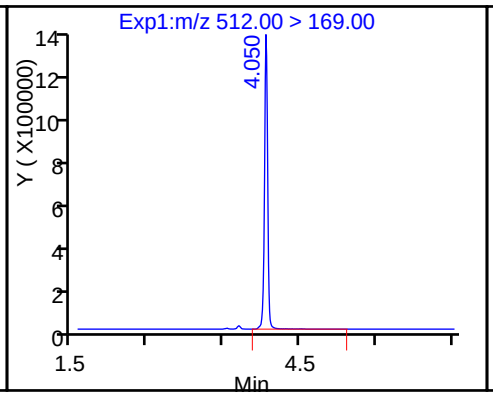
31 Perfluoroundecanoic acid



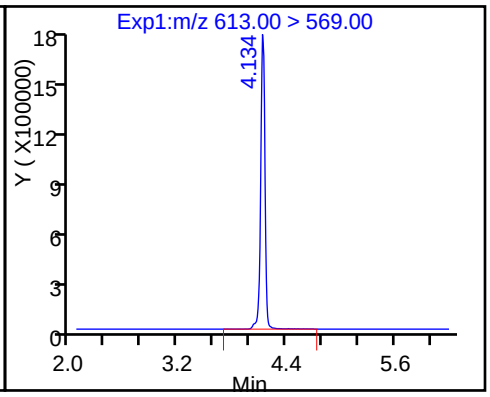
D 34 d-N-MeFOSA-M



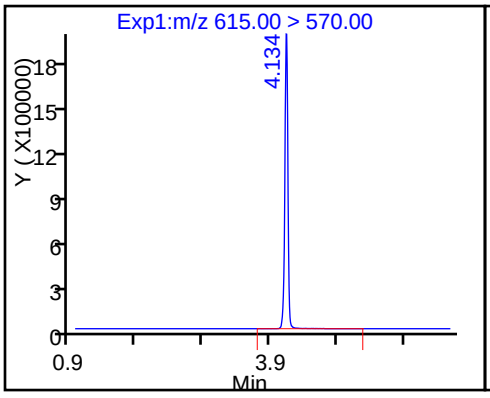
35 MeFOSA



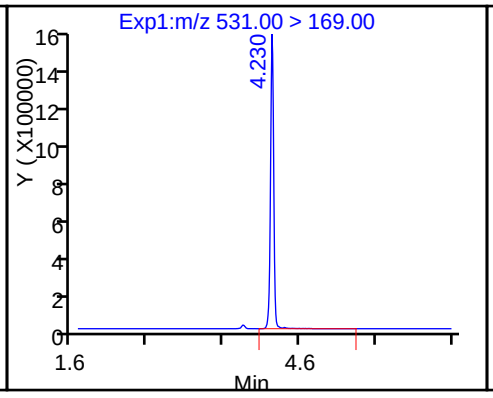
37 Perfluorododecanoic acid



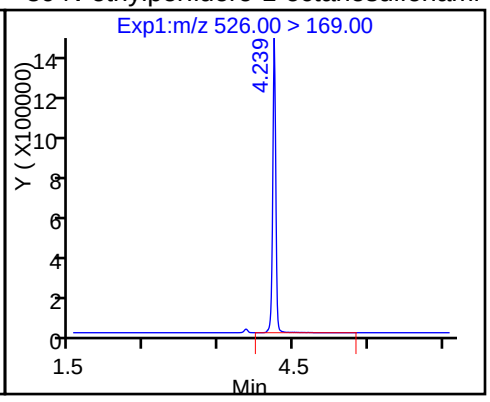
D 36 13C2 PFDoA



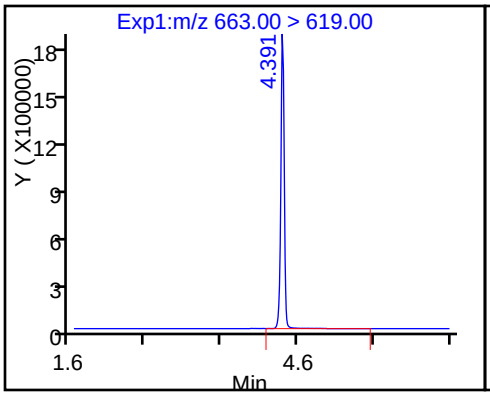
D 38 d-N-EtFOSA-M



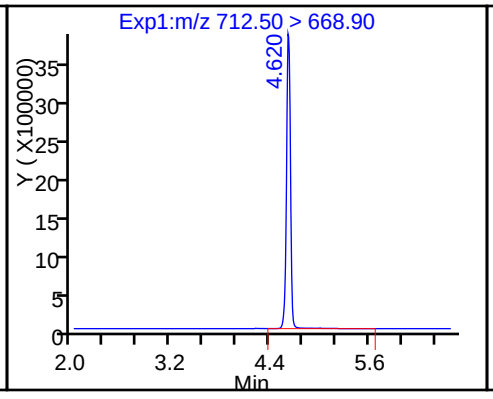
39 N-ethylperfluoro-1-octanesulfonami



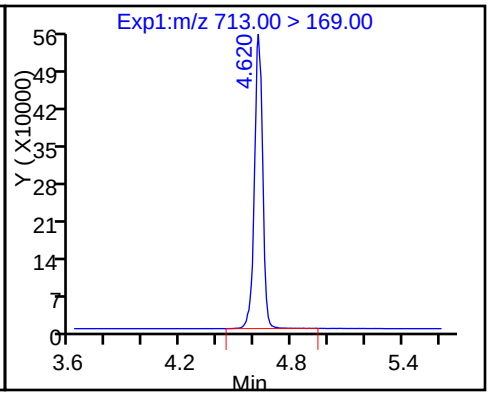
41 Perfluorotridecanoic acid



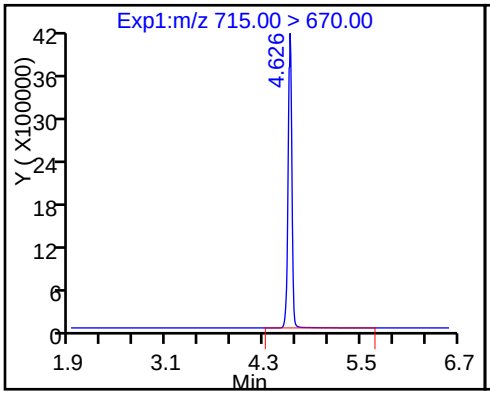
42 Perfluorotetradecanoic acid



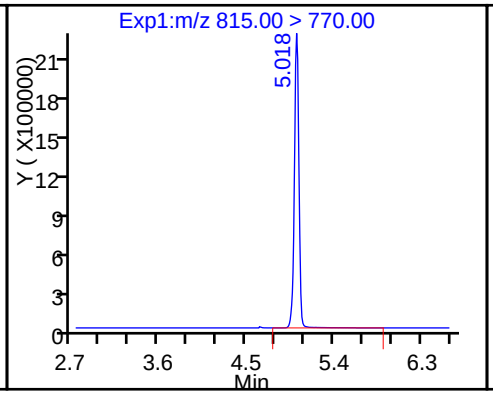
42 Perfluorotetradecanoic acid



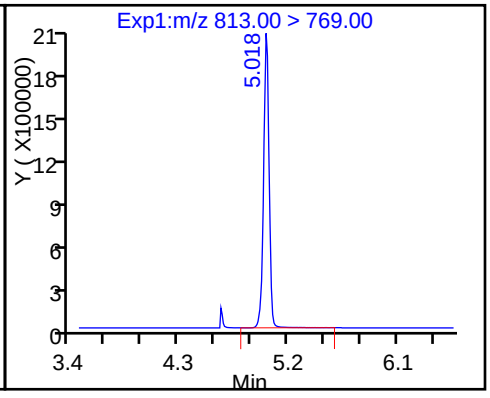
D 43 13C2-PFTeDA



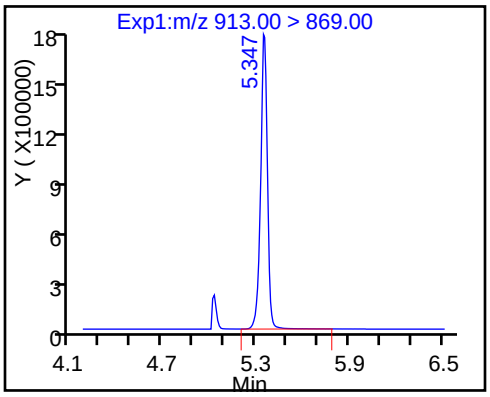
D 44 13C2-PFHxDA



45 Perfluorohexadecanoic acid



46 Perfluorooctadecanoic acid



FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Sacramento Job No.: 320-25962-1

SDG No.:

Lab Sample ID: CCV 320-152836/10 Calibration Date: 03/02/2017 10:12

Instrument ID: A8_N Calib Start Date: 03/01/2017 11:08

GC Column: GeminiC18 3x100 ID: 3.00(mm) Calib End Date: 03/01/2017 11:46

Lab File ID: 2017.03.02A_001.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorobutanoic acid (PFBA)	AveID	0.8473	0.8709		1.03	1.00	2.8	50.0
Perfluoropentanoic acid (PFPeA)	AveID	0.9785	1.178		1.20	1.00	20.4	50.0
Perfluorobutanesulfonic acid (PFBS)	AveID	1.433	1.589		0.981	0.884	10.9	50.0
Perfluorohexanoic acid (PFHxA)	AveID	0.8895	0.8907		1.00	1.00	0.1	50.0
Perfluoroheptanoic acid (PFHpA)	AveID	0.9673	0.9531		0.985	1.00	-1.5	50.0
Perfluorohexanesulfonic acid (PFHxS)	AveID	1.028	1.129		0.999	0.910	9.8	50.0
6:2FTS	L2ID		1.187		1.13	0.948	19.7	50.0
Perfluoroheptanesulfonic Acid (PFHpS)	AveID	1.031	1.103		1.02	0.952	7.0	50.0
Perfluorooctanoic acid (PFOA)	AveID	1.022	1.103		1.08	1.00	8.0	50.0
Perfluorononanoic acid (PFNA)	AveID	0.9040	0.9285		1.03	1.00	2.7	50.0
Perfluorooctanesulfonic acid (PFOS)	AveID	0.9835	0.9269		0.875	0.928	-5.8	50.0
Perfluorooctane Sulfonamide (FOSA)	AveID	0.8985	0.8939		0.995	1.00	-0.5	50.0
8:2FTS	L2ID		0.998		0.950	0.958	-0.8	50.0
Perfluorodecanoic acid (PFDA)	AveID	0.9057	0.8869		0.979	1.00	-2.1	50.0
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	AveID	0.9711	0.9220		0.949	1.00	-5.1	50.0
Perfluorodecanesulfonic acid (PFDS)	AveID	0.5957	0.5874		0.951	0.964	-1.4	50.0
Perfluoroundecanoic acid (PFUnA)	AveID	1.014	1.066		1.05	1.00	5.2	50.0
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	AveID	0.9103	0.9205		1.01	1.00	1.1	50.0
MeFOSA	AveID	0.9355	0.9537		1.02	1.00	1.9	50.0
Perfluorododecanoic acid (PFDoA)	AveID	0.9145	0.8711		0.953	1.00	-4.7	50.0
N-EtFOSA-M	AveID	0.9837	0.9767		0.993	1.00	-0.7	50.0
Perfluorotridecanoic Acid (PFTriA)	AveID	0.8734	0.9423		1.08	1.00	7.9	50.0
Perfluorotetradecanoic acid (PFTeA)	AveID	1.966	2.049		1.04	1.00	4.2	50.0
Perfluoro-n-hexadecanoic acid (PFHxDA)	L1ID		1.637		1.39	1.00	38.9	50.0
Perfluoro-n-octadecanoic acid (PFODA)	AveID	0.7175	0.8767		1.22	1.00	22.2	50.0
13C4 PFBA	Ave	292242	303085		51.9	50.0	3.7	50.0
13C5-PFPeA	Ave	232192	243710		52.5	50.0	5.0	50.0
13C2 PFHxA	Ave	210884	225943		53.6	50.0	7.1	50.0
13C4-PFHpA	Ave	192959	211066		54.7	50.0	9.4	50.0
18O2 PFHxS	Ave	290899	283155		46.0	47.3	-2.7	50.0
M2-6:2FTS	Ave	77178	84371		51.9	47.5	9.3	50.0

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Sacramento Job No.: 320-25962-1

SDG No.:

Lab Sample ID: CCV 320-152836/10 Calibration Date: 03/02/2017 10:12

Instrument ID: A8_N Calib Start Date: 03/01/2017 11:08

GC Column: GeminiC18 3x100 ID: 3.00(mm) Calib End Date: 03/01/2017 11:46

Lab File ID: 2017.03.02A_001.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
13C4 PFOA	Ave	204953	204611		49.9	50.0	-0.2	50.0
13C4 PFOS	Ave	241637	228603		45.2	47.8	-5.4	50.0
13C5 PFNA	Ave	177866	159686		44.9	50.0	-10.2	50.0
13C8 FOSA	Ave	366918	366512		49.9	50.0	-0.1	50.0
M2-8:2FTS	Ave	92602	87201		45.1	47.9	-5.8	50.0
13C2 PFDA	Ave	166704	148326		44.5	50.0	-11.0	50.0
d3-NMeFOSAA	Ave	85186	50414		29.6	50.0	-40.8	50.0
d5-NEtFOSAA	Ave	81371	50925		31.3	50.0	-37.4	50.0
13C2 PFUnA	Ave	130805	116606		44.6	50.0	-10.9	50.0
d-N-MeFOSA-M	Ave	87983	82263		46.7	50.0	-6.5	50.0
13C2 PFDoA	Ave	123944	110773		44.7	50.0	-10.6	50.0
d-N-EtFOSA-M	Ave	85249	81641		47.9	50.0	-4.2	50.0
13C2-PFTeDA	Ave	259165	236024		45.5	50.0	-8.9	50.0
13C2-PFHxDA	Ave	125061	122244		48.9	50.0	-2.3	50.0

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNa\Sacramento\ChromData\A8_N\20170302-40393.b\2017.03.02A_001.d
Lims ID: CCV L2
Client ID:
Sample Type: CCVL
Inject. Date: 02-Mar-2017 10:12:44 ALS Bottle#: 29 Worklist Smp#: 10
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV L2
Misc. Info.: Plate: 1 Rack: 1
Operator ID: A8-PC\A8 Instrument ID: A8_N
Sublist: chrom-A8_N*sub14

Method: \\ChromNa\Sacramento\ChromData\A8_N\20170302-40393.b\A8_N.m
Limit Group: LC PFC_DOD ICAL
Last Update: 27-Mar-2017 09:41:25 Calib Date: 01-Mar-2017 11:53:47
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A8_N\20170301-40358.b\2017.03.01CURVE_009.d

Column 1 : Det: EXP1
Process Host: XAWRK006

First Level Reviewer: chandrasenas Date: 27-Mar-2017 09:41:25

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
2 Perfluorobutyric acid										
212.90 > 169.00	1.538	1.546	-0.008	1.000	263963	1.03		103	1678	
D 1 13C4 PFBA										
217.00 > 172.00	1.531	1.546	-0.015		15154274	51.9		104	992373	
D 3 13C5-PFPeA										
267.90 > 223.00	1.812	1.821	-0.009		12185493	52.5		105	627629	
4 Perfluoropentanoic acid										
262.90 > 219.00	1.822	1.821	0.001	1.000	287091	1.20		120	2499	
5 Perfluorobutanesulfonic acid										
298.90 > 80.00	1.851	1.861	-0.010	1.000	397788	0.9807		111		
298.90 > 99.00	1.851	1.861	-0.010	1.000	161991		2.46(0.00-0.00)			
D 7 13C2 PFHxA										
315.00 > 270.00	2.115	2.122	-0.007		11297146	53.6		107	351347	
6 Perfluorohexanoic acid										
313.00 > 269.00	2.115	2.131	-0.016	1.000	201243	1.00		100	6875	
10 Perfluoroheptanoic acid										
363.00 > 319.00	2.454	2.471	-0.017	1.000	201161	0.9853		98.5	2650	
D 9 13C4-PFHpA										
367.00 > 322.00	2.454	2.471	-0.017		10553294	54.7		109	407982	
8 Perfluorohexanesulfonic acid										M
399.00 > 80.00	2.478	2.407	0.071	1.000	290855	1.00		110		M
D 11 18O2 PFHxS										
403.00 > 84.00	2.478	2.487	-0.009		13393249	46.0		97.3	386661	
13 Sodium 1H,1H,2H,2H-perfluorooctane										
427.00 > 407.00	2.804	2.812	-0.008	1.000	94949	1.13		120		
D 12 M2-6:2FTS										
429.00 > 409.00	2.789	2.812	-0.023		4007645	51.9		109		

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 14 13C4 PFOA										
417.00 > 372.00	2.828	2.836	-0.008		10230536	49.9		99.8	343374	
15 Perfluorooctanoic acid										
413.00 > 369.00	2.828	2.844	-0.016	1.000	225716	1.08		108	2239	
413.00 > 169.00	2.828	2.844	-0.016	1.000	127154		1.78(0.90-1.10)		6016	
16 Perfluoroheptanesulfonic Acid										
449.00 > 80.00	2.828	2.851	-0.023	1.000	240122	1.02		107		
17 Perfluorooctane sulfonic acid										M
499.00 > 80.00	3.193	3.099	0.094	1.000	196625	0.8746		94.2	15282	M
499.00 > 99.00	3.193	3.099	0.094	1.000	44821		4.39(0.90-1.10)		2501	M
D 18 13C4 PFOS										
503.00 > 80.00	3.193	3.220	-0.027		10927227	45.2		94.6	427675	
D 19 13C5 PFNA										
468.00 > 423.00	3.193	3.220	-0.027		7984281	44.9		89.8	228284	
20 Perfluorononanoic acid										
463.00 > 419.00	3.193	3.220	-0.027	1.000	148263	1.03		103	3241	
D 21 13C8 FOSA										
506.00 > 78.00	3.529	3.547	-0.018		18325592	49.9		99.9	283918	
22 Perfluorooctane Sulfonamide										
498.00 > 78.00	3.529	3.547	-0.018	1.000	327613	0.99		99.5	27115	
25 Sodium 1H,1H,2H,2H-perfluorooctane										
527.00 > 507.00	3.546	3.572	-0.026	1.000	83379	0.9502		99.2		
D 26 M2-8:2FTS										
529.00 > 509.00	3.546	3.572	-0.026		4176937	45.1		94.2		
D 23 13C2 PFDA										
515.00 > 470.00	3.563	3.581	-0.018		7416278	44.5		89.0	253454	
24 Perfluorodecanoic acid										
513.00 > 469.00	3.554	3.581	-0.027	1.000	131555	0.9793		97.9	4848	
D 27 d3-NMeFOSAA										
573.00 > 419.00	3.705	3.727	-0.022		2520676	29.6		59.2		
28 N-methyl perfluorooctane sulfonami										
570.00 > 419.00	3.715	3.737	-0.022	1.003	46481	0.9494		94.9		
29 Perfluorodecane Sulfonic acid										
599.00 > 80.00	3.859	3.888	-0.029	1.000	129457	0.9507		98.6		
D 32 d5-NEtFOSAA										
589.00 > 419.00	3.868	3.896	-0.028		2546257	31.3		62.6		
33 N-ethyl perfluorooctane sulfonamid										
584.00 > 419.00	3.885	3.905	-0.020	1.004	46877	1.01		101		
31 Perfluoroundecanoic acid										
563.00 > 519.00	3.876	3.905	-0.029	1.000	124292	1.05		105	2797	
D 30 13C2 PFUnA										
565.00 > 520.00	3.876	3.905	-0.029		5830278	44.6		89.1	168776	
D 34 d-N-MeFOSA-M										
515.00 > 169.00	4.019	4.041	-0.022		4113167	46.7		93.5		
35 MeFOSA										
512.00 > 169.00	4.019	4.041	-0.022	1.000	78452	1.02		102		
37 Perfluorododecanoic acid										M
613.00 > 569.00	4.165	4.194	-0.029	1.000	96492	0.9525		95.3	972	M

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 36 13C2 PFDoA										
615.00 > 570.00	4.165	4.187	-0.022		5538643	44.7		89.4	110918	
D 38 d-N-EtFOSA-M										
531.00 > 169.00	4.199	4.222	-0.023		4082033	47.9		95.8		
39 N-ethylperfluoro-1-octanesulfonami										
526.00 > 169.00	4.213	4.230	-0.017	1.000	79734	0.99		99.3		
41 Perfluorotridecanoic acid										
663.00 > 619.00	4.429	4.461	-0.032	1.000	104381	1.08		108	3378	
D 43 13C2-PFTeDA										
715.00 > 670.00	4.672	4.695	-0.023		11801191	45.5		91.1	366715	
42 Perfluorotetradecanoic acid										M
712.50 > 668.90	4.672	4.695	-0.023	1.000	226988	1.04		104	1407	M
713.00 > 169.00	4.672	4.695	-0.023	1.000	37053		6.13(0.00-0.00)		5899	
D 44 13C2-PFHxDA										
815.00 > 770.00	5.094	5.103	-0.009		6112206	48.9		97.7	168460	
45 Perfluorohexadecanoic acid										M
813.00 > 769.00	5.094	5.114	-0.020	1.000	181303	1.39		139	529	M
46 Perfluorooctadecanoic acid										
913.00 > 869.00	5.446	5.469	-0.023	1.000	97111	1.22		122	400	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

LCPFC_FULL-L2_00001 Amount Added: 1.00 Units: mL

Report Date: 27-Mar-2017 09:41:27 Chrom Revision: 2.2 13-Mar-2017 15:50:30

TestAmerica Sacramento

Data File: \\ChromNa\Sacramento\ChromData\A8_N\20170302-40393.b\2017.03.02A_001.d

Injection Date: 02-Mar-2017 10:12:44 Instrument ID: A8_N

Lims ID: CCV L2

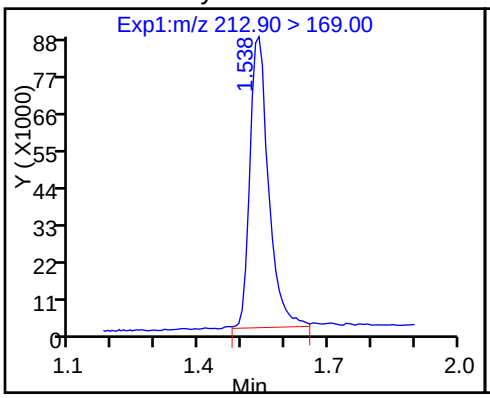
Client ID:

Operator ID: A8-PC\A8 ALS Bottle#: 29 Worklist Smp#: 10

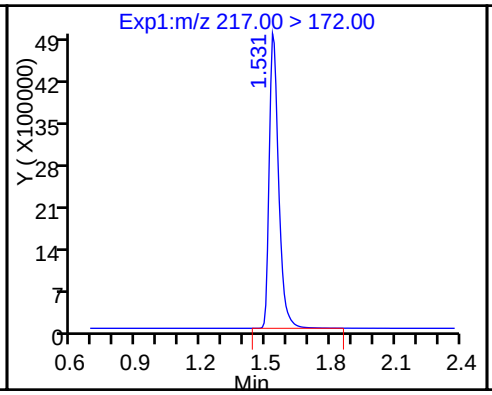
Injection Vol: 2.0 ul Dil. Factor: 1.0000

Method: A8_N Limit Group: LC PFC_DOD ICAL

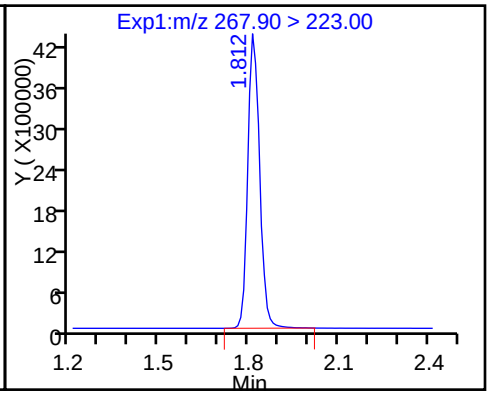
2 Perfluorobutyric acid



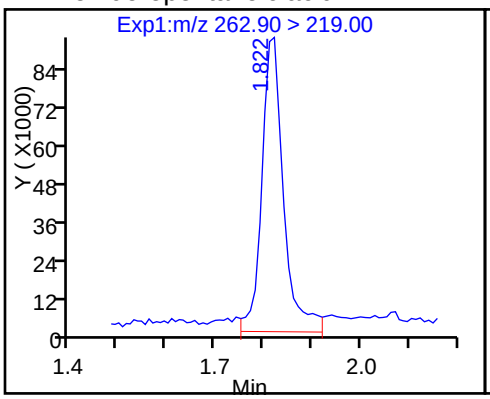
D 1 13C4 PFBA



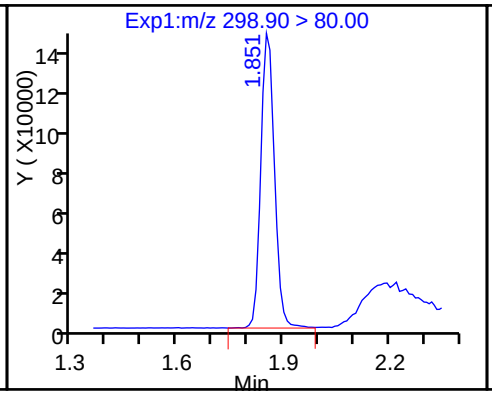
D 3 13C5-PFPeA



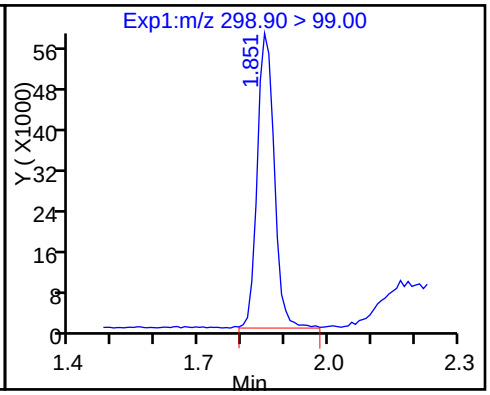
4 Perfluoropentanoic acid



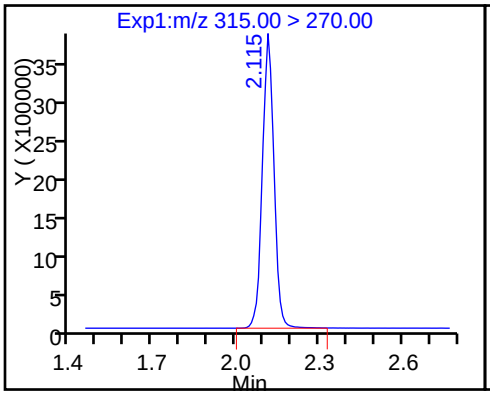
5 Perfluorobutanesulfonic acid



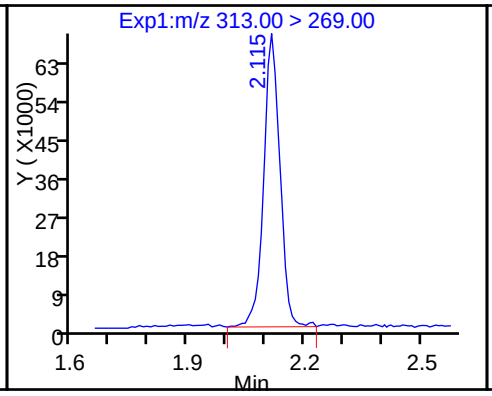
5 Perfluorobutanesulfonic acid



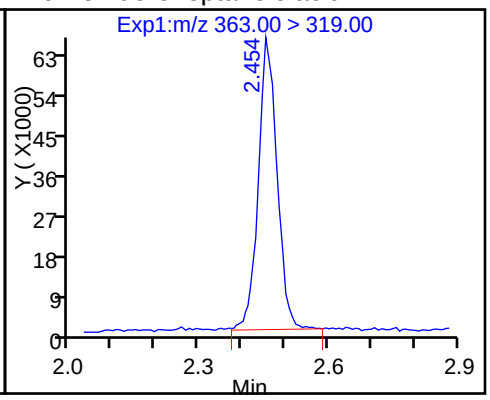
D 7 13C2 PFHxA



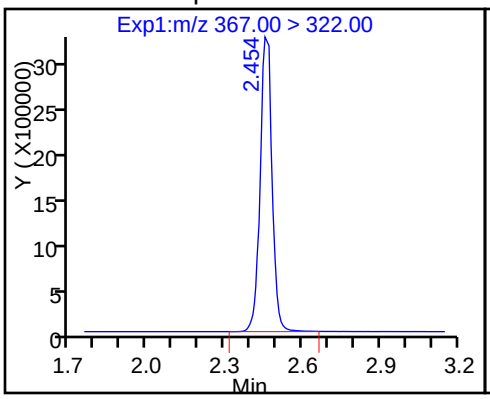
6 Perfluorohexanoic acid



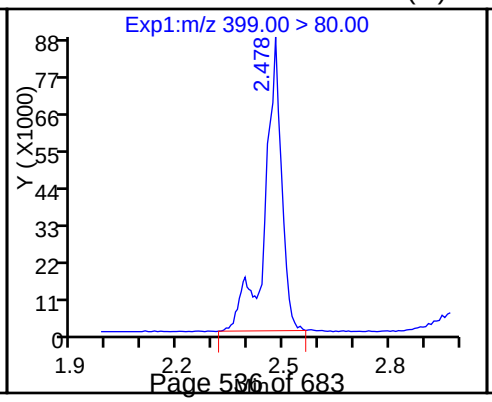
10 Perfluoroheptanoic acid



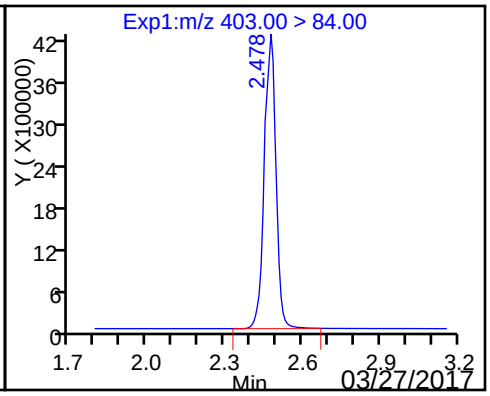
D 9 13C4-PFHpA



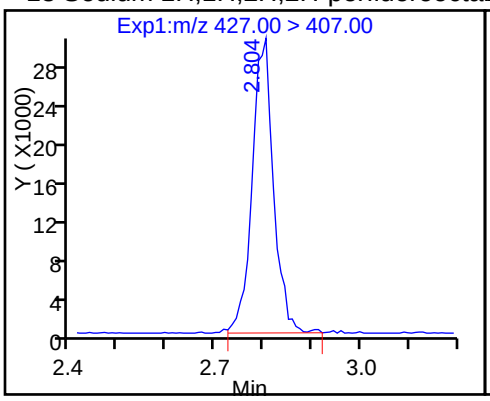
8 Perfluorohexanesulfonic acid (M)



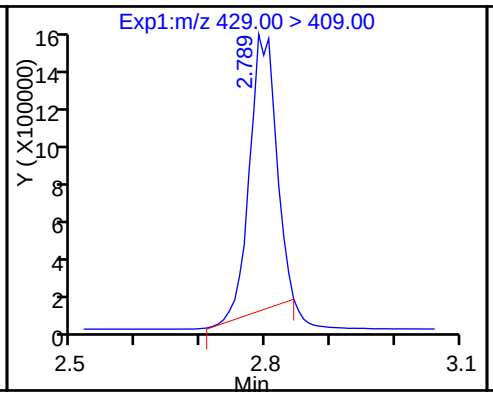
D 11 18O2 PFHxS



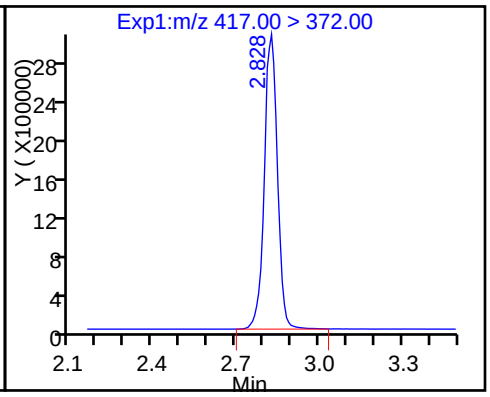
13 Sodium 1H,1H,2H,2H-perfluorooctane



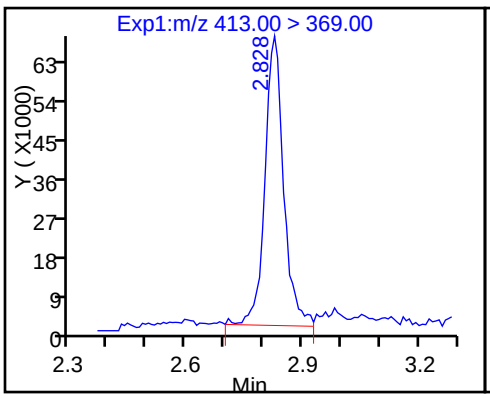
D 12 M2-6:2FTS



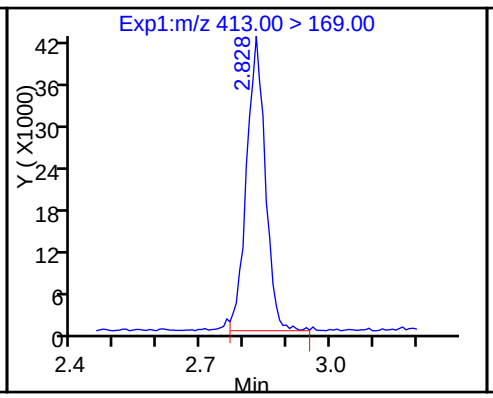
D 14 13C4 PFOA



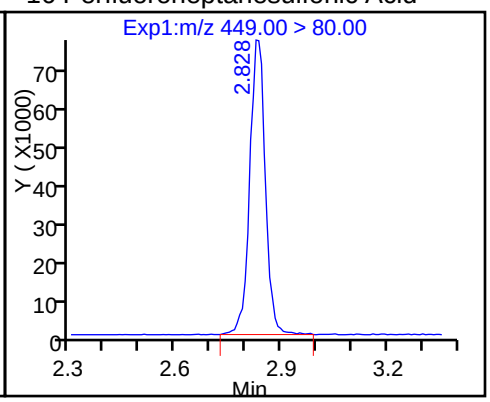
15 Perfluorooctanoic acid



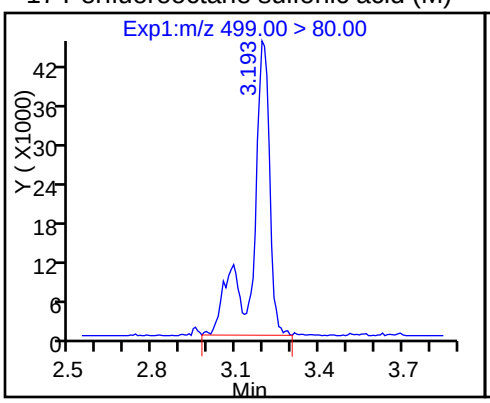
15 Perfluorooctanoic acid



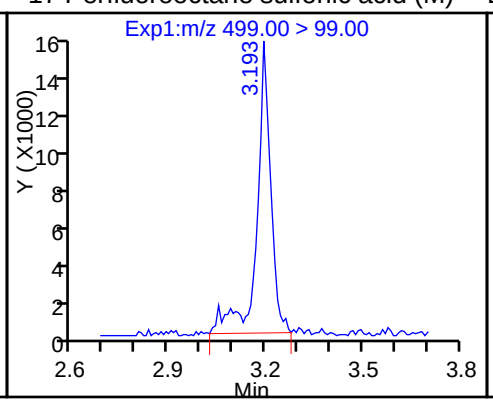
16 Perfluoroheptanesulfonic Acid



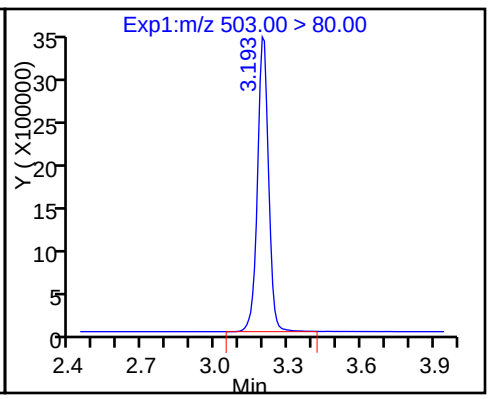
17 Perfluorooctane sulfonic acid (M)



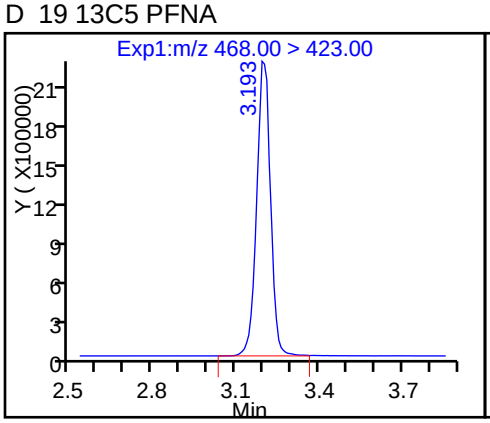
17 Perfluorooctane sulfonic acid (M)



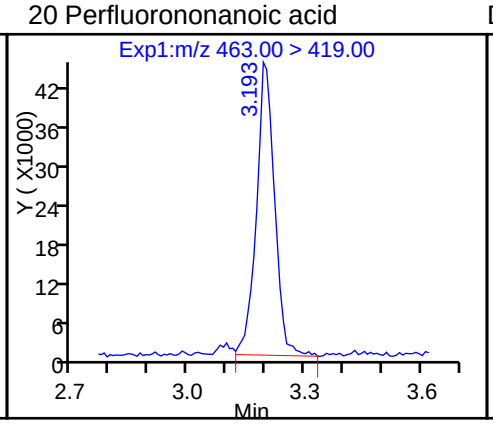
D 18 13C4 PFOS



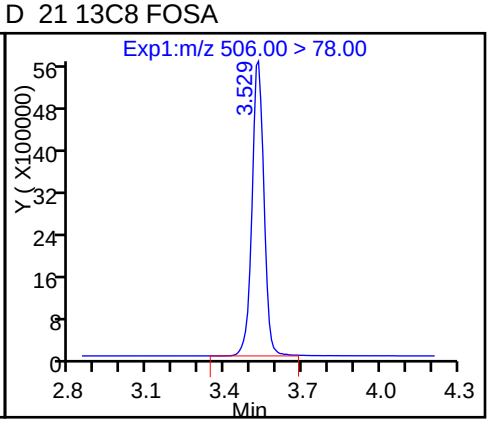
D 19 13C5 PFNA



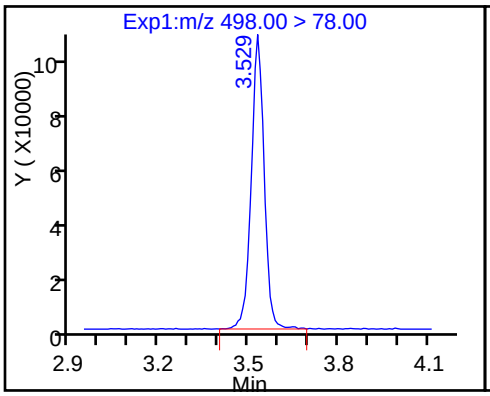
20 Perfluorononanoic acid



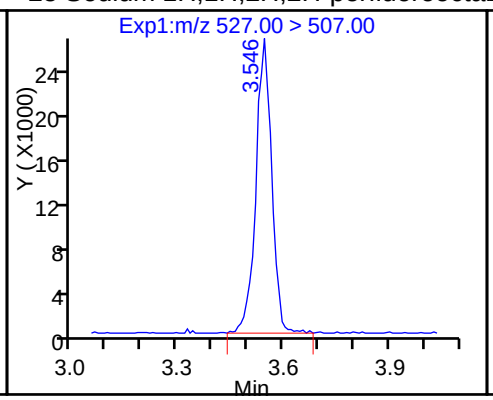
D 21 13C8 FOSA



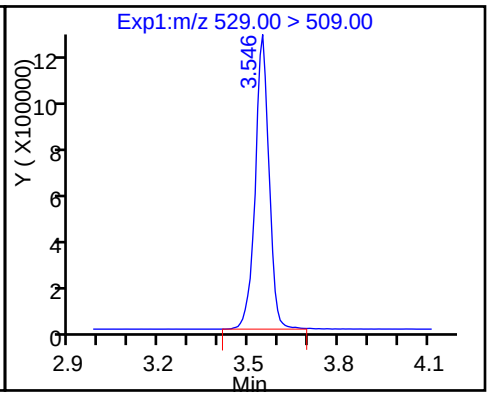
22 Perfluorooctane Sulfonamide



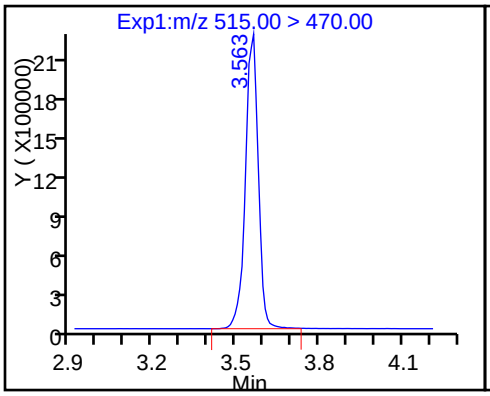
25 Sodium 1H,1H,2H,2H-perfluorooctane



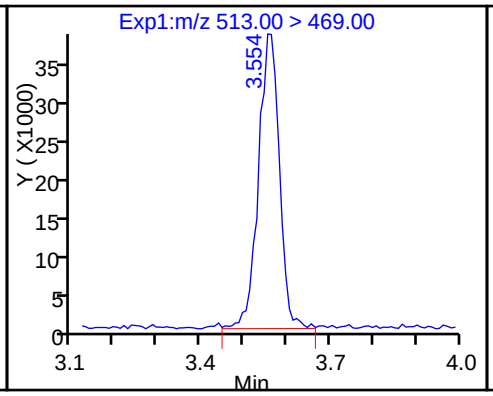
D 26 M2-8:2FTS



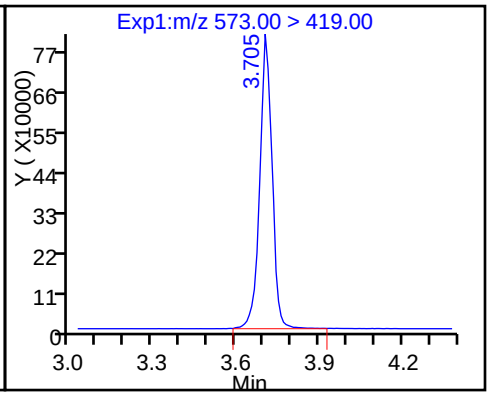
D 23 13C2 PFDA



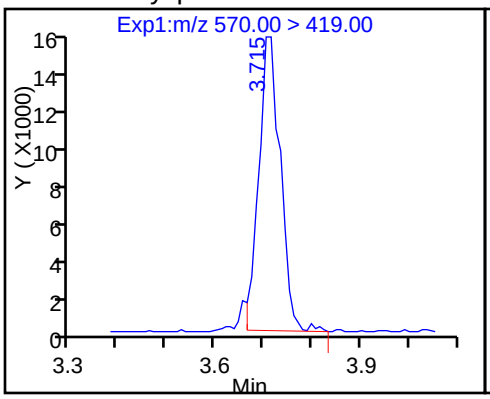
24 Perfluorodecanoic acid



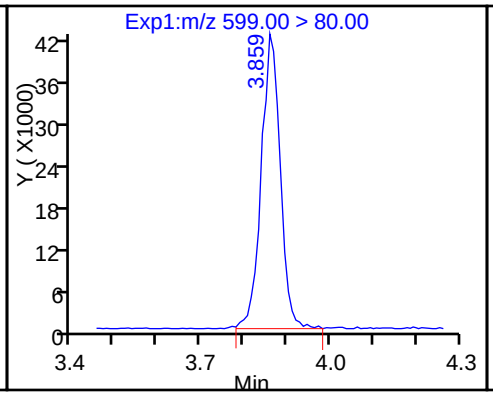
D 27 d3-NMeFOSAA



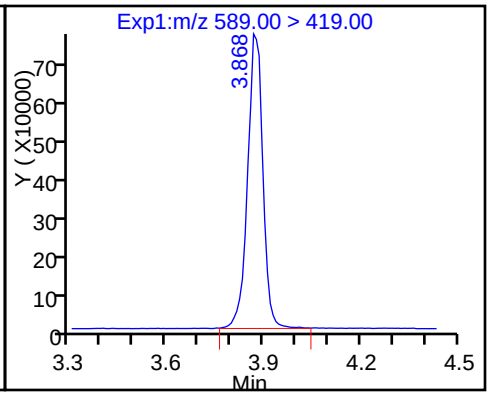
28 N-methyl perfluorooctane sulfonami



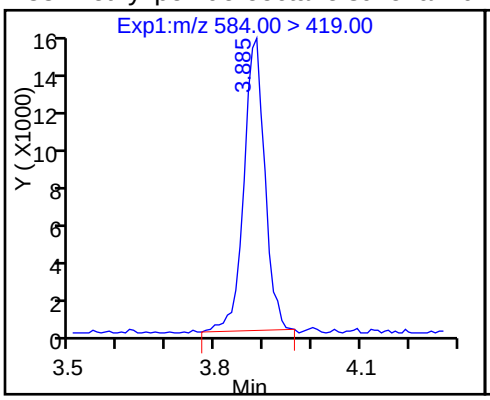
29 Perfluorodecane Sulfonic acid



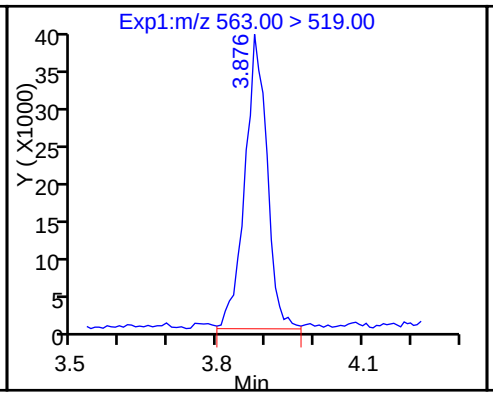
D 32 d5-NEtFOSAA



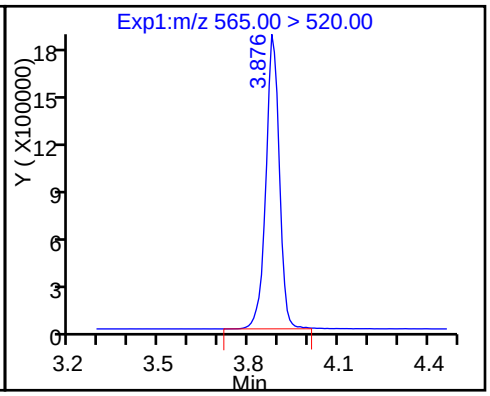
33 N-ethyl perfluorooctane sulfonamid



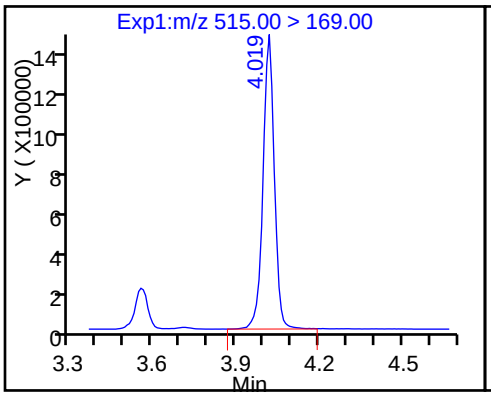
31 Perfluoroundecanoic acid



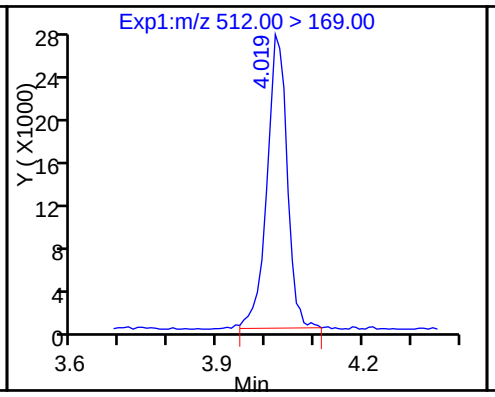
D 30 13C2 PFUnA



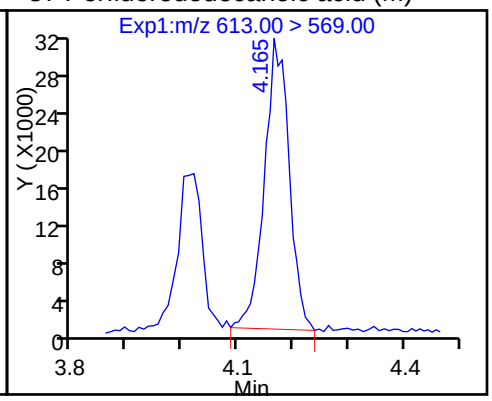
D 34 d-N-MeFOSA-M



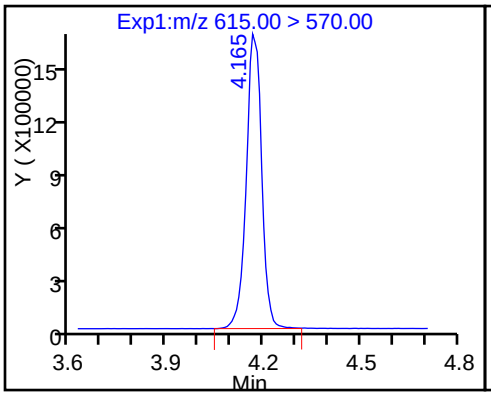
35 MeFOSA



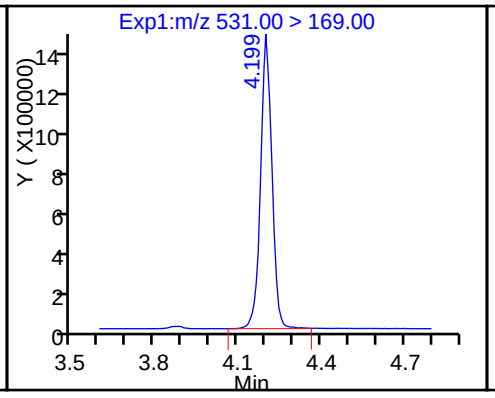
37 Perfluorododecanoic acid (M)



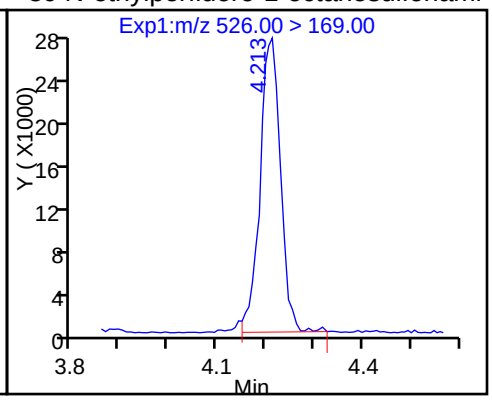
D 36 13C2 PFDoA



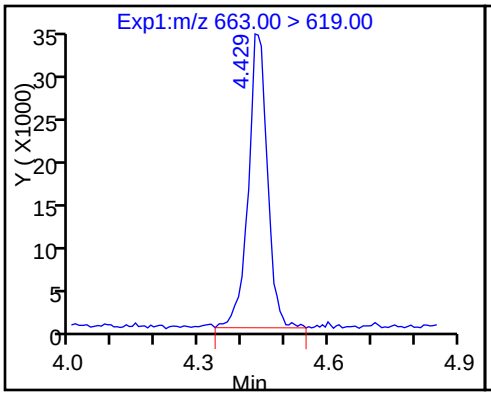
D 38 d-N-EtFOSA-M



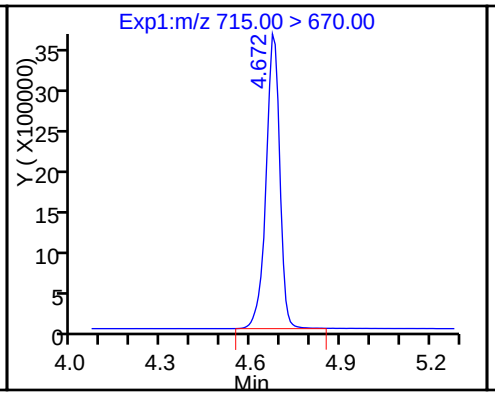
39 N-ethylperfluoro-1-octanesulfonami



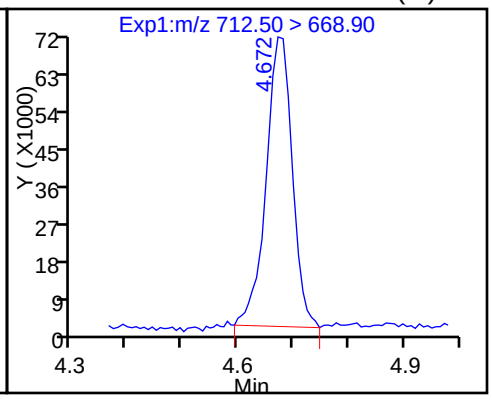
41 Perfluorotridecanoic acid



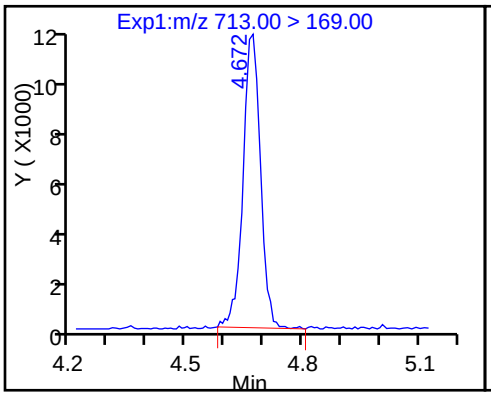
D 43 13C2-PFTeDA



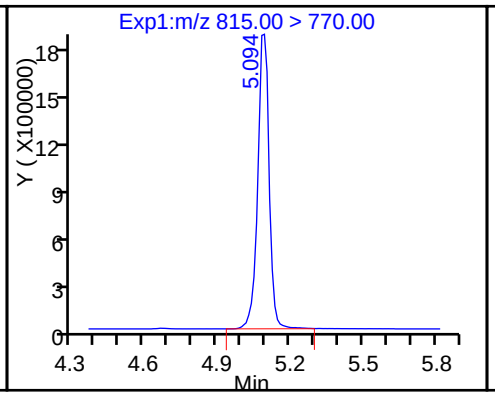
42 Perfluorotetradecanoic acid (M)



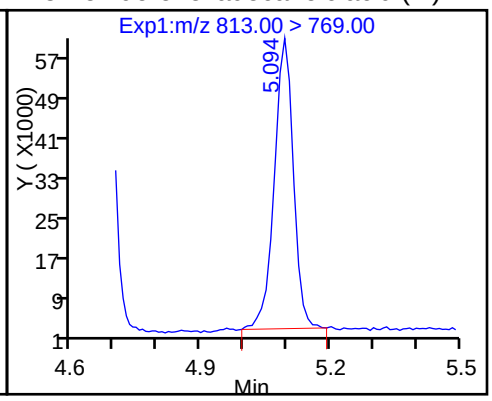
42 Perfluorotetradecanoic acid



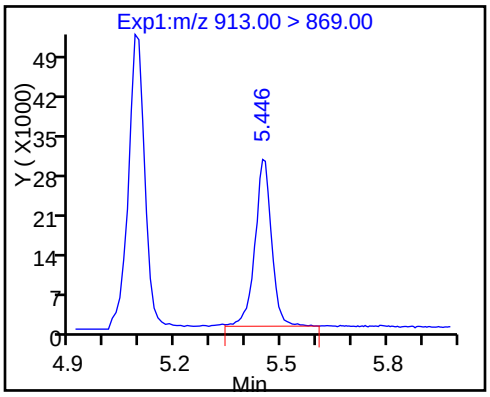
D 44 13C2-PFHxDA



45 Perfluorohexadecanoic acid (M)



46 Perfluorooctadecanoic acid



Manual Integration/User Assign Peak Report

TestAmerica Sacramento

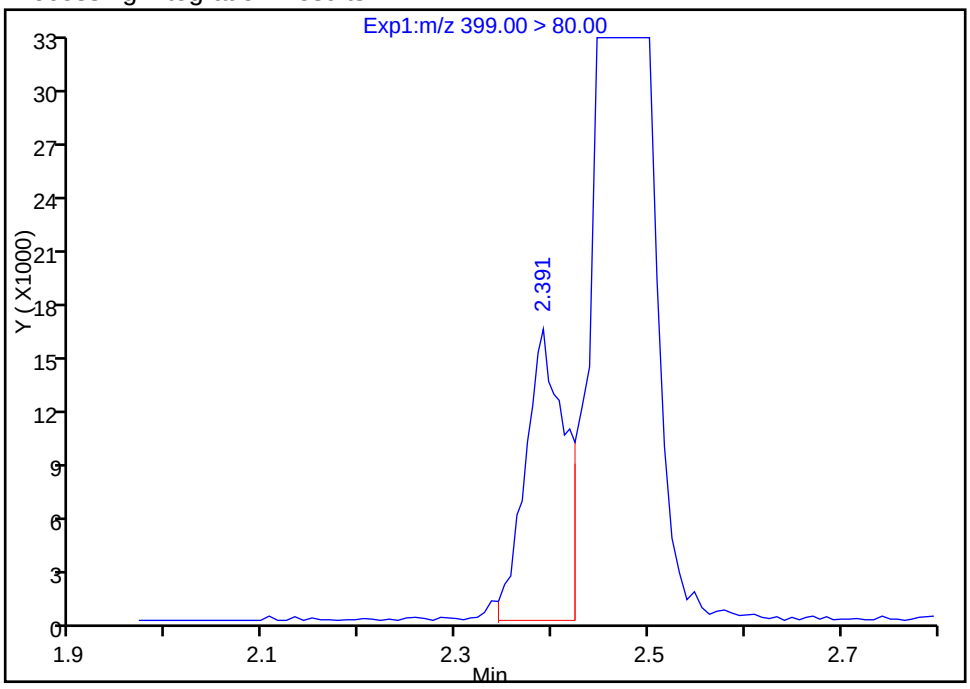
Data File: \\ChromNa\Sacramento\ChromData\A8_N\20170302-40393.b\2017.03.02A_001.d
Injection Date: 02-Mar-2017 10:12:44 Instrument ID: A8_N
Lims ID: CCV L2
Client ID:
Operator ID: A8-PC\A8 ALS Bottle#: 29 Worklist Smp#: 10
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Method: A8_N Limit Group: LC PFC_DOD ICAL
Column: Detector EXP1

8 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

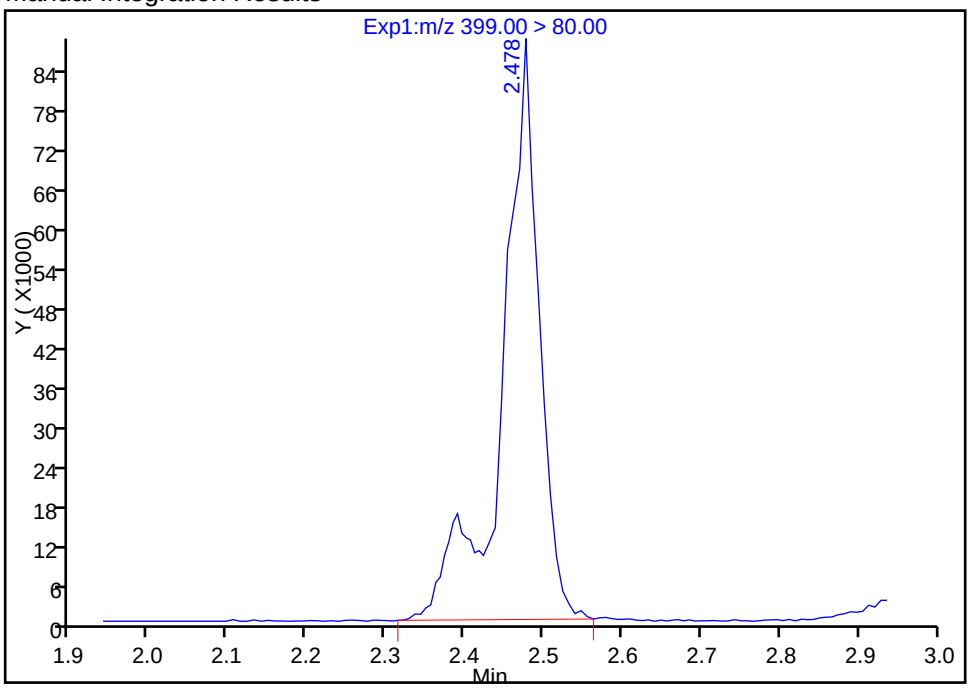
Processing Integration Results

RT: 2.39
Area: 45593
Amount: 0.156564
Amount Units: ng/ml



Manual Integration Results

RT: 2.48
Area: 290855
Amount: 0.998783
Amount Units: ng/ml



Reviewer: chandrasenas, 27-Mar-2017 09:41:17
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

TestAmerica Sacramento

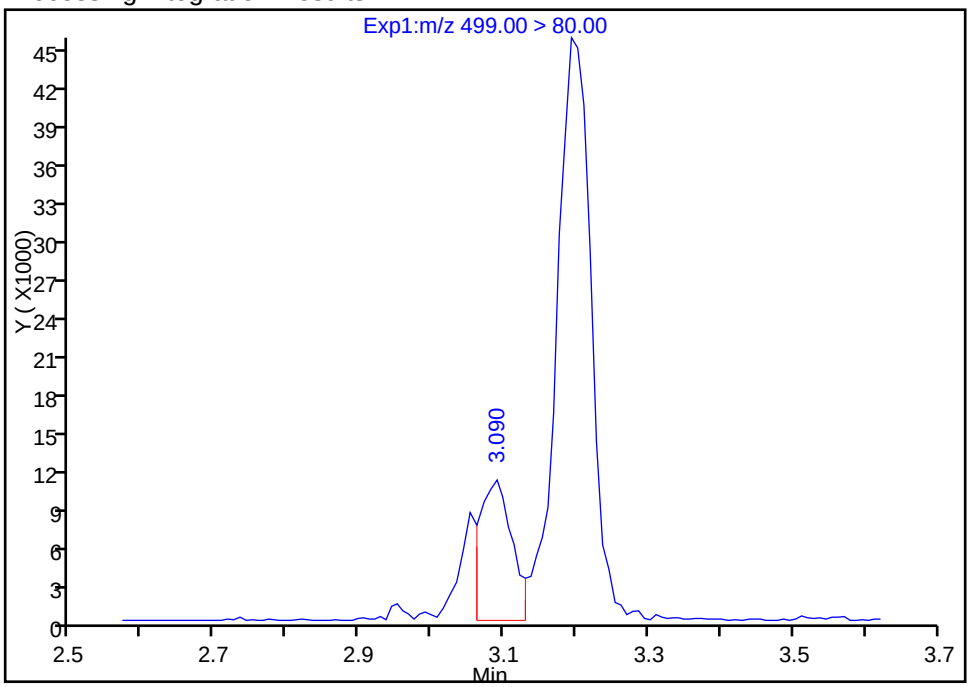
Data File: \\ChromNa\Sacramento\ChromData\A8_N\20170302-40393.b\2017.03.02A_001.d
Injection Date: 02-Mar-2017 10:12:44 Instrument ID: A8_N
Lims ID: CCV L2
Client ID:
Operator ID: A8-PC\A8 ALS Bottle#: 29 Worklist Smp#: 10
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Method: A8_N Limit Group: LC PFC_DOD ICAL
Column: Detector EXP1

17 Perfluorooctane sulfonic acid, CAS: 1763-23-1

Signal: 1

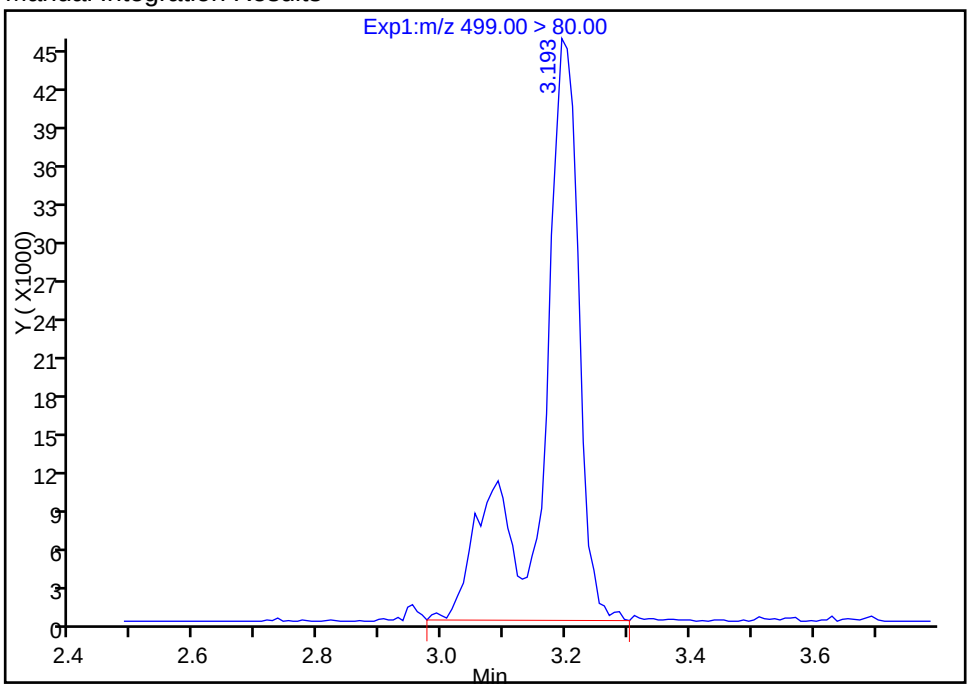
Processing Integration Results

RT: 3.09
Area: 31935
Amount: 0.142042
Amount Units: ng/ml



Manual Integration Results

RT: 3.19
Area: 196625
Amount: 0.874561
Amount Units: ng/ml



Reviewer: chandrasenas, 27-Mar-2017 09:41:17
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

TestAmerica Sacramento

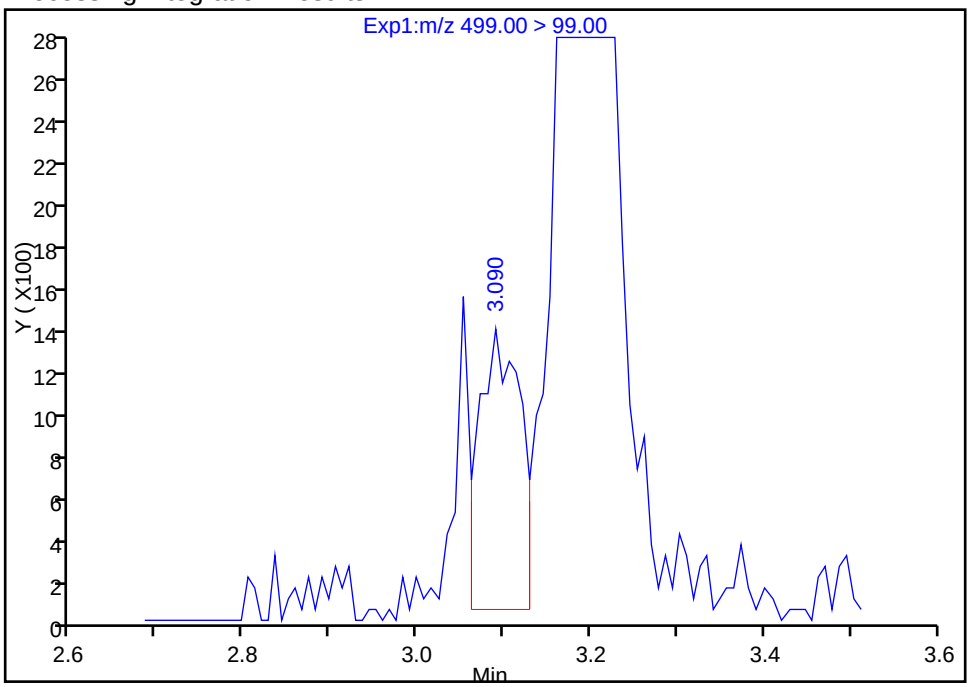
Data File: \\ChromNa\Sacramento\ChromData\A8_N\20170302-40393.b\2017.03.02A_001.d
Injection Date: 02-Mar-2017 10:12:44 Instrument ID: A8_N
Lims ID: CCV L2
Client ID:
Operator ID: A8-PC\A8 ALS Bottle#: 29 Worklist Smp#: 10
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Method: A8_N Limit Group: LC PFC_DOD ICAL
Column: Detector EXP1

17 Perfluorooctane sulfonic acid, CAS: 1763-23-1

Signal: 2

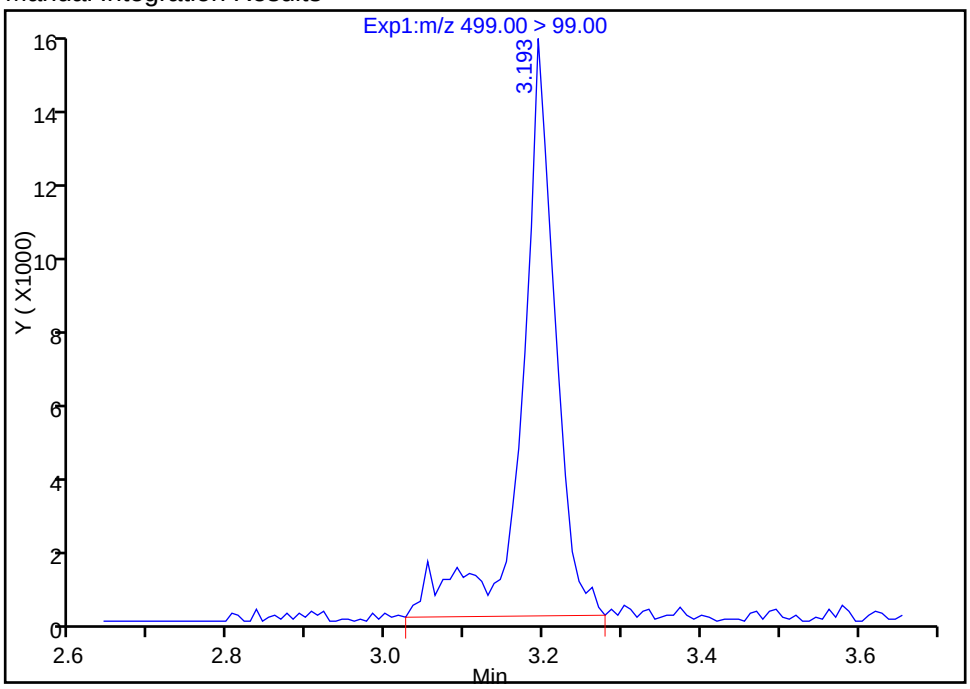
Processing Integration Results

RT: 3.09
Area: 4213
Amount: 0.142042
Amount Units: ng/ml



Manual Integration Results

RT: 3.19
Area: 44821
Amount: 0.874561
Amount Units: ng/ml



Reviewer: chandrasenas, 27-Mar-2017 09:41:17
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

TestAmerica Sacramento

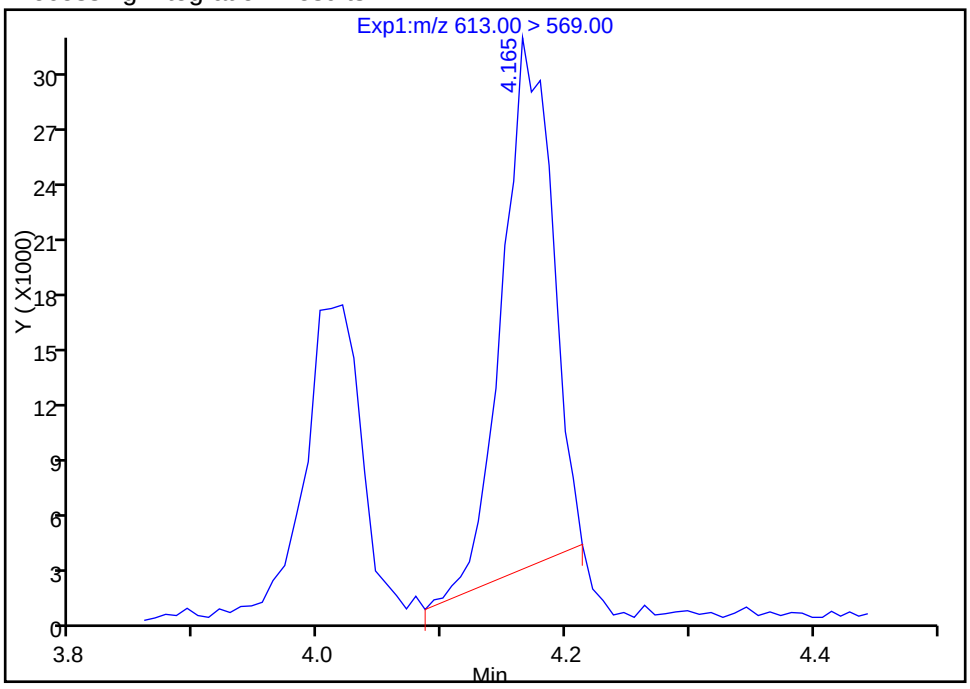
Data File: \\ChromNa\Sacramento\ChromData\A8_N\20170302-40393.b\2017.03.02A_001.d
Injection Date: 02-Mar-2017 10:12:44 Instrument ID: A8_N
Lims ID: CCV L2
Client ID:
Operator ID: A8-PC\A8 ALS Bottle#: 29 Worklist Smp#: 10
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Method: A8_N Limit Group: LC PFC_DOD ICAL
Column: Detector EXP1

37 Perfluorododecanoic acid, CAS: 307-55-1

Signal: 1

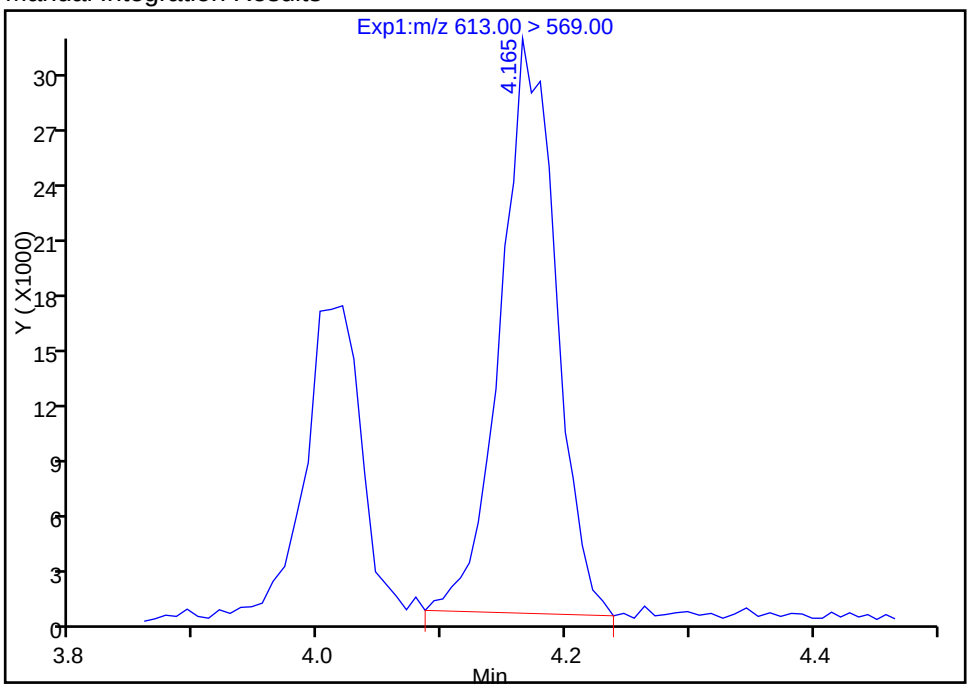
Processing Integration Results

RT: 4.16
Area: 80091
Amount: 0.790618
Amount Units: ng/ml



Manual Integration Results

RT: 4.16
Area: 96492
Amount: 0.952520
Amount Units: ng/ml



Reviewer: chandrasenas, 27-Mar-2017 09:41:17
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Sacramento

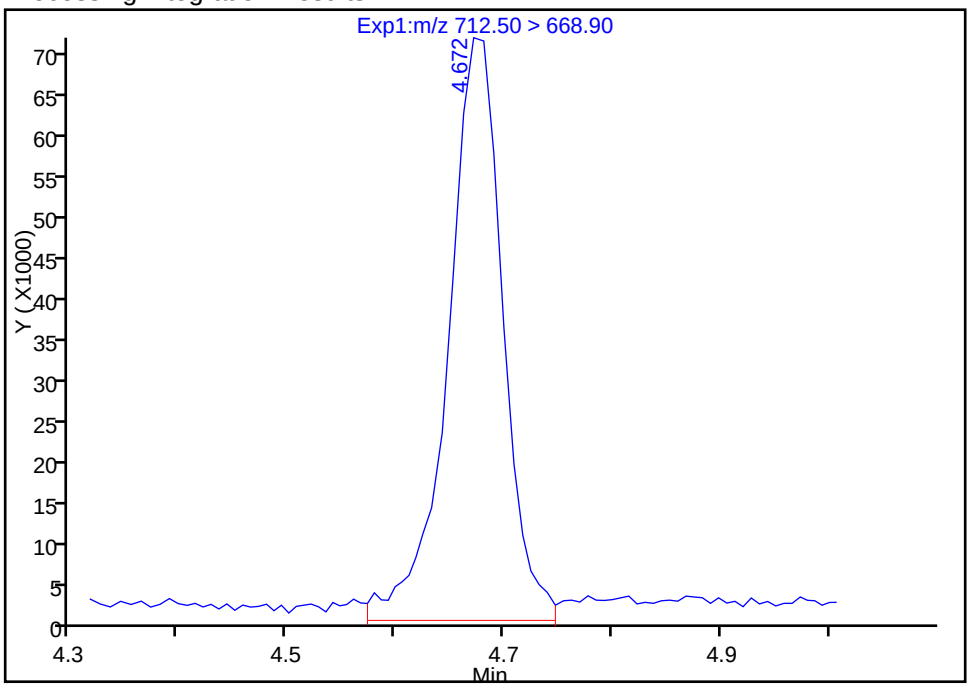
Data File: \\ChromNa\Sacramento\ChromData\A8_N\20170302-40393.b\2017.03.02A_001.d
Injection Date: 02-Mar-2017 10:12:44 Instrument ID: A8_N
Lims ID: CCV L2
Client ID:
Operator ID: A8-PC\A8 ALS Bottle#: 29 Worklist Smp#: 10
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Method: A8_N Limit Group: LC PFC_DOD ICAL
Column: Detector EXP1

42 Perfluorotetradecanoic acid, CAS: 376-06-7

Signal: 1

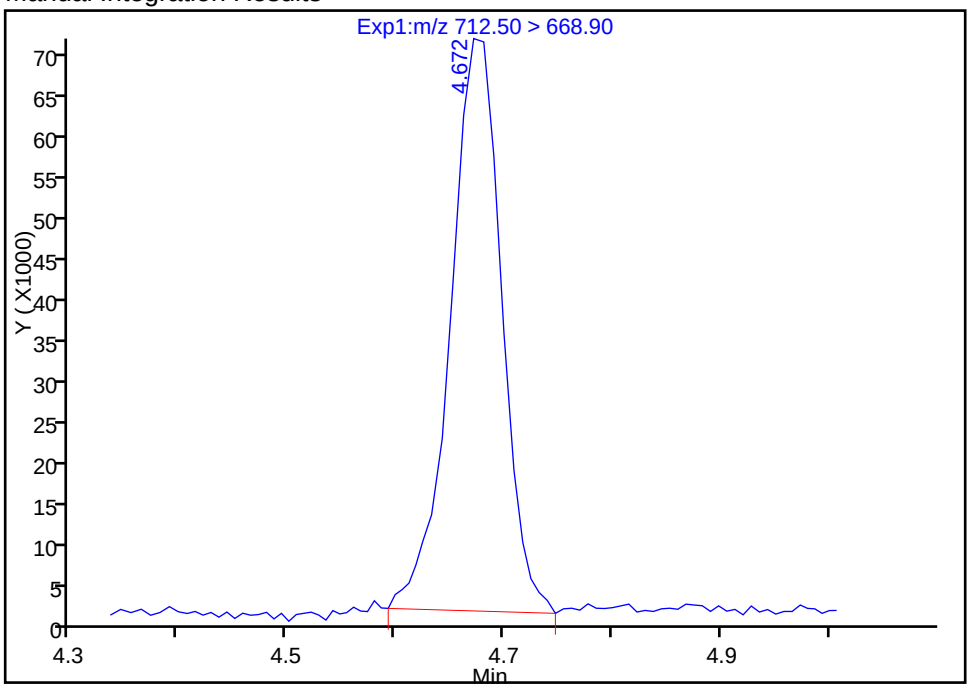
Processing Integration Results

RT: 4.67
Area: 249999
Amount: 1.147659
Amount Units: ng/ml



Manual Integration Results

RT: 4.67
Area: 226988
Amount: 1.042024
Amount Units: ng/ml



Reviewer: chandrasenas, 27-Mar-2017 09:41:17
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

TestAmerica Sacramento

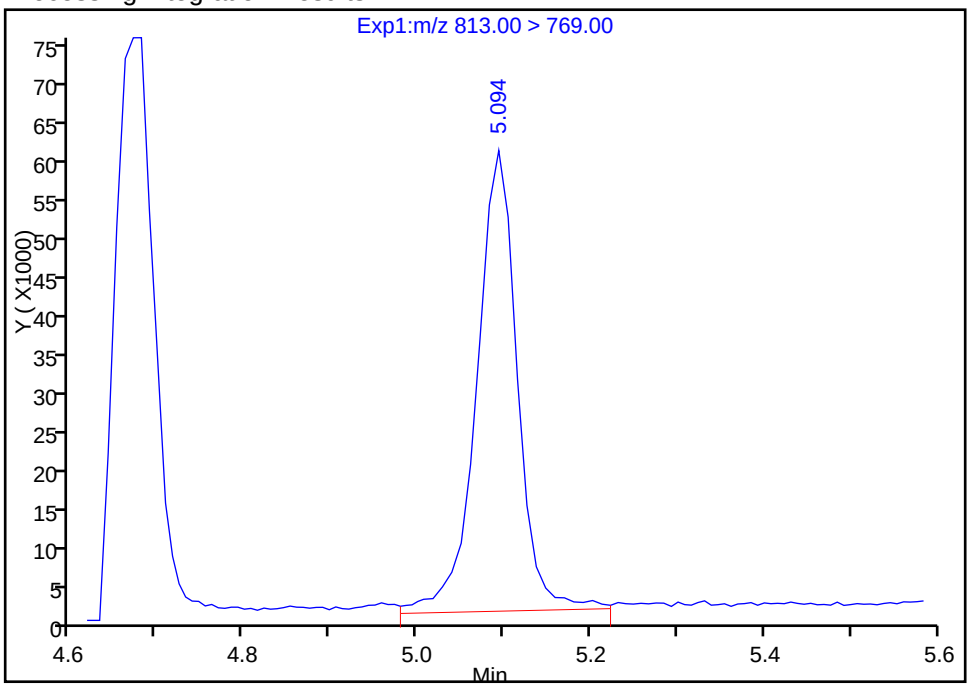
Data File: \\ChromNa\Sacramento\ChromData\A8_N\20170302-40393.b\2017.03.02A_001.d
Injection Date: 02-Mar-2017 10:12:44 Instrument ID: A8_N
Lims ID: CCV L2
Client ID:
Operator ID: A8-PC\A8 ALS Bottle#: 29 Worklist Smp#: 10
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Method: A8_N Limit Group: LC PFC_DOD ICAL
Column: Detector EXP1

45 Perfluorohexadecanoic acid, CAS: 67905-19-5

Signal: 1

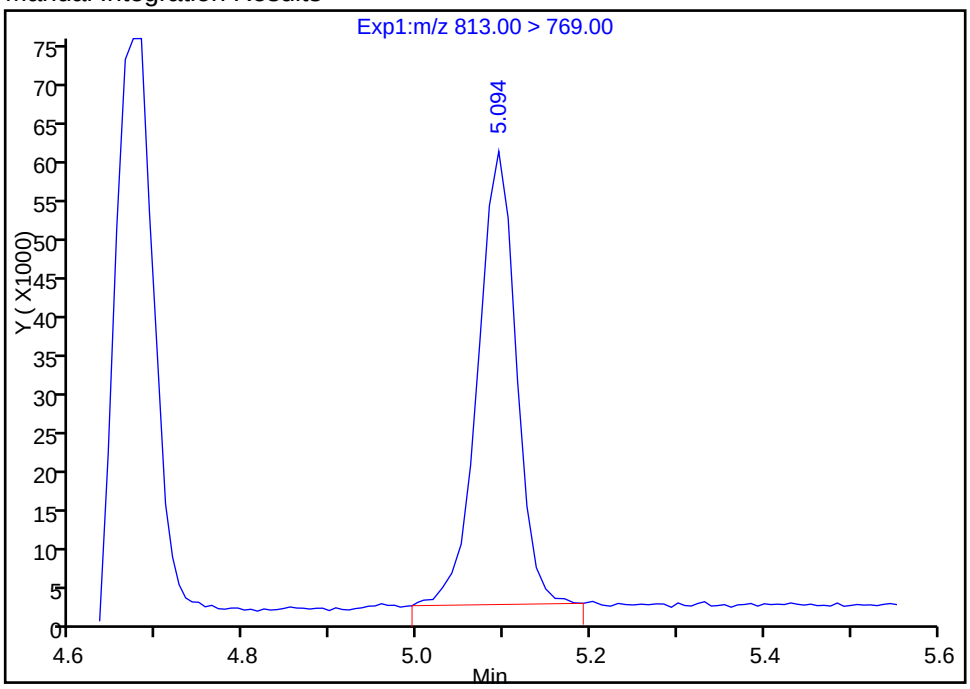
Processing Integration Results

RT: 5.09
Area: 195255
Amount: 1.524963
Amount Units: ng/ml



Manual Integration Results

RT: 5.09
Area: 181303
Amount: 1.389087
Amount Units: ng/ml



Reviewer: chandrasenas, 27-Mar-2017 09:41:17
Audit Action: Manually Integrated Audit Reason: Baseline

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Sacramento Job No.: 320-25962-1

SDG No.:

Lab Sample ID: CCV 320-152836/11 Calibration Date: 03/02/2017 10:20

Instrument ID: A8_N Calib Start Date: 03/01/2017 11:08

GC Column: GeminiC18 3x100 ID: 3.00(mm) Calib End Date: 03/01/2017 11:46

Lab File ID: 2017.03.02A_002.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorobutanoic acid (PFBA)	AveID	0.8473	0.8626		20.4	20.0	1.8	25.0
Perfluoropentanoic acid (PFPeA)	AveID	0.9785	0.9396		19.2	20.0	-4.0	25.0
Perfluorobutanesulfonic acid (PFBS)	AveID	1.433	1.525		18.8	17.7	6.5	25.0
Perfluorohexanoic acid (PFHxA)	AveID	0.8895	0.8472		19.0	20.0	-4.8	25.0
Perfluoroheptanoic acid (PFHpA)	AveID	0.9673	0.9487		19.6	20.0	-1.9	25.0
Perfluorohexanesulfonic acid (PFHxS)	AveID	1.028	0.9941		17.6	18.2	-3.3	25.0
6:2FTS	L2ID		0.9091		19.3	19.0	1.9	25.0
Perfluoroheptanesulfonic Acid (PFHpS)	AveID	1.031	1.067		19.7	19.0	3.5	25.0
Perfluorooctanoic acid (PFOA)	AveID	1.022	0.9682		19.0	20.0	-5.2	25.0
Perfluorooctanesulfonic acid (PFOS)	AveID	0.9835	0.9385		17.7	18.6	-4.6	25.0
Perfluorononanoic acid (PFNA)	AveID	0.9040	0.8879		19.6	20.0	-1.8	25.0
Perfluorooctane Sulfonamide (FOSA)	AveID	0.8985	0.9235		20.6	20.0	2.8	25.0
8:2FTS	L2ID		0.9667		20.0	19.2	4.2	25.0
Perfluorodecanoic acid (PFDA)	AveID	0.9057	0.8933		19.7	20.0	-1.4	25.0
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	AveID	0.9711	0.9421		19.4	20.0	-3.0	25.0
Perfluorodecanesulfonic acid (PFDS)	AveID	0.5957	0.5855		19.0	19.3	-1.7	25.0
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	AveID	0.9103	0.8693		19.1	20.0	-4.5	25.0
Perfluoroundecanoic acid (PFUnA)	AveID	1.014	0.9348		18.4	20.0	-7.8	25.0
MeFOSA	AveID	0.9355	0.9236		19.7	20.0	-1.3	25.0
Perfluorododecanoic acid (PFDoA)	AveID	0.9145	0.8671		19.0	20.0	-5.2	25.0
N-EtFOSA-M	AveID	0.9837	0.9734		19.8	20.0	-1.0	25.0
Perfluorotridecanoic Acid (PFTriA)	AveID	0.8734	0.8785		20.1	20.0	0.6	25.0
Perfluorotetradecanoic acid (PFTeA)	AveID	1.966	1.955		19.9	20.0	-0.6	25.0
Perfluoro-n-hexadecanoic acid (PFHxDA)	L1ID		1.014		21.5	20.0	7.5	25.0
Perfluoro-n-octadecanoic acid (PFODA)	AveID	0.7175	0.8394		23.4	20.0	17.0	25.0
13C4 PFBA	Ave	292242	325440		55.7	50.0	11.4	50.0
13C5-PFPeA	Ave	232192	259316		55.8	50.0	11.7	50.0
13C2 PFHxA	Ave	210884	249729		59.2	50.0	18.4	50.0
13C4-PFHpA	Ave	192959	214011		55.5	50.0	10.9	50.0
18O2 PFHxS	Ave	290899	320358		52.1	47.3	10.1	50.0
M2-6:2FTS	Ave	77178	107670		66.3	47.5	39.5	50.0

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Sacramento Job No.: 320-25962-1

SDG No.:

Lab Sample ID: CCV 320-152836/11 Calibration Date: 03/02/2017 10:20

Instrument ID: A8_N Calib Start Date: 03/01/2017 11:08

GC Column: GeminiC18 3x100 ID: 3.00(mm) Calib End Date: 03/01/2017 11:46

Lab File ID: 2017.03.02A_002.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
13C4 PFOA	Ave	204953	215902		52.7	50.0	5.3	50.0
13C4 PFOS	Ave	241637	257979		51.0	47.8	6.8	50.0
13C5 PFNA	Ave	177866	174212		49.0	50.0	-2.1	50.0
13C8 FOSA	Ave	366918	388757		53.0	50.0	6.0	50.0
M2-8:2FTS	Ave	92602	87636		45.3	47.9	-5.4	50.0
13C2 PFDA	Ave	166704	152943		45.9	50.0	-8.3	50.0
d3-NMeFOSAA	Ave	85186	56323		33.1	50.0	-33.9	50.0
d5-NEtFOSAA	Ave	81371	56185		34.5	50.0	-31.0	50.0
13C2 PFUnA	Ave	130805	117449		44.9	50.0	-10.2	50.0
d-N-MeFOSA-M	Ave	87983	94130		53.5	50.0	7.0	50.0
13C2 PFDoA	Ave	123944	118248		47.7	50.0	-4.6	50.0
d-N-EtFOSA-M	Ave	85249	93582		54.9	50.0	9.8	50.0
13C2-PFTeDA	Ave	259165	255708		49.3	50.0	-1.3	50.0
13C2-PFHxDA	Ave	125061	135532		54.2	50.0	8.4	50.0

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNa\Sacramento\ChromData\A8_N\20170302-40393.b\2017.03.02A_002.d
Lims ID: CCV L4
Client ID:
Sample Type: CCV
Inject. Date: 02-Mar-2017 10:20:15 ALS Bottle#: 31 Worklist Smp#: 11
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV L4
Misc. Info.: Plate: 1 Rack: 1
Operator ID: A8-PC\A8 Instrument ID: A8_N
Sublist: chrom-A8_N*sub14

Method: \\ChromNa\Sacramento\ChromData\A8_N\20170302-40393.b\A8_N.m
Limit Group: LC PFC_DOD ICAL
Last Update: 02-Mar-2017 12:33:56 Calib Date: 01-Mar-2017 11:53:47
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A8_N\20170301-40358.b\2017.03.01CURVE_009.d

Column 1 : Det: EXP1
Process Host: XAWRK026

First Level Reviewer: chandrasenas Date: 02-Mar-2017 12:19:20

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
2 Perfluorobutyric acid										
212.90 > 169.00	1.538	1.538	0.0	1.000	5614608	20.4		102	52029	
D 1 13C4 PFBA										
217.00 > 172.00	1.538	1.538	0.0		16272016	55.7		111	2560230	
D 3 13C5-PFPeA										
267.90 > 223.00	1.821	1.821	0.0		12965778	55.8		112	4482652	
4 Perfluoropentanoic acid										M
262.90 > 219.00	1.821	1.821	0.0	1.000	4873282	19.2		96.0	51203	M
5 Perfluorobutanesulfonic acid										
298.90 > 80.00	1.861	1.861	0.0	1.000	8637275	18.8		106		
298.90 > 99.00	1.861	1.861	0.0	1.000	3676549		2.35(0.00-0.00)			
D 7 13C2 PFHxA										
315.00 > 270.00	2.122	2.122	0.0		12486437	59.2		118	50611	
6 Perfluorohexanoic acid										M
313.00 > 269.00	2.122	2.122	0.0	1.000	4231273	19.0		95.2	139120	M
8 Perfluorohexanesulfonic acid										
399.00 > 80.00	2.483	2.483	0.0	1.000	5796134	17.6		96.7		
D 9 13C4-PFHpA										
367.00 > 322.00	2.468	2.468	0.0		10700569	55.5		111	41087	
10 Perfluoroheptanoic acid										
363.00 > 319.00	2.460	2.460	0.0	1.000	4060788	19.6		98.1	42603	
D 11 18O2 PFHxS										
403.00 > 84.00	2.483	2.483	0.0		15152935	52.1		110	107291	
13 Sodium 1H,1H,2H,2H-perfluorooctane										
427.00 > 407.00	2.803	2.803	0.0	1.000	1855846	19.3		102		
D 12 M2-6:2FTS										
429.00 > 409.00	2.803	2.803	0.0		5114334	66.3		140		

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 14 13C4 PFOA										
417.00 > 372.00	2.834	2.834	0.0		10795091	52.7		105	48013	
15 Perfluorooctanoic acid										
413.00 > 369.00	2.834	2.834	0.0	1.000	4180551	19.0		94.8	81633	
413.00 > 169.00	2.826	2.834	-0.008	0.997	2393662		1.75(0.90-1.10)		140384	
16 Perfluoroheptanesulfonic Acid										
449.00 > 80.00	2.834	2.834	0.0	1.000	5242228	19.7		104		
17 Perfluorooctane sulfonic acid										
499.00 > 80.00	3.089	3.089	0.0	1.000	4493469	17.7		95.4	50831	
499.00 > 99.00	3.202	3.089	0.113	1.037	1038493		4.33(0.90-1.10)		5446	
D 18 13C4 PFOS										
503.00 > 80.00	3.202	3.202	0.0		12331379	51.0		107	483502	
D 19 13C5 PFNA										
468.00 > 423.00	3.202	3.202	0.0		8710616	49.0		97.9	2554425	
20 Perfluorononanoic acid										
463.00 > 419.00	3.210	3.210	0.0	1.000	3093545	19.6		98.2	224177	
D 21 13C8 FOSA										
506.00 > 78.00	3.528	3.528	0.0		19437825	53.0		106	5825133	
22 Perfluorooctane Sulfonamide										
498.00 > 78.00	3.536	3.536	0.0	1.000	7180030	20.6		103	2322938	
25 Sodium 1H,1H,2H,2H-perfluorooctane										
527.00 > 507.00	3.545	3.545	0.0	0.998	1623166	20.0		104		
D 26 M2-8:2FTS										
529.00 > 509.00	3.553	3.553	0.0		4197741	45.3		94.6		
D 23 13C2 PFDA										
515.00 > 470.00	3.561	3.561	0.0		7647149	45.9		91.7	758082	
24 Perfluorodecanoic acid										
513.00 > 469.00	3.561	3.561	0.0	1.000	2732358	19.7		98.6	296115	
D 27 d3-NMeFOSAA										
573.00 > 419.00	3.714	3.714	0.0		2816150	33.1		66.1		
28 N-methyl perfluorooctane sulfonami										
570.00 > 419.00	3.714	3.714	0.0	1.000	1061205	19.4		97.0		
29 Perfluorodecane Sulfonic acid										
599.00 > 80.00	3.867	3.867	0.0	1.000	2912097	19.0		98.3		
D 32 d5-NEtFOSAA										
589.00 > 419.00	3.875	3.875	0.0		2809234	34.5		69.0		
33 N-ethyl perfluorooctane sulfonamid										
584.00 > 419.00	3.875	3.875	0.0	1.000	976797	19.1		95.5		
31 Perfluoroundecanoic acid										
563.00 > 519.00	3.884	3.884	0.0	1.000	2195714	18.4		92.2	673255	
D 30 13C2 PFUnA										
565.00 > 520.00	3.884	3.884	0.0		5872434	44.9		89.8	1799010	
D 34 d-N-MeFOSA-M										
515.00 > 169.00	4.027	4.027	0.0		4706484	53.5		107		
35 MeFOSA										
512.00 > 169.00	4.027	4.027	0.0	1.000	1738794	19.7		98.7		
D 36 13C2 PFDoA										
615.00 > 570.00	4.172	4.172	0.0		5912410	47.7		95.4	616849	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
37 Perfluorododecanoic acid										
613.00 > 569.00	4.172	4.172	0.0	1.000	2050744	19.0		94.8	41630	
D 38 d-N-EtFOSA-M										
531.00 > 169.00	4.205	4.205	0.0		4679104	54.9		110		
39 N-ethylperfluoro-1-octanesulfonami										
526.00 > 169.00	4.213	4.213	0.0	1.000	1821773	19.8		99.0		
41 Perfluorotridecanoic acid										
663.00 > 619.00	4.436	4.436	0.0	1.000	2077528	20.1		101	222516	
D 43 13C2-PFTeDA										
715.00 > 670.00	4.672	4.672	0.0		12785404	49.3		98.7	3955002	
42 Perfluorotetradecanoic acid										
712.50 > 668.90	4.681	4.681	0.0	1.000	4623654	19.9		99.4	30443	
713.00 > 169.00	4.672	4.681	-0.009	0.998	630382		7.33(0.00-0.00)		199387	
D 44 13C2-PFHxDA										
815.00 > 770.00	5.093	5.093	0.0		6776585	54.2		108	268593	
45 Perfluorohexadecanoic acid										
813.00 > 769.00	5.093	5.093	0.0	1.000	2397154	21.5		107	4946	
46 Perfluorooctadecanoic acid										
913.00 > 869.00	5.446	5.446	0.0	1.000	1985155	23.4		117	6409	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

LCPFC_FULL-L4_00001 Amount Added: 1.00 Units: mL

Report Date: 02-Mar-2017 12:33:56 Chrom Revision: 2.2 03-Feb-2017 15:35:04

TestAmerica Sacramento

Data File: \\ChromNa\Sacramento\ChromData\A8_N\20170302-40393.b\2017.03.02A_002.d

Injection Date: 02-Mar-2017 10:20:15 Instrument ID: A8_N

Lims ID: CCV L4

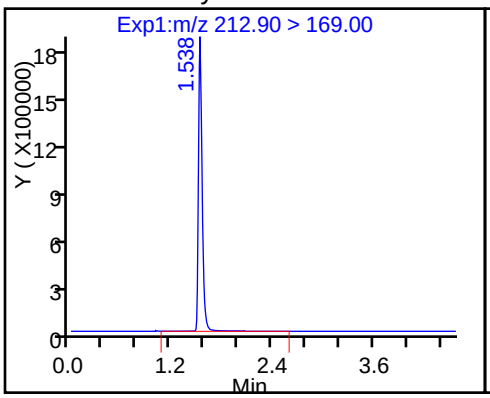
Client ID:

Operator ID: A8-PC\A8 ALS Bottle#: 31 Worklist Smp#: 11

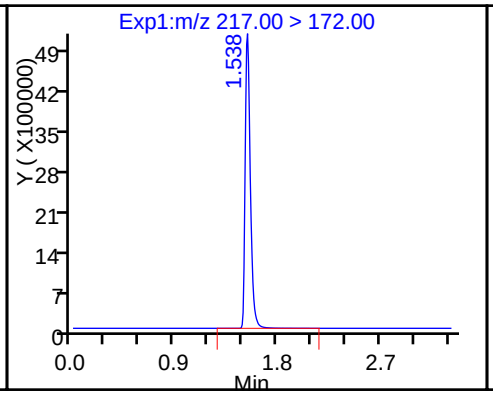
Injection Vol: 2.0 ul Dil. Factor: 1.0000

Method: A8_N Limit Group: LC PFC_DOD ICAL

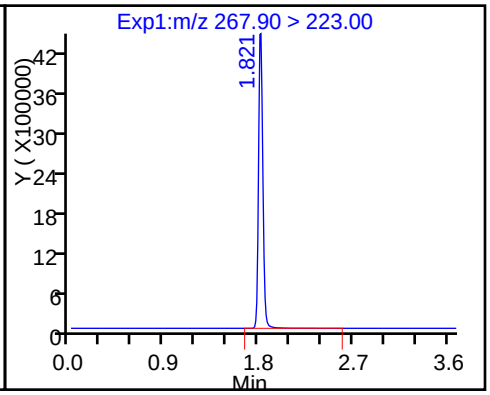
2 Perfluorobutyric acid



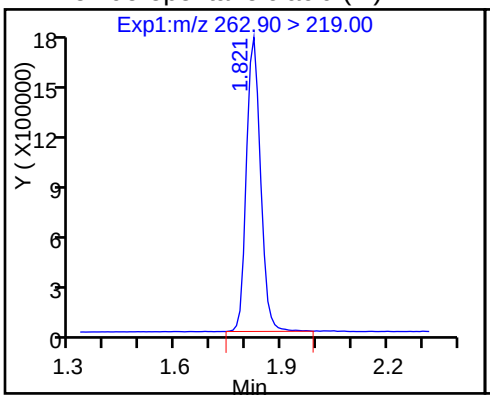
D 1 13C4 PFBA



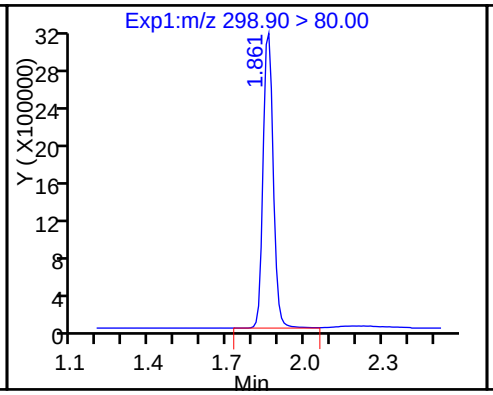
D 3 13C5-PFPeA



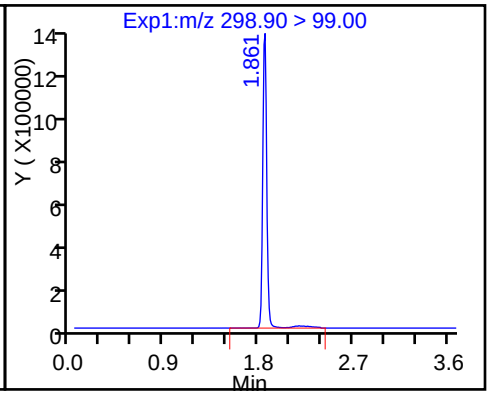
4 Perfluoropentanoic acid (M)



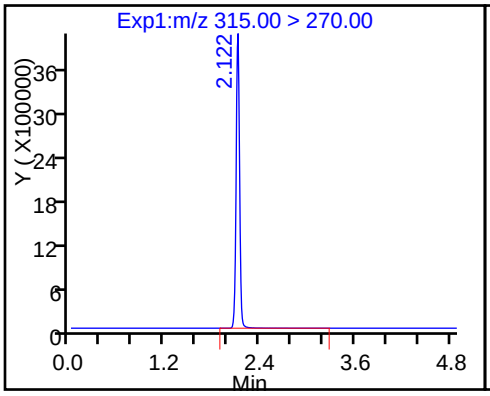
5 Perfluorobutanesulfonic acid



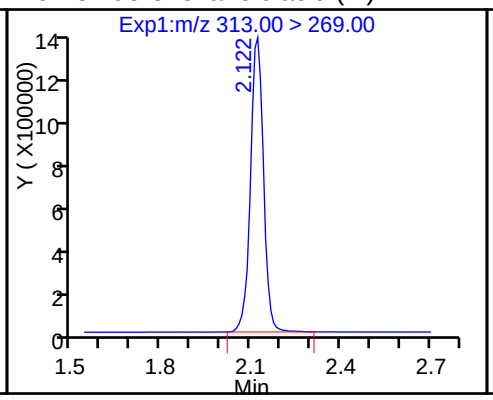
5 Perfluorobutanesulfonic acid



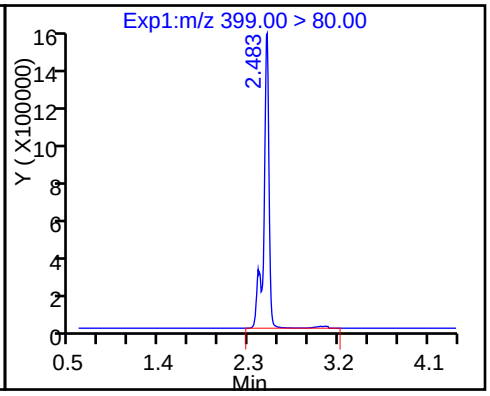
D 7 13C2 PFHxA



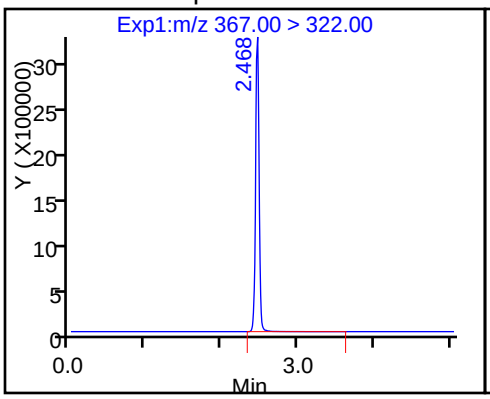
6 Perfluorohexanoic acid (M)



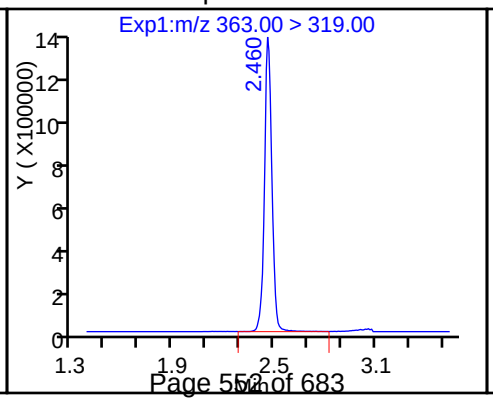
8 Perfluorohexanesulfonic acid



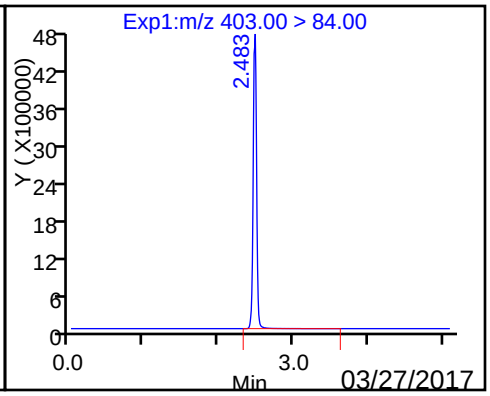
D 9 13C4-PFHpA



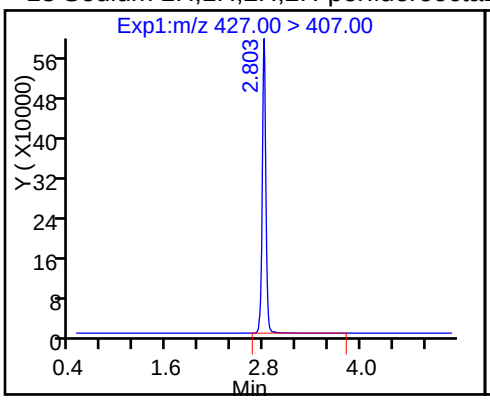
10 Perfluoroheptanoic acid



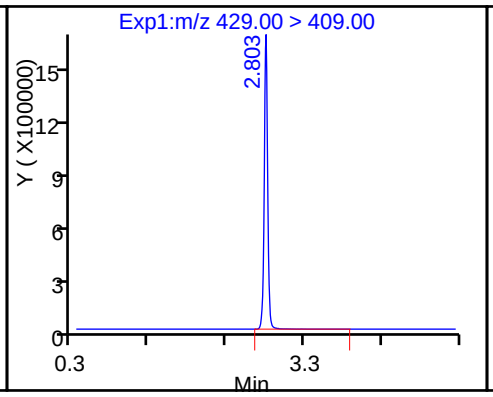
D 11 18O2 PFHxS



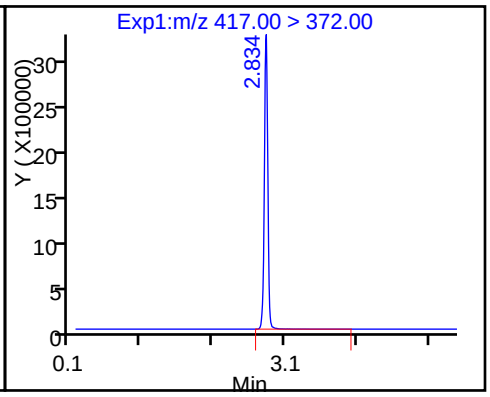
13 Sodium 1H,1H,2H,2H-perfluorooctane



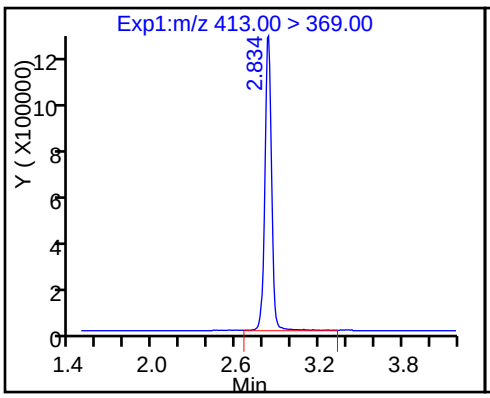
D 12 M2-6:2FTS



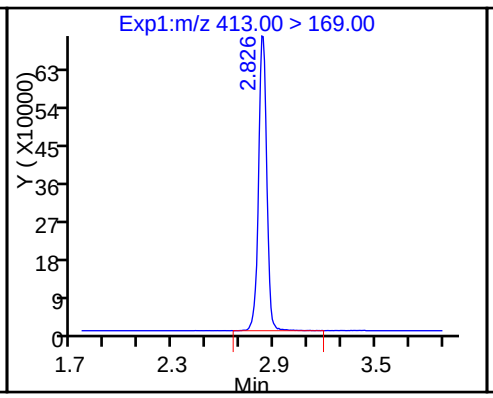
D 14 13C4 PFOA



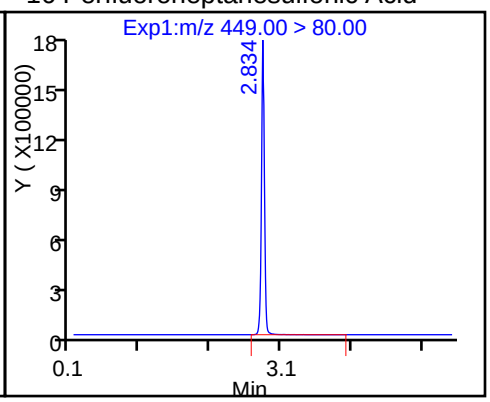
15 Perfluorooctanoic acid



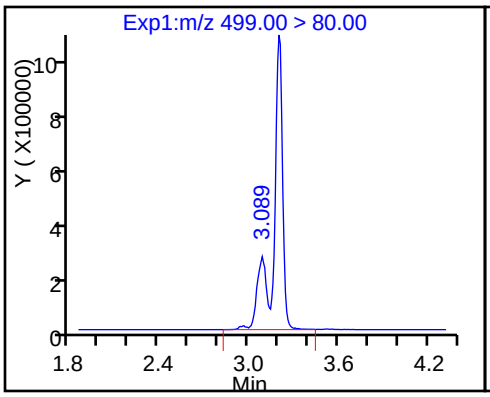
15 Perfluorooctanoic acid



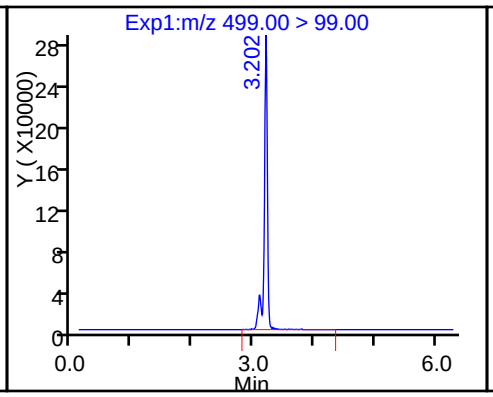
16 Perfluoroheptanesulfonic Acid



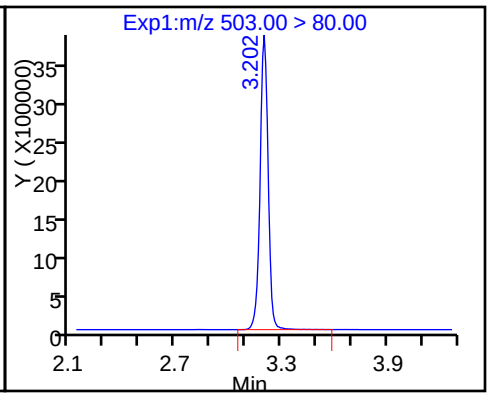
17 Perfluorooctane sulfonic acid



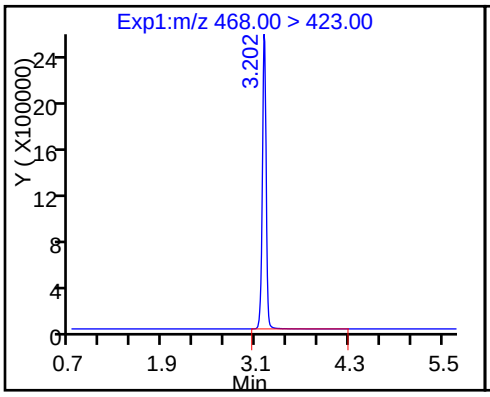
17 Perfluorooctane sulfonic acid



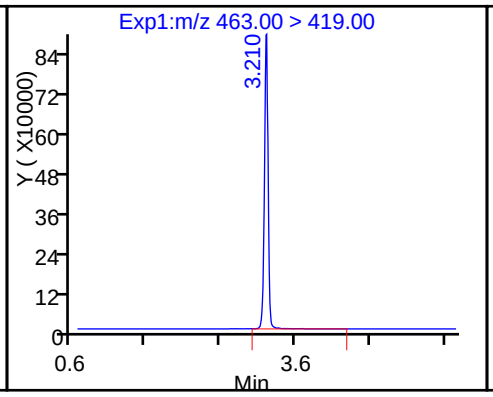
D 18 13C4 PFOS



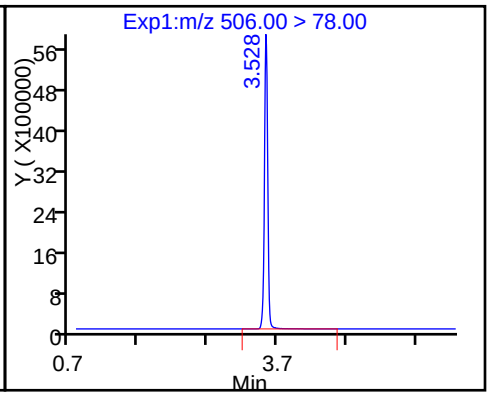
D 19 13C5 PFNA



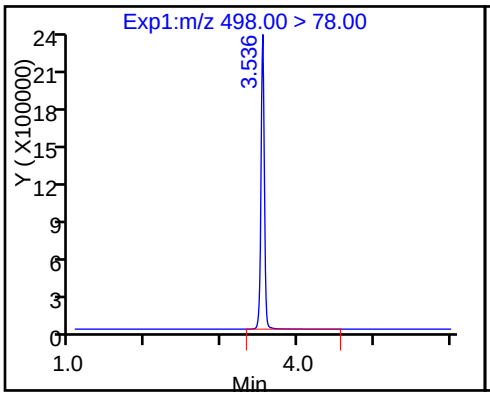
20 Perfluorononanoic acid



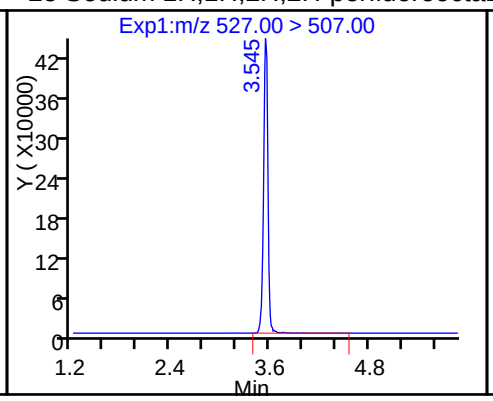
D 21 13C8 FOSA



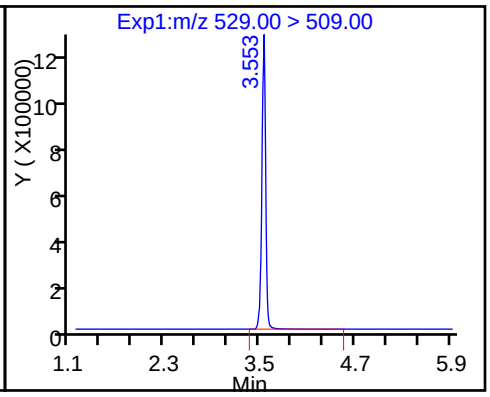
22 Perfluorooctane Sulfonamide



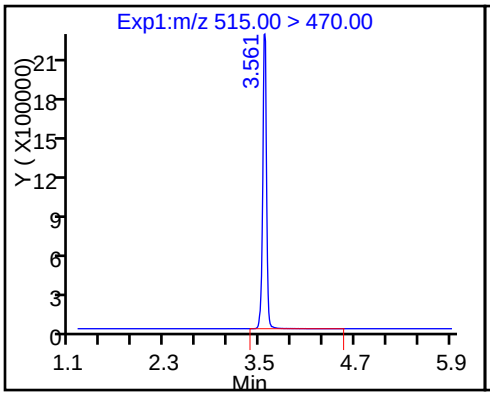
25 Sodium 1H,1H,2H,2H-perfluorooctane



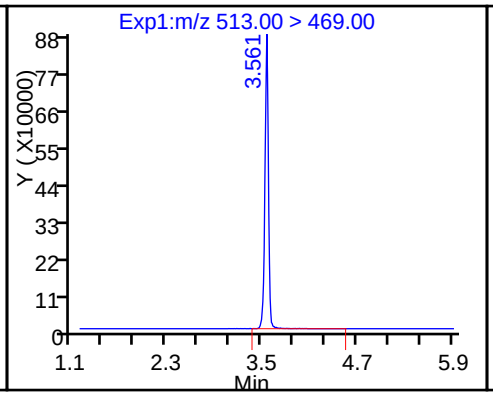
D 26 M2-8:2FTS



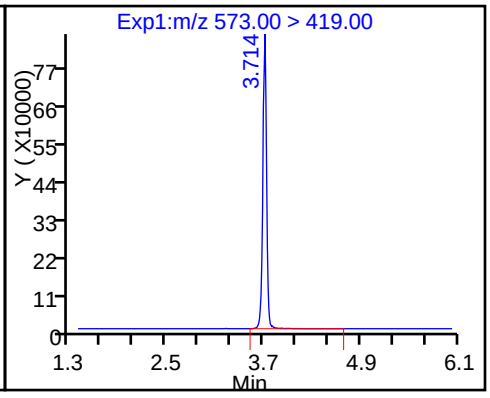
D 23 13C2 PFDA



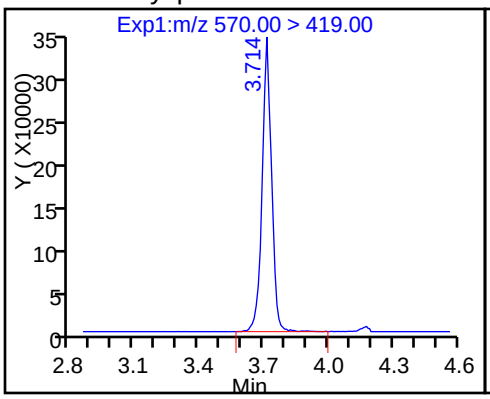
24 Perfluorodecanoic acid



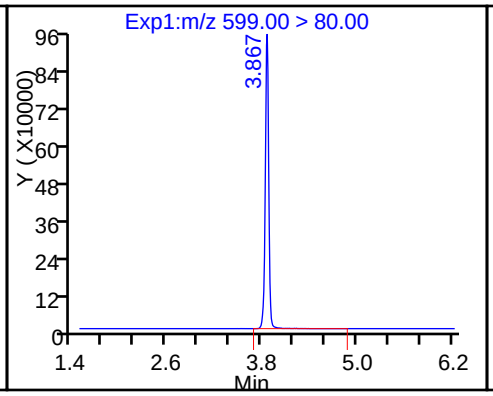
D 27 d3-NMeFOSAA



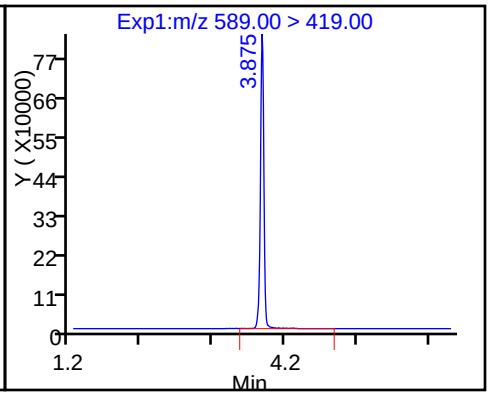
28 N-methyl perfluorooctane sulfonami



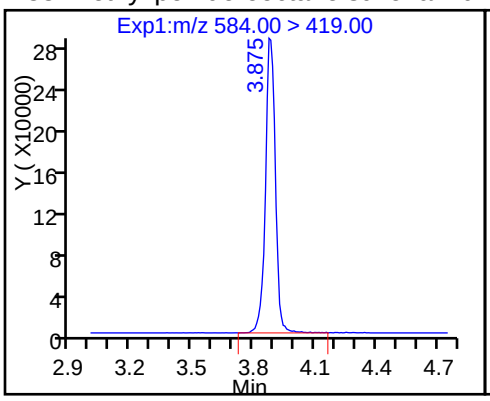
29 Perfluorodecane Sulfonic acid



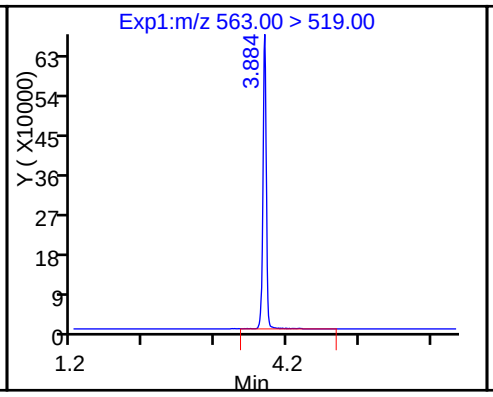
D 32 d5-NEtFOSAA



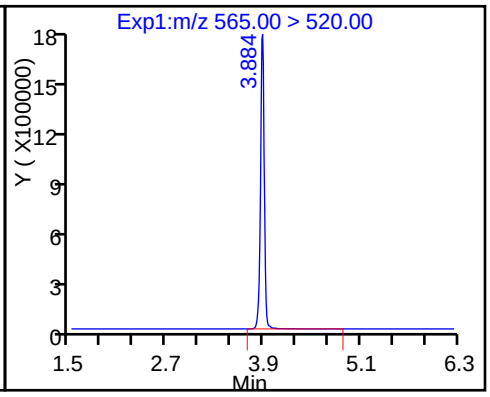
33 N-ethyl perfluorooctane sulfonamid



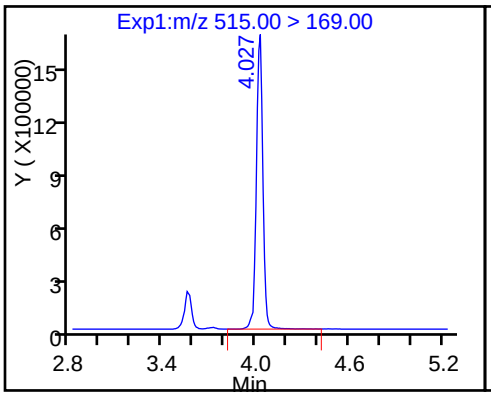
31 Perfluoroundecanoic acid



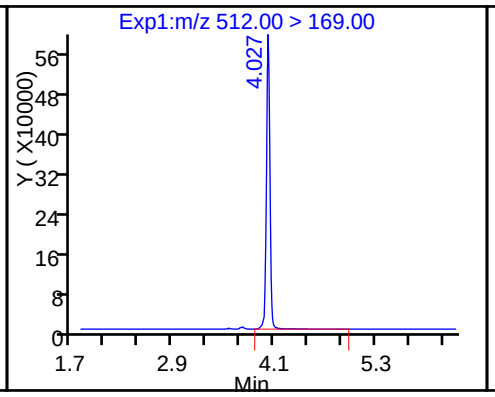
D 30 13C2 PFUnA



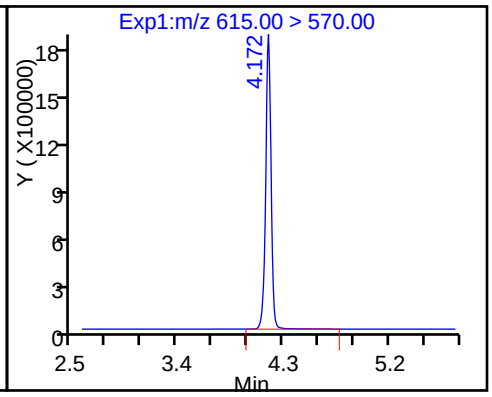
D 34 d-N-MeFOSA-M



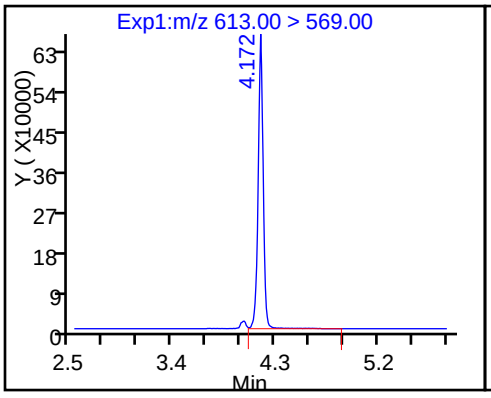
35 MeFOSA



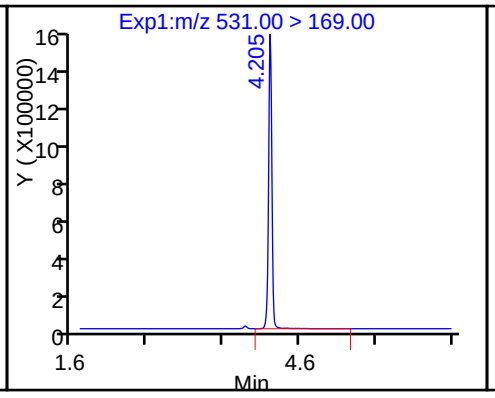
D 36 13C2 PFDoA



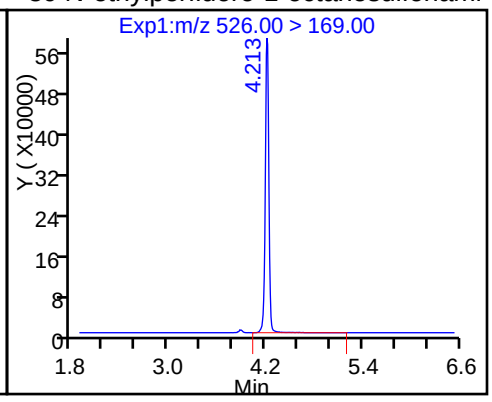
37 Perfluorododecanoic acid



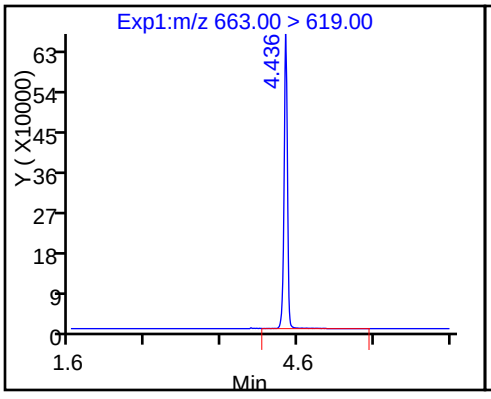
D 38 d-N-EtFOSA-M



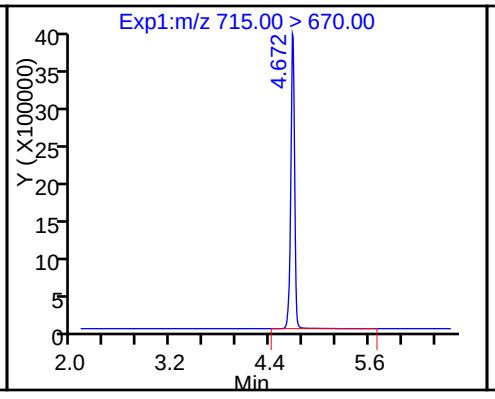
39 N-ethylperfluoro-1-octanesulfonami



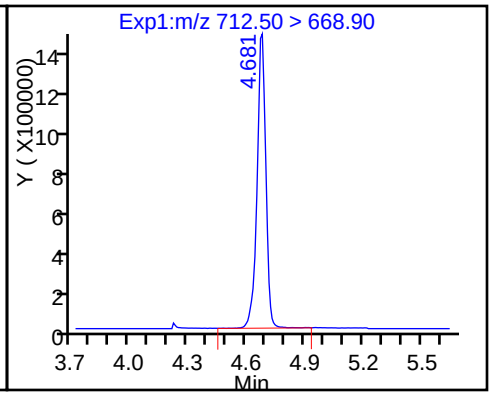
41 Perfluorotridecanoic acid



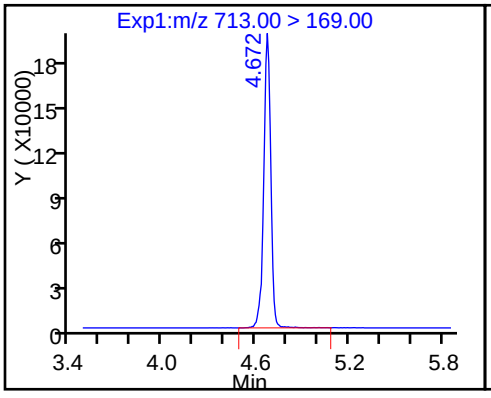
D 43 13C2-PFTeDA



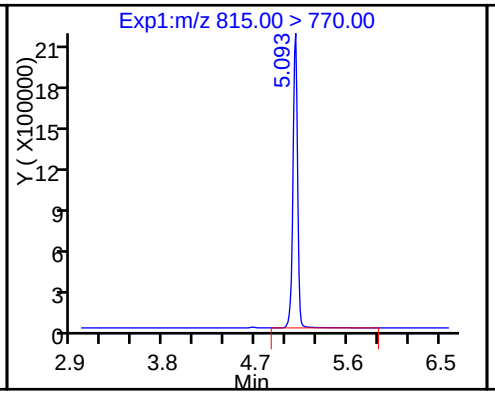
42 Perfluorotetradecanoic acid



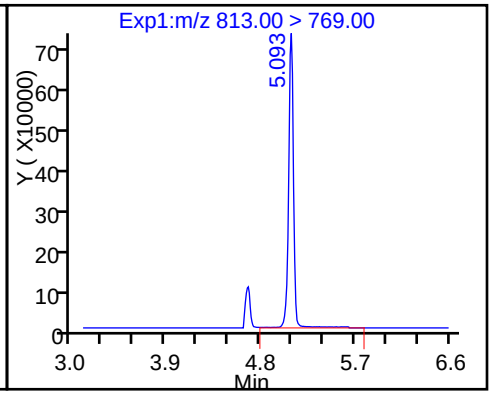
42 Perfluorotetradecanoic acid



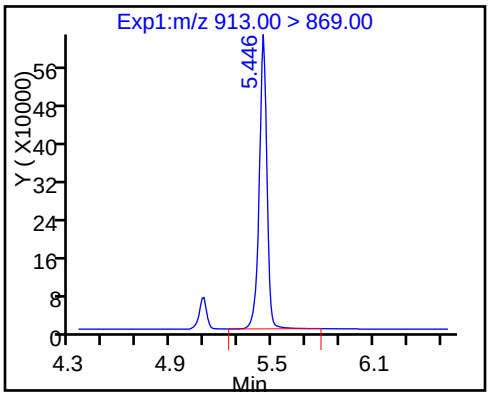
D 44 13C2-PFHxDA



45 Perfluorohexadecanoic acid



46 Perfluorooctadecanoic acid



Manual Integration/User Assign Peak Report

TestAmerica Sacramento

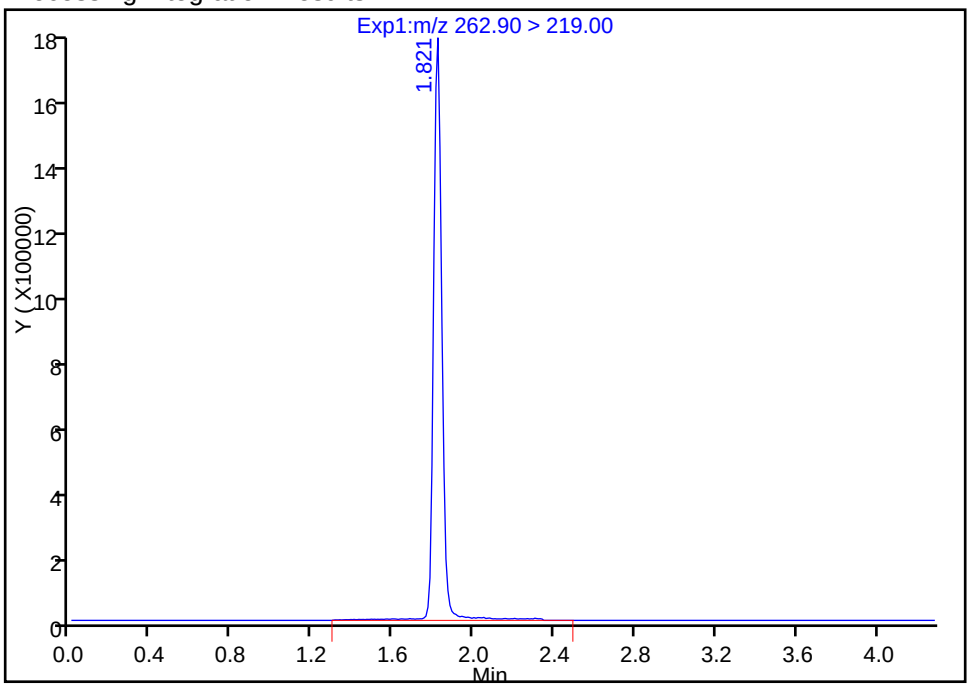
Data File: \\ChromNa\Sacramento\ChromData\A8_N\20170302-40393.b\2017.03.02A_002.d
Injection Date: 02-Mar-2017 10:20:15 Instrument ID: A8_N
Lims ID: CCV L4
Client ID:
Operator ID: A8-PC\A8 ALS Bottle#: 31 Worklist Smp#: 11
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Method: A8_N Limit Group: LC PFC_DOD ICAL
Column: Detector EXP1

4 Perfluoropentanoic acid, CAS: 2706-90-3

Signal: 1

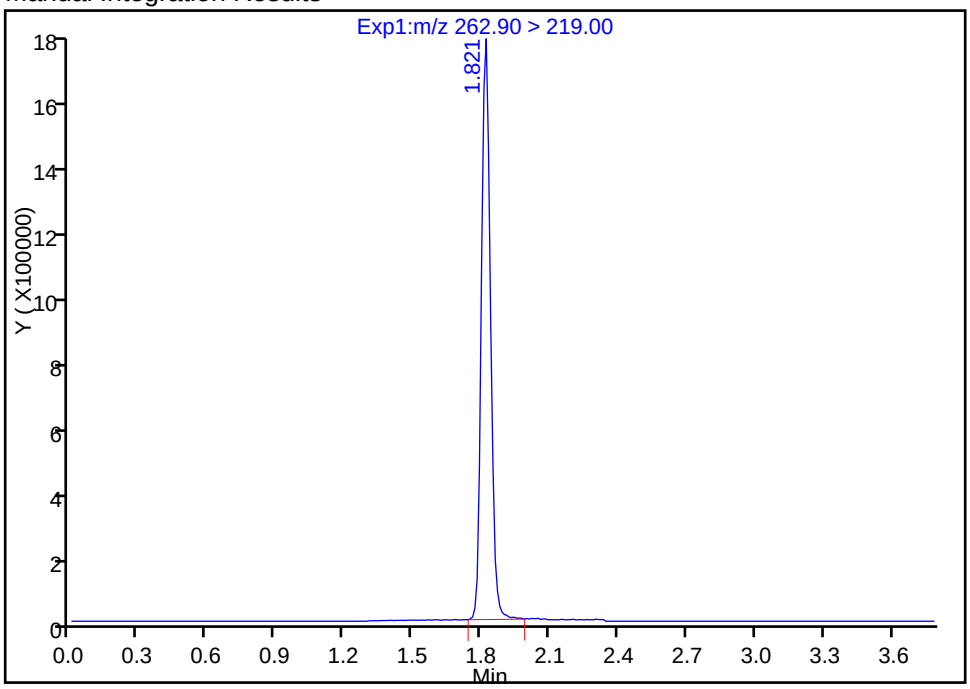
Processing Integration Results

RT: 1.82
Area: 5152486
Amount: 20.305253
Amount Units: ng/ml



Manual Integration Results

RT: 1.82
Area: 4873282
Amount: 19.204948
Amount Units: ng/ml



Reviewer: chandrasenas, 02-Mar-2017 12:33:55
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

TestAmerica Sacramento

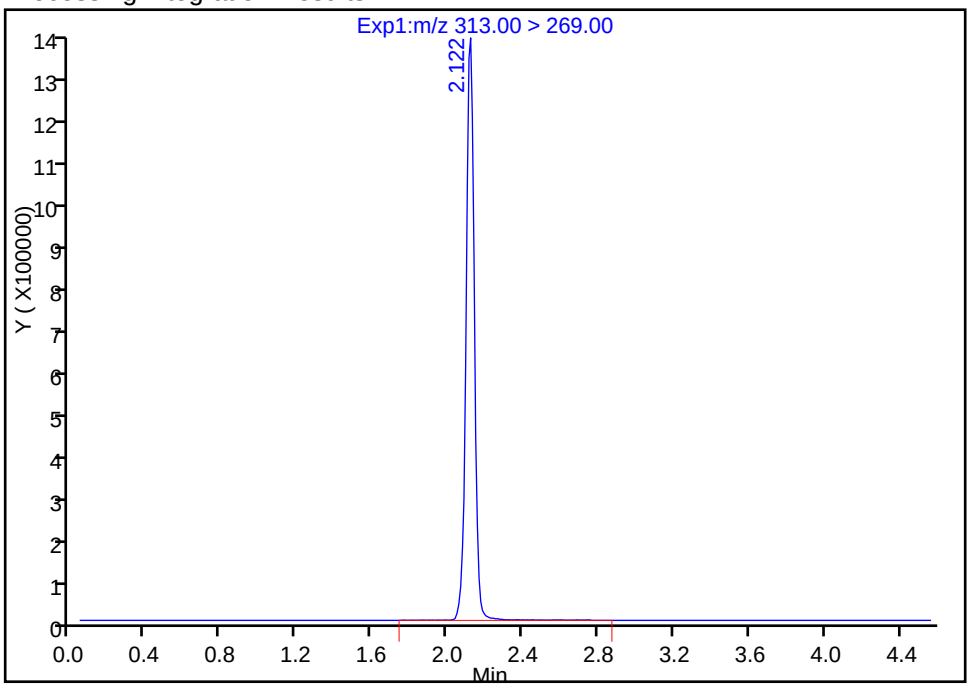
Data File: \\ChromNa\Sacramento\ChromData\A8_N\20170302-40393.b\2017.03.02A_002.d
Injection Date: 02-Mar-2017 10:20:15 Instrument ID: A8_N
Lims ID: CCV L4
Client ID:
Operator ID: A8-PC\A8 ALS Bottle#: 31 Worklist Smp#: 11
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Method: A8_N Limit Group: LC PFC_DOD ICAL
Column: Detector EXP1

6 Perfluorohexanoic acid, CAS: 307-24-4

Signal: 1

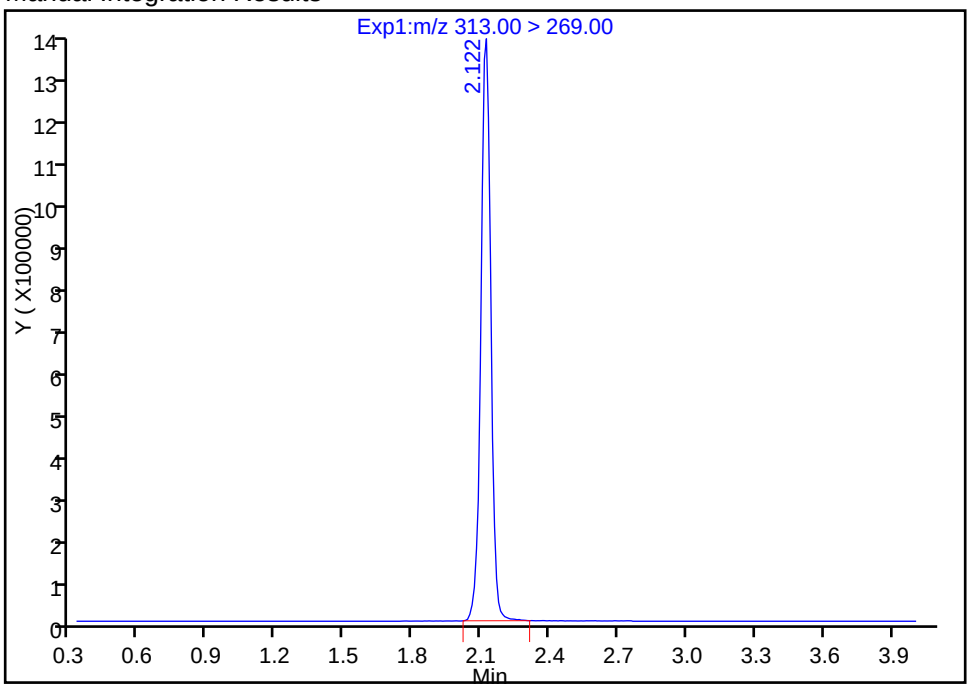
Processing Integration Results

RT: 2.12
Area: 4287198
Amount: 19.299849
Amount Units: ng/ml



Manual Integration Results

RT: 2.12
Area: 4231273
Amount: 19.048089
Amount Units: ng/ml



Reviewer: chandrasenas, 02-Mar-2017 12:33:55
Audit Action: Manually Integrated Audit Reason: Baseline

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Sacramento Job No.: 320-25962-1

SDG No.:

Lab Sample ID: CCV 320-152836/23 Calibration Date: 03/02/2017 11:50

Instrument ID: A8_N Calib Start Date: 03/01/2017 11:08

GC Column: GeminiC18 3x100 ID: 3.00(mm) Calib End Date: 03/01/2017 11:46

Lab File ID: 2017.03.02A_014.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorobutanoic acid (PFBA)	AveID	0.8473	0.8988		53.0	50.0	6.1	25.0
Perfluoropentanoic acid (PFPeA)	AveID	0.9785	1.008		51.5	50.0	3.0	25.0
Perfluorobutanesulfonic acid (PFBS)	AveID	1.433	1.483		45.7	44.2	3.5	25.0
Perfluorohexanoic acid (PFHxA)	AveID	0.8895	0.9279		52.2	50.0	4.3	25.0
Perfluoroheptanoic acid (PFHpA)	AveID	0.9673	0.9584		49.5	50.0	-0.9	25.0
Perfluorohexanesulfonic acid (PFHxS)	AveID	1.028	1.043		46.2	45.5	1.5	25.0
6:2FTS	L2ID		0.8881		47.4	47.4	-0.0	25.0
Perfluorooctanoic acid (PFOA)	AveID	1.022	1.018		49.8	50.0	-0.3	25.0
Perfluoroheptanesulfonic Acid (PFHpS)	AveID	1.031	1.120		51.7	47.6	8.6	25.0
Perfluorooctanesulfonic acid (PFOS)	AveID	0.9835	1.022		48.2	46.4	3.9	25.0
Perfluorononanoic acid (PFNA)	AveID	0.9040	0.9647		53.4	50.0	6.7	25.0
8:2FTS	L2ID		0.9133		47.3	47.9	-1.3	25.0
Perfluorooctane Sulfonamide (FOSA)	AveID	0.8985	0.9175		51.1	50.0	2.1	25.0
Perfluorodecanoic acid (PFDA)	AveID	0.9057	0.9264		51.1	50.0	2.3	25.0
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	AveID	0.9711	0.9312		47.9	50.0	-4.1	25.0
Perfluorodecanesulfonic acid (PFDS)	AveID	0.5957	0.6342		51.3	48.2	6.5	25.0
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	AveID	0.9103	0.8727		47.9	50.0	-4.1	25.0
Perfluoroundecanoic acid (PFUnA)	AveID	1.014	0.9523		47.0	50.0	-6.1	25.0
MeFOSA	AveID	0.9355	0.9017		48.2	50.0	-3.6	25.0
Perfluorododecanoic acid (PFDoA)	AveID	0.9145	0.9418		51.5	50.0	3.0	25.0
N-EtFOSA-M	AveID	0.9837	0.9242		47.0	50.0	-6.0	25.0
Perfluorotridecanoic Acid (PFTriA)	AveID	0.8734	0.9283		53.1	50.0	6.3	25.0
Perfluorotetradecanoic acid (PFTeA)	AveID	1.966	1.921		48.8	50.0	-2.3	25.0
Perfluoro-n-hexadecanoic acid (PFHxDA)	L1ID		1.007		54.0	50.0	7.9	25.0
Perfluoro-n-octadecanoic acid (PFODA)	AveID	0.7175	0.9567		66.7	50.0	33.3*	25.0
13C4 PFBA	Ave	292242	339102		58.0	50.0	16.0	50.0
13C5-PFPeA	Ave	232192	263905		56.8	50.0	13.7	50.0
13C2 PFHxA	Ave	210884	258586		61.3	50.0	22.6	50.0
13C4-PFHpA	Ave	192959	223271		57.9	50.0	15.7	50.0
18O2 PFHxS	Ave	290899	344494		56.0	47.3	18.4	50.0
M2-6:2FTS	Ave	77178	113159		69.6	47.5	46.6	50.0

FORM VII 537 (Modified)

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Sacramento Job No.: 320-25962-1

SDG No.:

Lab Sample ID: CCV 320-152836/23 Calibration Date: 03/02/2017 11:50

Instrument ID: A8_N Calib Start Date: 03/01/2017 11:08

GC Column: GeminiC18 3x100 ID: 3.00(mm) Calib End Date: 03/01/2017 11:46

Lab File ID: 2017.03.02A_014.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
13C4 PFOA	Ave	204953	220988		53.9	50.0	7.8	50.0
13C4 PFOS	Ave	241637	275791		54.6	47.8	14.1	50.0
13C5 PFNA	Ave	177866	176927		49.7	50.0	-0.5	50.0
13C8 FOSA	Ave	366918	403987		55.1	50.0	10.1	50.0
M2-8:2FTS	Ave	92602	91276		47.2	47.9	-1.4	50.0
13C2 PFDA	Ave	166704	156017		46.8	50.0	-6.4	50.0
d3-NMeFOSAA	Ave	85186	67930		39.9	50.0	-20.3	50.0
d5-NEtFOSAA	Ave	81371	61574		37.8	50.0	-24.3	50.0
13C2 PFUnA	Ave	130805	126813		48.5	50.0	-3.1	50.0
d-N-MeFOSA-M	Ave	87983	105294		59.8	50.0	19.7	50.0
13C2 PFDoA	Ave	123944	121654		49.1	50.0	-1.8	50.0
d-N-EtFOSA-M	Ave	85249	102620		60.2	50.0	20.4	50.0
13C2-PFTeDA	Ave	259165	246402		47.5	50.0	-4.9	50.0
13C2-PFHxDA	Ave	125061	140417		56.1	50.0	12.3	50.0

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNa\Sacramento\ChromData\A8_N\20170302-40393.b\2017.03.02A_014.d
Lims ID: CCV L5
Client ID:
Sample Type: CCV
Inject. Date: 02-Mar-2017 11:50:19 ALS Bottle#: 32 Worklist Smp#: 23
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV L5
Misc. Info.: Plate: 1 Rack: 1
Operator ID: A8-PC\A8 Instrument ID: A8_N
Sublist: chrom-A8_N*sub14

Method: \\ChromNa\Sacramento\ChromData\A8_N\20170302-40393.b\A8_N.m
Limit Group: LC PFC_DOD ICAL
Last Update: 02-Mar-2017 12:34:28 Calib Date: 01-Mar-2017 11:53:47
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A8_N\20170301-40358.b\2017.03.01CURVE_009.d

Column 1 : Det: EXP1
Process Host: XAWRK026

First Level Reviewer: chandrasenas Date: 02-Mar-2017 12:33:35

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
2 Perfluorobutyric acid										
212.90 > 169.00	1.538	1.538	0.0	1.000	15238716	53.0		106	99621	
D 1 13C4 PFBA										
217.00 > 172.00	1.538	1.538	0.0		16955081	58.0		116	846923	
D 3 13C5-PFPeA										
267.90 > 223.00	1.821	1.821	0.0		13195267	56.8		114	1120621	
4 Perfluoropentanoic acid										
262.90 > 219.00	1.821	1.821	0.0	1.000	13299835	51.5		103	111363	
5 Perfluorobutanesulfonic acid										
298.90 > 80.00	1.861	1.861	0.0	1.000	22574779	45.7		103		
298.90 > 99.00	1.861	1.861	0.0	1.000	9933704		2.27(0.00-0.00)			
D 7 13C2 PFHxA										
315.00 > 270.00	2.118	2.118	0.0		12929323	61.3		123	411353	
6 Perfluorohexanoic acid										
313.00 > 269.00	2.118	2.118	0.0	1.000	11996493	52.2		104	328901	
D 47 13C3-PFBS										
301.90 > 83.00	2.243	2.243	0.0		291	NC				
10 Perfluoroheptanoic acid										
363.00 > 319.00	2.464	2.464	0.0	1.000	10699567	49.5		99.1	110260	
D 9 13C4-PFHpA										
367.00 > 322.00	2.456	2.456	0.0		11163533	57.9		116	310079	
8 Perfluorohexanesulfonic acid										M
399.00 > 80.00	2.479	2.479	0.0	1.000	16354110	46.2		101		M
D 11 18O2 PFHxS										
403.00 > 84.00	2.479	2.479	0.0		16294547	56.0		118	469192	
13 Sodium 1H,1H,2H,2H-perfluorooctane										
427.00 > 407.00	2.798	2.798	0.0	1.000	4763457	47.4		100.0		

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 12 M2-6:2FTS										
429.00 > 409.00	2.798	2.798	0.0		5375056	69.6		147		
D 14 13C4 PFOA										
417.00 > 372.00	2.829	2.829	0.0		11049404	53.9		108	459222	
15 Perfluorooctanoic acid										
413.00 > 369.00	2.829	2.829	0.0	1.000	11252138	49.8		99.7	140155	
413.00 > 169.00	2.821	2.829	-0.008	0.997	6789329		1.66(0.90-1.10)		151233	
16 Perfluoroheptanesulfonic Acid										
449.00 > 80.00	2.837	2.837	0.0	1.000	14703223	51.7		109		
17 Perfluorooctane sulfonic acid										
499.00 > 80.00	3.084	3.084	0.0	1.000	13082408	48.2		104	70511	
499.00 > 99.00	3.100	3.084	0.016	1.005	2947909		4.44(0.90-1.10)		14308	
D 18 13C4 PFOS										
503.00 > 80.00	3.205	3.205	0.0		13182792	54.6		114	223761	
D 19 13C5 PFNA										
468.00 > 423.00	3.205	3.205	0.0		8846363	49.7		99.5	364742	
20 Perfluorononanoic acid										
463.00 > 419.00	3.205	3.205	0.0	1.000	8534255	53.4		107	191378	
D 21 13C8 FOSA										
506.00 > 78.00	3.542	3.542	0.0		20199361	55.1		110	339236	
22 Perfluorooctane Sulfonamide										
498.00 > 78.00	3.542	3.542	0.0	1.000	18532034	51.1		102	378589	
25 Sodium 1H,1H,2H,2H-perfluorooctane										
527.00 > 507.00	3.542	3.542	0.0	0.998	3992906	47.3		98.7		
D 26 M2-8:2FTS										
529.00 > 509.00	3.551	3.551	0.0		4372128	47.2		98.6		
D 23 13C2 PFDA										
515.00 > 470.00	3.559	3.559	0.0		7800859	46.8		93.6	226146	
24 Perfluorodecanoic acid										
513.00 > 469.00	3.568	3.568	0.0	1.000	7226381	51.1		102	179443	
D 27 d3-NMeFOSAA										
573.00 > 419.00	3.711	3.711	0.0		3396490	39.9		79.7		
28 N-methyl perfluorooctane sulfonami										
570.00 > 419.00	3.711	3.711	0.0	1.000	3162783	47.9		95.9		
29 Perfluorodecane Sulfonic acid										
599.00 > 80.00	3.857	3.857	0.0	1.000	8430308	51.3		106		
D 32 d5-NEtFOSAA										
589.00 > 419.00	3.874	3.874	0.0		3078695	37.8		75.7		
33 N-ethyl perfluorooctane sulfonamid										
584.00 > 419.00	3.883	3.883	0.0	1.002	2686679	47.9		95.9		
31 Perfluoroundecanoic acid										
563.00 > 519.00	3.883	3.883	0.0	1.000	6038014	47.0		93.9	110913	
D 30 13C2 PFUnA										
565.00 > 520.00	3.883	3.883	0.0		6340659	48.5		96.9	167301	
D 34 d-N-MeFOSA-M										
515.00 > 169.00	4.032	4.032	0.0		5264701	59.8		120		
35 MeFOSA										
512.00 > 169.00	4.042	4.042	0.0	1.000	4747214	48.2		96.4		

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 36 13C2 PFDoA										
615.00 > 570.00	4.166	4.166	0.0		6082691	49.1		98.2	156811	
37 Perfluorododecanoic acid										
613.00 > 569.00	4.166	4.166	0.0	1.000	5728563	51.5		103	64950	
D 38 d-N-EtFOSA-M										
531.00 > 169.00	4.225	4.225	0.0		5130981	60.2		120		
39 N-ethylperfluoro-1-octanesulfonami										
526.00 > 169.00	4.225	4.225	0.0	1.000	4741808	47.0		94.0		
41 Perfluorotridecanoic acid										
663.00 > 619.00	4.440	4.440	0.0	1.000	5646419	53.1		106	142853	
D 43 13C2-PFTeDA										
715.00 > 670.00	4.667	4.667	0.0		12320105	47.5		95.1	335589	
42 Perfluorotetradecanoic acid										
712.50 > 668.90	4.667	4.667	0.0	1.000	11682096	48.8		97.7	66737	
713.00 > 169.00	4.657	4.667	-0.010	0.998	1628059		7.18(0.00-0.00)		161246	
D 44 13C2-PFHxDA										
815.00 > 770.00	5.078	5.078	0.0		7020832	56.1		112	117131	
45 Perfluorohexadecanoic acid										
813.00 > 769.00	5.078	5.078	0.0	1.000	6126365	54.0		108	7145	
46 Perfluorooctadecanoic acid										
913.00 > 869.00	5.421	5.421	0.0	1.000	5819534	66.7		133	10171	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

M - Manually Integrated

Reagents:

LCPFC_FULL-L5_00001 Amount Added: 1.00 Units: mL

Report Date: 02-Mar-2017 12:34:29 Chrom Revision: 2.2 03-Feb-2017 15:35:04

TestAmerica Sacramento

Data File: \\ChromNa\Sacramento\ChromData\A8_N\20170302-40393.b\2017.03.02A_014.d

Injection Date: 02-Mar-2017 11:50:19 Instrument ID: A8_N

Lims ID: CCV L5

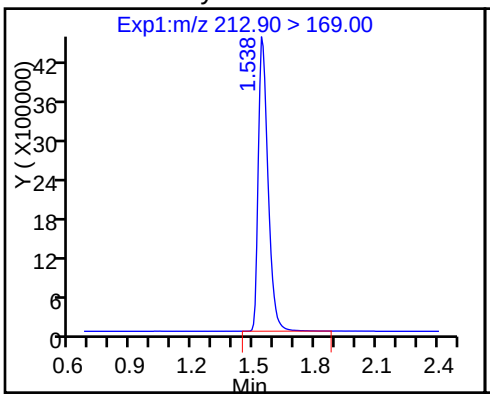
Client ID:

Operator ID: A8-PC\A8 ALS Bottle#: 32 Worklist Smp#: 23

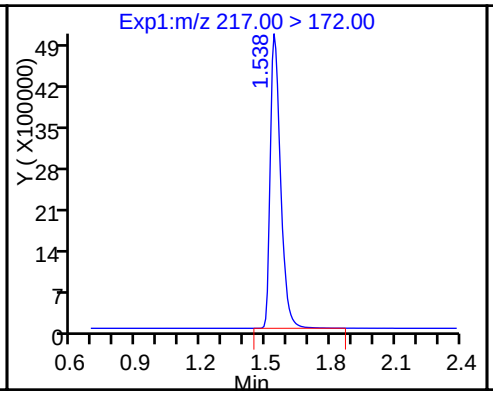
Injection Vol: 2.0 ul Dil. Factor: 1.0000

Method: A8_N Limit Group: LC PFC_DOD ICAL

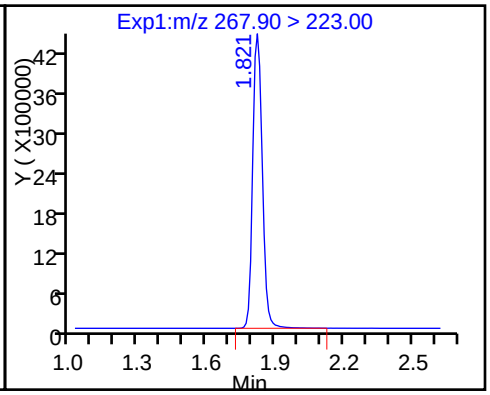
2 Perfluorobutyric acid



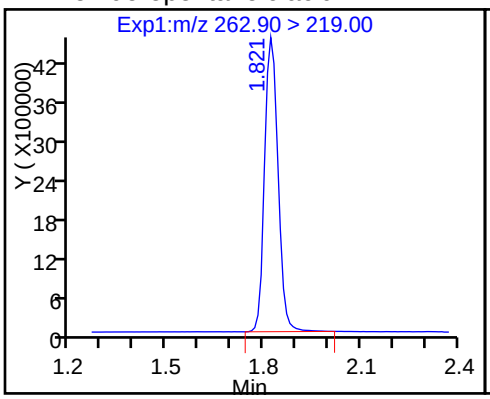
D 1 13C4 PFBA



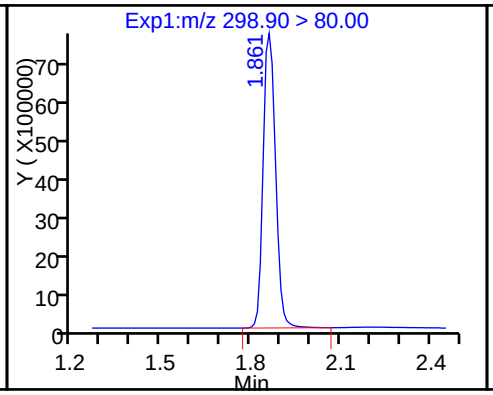
D 3 13C5-PFPeA



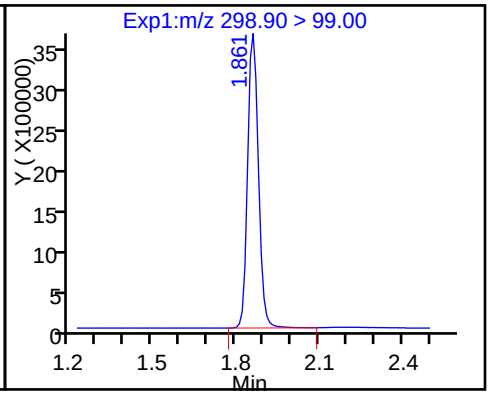
4 Perfluoropentanoic acid



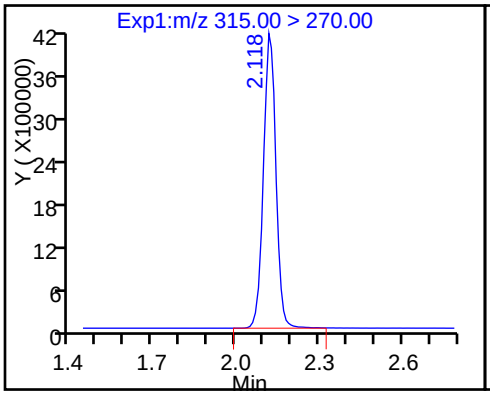
5 Perfluorobutanesulfonic acid



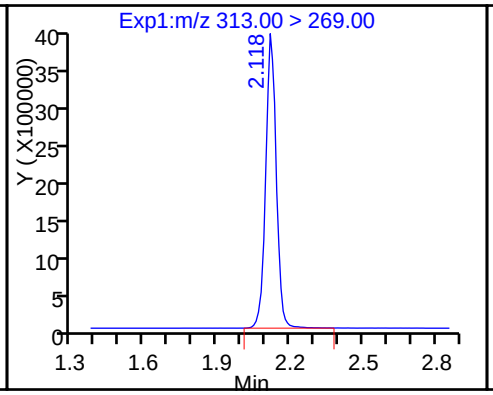
5 Perfluorobutanesulfonic acid



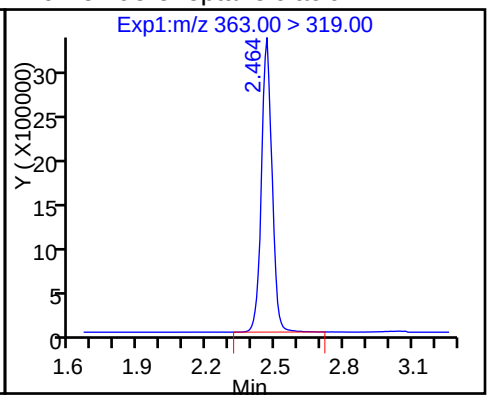
D 7 13C2 PFHxA



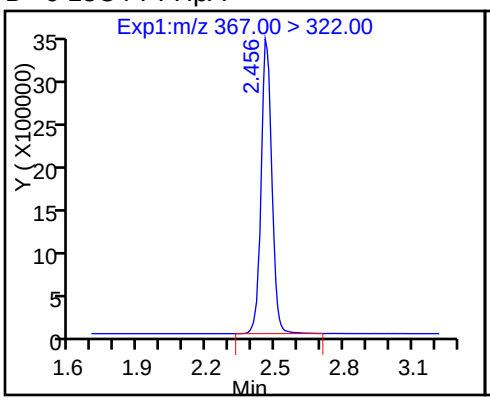
6 Perfluorohexanoic acid



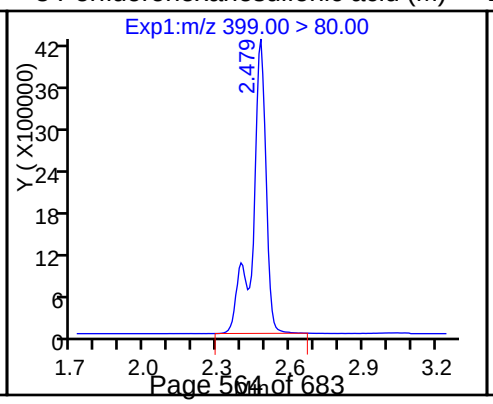
10 Perfluoroheptanoic acid



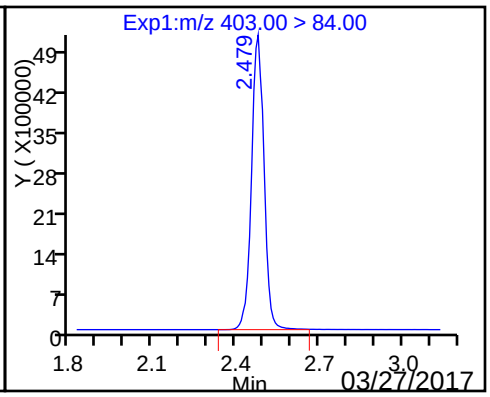
D 9 13C4-PFHpA



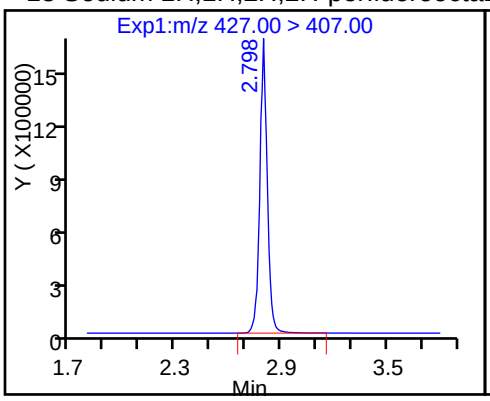
8 Perfluorohexanesulfonic acid (M)



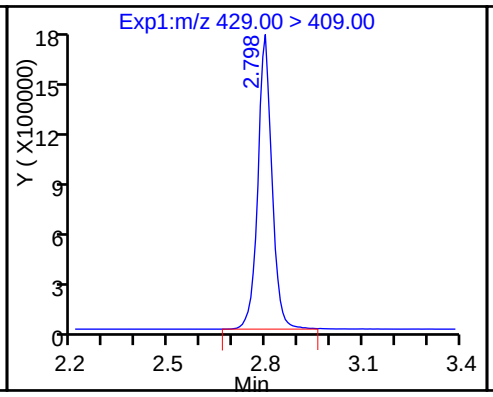
D 11 18O2 PFHxS



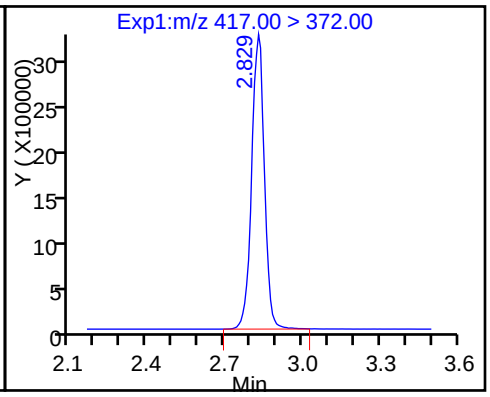
13 Sodium 1H,1H,2H,2H-perfluorooctane



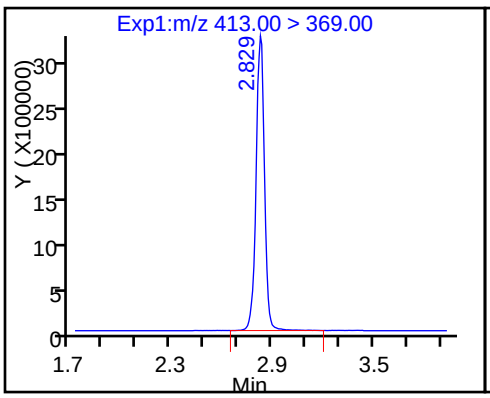
D 12 M2-6:2FTS



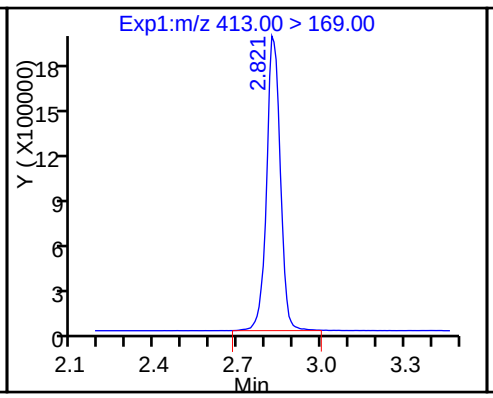
D 14 13C4 PFOA



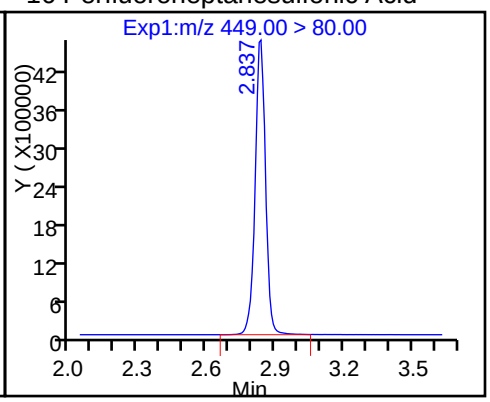
15 Perfluorooctanoic acid



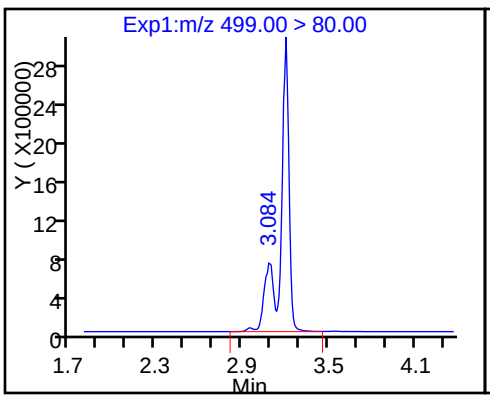
15 Perfluorooctanoic acid



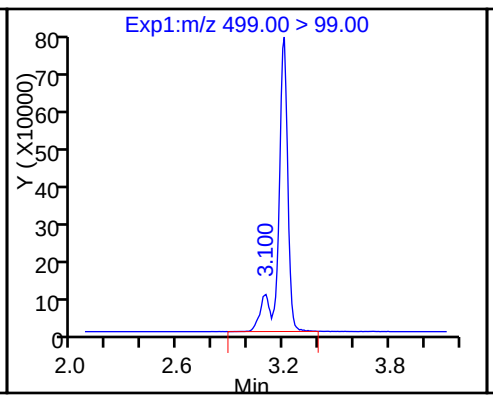
16 Perfluoroheptanesulfonic Acid



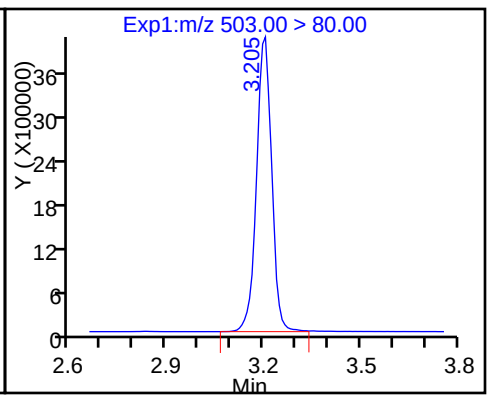
17 Perfluorooctane sulfonic acid



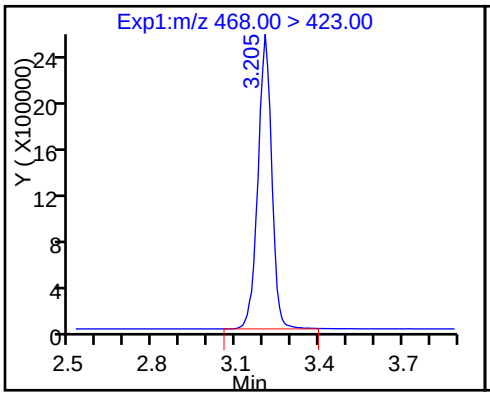
17 Perfluorooctane sulfonic acid



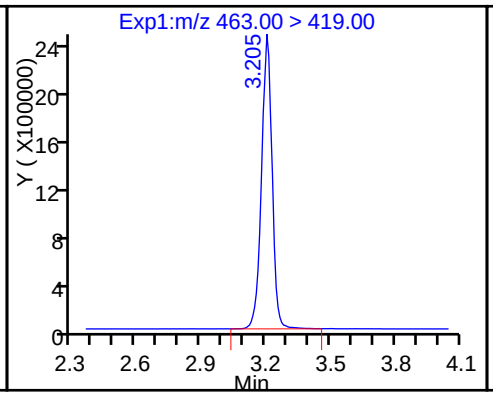
D 18 13C4 PFOS



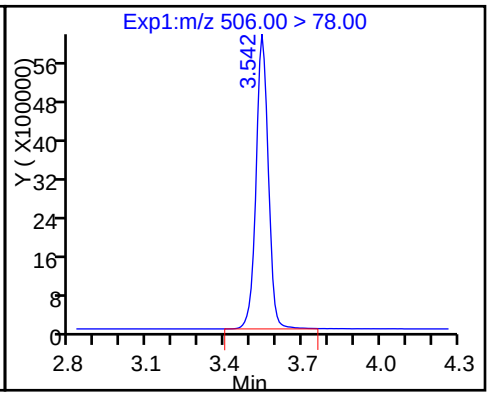
D 19 13C5 PFNA



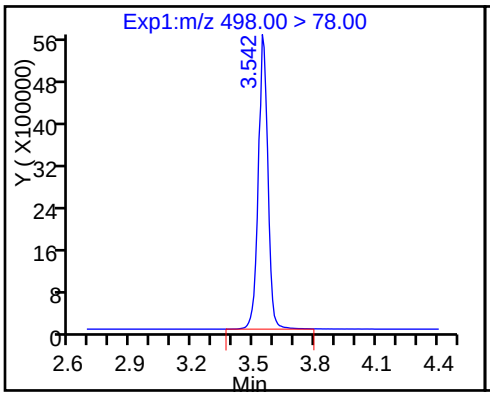
20 Perfluorononanoic acid



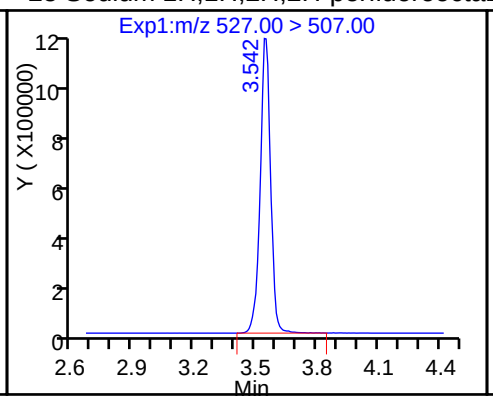
D 21 13C8 FOSA



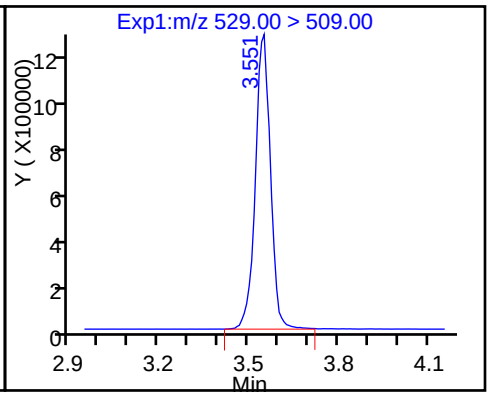
22 Perfluorooctane Sulfonamide



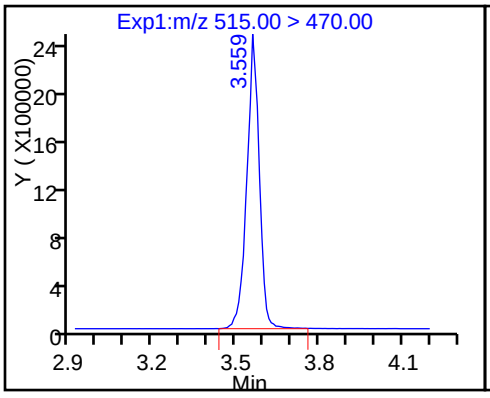
25 Sodium 1H,1H,2H,2H-perfluorooctane



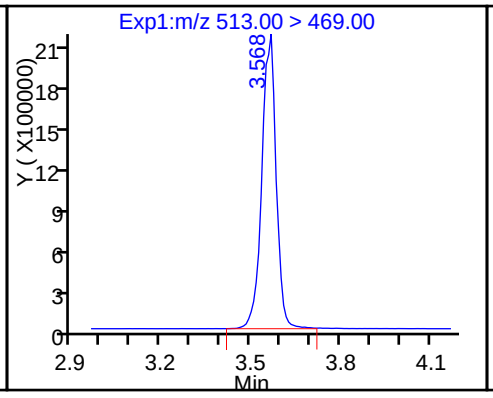
D 26 M2-8:2FTS



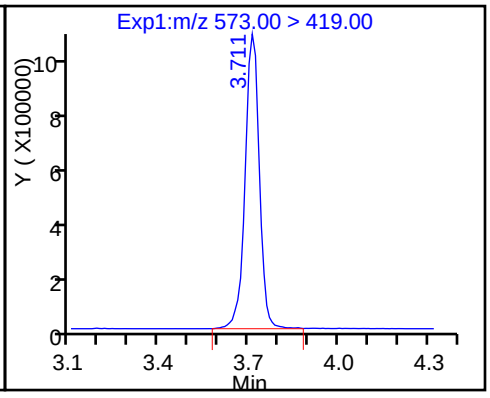
D 23 13C2 PFDA



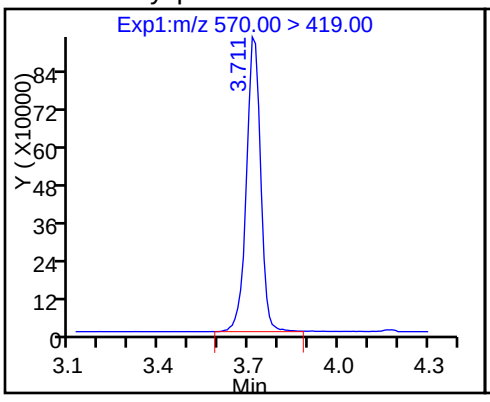
24 Perfluorodecanoic acid



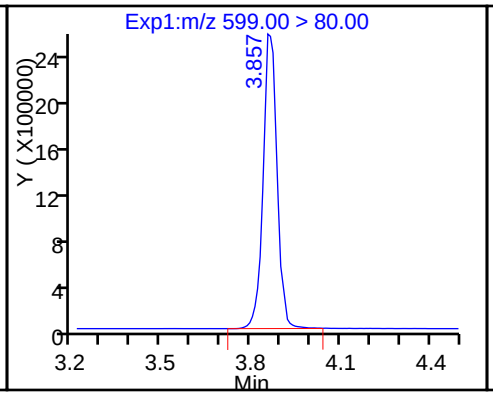
D 27 d3-NMeFOSAA



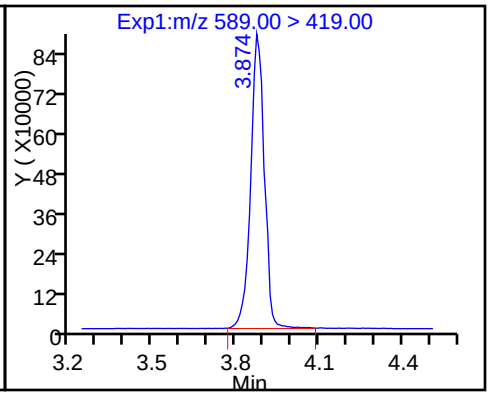
28 N-methyl perfluorooctane sulfonami



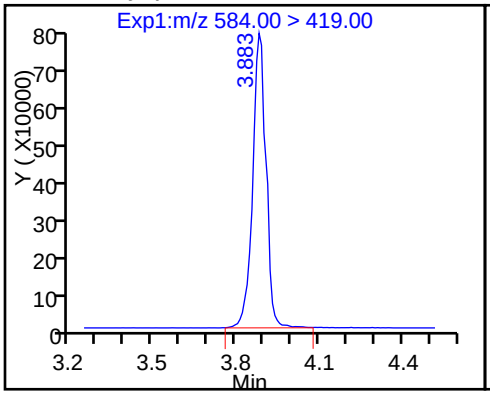
29 Perfluorodecane Sulfonic acid



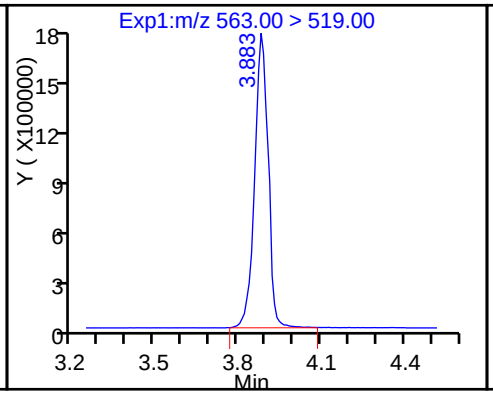
D 32 d5-NEtFOSAA



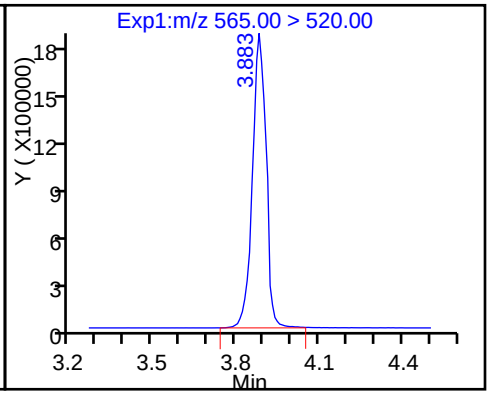
33 N-ethyl perfluorooctane sulfonamid



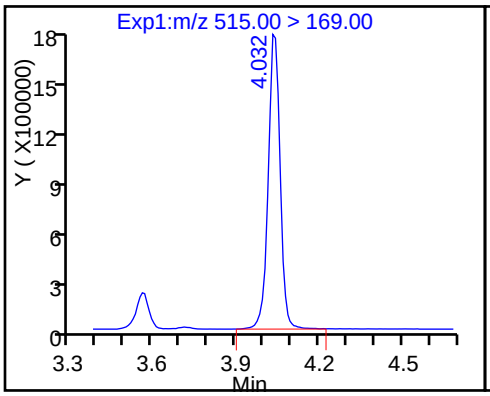
31 Perfluoroundecanoic acid



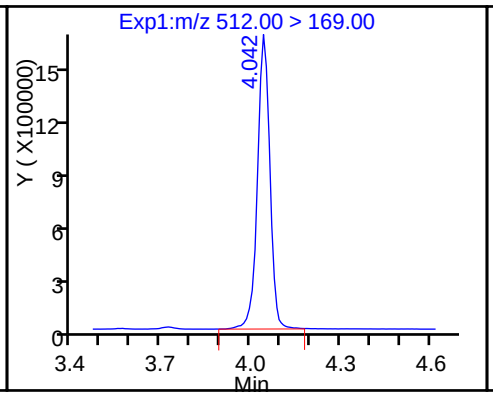
D 30 13C2 PFUnA



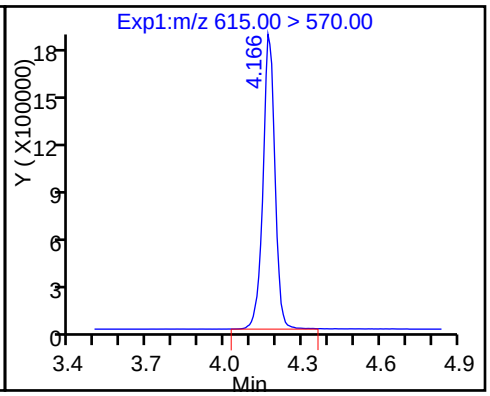
D 34 d-N-MeFOSA-M



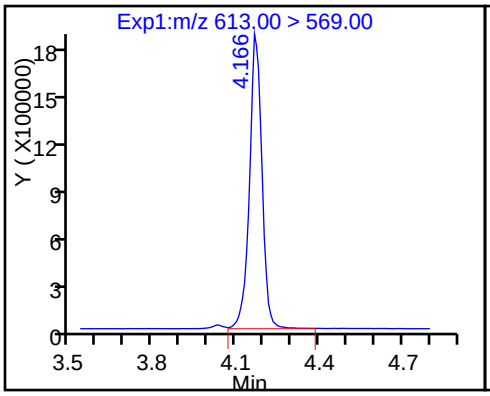
35 MeFOSA



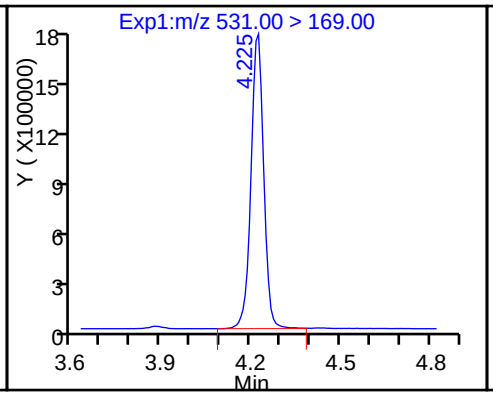
D 36 13C2 PFDoA



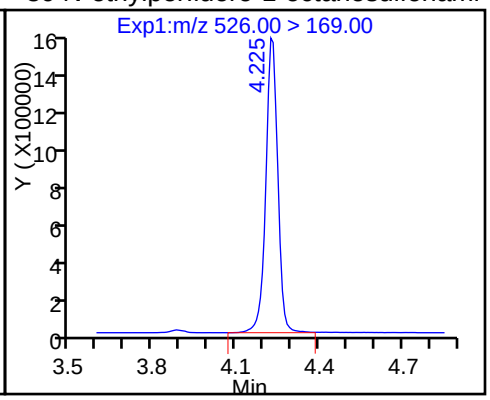
37 Perfluorododecanoic acid



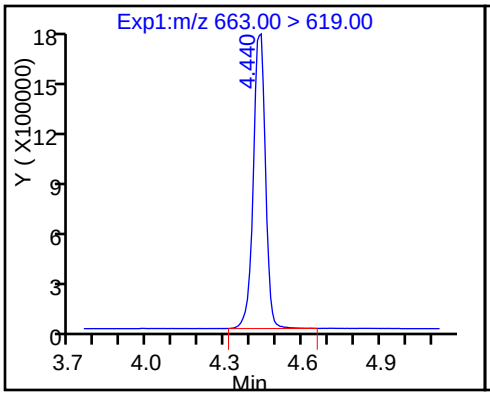
D 38 d-N-EtFOSA-M



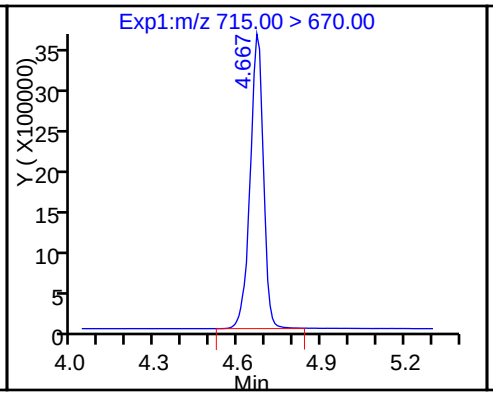
39 N-ethylperfluoro-1-octanesulfonami



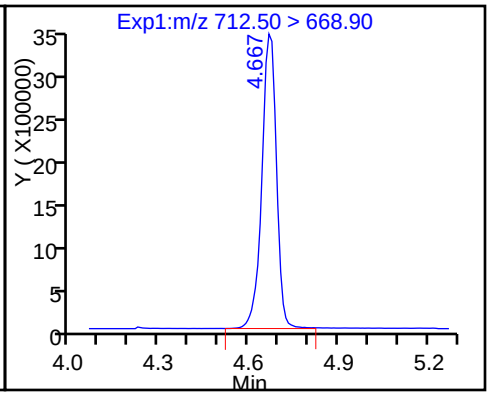
41 Perfluorotridecanoic acid



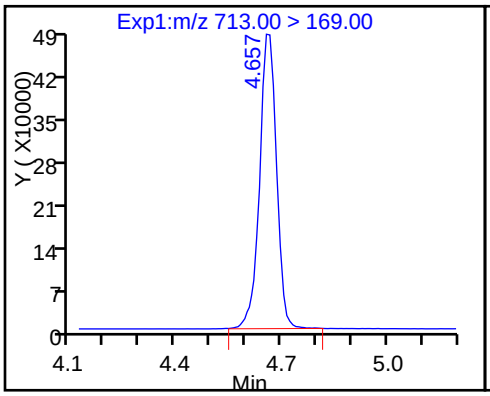
D 43 13C2-PFTeDA



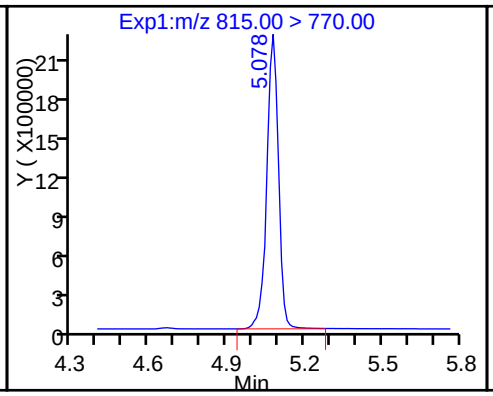
42 Perfluorotetradecanoic acid



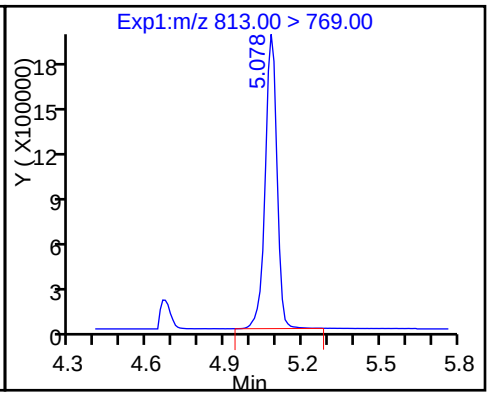
42 Perfluorotetradecanoic acid



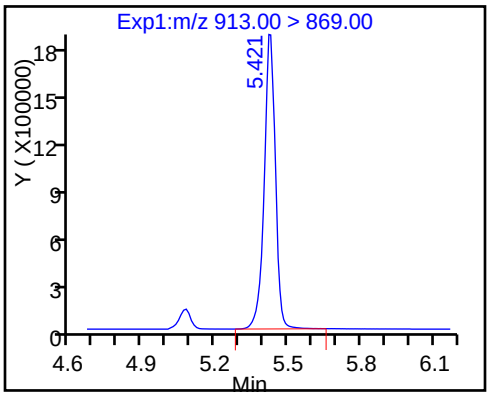
D 44 13C2-PFHxDA



45 Perfluorohexadecanoic acid



46 Perfluorooctadecanoic acid



Manual Integration/User Assign Peak Report

TestAmerica Sacramento

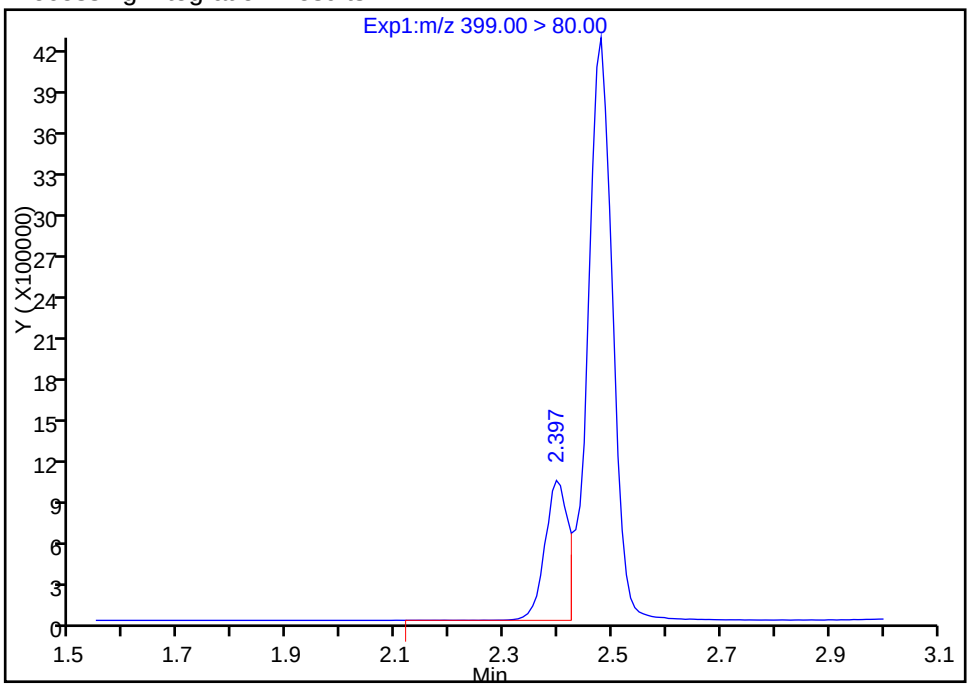
Data File: \\ChromNa\Sacramento\ChromData\A8_N\20170302-40393.b\2017.03.02A_014.d
Injection Date: 02-Mar-2017 11:50:19 Instrument ID: A8_N
Lims ID: CCV L5
Client ID:
Operator ID: A8-PC\A8 ALS Bottle#: 32 Worklist Smp#: 23
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Method: A8_N Limit Group: LC PFC_DOD ICAL
Column: Detector EXP1

8 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

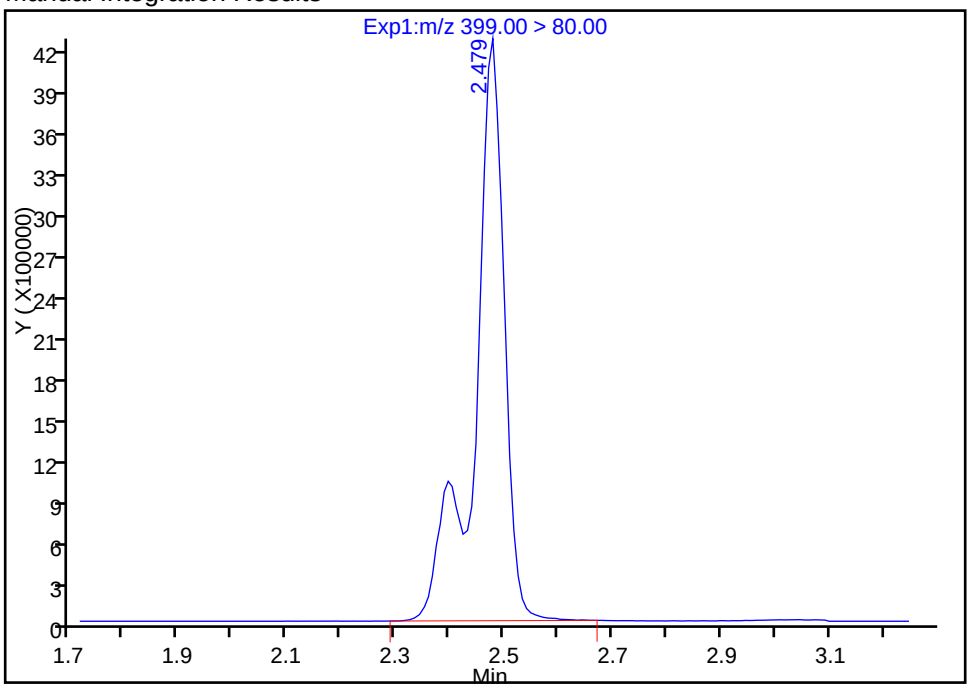
Processing Integration Results

RT: 2.40
Area: 2959842
Amount: 8.354240
Amount Units: ng/ml



Manual Integration Results

RT: 2.48
Area: 16354110
Amount: 46.159952
Amount Units: ng/ml



Reviewer: chandrasenas, 02-Mar-2017 12:34:27
Audit Action: Manually Integrated Audit Reason: Isomers

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Sacramento Job No.: 320-25962-1

SDG No.:

Lab Sample ID: CCV 320-153020/4 Calibration Date: 03/03/2017 09:22

Instrument ID: A8_N Calib Start Date: 03/01/2017 11:08

GC Column: GeminiC18 3x100 ID: 3.00(mm) Calib End Date: 03/01/2017 11:46

Lab File ID: 2017.03.03A_004.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorobutanoic acid (PFBA)	AveID	0.8473	0.8577		20.2	20.0	1.2	25.0
Perfluoropentanoic acid (PFPeA)	AveID	0.9785	0.9653		19.7	20.0	-1.4	25.0
Perfluorobutanesulfonic acid (PFBS)	AveID	1.433	1.500		18.5	17.7	4.7	25.0
Perfluorohexanoic acid (PFHxA)	AveID	0.8895	0.8771		19.7	20.0	-1.4	25.0
Perfluoroheptanoic acid (PFHpA)	AveID	0.9673	0.9421		19.5	20.0	-2.6	25.0
Perfluorohexanesulfonic acid (PFHxS)	AveID	1.028	0.9878		17.5	18.2	-4.0	25.0
6:2FTS	L2ID		0.9157		19.5	19.0	2.6	25.0
Perfluoroheptanesulfonic Acid (PFHpS)	AveID	1.031	1.078		19.9	19.0	4.5	25.0
Perfluorooctanoic acid (PFOA)	AveID	1.022	0.9435		18.5	20.0	-7.6	25.0
Perfluorooctanesulfonic acid (PFOS)	AveID	0.9835	0.9518		18.0	18.6	-3.2	25.0
Perfluorononanoic acid (PFNA)	AveID	0.9040	0.9024		20.0	20.0	-0.2	25.0
Perfluorooctane Sulfonamide (FOSA)	AveID	0.8985	0.9291		20.7	20.0	3.4	25.0
8:2FTS	L2ID		0.9598		19.8	19.2	3.4	25.0
Perfluorodecanoic acid (PFDA)	AveID	0.9057	0.8727		19.3	20.0	-3.6	25.0
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	AveID	0.9711	0.9223		19.0	20.0	-5.0	25.0
Perfluorodecanesulfonic acid (PFDS)	AveID	0.5957	0.6068		19.6	19.3	1.9	25.0
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	AveID	0.9103	0.8760		19.2	20.0	-3.8	25.0
Perfluoroundecanoic acid (PFUnA)	AveID	1.014	0.8823		17.4	20.0	-13.0	25.0
MeFOSA	AveID	0.9355	0.9141		19.5	20.0	-2.3	25.0
N-EtFOSA-M	AveID	0.9837	0.9780		19.9	20.0	-0.6	25.0
Perfluorododecanoic acid (PFDoA)	AveID	0.9145	0.8731		19.1	20.0	-4.5	25.0
Perfluorotridecanoic Acid (PFTriA)	AveID	0.8734	0.8214		18.8	20.0	-6.0	25.0
Perfluorotetradecanoic acid (PFTeA)	AveID	1.966	1.709		17.4	20.0	-13.1	25.0
Perfluoro-n-hexadecanoic acid (PFHxDA)	L1ID		0.7955		16.8	20.0	-16.1	25.0
Perfluoro-n-octadecanoic acid (PFODA)	AveID	0.7175	0.7658		21.3	20.0	6.7	25.0
13C4 PFBA	Ave	292242	325898		55.8	50.0	11.5	50.0
13C5-PFPeA	Ave	232192	255368		55.0	50.0	10.0	50.0
13C2 PFHxA	Ave	210884	227520		53.9	50.0	7.9	50.0
13C4-PFHpA	Ave	192959	206066		53.4	50.0	6.8	50.0
18O2 PFHxS	Ave	290899	314366		51.1	47.3	8.1	50.0
M2-6:2FTS	Ave	77178	82506		50.8	47.5	6.9	50.0

FORM VII 537 (Modified)

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Sacramento Job No.: 320-25962-1

SDG No.:

Lab Sample ID: CCV 320-153020/4 Calibration Date: 03/03/2017 09:22

Instrument ID: A8_N Calib Start Date: 03/01/2017 11:08

GC Column: GeminiC18 3x100 ID: 3.00(mm) Calib End Date: 03/01/2017 11:46

Lab File ID: 2017.03.03A_004.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
13C4 PFOA	Ave	204953	224507		54.8	50.0	9.5	50.0
13C4 PFOS	Ave	241637	255045		50.5	47.8	5.5	50.0
13C5 PFNA	Ave	177866	192378		54.1	50.0	8.2	50.0
13C8 FOSA	Ave	366918	399329		54.4	50.0	8.8	50.0
M2-8:2FTS	Ave	92602	95658		49.5	47.9	3.3	50.0
13C2 PFDA	Ave	166704	186660		56.0	50.0	12.0	50.0
d3-NMeFOSAA	Ave	85186	88306		51.8	50.0	3.7	50.0
d5-NEtFOSAA	Ave	81371	90768		55.8	50.0	11.5	50.0
13C2 PFUnA	Ave	130805	141270		54.0	50.0	8.0	50.0
d-N-MeFOSA-M	Ave	87983	94174		53.5	50.0	7.0	50.0
d-N-EtFOSA-M	Ave	85249	88457		51.9	50.0	3.8	50.0
13C2 PFDoA	Ave	123944	134098		54.1	50.0	8.2	50.0
13C2-PFTeDA	Ave	259165	264401		51.0	50.0	2.0	50.0
13C2-PFHxDA	Ave	125061	133297		53.3	50.0	6.6	50.0

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNa\Sacramento\ChromData\A8_N\20170303-40441.b\2017.03.03A_004.d
Lims ID: CCV L4
Client ID:
Sample Type: CCV
Inject. Date: 03-Mar-2017 09:22:57 ALS Bottle#: 31 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV L4
Misc. Info.: Plate: 1 Rack: 1
Operator ID: A8-PC\A8 Instrument ID: A8_N
Sublist: chrom-A8_N*sub14

Method: \\ChromNa\Sacramento\ChromData\A8_N\20170303-40441.b\A8_N.m
Limit Group: LC PFC_DOD ICAL
Last Update: 27-Mar-2017 10:05:43 Calib Date: 01-Mar-2017 11:53:47
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A8_N\20170301-40358.b\2017.03.01CURVE_009.d

Column 1 : Det: EXP1
Process Host: XAWRK006

First Level Reviewer: chandrasenas Date: 03-Mar-2017 09:42:14

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C4 PFBA										
217.00 > 172.00	1.539	1.539	0.0		16294891	55.8		112	636635	
2 Perfluorobutyric acid										
212.90 > 169.00	1.547	1.547	0.0	1.000	5590647	20.2		101	26825	
D 3 13C5-PFPeA										
267.90 > 223.00	1.823	1.823	0.0		12768396	55.0		110	1091200	
4 Perfluoropentanoic acid										
262.90 > 219.00	1.823	1.823	0.0	1.000	4930038	19.7		98.6	49332	
5 Perfluorobutanesulfonic acid										
298.90 > 80.00	1.863	1.863	0.0	1.000	8336054	18.5		105		
298.90 > 99.00	1.863	1.863	0.0	1.000	3367351		2.48(0.00-0.00)			
D 7 13C2 PFHxA										
315.00 > 270.00	2.135	2.135	0.0		11376023	53.9		108	538791	
6 Perfluorohexanoic acid										
313.00 > 269.00	2.135	2.135	0.0	1.000	3991250	19.7		98.6	232543	
D 9 13C4-PFHpA										
367.00 > 322.00	2.476	2.476	0.0		10303301	53.4		107	420688	
10 Perfluoroheptanoic acid										
363.00 > 319.00	2.476	2.476	0.0	1.000	3882625	19.5		97.4	47359	
D 11 18O2 PFHxS										
403.00 > 84.00	2.492	2.492	0.0		14869492	51.1		108	326683	
8 Perfluorohexanesulfonic acid										
399.00 > 80.00	2.492	2.492	0.0	1.000	5651345	17.5		96.0		
D 12 M2-6:2FTS										
429.00 > 409.00	2.819	2.819	0.0		3919026	50.8		107		
13 Sodium 1H,1H,2H,2H-perfluorooctane										
427.00 > 407.00	2.819	2.819	0.0	1.000	1432499	19.5		103		

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 14 13C4 PFOA										
417.00 > 372.00	2.850	2.850	0.0		11225342	54.8		110	417952	
15 Perfluorooctanoic acid										
413.00 > 369.00	2.850	2.850	0.0	1.000	4236625	18.5		92.4	47867	
413.00 > 169.00	2.850	2.850	0.0	1.000	2468177		1.72(0.90-1.10)		109307	
16 Perfluoroheptanesulfonic Acid										
449.00 > 80.00	2.850	2.850	0.0	1.000	5232384	19.9		105		
17 Perfluorooctane sulfonic acid										
499.00 > 80.00	3.106	3.106	0.0	1.000	4505300	18.0		96.8	45398	
499.00 > 99.00	3.228	3.106	0.122	1.039	1035389		4.35(0.90-1.10)		293849	
D 18 13C4 PFOS										
503.00 > 80.00	3.228	3.228	0.0		12191155	50.5		106	294973	
D 19 13C5 PFNA										
468.00 > 423.00	3.228	3.228	0.0		9618889	54.1		108	306026	
20 Perfluorononanoic acid										
463.00 > 419.00	3.228	3.228	0.0	1.000	3471852	20.0		99.8	62233	
D 21 13C8 FOSA										
506.00 > 78.00	3.536	3.536	0.0		19966460	54.4		109	429201	
22 Perfluorooctane Sulfonamide										
498.00 > 78.00	3.536	3.536	0.0	1.000	7420266	20.7		103	185417	
25 Sodium 1H,1H,2H,2H-perfluorooctane										
527.00 > 507.00	3.578	3.578	0.0	1.000	1759111	19.8		103		
D 26 M2-8:2FTS										
529.00 > 509.00	3.578	3.578	0.0		4582021	49.5		103		
D 23 13C2 PFDA										
515.00 > 470.00	3.586	3.586	0.0		9333013	56.0		112	175517	
24 Perfluorodecanoic acid										
513.00 > 469.00	3.586	3.586	0.0	1.000	3258058	19.3		96.4	115940	
D 27 d3-NMeFOSAA										
573.00 > 419.00	3.745	3.745	0.0		4415291	51.8		104		
28 N-methyl perfluorooctane sulfonami										
570.00 > 419.00	3.754	3.754	0.0	1.003	1628937	19.0		95.0		
29 Perfluorodecane Sulfonic acid										
599.00 > 80.00	3.895	3.895	0.0	1.000	2983745	19.6		102		
D 32 d5-NEtFOSAA										
589.00 > 419.00	3.904	3.904	0.0		4538380	55.8		112		
31 Perfluoroundecanoic acid										
563.00 > 519.00	3.912	3.912	0.0	1.000	2492771	17.4		87.0	58852	
33 N-ethyl perfluorooctane sulfonamid										
584.00 > 419.00	3.912	3.912	0.0	1.002	1590161	19.2		96.2		
D 30 13C2 PFUnA										
565.00 > 520.00	3.921	3.921	0.0		7063475	54.0		108	165131	
D 34 d-N-MeFOSA-M										
515.00 > 169.00	4.012	4.012	0.0		4708700	53.5		107		
35 MeFOSA										
512.00 > 169.00	4.021	4.021	0.0	1.000	1721685	19.5		97.7		
D 36 13C2 PFDoA										
615.00 > 570.00	4.209	4.209	0.0		6704894	54.1		108	146089	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
37 Perfluorododecanoic acid										
613.00 > 569.00	4.201	4.201	0.0	1.000	2341476	19.1		95.5	14800	
D 38 d-N-EtFOSA-M										
531.00 > 169.00	4.201	4.201	0.0		4422856	51.9		104		
39 N-ethylperfluoro-1-octanesulfonami										
526.00 > 169.00	4.201	4.201	0.0	1.000	1730246	19.9		99.4		
41 Perfluorotridecanoic acid										
663.00 > 619.00	4.476	4.476	0.0	1.000	2202904	18.8		94.0	45088	
D 43 13C2-PFTeDA										
715.00 > 670.00	4.711	4.711	0.0		13220040	51.0		102	2019424	
42 Perfluorotetradecanoic acid										
712.50 > 668.90	4.711	4.711	0.0	1.000	4582925	17.4		86.9	2933	
713.00 > 169.00	4.711	4.711	0.0	1.000	650903		7.04(0.00-0.00)		68021	
D 44 13C2-PFHxDA										
815.00 > 770.00	5.144	5.144	0.0		6664867	53.3		107	100048	
45 Perfluorohexadecanoic acid										
813.00 > 769.00	5.144	5.144	0.0	1.000	2133356	16.8		83.9	2130	
46 Perfluorooctadecanoic acid										
913.00 > 869.00	5.518	5.518	0.0	1.000	2053722	21.3		107	2538	

Reagents:

LCPFC_FULL-L4_00001 Amount Added: 1.00 Units: mL

Report Date: 27-Mar-2017 10:05:44 Chrom Revision: 2.2 13-Mar-2017 15:50:30

TestAmerica Sacramento

Data File: \\ChromNa\Sacramento\ChromData\A8_N\20170303-40441.b\2017.03.03A_004.d

Injection Date: 03-Mar-2017 09:22:57 Instrument ID: A8_N

Lims ID: CCV L4

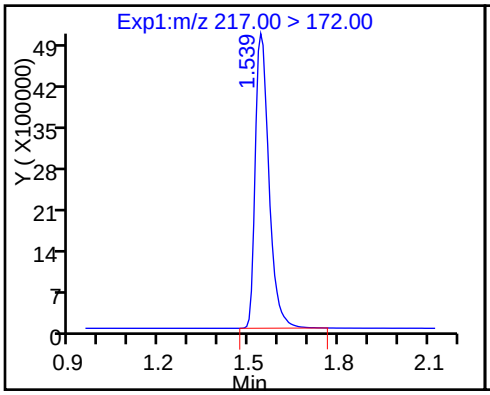
Client ID:

Operator ID: A8-PC\A8 ALS Bottle#: 31 Worklist Smp#: 4

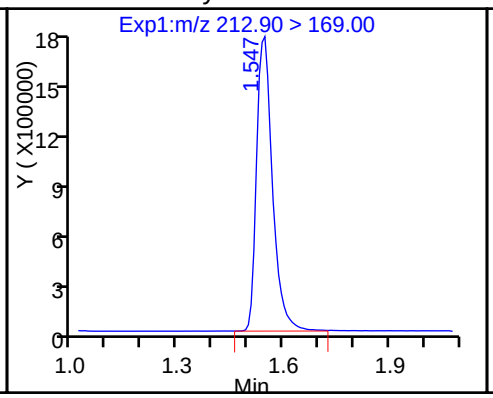
Injection Vol: 2.0 ul Dil. Factor: 1.0000

Method: A8_N Limit Group: LC PFC_DOD ICAL

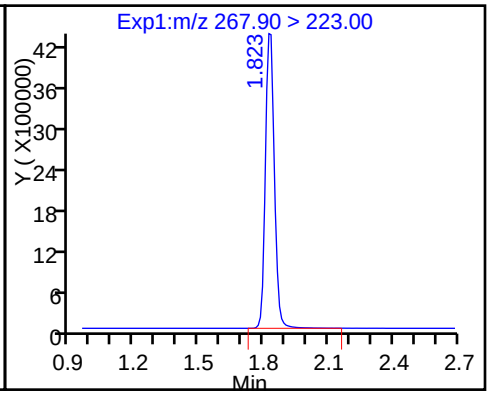
D 1 13C4 PFBA



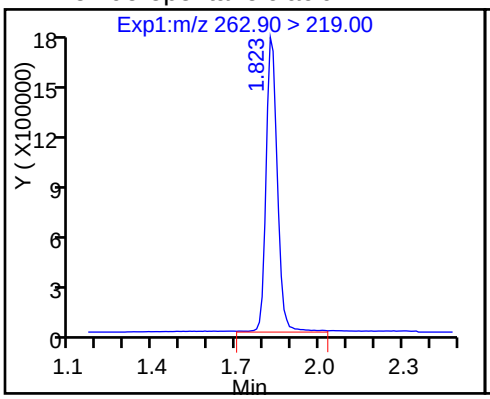
2 Perfluorobutyric acid



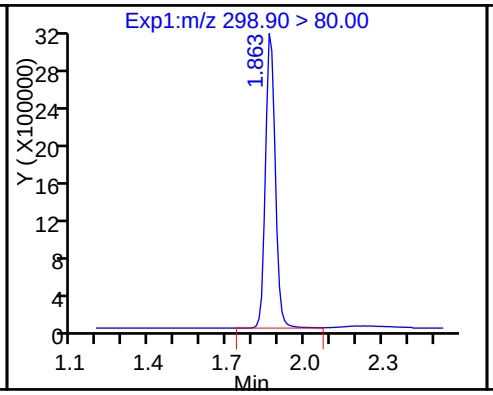
D 3 13C5-PFPeA



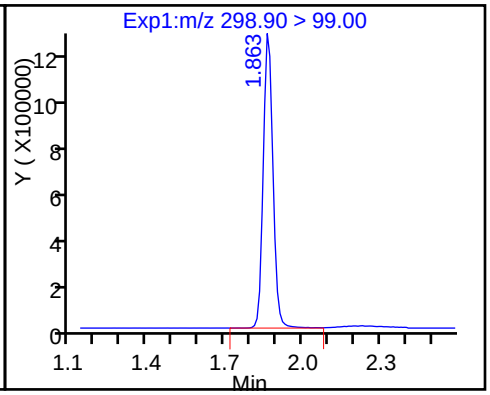
4 Perfluoropentanoic acid



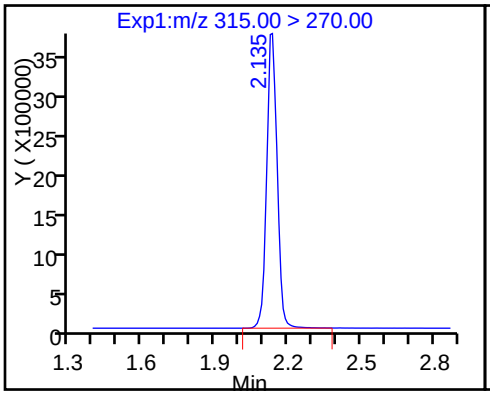
5 Perfluorobutanesulfonic acid



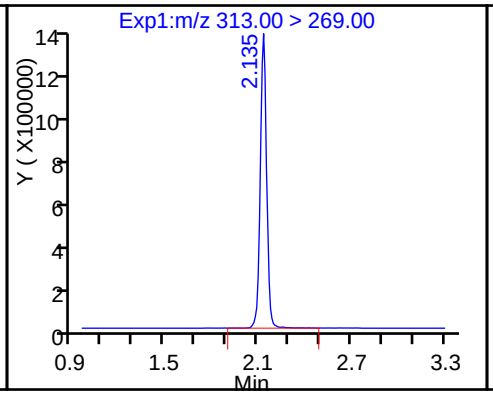
5 Perfluorobutanesulfonic acid



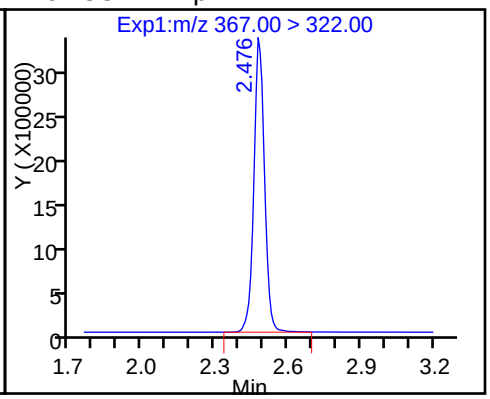
D 7 13C2 PFHxA



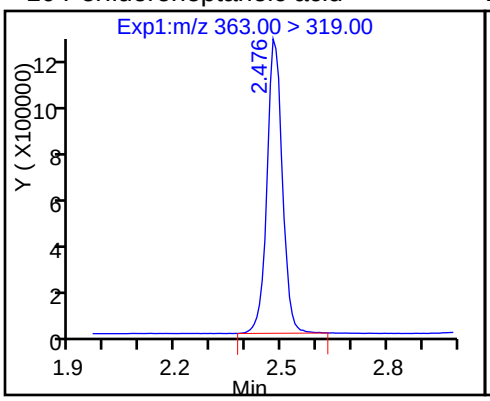
6 Perfluorohexanoic acid



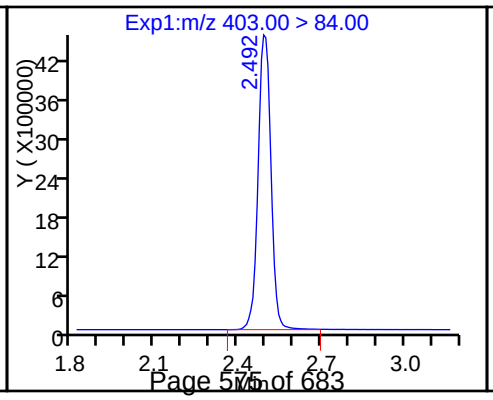
D 9 13C4-PFHpA



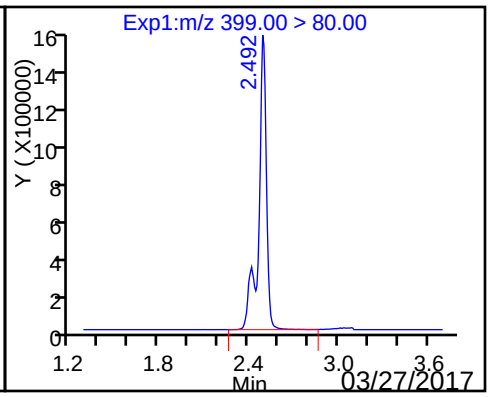
10 Perfluoroheptanoic acid



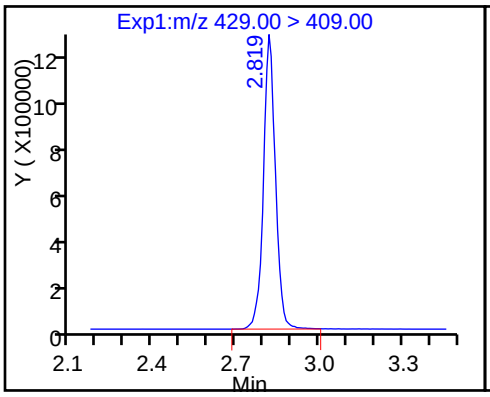
D 11 18O2 PFHxS



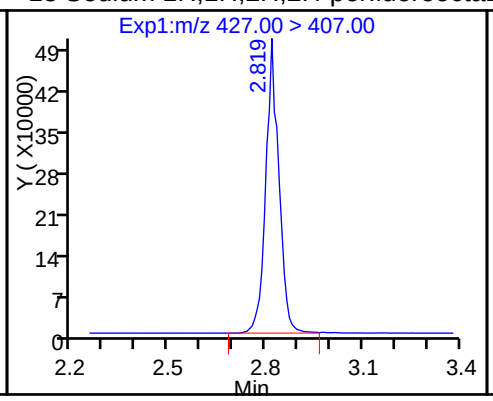
8 Perfluorohexanesulfonic acid



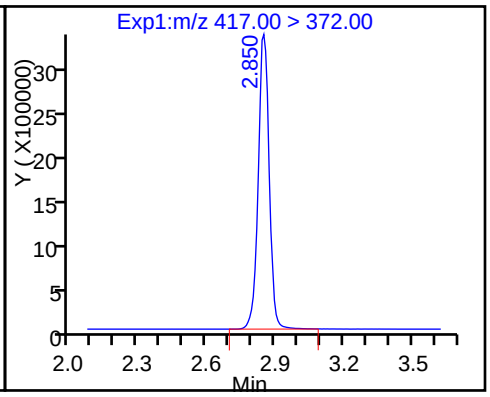
D 12 M2-6:2FTS



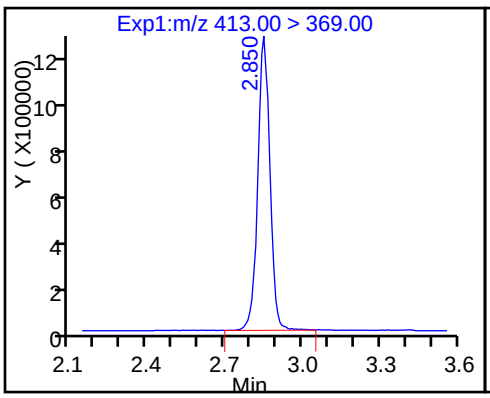
13 Sodium 1H,1H,2H,2H-perfluorooctane



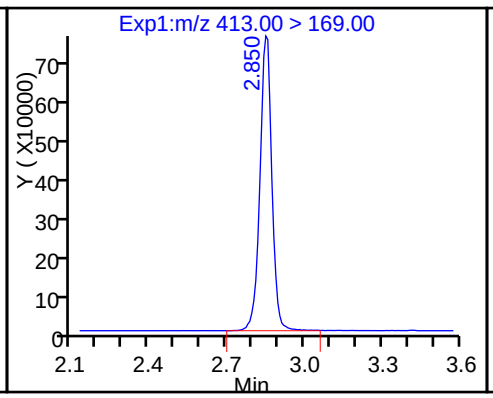
D 14 13C4 PFOA



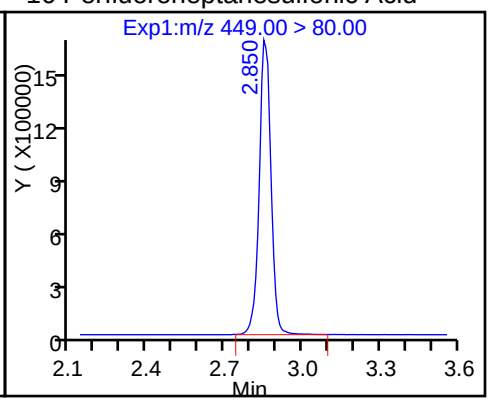
15 Perfluorooctanoic acid



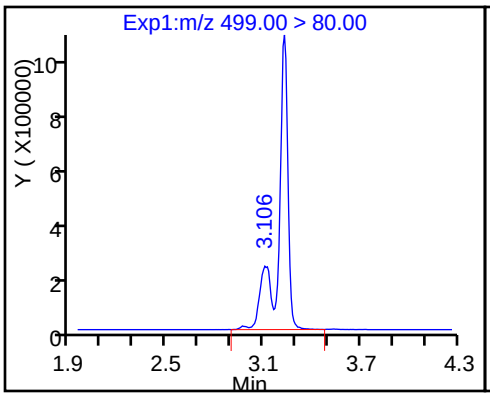
15 Perfluorooctanoic acid



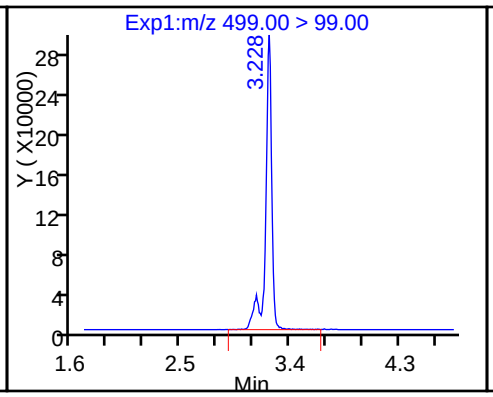
16 Perfluoroheptanesulfonic Acid



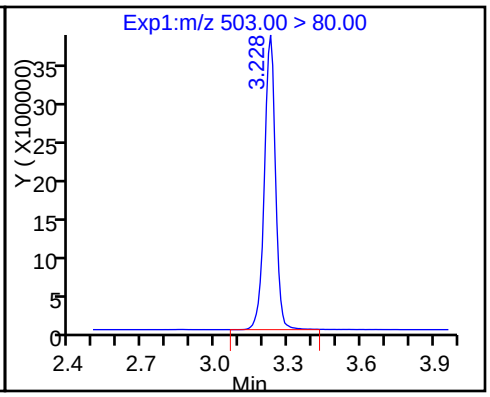
17 Perfluorooctane sulfonic acid



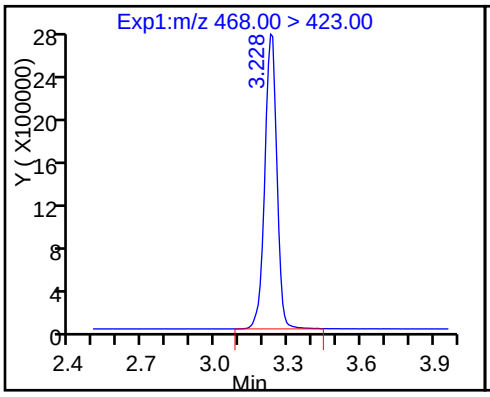
17 Perfluorooctane sulfonic acid



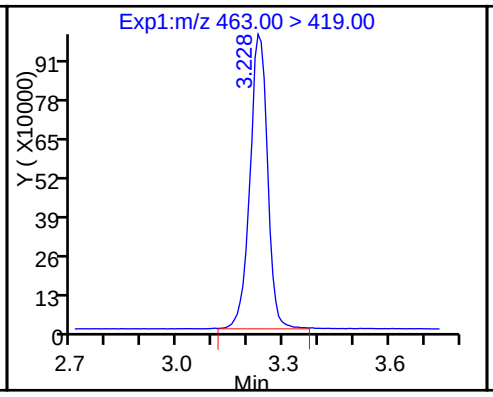
D 18 13C4 PFOS



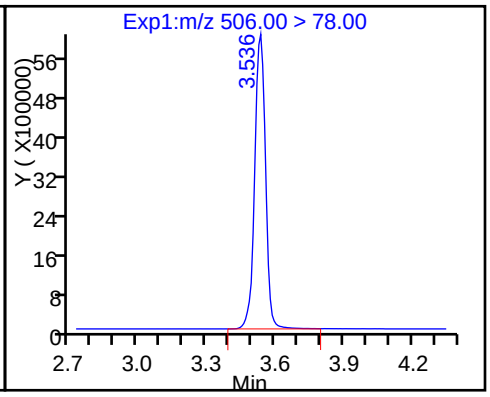
D 19 13C5 PFNA



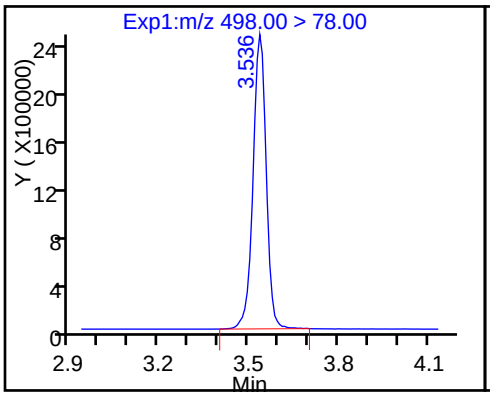
20 Perfluorononanoic acid



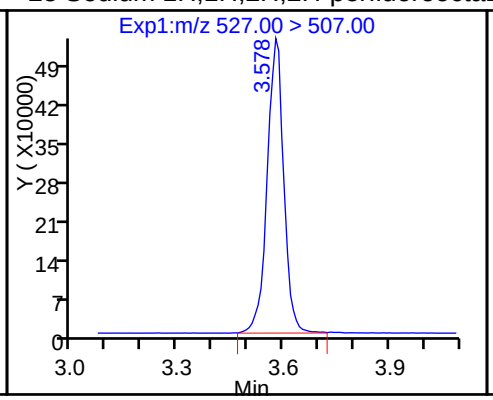
D 21 13C8 FOSA



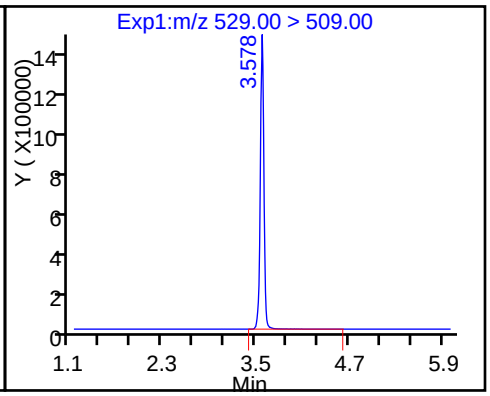
22 Perfluorooctane Sulfonamide



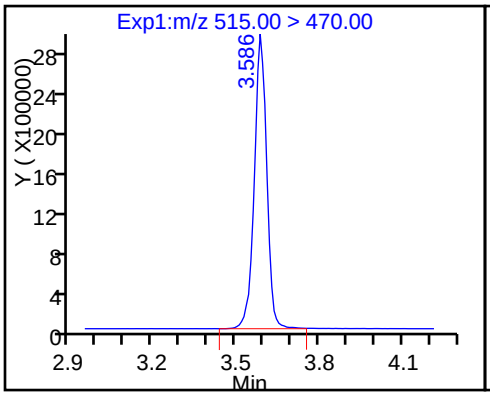
25 Sodium 1H,1H,2H,2H-perfluorooctane



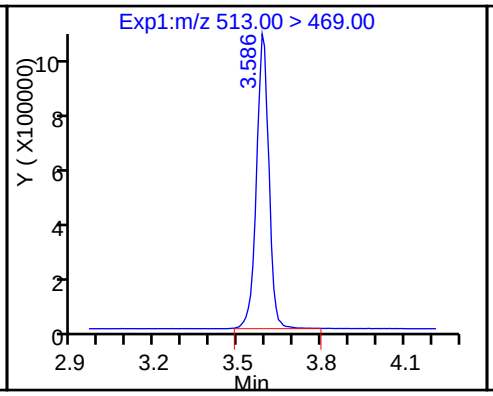
D 26 M2-8:2FTS



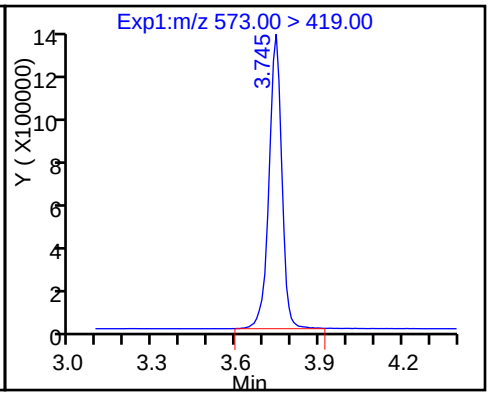
D 23 13C2 PFDA



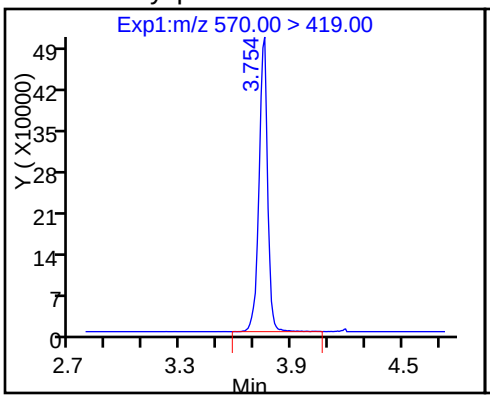
24 Perfluorodecanoic acid



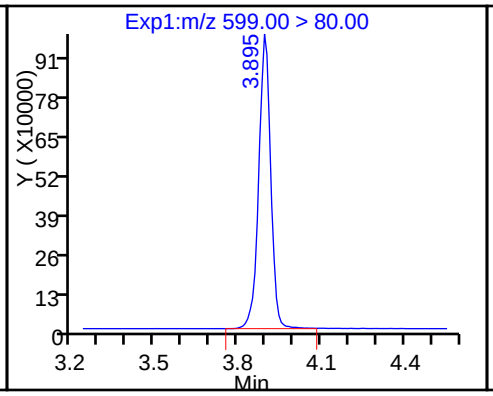
D 27 d3-NMeFOSAA



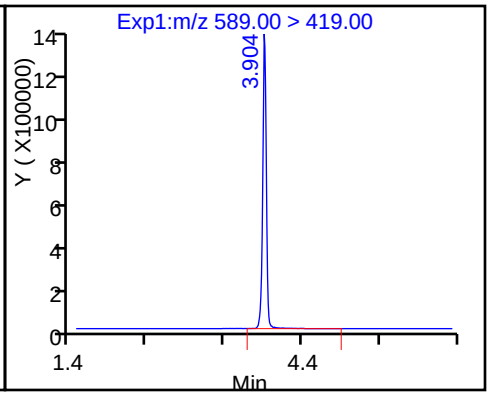
28 N-methyl perfluorooctane sulfonami



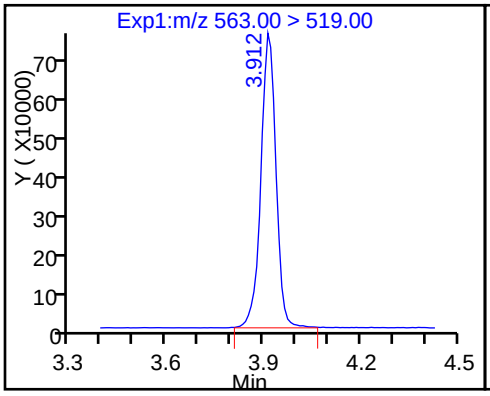
29 Perfluorodecane Sulfonic acid



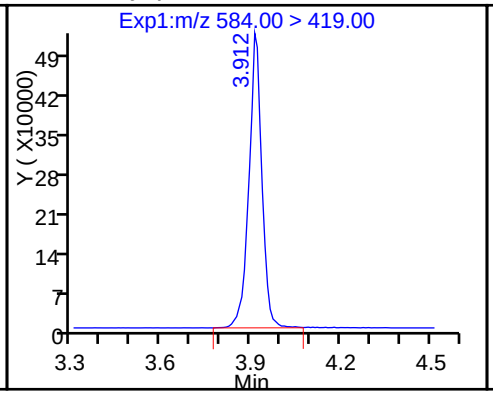
D 32 d5-NEtFOSAA



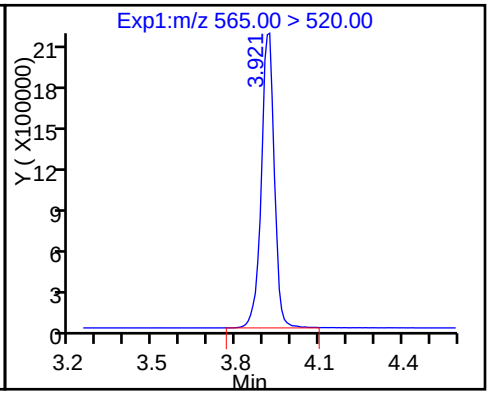
31 Perfluoroundecanoic acid



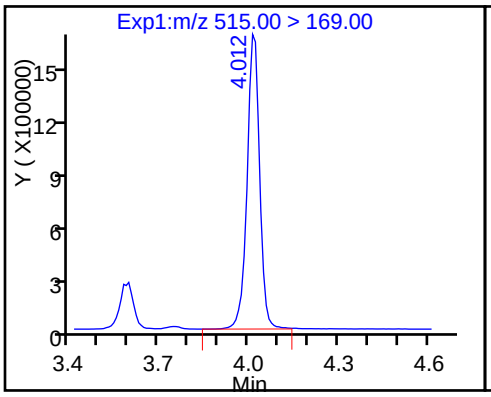
33 N-ethyl perfluorooctane sulfonamid



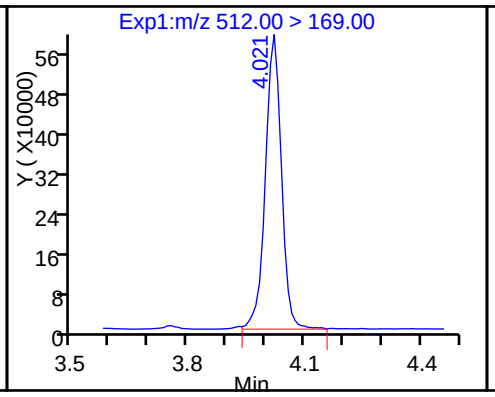
D 30 13C2 PFUnA



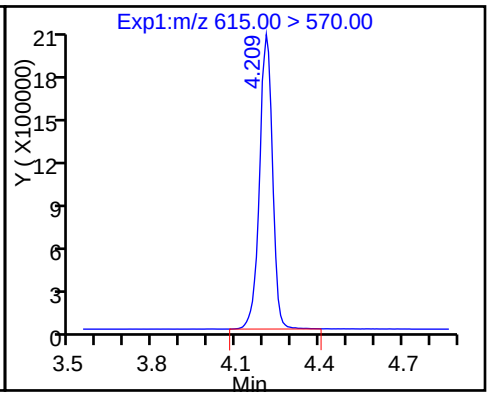
D 34 d-N-MeFOSA-M



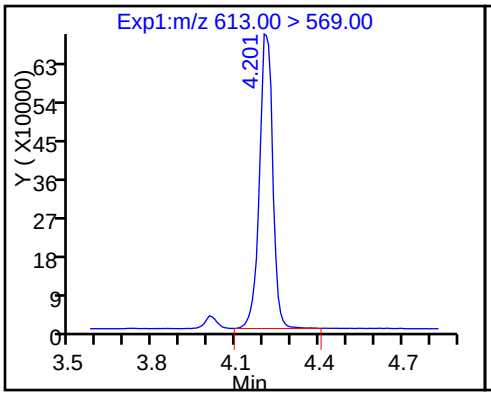
35 MeFOSA



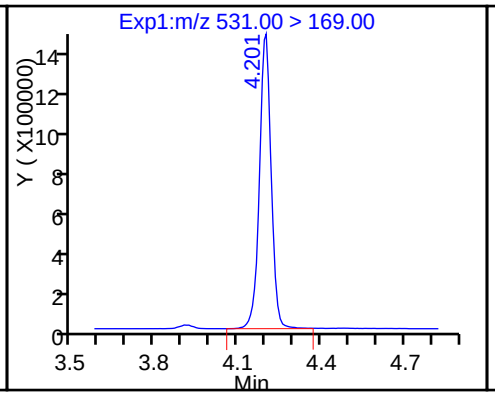
D 36 13C2 PFDoA



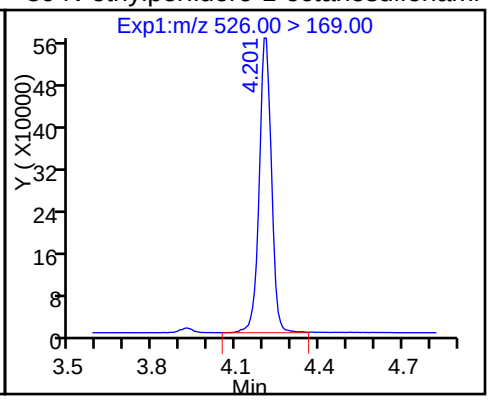
37 Perfluorododecanoic acid



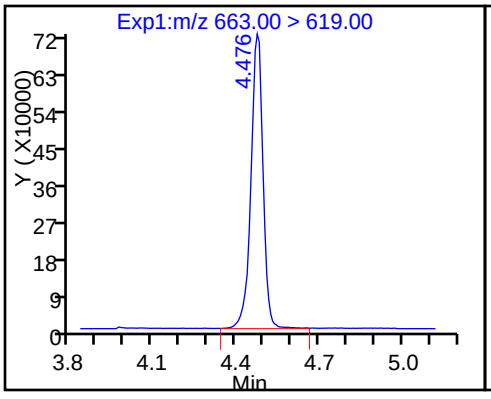
D 38 d-N-EtFOSA-M



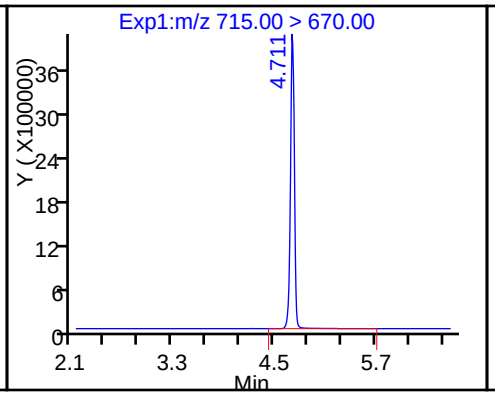
39 N-ethylperfluoro-1-octanesulfonami



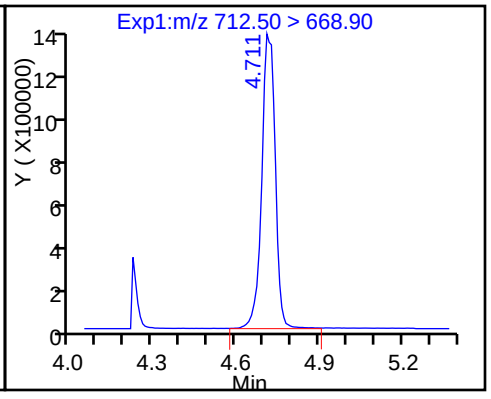
41 Perfluorotridecanoic acid



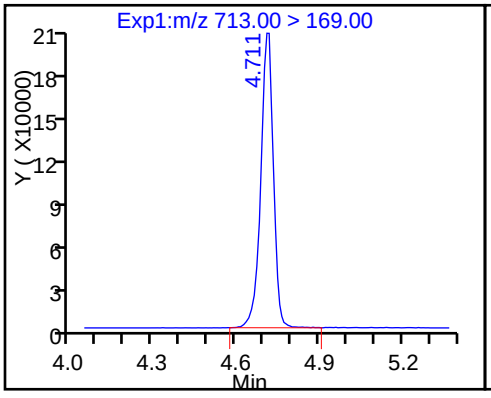
D 43 13C2-PFTeDA



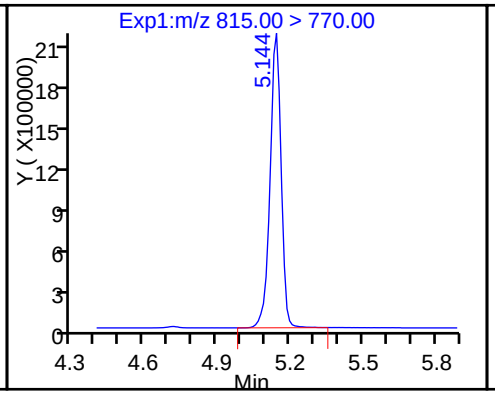
42 Perfluorotetradecanoic acid



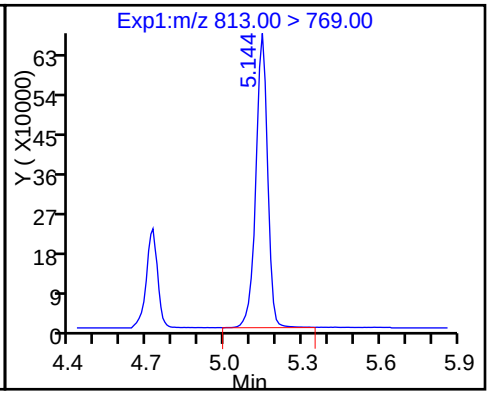
42 Perfluorotetradecanoic acid



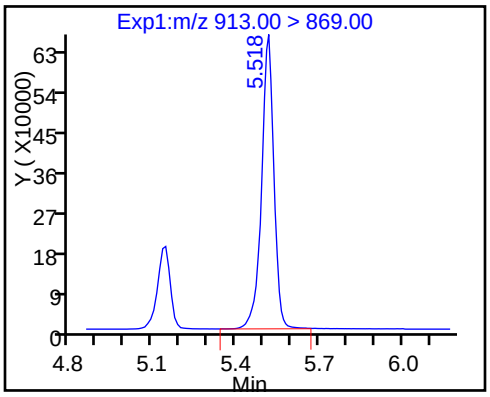
D 44 13C2-PFHxDA



45 Perfluorohexadecanoic acid



46 Perfluorooctadecanoic acid



FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Sacramento Job No.: 320-25962-1

SDG No.:

Lab Sample ID: CCV 320-153020/9 Calibration Date: 03/03/2017 10:00

Instrument ID: A8_N Calib Start Date: 03/01/2017 11:08

GC Column: GeminiC18 3x100 ID: 3.00(mm) Calib End Date: 03/01/2017 11:46

Lab File ID: 2017.03.03A_009.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorobutanoic acid (PFBA)	AveID	0.8473	0.8971		52.9	50.0	5.9	25.0
Perfluoropentanoic acid (PFPeA)	AveID	0.9785	1.006		51.4	50.0	2.8	25.0
Perfluorobutanesulfonic acid (PFBS)	AveID	1.433	1.479		45.6	44.2	3.2	25.0
Perfluorohexanoic acid (PFHxA)	AveID	0.8895	0.9081		51.0	50.0	2.1	25.0
Perfluoroheptanoic acid (PFHpA)	AveID	0.9673	0.9717		50.2	50.0	0.5	25.0
Perfluorohexanesulfonic acid (PFHxS)	AveID	1.028	1.049		46.4	45.5	2.0	25.0
6:2FTS	L2ID		0.8824		47.1	47.4	-0.7	25.0
Perfluorooctanoic acid (PFOA)	AveID	1.022	0.998		48.8	50.0	-2.3	25.0
Perfluoroheptanesulfonic Acid (PFHpS)	AveID	1.031	1.096		50.6	47.6	6.3	25.0
Perfluorooctanesulfonic acid (PFOS)	AveID	0.9835	1.010		47.7	46.4	2.7	25.0
Perfluorononanoic acid (PFNA)	AveID	0.9040	0.9545		52.8	50.0	5.6	25.0
Perfluorooctane Sulfonamide (FOSA)	AveID	0.8985	0.9290		51.7	50.0	3.4	25.0
8:2FTS	L2ID		0.9201		47.6	47.9	-0.6	25.0
Perfluorodecanoic acid (PFDA)	AveID	0.9057	0.9492		52.4	50.0	4.8	25.0
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	AveID	0.9711	0.9285		47.8	50.0	-4.4	25.0
Perfluorodecanesulfonic acid (PFDS)	AveID	0.5957	0.6381		51.6	48.2	7.1	25.0
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	AveID	0.9103	0.8577		47.1	50.0	-5.8	25.0
Perfluoroundecanoic acid (PFUnA)	AveID	1.014	0.9870		48.7	50.0	-2.6	25.0
MeFOSA	AveID	0.9355	0.9080		48.5	50.0	-2.9	25.0
Perfluorododecanoic acid (PFDoA)	AveID	0.9145	0.9196		50.3	50.0	0.6	25.0
N-EtFOSA-M	AveID	0.9837	0.9415		47.9	50.0	-4.3	25.0
Perfluorotridecanoic Acid (PFTriA)	AveID	0.8734	0.9034		51.7	50.0	3.4	25.0
Perfluorotetradecanoic acid (PFTeA)	AveID	1.966	1.836		46.7	50.0	-6.6	25.0
Perfluoro-n-hexadecanoic acid (PFHxDA)	L1ID		0.9628		51.6	50.0	3.1	25.0
Perfluoro-n-octadecanoic acid (PFODA)	AveID	0.7175	0.6843		47.7	50.0	-4.6	25.0
13C4 PFBA	Ave	292242	334153		57.2	50.0	14.3	50.0
13C5-PFPeA	Ave	232192	252574		54.4	50.0	8.8	50.0
13C2 PFHxA	Ave	210884	234974		55.7	50.0	11.4	50.0
13C4-PFHpA	Ave	192959	212838		55.2	50.0	10.3	50.0
18O2 PFHxS	Ave	290899	314086		51.1	47.3	8.0	50.0
M2-6:2FTS	Ave	77178	82674		50.9	47.5	7.1	50.0

FORM VII 537 (Modified)

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Sacramento Job No.: 320-25962-1

SDG No.:

Lab Sample ID: CCV 320-153020/9 Calibration Date: 03/03/2017 10:00

Instrument ID: A8_N Calib Start Date: 03/01/2017 11:08

GC Column: GeminiC18 3x100 ID: 3.00(mm) Calib End Date: 03/01/2017 11:46

Lab File ID: 2017.03.03A_009.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
13C4 PFOA	Ave	204953	217563		53.1	50.0	6.2	50.0
13C4 PFOS	Ave	241637	268234		53.1	47.8	11.0	50.0
13C5 PFNA	Ave	177866	185773		52.2	50.0	4.4	50.0
13C8 FOSA	Ave	366918	407291		55.5	50.0	11.0	50.0
M2-8:2FTS	Ave	92602	90188		46.7	47.9	-2.6	50.0
13C2 PFDA	Ave	166704	176887		53.1	50.0	6.1	50.0
d3-NMeFOSAA	Ave	85186	92495		54.3	50.0	8.6	50.0
d5-NEtFOSAA	Ave	81371	89341		54.9	50.0	9.8	50.0
13C2 PFUnA	Ave	130805	136205		52.1	50.0	4.1	50.0
d-N-MeFOSA-M	Ave	87983	96274		54.7	50.0	9.4	50.0
13C2 PFDoA	Ave	123944	134705		54.3	50.0	8.7	50.0
d-N-EtFOSA-M	Ave	85249	91226		53.5	50.0	7.0	50.0
13C2-PFTeDA	Ave	259165	271896		52.5	50.0	4.9	50.0
13C2-PFHxDA	Ave	125061	146486		58.6	50.0	17.1	50.0

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNa\Sacramento\ChromData\A8_N\20170303-40441.b\2017.03.03A_009.d
Lims ID: CCV L5
Client ID:
Sample Type: CCV
Inject. Date: 03-Mar-2017 10:00:31 ALS Bottle#: 32 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV L5
Misc. Info.: Plate: 1 Rack: 1
Operator ID: A8-PC\A8 Instrument ID: A8_N
Sublist: chrom-A8_N*sub14

Method: \\ChromNa\Sacramento\ChromData\A8_N\20170303-40441.b\A8_N.m
Limit Group: LC PFC_DOD ICAL
Last Update: 27-Mar-2017 10:05:38 Calib Date: 01-Mar-2017 11:53:47
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A8_N\20170301-40358.b\2017.03.01CURVE_009.d

Column 1 : Det: EXP1
Process Host: XAWRK006

First Level Reviewer: chandrasenas Date: 03-Mar-2017 10:15:52

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C4 PFBA										
217.00 > 172.00	1.539	1.539	0.0		16707649	57.2		114	644238	
2 Perfluorobutyric acid										
212.90 > 169.00	1.539	1.539	0.0	1.000	14989120	52.9		106	70389	
D 3 13C5-PFPeA										
267.90 > 223.00	1.823	1.823	0.0		12628683	54.4		109	635022	
4 Perfluoropentanoic acid										
262.90 > 219.00	1.823	1.823	0.0	1.000	12704773	51.4		103	112227	
5 Perfluorobutanesulfonic acid										
298.90 > 80.00	1.863	1.863	0.0	1.000	20531744	45.6		103		
298.90 > 99.00	1.863	1.863	0.0	1.000	8914114		2.30(0.00-0.00)			
D 7 13C2 PFHxA										
315.00 > 270.00	2.119	2.119	0.0		11748698	55.7		111	446049	
6 Perfluorohexanoic acid										
313.00 > 269.00	2.128	2.128	0.0	1.000	10668527	51.0		102	286436	
D 9 13C4-PFHpA										
367.00 > 322.00	2.464	2.464	0.0		10641918	55.2		110	487581	
10 Perfluoroheptanoic acid										
363.00 > 319.00	2.464	2.464	0.0	1.000	10340390	50.2		100	116847	
D 11 18O2 PFHxS										
403.00 > 84.00	2.480	2.480	0.0		14856249	51.1		108	528041	
8 Perfluorohexanesulfonic acid										M
399.00 > 80.00	2.480	2.480	0.0	1.000	14984106	46.4		102		M
D 12 M2-6:2FTS										
429.00 > 409.00	2.807	2.807	0.0		3926998	50.9		107		
13 Sodium 1H,1H,2H,2H-perfluorooctane										
427.00 > 407.00	2.807	2.807	0.0	1.000	3457938	47.1		99.3		

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 14 13C4 PFOA										
417.00 > 372.00	2.830	2.830	0.0		10878151	53.1		106	289993	
15 Perfluorooctanoic acid										
413.00 > 369.00	2.830	2.830	0.0	1.000	10857092	48.8		97.7	106005	
413.00 > 169.00	2.830	2.830	0.0	1.000	6542056		1.66(0.90-1.10)		324513	
16 Perfluoroheptanesulfonic Acid										
449.00 > 80.00	2.838	2.838	0.0	1.000	13989420	50.6		106		
17 Perfluorooctane sulfonic acid										
499.00 > 80.00	3.093	3.093	0.0	1.000	12573450	47.7		103	70870	
499.00 > 99.00	3.093	3.093	0.0	1.000	2835983		4.43(0.90-1.10)		13657	
D 18 13C4 PFOS										
503.00 > 80.00	3.206	3.206	0.0		12821590	53.1		111	192615	
D 19 13C5 PFNA										
468.00 > 423.00	3.214	3.214	0.0		9288651	52.2		104	270640	
20 Perfluorononanoic acid										
463.00 > 419.00	3.214	3.214	0.0	1.000	8865617	52.8		106	156573	
D 21 13C8 FOSA										
506.00 > 78.00	3.527	3.527	0.0		20364538	55.5		111	441702	
22 Perfluorooctane Sulfonamide										
498.00 > 78.00	3.536	3.536	0.0	1.000	18917564	51.7		103	456713	
25 Sodium 1H,1H,2H,2H-perfluorooctane										
527.00 > 507.00	3.553	3.553	0.0	1.000	3974940	47.6		99.4		
D 26 M2-8:2FTS										
529.00 > 509.00	3.553	3.553	0.0		4319986	46.7		97.4		
D 23 13C2 PFDA										
515.00 > 470.00	3.569	3.569	0.0		8844351	53.1		106	245259	
24 Perfluorodecanoic acid										
513.00 > 469.00	3.569	3.569	0.0	1.000	8395012	52.4		105	189111	
D 27 d3-NMeFOSAA										
573.00 > 419.00	3.725	3.725	0.0		4624753	54.3		109		
28 N-methyl perfluorooctane sulfonami										
570.00 > 419.00	3.725	3.725	0.0	1.000	4294236	47.8		95.6		
29 Perfluorodecane Sulfonic acid										
599.00 > 80.00	3.878	3.878	0.0	1.000	8249754	51.6		107		
D 32 d5-NEtFOSAA										
589.00 > 419.00	3.887	3.887	0.0		4467038	54.9		110		
31 Perfluoroundecanoic acid										
563.00 > 519.00	3.895	3.895	0.0	1.000	6721841	48.7		97.4	203837	
33 N-ethyl perfluorooctane sulfonamid										
584.00 > 419.00	3.895	3.895	0.0	1.002	3831483	47.1		94.2		
D 30 13C2 PFUnA										
565.00 > 520.00	3.895	3.895	0.0		6810244	52.1		104	240147	
D 34 d-N-MeFOSA-M										
515.00 > 169.00	4.022	4.022	0.0		4813722	54.7		109		
35 MeFOSA										
512.00 > 169.00	4.022	4.022	0.0	1.000	4370849	48.5		97.1		
37 Perfluorododecanoic acid										
613.00 > 569.00	4.188	4.188	0.0	1.000	6193702	50.3		101	46716	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
39 N-ethylperfluoro-1-octanesulfonami										
526.00 > 169.00	4.211	4.211	0.0	1.000	4294446	47.9		95.7		
D 38 d-N-EtFOSA-M										
531.00 > 169.00	4.202	4.202	0.0		4561298	53.5		107		
D 36 13C2 PFDoA										
615.00 > 570.00	4.181	4.181	0.0		6735249	54.3		109	215881	
41 Perfluorotridecanoic acid										
663.00 > 619.00	4.448	4.448	0.0	1.000	6084594	51.7		103	140214	
D 43 13C2-PFTeDA										
715.00 > 670.00	4.684	4.684	0.0		13594795	52.5		105	412666	
42 Perfluorotetradecanoic acid										
712.50 > 668.90	4.684	4.684	0.0	1.000	12368125	46.7		93.4	42501	
713.00 > 169.00	4.684	4.684	0.0	1.000	1789045		6.91(0.00-0.00)		181457	
D 44 13C2-PFHxDA										
815.00 > 770.00	5.102	5.102	0.0		7324314	58.6		117	116120	
45 Perfluorohexadecanoic acid										
813.00 > 769.00	5.102	5.102	0.0	1.000	6484396	51.6		103	6380	
46 Perfluorooctadecanoic acid										
913.00 > 869.00	5.470	5.470	0.0	1.000	4608829	47.7		95.4	4830	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

LCPFC_FULL-L5_00001 Amount Added: 1.00 Units: mL

Report Date: 27-Mar-2017 10:05:39 Chrom Revision: 2.2 13-Mar-2017 15:50:30

TestAmerica Sacramento

Data File: \\ChromNa\Sacramento\ChromData\A8_N\20170303-40441.b\2017.03.03A_009.d

Injection Date: 03-Mar-2017 10:00:31 Instrument ID: A8_N

Lims ID: CCV L5

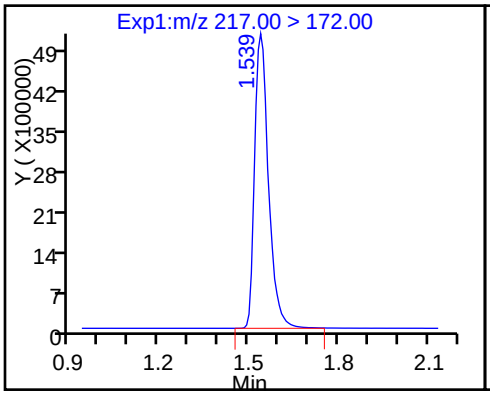
Client ID:

Operator ID: A8-PC\A8 ALS Bottle#: 32 Worklist Smp#: 9

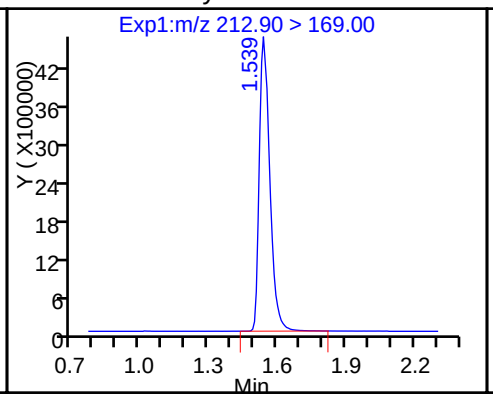
Injection Vol: 2.0 ul Dil. Factor: 1.0000

Method: A8_N Limit Group: LC PFC_DOD ICAL

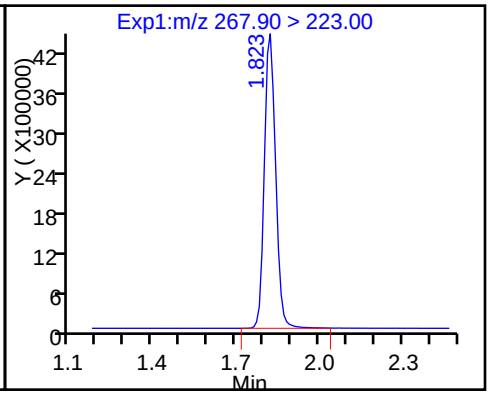
D 1 13C4 PFBA



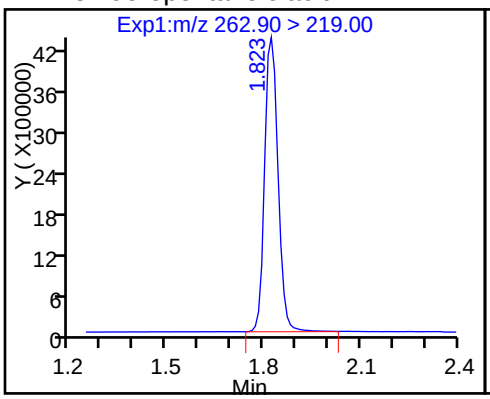
2 Perfluorobutyric acid



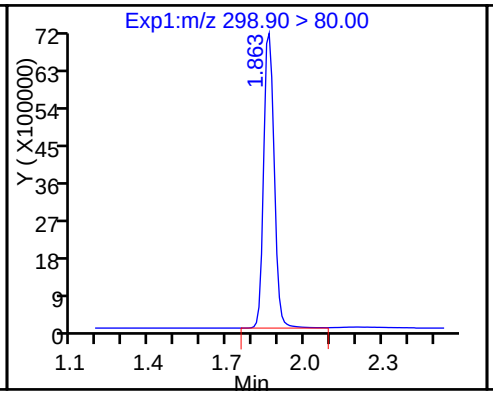
D 3 13C5-PFPeA



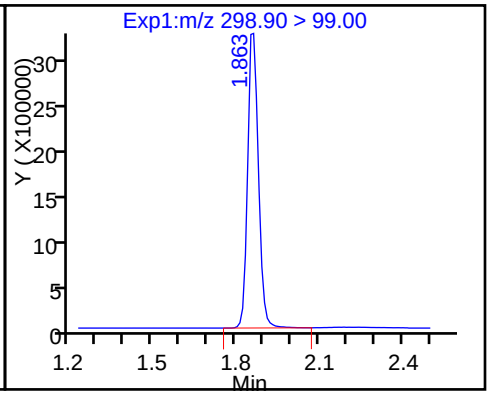
4 Perfluoropentanoic acid



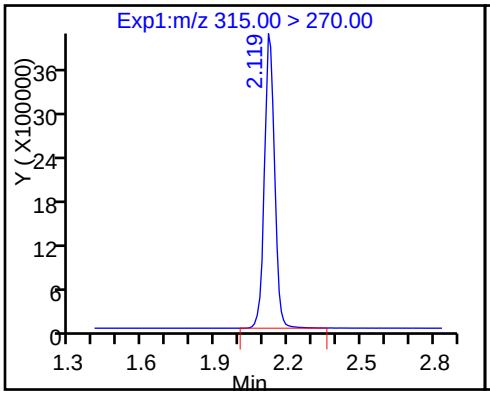
5 Perfluorobutanesulfonic acid



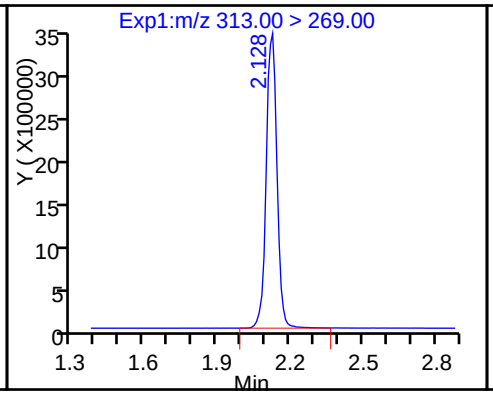
5 Perfluorobutanesulfonic acid



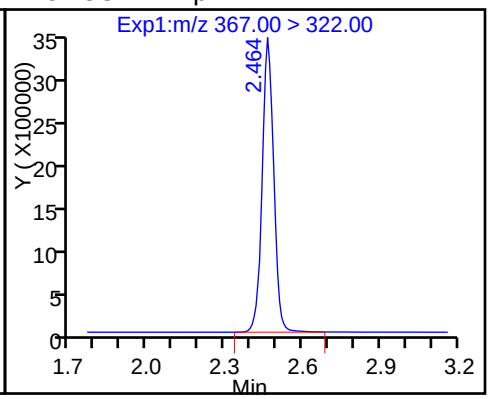
D 7 13C2 PFHxA



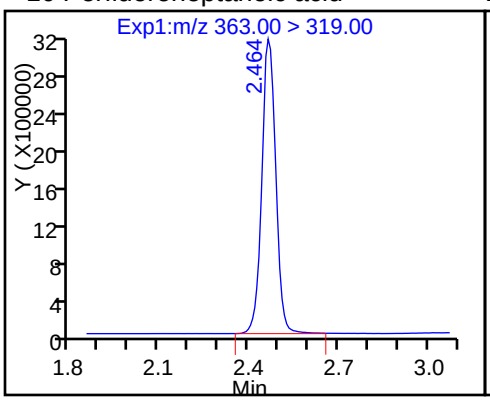
6 Perfluorohexanoic acid



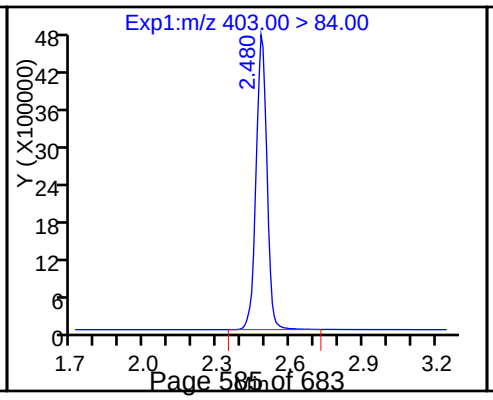
D 9 13C4-PFHpA



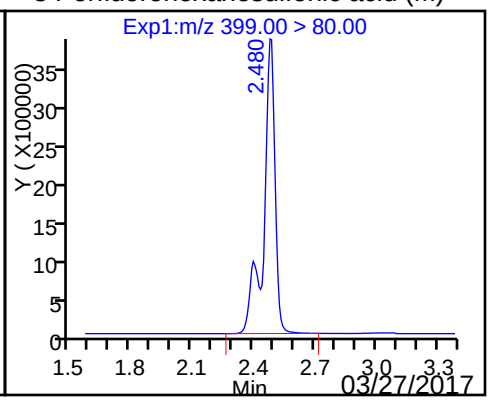
10 Perfluoroheptanoic acid



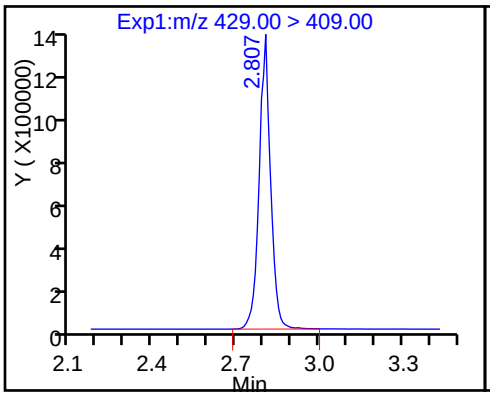
D 11 18O2 PFHxS



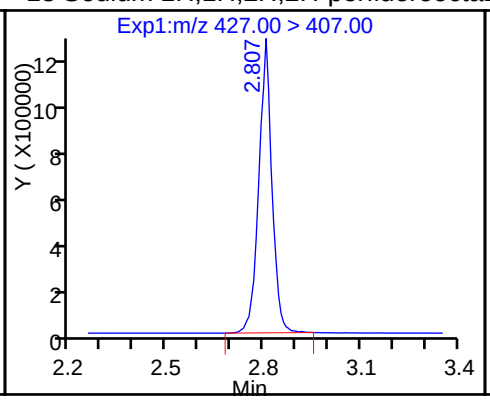
8 Perfluorohexanesulfonic acid (M)



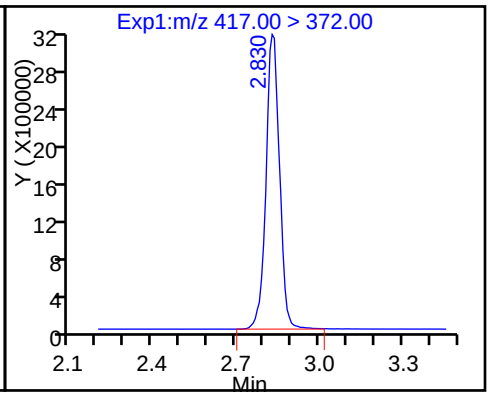
D 12 M2-6:2FTS



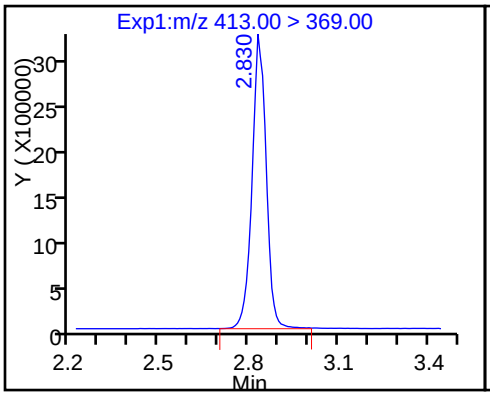
13 Sodium 1H,1H,2H,2H-perfluorooctane



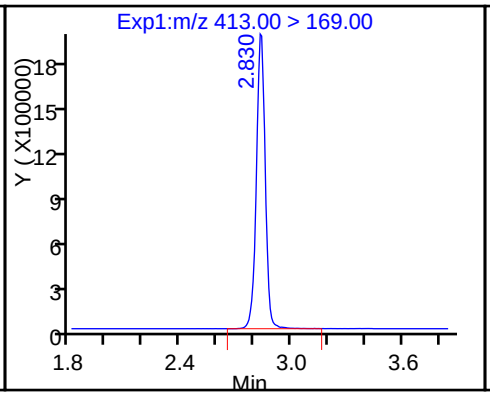
D 14 13C4 PFOA



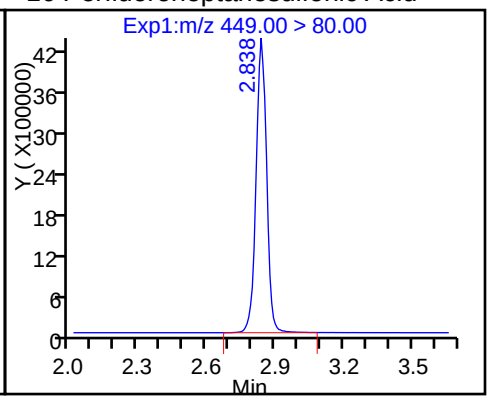
15 Perfluorooctanoic acid



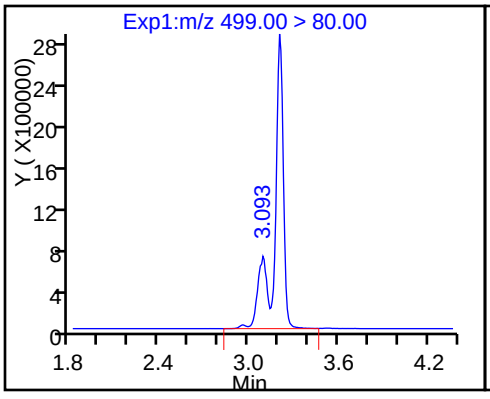
15 Perfluorooctanoic acid



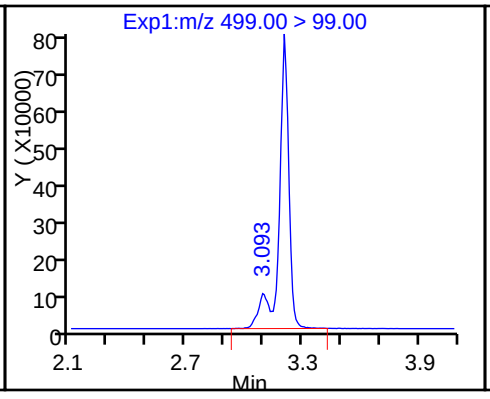
16 Perfluoroheptanesulfonic Acid



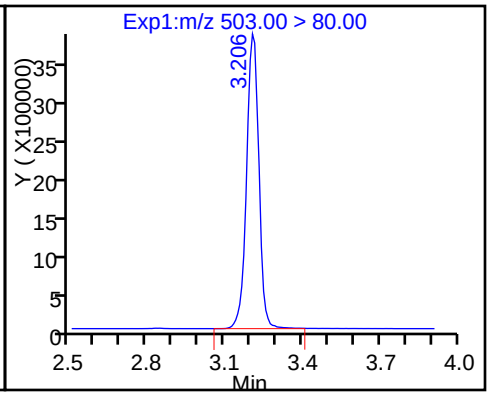
17 Perfluorooctane sulfonic acid



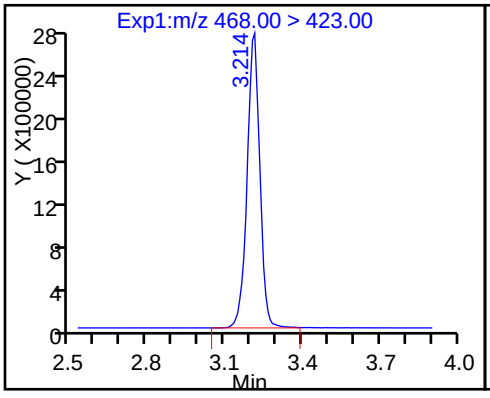
17 Perfluorooctane sulfonic acid



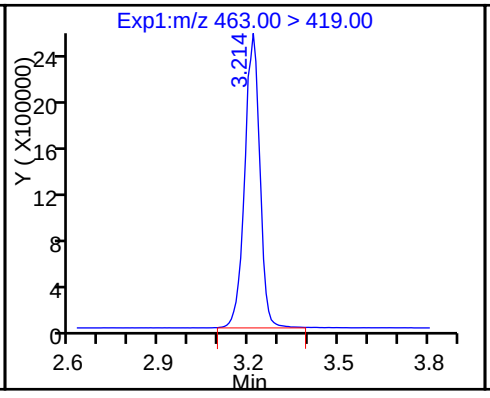
D 18 13C4 PFOS



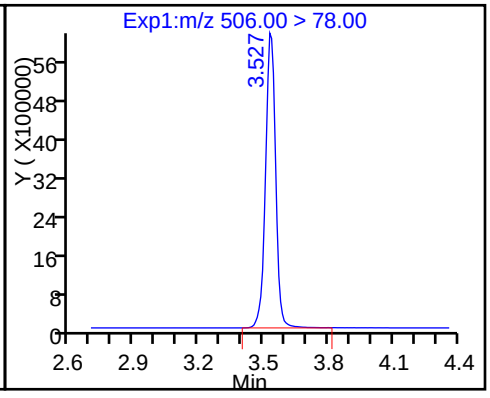
D 19 13C5 PFNA



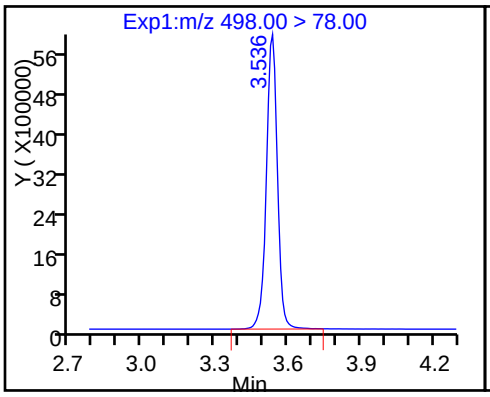
20 Perfluorononanoic acid



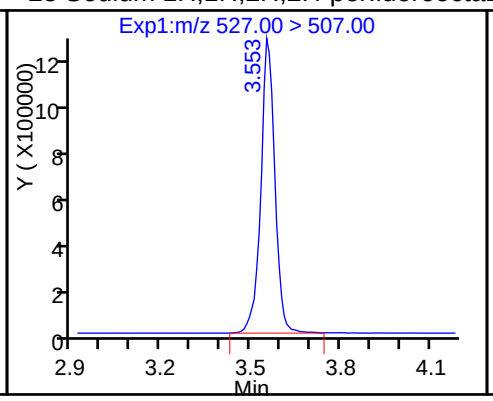
D 21 13C8 FOSA



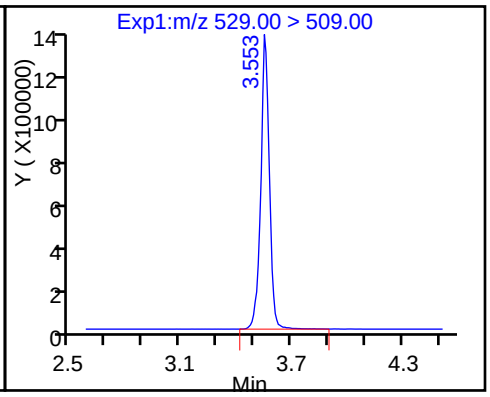
22 Perfluorooctane Sulfonamide



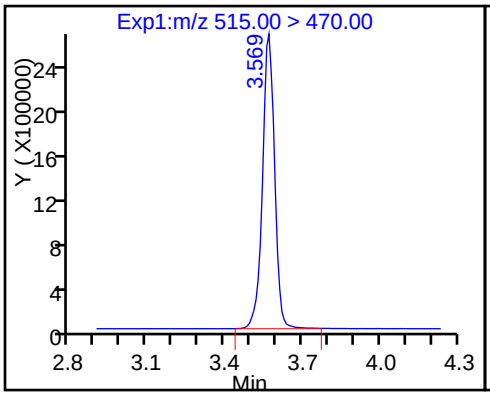
25 Sodium 1H,1H,2H,2H-perfluorooctane



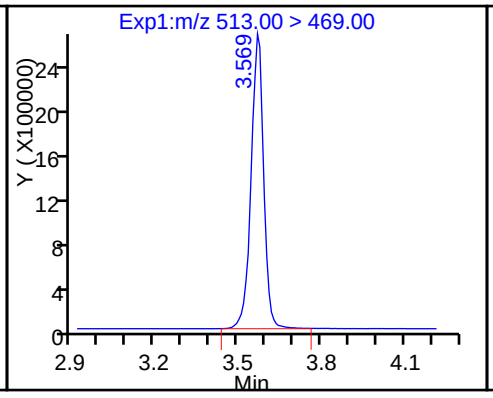
D 26 M2-8:2FTS



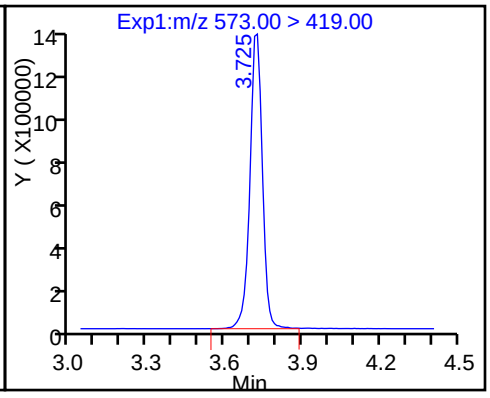
D 23 13C2 PFDA



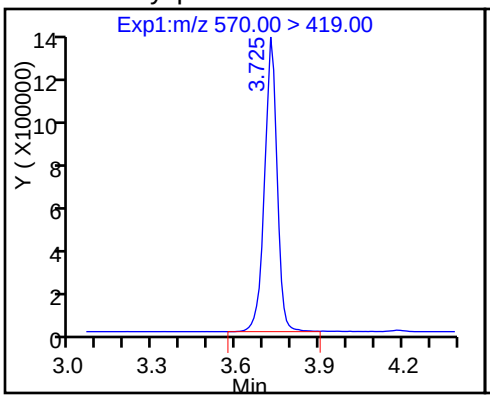
24 Perfluorodecanoic acid



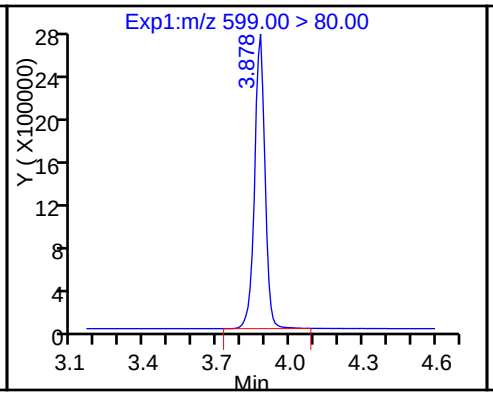
D 27 d3-NMeFOSAA



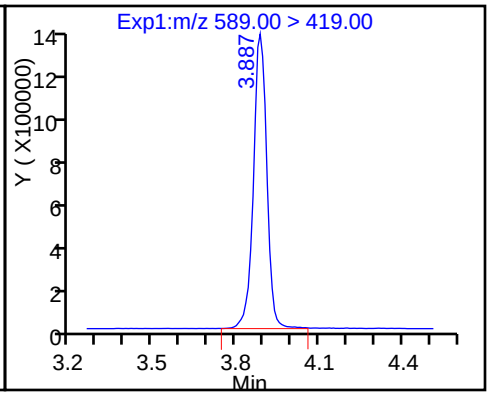
28 N-methyl perfluorooctane sulfonami



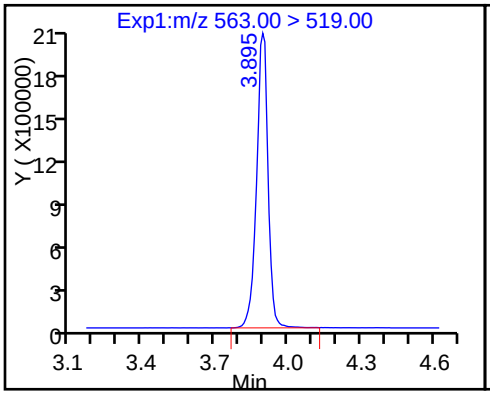
29 Perfluorodecane Sulfonic acid



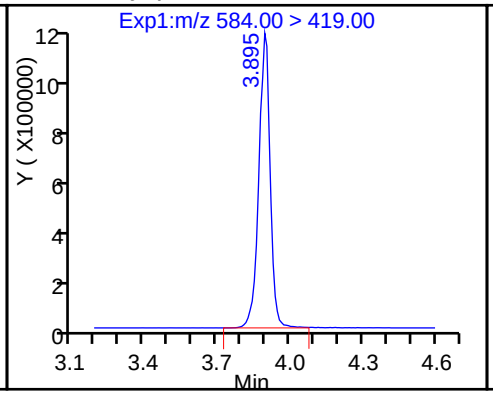
D 32 d5-NEtFOSAA



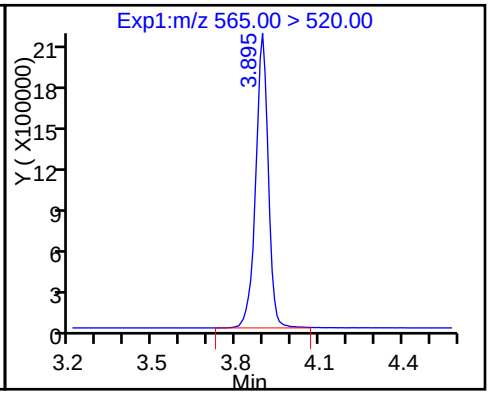
31 Perfluoroundecanoic acid



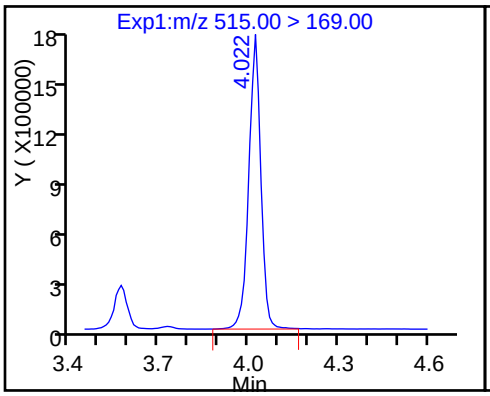
33 N-ethyl perfluorooctane sulfonamid



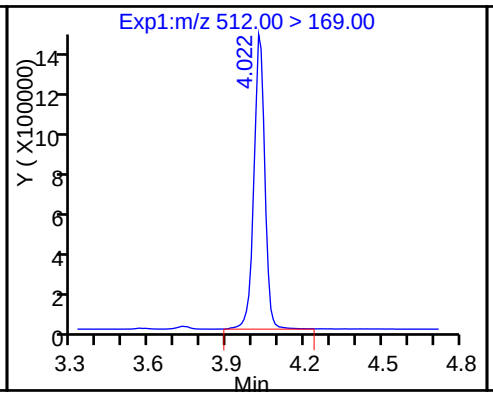
D 30 13C2 PFUnA



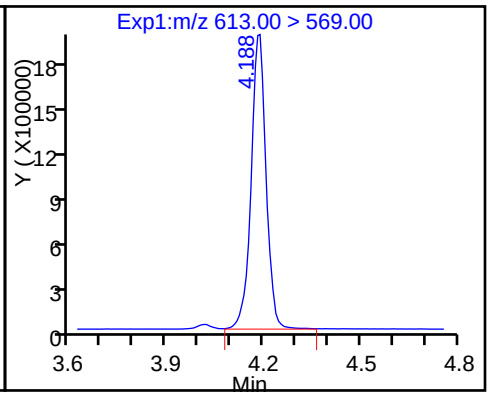
D 34 d-N-MeFOSA-M



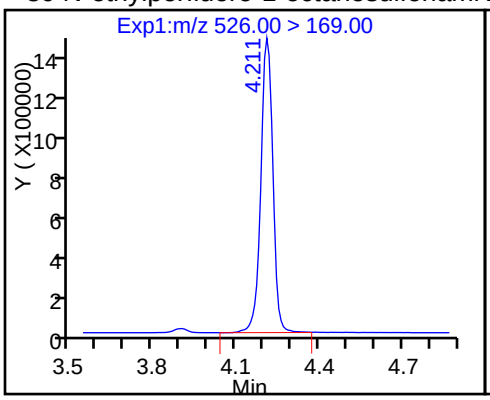
35 MeFOSA



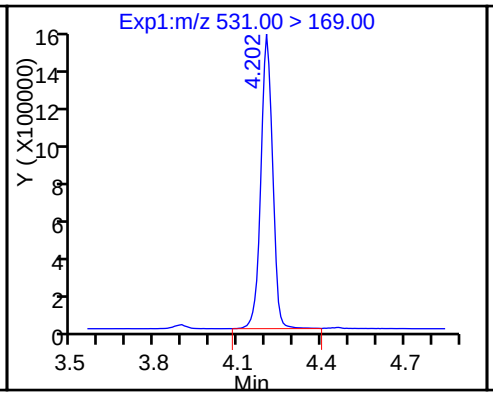
37 Perfluorododecanoic acid



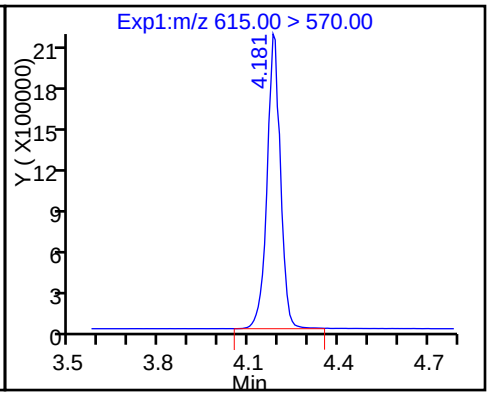
39 N-ethylperfluoro-1-octanesulfonami



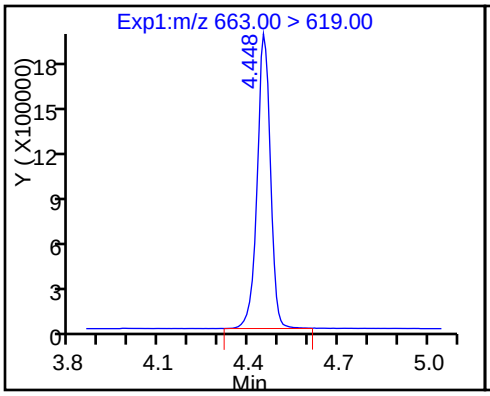
D 38 d-N-EtFOSA-M



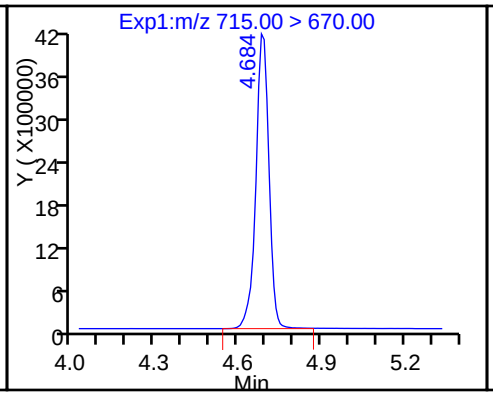
D 36 13C2 PFDoA



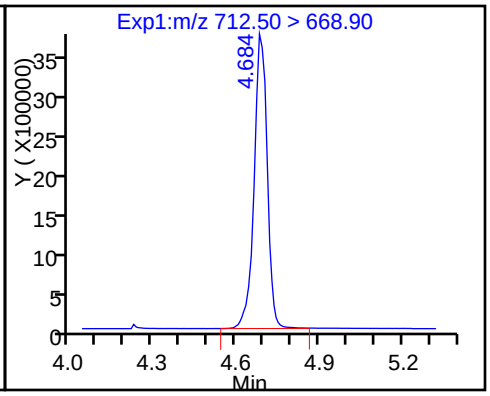
41 Perfluorotridecanoic acid



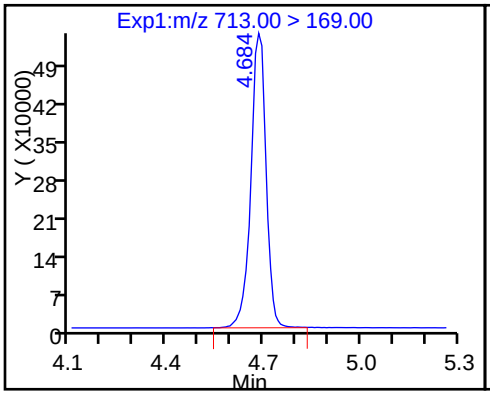
D 43 13C2-PFTeDA



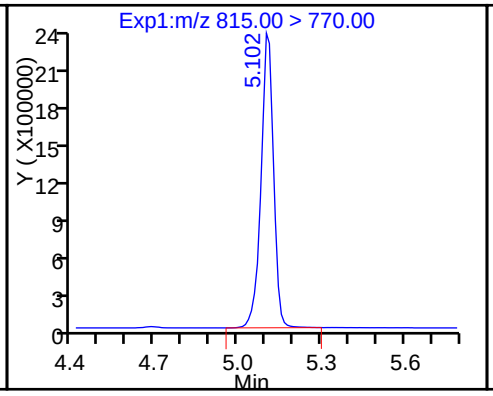
42 Perfluorotetradecanoic acid



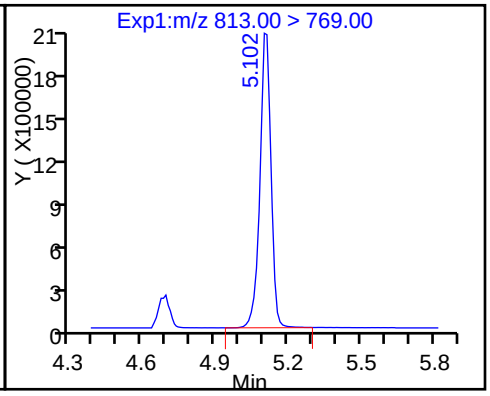
42 Perfluorotetradecanoic acid



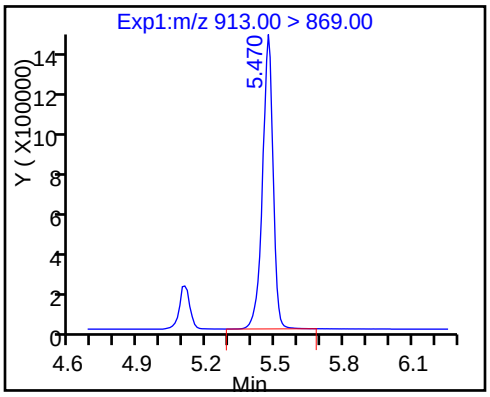
D 44 13C2-PFHxDA



45 Perfluorohexadecanoic acid



46 Perfluorooctadecanoic acid



Manual Integration/User Assign Peak Report

TestAmerica Sacramento

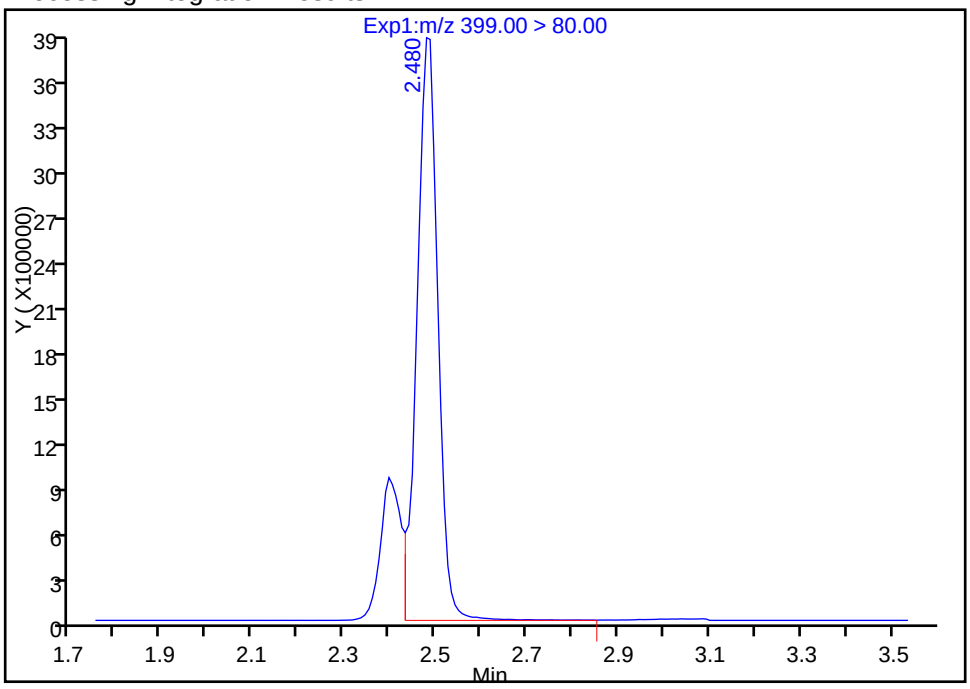
Data File: \\ChromNa\Sacramento\ChromData\A8_N\20170303-40441.b\2017.03.03A_009.d
Injection Date: 03-Mar-2017 10:00:31 Instrument ID: A8_N
Lims ID: CCV L5
Client ID:
Operator ID: A8-PC\A8 ALS Bottle#: 32 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Method: A8_N Limit Group: LC PFC_DOD ICAL
Column: Detector EXP1

8 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

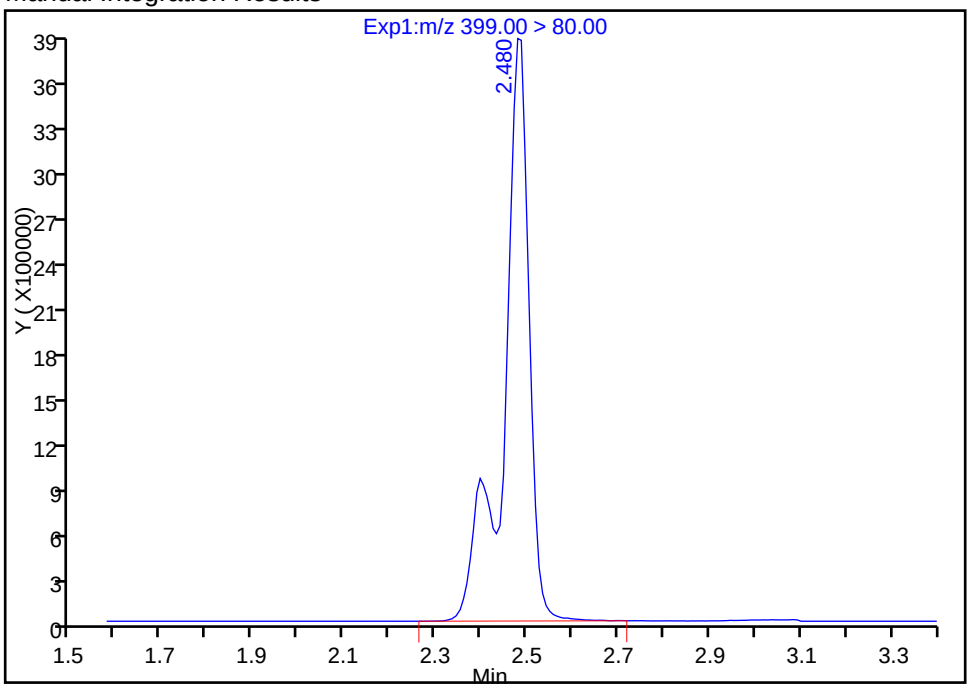
Processing Integration Results

RT: 2.48
Area: 12130753
Amount: 37.554269
Amount Units: ng/ml



Manual Integration Results

RT: 2.48
Area: 14984106
Amount: 46.387652
Amount Units: ng/ml



Reviewer: chandrasenas, 27-Mar-2017 10:05:38
Audit Action: Manually Integrated Audit Reason: Isomers

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento | Job No.: 320-25962-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 320-152015/1-A

Matrix: Solid | Lab File ID: 2017.03.01A_003.d

Analysis Method: 537 (Modified) | Date Collected:

Extraction Method: SHAKE | Date Extracted: 02/23/2017 17:22

Sample wt/vol: 5.00(g) | Date Analyzed: 03/01/2017 18:37

Con. Extract Vol.: 1.00(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: GeminiC18 3x100 ID: 3(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 152825 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
335-67-1	Perfluorooctanoic acid (PFOA)	0.30	U	0.50	0.30	0.10
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	0.178	J	0.50	0.30	0.13
375-73-5	Perfluorobutanesulfonic acid (PFBS)	0.30	U	0.40	0.30	0.10

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL00990	13C4 PFOA	121		25-150
STL00991	13C4 PFOS	95		25-150
STL00994	18O2 PFHxS	113		25-150

Report Date: 03-Mar-2017 10:40:58 Chrom Revision: 2.2 03-Feb-2017 15:35:04

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNa\Sacramento\ChromData\A8_N\20170302-40391.b\2017.03.01A_003.d
Lims ID: MB 320-152015/1-A
Client ID:
Sample Type: MB
Inject. Date: 01-Mar-2017 18:37:38 ALS Bottle#: 25 Worklist Smp#: 3
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: mb 320-152015/1-a
Misc. Info.: Plate: 1 Rack: 3
Operator ID: A8-PC\A8 Instrument ID: A8_N

Method: \\ChromNa\Sacramento\ChromData\A8_N\20170302-40391.b\A8_N.m
Limit Group: LC PFC_DOD ICAL
Last Update: 03-Mar-2017 10:40:57 Calib Date: 01-Mar-2017 11:53:47
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A8_N\20170301-40358.b\2017.03.01CURVE_009.d

Column 1 : Det: EXP1
Process Host: XAWRK033

First Level Reviewer: chandrasenas Date: 02-Mar-2017 11:38:23

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C4 PFBA										
217.00 > 172.00	1.531	1.531	0.0		16865600	57.7		115	1090959	
2 Perfluorobutyric acid										
212.90 > 169.00	1.539	1.539	0.001	1.000	91240	0.3193			659	
D 3 13C5-PFPeA										
267.90 > 223.00	1.802	1.802	0.0		12987337	55.9		112	775582	
4 Perfluoropentanoic acid										
262.90 > 219.00	1.802	1.812	-0.010	1.000	22490	0.0885			178	
5 Perfluorobutanesulfonic acid										
298.90 > 80.00	1.842	1.842	0.0	1.000	8569	0.0182				
298.90 > 99.00	1.822	1.842	-0.020	0.989	4037		2.12(0.00-0.00)			
6 Perfluorohexanoic acid										
313.00 > 269.00	2.105	2.099	0.006	1.000	15411	0.0746			265	
D 7 13C2 PFHxA										
315.00 > 270.00	2.096	2.099	-0.003		11610894	55.1		110	319354	
10 Perfluoroheptanoic acid										
363.00 > 319.00	2.447	2.423	0.024	1.000	22884	0.0924			145	
D 9 13C4-PFHpA										
367.00 > 322.00	2.439	2.423	0.016		12803192	66.4		133	474131	
8 Perfluorohexanesulfonic acid										
399.00 > 80.00	2.447	2.446	0.001	1.000	59565	0.1758				
D 11 18O2 PFHxS										
403.00 > 84.00	2.447	2.446	0.001		15582722	53.6		113	574300	
13 Sodium 1H,1H,2H,2H-perfluorooctane										
427.00 > 407.00	2.767	2.759	0.008	1.000	194180	2.33				
D 12 M2-6:2FTS										
429.00 > 409.00	2.767	2.759	0.008		4220974	54.7		115		
D 14 13C4 PFOA										
417.00 > 372.00	2.797	2.781	0.016		12430341	60.6		121	394139	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
15 Perfluorooctanoic acid										
413.00 > 369.00	2.789	2.789	0.0	1.000	78314	0.3083			946	
413.00 > 169.00	2.797	2.789	0.008	1.003	43661		1.79(0.90-1.10)		1663	
16 Perfluoroheptanesulfonic Acid										
449.00 > 80.00	2.782	2.797	-0.015	1.000	2191	0.009248				
17 Perfluorooctane sulfonic acid										
499.00 > 80.00	3.154	3.044	0.110	1.000	200767	0.8883			8635	
499.00 > 99.00	3.154	3.044	0.110	1.000	54441		3.69(0.90-1.10)		2903	
D 18 13C4 PFOS										
503.00 > 80.00	3.154	3.154	0.0		10984637	45.5		95.1	399395	
D 19 13C5 PFNA										
468.00 > 423.00	3.154	3.154	0.0		9766410	54.9		110	368305	
20 Perfluorononanoic acid										
463.00 > 419.00	3.154	3.162	-0.008	1.000	6072	0.0344			97.4	
D 26 M2-8:2FTS										
529.00 > 509.00	3.501	3.492	0.009		4157952	44.9		93.7		
24 Perfluorodecanoic acid										
513.00 > 469.00	3.501	3.501	0.0	1.000	6016	0.0388			236	
D 23 13C2 PFDA										M
515.00 > 470.00	3.518	3.501	0.017		8551945	51.3		103	163346	M
D 21 13C8 FOSA										
506.00 > 78.00	3.534	3.534	0.0		7230245	19.7		39.4	207953	
22 Perfluorooctane Sulfonamide										
498.00 > 78.00	3.543	3.543	0.0	1.000	94380	0.7264			6585	
D 27 d3-NMeFOSAA										
573.00 > 419.00	3.662	3.653	0.009		2287957	26.9		53.7		
28 N-methyl perfluorooctane sulfonami										
570.00 > 419.00	3.672	3.662	0.010	1.003	6683	0.1504				
29 Perfluorodecane Sulfonic acid										
599.00 > 80.00	3.811	3.802	0.009	1.000	2012	0.0147				
D 32 d5-NEtFOSAA										
589.00 > 419.00	3.828	3.819	0.009		2211662	27.2		54.4		
D 30 13C2 PFUnA										
565.00 > 520.00	3.828	3.819	0.009		5425398	41.5		83.0	222758	
33 N-ethyl perfluorooctane sulfonamid										
584.00 > 419.00	3.837	3.828	0.009	1.002	8467	0.2103				
31 Perfluoroundecanoic acid										
563.00 > 519.00	3.828	3.828	0.0	1.000	19673	0.1789			507	
D 34 d-N-MeFOSA-M										
515.00 > 169.00	4.032	4.041	-0.009		79061	0.8986		1.8		
35 MeFOSA										
512.00 > 169.00	4.032	4.041	-0.009	1.000	2192	1.48				
37 Perfluorododecanoic acid										
613.00 > 569.00	4.101	4.105	-0.004	1.000	5004	0.0847			158	
D 36 13C2 PFDoA										
615.00 > 570.00	4.116	4.105	0.011		3228413	26.0		52.1	101458	
D 38 d-N-EtFOSA-M										
531.00 > 169.00	4.222	4.219	0.003		56842	0.6668		1.3		

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
39 N-ethylperfluoro-1-octanesulfonami										
526.00 > 169.00	4.239	4.228	0.011	1.000	2068	1.85				
41 Perfluorotridecanoic acid										
663.00 > 619.00	4.357	4.362	-0.005	1.000	8178	0.1450			93.2	
42 Perfluorotetradecanoic acid										
712.50 > 668.90	4.596	4.585	0.011	1.000	13785	0.1086			95.1	
713.00 > 169.00	4.596	4.585	0.011	1.000	2763		4.99(0.00-0.00)		1428	
D 43 13C2-PFTeDA										
715.00 > 670.00	4.596	4.591	0.005		3372806	13.0		26.0	163310	
D 44 13C2-PFHxDA										
815.00 > 770.00	4.993	4.977	0.016		1212701	9.70		19.4	94898	
45 Perfluorohexadecanoic acid										
813.00 > 769.00	4.987	4.977	0.010	1.000	26028	0.0583			504	
46 Perfluorooctadecanoic acid										M
913.00 > 869.00	5.316	5.306	0.010	1.000	13870	0.2994			173	M

QC Flag Legend

Review Flags

M - Manually Integrated

Report Date: 03-Mar-2017 10:40:58 Chrom Revision: 2.2 03-Feb-2017 15:35:04

TestAmerica Sacramento

Data File: \\ChromNa\Sacramento\ChromData\A8_N\20170302-40391.b\2017.03.01A_003.d

Injection Date: 01-Mar-2017 18:37:38 Instrument ID: A8_N

Lims ID: MB 320-152015/1-A

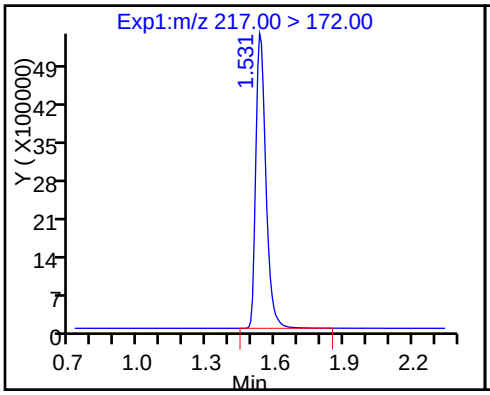
Client ID:

Operator ID: A8-PC\A8 ALS Bottle#: 25 Worklist Smp#: 3

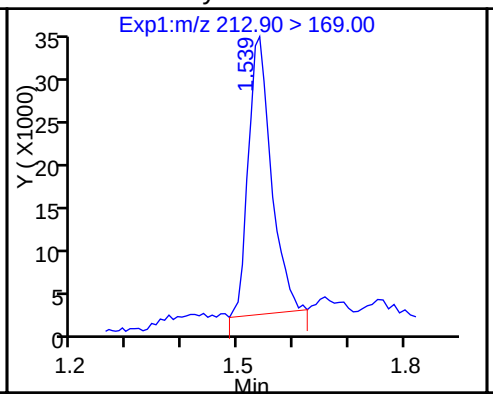
Injection Vol: 2.0 ul Dil. Factor: 1.0000

Method: A8_N Limit Group: LC PFC_DOD ICAL

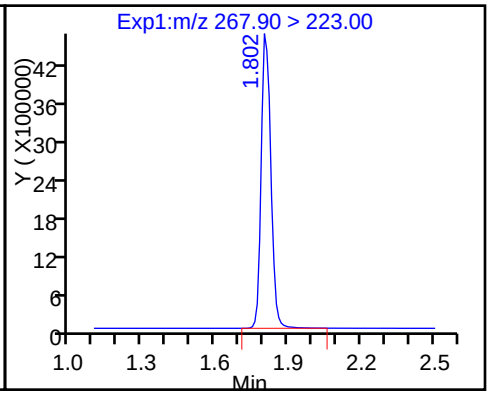
D 1 13C4 PFBA



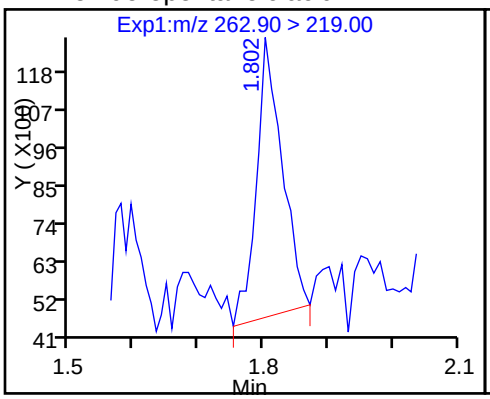
2 Perfluorobutyric acid



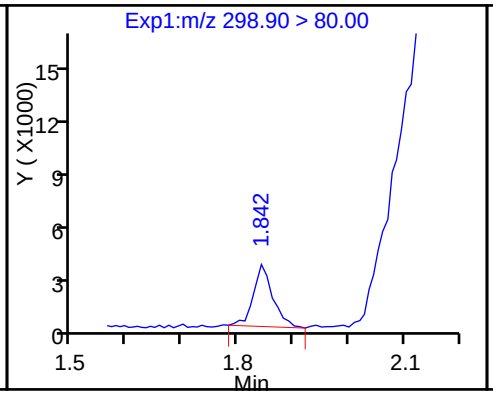
D 3 13C5-PFPeA



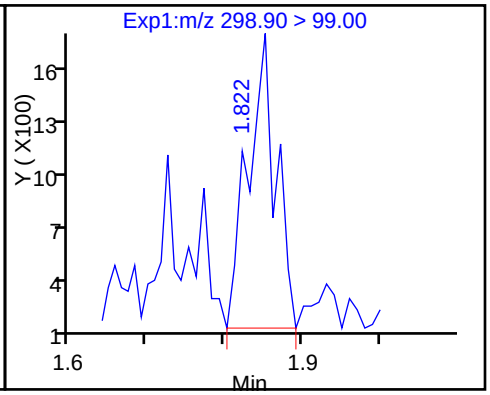
4 Perfluoropentanoic acid



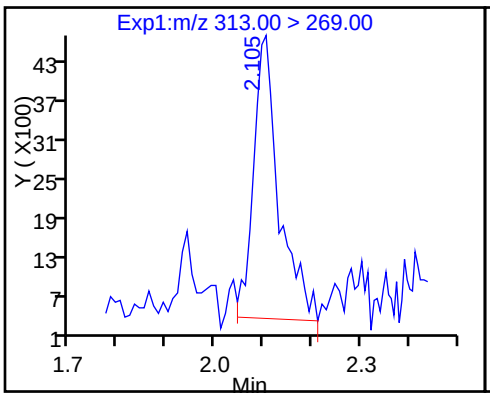
5 Perfluorobutanesulfonic acid



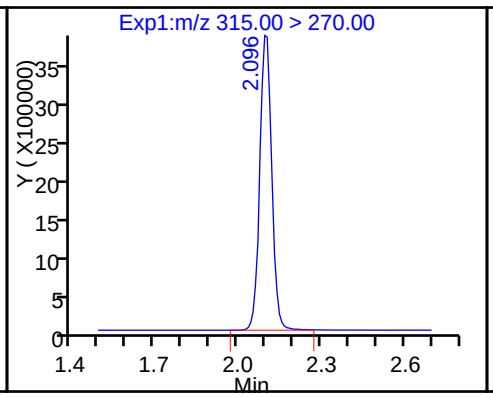
5 Perfluorobutanesulfonic acid



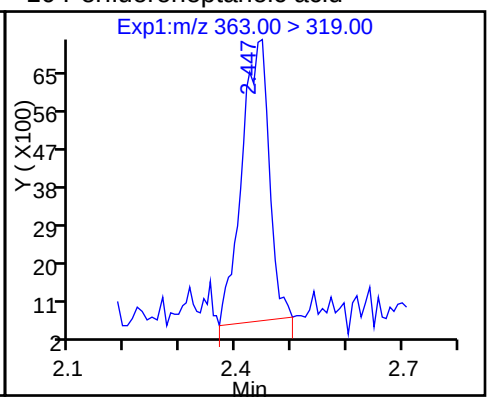
6 Perfluorohexanoic acid



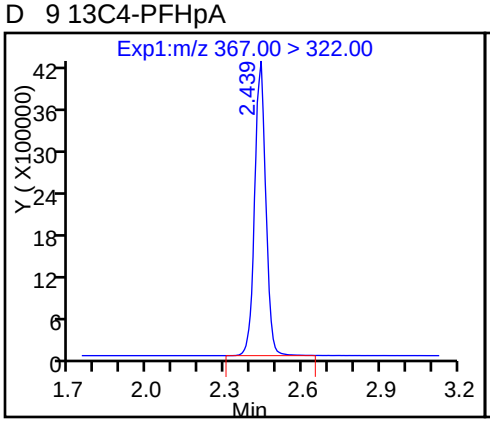
D 7 13C2 PFHxA



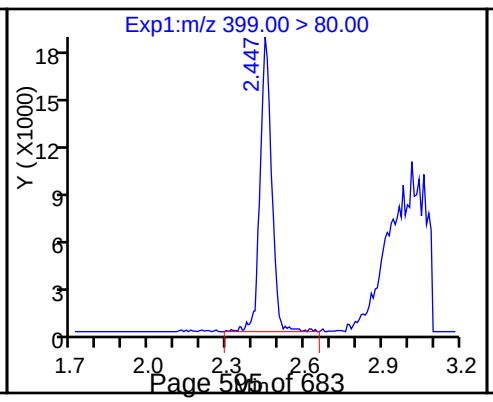
10 Perfluoroheptanoic acid



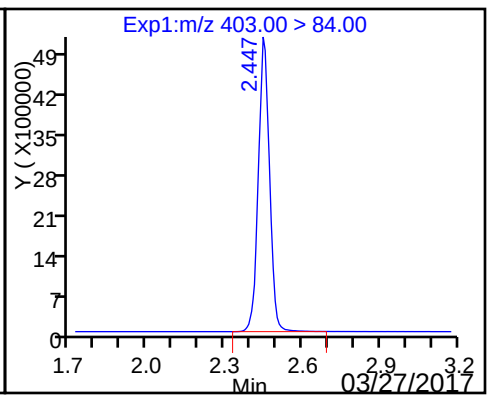
D 9 13C4-PFHpA



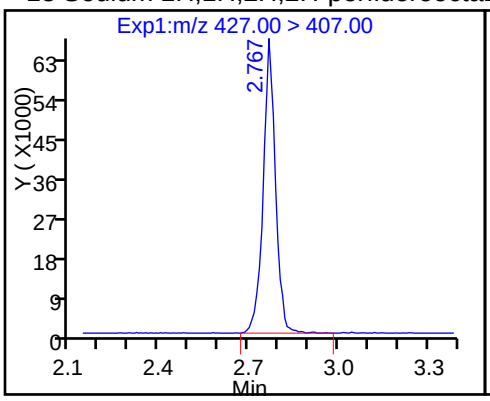
8 Perfluorohexanesulfonic acid



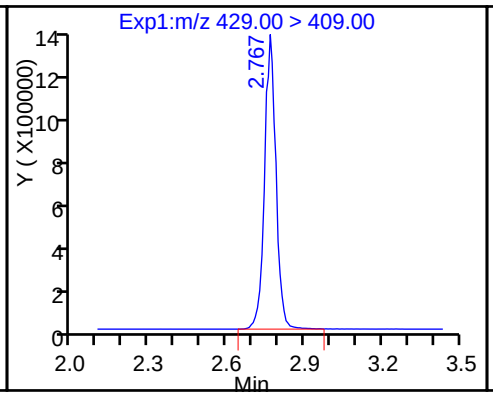
D 11 18O2 PFHxS



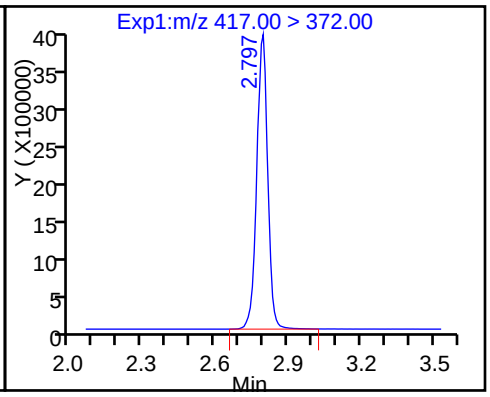
13 Sodium 1H,1H,2H,2H-perfluorooctane



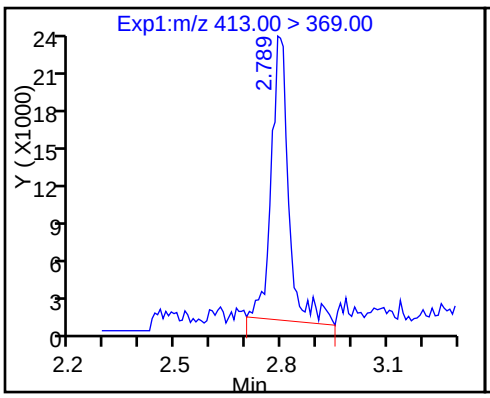
D 12 M2-6:2FTS



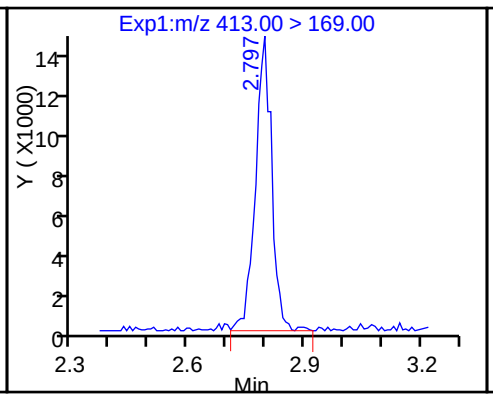
D 14 13C4 PFOA



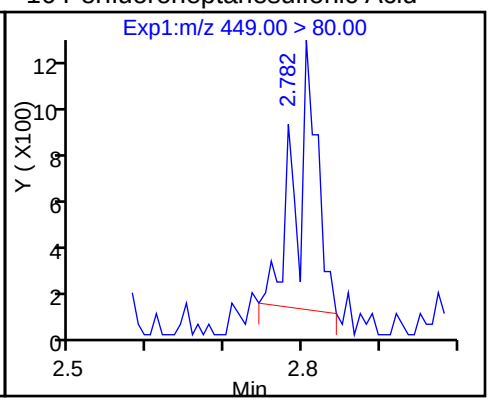
15 Perfluorooctanoic acid



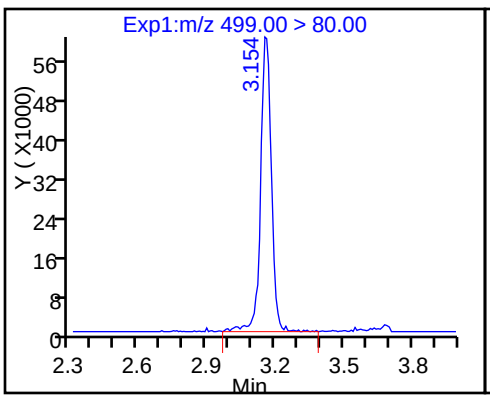
15 Perfluorooctanoic acid



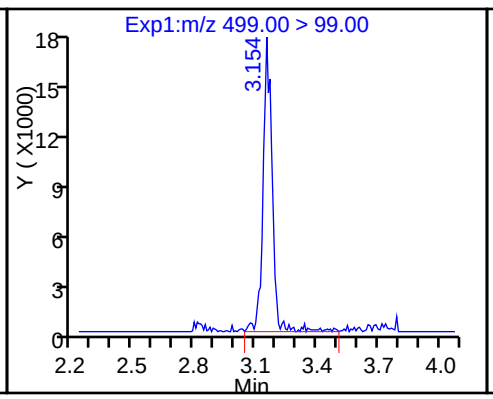
16 Perfluoroheptanesulfonic Acid



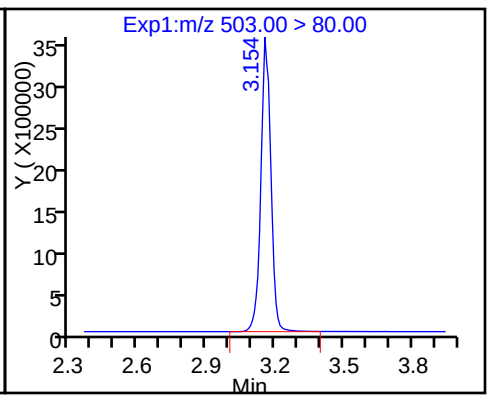
17 Perfluorooctane sulfonic acid



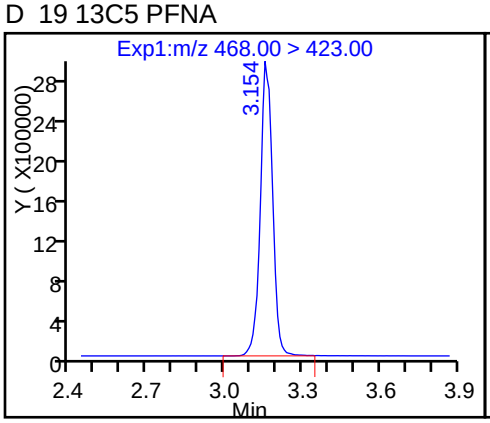
17 Perfluorooctane sulfonic acid



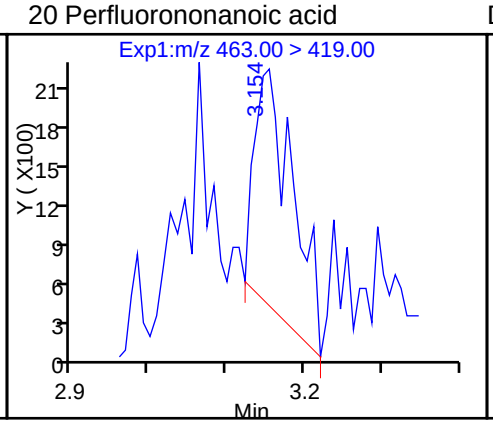
D 18 13C4 PFOS



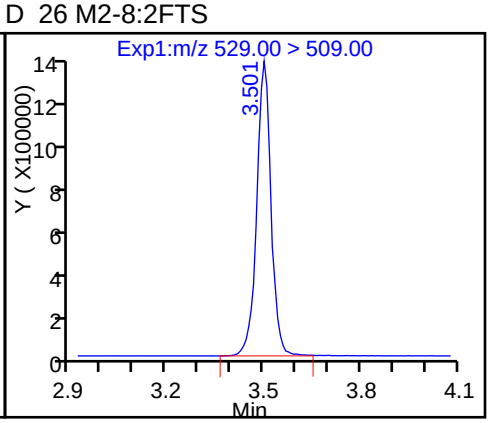
D 19 13C5 PFNA



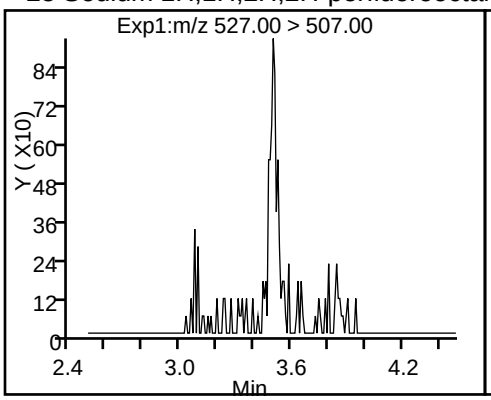
20 Perfluorononanoic acid



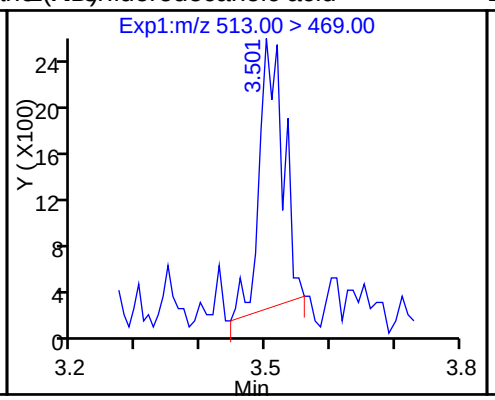
D 26 M2-8:2FTS



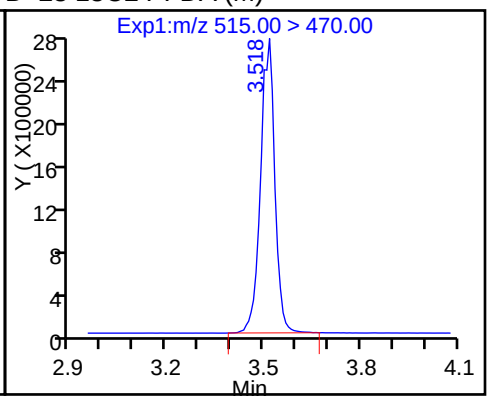
25 Sodium 1H,1H,2H,2H-perfluorooctane (NPe)



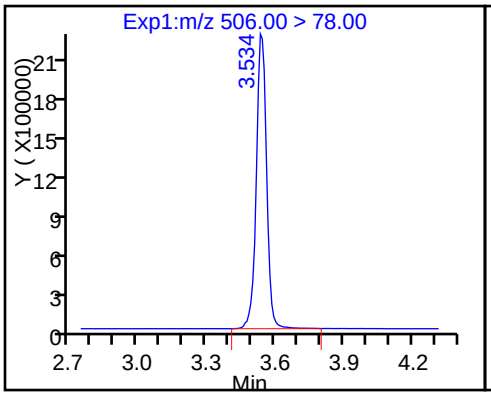
24 Perfluorodecanoic acid



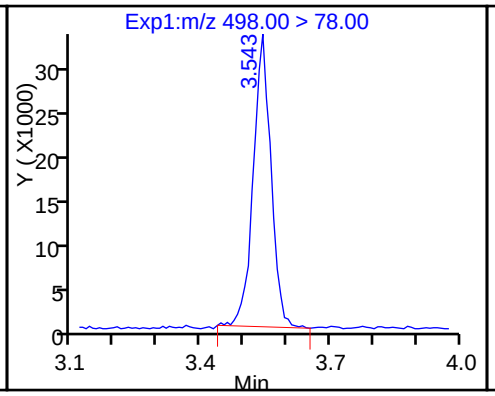
D 23 13C2 PFDA (M)



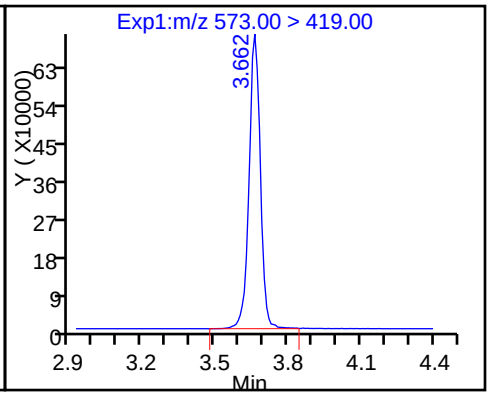
D 21 13C8 FOSA



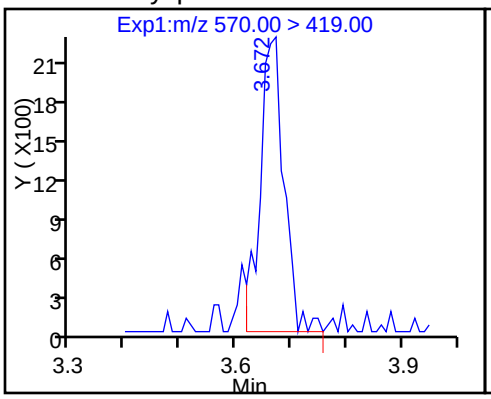
22 Perfluorooctane Sulfonamide



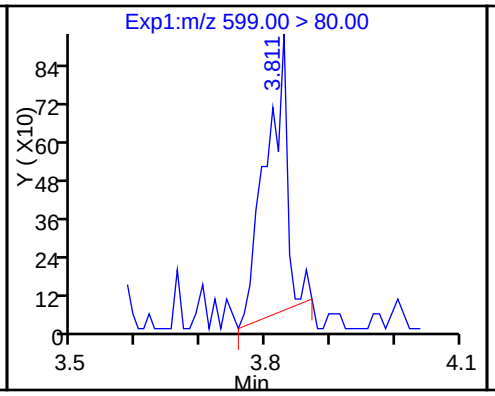
D 27 d3-NMeFOSAA



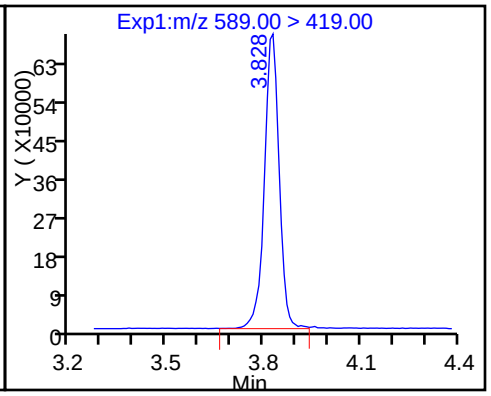
28 N-methyl perfluorooctane sulfonami



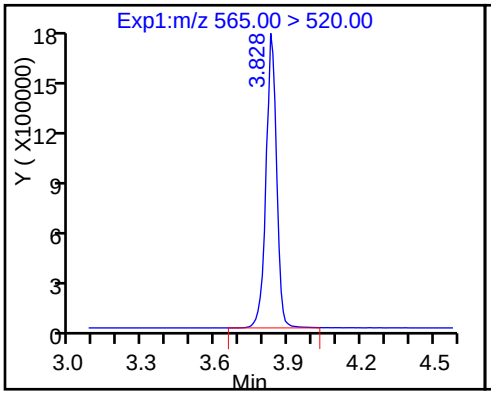
29 Perfluorodecane Sulfonic acid



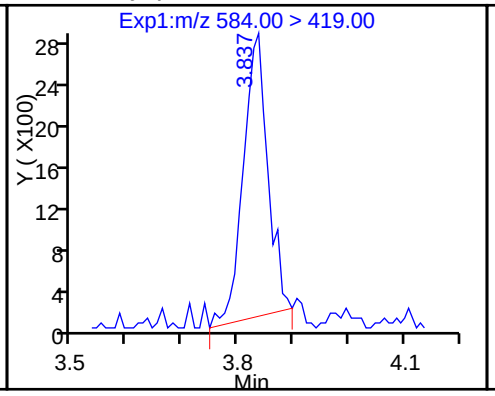
D 32 d5-NEtFOSAA



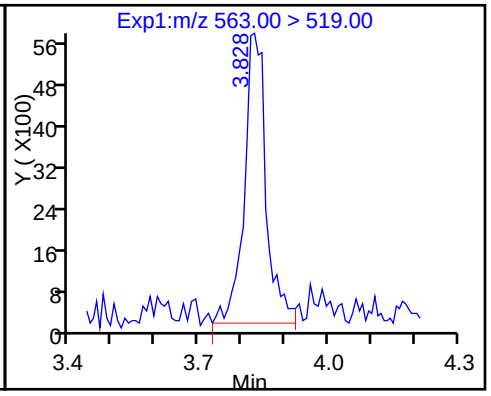
D 30 13C2 PFUnA



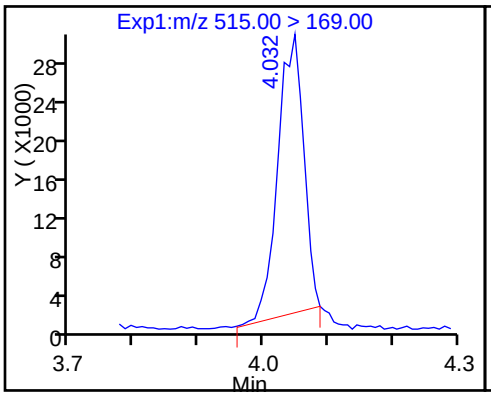
33 N-ethyl perfluorooctane sulfonamid



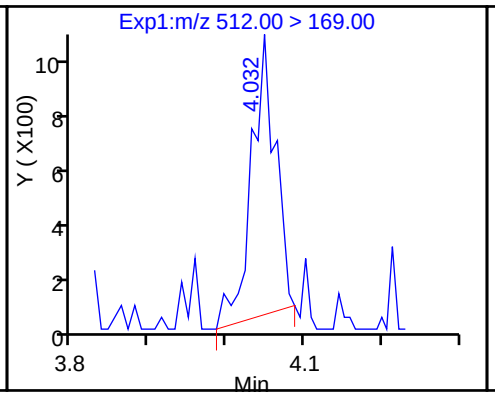
31 Perfluoroundecanoic acid



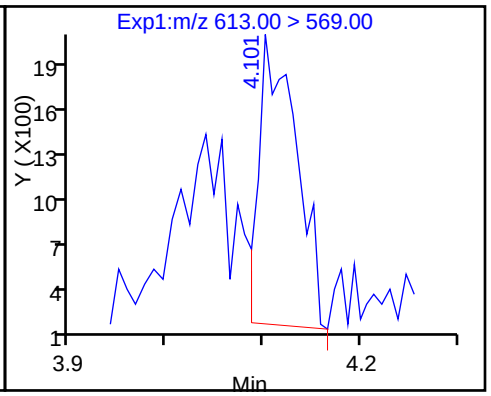
D 34 d-N-MeFOSA-M



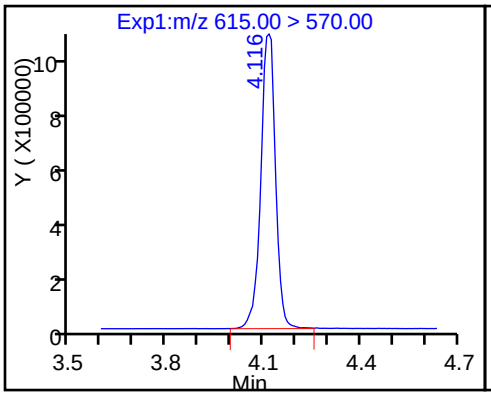
35 MeFOSA



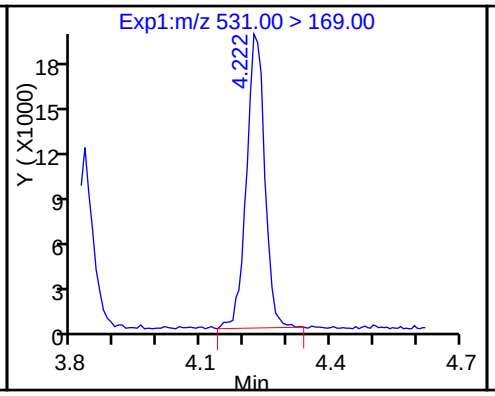
37 Perfluorododecanoic acid



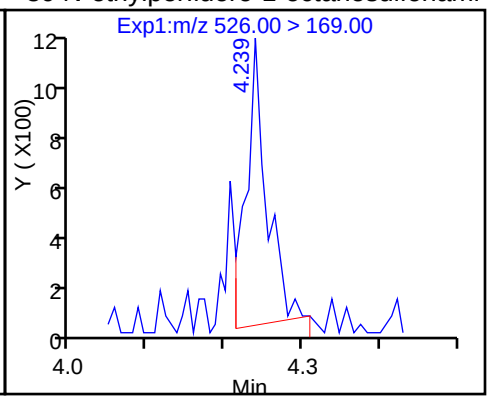
D 36 13C2 PFDoA



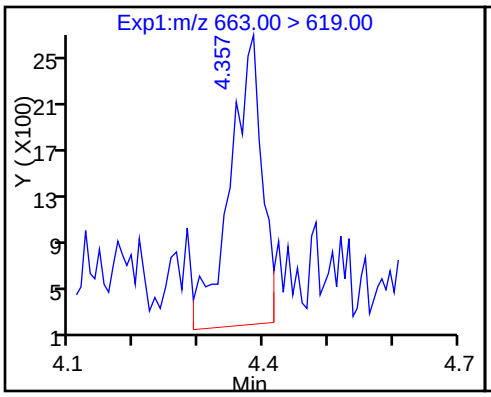
D 38 d-N-EtFOSA-M



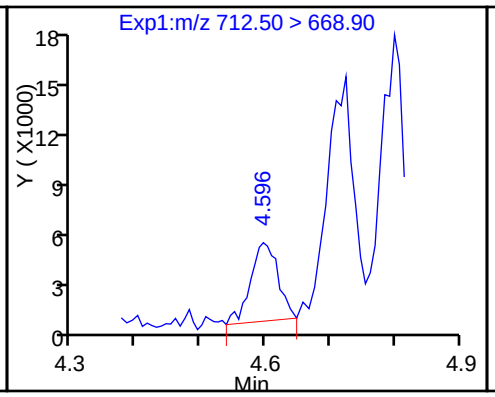
39 N-ethylperfluoro-1-octanesulfonami



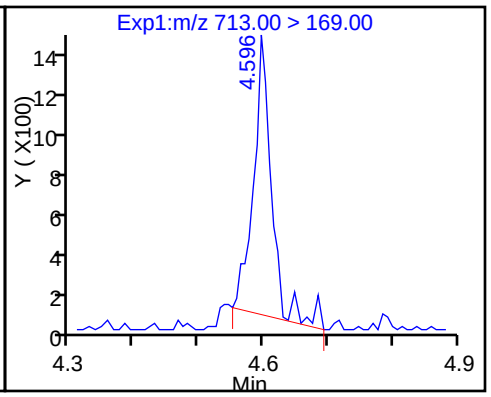
41 Perfluorotridecanoic acid



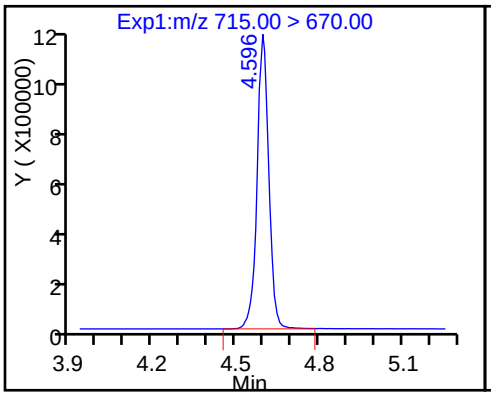
42 Perfluorotetradecanoic acid



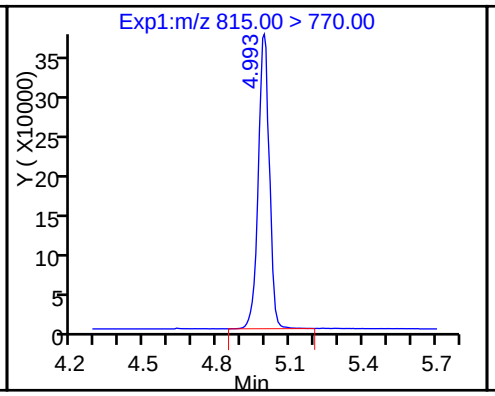
42 Perfluorotetradecanoic acid



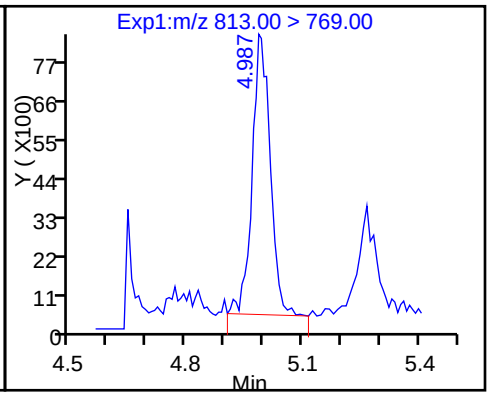
D 43 13C2-PFTeDA



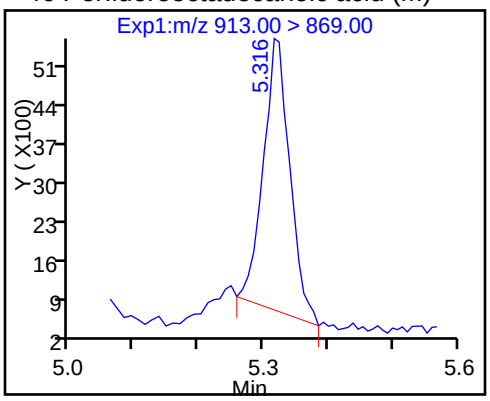
D 44 13C2-PFHxDA



45 Perfluorohexadecanoic acid



46 Perfluorooctadecanoic acid (M)



FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 320-25962-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 320-152587/1-A

Matrix: Water Lab File ID: 2017.03.02A_004.d

Analysis Method: 537 (Modified) Date Collected:

Extraction Method: 3535 Date Extracted: 02/28/2017 16:42

Sample wt/vol: 250.00(mL) Date Analyzed: 03/02/2017 10:35

Con. Extract Vol.: 0.50(mL) Dilution Factor: 1

Injection Volume: 2(uL) GC Column: GeminiC18 3x100 ID: 3(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 152836 Units: ng/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
335-67-1	Perfluorooctanoic acid (PFOA)	2.0	U M	2.5	2.0	0.75
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	3.0	U	4.0	3.0	1.3
375-73-5	Perfluorobutanesulfonic acid (PFBS)	2.0	U	2.5	2.0	0.92

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL00990	13C4 PFOA	158	Q	25-150
STL00991	13C4 PFOS	138		25-150
STL00994	18O2 PFHxS	145		25-150

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNa\Sacramento\ChromData\A8_N\20170302-40393.b\2017.03.02A_004.d
Lims ID: MB 320-152587/1-A
Client ID:
Sample Type: MB
Inject. Date: 02-Mar-2017 10:35:15 ALS Bottle#: 1 Worklist Smp#: 13
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: mb 320-152587/1-a
Misc. Info.: Plate: 1 Rack: 5
Operator ID: A8-PC\A8 Instrument ID: A8_N

Method: \\ChromNa\Sacramento\ChromData\A8_N\20170302-40393.b\A8_N.m
Limit Group: LC PFC_DOD ICAL
Last Update: 08-Mar-2017 08:24:39 Calib Date: 01-Mar-2017 11:53:47
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A8_N\20170301-40358.b\2017.03.01CURVE_009.d

Column 1 : Det: EXP1
Process Host: XAWRK022

First Level Reviewer: chandrasenas Date: 02-Mar-2017 12:20:47

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
2 Perfluorobutyric acid										
212.90 > 169.00	1.569	1.538	0.031	1.000	77701	0.2168			388	
D 1 13C4 PFBA										
217.00 > 172.00	1.538	1.538	0.0		21149082	72.4		145	835413	
D 3 13C5-PFPeA										
267.90 > 223.00	1.821	1.821	0.0		18356897	79.1		158	694336	
4 Perfluoropentanoic acid										
262.90 > 219.00	1.821	1.821	0.0	1.000	30613	0.0852			262	
5 Perfluorobutanesulfonic acid										
298.90 > 80.00	1.861	1.861	0.0	1.000	9759	0.0161				
298.90 > 99.00	1.851	1.861	-0.010	0.995	3893		2.51(0.00-0.00)			
D 7 13C2 PFHxA										
315.00 > 270.00	2.118	2.122	-0.004		16382273	77.7		155	385952	
6 Perfluorohexanoic acid										
313.00 > 269.00	2.118	2.122	-0.004	1.000	19342	0.0664			282	
8 Perfluorohexanesulfonic acid										
399.00 > 80.00	2.476	2.483	-0.007	1.000	70774	0.1627				
D 9 13C4-PFHpA										
367.00 > 322.00	2.461	2.468	-0.007		16226877	84.1		168	491607	
D 11 18O2 PFHxS										
403.00 > 84.00	2.476	2.483	-0.007		20004423	68.8		145	622204	
13 Sodium 1H,1H,2H,2H-perfluorooctane										
427.00 > 407.00	2.795	2.803	-0.007	1.000	6740	-0.0816				
D 12 M2-6:2FTS										
429.00 > 409.00	2.787	2.803	-0.015		6657626	86.3		182		
D 14 13C4 PFOA										
417.00 > 372.00	2.826	2.834	-0.008		16226858	79.2		158	561166	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
15 Perfluorooctanoic acid										M
413.00 > 369.00	2.818	2.834	-0.016	1.000	31167	0.0940			197	M
413.00 > 169.00	2.834	2.834	0.0	1.006	18054		1.73(0.90-1.10)		749	M
17 Perfluorooctane sulfonic acid										
499.00 > 80.00	3.192	3.089	0.103	1.000	11900	0.0362			955	
499.00 > 99.00	3.210	3.089	0.121	1.005	6667		1.78(0.90-1.10)		207	
D 18 13C4 PFOS										
503.00 > 80.00	3.192	3.202	-0.010		15992605	66.2		138	538384	
D 19 13C5 PFNA										
468.00 > 423.00	3.201	3.202	-0.001		11921385	67.0		134	395671	
D 21 13C8 FOSA										
506.00 > 78.00	3.529	3.528	0.001		16705430	45.5		91.1	291304	
22 Perfluorooctane Sulfonamide										
498.00 > 78.00	3.529	3.536	-0.007	1.000	60494	0.2015			3973	
D 26 M2-8:2FTS										
529.00 > 509.00	3.537	3.553	-0.016		6613182	71.4		149		
D 23 13C2 PFDA										
515.00 > 470.00	3.554	3.561	-0.007		10948888	65.7		131	243284	
24 Perfluorodecanoic acid										
513.00 > 469.00	3.554	3.561	-0.007	1.000	7332	0.0370			210	
D 27 d3-NMeFOSAA										
573.00 > 419.00	3.705	3.714	-0.009		3829394	45.0		89.9		
28 N-methyl perfluorooctane sulfonami										
570.00 > 419.00	3.705	3.714	-0.009	1.000	1202	0.0162				
D 32 d5-NEtFOSAA										
589.00 > 419.00	3.868	3.875	-0.007		3674072	45.2		90.3		
31 Perfluoroundecanoic acid										
563.00 > 519.00	3.877	3.884	-0.007	1.000	22140	0.1280			539	
D 30 13C2 PFUnA										
565.00 > 520.00	3.877	3.884	-0.007		8531315	65.2		130	202553	
D 34 d-N-MeFOSA-M										
515.00 > 169.00	4.011	4.027	-0.016		8387	0.0953		0.2		
D 36 13C2 PFDoA										
615.00 > 570.00	4.158	4.172	-0.014		7689303	62.0		124	177606	
D 38 d-N-EtFOSA-M										
531.00 > 169.00	4.194	4.205	-0.011		7985	0.0937		0.2		
41 Perfluorotridecanoic acid										
663.00 > 619.00	4.418	4.436	-0.018	1.000	763	0.005680			28.4	
D 43 13C2-PFTeDA										
715.00 > 670.00	4.661	4.672	-0.011		20433684	78.8		158	588115	
42 Perfluorotetradecanoic acid										
712.50 > 668.90	4.679	4.681	-0.002	1.000	71601	0.2368			325	
713.00 > 169.00	4.652	4.681	-0.029	0.994	10234		7.00(0.00-0.00)		1944	
D 44 13C2-PFHxDA										
815.00 > 770.00	5.079	5.093	-0.014		7949525	63.6		127	202911	
45 Perfluorohexadecanoic acid										
813.00 > 769.00	5.079	5.093	-0.014	1.000	117593	0.4483			292	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
46 Perfluorooctadecanoic acid										
913.00 > 869.00	5.421	5.446	-0.025	1.000	5710	0.0517			12.2	

QC Flag Legend

Review Flags

M - Manually Integrated

Report Date: 08-Mar-2017 08:24:41 Chrom Revision: 2.2 05-Mar-2017 11:38:00

TestAmerica Sacramento

Data File: \\ChromNa\Sacramento\ChromData\A8_N\20170302-40393.b\2017.03.02A_004.d

Injection Date: 02-Mar-2017 10:35:15 Instrument ID: A8_N

Lims ID: MB 320-152587/1-A

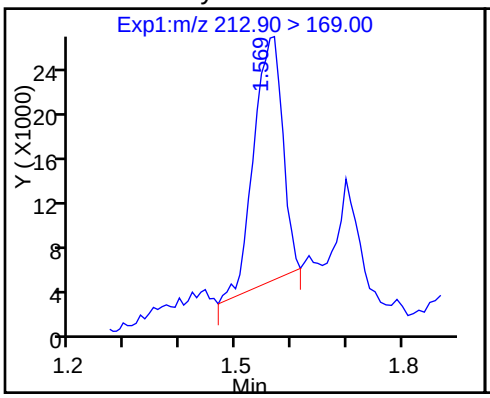
Client ID:

Operator ID: A8-PC\A8 ALS Bottle#: 1 Worklist Smp#: 13

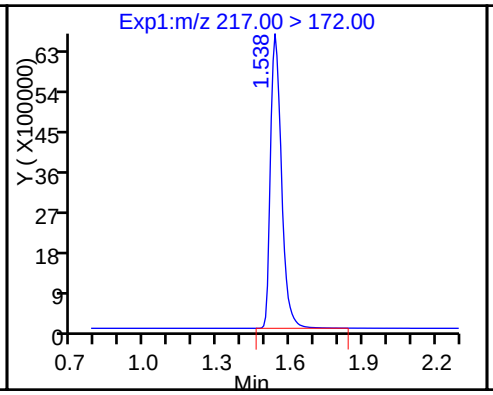
Injection Vol: 2.0 ul Dil. Factor: 1.0000

Method: A8_N Limit Group: LC PFC_DOD ICAL

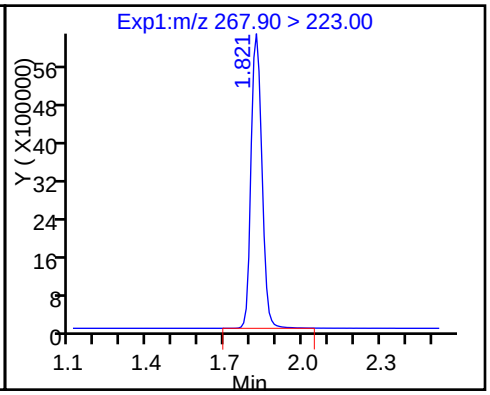
2 Perfluorobutyric acid



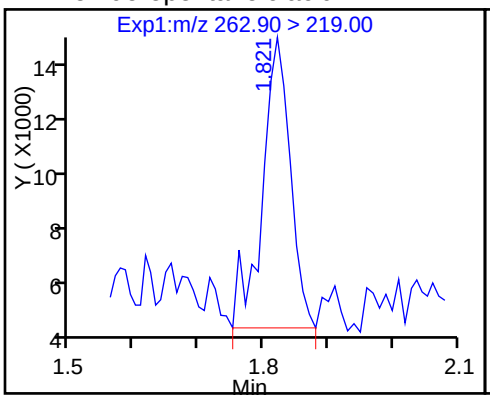
D 1 13C4 PFBA



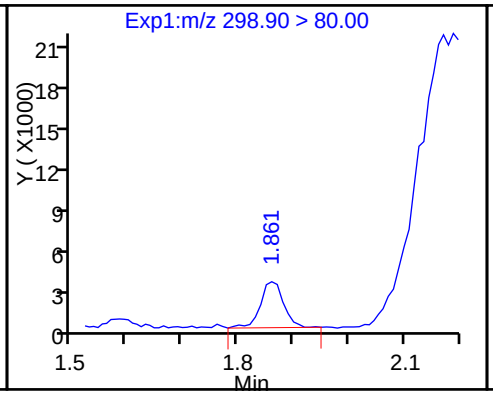
D 3 13C5-PFPeA



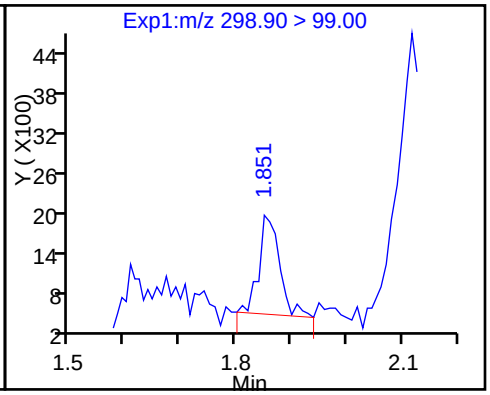
4 Perfluoropentanoic acid



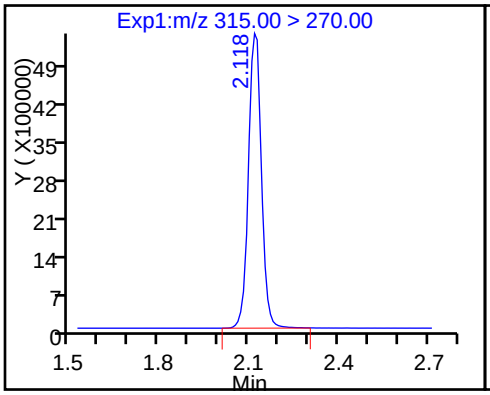
5 Perfluorobutanesulfonic acid



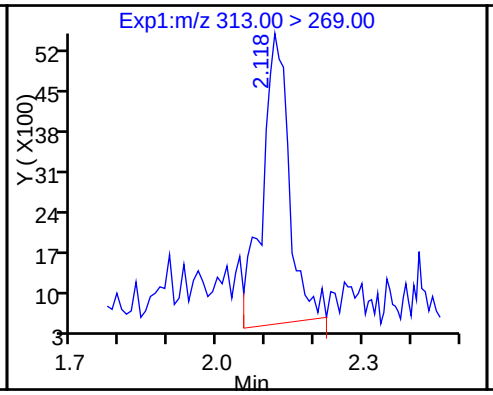
5 Perfluorobutanesulfonic acid



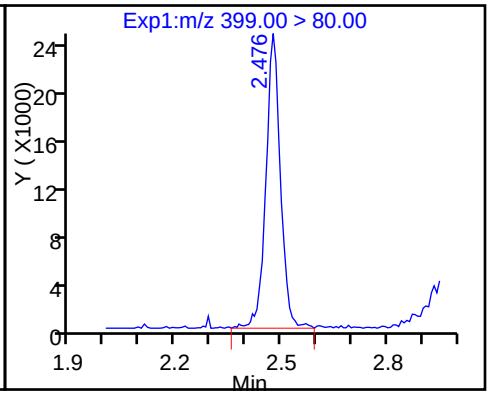
D 7 13C2 PFHxA



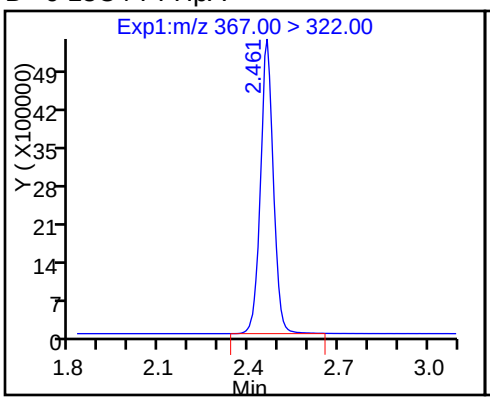
6 Perfluorohexanoic acid



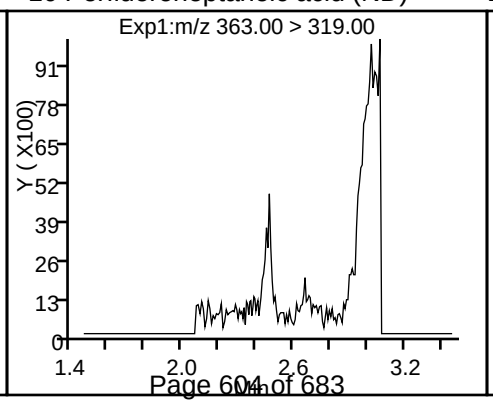
8 Perfluorohexanesulfonic acid



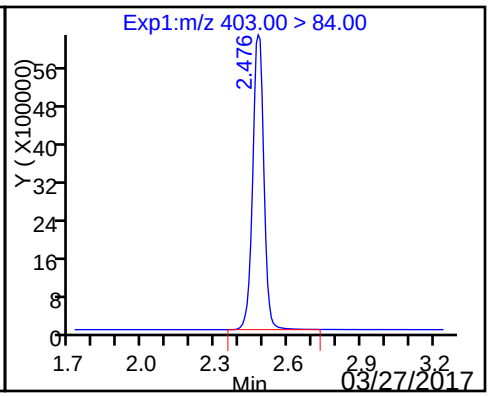
D 9 13C4-PFHpA



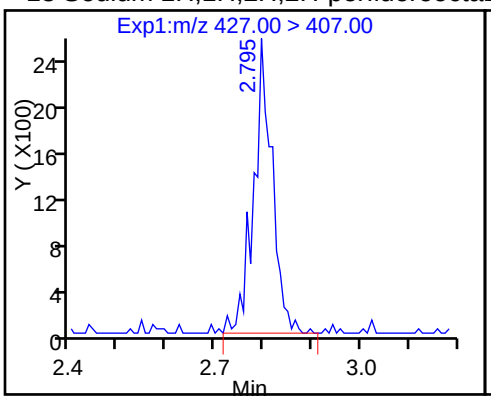
10 Perfluoroheptanoic acid (ND)



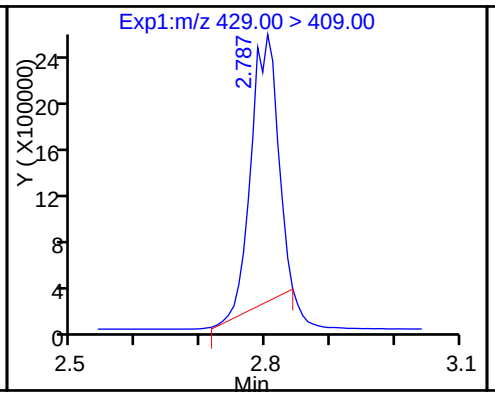
D 11 18O2 PFHxS



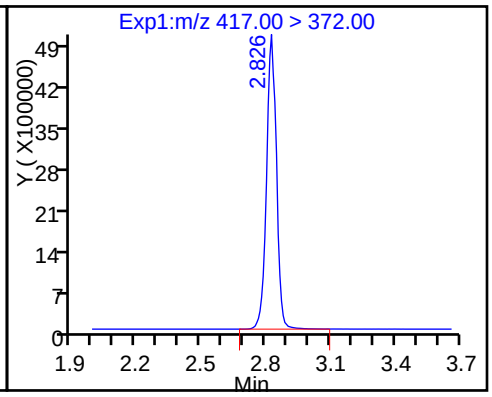
13 Sodium 1H,1H,2H,2H-perfluorooctane



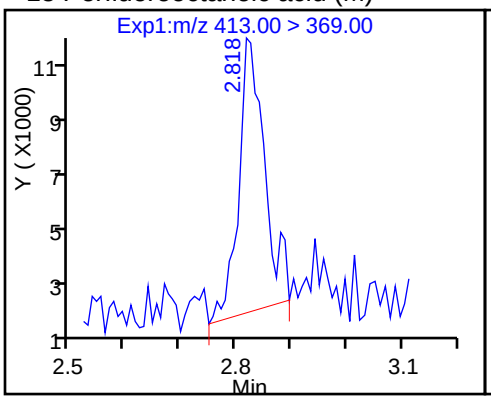
D 12 M2-6:2FTS



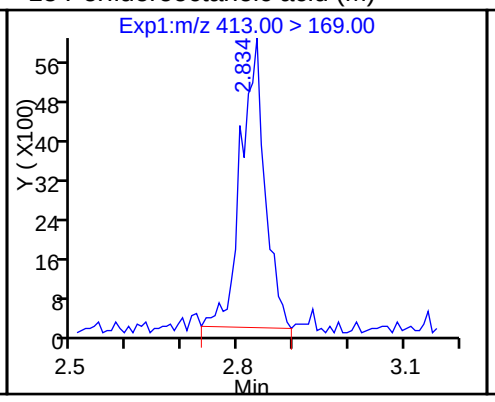
D 14 13C4 PFOA



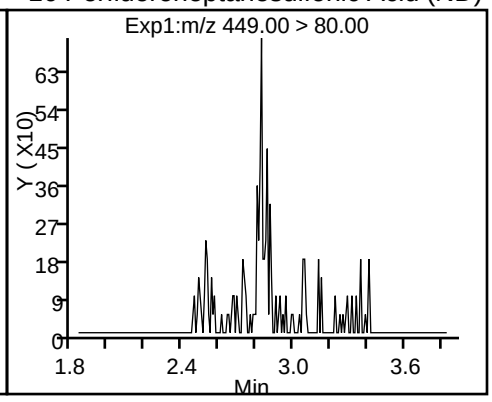
15 Perfluorooctanoic acid (M)



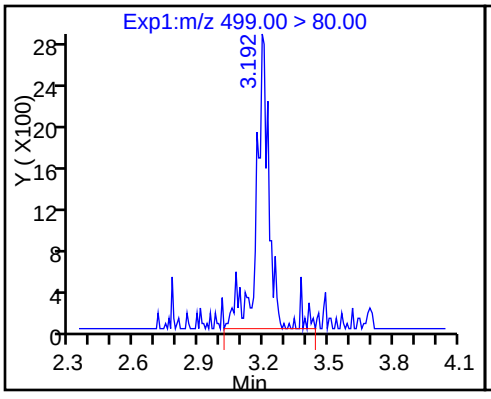
15 Perfluorooctanoic acid (M)



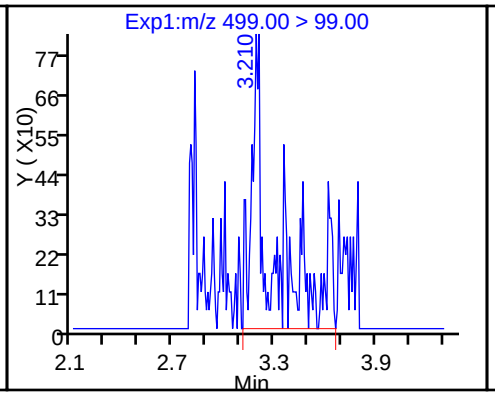
16 Perfluoroheptanesulfonic Acid (ND)



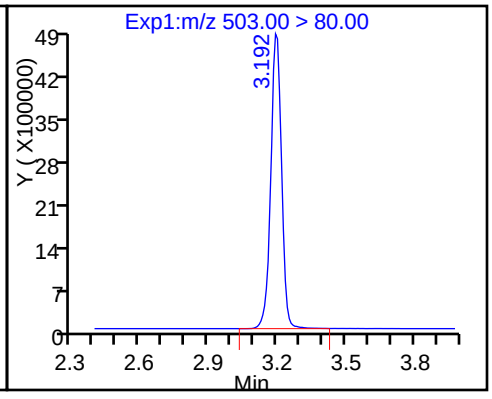
17 Perfluorooctane sulfonic acid



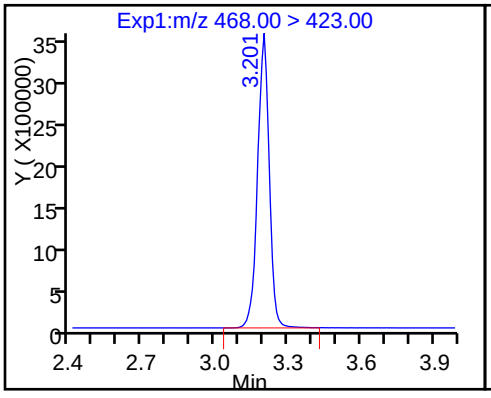
17 Perfluorooctane sulfonic acid



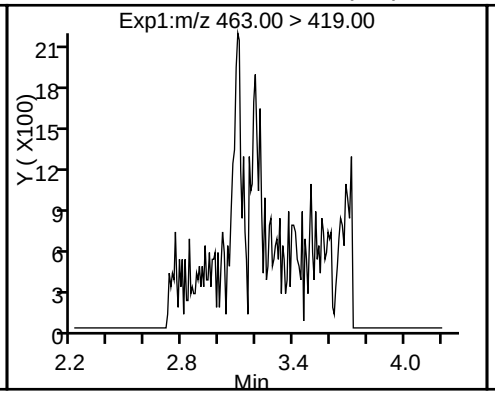
D 18 13C4 PFOS



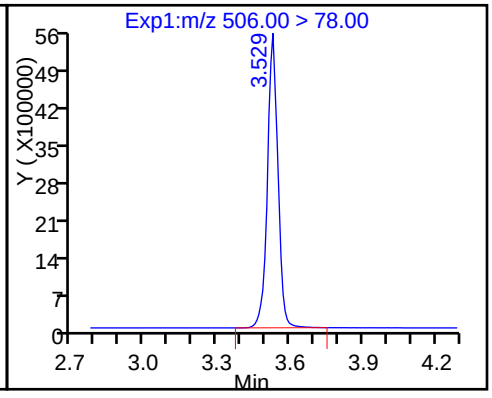
D 19 13C5 PFNA



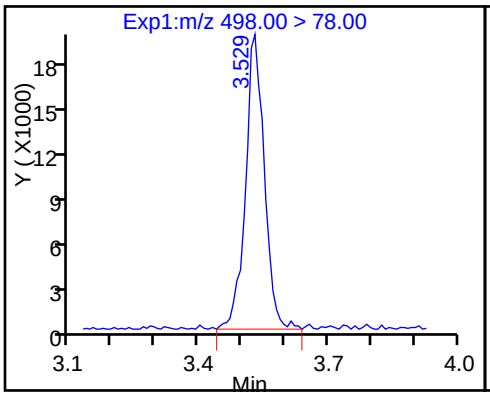
20 Perfluorononanoic acid (ND)



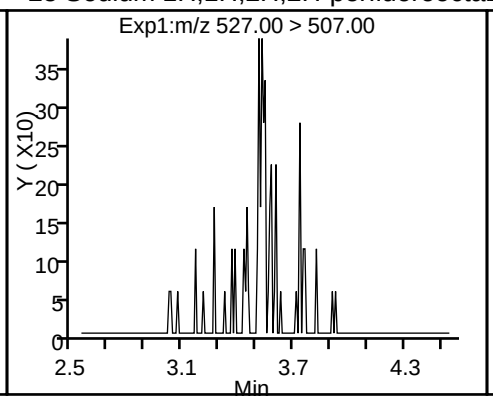
D 21 13C8 FOSA



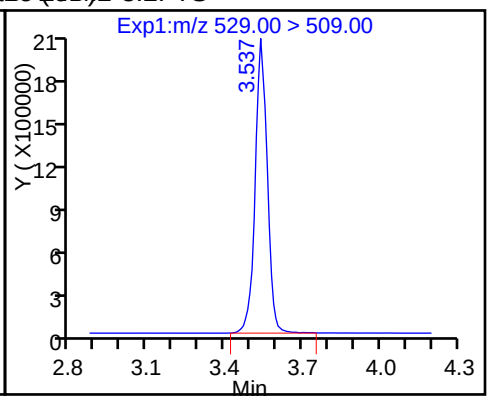
22 Perfluorooctane Sulfonamide



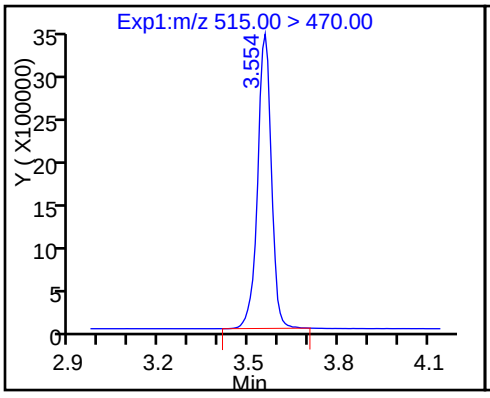
25 Sodium 1H,1H,2H,2H-perfluorooctane (ND)



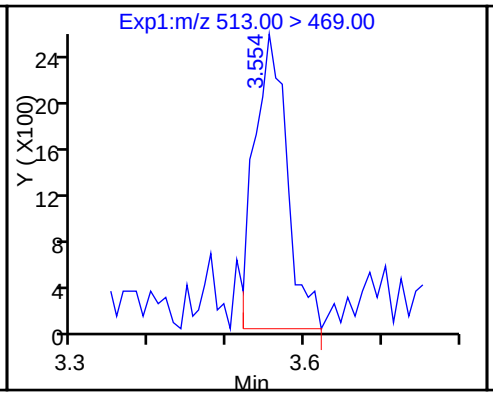
D 26 M2-8:2FTS



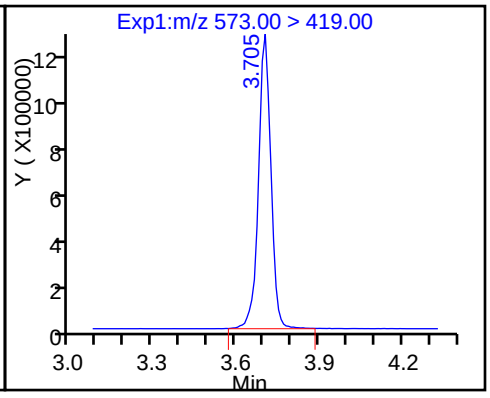
D 23 13C2 PFDA



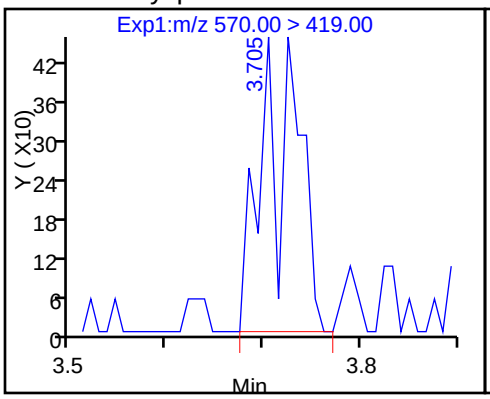
24 Perfluorodecanoic acid



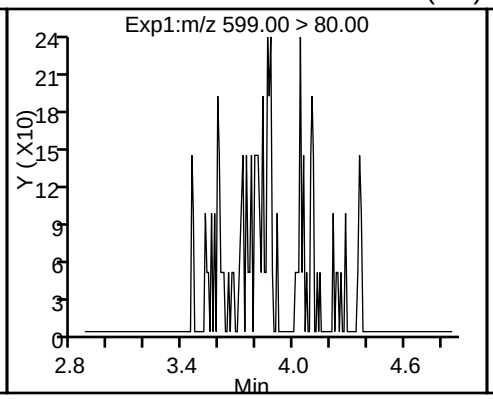
D 27 d3-NMeFOSAA



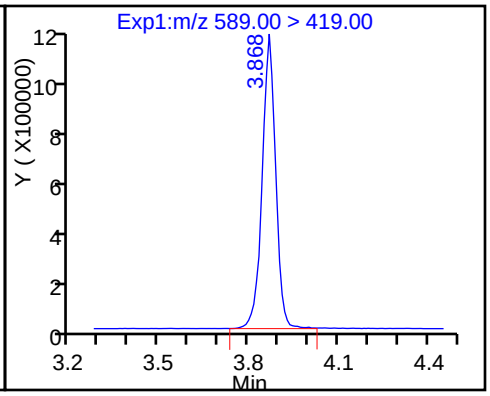
28 N-methyl perfluorooctane sulfonami



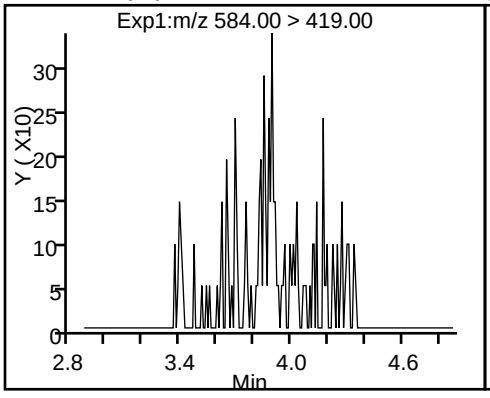
29 Perfluorodecane Sulfonic acid (ND)



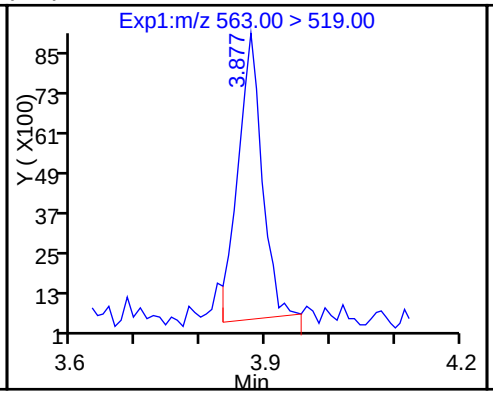
D 32 d5-NEtFOSAA



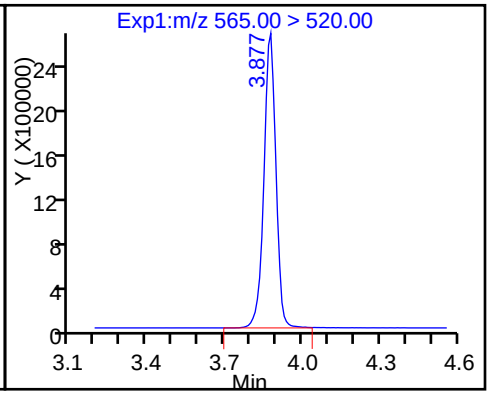
33 N-ethyl perfluorooctane sulfonamid (ND)



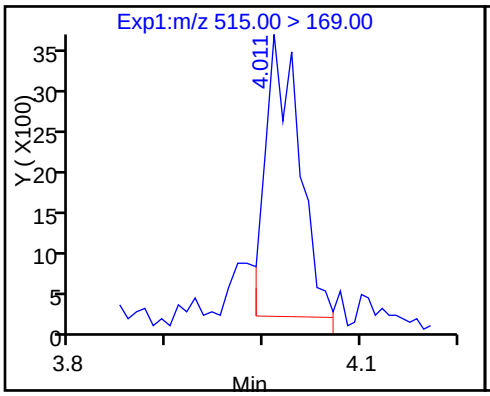
31 Perfluoroundecanoic acid



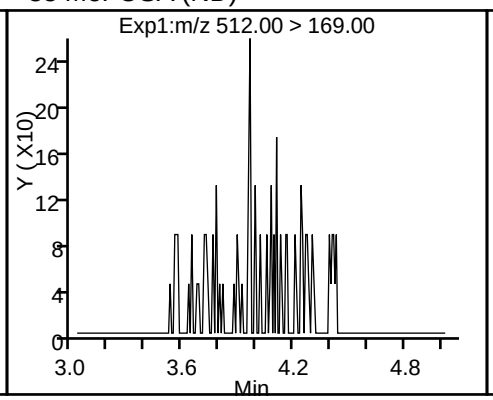
D 30 13C2 PFUnA



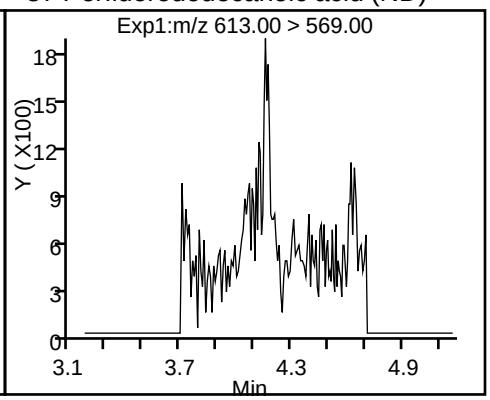
D 34 d-N-MeFOSA-M



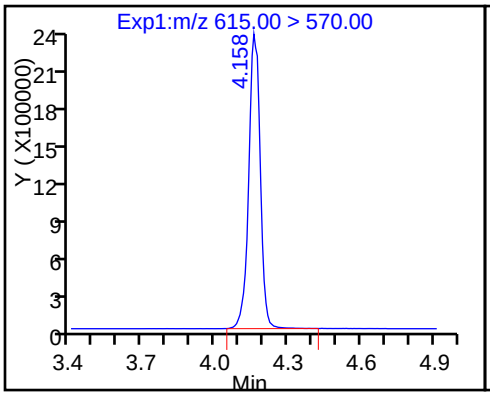
35 MeFOSA (ND)



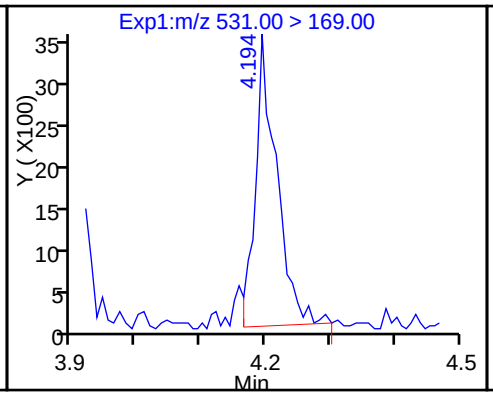
37 Perfluorododecanoic acid (ND)



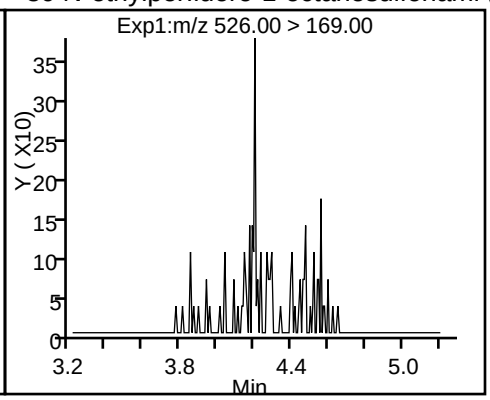
D 36 13C2 PFDoA



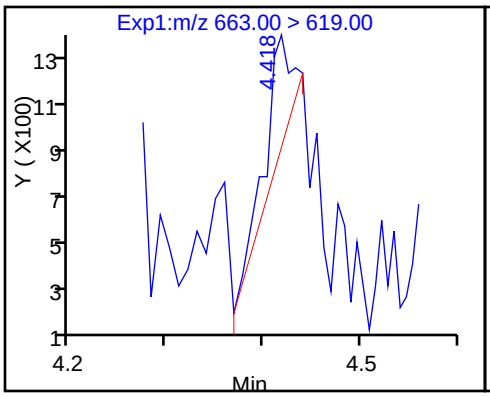
D 38 d-N-EtFOSA-M



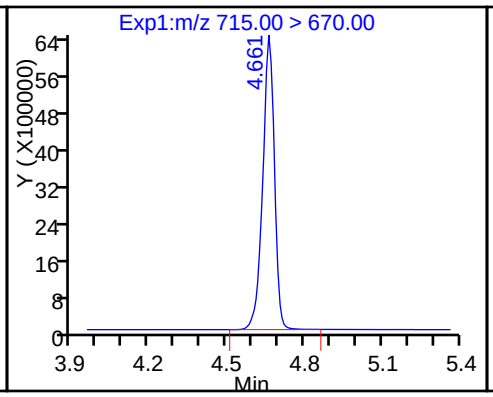
39 N-ethylperfluoro-1-octanesulfonami (ND)



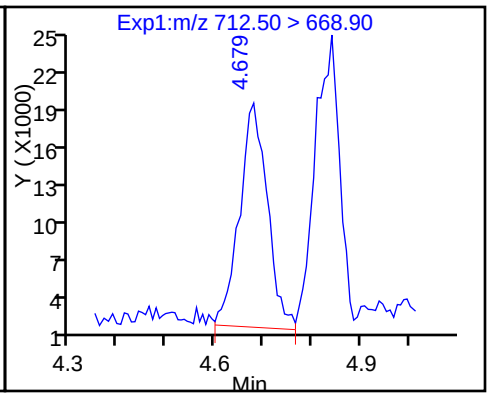
41 Perfluorotridecanoic acid



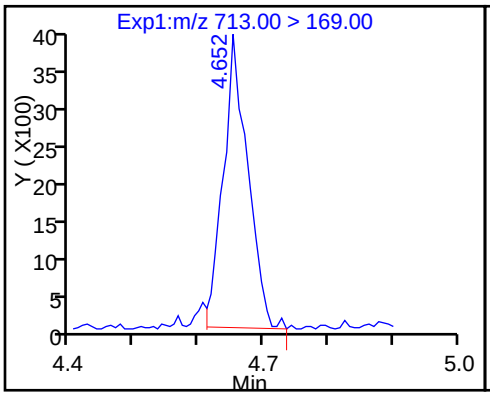
D 43 13C2-PFTeDA



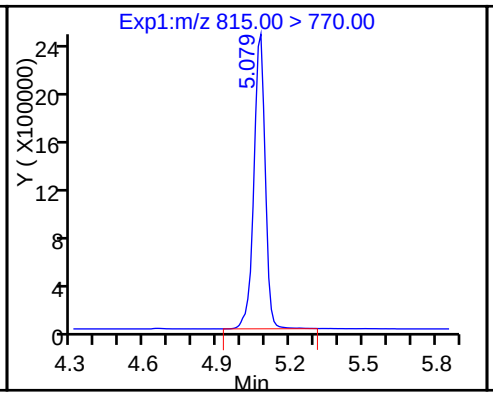
42 Perfluorotetradecanoic acid



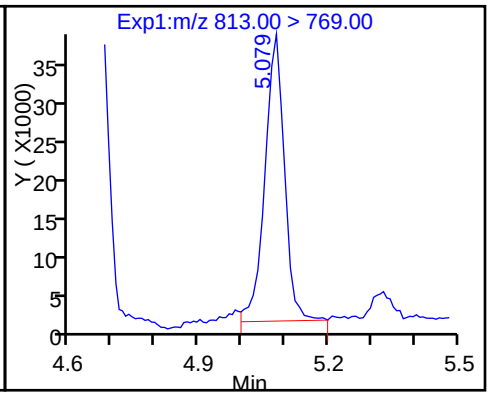
42 Perfluorotetradecanoic acid



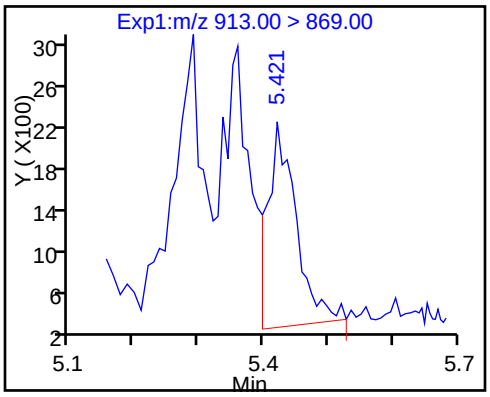
D 44 13C2-PFHxDA



45 Perfluorohexadecanoic acid



46 Perfluorooctadecanoic acid



Manual Integration/User Assign Peak Report

TestAmerica Sacramento

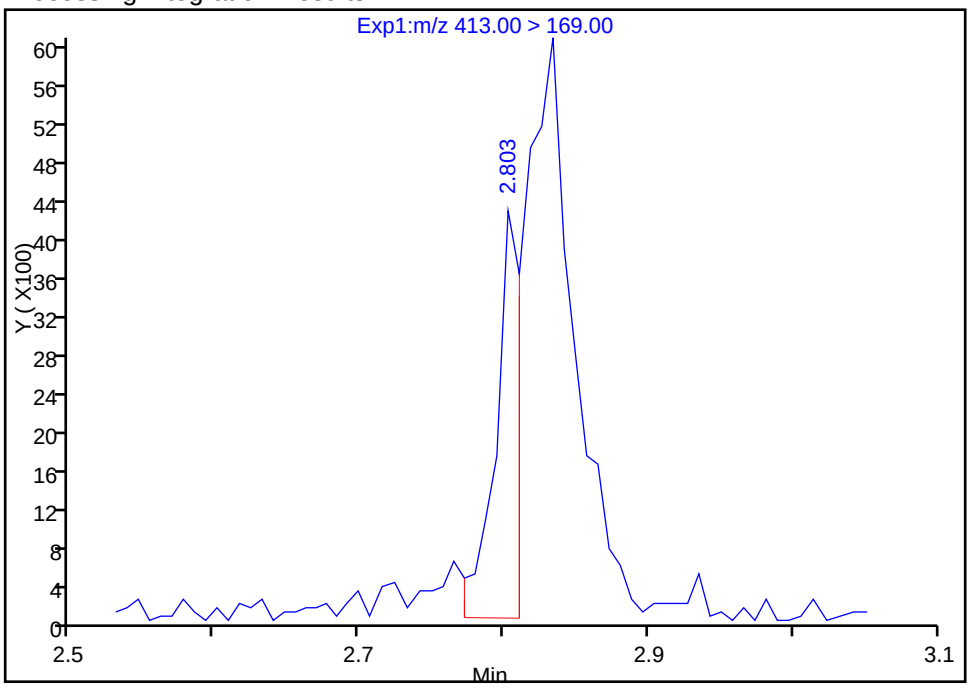
Data File: \\ChromNa\Sacramento\ChromData\A8_N\20170302-40393.b\2017.03.02A_004.d
Injection Date: 02-Mar-2017 10:35:15 Instrument ID: A8_N
Lims ID: MB 320-152587/1-A
Client ID:
Operator ID: A8-PC\A8 ALS Bottle#: 1 Worklist Smp#: 13
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Method: A8_N Limit Group: LC PFC_DOD ICAL
Column: Detector EXP1

15 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 2

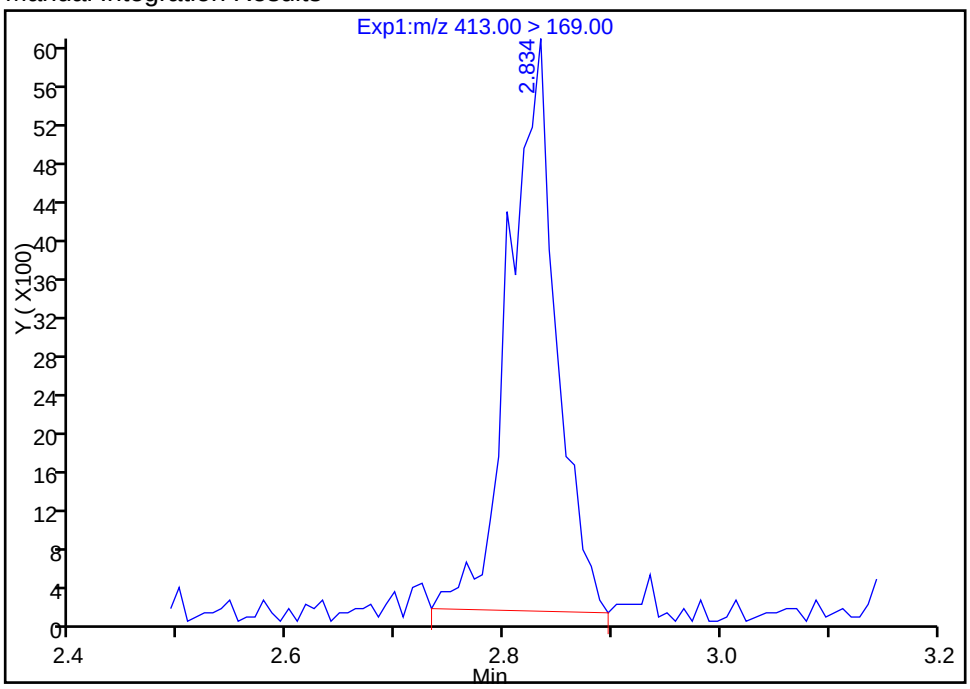
Processing Integration Results

RT: 2.80
Area: 4378
Amount: 0.159296
Amount Units: ng/ml



Manual Integration Results

RT: 2.83
Area: 18054
Amount: 0.093999
Amount Units: ng/ml



Reviewer: chandrasenas, 08-Mar-2017 08:23:13
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Sacramento

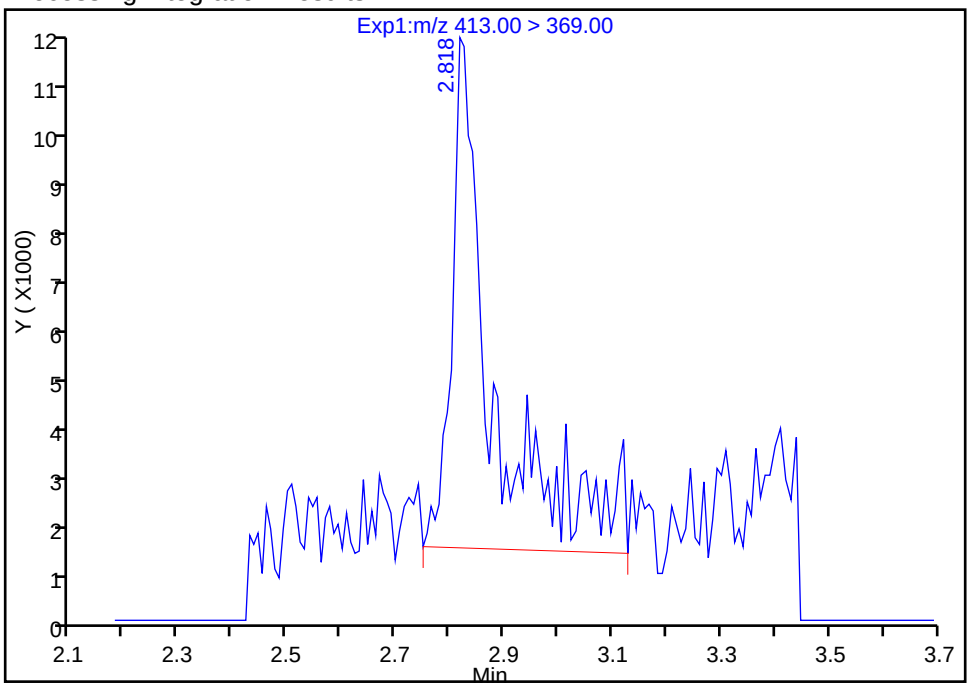
Data File: \\ChromNa\Sacramento\ChromData\A8_N\20170302-40393.b\2017.03.02A_004.d
Injection Date: 02-Mar-2017 10:35:15 Instrument ID: A8_N
Lims ID: MB 320-152587/1-A
Client ID:
Operator ID: A8-PC\A8 ALS Bottle#: 1 Worklist Smp#: 13
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Method: A8_N Limit Group: LC PFC_DOD ICAL
Column: Detector EXP1

15 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

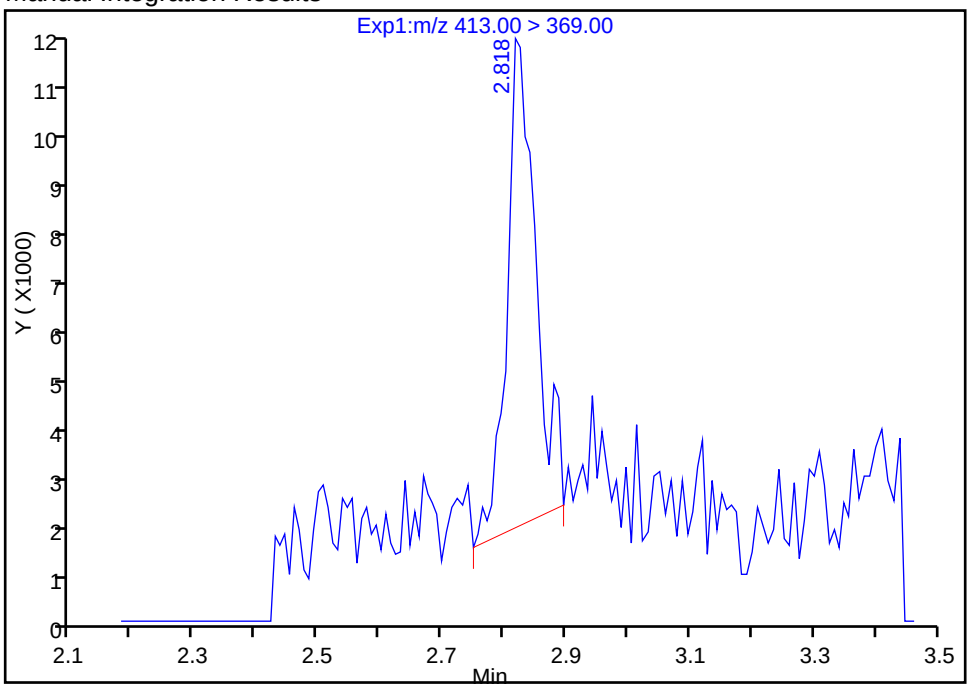
Processing Integration Results

RT: 2.82
Area: 52817
Amount: 0.159296
Amount Units: ng/ml



Manual Integration Results

RT: 2.82
Area: 31167
Amount: 0.093999
Amount Units: ng/ml



Reviewer: westendorfc, 08-Mar-2017 08:23:46
Audit Action: Manually Integrated Audit Reason: Baseline

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento | Job No.: 320-25962-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 320-152015/2-A

Matrix: Solid | Lab File ID: 2017.03.03A_006.d

Analysis Method: 537 (Modified) | Date Collected:

Extraction Method: SHAKE | Date Extracted: 02/23/2017 17:22

Sample wt/vol: 5.00(g) | Date Analyzed: 03/03/2017 09:37

Con. Extract Vol.: 1.00(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: GeminiC18 3x100 ID: 3(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 153020 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
335-67-1	Perfluorooctanoic acid (PFOA)	4.09		0.50	0.30	0.10
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	3.96		0.50	0.30	0.13
375-73-5	Perfluorobutanesulfonic acid (PFBS)	3.95		0.40	0.30	0.10

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL00990	13C4 PFOA	106		25-150
STL00991	13C4 PFOS	91		25-150
STL00994	18O2 PFHxS	101		25-150

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNa\Sacramento\ChromData\A8_N\20170303-40441.b\2017.03.03A_006.d
Lims ID: LCS 320-152015/2-A
Client ID:
Sample Type: LCS
Inject. Date: 03-Mar-2017 09:37:58 ALS Bottle#: 1 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: lcs 320-152015/2-a
Misc. Info.: Plate: 1 Rack: 5
Operator ID: A8-PC\A8 Instrument ID: A8_N

Method: \\ChromNa\Sacramento\ChromData\A8_N\20170303-40441.b\A8_N.m
Limit Group: LC PFC_DOD ICAL
Last Update: 27-Mar-2017 10:05:12 Calib Date: 01-Mar-2017 11:53:47
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A8_N\20170301-40358.b\2017.03.01CURVE_009.d

Column 1 : Det: EXP1
Process Host: XAWRK006

First Level Reviewer: chandrasenas Date: 03-Mar-2017 10:11:28

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C4 PFBA										
217.00 > 172.00	1.539	1.539	0.0		15501449	53.0		106	571898	
2 Perfluorobutyric acid										
212.90 > 169.00	1.539	1.547	-0.008	1.000	5831715	22.2		111	28714	
D 3 13C5-PFPeA										
267.90 > 223.00	1.823	1.823	0.0		12176524	52.4		105	824432	
4 Perfluoropentanoic acid										
262.90 > 219.00	1.823	1.823	0.0	1.000	4983931	20.9		105	50127	
5 Perfluorobutanesulfonic acid										
298.90 > 80.00	1.862	1.863	-0.001	1.000	8335333	19.7		112		
298.90 > 99.00	1.862	1.863	-0.001	1.000	3441524		2.42(0.00-0.00)			
D 7 13C2 PFHxA										
315.00 > 270.00	2.126	2.135	-0.009		10683543	50.7		101	349448	
6 Perfluorohexanoic acid										
313.00 > 269.00	2.126	2.135	-0.009	1.000	4005174	21.1		105	236301	
D 9 13C4-PFHpA										
367.00 > 322.00	2.471	2.476	-0.005		10679916	55.3		111	331542	
10 Perfluoroheptanoic acid										
363.00 > 319.00	2.471	2.476	-0.005	1.000	3999543	19.4		96.8	42229	
D 11 18O2 PFHxS										
403.00 > 84.00	2.487	2.492	-0.005		13943956	47.9		101	518131	
8 Perfluorohexanesulfonic acid										M
399.00 > 80.00	2.479	2.492	-0.013	1.000	5513360	18.2		99.9		M
D 12 M2-6:2FTS										
429.00 > 409.00	2.806	2.819	-0.013		4209674	54.5		115		
13 Sodium 1H,1H,2H,2H-perfluorooctane										
427.00 > 407.00	2.806	2.819	-0.013	1.000	1589800	20.1		106		
D 14 13C4 PFOA										
417.00 > 372.00	2.829	2.850	-0.021		10823271	52.8		106	397579	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
15 Perfluorooctanoic acid										
413.00 > 369.00	2.837	2.850	-0.013	1.000	4517821	20.4		102	39027	
413.00 > 169.00	2.837	2.850	-0.013	1.000	2573659		1.76(0.90-1.10)		77369	
16 Perfluoroheptanesulfonic Acid										
449.00 > 80.00	2.845	2.850	-0.005	1.000	5119735	22.6		119		
17 Perfluorooctane sulfonic acid										
499.00 > 80.00	3.101	3.106	-0.005	1.000	4268757	19.8		107	45601	
499.00 > 99.00	3.213	3.106	0.107	1.036	983717		4.34(0.90-1.10)		142333	
D 18 13C4 PFOS										
503.00 > 80.00	3.213	3.228	-0.015		10481941	43.4		90.8	279240	
D 19 13C5 PFNA										
468.00 > 423.00	3.213	3.228	-0.015		8719675	49.0		98.0	289200	
20 Perfluorononanoic acid										
463.00 > 419.00	3.213	3.228	-0.015	1.000	3169644	20.1		101	48248	
D 21 13C8 FOSA										
506.00 > 78.00	3.531	3.536	-0.005		6511045	17.7		35.5	179086	
22 Perfluorooctane Sulfonamide										
498.00 > 78.00	3.531	3.536	-0.005	1.000	2426576	20.7		104	133745	
25 Sodium 1H,1H,2H,2H-perfluorooctane										M
527.00 > 507.00	3.556	3.578	-0.022	0.998	1404420	20.2		105		M
D 26 M2-8:2FTS										
529.00 > 509.00	3.565	3.578	-0.014		3589911	38.8		80.9		
D 23 13C2 PFDA										
515.00 > 470.00	3.573	3.586	-0.013		7628094	45.8		91.5	148067	
24 Perfluorodecanoic acid										
513.00 > 469.00	3.573	3.586	-0.013	1.000	2830544	20.5		102	77223	
D 27 d3-NMeFOSAA										
573.00 > 419.00	3.727	3.745	-0.018		2034147	23.9		47.8		
28 N-methyl perfluorooctane sulfonami										
570.00 > 419.00	3.727	3.754	-0.027	1.000	828746	21.0		105		
29 Perfluorodecane Sulfonic acid										
599.00 > 80.00	3.888	3.895	-0.007	1.000	1511320	11.6		60.0		
D 32 d5-NEtFOSAA										
589.00 > 419.00	3.888	3.904	-0.016		2007535	24.7		49.3		
31 Perfluoroundecanoic acid										
563.00 > 519.00	3.905	3.912	-0.007	1.000	1767051	18.8		93.8	52274	
33 N-ethyl perfluorooctane sulfonamid										
584.00 > 419.00	3.905	3.912	-0.007	1.004	734372	20.1		100		
D 30 13C2 PFUnA										
565.00 > 520.00	3.905	3.921	-0.016		4645749	35.5		71.0	209079	
D 34 d-N-MeFOSA-M										
515.00 > 169.00	4.013	4.012	0.001		64156	0.7292		1.5		
35 MeFOSA										
512.00 > 169.00	4.022	4.021	0.001	1.000	23869	19.9		99.4		
37 Perfluorododecanoic acid										
613.00 > 569.00	4.196	4.201	-0.005	1.000	1059068	19.4		97.1	35650	
39 N-ethylperfluoro-1-octanesulfonami										
526.00 > 169.00	4.209	4.201	0.008	1.000	15056	20.4		102		

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 38 d-N-EtFOSA-M										
531.00 > 169.00	4.202	4.201	0.001		37498	0.4399		0.9		
D 36 13C2 PFDoA										
615.00 > 570.00	4.196	4.209	-0.013		2980394	24.0		48.1	122115	
41 Perfluorotridecanoic acid										
663.00 > 619.00	4.455	4.476	-0.021	1.000	586171	11.3		56.3	13300	
D 43 13C2-PFTeDA										
715.00 > 670.00	4.697	4.711	-0.014		3286923	12.7		25.4	548051	
42 Perfluorotetradecanoic acid										
712.50 > 668.90	4.705	4.711	-0.006	1.000	1210980	10.3		51.7	3582	
713.00 > 169.00	4.697	4.711	-0.014	0.998	166937		7.25(0.00-0.00)		55884	
D 44 13C2-PFHxDA										
815.00 > 770.00	5.123	5.144	-0.021		963367	7.70		15.4	54426	
45 Perfluorohexadecanoic acid										
813.00 > 769.00	5.123	5.144	-0.021	1.000	330610	5.61		28.0	2202	
46 Perfluorooctadecanoic acid										
913.00 > 869.00	5.498	5.518	-0.020	1.000	214650	5.02		25.1	1380	

QC Flag Legend

Review Flags

M - Manually Integrated

Report Date: 27-Mar-2017 10:05:35 Chrom Revision: 2.2 13-Mar-2017 15:50:30

TestAmerica Sacramento

Data File: \\ChromNa\Sacramento\ChromData\A8_N\20170303-40441.b\2017.03.03A_006.d

Injection Date: 03-Mar-2017 09:37:58 Instrument ID: A8_N

Lims ID: LCS 320-152015/2-A

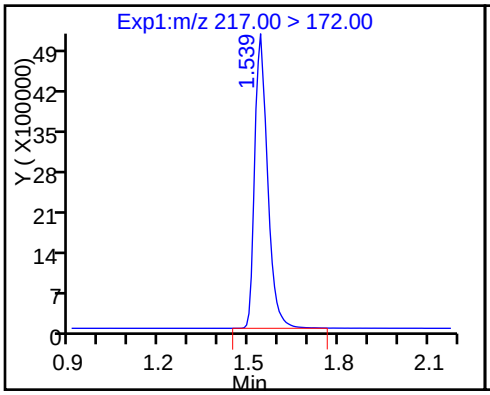
Client ID:

Operator ID: A8-PC\A8 ALS Bottle#: 1 Worklist Smp#: 6

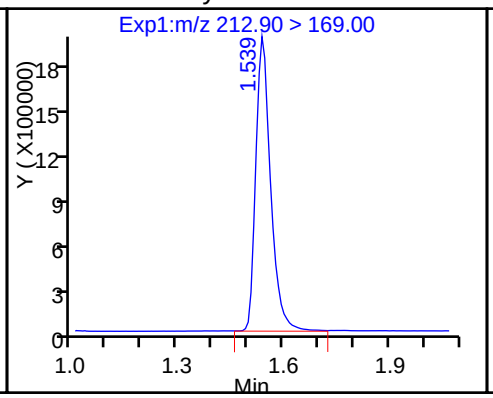
Injection Vol: 2.0 ul Dil. Factor: 1.0000

Method: A8_N Limit Group: LC PFC_DOD ICAL

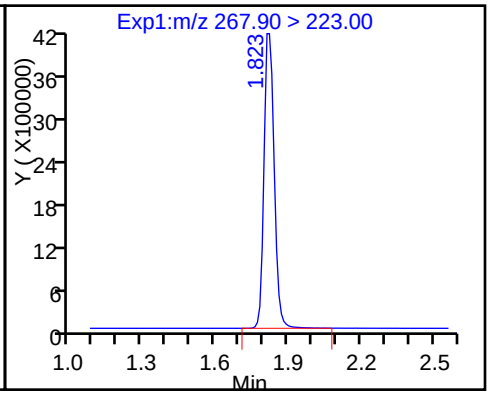
D 1 13C4 PFBA



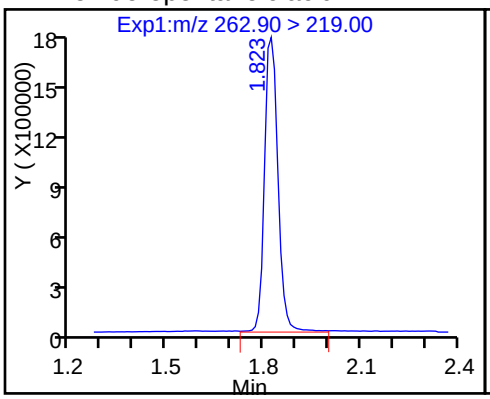
2 Perfluorobutyric acid



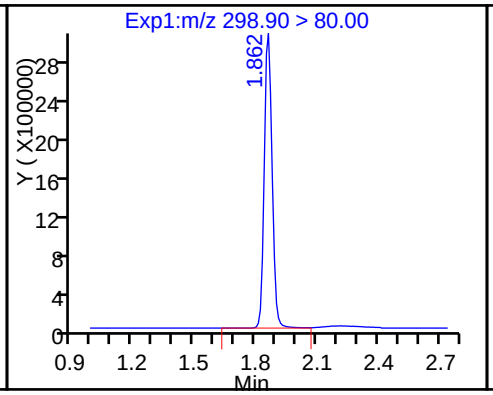
D 3 13C5-PFPeA



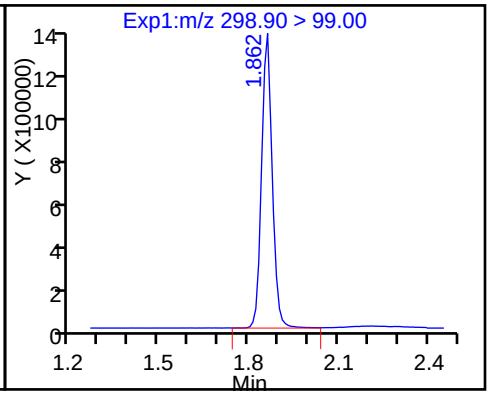
4 Perfluoropentanoic acid



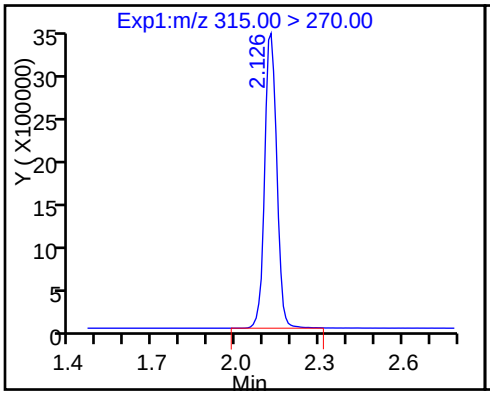
5 Perfluorobutanesulfonic acid



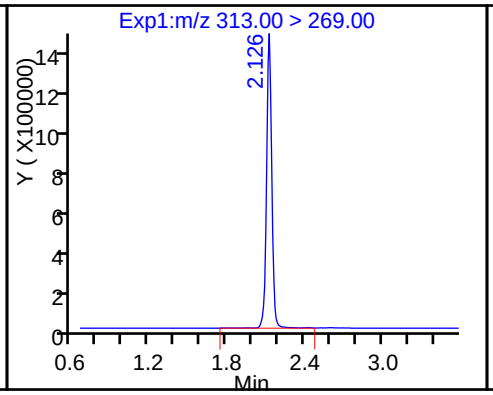
5 Perfluorobutanesulfonic acid



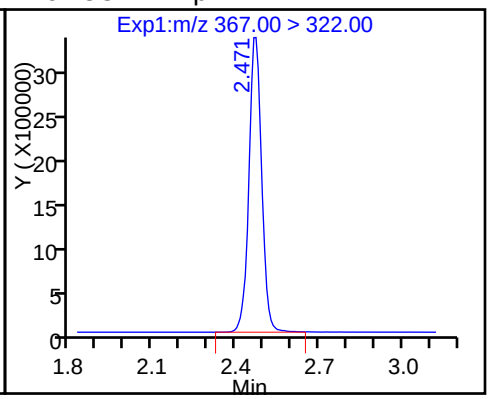
D 7 13C2 PFHxA



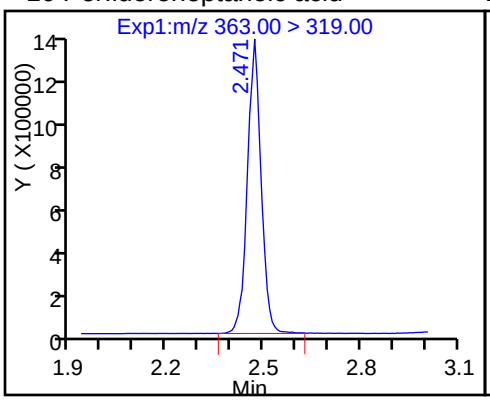
6 Perfluorohexanoic acid



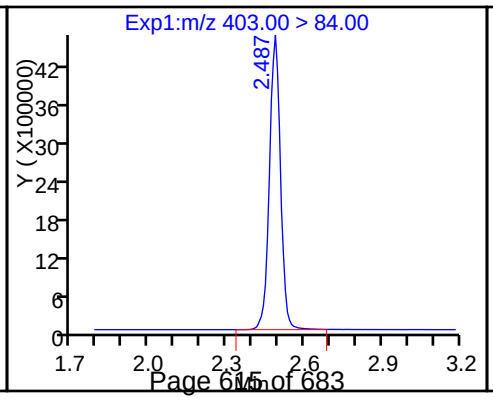
D 9 13C4-PFHpA



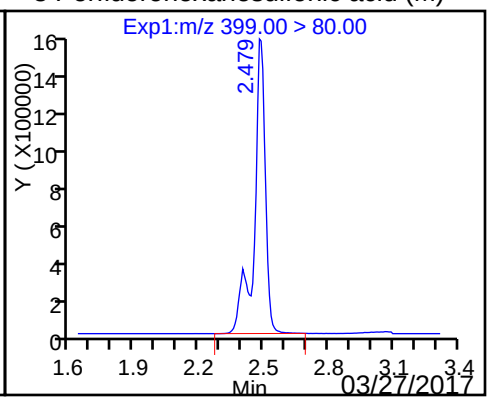
10 Perfluoroheptanoic acid



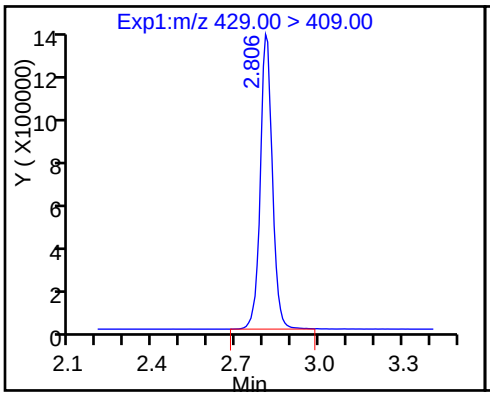
D 11 18O2 PFHxS



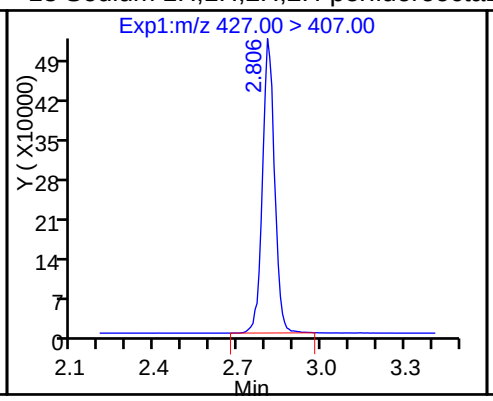
8 Perfluorohexanesulfonic acid (M)



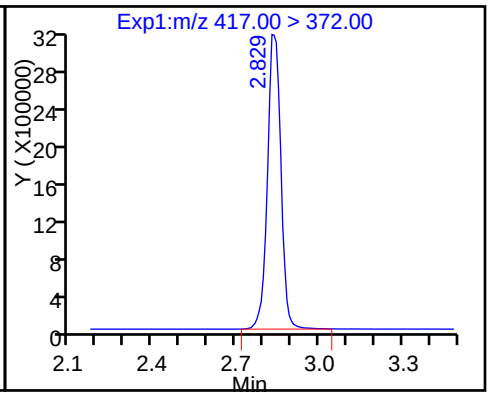
D 12 M2-6:2FTS



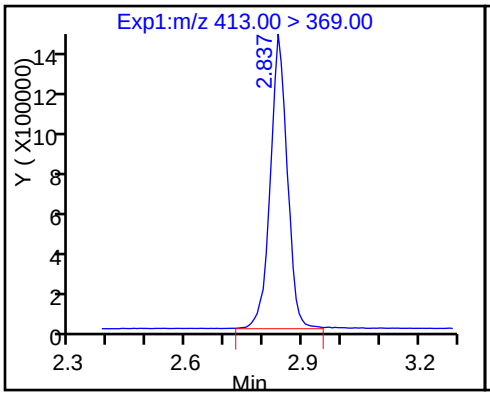
13 Sodium 1H,1H,2H,2H-perfluorooctane



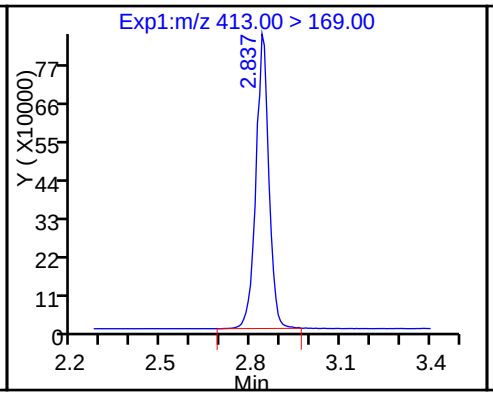
D 14 13C4 PFOA



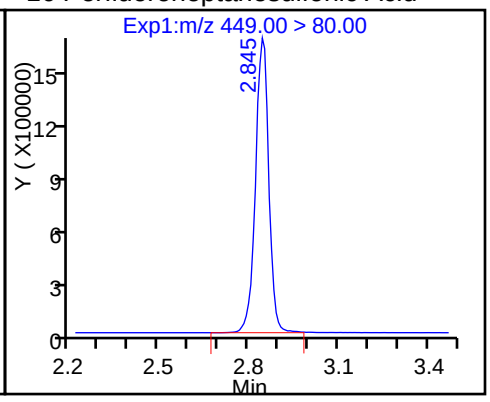
15 Perfluorooctanoic acid



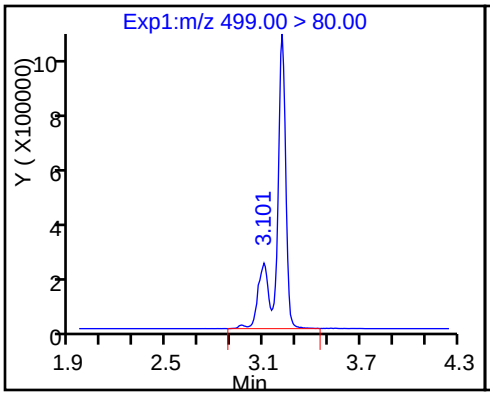
15 Perfluorooctanoic acid



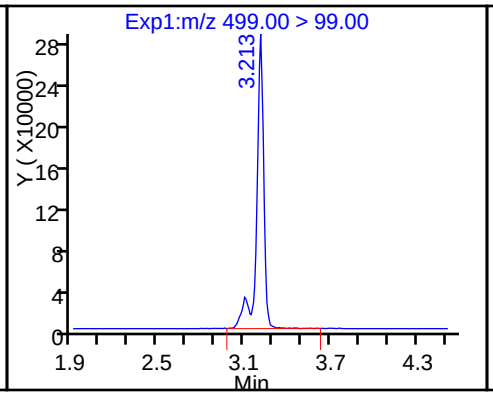
16 Perfluoroheptanesulfonic Acid



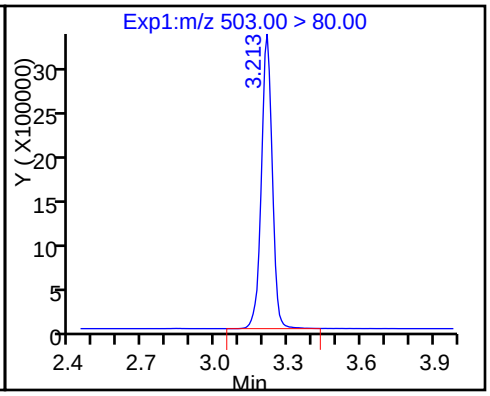
17 Perfluorooctane sulfonic acid



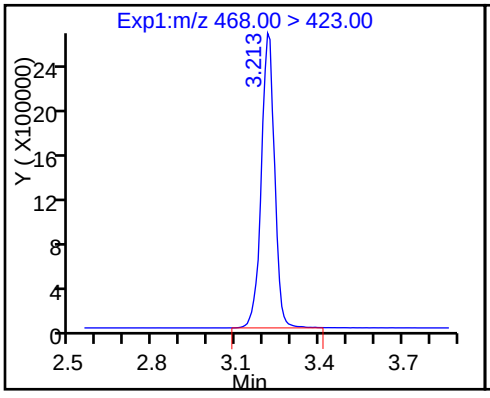
17 Perfluorooctane sulfonic acid



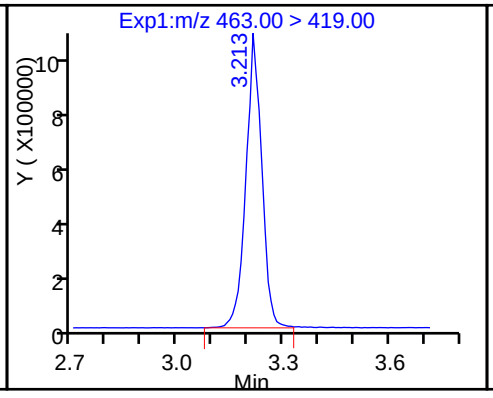
D 18 13C4 PFOS



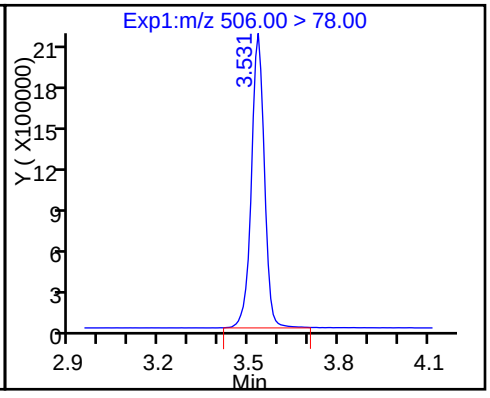
D 19 13C5 PFNA



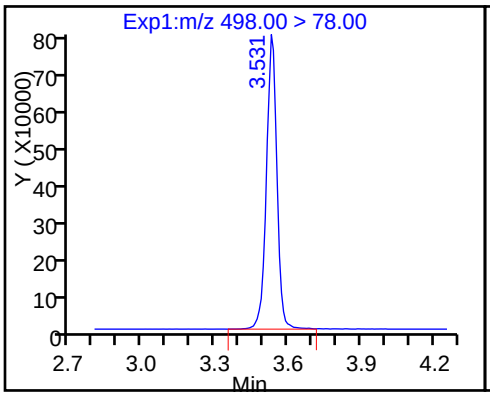
20 Perfluorononanoic acid



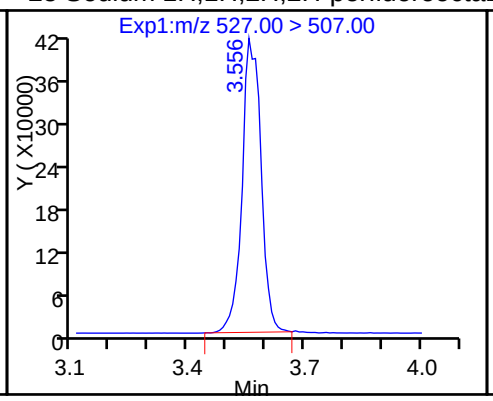
D 21 13C8 FOSA



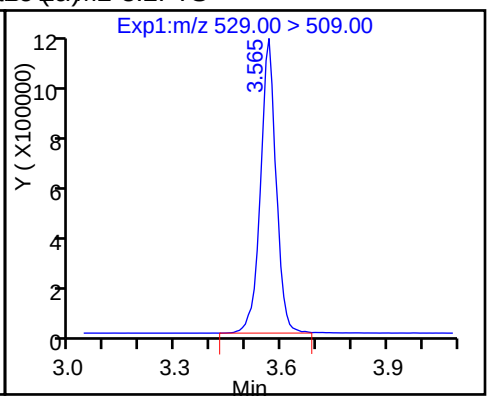
22 Perfluorooctane Sulfonamide



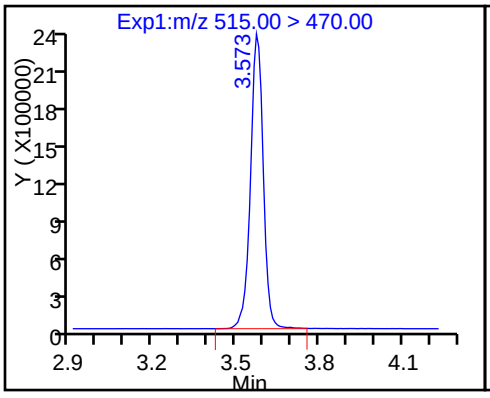
25 Sodium 1H,1H,2H,2H-perfluorooctane (M)



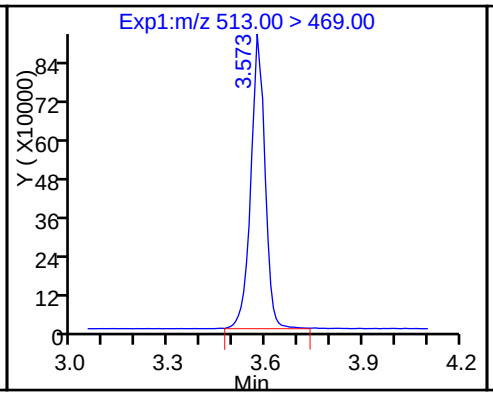
D 26 M2-8:2FTS



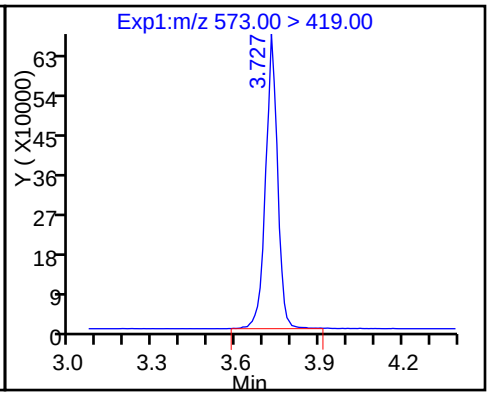
D 23 13C2 PFDA



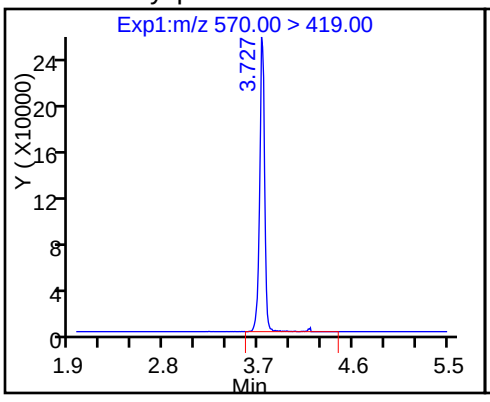
24 Perfluorodecanoic acid



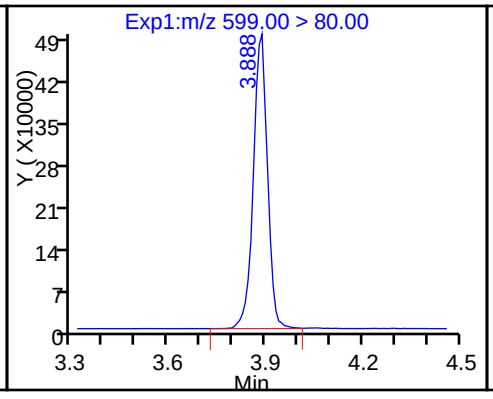
D 27 d3-NMeFOSAA



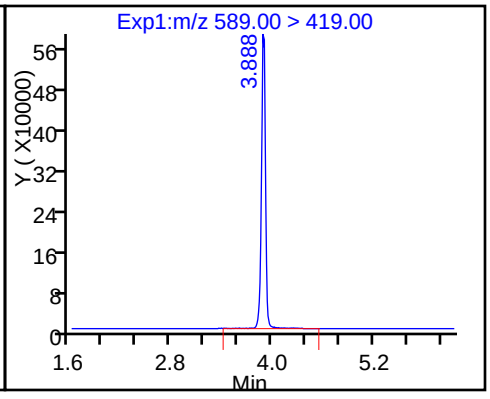
28 N-methyl perfluorooctane sulfonami



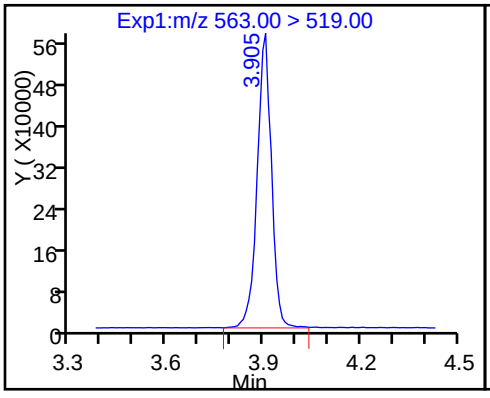
29 Perfluorodecane Sulfonic acid



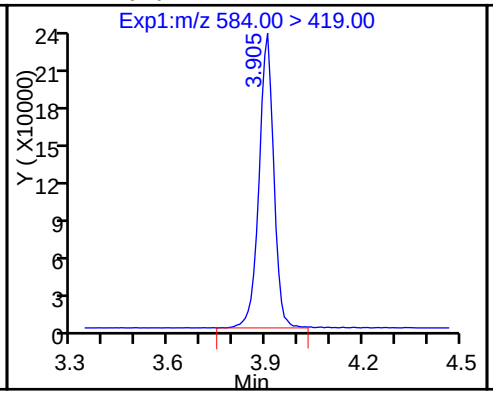
D 32 d5-NEtFOSAA



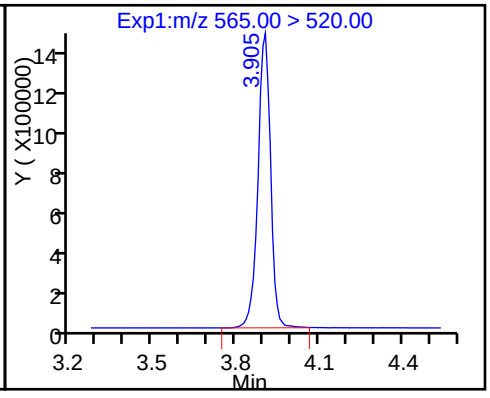
31 Perfluoroundecanoic acid



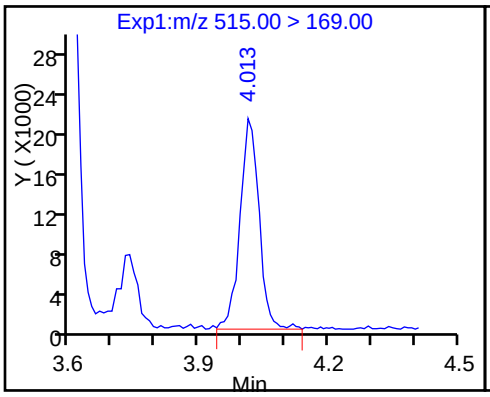
33 N-ethyl perfluorooctane sulfonamid



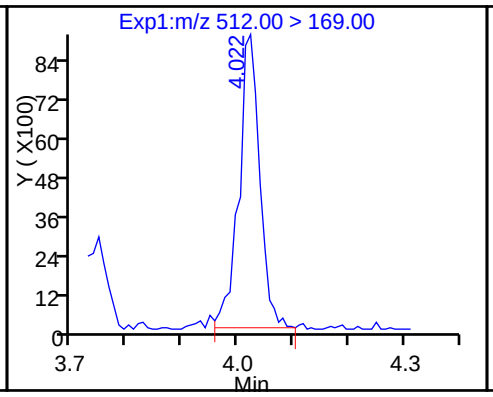
D 30 13C2 PFUnA



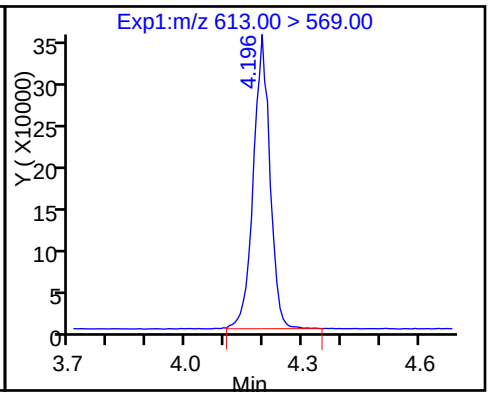
D 34 d-N-MeFOSA-M



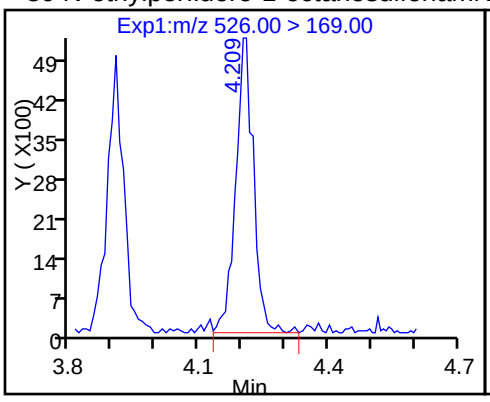
35 MeFOSA



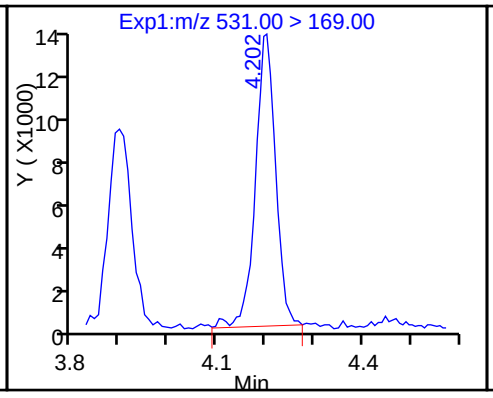
37 Perfluorododecanoic acid



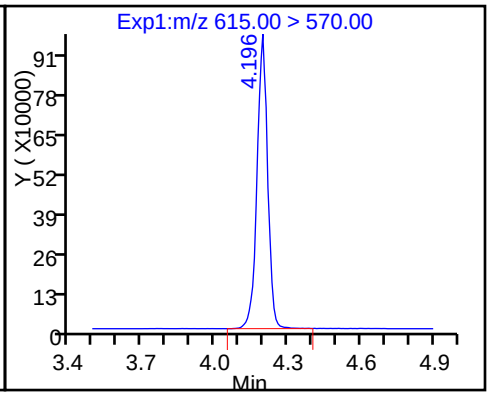
39 N-ethylperfluoro-1-octanesulfonami



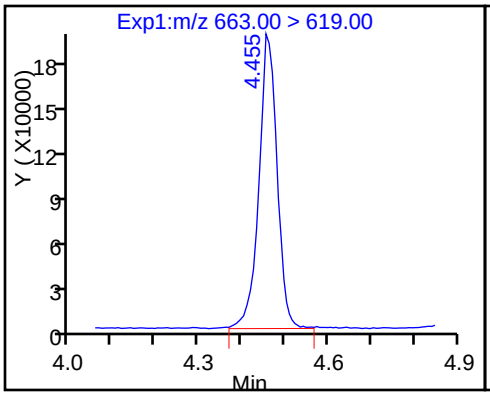
D 38 d-N-EtFOSA-M



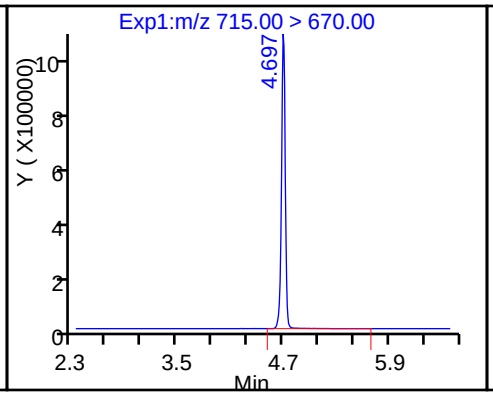
D 36 13C2 PFDoA



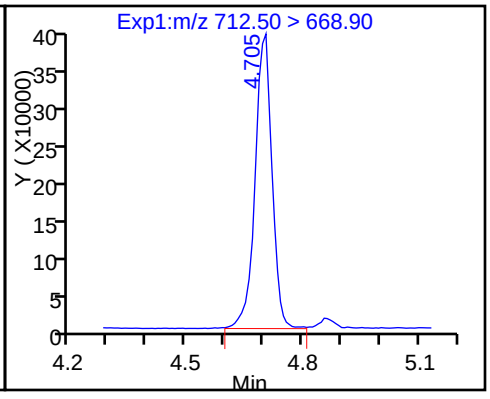
41 Perfluorotridecanoic acid



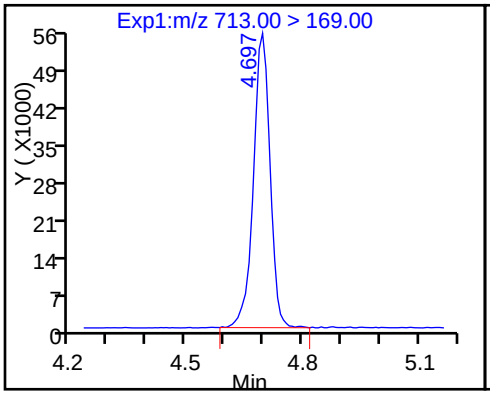
D 43 13C2-PFTeDA



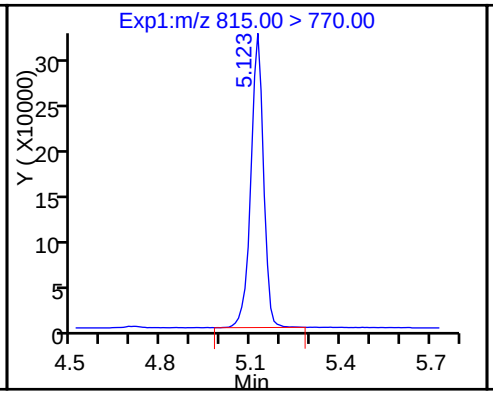
42 Perfluorotetradecanoic acid



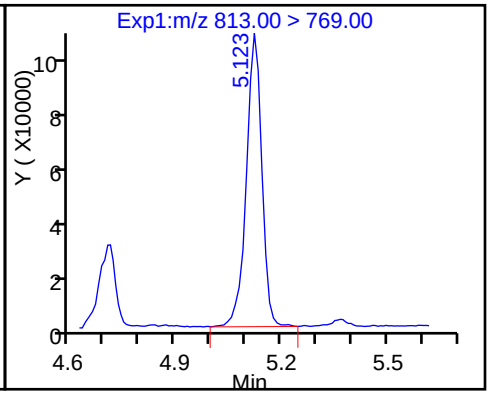
42 Perfluorotetradecanoic acid



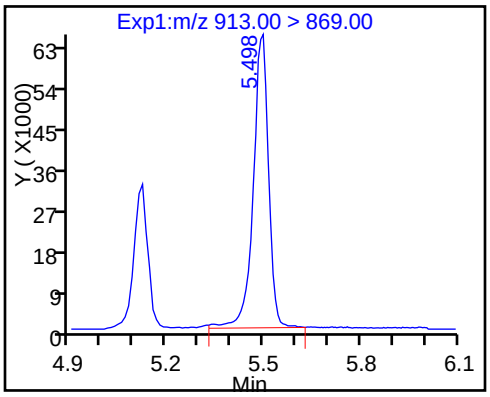
D 44 13C2-PFHxDA



45 Perfluorohexadecanoic acid



46 Perfluorooctadecanoic acid



FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 320-25962-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 320-152587/2-A

Matrix: Water Lab File ID: 2017.03.02A_005.d

Analysis Method: 537 (Modified) Date Collected:

Extraction Method: 3535 Date Extracted: 02/28/2017 16:42

Sample wt/vol: 250.00(mL) Date Analyzed: 03/02/2017 10:42

Con. Extract Vol.: 0.50(mL) Dilution Factor: 1

Injection Volume: 2(uL) GC Column: GeminiC18 3x100 ID: 3(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 152836 Units: ng/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
335-67-1	Perfluorooctanoic acid (PFOA)	38.6		2.5	2.0	0.75
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	35.6		4.0	3.0	1.3
375-73-5	Perfluorobutanesulfonic acid (PFBS)	39.5		2.5	2.0	0.92

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL00990	13C4 PFOA	142		25-150
STL00991	13C4 PFOS	133		25-150
STL00994	18O2 PFHxS	136		25-150

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNa\Sacramento\ChromData\A8_N\20170302-40393.b\2017.03.02A_005.d
Lims ID: LCS 320-152587/2-A
Client ID:
Sample Type: LCS
Inject. Date: 02-Mar-2017 10:42:45 ALS Bottle#: 2 Worklist Smp#: 14
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: lcs 320-152587/2-a
Misc. Info.: Plate: 1 Rack: 5
Operator ID: A8-PC\A8 Instrument ID: A8_N

Method: \\ChromNa\Sacramento\ChromData\A8_N\20170302-40393.b\A8_N.m
Limit Group: LC PFC_DOD ICAL
Last Update: 02-Mar-2017 12:33:56 Calib Date: 01-Mar-2017 11:53:47
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A8_N\20170301-40358.b\2017.03.01CURVE_009.d

Column 1 : Det: EXP1
Process Host: XAWRK026

First Level Reviewer: chandrasenas Date: 02-Mar-2017 12:21:39

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
2 Perfluorobutyric acid										
212.90 > 169.00	1.546	1.538	0.008	1.000	7422717	21.6		108	74277	
D 1 13C4 PFBA										
217.00 > 172.00	1.538	1.538	0.0		20256629	69.3		139	3061905	
D 3 13C5-PFPeA										
267.90 > 223.00	1.821	1.821	0.0		16326601	70.3		141	2742417	
4 Perfluoropentanoic acid										
262.90 > 219.00	1.821	1.821	0.0	1.000	6568984	20.6		103	109845	
5 Perfluorobutanesulfonic acid										
298.90 > 80.00	1.861	1.861	0.0	1.000	11195126	19.7		112		
298.90 > 99.00	1.861	1.861	0.0	1.000	4705494		2.38(0.00-0.00)			
D 7 13C2 PFHxA										
315.00 > 270.00	2.125	2.122	0.003		15305179	72.6		145	58955	
6 Perfluorohexanoic acid										
313.00 > 269.00	2.125	2.122	0.003	1.000	5303058	19.5		97.4	584514	
10 Perfluoroheptanoic acid										
363.00 > 319.00	2.467	2.460	0.007	1.000	5549686	20.1		100	576972	
D 9 13C4-PFHpA										
367.00 > 322.00	2.467	2.468	-0.001		14305507	74.1		148	929705	
8 Perfluorohexanesulfonic acid										
399.00 > 80.00	2.490	2.483	0.007	1.000	7214762	17.7		97.4		
D 11 18O2 PFHxS										
403.00 > 84.00	2.482	2.483	-0.001		18723376	64.4		136	103780	
13 Sodium 1H,1H,2H,2H-perfluorooctane										
427.00 > 407.00	2.801	2.803	-0.001	1.000	2833149	20.0		105		
D 12 M2-6:2FTS										
429.00 > 409.00	2.809	2.803	0.007		7554273	97.9		206		
D 14 13C4 PFOA										
417.00 > 372.00	2.832	2.834	-0.002		14533718	70.9		142	4550584	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
15 Perfluorooctanoic acid										
413.00 > 369.00	2.832	2.834	-0.002	1.000	5735939	19.3		96.6	71230	
413.00 > 169.00	2.840	2.834	0.006	1.003	3300335		1.74(0.90-1.10)		1033646	
16 Perfluoroheptanesulfonic Acid										
449.00 > 80.00	2.840	2.834	0.006	1.000	6811488	20.6		108		
17 Perfluorooctane sulfonic acid										
499.00 > 80.00	3.096	3.089	0.007	1.000	5613125	17.8		96.0	48938	
499.00 > 99.00	3.167	3.089	0.078	1.023	1280272		4.38(0.90-1.10)		10752	
D 18 13C4 PFOS										
503.00 > 80.00	3.209	3.202	0.007		15317374	63.4		133	1572118	
D 19 13C5 PFNA										
468.00 > 423.00	3.209	3.202	0.007		10608060	59.6		119	2972220	
20 Perfluorononanoic acid										
463.00 > 419.00	3.209	3.210	-0.001	1.000	3835053	20.0		100.0	148780	
D 21 13C8 FOSA										
506.00 > 78.00	3.544	3.528	0.016		12094528	33.0		65.9	3765181	
22 Perfluorooctane Sulfonamide										
498.00 > 78.00	3.553	3.536	0.017	1.000	4266923	19.6		98.2	1376279	
25 Sodium 1H,1H,2H,2H-perfluorooctane										
527.00 > 507.00	3.553	3.545	0.008	1.000	2207100	19.5		102		
D 26 M2-8:2FTS										
529.00 > 509.00	3.553	3.553	0.0		5835376	63.0		132		
D 23 13C2 PFDA										
515.00 > 470.00	3.561	3.561	0.0		10092537	60.5		121	760047	
24 Perfluorodecanoic acid										
513.00 > 469.00	3.570	3.561	0.009	1.000	3716128	20.3		102	1147689	
D 27 d3-NMeFOSAA										
573.00 > 419.00	3.714	3.714	0.0		3064781	36.0		72.0		
28 N-methyl perfluorooctane sulfonami										
570.00 > 419.00	3.724	3.714	0.010	1.003	1226397	20.6		103		
29 Perfluorodecane Sulfonic acid										
599.00 > 80.00	3.868	3.867	0.001	1.000	3570465	18.7		97.0		
D 32 d5-NEtFOSAA										
589.00 > 419.00	3.885	3.875	0.010		2892886	35.6		71.1		
33 N-ethyl perfluorooctane sulfonamid										
584.00 > 419.00	3.885	3.875	0.010	1.000	1047607	19.9		99.5		
31 Perfluoroundecanoic acid										
563.00 > 519.00	3.894	3.884	0.010	1.000	2658216	17.5		87.5	1816	
D 30 13C2 PFUnA										
565.00 > 520.00	3.885	3.884	0.001		7497114	57.3		115	2226160	
D 36 13C2 PFDoA										
615.00 > 570.00	4.176	4.172	0.004		6936444	56.0		112	2096795	
37 Perfluorododecanoic acid										
613.00 > 569.00	4.176	4.172	0.004	1.000	2394762	18.9		94.4	125511	
41 Perfluorotridecanoic acid										
663.00 > 619.00	4.441	4.436	0.005	1.000	2524943	20.8		104	116139	
D 43 13C2-PFTeDA										
715.00 > 670.00	4.679	4.672	0.007		17132293	66.1		132	44660	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
42 Perfluorotetradecanoic acid										M
712.50 > 668.90	4.679	4.681	-0.002	1.000	5879704	21.6		108	23442	M
713.00 > 169.00	4.670	4.681	-0.011	0.998	840079		7.00(0.00-0.00)		275195	
D 44 13C2-PFHxDA										
815.00 > 770.00	5.090	5.093	-0.003		6451688	51.6		103	325410	
45 Perfluorohexadecanoic acid										M
813.00 > 769.00	5.090	5.093	-0.003	1.000	2187102	16.6		83.2	5599	M
46 Perfluorooctadecanoic acid										
913.00 > 869.00	5.444	5.446	-0.002	1.000	1968218	19.8		98.9	4023	

QC Flag Legend

Review Flags

M - Manually Integrated

Report Date: 02-Mar-2017 12:34:08 Chrom Revision: 2.2 03-Feb-2017 15:35:04

TestAmerica Sacramento

Data File: \\ChromNa\Sacramento\ChromData\A8_N\20170302-40393.b\2017.03.02A_005.d

Injection Date: 02-Mar-2017 10:42:45 Instrument ID: A8_N

Lims ID: LCS 320-152587/2-A

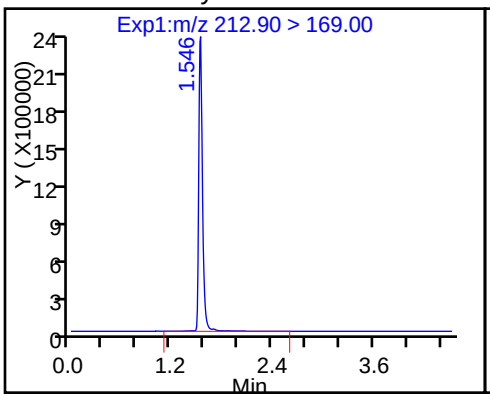
Client ID:

Operator ID: A8-PC\A8 ALS Bottle#: 2 Worklist Smp#: 14

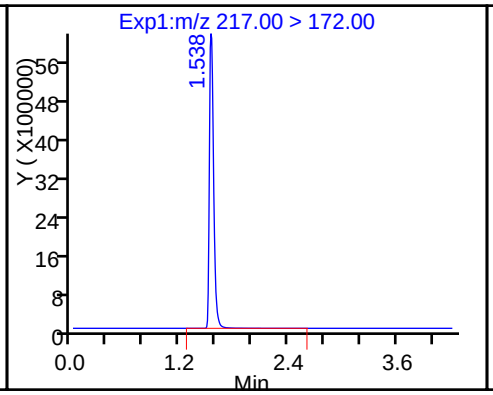
Injection Vol: 2.0 ul Dil. Factor: 1.0000

Method: A8_N Limit Group: LC PFC_DOD ICAL

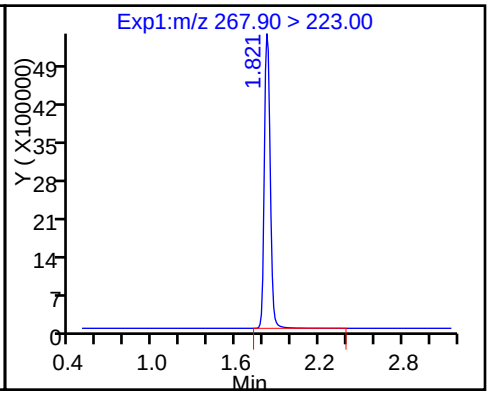
2 Perfluorobutyric acid



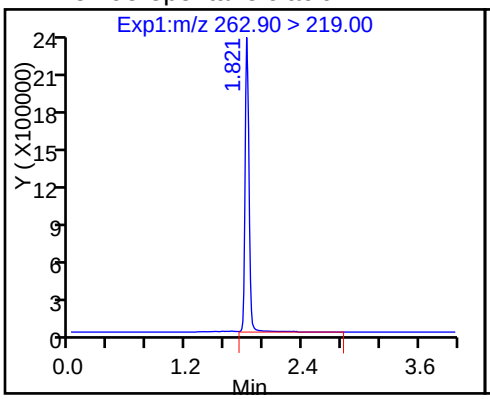
D 1 13C4 PFBA



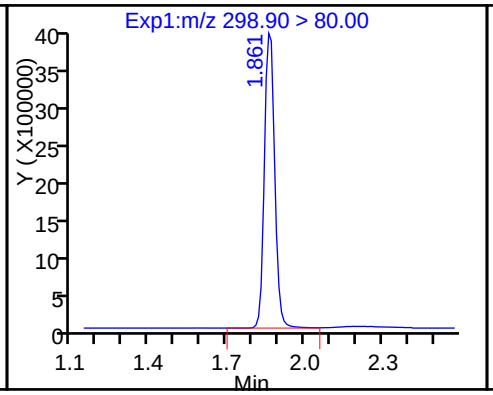
D 3 13C5-PFPeA



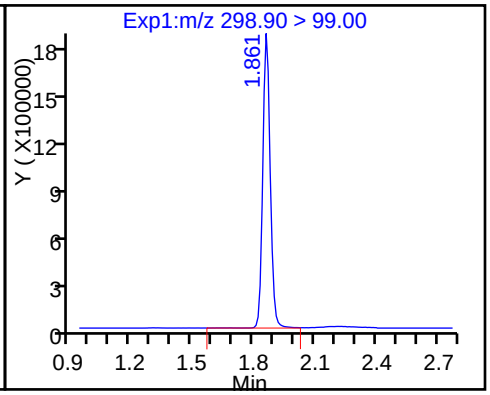
4 Perfluoropentanoic acid



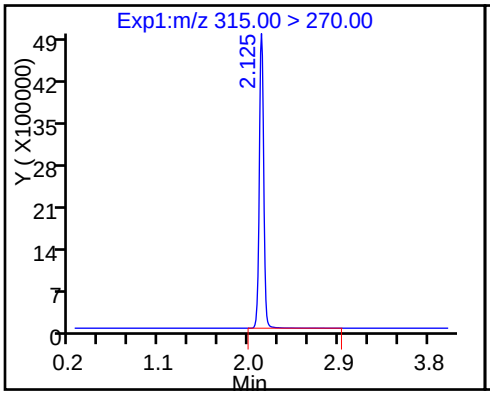
5 Perfluorobutanesulfonic acid



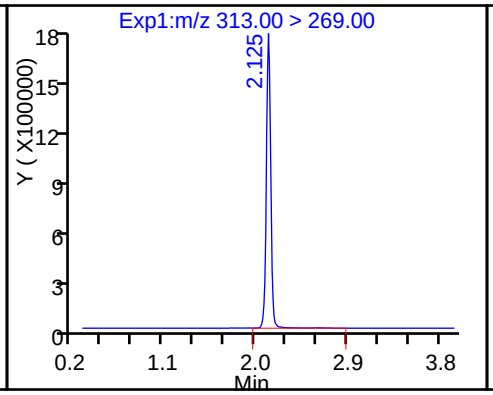
5 Perfluorobutanesulfonic acid



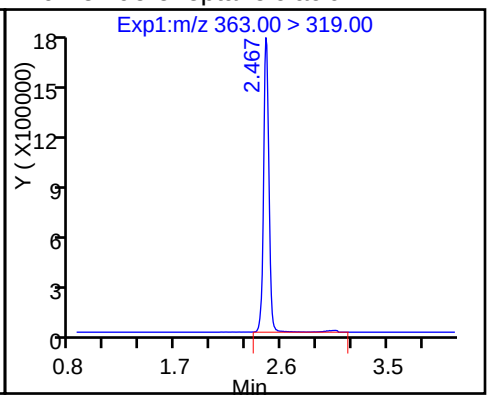
D 7 13C2 PFHxA



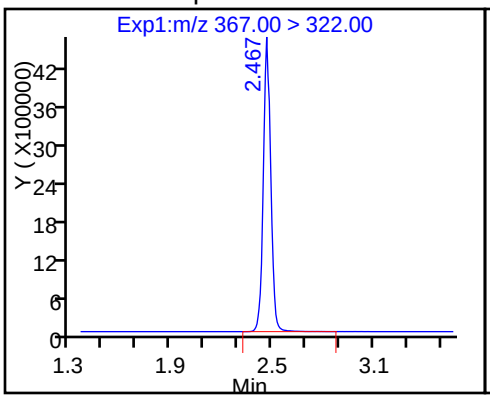
6 Perfluorohexanoic acid



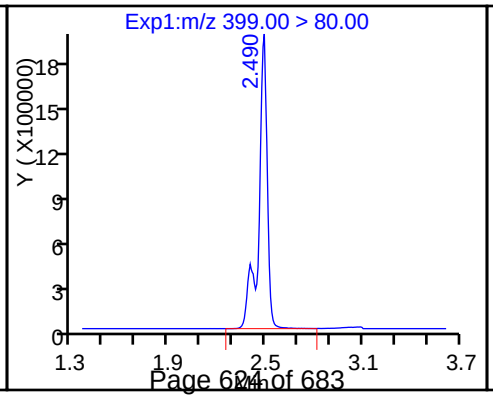
10 Perfluoroheptanoic acid



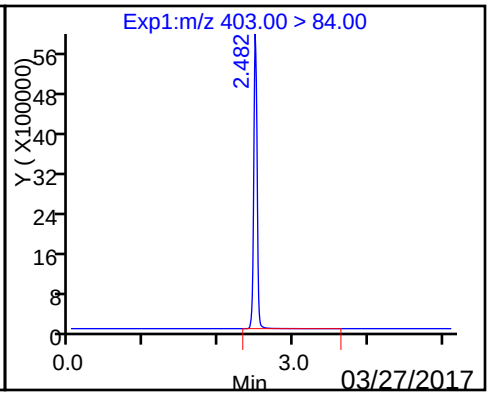
D 9 13C4-PFHpA



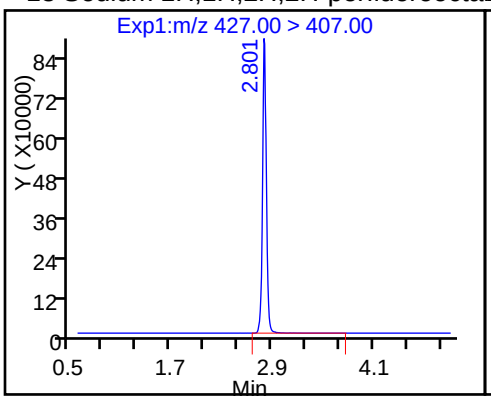
8 Perfluorohexanesulfonic acid



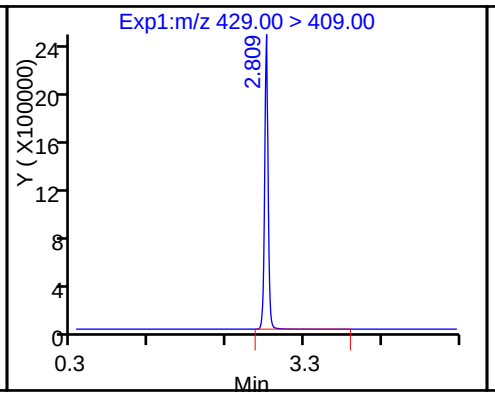
D 11 18O2 PFHxS



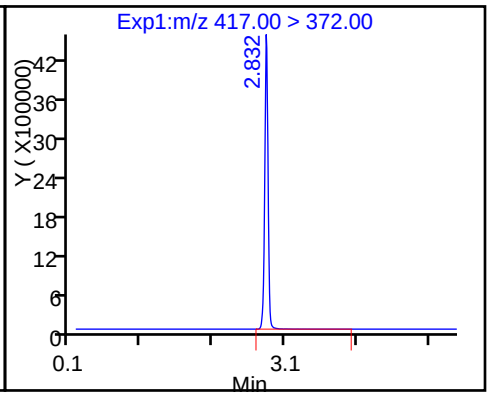
13 Sodium 1H,1H,2H,2H-perfluorooctane



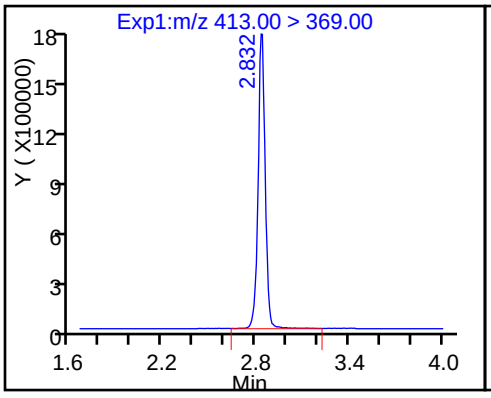
D 12 M2-6:2FTS



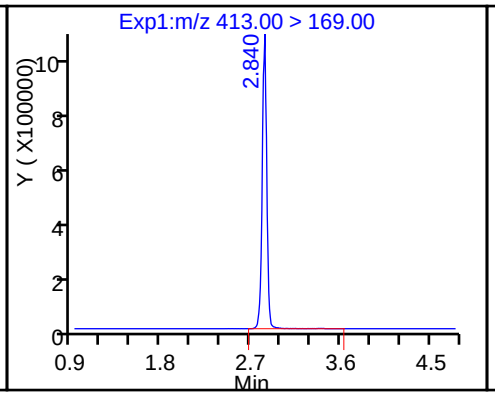
D 14 13C4 PFOA



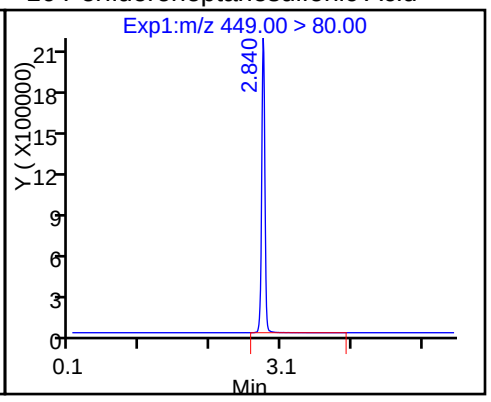
15 Perfluorooctanoic acid



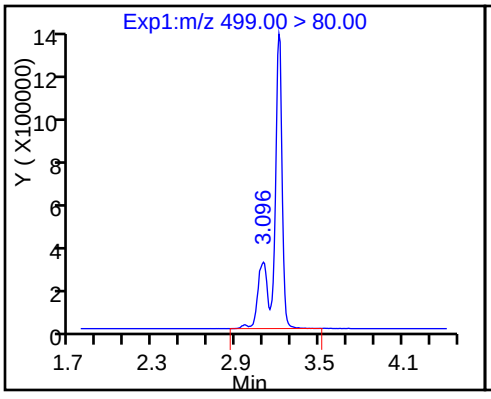
15 Perfluorooctanoic acid



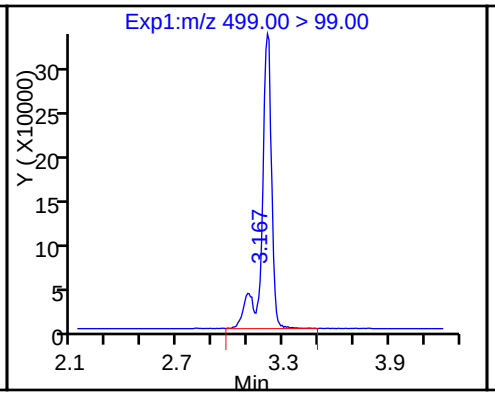
16 Perfluoroheptanesulfonic Acid



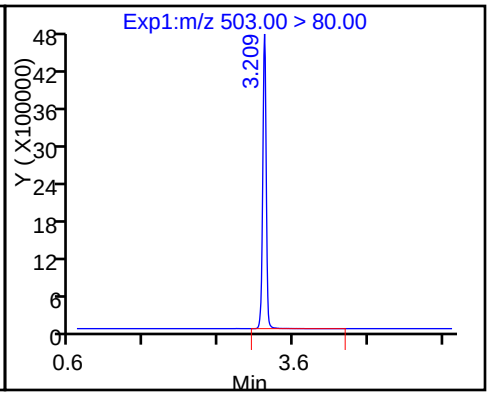
17 Perfluorooctane sulfonic acid



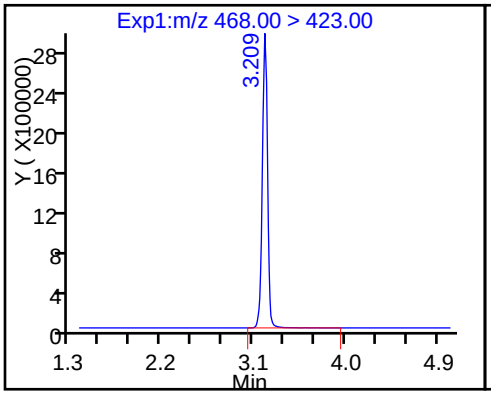
17 Perfluorooctane sulfonic acid



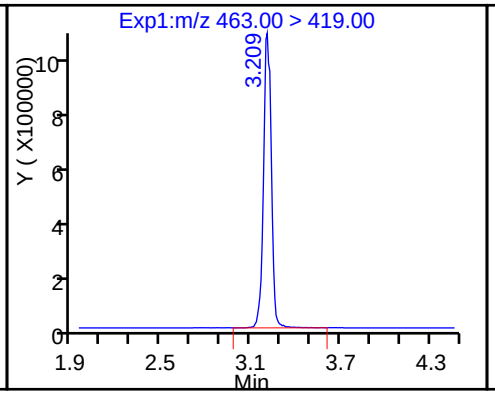
D 18 13C4 PFOS



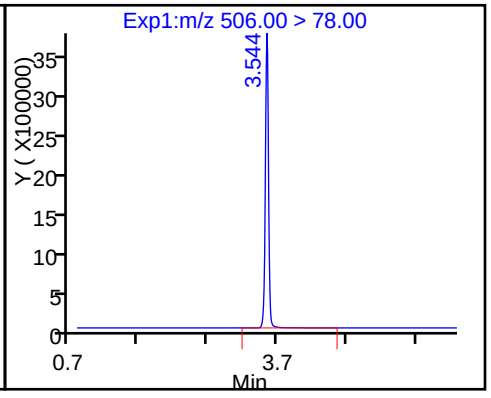
D 19 13C5 PFNA



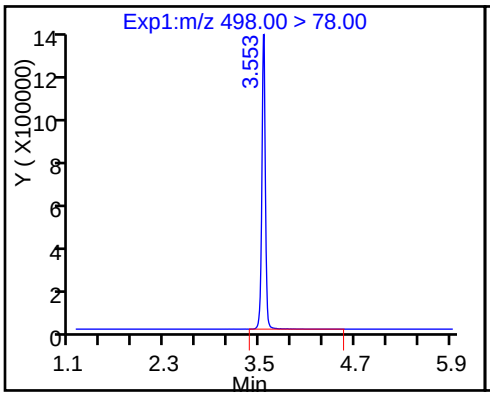
20 Perfluorononanoic acid



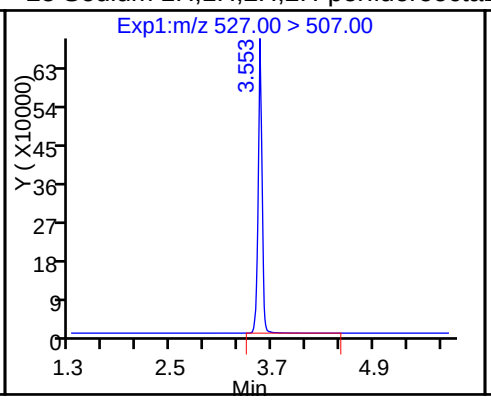
D 21 13C8 FOSA



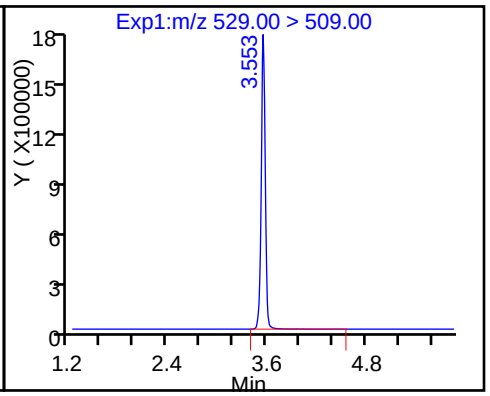
22 Perfluorooctane Sulfonamide



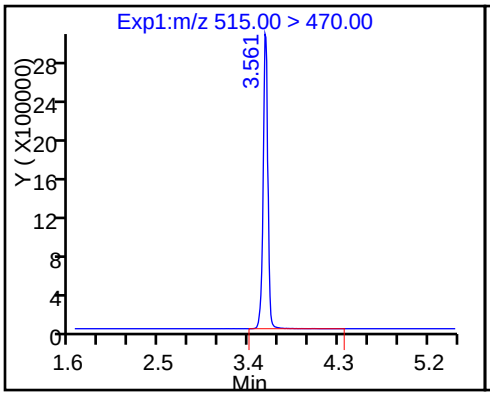
25 Sodium 1H,1H,2H,2H-perfluorooctane



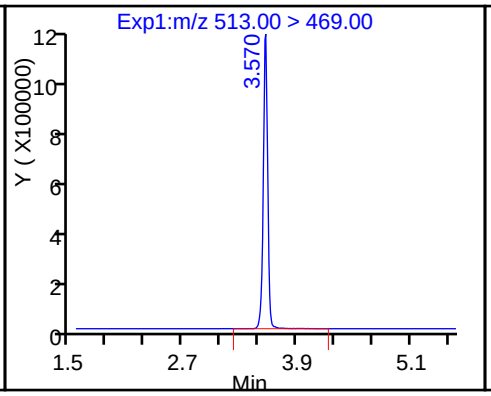
D 26 M2-8:2FTS



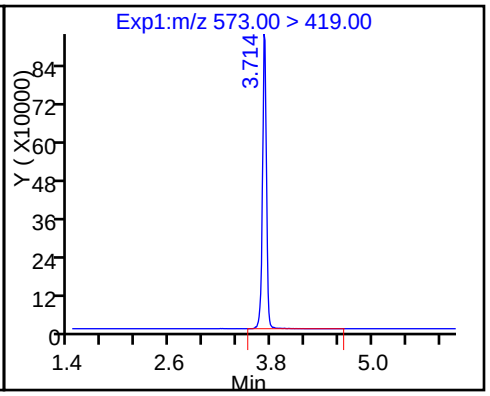
D 23 13C2 PFDA



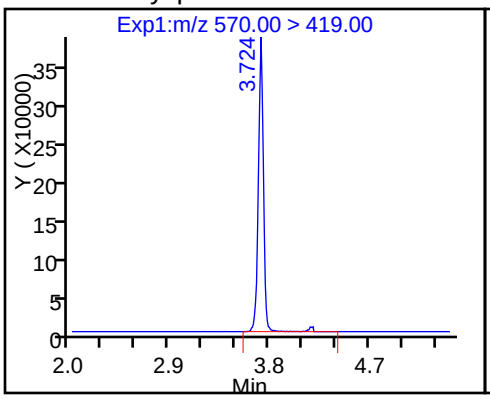
24 Perfluorodecanoic acid



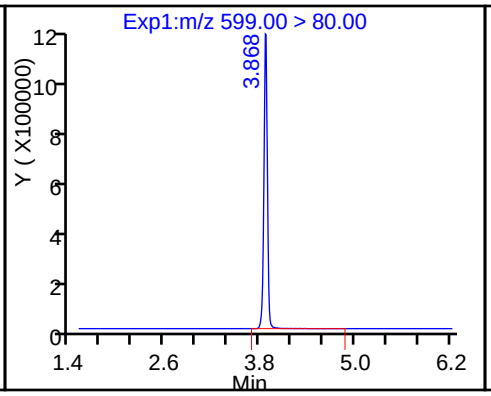
D 27 d3-NMeFOSAA



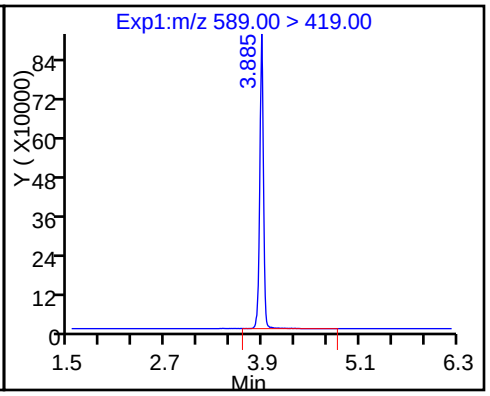
28 N-methyl perfluorooctane sulfonami



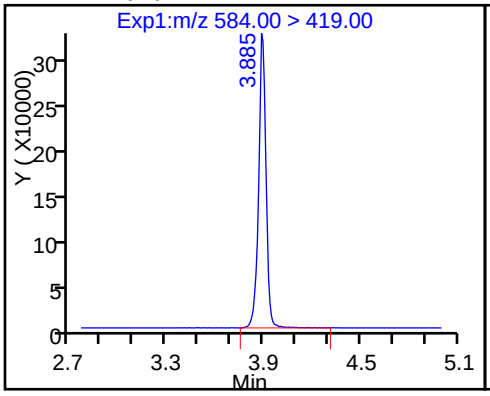
29 Perfluorodecane Sulfonic acid



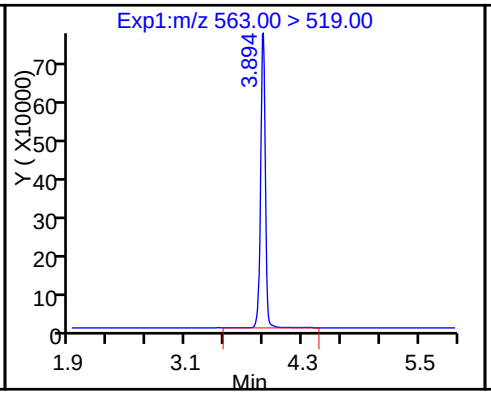
D 32 d5-NEtFOSAA



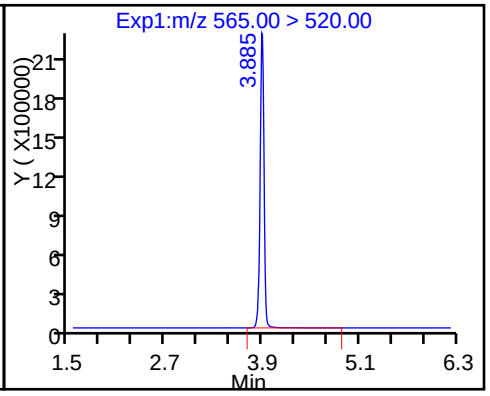
33 N-ethyl perfluorooctane sulfonamid



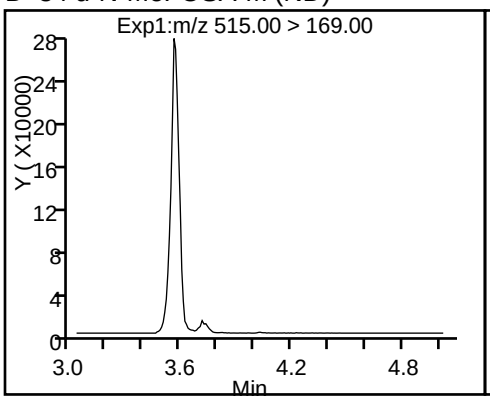
31 Perfluoroundecanoic acid



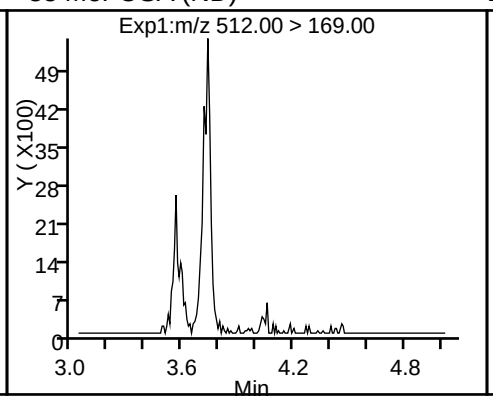
D 30 13C2 PFUnA



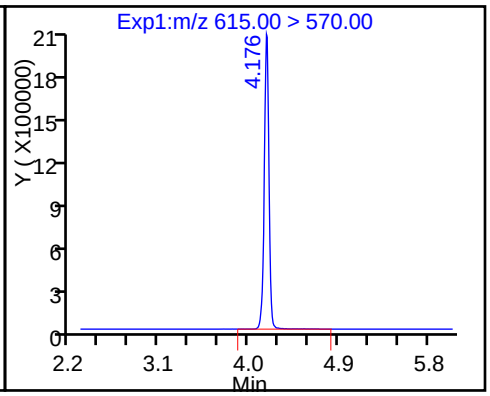
D 34 d-N-MeFOSA-M (ND)



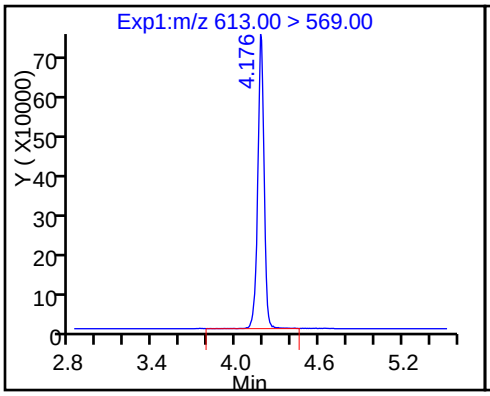
35 MeFOSA (ND)



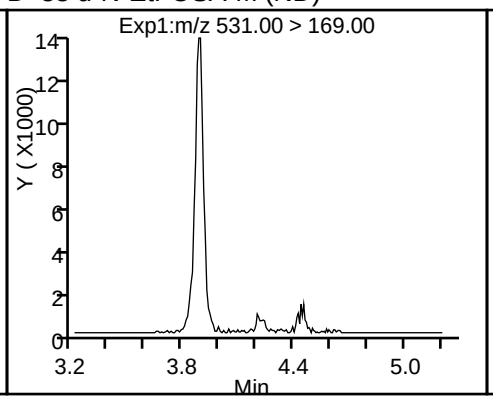
D 36 13C2 PFDoA



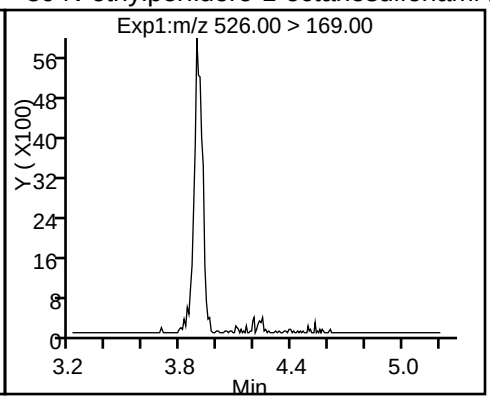
37 Perfluorododecanoic acid



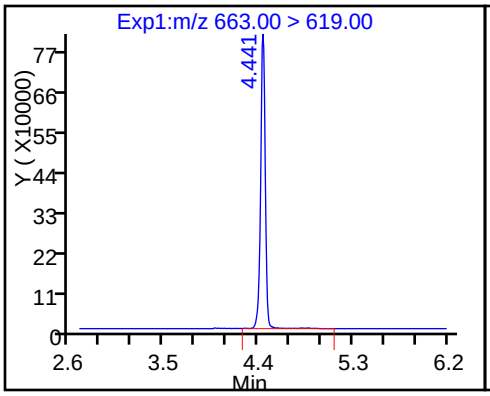
D 38 d-N-EtFOSA-M (ND)



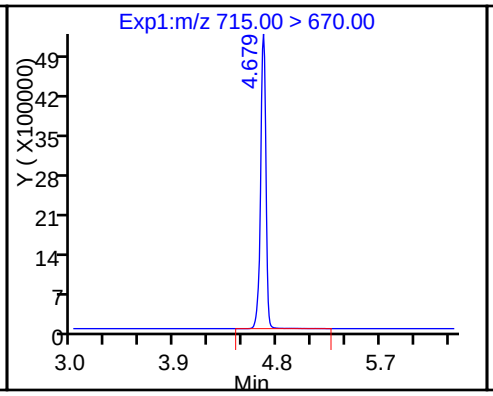
39 N-ethylperfluoro-1-octanesulfonami (ND)



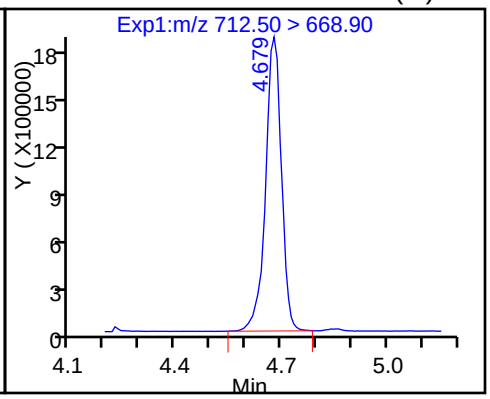
41 Perfluorotridecanoic acid



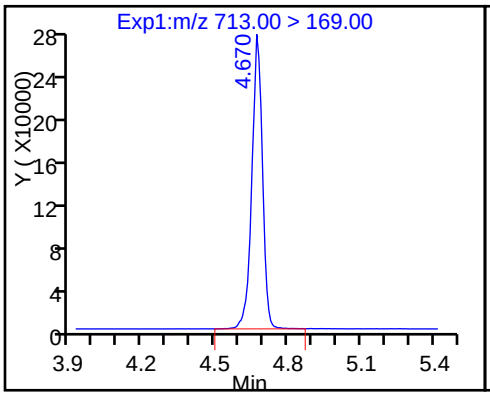
D 43 13C2-PFTeDA



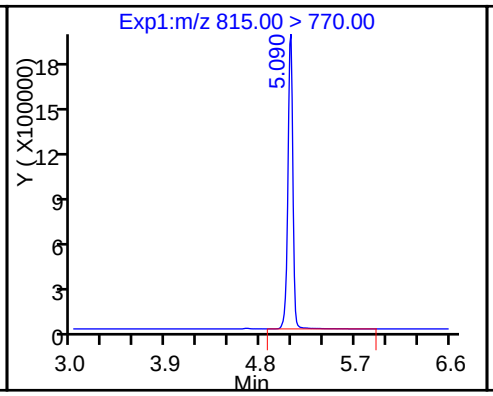
42 Perfluorotetradecanoic acid (M)



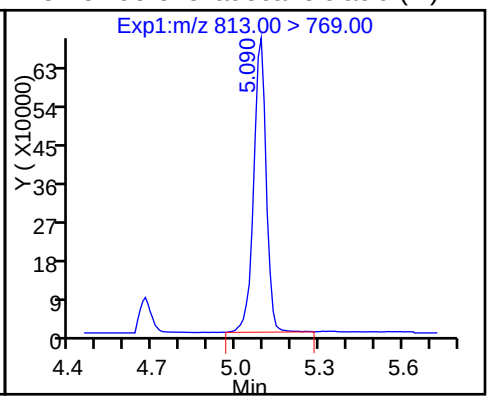
42 Perfluorotetradecanoic acid



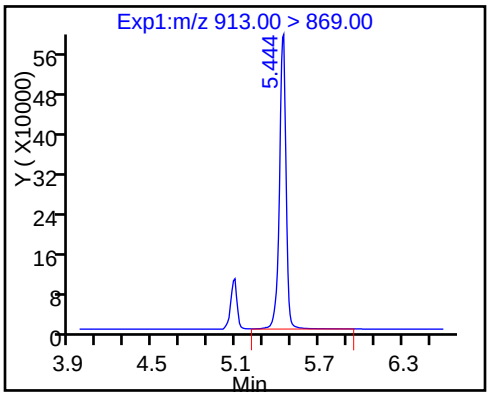
D 44 13C2-PFHxDA



45 Perfluorohexadecanoic acid (M)



46 Perfluorooctadecanoic acid



FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 320-25962-1

SDG No.:

Client Sample ID: Lab Sample ID: LCSD 320-152587/3-A

Matrix: Water Lab File ID: 2017.03.02A_006.d

Analysis Method: 537 (Modified) Date Collected:

Extraction Method: 3535 Date Extracted: 02/28/2017 16:42

Sample wt/vol: 250.00(mL) Date Analyzed: 03/02/2017 10:50

Con. Extract Vol.: 0.50(mL) Dilution Factor: 1

Injection Volume: 2(uL) GC Column: GeminiC18 3x100 ID: 3(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 152836 Units: ng/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
335-67-1	Perfluorooctanoic acid (PFOA)	38.5		2.5	2.0	0.75
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	35.6	M	4.0	3.0	1.3
375-73-5	Perfluorobutanesulfonic acid (PFBS)	40.3	M	2.5	2.0	0.92

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL00990	13C4 PFOA	142		25-150
STL00991	13C4 PFOS	135		25-150
STL00994	18O2 PFHxS	140		25-150

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNa\Sacramento\ChromData\A8_N\20170302-40393.b\2017.03.02A_006.d
Lims ID: LCSD 320-152587/3-A
Client ID:
Sample Type: LCSD
Inject. Date: 02-Mar-2017 10:50:15 ALS Bottle#: 3 Worklist Smp#: 15
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: lcsd 320-152587/3-a
Misc. Info.: Plate: 1 Rack: 5
Operator ID: A8-PC\A8 Instrument ID: A8_N

Method: \\ChromNa\Sacramento\ChromData\A8_N\20170302-40393.b\A8_N.m
Limit Group: LC PFC_DOD ICAL
Last Update: 02-Mar-2017 12:33:56 Calib Date: 01-Mar-2017 11:53:47
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\A8_N\20170301-40358.b\2017.03.01CURVE_009.d

Column 1 : Det: EXP1
Process Host: XAWRK026

First Level Reviewer: chandrasenas Date: 02-Mar-2017 12:25:50

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
2 Perfluorobutyric acid										
212.90 > 169.00	1.545	1.538	0.007	1.000	7482816	21.3		106	77287	
D 1 13C4 PFBA										
217.00 > 172.00	1.537	1.538	-0.001		20752007	71.0		142	2167597	
D 3 13C5-PFPeA										
267.90 > 223.00	1.821	1.821	0.0		17664261	76.1		152	2872032	
4 Perfluoropentanoic acid										
262.90 > 219.00	1.821	1.821	0.0	1.000	6999956	20.2		101	89737	
5 Perfluorobutanesulfonic acid										M
298.90 > 80.00	1.860	1.861	-0.001	1.000	11762366	20.2		114		
298.90 > 99.00	1.860	1.861	-0.001	1.000	4842032		2.43(0.00-0.00)			M
D 7 13C2 PFHxA										
315.00 > 270.00	2.125	2.122	0.003		15474823	73.4		147	5173200	
6 Perfluorohexanoic acid										
313.00 > 269.00	2.125	2.122	0.003	1.000	5494585	20.0		99.8	294520	
10 Perfluoroheptanoic acid										M
363.00 > 319.00	2.467	2.460	0.007	1.000	5376080	18.9		94.4	72086	M
D 9 13C4-PFHpA										
367.00 > 322.00	2.467	2.468	-0.001		14724421	76.3		153	4754593	
8 Perfluorohexanesulfonic acid										
399.00 > 80.00	2.482	2.483	-0.001	1.000	7275075	17.4		95.5		
D 11 18O2 PFHxS										
403.00 > 84.00	2.482	2.483	-0.001		19260630	66.2		140	100161	
13 Sodium 1H,1H,2H,2H-perfluorooctane										
427.00 > 407.00	2.809	2.803	0.007	1.000	2766592	20.1		106		
D 12 M2-6:2FTS										
429.00 > 409.00	2.809	2.803	0.007		7345938	95.2		200		
D 14 13C4 PFOA										
417.00 > 372.00	2.832	2.834	-0.002		14569054	71.1		142	74835	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
15 Perfluorooctanoic acid										
413.00 > 369.00	2.848	2.834	0.014	1.000	5734446	19.3		96.3	266049	
413.00 > 169.00	2.832	2.834	-0.002	0.995	3315175		1.73(0.90-1.10)		1051217	
16 Perfluoroheptanesulfonic Acid										
449.00 > 80.00	2.848	2.834	0.014	1.000	6684766	19.9		105		
17 Perfluorooctane sulfonic acid										M
499.00 > 80.00	3.218	3.089	0.129	1.000	5699041	17.8		95.9	217329	M
499.00 > 99.00	3.218	3.089	0.129	1.000	1292504		4.41(0.90-1.10)		344960	
D 18 13C4 PFOS										
503.00 > 80.00	3.209	3.202	0.007		15561883	64.4		135	1143535	
D 19 13C5 PFNA										
468.00 > 423.00	3.218	3.202	0.016		10943767	61.5		123	3079763	
20 Perfluorononanoic acid										
463.00 > 419.00	3.218	3.210	0.008	1.000	3870558	19.6		97.8	356383	
D 21 13C8 FOSA										
506.00 > 78.00	3.553	3.528	0.025		11756789	32.0		64.1	946803	
22 Perfluorooctane Sulfonamide										
498.00 > 78.00	3.553	3.536	0.017	1.000	3991951	18.9		94.5	615781	
25 Sodium 1H,1H,2H,2H-perfluorooctane										
527.00 > 507.00	3.561	3.545	0.016	1.000	2294566	20.5		107		
D 26 M2-8:2FTS										
529.00 > 509.00	3.561	3.553	0.008		5789371	62.5		131		
D 23 13C2 PFDA										
515.00 > 470.00	3.570	3.561	0.009		10224483	61.3		123	785026	
24 Perfluorodecanoic acid										
513.00 > 469.00	3.578	3.561	0.017	1.000	3697032	20.0		99.8	544597	
D 27 d3-NMeFOSAA										
573.00 > 419.00	3.725	3.714	0.011		3631549	42.6		85.3		
28 N-methyl perfluorooctane sulfonami										
570.00 > 419.00	3.735	3.714	0.021	1.003	1449910	20.6		103		
29 Perfluorodecane Sulfonic acid										
599.00 > 80.00	3.877	3.867	0.010	1.000	3564363	18.4		95.3		
D 32 d5-NEtFOSAA										
589.00 > 419.00	3.894	3.875	0.019		3353783	41.2		82.4		
33 N-ethyl perfluorooctane sulfonamid										
584.00 > 419.00	3.894	3.875	0.019	1.000	1226023	20.1		100		
31 Perfluoroundecanoic acid										
563.00 > 519.00	3.894	3.884	0.010	1.000	2747762	17.0		84.8	142157	
D 30 13C2 PFUnA										
565.00 > 520.00	3.894	3.884	0.010		7994079	61.1		122	2345680	
D 34 d-N-MeFOSA-M										
515.00 > 169.00	4.057	4.027	0.030		7857	0.0893		0.2		
D 36 13C2 PFDoA										
615.00 > 570.00	4.185	4.172	0.013		7639914	61.6		123	0.0	
37 Perfluorododecanoic acid										
613.00 > 569.00	4.192	4.172	0.020	1.000	2583508	18.5		92.4	402040	
D 38 d-N-EtFOSA-M										
531.00 > 169.00	4.439	4.205	0.234		4744	0.0556		0.1		

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
41 Perfluorotridecanoic acid										
663.00 > 619.00	4.454	4.436	0.018	1.000	2662270	19.9		99.7	165763	
D 43 13C2-PFTeDA										
715.00 > 670.00	4.687	4.672	0.015		18132069	70.0		140	5353007	
42 Perfluorotetradecanoic acid										
712.50 > 668.90	4.687	4.681	0.006	1.000	6352596	21.1		106	15810	
713.00 > 169.00	4.678	4.681	-0.003	0.998	919793		6.91(0.00-0.00)		7151	
D 44 13C2-PFHxDA										
815.00 > 770.00	5.090	5.093	-0.003		7890344	63.1		126	353494	
45 Perfluorohexadecanoic acid										M
813.00 > 769.00	5.090	5.093	-0.003	1.000	2601555	18.0		90.0	5857	M
46 Perfluorooctadecanoic acid										M
913.00 > 869.00	5.436	5.446	-0.010	1.000	2648380	24.2		121	4575	M

QC Flag Legend

Review Flags

M - Manually Integrated

Report Date: 02-Mar-2017 12:34:10 Chrom Revision: 2.2 03-Feb-2017 15:35:04

TestAmerica Sacramento

Data File: \\ChromNa\Sacramento\ChromData\A8_N\20170302-40393.b\2017.03.02A_006.d

Injection Date: 02-Mar-2017 10:50:15 Instrument ID: A8_N

Lims ID: LCSD 320-152587/3-A

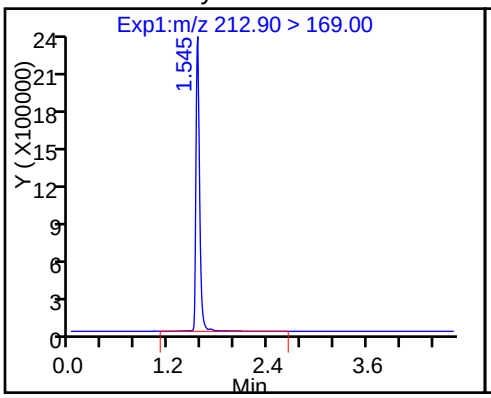
Client ID:

Operator ID: A8-PC\A8 ALS Bottle#: 3 Worklist Smp#: 15

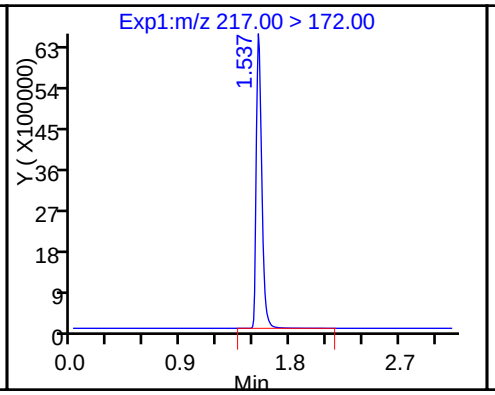
Injection Vol: 2.0 ul Dil. Factor: 1.0000

Method: A8_N Limit Group: LC PFC_DOD ICAL

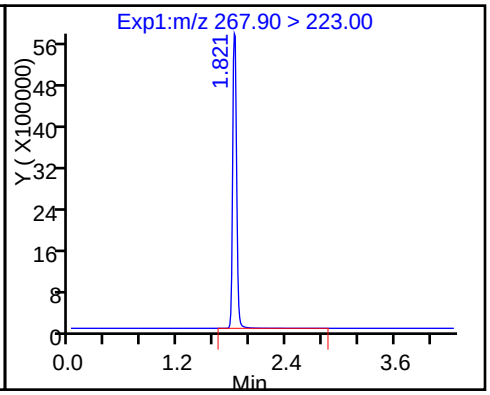
2 Perfluorobutyric acid



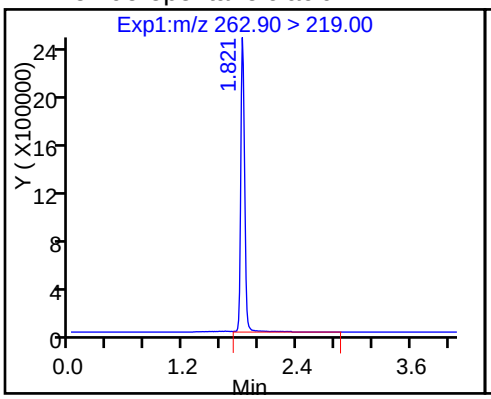
D 1 13C4 PFBA



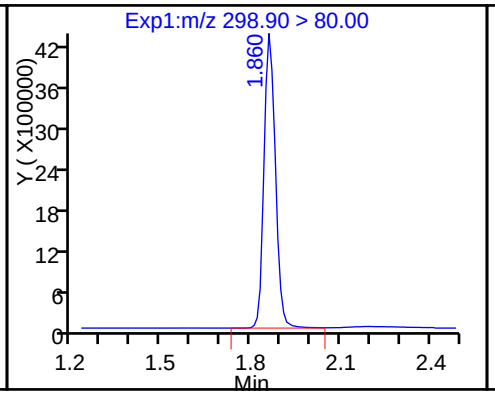
D 3 13C5-PFPeA



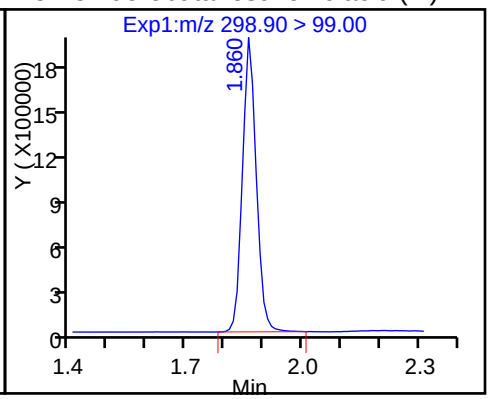
4 Perfluoropentanoic acid



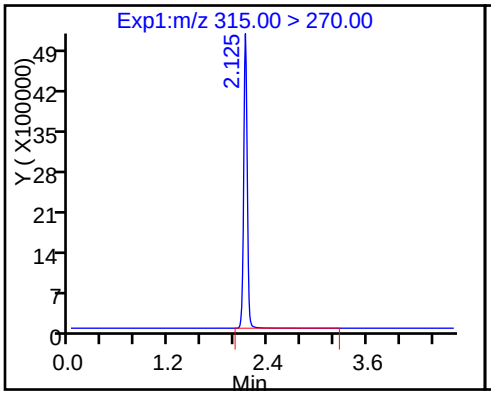
5 Perfluorobutanesulfonic acid



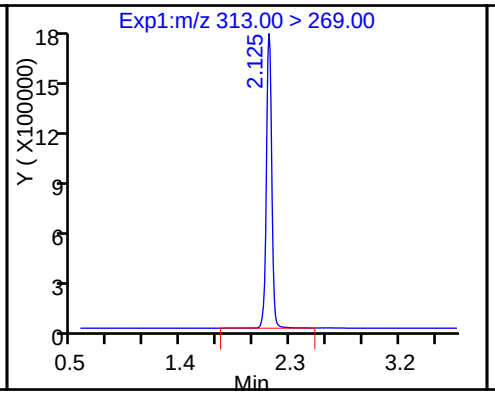
5 Perfluorobutanesulfonic acid (M)



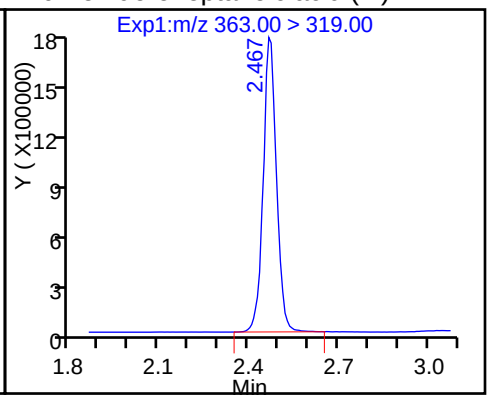
D 7 13C2 PFHxA



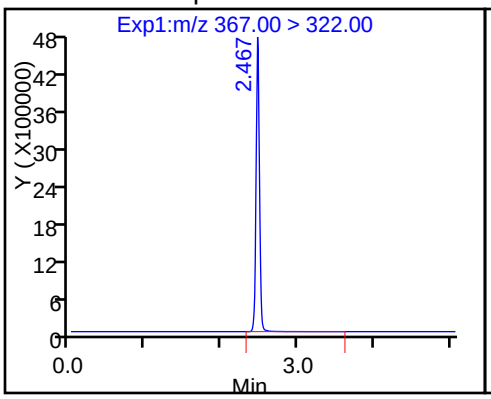
6 Perfluorohexanoic acid



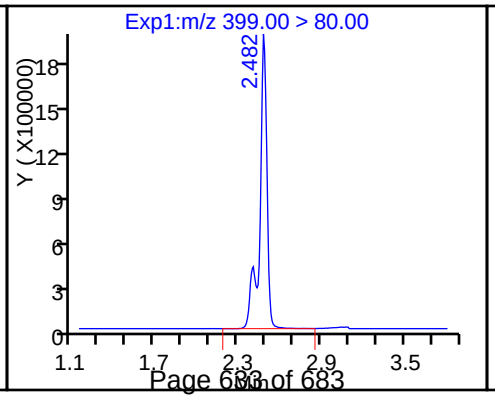
10 Perfluoroheptanoic acid (M)



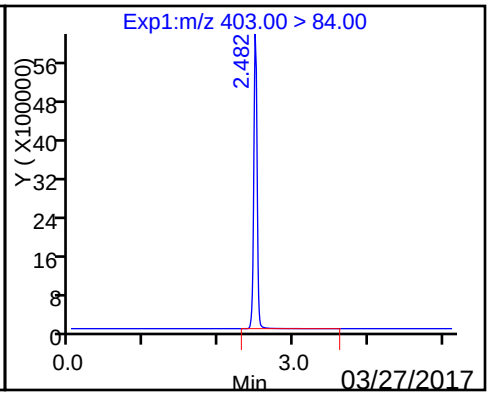
D 9 13C4-PFHpA



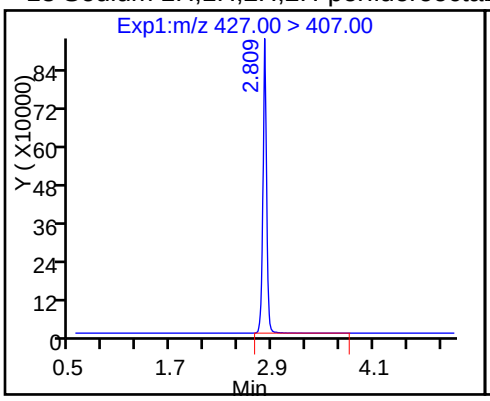
8 Perfluorohexanesulfonic acid



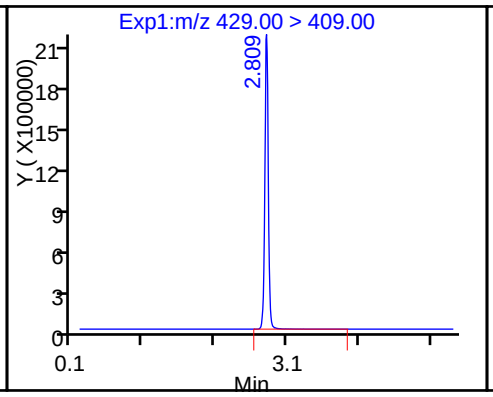
D 11 18O2 PFHxS



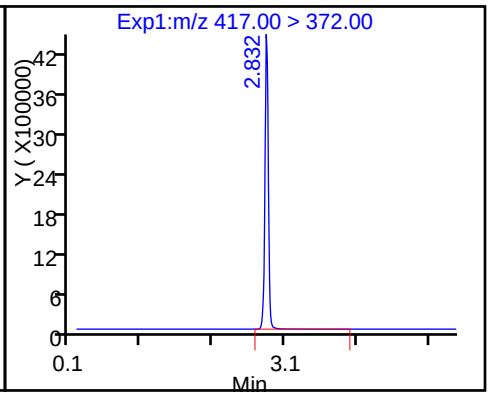
13 Sodium 1H,1H,2H,2H-perfluorooctane



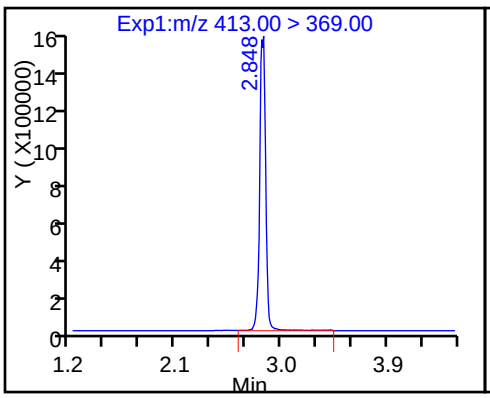
D 12 M2-6:2FTS



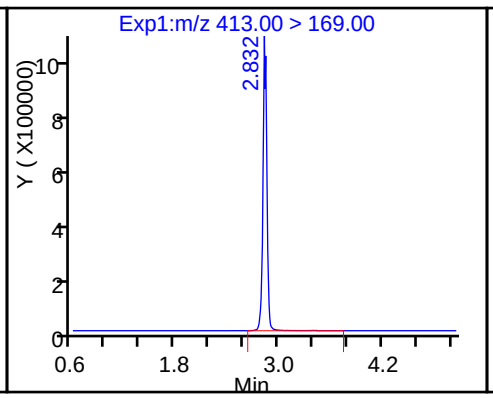
D 14 13C4 PFOA



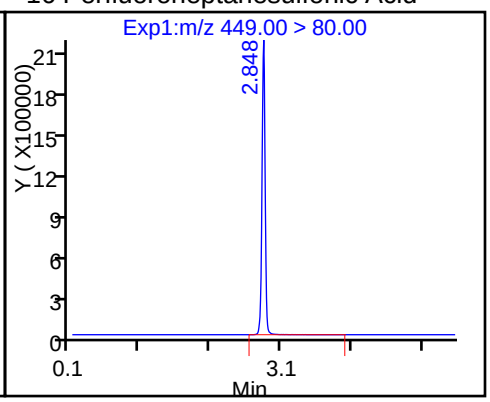
15 Perfluorooctanoic acid



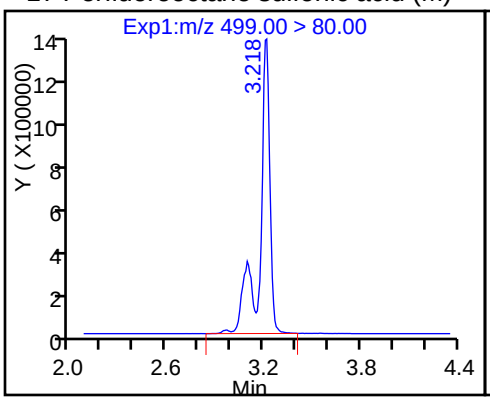
15 Perfluorooctanoic acid



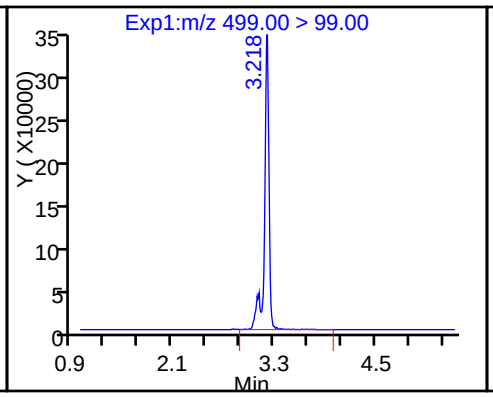
16 Perfluoroheptanesulfonic Acid



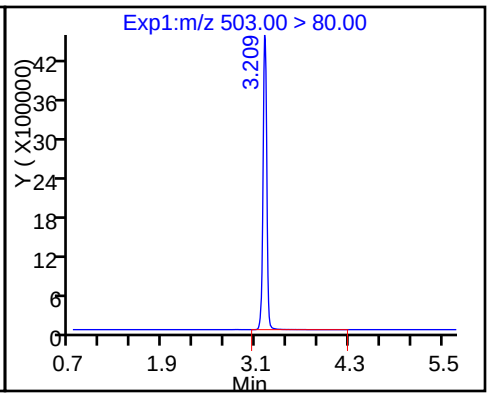
17 Perfluorooctane sulfonic acid (M)



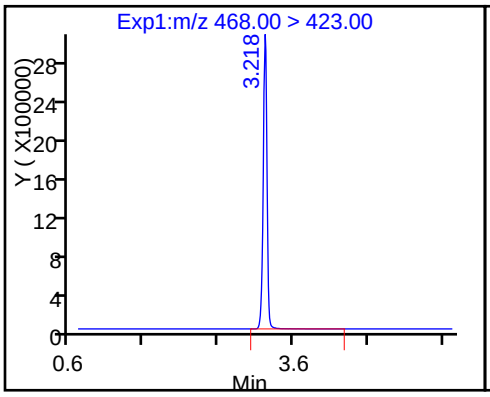
17 Perfluorooctane sulfonic acid



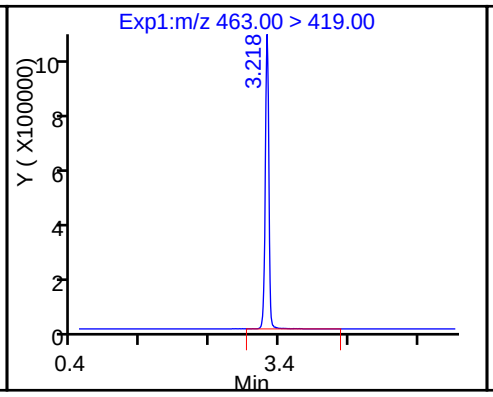
D 18 13C4 PFOS



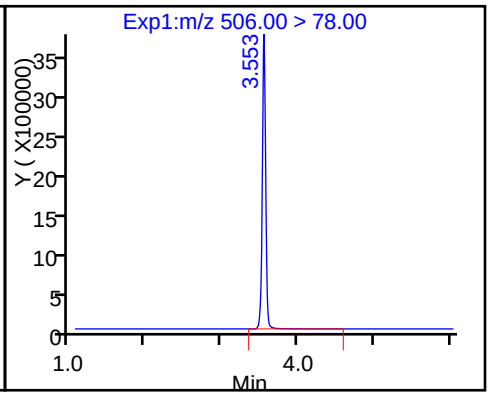
D 19 13C5 PFNA



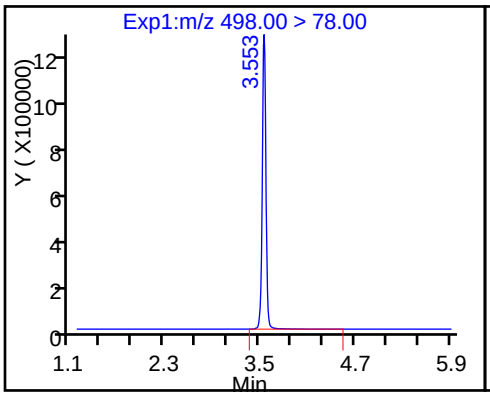
20 Perfluorononanoic acid



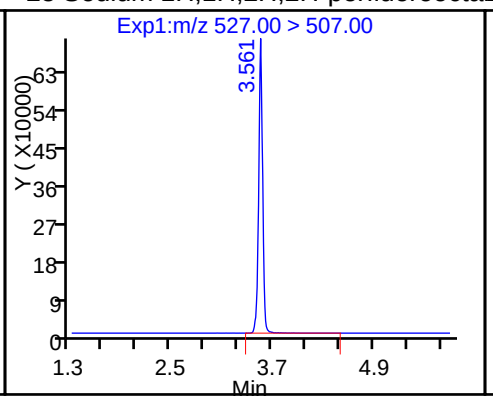
D 21 13C8 FOSA



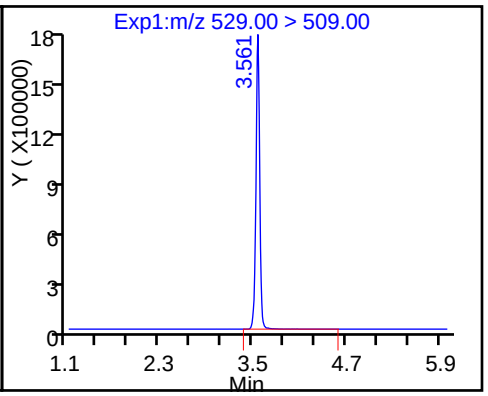
22 Perfluorooctane Sulfonamide



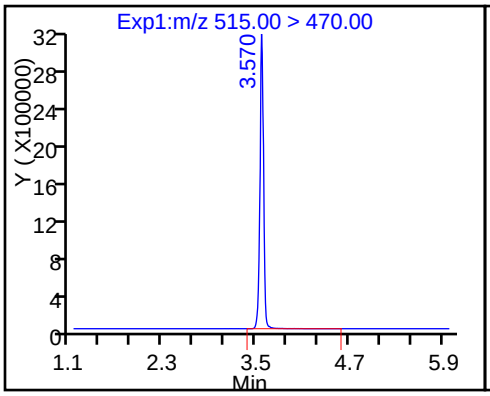
25 Sodium 1H,1H,2H,2H-perfluorooctane



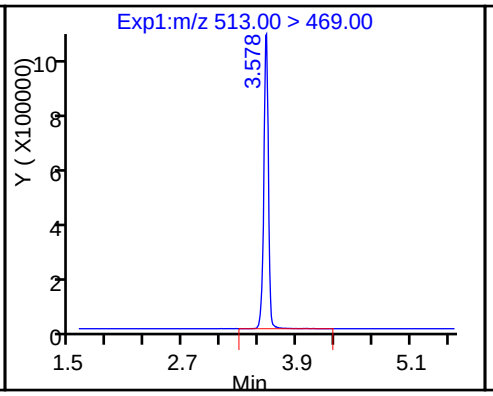
D 26 M2-8:2FTS



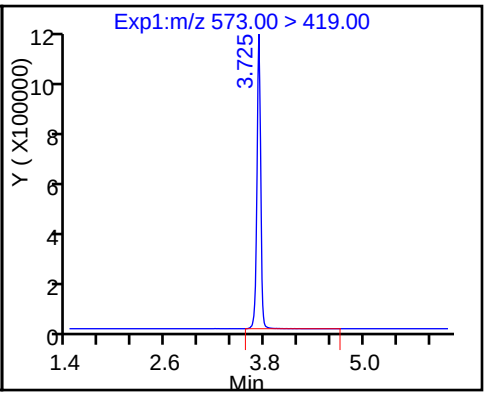
D 23 13C2 PFDA



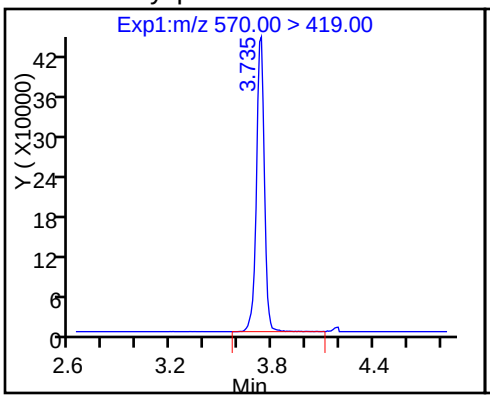
24 Perfluorodecanoic acid



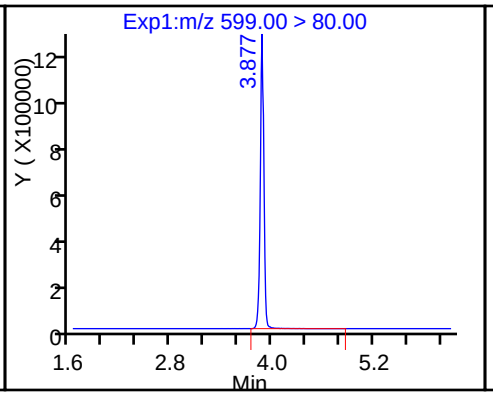
D 27 d3-NMeFOSAA



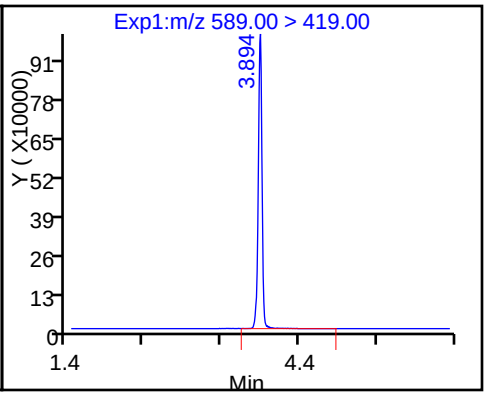
28 N-methyl perfluorooctane sulfonami



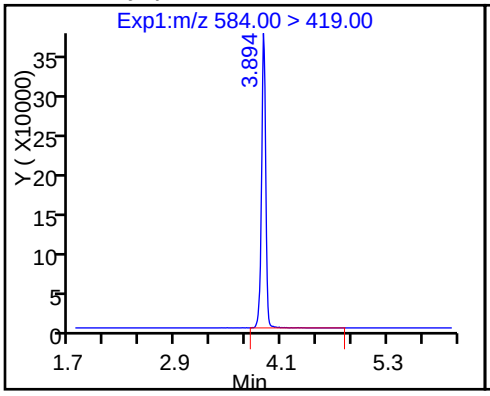
29 Perfluorodecane Sulfonic acid



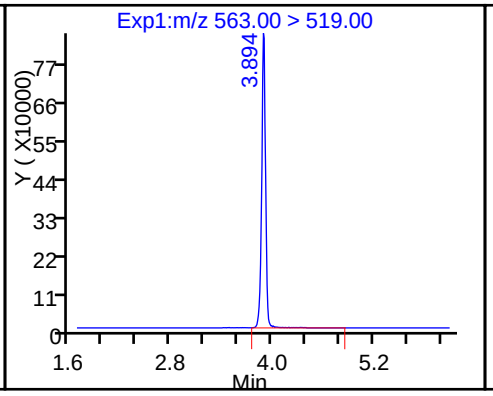
D 32 d5-NEtFOSAA



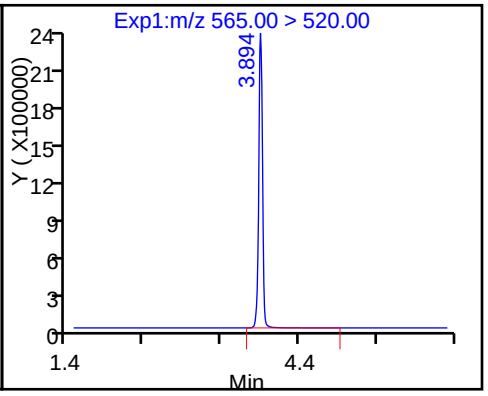
33 N-ethyl perfluorooctane sulfonamid



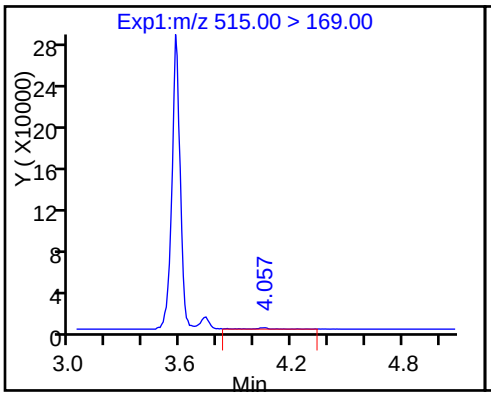
31 Perfluoroundecanoic acid



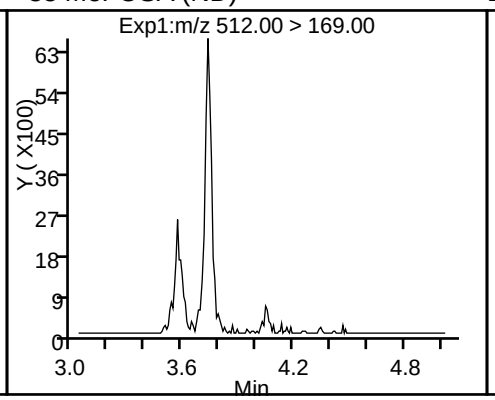
D 30 13C2 PFUnA



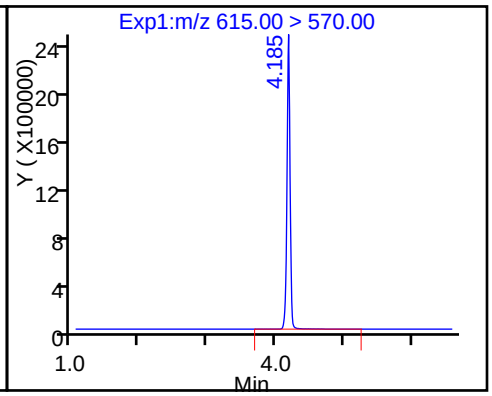
D 34 d-N-MeFOSA-M



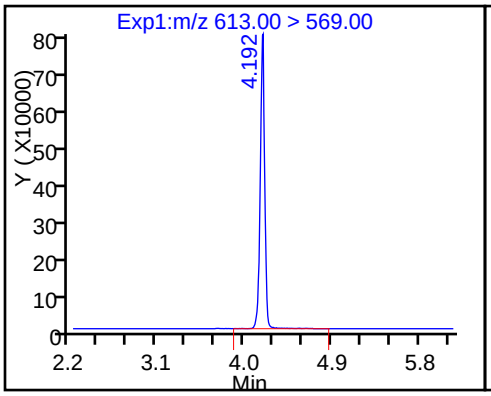
35 MeFOSA (ND)



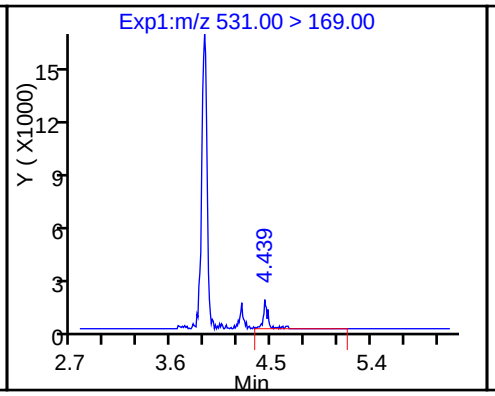
D 36 13C2 PFDoA



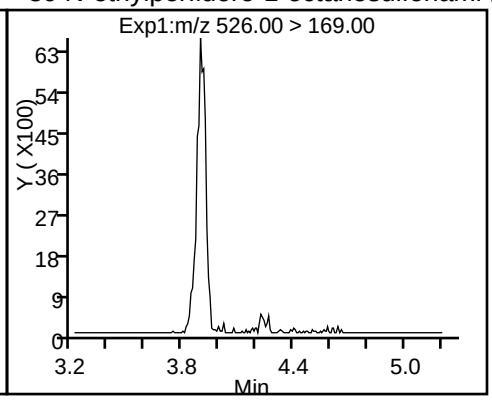
37 Perfluorododecanoic acid



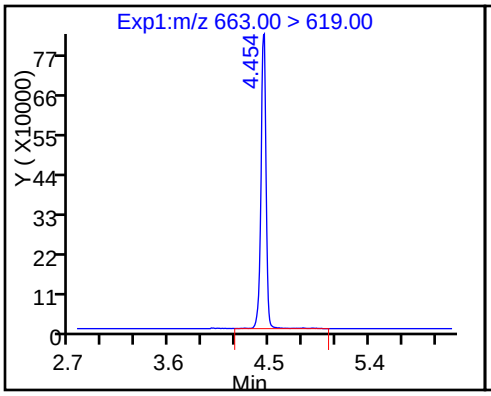
D 38 d-N-EtFOSA-M



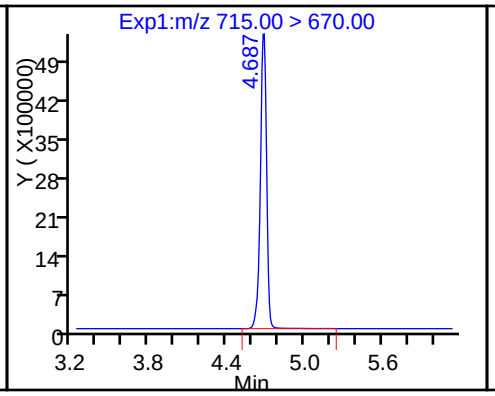
39 N-ethylperfluoro-1-octanesulfonami (ND)



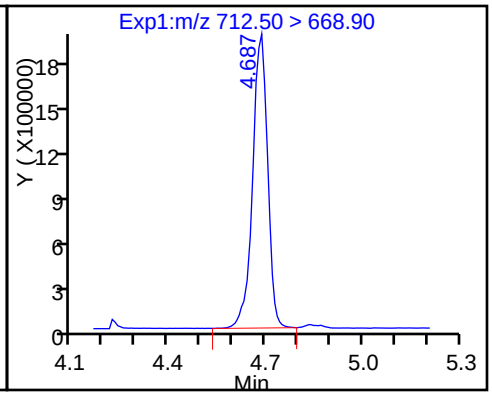
41 Perfluorotridecanoic acid



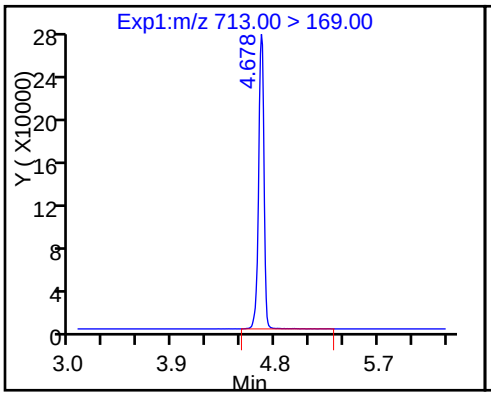
D 43 13C2-PFTeDA



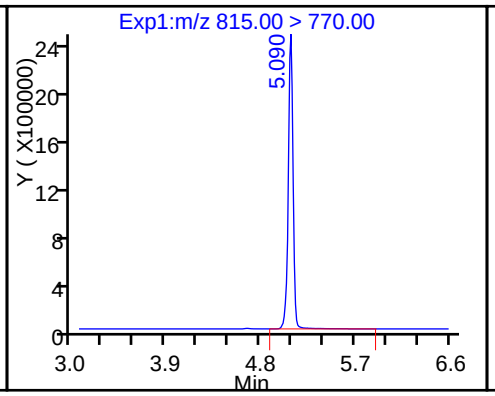
42 Perfluorotetradecanoic acid



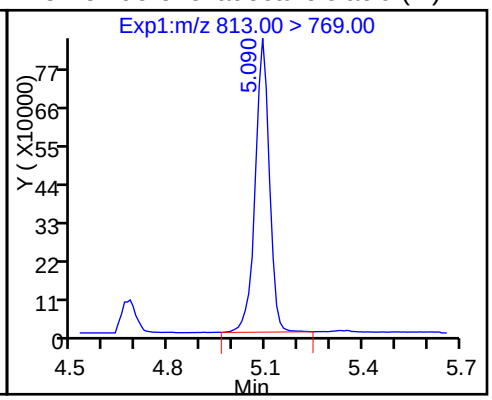
42 Perfluorotetradecanoic acid



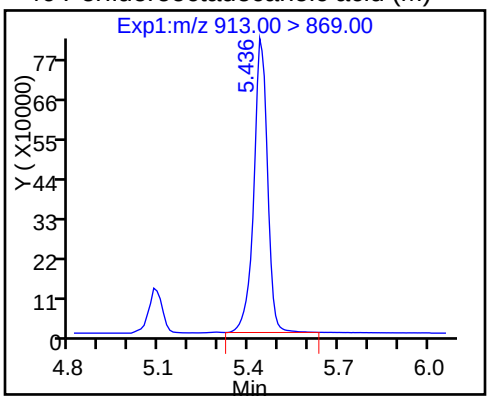
D 44 13C2-PFHxDA



45 Perfluorohexadecanoic acid (M)



46 Perfluorooctadecanoic acid (M)



Manual Integration/User Assign Peak Report

TestAmerica Sacramento

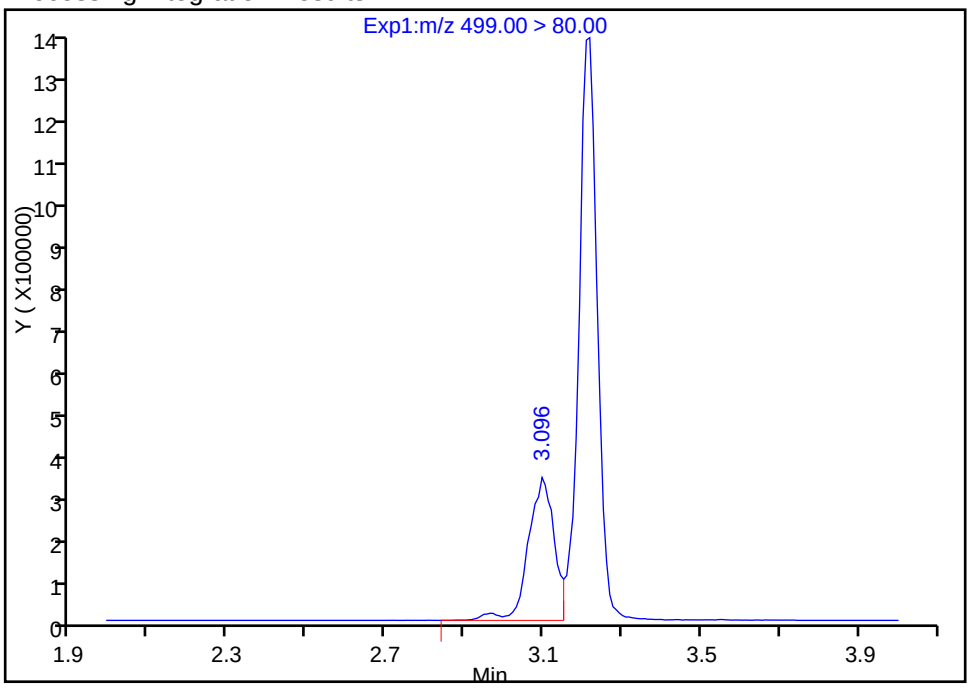
Data File: \\ChromNa\Sacramento\ChromData\A8_N\20170302-40393.b\2017.03.02A_006.d
Injection Date: 02-Mar-2017 10:50:15 Instrument ID: A8_N
Lims ID: LCSD 320-152587/3-A
Client ID:
Operator ID: A8-PC\A8 ALS Bottle#: 3 Worklist Smp#: 15
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Method: A8_N Limit Group: LC PFC_DOD ICAL
Column: Detector EXP1

17 Perfluorooctane sulfonic acid, CAS: 1763-23-1

Signal: 1

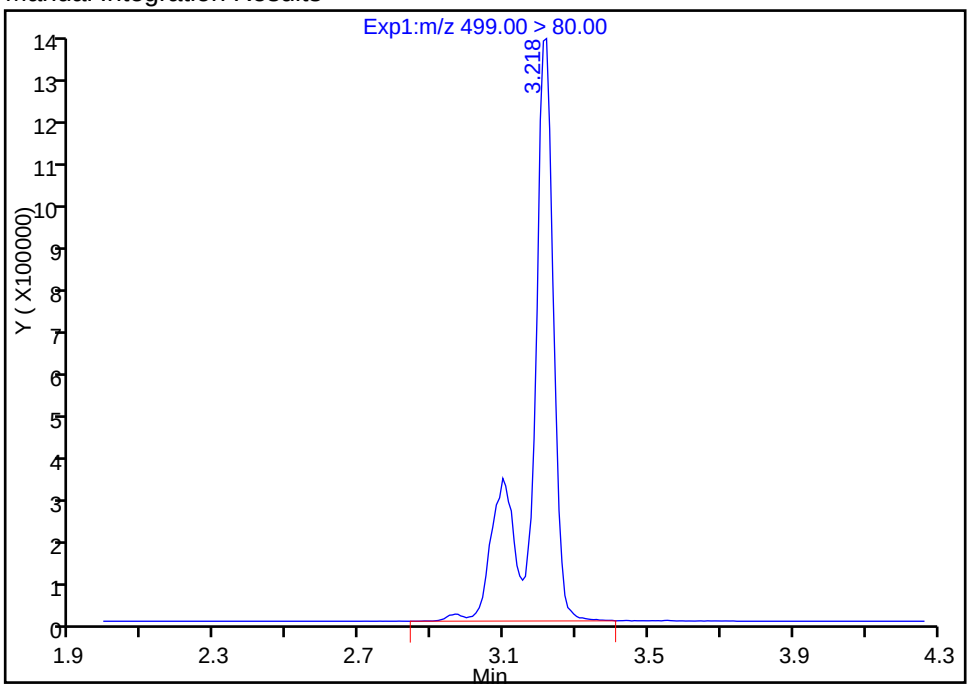
Processing Integration Results

RT: 3.10
Area: 1451227
Amount: 4.532466
Amount Units: ng/ml



Manual Integration Results

RT: 3.22
Area: 5699041
Amount: 17.799221
Amount Units: ng/ml



Reviewer: chandrasenas, 02-Mar-2017 12:34:09
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

TestAmerica Sacramento

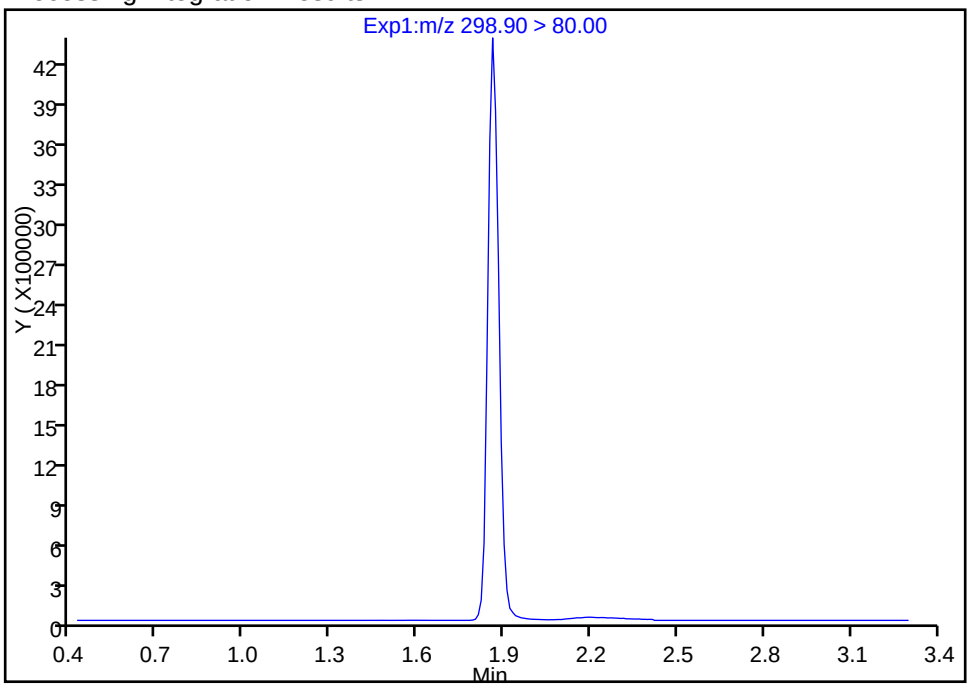
Data File: \\ChromNa\Sacramento\ChromData\A8_N\20170302-40393.b\2017.03.02A_006.d
Injection Date: 02-Mar-2017 10:50:15 Instrument ID: A8_N
Lims ID: LCSD 320-152587/3-A
Client ID:
Operator ID: A8-PC\A8 ALS Bottle#: 3 Worklist Smp#: 15
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Method: A8_N Limit Group: LC PFC_DOD ICAL
Column: Detector EXP1

5 Perfluorobutanesulfonic acid, CAS: 375-73-5

Signal: 1

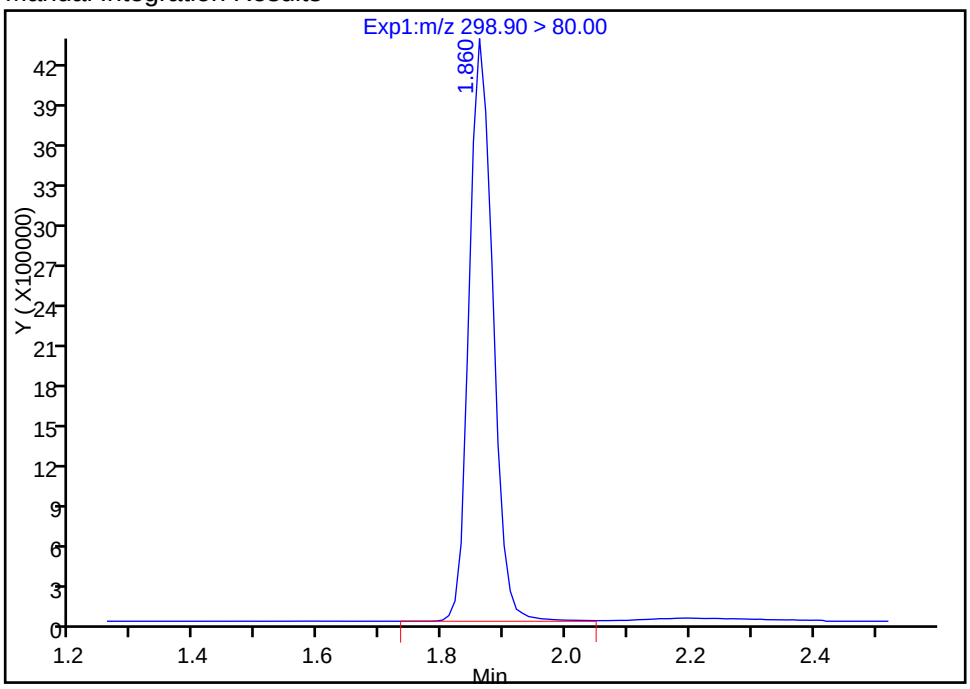
Not Detected
Expected RT: 1.86

Processing Integration Results



Manual Integration Results

RT: 1.86
Area: 11762366
Amount: 20.164565
Amount Units: ng/ml



Reviewer: chandrasenas, 02-Mar-2017 12:34:09
Audit Action: Assigned Compound ID Audit Reason: Baseline

Manual Integration/User Assign Peak Report

TestAmerica Sacramento

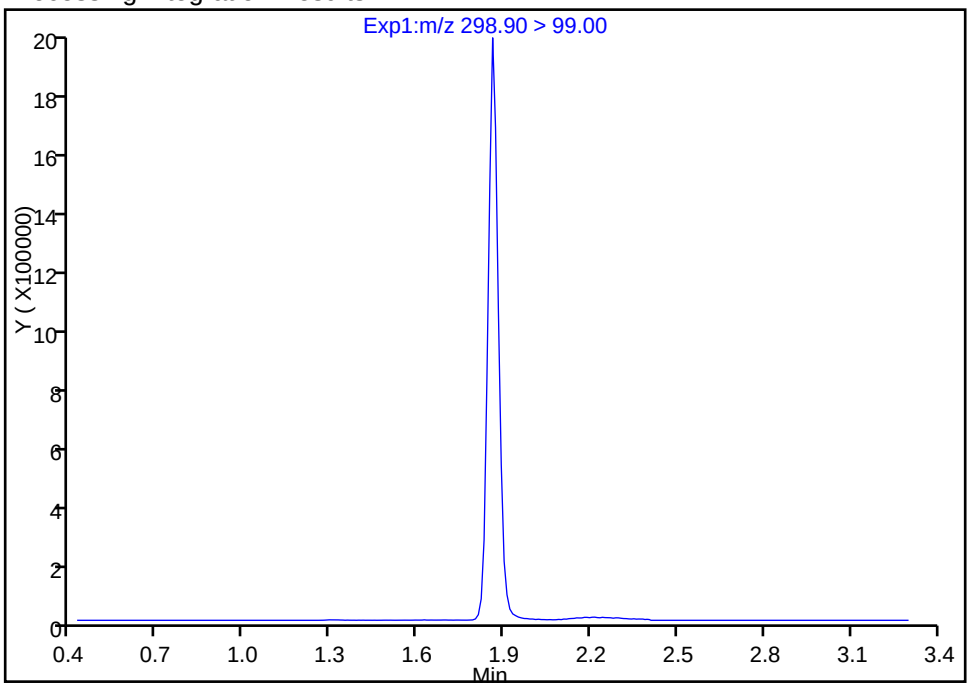
Data File: \\ChromNa\Sacramento\ChromData\A8_N\20170302-40393.b\2017.03.02A_006.d
Injection Date: 02-Mar-2017 10:50:15 Instrument ID: A8_N
Lims ID: LCSD 320-152587/3-A
Client ID:
Operator ID: A8-PC\A8 ALS Bottle#: 3 Worklist Smp#: 15
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Method: A8_N Limit Group: LC PFC_DOD ICAL
Column: Detector EXP1

5 Perfluorobutanesulfonic acid, CAS: 375-73-5

Signal: 2

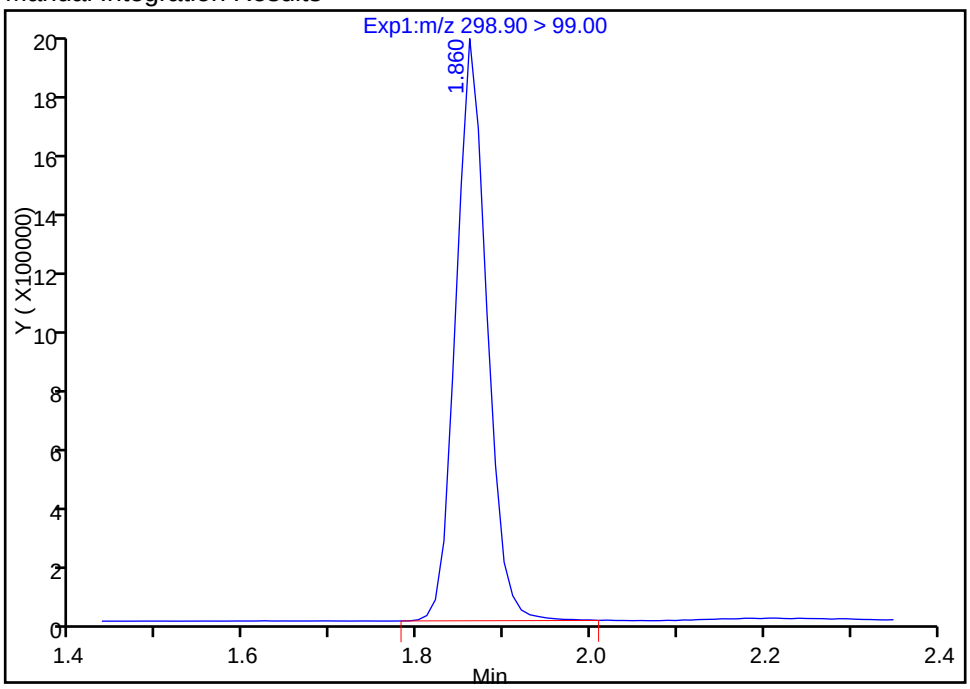
Not Detected
Expected RT: 1.86

Processing Integration Results



Manual Integration Results

RT: 1.86
Area: 4842032
Amount: 20.164565
Amount Units: ng/ml



Reviewer: chandrasenas, 02-Mar-2017 12:34:09
Audit Action: Manually Integrated Audit Reason: Baseline

LCMS ANALYSIS RUN LOG

Lab Name: TestAmerica Sacramento Job No.: 320-25962-1

SDG No.:

Instrument ID: A8_N Start Date: 03/01/2017 11:08

Analysis Batch Number: 152681 End Date: 03/01/2017 12:31

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
IC 320-152681/2		03/01/2017 11:08	1	2017.03.01CURVE 003.d	GeminiC18 3x100 3(mm)
IC 320-152681/3		03/01/2017 11:16	1	2017.03.01CURVE 004.d	GeminiC18 3x100 3(mm)
IC 320-152681/4		03/01/2017 11:23	1	2017.03.01CURVE 005.d	GeminiC18 3x100 3(mm)
IC 320-152681/5		03/01/2017 11:31	1	2017.03.01CURVE 006.d	GeminiC18 3x100 3(mm)
IC 320-152681/6		03/01/2017 11:38	1	2017.03.01CURVE 007.d	GeminiC18 3x100 3(mm)
IC 320-152681/7		03/01/2017 11:46	1	2017.03.01CURVE 008.d	GeminiC18 3x100 3(mm)
ICB 320-152681/12		03/01/2017 12:23	1		GeminiC18 3x100 3(mm)
ICV 320-152681/13		03/01/2017 12:31	1	2017.03.01CURVE 014.d	GeminiC18 3x100 3(mm)

LCMS ANALYSIS RUN LOG

Lab Name: TestAmerica Sacramento Job No.: 320-25962-1

SDG No.:

Instrument ID: A8_N Start Date: 03/01/2017 18:30

Analysis Batch Number: 152825 End Date: 03/01/2017 20:07

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 320-152825/2		03/01/2017 18:30	1	2017.03.01A_002.d	GeminiC18 3x100 3(mm)
MB 320-152015/1-A		03/01/2017 18:37	1	2017.03.01A_003.d	GeminiC18 3x100 3(mm)
ZZZZZ		03/01/2017 18:45	1		GeminiC18 3x100 3(mm)
ZZZZZ		03/01/2017 18:52	1		GeminiC18 3x100 3(mm)
ZZZZZ		03/01/2017 19:00	1		GeminiC18 3x100 3(mm)
ZZZZZ		03/01/2017 19:07	1		GeminiC18 3x100 3(mm)
ZZZZZ		03/01/2017 19:15	1		GeminiC18 3x100 3(mm)
ZZZZZ		03/01/2017 19:22	1		GeminiC18 3x100 3(mm)
ZZZZZ		03/01/2017 19:30	1		GeminiC18 3x100 3(mm)
ZZZZZ		03/01/2017 19:37	1		GeminiC18 3x100 3(mm)
320-25962-4		03/01/2017 19:45	1	2017.03.01A_012.d	GeminiC18 3x100 3(mm)
CCV 320-152825/13		03/01/2017 19:52	1	2017.03.01A_013.d	GeminiC18 3x100 3(mm)
320-25962-5		03/01/2017 20:00	1	2017.03.01A_014.d	GeminiC18 3x100 3(mm)
CCV 320-152825/15		03/01/2017 20:07	1	2017.03.01A_015.d	GeminiC18 3x100 3(mm)

LCMS ANALYSIS RUN LOG

Lab Name: TestAmerica Sacramento Job No.: 320-25962-1

SDG No.:

Instrument ID: A8_N Start Date: 03/02/2017 10:12

Analysis Batch Number: 152836 End Date: 03/02/2017 12:05

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 320-152836/10 CCVL		03/02/2017 10:12	1	2017.03.02A_001 .d	GeminiC18 3x100 3(mm)
CCV 320-152836/11		03/02/2017 10:20	1	2017.03.02A_002 .d	GeminiC18 3x100 3(mm)
ZZZZZ		03/02/2017 10:27	1		GeminiC18 3x100 3(mm)
MB 320-152587/1-A		03/02/2017 10:35	1	2017.03.02A_004 .d	GeminiC18 3x100 3(mm)
LCS 320-152587/2-A		03/02/2017 10:42	1	2017.03.02A_005 .d	GeminiC18 3x100 3(mm)
LCSD 320-152587/3-A		03/02/2017 10:50	1	2017.03.02A_006 .d	GeminiC18 3x100 3(mm)
ZZZZZ		03/02/2017 10:57	1		GeminiC18 3x100 3(mm)
ZZZZZ		03/02/2017 11:05	1		GeminiC18 3x100 3(mm)
320-25962-3		03/02/2017 11:12	1	2017.03.02A_009 .d	GeminiC18 3x100 3(mm)
ZZZZZ		03/02/2017 11:20	1		GeminiC18 3x100 3(mm)
ZZZZZ		03/02/2017 11:27	1		GeminiC18 3x100 3(mm)
ZZZZZ		03/02/2017 11:35	1		GeminiC18 3x100 3(mm)
ZZZZZ		03/02/2017 11:42	1		GeminiC18 3x100 3(mm)
CCV 320-152836/23		03/02/2017 11:50	1	2017.03.02A_014 .d	GeminiC18 3x100 3(mm)
ZZZZZ		03/02/2017 11:57	1		GeminiC18 3x100 3(mm)
CCV 320-152836/25		03/02/2017 12:05	1		GeminiC18 3x100 3(mm)

537 (Modified)

LCMS ANALYSIS RUN LOG

Lab Name: TestAmerica Sacramento Job No.: 320-25962-1

SDG No.:

Instrument ID: A8_N Start Date: 03/03/2017 09:07

Analysis Batch Number: 153020 End Date: 03/03/2017 10:00

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ		03/03/2017 09:07	1		GeminiC18 3x100 3(mm)
CCV 320-153020/3 CCVL		03/03/2017 09:15	1		GeminiC18 3x100 3(mm)
CCV 320-153020/4		03/03/2017 09:22	1	2017.03.03A_004 .d	GeminiC18 3x100 3(mm)
ZZZZZ		03/03/2017 09:30	1		GeminiC18 3x100 3(mm)
LCS 320-152015/2-A		03/03/2017 09:37	1	2017.03.03A_006 .d	GeminiC18 3x100 3(mm)
ZZZZZ		03/03/2017 09:45	50		GeminiC18 3x100 3(mm)
320-25962-4 DL		03/03/2017 09:53	10	2017.03.03A_008 .d	GeminiC18 3x100 3(mm)
CCV 320-153020/9		03/03/2017 10:00	1	2017.03.03A_009 .d	GeminiC18 3x100 3(mm)

LCMS BATCH WORKSHEET

Lab Name: TestAmerica Sacramento Job No.: 320-25962-1

SDG No.:

Batch Number: 152015 Batch Start Date: 02/23/17 17:22 Batch Analyst: Reed, Jonathan E

Batch Method: SHAKE Batch End Date: 02/27/17 17:10

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	LCMPFC2SU 00014	LCMPFCSU 00047	LCPFC2SP 00017	LCPFCSP 00080
MB 320-152015/1		SHAKE, 537 (Modified)		5.00 g	1.00 mL	50 uL	50 uL		
LCS 320-152015/2		SHAKE, 537 (Modified)		5.00 g	1.00 mL	50 uL	50 uL	40 uL	40 uL
320-25962-A-4	MEAFF-PWMA-SB01-0001	SHAKE, 537 (Modified)	T	5.05 g	1.00 mL		50 uL		
320-25962-A-5	MEAFF-PWMA-SB01-0204	SHAKE, 537 (Modified)	T	4.97 g	1.00 mL		50 uL		

Batch Notes	
Acetic Acid ID	429065
Balance ID	QA-070
Batch Comment	PIPETTE: MD05306
Hexane ID	0000130361
Manifold ID	5,6
Methanol ID	851504
Methanolic Potassium Hydroxide ID	826650
Millipore Water Dispense Date	2/23/17
Sodium Hydroxide ID	0.1% NaOH/H2O: 819948
Ammonium Hydroxide/MeOH ID	847209
Analyst ID - Reagent Drop Witness	KMK
Blank Sand Lot #	156690
SPE Cartridge ID	016836329B
SPE Cartridge Type	WAX 150mg

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.: 320-25962-1

SDG No.:

Batch Number: 152587 Batch Start Date: 02/28/17 16:42 Batch Analyst: Reed, Jonathan E

Batch Method: 3535 Batch End Date: 03/01/17 13:40

Lab Sample ID	Client Sample ID	Method Chain	Basis	GrossWeight	TareWeight	InitialAmount	FinalAmount	LCMPFC2SU 00014	LCMPFCSU 00047
MB 320-152587/1		3535, 537 (Modified)				250.00 mL	0.50 mL	25 uL	25 uL
LCS 320-152587/2		3535, 537 (Modified)				250.00 mL	0.50 mL	25 uL	25 uL
LCSD 320-152587/3		3535, 537 (Modified)				250.00 mL	0.50 mL	25 uL	25 uL
320-25962-A-3	MEAFF-EB01-022117-SO	3535, 537 (Modified)	T	305.66 g	26.40 g	279.3 mL	0.50 mL		25 uL

Lab Sample ID	Client Sample ID	Method Chain	Basis	LCPFC2SP 00017	LCPFCSP 00080				
MB 320-152587/1		3535, 537 (Modified)							
LCS 320-152587/2		3535, 537 (Modified)		20 uL	20 uL				
LCSD 320-152587/3		3535, 537 (Modified)		20 uL	20 uL				
320-25962-A-3	MEAFF-EB01-022117-SO	3535, 537 (Modified)	T						

Batch Notes	
Balance ID	QA-070
H2O ID	2/28/17
Hexane ID	0000130361
Manifold ID	2, 5
Methanol ID	851503
Sodium Hydroxide ID	0.1N NaOH/H2O: 858158
Pipette ID	MD05306
Analyst ID - Reagent Drop	JER
Analyst ID - SU Reagent Drop	JER
Analyst ID - SU Reagent Drop Witness	VPM
Solvent Lot #	847209
Solvent Name	0.3% NH4OH/MeOH
SPE Cartridge Type	WAX 500mg
Solid Phase Extraction Disk ID	002836112A

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.: 320-25962-1

SDG No.:

Batch Number: 152587 Batch Start Date: 02/28/17 16:42 Batch Analyst: Reed, Jonathan E

Batch Method: 3535 Batch End Date: 03/01/17 13:40

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
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West Sacramento

HPLC/LCMS Data Review Checklist

Job Number(s): 25933; 25962; 26103 Work List ID(s): 40391; 40441

Extraction Batch: 152015; 152587 Analysis Batch(es): 152825; 153020

Delivery Rank 4 Due Date: 2/27/17; 3 SBC 3/3/17 2/28/17; 2/26/17

A. Calibration/Instrument Run QC	1st Level	2nd Level	N/A
1. ICAL locked in Chrom and TALS? ICAL Batch# 152681	✓	✓	
2. ICAL, CCV Frequency & Criteria met.	✓	✓	
• $RF_{average}$ criteria appropriate for the method.	✓	✓	
• Linear Regression criteria appropriate if required ($r \geq 0.995$).	✓	✓	
• Quadratic fit criteria appropriate if required ($r^2 \geq 0.990$).			✓
• For Linear Regression and Quadratic fit – Does the y-intercept support ½ the reporting limit as described in CA-Q-S-005?	✓	✓	
• All curve points show calculated concentrations.	✓	✓	
3. Peaks correctly ID'd by data system.	✓	✓	
5. Tune check frequency & criteria met and Tune check report attached.	✓	✓	
B. QA/QC			
1. Are all QC samples properly linked in TALS?	✓	✓	
2. Method blank, LCS/LCSD and MS/SD frequencies met.	✓	✓	
3. LCS/LCSD and MB data are within control limits. If not, NCM is present.	✓	✓	
4. Are MS/MSD recoveries and RPD within control limits?	✓	✓	
5. Holding Times were met for prep and analytical.	✓	✓	
6. IS/Surrogate recoveries meet criteria or properly noted.	✓	✓	
C. Sample Analysis			
1. Was correct analysis performed and were project instructions followed?	✓	✓	
2. If required, are compounds within RT windows?	✓	✓	
3. If required, are positive hits confirmed and >40% RPD flagged?			✓
4. Manual Integrations reviewed and appropriate.	✓	✓	
5. All analytes correctly reported. (Primary, secondary, acceptable status)	✓	✓	
6. Correct reporting limits used. (based on client request, prep factors, and dilutions)	✓	✓	
D. Documentation			
1. Are all non-conformances documented/attached? NCM#	✓	✓	
2. Do results make sense (e.g. dilutions, etc.)?	✓	✓	
3. Have all flags been reviewed for appropriateness?	✓	✓	
4. For level 3 and 4 reports, have forms and raw data been reviewed?		✓	
5. Was QC Checker run for this job?	✓	✓	

**Upon completion of this checklist, the reviewer must scan and attach the checklist to the TALS job.*

1st Level (Analyst): [signature] Date: 3/3/17

2nd Level Reviewer: Mcwalf Date: 3/8/2017

NCMs: 79769; 79770; 79775; 79771; 79642

TestAmerica Laboratories
Worklist QC Batch Report

Worklist Name: 03MAR2017A_PFC Worklist Number: 40441
Instrument Name: A8_N Chrom Method: A8_N
Data Directory: \\ChromNa\Sacramento\ChromData\A8_N\20170303-40441.b
QC Batching: Disabled Limit Group Batching: Enabled

QC Batch: 1	LC PFC_DOD ICAL Raw Batch: 153020	LC PFC ICAL Raw Batch: 153021	LC PFAS ICAL Raw Batch: 153022	LC PFC_PREC ICAL Raw Batch: 153023
# 1 RB	# 1 RB	# 1 RB	# 1 RB	# 1 RB
# 2 RB	# 2 RB	# 2 RB	# 2 RB	# 2 RB
# 3 CCV L2	# 3 CCV L2	# 3 CCV L2	# 3 CCV L2	# 3 CCV L2
# 4 CCV L4	# 4 CCV L4	# 4 CCV L4	# 4 CCV L4	# 4 CCV L4
# 5 RB	# 5 RB	# 5 RB	# 5 RB	# 5 RB
# 6 LCS 320-152015/2-A	# 6 LCS 320-152015/2-A	RL, Dilution 79971		
# 7 320-26103-A-7-A	# 7 320-26103-A-7-A			
# 8 320-25962-A-4-A	# 8 320-25962-A-4-A			
# 9 CCV L5	# 9 CCV L5	# 9 CCV L5	# 9 CCV L5	# 9 CCV L5

ICV 152681

Tune 79642

TestAmerica Laboratories
Worklist QC Batch Report

Worklist Name: 01MAR2017A_PFC Worklist Number: 40391
Instrument Name: A8_N Chrom Method: A8_N
Data Directory: \\ChromNa\Sacramento\ChromData\A8_N\20170302-40391.b
QC Batching: Disabled Limit Group Batching: Enabled

QC Batch: 1	LC PFC_DOD ICAL Raw Batch: 152825	LC PFC ICAL Raw Batch: 152826	LC PFAS ICAL Raw Batch: 152827	LC PFC_PREC ICAL Raw Batch: 152828
# 1 RB	# 1 RB	# 1 RB	# 1 RB	# 1 RB
# 2 CCV L5	# 2 CCV L5	# 2 CCV L5	# 2 CCV L5	# 2 CCV L5
# 3 MB 320-152015/1-A	# 3 MB 320-152015/1-A			
# 4 LCS 320-152015/2-A	# 4 LCS 320-152015/2-A	→ AB 153020		
# 5 320-25933-A-1-A	# 5 320-25933-A-1-A			
# 6 320-25933-A-1-B MS	# 6 320-25933-A-1-B MS			
# 7 320-25933-A-1-C MSD	# 7 320-25933-A-1-C MSD	MS/MSD + RPD NCM 79770		
# 8 320-25933-A-2-A	# 8 320-25933-A-2-A			
# 9 320-25933-A-4-A	# 9 320-25933-A-4-A			
#10 320-25933-A-5-A	#10 320-25933-A-5-A			
#11 320-25933-A-7-A	#11 320-25933-A-7-A			
#12 320-25962-A-4-A	#12 320-25962-A-4-A	#13 CCV L4	#13 CCV L4	#13 CCV L4
#13 CCV L4	#13 CCV L4			
#14 320-25962-A-5-A	#14 320-25962-A-5-A	#15 CCV L5	#15 CCV L5	#15 CCV L5
#15 CCV L5	#15 CCV L5			

ICV 152681

LDA low 79775

E flag NCM 79769

Tune 79642

Solid SW-846-3500 Analysis Sheet

(To Accompany Samples to Instruments)

AS 2/28/17
3/1/17

Batch Number: 320-152015

Method Code: 320-Shake_Bath_14D-320

Analyst: Reed, Jonathan E

Batch Open: 2/23/2017 5:22:00PM

Batch End: 2-27-17 17:10 P.M

Shake Extraction with Ultrasonic Bath Extraction

Due 3/6

	Input Sample Lab ID (Analytical Method)	SDG (Job #)	Initial Amount	Final Amount	Due Date	Analytical TAT	Dlv Rank	Comments	Output Sample Lab ID
1	MB-320-152015/1 N/A	N/A	5.00 g	1.00 mL	N/A	N/A	N/A	RI	
2	LCS-320-152015/2 N/A	N/A	5.00 g	1.00 mL	N/A	N/A	N/A		
3	320-25933-A-1 (PFC_IDA_DOD5)	M3010.0019.0017.0 5.17TM (320-25962-1)	4.97 g	1.00 mL	2/27/17	8_Days	4		
4	320-25933-A-1-MS (PFC_IDA_DOD5)	M3010.0019.0017.0 5.17TM (320-25962-1)	4.99 g	1.00 mL	2/27/17	8_Days	4		
5	320-25933-A-1-MSD (PFC_IDA_DOD5)	M3010.0019.0017.0 5.17TM (320-25962-1)	5.00 g	1.00 mL	2/27/17	8_Days	4		
6	320-25933-A-2 (PFC_IDA_DOD5)	M3010.0019.0017.0 5.17TM (320-25962-1)	4.97 g	1.00 mL	2/27/17	8_Days	4		
7	320-25933-A-4 (PFC_IDA_DOD5)	M3010.0019.0017.0 5.17TM (320-25962-1)	5.05 g	1.00 mL	2/27/17	8_Days	4		
8	320-25933-A-5 (PFC_IDA_DOD5)	M3010.0019.0017.0 5.17TM (320-25962-1)	4.99 g	1.00 mL	2/27/17	8_Days	4		
9	320-25933-A-7 (PFC_IDA_DOD5)	M3010.0019.0017.0 5.17TM (320-25962-1)	5.05 g	1.00 mL	2/27/17	8_Days	4		
10	320-25962-A-4 (PFC_IDA_DOD5)	N/A (320-25962-1)	5.05 g	1.00 mL	2/26/17	23_Days	4	10x PFOS	
11	320-25962-A-5 (PFC_IDA_DOD5)	N/A (320-25962-1)	4.97 g	1.00 mL	2/26/17	23_Days	4		

Solid SW-846-3500 Analysis Sheet

(To Accompany Samples to Instruments)

Batch Number: 320-152015

Analyst: Reed, Jonathan E

Batch Open: 2/23/2017 5:22:00PM

Method Code: 320-Shake_Bath_14D-320

Batch End:

Batch Notes

Balance ID	QA-070
Blank Sand Lot #	156690
Filter ID	NA
Millipore Water Dispense Date	2/23/17
Analyst ID - Reagent Drop Witness	KMK
SPE Cartridge ID	016836329B
SPE Cartridge Type	WAX 150mg
Hexane ID	0000130361
Methanol ID	851504
Ammonium Hydroxide/MeOH ID	847209
Sodium Hydroxide ID	0.1% NaOH/H2O: 819948
Methanolic Potassium Hydroxide ID	826650
Manifold ID	5, 6
Interference check solution ID	NA
Acetic Acid ID	429065
Batch Comment	PIPETTE: MD05306

Solid SW-846-3500 Analysis Sheet

(To Accompany Samples to Instruments)

Batch Number: 320-152015

Analyst: Reed, Jonathan E

Batch Open: 2/23/2017 5:22:00PM

Method Code: 320-Shake_Bath_14D-320

Batch End:

Comments

320-25933-A-1	Method Comments: include add on spikes
320-25933-A-1~MS	Method Comments: include add on spikes
320-25933-A-1~MSD	Method Comments: include add on spikes
320-25933-A-2	Method Comments: include add on spikes
320-25933-A-4	Method Comments: include add on spikes
320-25933-A-5	Method Comments: include add on spikes
320-25933-A-7	Method Comments: include add on spikes
320-25962-A-4	Method Comments: DOD site, Screen-caution
320-25962-A-5	Method Comments: DOD site, Screen-caution

Solid SW-846-3500 Analysis Sheet

(To Accompany Samples to Instruments)

Batch Number: 320-152015

Analyst: Reed, Jonathan E

Batch Open: 2/23/2017 5:22:00PM

Method Code: 320-Shake_Bath_14D-320

Batch End:

Reagent Additions Worksheet

Lab ID	Reagent Code	Amount Added	Final Amount	By	Witness
MB 320-152015/1	LCMPFC2SU_00014	50 uL	1.00 mL	2/23/17	KMK 2-23-17
MB 320-152015/1	LCMPFCSU_00047	50 uL	1.00 mL		
LCS 320-152015/2	LCMPFC2SU_00014	50 uL	1.00 mL		
LCS 320-152015/2	LCMPFCSU_00047	50 uL	1.00 mL		
LCS 320-152015/2	LCPFC2SP_00017	40 uL	1.00 mL		
LCS 320-152015/2	LCPFCSP_00080	40 uL	1.00 mL		
320-25933-A-1	LCMPFC2SU_00014	50 uL	1.00 mL		
320-25933-A-1	LCMPFCSU_00047	50 uL	1.00 mL		
320-25933-A-1 MS	LCMPFC2SU_00014	50 uL	1.00 mL		
320-25933-A-1 MS	LCMPFCSU_00047	50 uL	1.00 mL		
320-25933-A-1 MS	LCPFC2SP_00017	40 uL	1.00 mL		
320-25933-A-1 MS	LCPFCSP_00080	40 uL	1.00 mL		
320-25933-A-1 MSD	LCMPFC2SU_00014	50 uL	1.00 mL		
320-25933-A-1 MSD	LCMPFCSU_00047	50 uL	1.00 mL		
320-25933-A-1 MSD	LCPFC2SP_00017	40 uL	1.00 mL		
320-25933-A-1 MSD	LCPFCSP_00080	40 uL	1.00 mL		
320-25933-A-2	LCMPFC2SU_00014	50 uL	1.00 mL		
320-25933-A-2	LCMPFCSU_00047	50 uL	1.00 mL		

Solid SW-846-3500 Analysis Sheet

(To Accompany Samples to Instruments)

Batch Number: 320-152015

Analyst: Reed, Jonathan E

Batch Open: 2/23/2017 5:22:00PM

Method Code: 320-Shake_Bath_14D-320

Batch End:

320-25933-A-4	LCMPFC2SU_00014	50 mL uL	1.00 mL	2/23/17	2-23-17 KMK
320-25933-A-4	LCMPFCSU_00047	50 uL	1.00 mL		
320-25933-A-5	LCMPFC2SU_00014	50 mL uL	1.00 mL		
320-25933-A-5	LCMPFCSU_00047	50 uL	1.00 mL		
320-25933-A-7	LCMPFC2SU_00014	50 mL uL	1.00 mL		
320-25933-A-7	LCMPFCSU_00047	50 uL	1.00 mL		
320-25962-A-4	LCMPFCSU_00047	50 uL	1.00 mL		
320-25962-A-5	LCMPFCSU_00047	50 uL	1.00 mL		

Other Reagents:

Reagent	Amount/Units	Lot#:

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Sacramento
Preparation Data Review Checklist

Preparation Batch Number(s): 152015 Test: pFe (S)

Earliest Holding Time: 3/03/17

Sample List Tab	1st Level Reviewer	2nd Level Reviewer
Samples identified to the correct method	✓	✓
All necessary NCMs filed (including holding time)	NA	NA
Method/sample/login/QAS checked and correct	✓	✓
Worksheet Tab	**1st Level Reviewer**	**2nd Level Reviewer**
All samples properly preserved	NA	NA
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 Cl Check)	✓	
The pH is transcribed correctly in TALS	NA	NA
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: 2/27/17

2nd Level Reviewer: TPM Date: 2/27/17

Comments: _____

7 of 7 A

Aqueous Extraction Analysis Sheet

(To Accompany Samples to Instruments)

AS 3/2/17

Batch Number: 320-152587

Method Code: 320-3535_PFC-320

Analyst: Reed, Jonathan E

Batch Open: 2/28/2017 4:42:00PM

Batch End: 3/1/17 13:40

Solid-Phase Extraction (SPE)

	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~320-152587/1 N/A	N/A		250.00 mL				N/A	N/A	N/A		MB 320-152587/1-A
				0.50 mL								
2	LCS~320-152587/2 N/A	N/A		250.00 mL				N/A	N/A	N/A		LCS 320-152587/2-A
				0.50 mL								
3	LCSD~320-152587/3 N/A	N/A		250.00 mL				N/A	N/A	N/A		LCSD 320-152587/3-A
				0.50 mL								
4	320-25933-A-3 (PFC_IDA_DOD5)	M3010.0019.0017.0 5.17TM (320-25933-1)	291.92 g	264.5 mL				3/3/17	8_Days	4		320-25933-A-3-A
			27.40 g	0.50 mL								
5	320-25933-A-6 (PFC_IDA_DOD5)	M3010.0019.0017.0 5.17TM (320-25933-1)	308.01 g	280.9 mL				3/3/17	8_Days	4		320-25933-A-6-A
			27.15 g	0.50 mL								
6	320-25962-A-3 (PFC_IDA_DOD5)	N/A (320-25962-1)	305.66 g	279.3 mL				2/26/17	23_Days	4		320-25962-A-3-A
			26.40 g	0.50 mL								
7	320-26011-A-10 (PFC_IDA_DOD5)	N/A (320-26011-1)	311.87 g	284.5 mL				2/27/17	23_Days	4		320-26011-A-10-A
			27.36 g	0.50 mL								
8	320-26011-A-20 (PFC_IDA_DOD5)	N/A (320-26011-1)	305.37 g	277.1 mL				2/27/17	23_Days	4		320-26011-A-20-A
			28.25 g	0.50 mL								
9	320-26011-A-21 (PFC_IDA_DOD5)	N/A (320-26011-1)	319.52 g	291.7 mL				2/27/17	23_Days	4		320-26011-A-21-A
			27.83 g	0.50 mL								
10	320-26103-A-7 (PFC_IDA_DOD5)	N/A (320-26103-1)	321.56 g	295.1 mL				2/28/17	23_Days	4	50x	320-26103-A-7-A
			26.42 g	0.50 mL								

Aqueous Extraction Analysis Sheet

(To Accompany Samples to Instruments)

Batch Number: 320-152587

Analyst: Reed, Jonathan E

Batch Open: 2/28/2017 4:42:00PM

Method Code: 320-3535_PFC-320

Batch End:

11	320-26103-A-12 (PFC_IDA_DOD5)	N/A (320-26103-1)	320.69 g 27.25 g	293.4 mL 0.50 mL				2/28/17	23_Days	4

Aqueous Extraction Analysis Sheet

(To Accompany Samples to Instruments)

Batch Number: 320-152587

Analyst: Reed, Jonathan E

Batch Open: 2/28/2017 4:42:00PM

Method Code: 320-3535_PFC-320

Batch End:

Batch Notes

Manifold ID	2, 5
Methanol ID	851503
Hexane ID	0000130361
Sodium Hydroxide ID	0.1N NaOH/H2O: 858158
First Start time	NA
First End time	NA
SPE Cartridge Type	WAX 500mg
Solid Phase Extraction Disk ID	002836112A
Balance ID	QA-070
H2O ID	2/28/17
Pipette ID	MD05306
Solvent Name	0.3% NH4OH/MeOH
Solvent Lot #	847209
Analyst ID - Reagent Drop	JER
Analyst ID - SU Reagent Drop	JER
Analyst ID - SU Reagent Drop Witness	VPM
Acid Name	NA
Acid ID	NA
Reagent ID	NA
Reagent Lot Number	NA
SOP Number	NA

Aqueous Extraction Analysis Sheet

(To Accompany Samples to Instruments)

Batch Number: 320-152587

Analyst: Reed, Jonathan E

Batch Open: 2/28/2017 4:42:00PM

Method Code: 320-3535_PFC-320

Batch End:

Batch Comment NA

Comments

320-25933-A-3	Method Comments:	add-ons needed
320-25933-A-6	Method Comments:	add-ons needed
320-25962-A-3	Method Comments:	DOD site, Screen-caution
320-26011-A-10	Method Comments:	DOD site, Screen-caution
320-26011-A-20	Method Comments:	DOD site, Screen-caution
320-26011-A-21	Method Comments:	DOD site, Screen-caution
320-26103-A-7	Method Comments:	DOD site, Screen-caution
320-26103-A-12	Method Comments:	DOD site, Screen-caution

Aqueous Extraction Analysis Sheet

(To Accompany Samples to Instruments)

Batch Number: 320-152587

Analyst: Reed, Jonathan E

Batch Open: 2/28/2017 4:42:00PM

Method Code: 320-3535_PFC-320

Batch End:

Reagent Additions Worksheet

Lab ID	Reagent Code	Amount Added	Final Amount	By	Witness
MB 320-152587/1	LCMPFC2SU_00014	25 uL	0.50 mL		VPM 2/28/17
MB 320-152587/1	LCMPFCSU_00047	25 uL	0.50 mL		
LCS 320-152587/2	LCMPFC2SU_00014	25 uL	0.50 mL		
LCS 320-152587/2	LCMPFCSU_00047	25 uL	0.50 mL		
LCS 320-152587/2	LCPFC2SP_00017	20 uL	0.50 mL		
LCS 320-152587/2	LCPFCSP_00080	20 uL	0.50 mL		
LCSD 320-152587/3	LCMPFC2SU_00014	25 uL	0.50 mL		
LCSD 320-152587/3	LCMPFCSU_00047	25 uL	0.50 mL		
LCSD 320-152587/3	LCPFC2SP_00017	20 uL	0.50 mL		
LCSD 320-152587/3	LCPFCSP_00080	20 uL	0.50 mL		
320-25933-A-3	LCMPFC2SU_00014	25 uL	0.50 mL		
320-25933-A-3	LCMPFCSU_00047	25 uL	0.50 mL		
320-25933-A-6	LCMPFC2SU_00014	25 uL	0.50 mL		
320-25933-A-6	LCMPFCSU_00047	25 uL	0.50 mL		
320-25962-A-3	LCMPFCSU_00047	25 uL	0.50 mL		
320-26011-A-10	LCMPFCSU_00047	25 uL	0.50 mL		
320-26011-A-20	LCMPFCSU_00047	25 uL	0.50 mL		
320-26011-A-21	LCMPFCSU_00047	25 uL	0.50 mL		

Aqueous Extraction Analysis Sheet

(To Accompany Samples to Instruments)

Batch Number: 320-152587

Analyst: Reed, Jonathan E

Batch Open: 2/28/2017 4:42:00PM

Method Code: 320-3535_PFC-320

Batch End:

320-26103-A-7	LCMPFCSU_00047	25 uL	0.50 mL	2/28/17	VPM 2/28/17
320-26103-A-12	LCMPFCSU_00047	25 uL	0.50 mL	↓	↓

Other Reagents:

Reagent	Amount/Units	Lot#:

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Sacramento
Preparation Data Review Checklist

Preparation Batch Number(s): 320-152587 Test: PFC-3535 (L)

Earliest Holding Time: 3/03/17

Sample List Tab	1st Level Reviewer	2nd Level Reviewer
Samples identified to the correct method	✓	✓
All necessary NCMs filed (including holding time)	NA	NA vvm 3/1/17
Method/sample/login/QAS checked and correct vvm 3/1/17	✓	✓

Worksheet Tab	1st Level Reviewer	2nd Level Reviewer
All samples properly preserved	NA	NA
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	NA	NA
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: CS Date: 3/1/17

2nd Level Reviewer: VVM Date: 3/1/17

Comments:

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Test America – Sacramento

Sample Dilution Record

Method ID PFC-IDA-DOD5 **Job #** 26103; 25962

Analyst (Print Name) Suhasa Chandrasena **Analyst Initials** SBC

Date 3/3/17

Sample#	Original F.V. (uL)	Aliquot (uL)	Dilution F.V. (uL)	Dilution Factor
26103-7	500	30	1500	50x
25962-4	1000	40	400	10x

Comments:

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

West Sacramento

HPLC/LCMS Data Review Checklist

Job Number(s): 26103; 25933; 25962; 26011

Work List ID(s): 40393

Extraction Batch: 152587

Analysis Batch(es): 152836

Delivery Rank: 4

Due Date: 3/3/17; 2/26/17; 2/27/17; 2/28/17

A Calibration/Instrument Run QC	1st Level	2nd Level	N/A
1. ICAL locked in Chrom and TALS? ICAL Batch# 152681	✓	✓	
2. ICAL, CCV Frequency & Criteria met.	✓	✓	
• $RF_{average}$ criteria appropriate for the method.	✓	✓	
• Linear Regression criteria appropriate if required ($r \geq 0.995$).	✓	✓	
• Quadratic fit criteria appropriate if required ($r^2 \geq 0.990$).			✓
• For Linear Regression and Quadratic fit – Does the y-intercept support ½ the reporting limit as described in CA-Q-S-005?	✓	✓	
• All curve points show calculated concentrations.	✓	✓	
3. Peaks correctly ID'd by data system.	✓	✓	
5. Tune check frequency & criteria met and Tune check report attached.	✓	✓	
B QA/QC			
1. Are all QC samples properly linked in TALS?	✓	✓	
2. Method blank, LCS/LCSD and MS/SD frequencies met.	✓	✓	
3. LCS/LCSD and MB data are within control limits. If not, NCM is present.	✓	✓	
4. Are MS/MSD recoveries and RPD within control limits?	✓	✓	
5. Holding Times were met for prep and analytical.	✓	✓	
6. IS/Surrogate recoveries meet criteria or properly noted.	✓	✓	
C Sample Analysis			
1. Was correct analysis performed and were project instructions followed?	✓	✓	
2. If required, are compounds within RT windows?	✓	✓	
3. If required, are positive hits confirmed and >40% RPD flagged?			✓
4. Manual Integrations reviewed and appropriate.	✓	✓	
5. All analytes correctly reported. (Primary, secondary, acceptable status)	✓	✓	
6. Correct reporting limits used. (based on client request, prep factors, and dilutions)	✓	✓	
D Documentation			
1. Are all non-conformances documented/attached? NCM#	✓	✓	
2. Do results make sense (e.g. dilutions, etc.)?	✓	✓	
3. Have all flags been reviewed for appropriateness?	✓	✓	
4. For level 3 and 4 reports, have forms and raw data been reviewed?		✓	
5. Was QC Checker run for this job?	✓	✓	

**Upon completion of this checklist, the reviewer must scan and attach the checklist to the TALS job.*

1st Level (Analyst): [signature] Date: 3/2/17

2nd Level Reviewer: [signature] Date: 3/8/2017

NCMs: 79638; 79640; 79642

TestAmerica Laboratories
Worklist QC Batch Report

Worklist Name: 02MAR2017A_PFC Worklist Number: 40393
Instrument Name: A8_N Chrom Method: A8_N
Data Directory: \\ChromNa\Sacramento\ChromData\A8_N\20170302-40393.b
QC Batching: Disabled Limit Group Batching: Enabled

QC Batch: 1	LC PFC_DOD ICAL Raw Batch: 152836	LC PFC ICAL Raw Batch: 152837	LC PFAS ICAL Raw Batch: 152838	LC PFC_PREC ICAL Raw Batch: 152839
# 1 RB	# 1 RB	# 1 RB	# 1 RB	# 1 RB
# 2 RB	# 2 RB	# 2 RB	# 2 RB	# 2 RB
# 3 RB	# 3 RB	# 3 RB	# 3 RB	# 3 RB
# 4 RB	# 4 RB	# 4 RB	# 4 RB	# 4 RB
# 5 CCV L5	# 5 CCV L5	# 5 CCV L5	# 5 CCV L5	# 5 CCV L5
# 6 QC RING & PUCK		# 6 QC RING & PUCK	# 6 QC RING & PUCK	
# 7 QC MORTAR & PESTLES		# 7 QC MORTAR & PESTLES	# 7 QC MORTAR & PESTLES	
# 8 QC SIEVES	# 9 CCV L4	# 8 QC SIEVES	# 8 QC SIEVES	# 9 CCV L4
# 9 CCV L4	#10 CCV L2	# 9 CCV L4	# 9 CCV L4	#10 CCV L2
#10 CCV L2	#11 CCV L4	#10 CCV L2	#10 CCV L2	#11 CCV L4
#11 CCV L4	#12 RB	#11 CCV L4	#11 CCV L4	#12 RB
#12 RB	#13 MB 320-152587/1-A	#12 RB	#12 RB	
#13 MB 320-152587/1-A	#14 LCS 320-152587/2-A			
#14 LCS 320-152587/2-A	#15 LCSD 320-152587/3-A	E flag NCM 79638		
#15 LCSD 320-152587/3-A	#16 320-25933-A-3-A	IDA high 79640		
#16 320-25933-A-3-A	#17 320-25933-A-6-A			
#17 320-25933-A-6-A	#18 320-25962-A-3-A			
#18 320-25962-A-3-A	#19 320-26011-A-10-A			
#19 320-26011-A-10-A	#20 320-26011-A-20-A			
#20 320-26011-A-20-A	#21 320-26011-A-21-A			#23 CCV L5
#21 320-26011-A-21-A	#22 320-26103-A-7-A	#23 CCV L5	#23 CCV L5	
#22 320-26103-A-7-A	#23 CCV L5			#25 CCV L4
#23 CCV L5	#24 320-26103-A-12-A	#25 CCV L4	#25 CCV L4	
#24 320-26103-A-12-A	#25 CCV L4			
#25 CCV L4				

ICV 152681
Tune NCM 79642

7W A

Aqueous Extraction Analysis Sheet

(To Accompany Samples to Instruments)

AB 3/2/17

Batch Number: 320-152587

Method Code: 320-3535_PFC-320

Analyst: Reed, Jonathan E

Batch Open: 2/28/2017 4:42:00PM

Batch End: 3/1/17 13:40

Solid-Phase Extraction (SPE)

	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~320-152587/1 N/A	N/A		250.00 mL 0.50 mL				N/A	N/A	N/A		MB 320-152587/1-A
2	LCS~320-152587/2 N/A	N/A		250.00 mL 0.50 mL				N/A	N/A	N/A		LCS 320-152587/2-A
3	LCSD~320-152587/3 N/A	N/A		250.00 mL 0.50 mL				N/A	N/A	N/A		LCSD 320-152587/3-A
4	320-25933-A-3 (PFC_IDA_DOD5)	M3010.0019.0017.0 5.17TM (320-25933-1)	291.92 g 27.40 g	264.5 mL 0.50 mL				3/3/17	8_Days	4		320-25933-A-3-A
5	320-25933-A-6 (PFC_IDA_DOD5)	M3010.0019.0017.0 5.17TM (320-25933-1)	308.01 g 27.15 g	280.9 mL 0.50 mL				3/3/17	8_Days	4		320-25933-A-6-A
6	320-25962-A-3 (PFC_IDA_DOD5)	N/A (320-25962-1)	305.66 g 26.40 g	279.3 mL 0.50 mL				2/26/17	23_Days	4		320-25962-A-3-A
7	320-26011-A-10 (PFC_IDA_DOD5)	N/A (320-26011-1)	311.87 g 27.36 g	284.5 mL 0.50 mL				2/27/17	23_Days	4		320-26011-A-10-A
8	320-26011-A-20 (PFC_IDA_DOD5)	N/A (320-26011-1)	305.37 g 28.25 g	277.1 mL 0.50 mL				2/27/17	23_Days	4		320-26011-A-20-A
9	320-26011-A-21 (PFC_IDA_DOD5)	N/A (320-26011-1)	319.52 g 27.83 g	291.7 mL 0.50 mL				2/27/17	23_Days	4		320-26011-A-21-A
10	320-26103-A-7 (PFC_IDA_DOD5)	N/A (320-26103-1)	321.56 g 26.42 g	295.1 mL 0.50 mL				2/28/17	23_Days	4	50x	320-26103-A-7-A

Aqueous Extraction Analysis Sheet

(To Accompany Samples to Instruments)

Batch Number: 320-152587

Analyst: Reed, Jonathan E

Batch Open: 2/28/2017 4:42:00PM

Method Code: 320-3535_PFC-320

Batch End:

11	320-26103-A-12 (PFC_IDA_DOD5)	N/A (320-26103-1)	320.69 g 27.25 g	293.4 mL 0.50 mL				2/28/17	23_Days	4

Aqueous Extraction Analysis Sheet

(To Accompany Samples to Instruments)

Batch Number: 320-152587

Method Code: 320-3535_PFC-320

Analyst: Reed, Jonathan E

Batch Open: 2/28/2017 4:42:00PM

Batch End:

Batch Notes

Manifold ID	2, 5
Methanol ID	851503
Hexane ID	0000130361
Sodium Hydroxide ID	0.1N NaOH/H2O: 858158
First Start time	NA
First End time	NA
SPE Cartridge Type	WAX 500mg
Solid Phase Extraction Disk ID	002836112A
Balance ID	QA-070
H2O ID	2/28/17
Pipette ID	MD05306
Solvent Name	0.3% NH4OH/MeOH
Solvent Lot #	847209
Analyst ID - Reagent Drop	JER
Analyst ID - SU Reagent Drop	JER
Analyst ID - SU Reagent Drop Witness	VPM
Acid Name	NA
Acid ID	NA
Reagent ID	NA
Reagent Lot Number	NA
SOP Number	NA

Aqueous Extraction Analysis Sheet

(To Accompany Samples to Instruments)

Batch Number: 320-152587

Analyst: Reed, Jonathan E

Batch Open: 2/28/2017 4:42:00PM

Method Code: 320-3535_PFC-320

Batch End:

Batch Comment NA

Comments

320-25933-A-3	Method Comments:	add-ons needed
320-25933-A-6	Method Comments:	add-ons needed
320-25962-A-3	Method Comments:	DOD site, Screen-caution
320-26011-A-10	Method Comments:	DOD site, Screen-caution
320-26011-A-20	Method Comments:	DOD site, Screen-caution
320-26011-A-21	Method Comments:	DOD site, Screen-caution
320-26103-A-7	Method Comments:	DOD site, Screen-caution
320-26103-A-12	Method Comments:	DOD site, Screen-caution

Aqueous Extraction Analysis Sheet

(To Accompany Samples to Instruments)

Batch Number: 320-152587

Method Code: 320-3535_PFC-320

Analyst: Reed, Jonathan E

Batch Open: 2/28/2017 4:42:00PM

Batch End:

Reagent Additions Worksheet

Lab ID	Reagent Code	Amount Added	Final Amount	By	Witness
MB 320-152587/1	LCMPFC2SU_00014	25 uL	0.50 mL	[signature]	VPM 2/28/17
MB 320-152587/1	LCMPFCSU_00047	25 uL	0.50 mL		
LCS 320-152587/2	LCMPFC2SU_00014	25 uL	0.50 mL		
LCS 320-152587/2	LCMPFCSU_00047	25 uL	0.50 mL		
LCS 320-152587/2	LCPFC2SP_00017	20 uL	0.50 mL		
LCS 320-152587/2	LCPFCSP_00080	20 uL	0.50 mL		
LCSD 320-152587/3	LCMPFC2SU_00014	25 uL	0.50 mL		
LCSD 320-152587/3	LCMPFCSU_00047	25 uL	0.50 mL		
LCSD 320-152587/3	LCPFC2SP_00017	20 uL	0.50 mL		
LCSD 320-152587/3	LCPFCSP_00080	20 uL	0.50 mL		
320-25933-A-3	LCMPFC2SU_00014	25 uL	0.50 mL		
320-25933-A-3	LCMPFCSU_00047	25 uL	0.50 mL		
320-25933-A-6	LCMPFC2SU_00014	25 uL	0.50 mL		
320-25933-A-6	LCMPFCSU_00047	25 uL	0.50 mL		
320-25962-A-3	LCMPFCSU_00047	25 uL	0.50 mL		
320-26011-A-10	LCMPFCSU_00047	25 uL	0.50 mL		
320-26011-A-20	LCMPFCSU_00047	25 uL	0.50 mL		
320-26011-A-21	LCMPFCSU_00047	25 uL	0.50 mL		

Aqueous Extraction Analysis Sheet

(To Accompany Samples to Instruments)

Batch Number: 320-152587

Analyst: Reed, Jonathan E

Batch Open: 2/28/2017 4:42:00PM

Method Code: 320-3535_PFC-320

Batch End:

320-26103-A-7	LCMPFCSU_00047	25 uL	0.50 mL	2/28/17	VPM 2/28/17
320-26103-A-12	LCMPFCSU_00047	25 uL	0.50 mL	↓	↓

Other Reagents:

Reagent	Amount/Units	Lot#:

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Sacramento
Preparation Data Review Checklist

Preparation Batch Number(s): 320-152587 Test: PEC-3535 (L)

Earliest Holding Time: 3/03/17

Sample List Tab	1st Level Reviewer	2nd Level Reviewer
Samples identified to the correct method	✓	✓
All necessary NCMs filed (including holding time)	NA	NA
Method/sample/login/QAS checked and correct	✓	✓

Worksheet Tab	1st Level Reviewer	2nd Level Reviewer
All samples properly preserved	NA	NA
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	NA	NA
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: CS Date: 3/1/17

2nd Level Reviewer: VMM Date: 3/1/17

Comments:

GENERAL CHEMISTRY

COVER PAGE
GENERAL CHEMISTRY

Lab Name: TestAmerica Sacramento Job Number: 320-25962-1

SDG No.:

Project: Meridian 10006-7-105420 JM01 Navy Clean

Client Sample ID	Lab Sample ID
MEAFF-PWMA-SB01-0001	320-25962-4
MEAFF-PWMA-SB01-0204	320-25962-5

Comments:

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Sacramento Job Number: 320-25962-1

SDG Number:

Matrix: Solid Instrument ID: NOEQUIP

Method: D 2216 LOQ Date: 01/01/2012 08:18

Analyte	Wavelength/ Mass	LOQ (%)	
Percent Moisture		0.1	
Percent Solids		0.1	

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Sacramento Job Number: 320-25962-1

SDG Number:

Matrix: Solid Instrument ID: NOEQUIP

Method: D 2216 XRL Date: 01/01/2012 08:19

Analyte	Wavelength/ Mass	XRL (%)	
Percent Moisture		0.1	
Percent Solids		0.1	

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Sacramento

Job No.: 320-25962-1

SDG No.:

Instrument ID: NOEQUIP

Analysis Method: D 2216

Start Date: 02/25/2017 14:01

End Date: 02/25/2017 14:01

Lab Sample Id	D/F	Type	Time	Analytes																									
				%Sol	Moist																								
ZZZZZZ			14:01																										
ZZZZZZ			14:01																										
ZZZZZZ			14:01																										
ZZZZZZ			14:01																										
ZZZZZZ			14:01																										
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ZZZZZZ			14:01																										
ZZZZZZ			14:01																										
320-25962-4	1	T	14:01	X	X																								
320-25962-5	1	T	14:01	X	X																								

Prep Types:

T = Total/NA

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Sacramento Job No.: 320-25962-1

SDG No.:

Batch Number: 152218 Batch Start Date: 02/25/17 14:01 Batch Analyst: Popova, Esfir 1

Batch Method: D 2216 Batch End Date: 02/27/17 11:31

Lab Sample ID	Client Sample ID	Method Chain	Basis	DISH#	DishWeight	SampleMassWet	SampleMassDry		
320-25962-A-4	MEAFF-PWMA-SB01-0001	D 2216	T	19	1.01 g	12.08 g	10.61 g		
320-25962-A-5	MEAFF-PWMA-SB01-0204	D 2216	T	20	1.01 g	13.25 g	11.45 g		

Batch Notes	
Balance ID	QA-068 No Unit
Date and Time Samples in Desiccator	02/27/17 @ 9:40
Date and Time Samples out of Desiccator	02/27/17 @ 11:31
Date samples were placed in the oven	02-25-17
Oven Temp In	118 Degrees C
Time samples were place in the oven	14:40
Date samples were removed from oven	02/27/17
Oven Temp Out	115 Degrees C
Time Samples were removed from oven	9:40
Oven ID	Soil Prep #2
Thermometer ID	151969607

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
Preparation Data Review Checklist

Preparation Batch Number(s): 152217, 152210, 152211, 152209, 152218, 152219 Test: % Moisture

Earliest Holding Time: N/A

320-25933, -26011, -25828, -25927, -25933, -25961, -25828, -25871, -25872, -25873, -25881, -25889, -25895, -25954, -26031, -25962, -25926

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	NA	H/A
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 Cl Check)	~~NA~~ ✓ MY 2/27/17	✓
The pH is transcribed correctly in TALS	NA	H/A
All additional information transcribed into TALS is correct and raw data is attached	NA	H/A
Comments are transcribed correctly in TALS	NA	H/A
Reagents Tab	**1st Level Reviewer**	**2nd Level Reviewer**
All necessary reagents not expired and entered into TALS	NA	H/A
All spike amounts correct and added to necessary samples and QC	NA	H/A
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: MY Date: 2/27/17

2nd Level Reviewer: CFR Date: 2/27/17

Comments: _____

Shipping and Receiving Documents

TestAmerica Sacramento
880 Riverside Parkway

West Sacramento, CA 95605-1500
phone 916.373.5600 fax 303.467.7248

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Bryan Burkingstock	Site Contact: Ryan Brown	Date: 2/21/17	COC No: 1
CH2M Hill	Tel/Fax:	Lab Contact: Jill Kellmann	Carrier: FedEx	1 of 1 COCs
6600 Peachtree Dunwoody Rd., 400 Embassy Row, Suite 600	**Analysis Turnaround Time**			Sampler: K. Braun, J. McCann
Atlanta, GA 30328	~~X~~ CALENDAR DAYS X WORKING DAYS			**For Lab Use Only:**
(678) 530-4060 Phone	TAT if different from Below _____			Walk-in Client:
(770) 604-9183 FAX	X 2 weeks			Lab Sampling:
Project Name: Meridian 10006-7-105420 JM01 Navy Clean	☐ 1 week			
Site: NAS Meridian	☐ 2 days			Job / SDG No.:
P O #: 10006-7-105420	☐ 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)	1,4-Dioxane 8270	PFC 537M	Sample Specific Notes:
MEAFF-MRD-1A01-0217	2/21/17	1555	G	GW	4	N	N	X	X	
MEAFF-MRD-1A01P-0217	↓	↓	↓	↓	↓	N	N	X	X	field duplicate
MEAFF-EB01-022117	↓	1325	G	~~W~~ SO	1	N	N		X	equipment blank
MEAFF-PWMA-SB01-0001	↓	1335	↓	GW	↓	N	N		X	
MEAFF-PWMA-SB01-0204	↓	1340	↓	↓	↓	N	N		X	

320-25962 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 X 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:
Send results to Mike Zamboni - address should be on file

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: 4.8 Corr'd: 4.8 | Therm ID No.: AK

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Ryan Braun	CH2M	2/21/17@1800	Troy G. Tarpey	TAWS	2/22/17 0900
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. 4.11, dated 1/24/2017

Login Sample Receipt Checklist

Client: CH2M Hill, Inc.

Job Number: 320-25962-1

Login Number: 25962
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?	True	
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	

Comment_ID	CCV_CTU_Number	Phase	Installation_ID	Sample_Name	CTUNM_Code	Analysis_Group	Analytical_Method	PAC_Code	Lab_Code	Lab_Name	Leachate_Method	Sample_Basis	Contraction_Method	Result_Type	Lab_QC_Type	Sample_Medium	QC_Level	Date/Time_Collected	Date_Received	Leachate_Date	Leachate_Time	Extraction_Date	Extraction_Time	Analysis_Date	Analysis_Time	Lab_Sample_ID	Dilution	Run_Number	Percent_Moisture	Percent_Lipid	Chem_Name	Analyte_ID	Analyte_Value	Original_Analyte_Value	Result_Units	Lab_Qualifier	Validator_Qualifier	QC_Column_Type	Analysis_Result_Type	Result_Narrative	SQC_Control_Limit_Code	QC_Accuracy_Upper	QC_Accuracy_Lower	Control_Limit_Date	QC_Narrative	MDL	Detection_Limit	QSM_Version	EDL	LOQ	DOQ	DOQ	Analytes_Batch	Validator_Name	Val_Date
9224701000900	AMOS		MERIDIAN_NAS	4AEART-MRD-1A01-0217	NONG	SVOA	537_MOD	ORG	TANKR	Test America	NONE	NA	SWI5035	SSC	REG	W	A	02/15/2017 15:55	02/21/2017			03/02/2017		03/17/2017	0:24	320-21962-1	1				4,4'-Dioctyltin	15084-5	0.08	0.08	UG_L			IN	SURR		N/A	81	82	00000000							320-219962-1 320-215198		
9224701000900	AMOS		MERIDIAN_NAS	4AEART-MRD-1A01-0217	NONG	SVOA	527_MOD	ORG	TANKR	Test America	NONE	NA	SWI5030C	SSC	REG	W	A	02/15/2017 15:55	02/21/2017			03/02/2017		03/16/2017	16:12:00	320-21962-1	1				Tributylbenzene-DS	41445-60-0	91	91	PCT_REC			IN	SURR		N/A	81	82	00000000							320-219962-1 320-215198		
9224701000900	AMOS		MERIDIAN_NAS	4AEART-MRD-1A01F-0217	NONG	SVOA	527_MOD	ORG	TANKR	Test America	NONE	NA	SWI5030C	SSC	REG	W	A	02/15/2017 15:55	02/21/2017			03/02/2017		03/16/2017	16:12:00	320-21962-2	1				Tributylbenzene-DS	41445-60-0	93	93	PCT_REC			IN	SURR		N/A	81	82	00000000							320-219962-2 320-215198		
9224701000900	AMOS		MERIDIAN_NAS	4AEART-MRD-1A01F-0217	NONG	SVOA	537_MOD	ORG	TANKR	Test America	NONE	NA	SWI5035	SSC	REG	W	A	02/15/2017 15:55	02/21/2017			03/02/2017		03/17/2017	0:24	320-21962-2	1				4,4'-Dioctyltin	15084-5	0.08	0.08	UG_L	UJ		IN	SURR		N/A	81	82	00000000							320-219962-2 320-215198		
9224701000900	AMOS		MERIDIAN_NAS	4AEART-0801-022217-S0	NONG	SVOA	537_MOD	ORG	TANKR	Test America	NONE	NA	SWI5035	SSC	REG	W	A	02/22/2017 13:25	02/23/2017			03/02/2017		03/17/2017	0:24	320-21962-3	1				Perfluorooctanesulfonic acid (PFOS)	1763-23-1	0.0553	0.0553	UG_L			IN	TRG					00000000					0.0092	0.0092	320-219962-3 320-215198		
9224701000900	AMOS		MERIDIAN_NAS	4AEART-0801-022217-S0	NONG	SVOA	527_MOD	ORG	TANKR	Test America	NONE	NA	SWI5030C	SSC	REG	W	A	02/22/2017 13:25	02/23/2017			03/02/2017		03/16/2017	16:42:00	320-21962-3	1				Perfluorooctanesulfonic acid (PFOS)	1763-23-1	0.0553	0.0553	UG_L			IN	TRG					00000000					0.0092	0.0092	320-219962-3 320-215198		
9224701000900	AMOS		MERIDIAN_NAS	4AEART-0801-022217-S0	NONG	SVOA	537_MOD	ORG	TANKR	Test America	NONE	NA	SWI5035	SSC	REG	W	A	02/22/2017 13:25	02/23/2017			03/02/2017		03/17/2017	0:24	320-21962-3	1				4,4'-Dioctyltin	15084-5	0.08	0.08	UG_L	U		IN	SURR		N/A	81	82	00000000							320-219962-3 320-215198		
9224701000900	AMOS		MERIDIAN_NAS	4AEART-0801-022217-S0	NONG	SVOA	527_MOD	ORG	TANKR	Test America	NONE	NA	SWI5030C	SSC	REG	W	A	02/22/2017 13:25	02/23/2017			03/02/2017		03/16/2017	16:42:00	320-21962-3	1				Perfluorobutanesulfonic acid (PFBS)	375-73-5	0.00668	0.00668	UG_L			IN	TRG					00000000					0.0022	0.0022	320-219962-3 320-215198		
9224701000900	AMOS		MERIDIAN_NAS	4AEART-0801-022217-S0	NONG	SVOA	537_MOD	ORG	TANKR	Test America	NONE	NA	SWI5035	SSC	REG	W	A	02/22/2017 13:25	02/23/2017			03/02/2017		03/17/2017	0:24	320-21962-3	1				Perfluorooctanesulfonic acid (PFOS)	1763-23-1	0.0553	0.0553	UG_L			IN	TRG					00000000					0.0092	0.0092	320-219962-3 320-215198		
9224701000900	AMOS		MERIDIAN_NAS	4AEART-PWMA-0801-0001	NONG	SVOA	537_MOD	ORG	TANKR	Test America	NONE	NA	SWI7023	SSC	REG	S	A	02/21/2017 13:25	02/22/2017			03/02/2017		03/17/2017	0:24	320-21962-4	1		13.3		Perfluorooctanesulfonic acid (PFOA)	335-67-1	237	237	UG_KG			IN	TRG					00000000					0.13	0.34	0.57	320-219962-4 320-215825		
9224701000900	AMOS		MERIDIAN_NAS	4AEART-PWMA-0801-0001	NONG	SVOA	537_MOD	ORG	TANKR	Test America	NONE	NA	SWI7023	SSC	REG	S	A	02/21/2017 13:25	02/22/2017			03/02/2017		03/17/2017	0:24	320-21962-4	1		13.3		Perfluorooctanesulfonic acid (PFOS)	1763-23-1	27	27	UG_KG			IN	TRG					00000000					0.13	0.34	0.57	320-219962-4 320-215825		
9224701000900	AMOS		MERIDIAN_NAS	4AEART-PWMA-0801-0001	NONG	SVOA	527_MOD	ORG	TANKR	Test America	NONE	NA	SWI7023	SSC	REG	S	A	02/21/2017 13:25	02/22/2017			03/02/2017		03/16/2017	17:22:00	320-21962-4	1		13.3		4,4'-Dioctyltin	15084-5	0.34	0.34	UG_KG			IN	SURR		N/A	81	82	00000000							320-219962-4 320-215825		
9224701000900	AMOS		MERIDIAN_NAS	4AEART-PWMA-0801-0001	NONG	SVOA	527_MOD	ORG	TANKR	Test America	NONE	NA	SWI7023	SSC	REG	S	A	02/21/2017 13:25	02/22/2017			03/02/2017		03/16/2017	19:45:00	320-21962-4	1		13.3		Perfluorobutanesulfonic acid (PFBS)	375-73-5	0.0308	0.0308	UG_KG			IN	TRG					00000000					0.13	0.34	0.57	320-219962-4 320-215825		
9224701000900	AMOS		MERIDIAN_NAS	4AEART-PWMA-0801-0001	NONG	SVOA	527_MOD	ORG	TANKR	Test America	NONE	NA	SWI7023	SSC	REG	S	A	02/21/2017 13:25	02/22/2017			03/02/2017		03/16/2017	20:40:00	320-21962-4	1		13.3		1H,1H,2H,2H-Perfluorooctanesulfonic acid (FHOS)	27619-97-2	25	25	PCT_REC			IN	SURR		N/A	80	82	00000000							320-219962-4 320-215825		
9224701000900	AMOS		MERIDIAN_NAS	4AEART-PWMA-0801-0001	NONG	SVOA	527_MOD	ORG	TANKR	Test America	NONE	NA	SWI7023	SSC	REG	S	A	02/21/2017 13:25	02/22/2017			03/02/2017		03/16/2017	21:02:00	320-21962-4	1		13.3		1H,1H,2H,2H-Perfluorodecanesulfonic acid (FDOS)	39108-34-4	21	21	PCT_REC			IN	SURR		N/A	80	82	00000000							320-219962-4 320-215825		
9224701000900	AMOS		MERIDIAN_NAS	4AEART-PWMA-0801-0001	NONG	SVOA	537_MOD	ORG	TANKR	Test America	NONE	NA	SWI7023	SSC	REG	S	A	02/21/2017 13:25	02/22/2017			03/02/2017		03/17/2017	0:24	320-21962-4	1		13.3		Perfluorooctanesulfonic acid (PFOS)	1763-23-1	27	27	UG_KG			IN	TRG					00000000					0.13	0.34	0.57	320-219962-4 320-215825		
9224701000900	AMOS		MERIDIAN_NAS	4AEART-PWMA-0801-0001	NONG	SVOA	537_MOD	ORG	TANKR	Test America	NONE	NA	SWI7023	SSC	REG	S	A	02/21/2017 13:25	02/22/2017			03/02/2017		03/17/2017	0:24	320-21962-4	1		13.3		4,4'-Dioctyltin	15084-5	0.34	0.34	UG_KG	U		IN	SURR		N/A	80	82	00000000							320-219962-4 320-215825		
9224701000900	AMOS		MERIDIAN_NAS	4AEART-PWMA-0801-0001	NONG	SVOA	537_MOD	ORG	TANKR	Test America	NONE	NA	SWI7023	SSC	REG	S	A	02/21/2017 13:25	02/22/2017			03/02/2017		03/17/2017	0:24	320-21962-4	1		13.3		1H,1H,2H,2H-Perfluorodecanesulfonic acid (FDOS)	39108-34-4	21	21	PCT_REC			IN	SURR		N/A	80	82	00000000							320-219962-4 320-215825		
9224701000900	AMOS		MERIDIAN_NAS	4AEART-PWMA-0801-0001	NONG	SVOA	537_MOD	ORG	TANKR	Test America	NONE	NA	SWI7023	SSC	REG	S	A	02/21/2017 13:25	02/22/2017			03/02/2017		03/17/2017	0:24	320-21962-4	1		13.3		Perfluorobutanesulfonic acid (PFBS)	375-73-5	0.0308	0.0308	UG_KG			IN	TRG					00000000					0.13	0.34	0.57	320-219962-4 320-215825		
9224701000900	AMOS		MERIDIAN_NAS	4AEART-PWMA-0801-0001	NONG	SVOA	527_MOD	ORG	TANKR	Test America	NONE	NA	SWI7023	SSC	REG	S	A	02/21/2017 13:25	02/22/2017			03/02/2017		03/16/2017	21:23:00	320-21962-4	1		13.3		Perfluorooctanesulfonic acid (PFOS)	1763-23-1	27	27	UG_KG			IN	TRG					00000000					0.13	0.34	0.57	320-219962-4 320-215825		
9224701000900	AMOS		MERIDIAN_NAS	4AEART-PWMA-0801-0001	NONG	SVOA	537_MOD	ORG	TANKR	Test America	NONE	NA	SWI7023	SSC	REG	S	A	02/21/2017 13:25	02/22/2017			03/02/2017		03/17/2017	0:24	320-21962-4	1		13.3		4,4'-Dioctyltin	15084-5	0.34	0.34	UG_KG	U		IN	SURR		N/A	81	82	00000000							320-219962-4 320-215825		
9224701000900	AMOS		MERIDIAN_NAS	4AEART-PWMA-0801-0001	NONG	SVOA	537_MOD	ORG	TANKR	Test America	NONE	NA	SWI7023	SSC	REG	S	A	02/21/2017 13:25	02/22/2017			03/02/2017		03/17/2017	0:24	320-21962-4	1		13.3		1H,1H,2H,2H-Perfluorodecanesulfonic acid (FDOS)	39108-34-4	21	21	PCT_REC			IN	SURR		N/A	80	82	00000000							320-219962-4 320-215825		
9224701000900	AMOS		MERIDIAN_NAS	4AEART-PWMA-0801-0001	NONG	SVOA	537_MOD	ORG	TANKR	Test America	NONE	NA	SWI7023	SSC	REG	S	A	02/21/2017 13:25	02/22/2017			03/02/2017		03/17/2017	0:24	320-21962-4	1		13.3		Perfluorobutanesulfonic acid (PFBS)	375-73-5	0.0308	0.0308	UG_KG			IN	TRG					00000000					0.13	0.34	0.57	320-219962-4 320-215825		
9224701000900	AMOS		MERIDIAN_NAS	4AEART-PWMA-0801-0001	NONG	SVOA	527_MOD	ORG	TANKR	Test America	NONE	NA	SWI7023	SSC	REG	S	A	02/21/2017 13:25	02/22/2017			03/02/2017		03/16/2017	21:44:00	320-21962-4	1		13.3		Perfluorooctanesulfonic acid (PFOS)	1763-23-1	27	27	UG_KG			IN	TRG					00000000					0.13	0.34	0.57	320-219962-4 320-215825		
9224701000900	AMOS		MERIDIAN_NAS	4AEART-PWMA-0801-0001	NONG	SVOA	537_MOD	ORG	TANKR	Test America	NONE	NA	SWI7023	SSC	REG	S	A	02/21/2017 13:25	02/22/2017			03/02/2017		03/17/2017	0:24	320-21962-4	1		13.3		4,4'-Dioctyltin	15084-5	0.34	0.34	UG_KG	U		IN	SURR		N/A	81	82	00000000							320-219962-4 320-215825		
9224701000900	AMOS		MERIDIAN_NAS	4AEART-PWMA-0801-0001	NONG	SVOA	537_MOD	ORG	TANKR	Test America	NONE	NA	SWI7023	SSC	REG	S	A	02/21/2017 13:25	02/22/2017			03/02/2017		03/17/2017	0:24	320-21962-4	1		13.3		1H,1H,2H,2H-Perfluorodecanesulfonic acid (FDOS)	39108-34-4	21	21	PCT_REC			IN	SURR		N/A	80	82	00000000							320-219962-4 320-215825		
9224701000900	AMOS		MERIDIAN_NAS	4AEART-PWMA-0801-0001	NONG	SVOA	537_MOD	ORG	TANKR	Test America	NONE	NA	SWI7023	SSC	REG	S	A	02/21/2017 13:25	02/22/2017			03/02/2017		03/17/2017	0:24	320-21962-4	1		13.3		Perfluorobutanesulfonic acid (PFBS)	375-73-5	0.0308	0.0308	UG_KG			IN	TRG					00000000					0.13	0.34	0.57	320-219962-4 320-215825		
9224701000900	AMOS		MERIDIAN_NAS	4AEART-PWMA-0801-0001	NONG	SVOA	527_MOD	ORG	TANKR	Test America	NONE	NA	SWI7023	SSC	REG	S	A	02/21/2017 13:25	02/22/2017			03/02/2017		03/16/2017	22:06:00	320-21962-4	1		13.3		Perfluorooctanesulfonic acid (PFOS)	1763-23-1	27	27	UG_KG			IN	TRG					00000000					0.13	0.34	0.57	320-219962-4 320-215825		
9224701000900	AMOS		MERIDIAN_NAS	4AEART-PWMA-0801-0001	NONG	SVOA	537_MOD	ORG	TANKR	Test America	NONE	NA	SWI7023	SSC	REG	S	A	02/21/2017 13:25	02/22/2017			03/02/2017		03/17/2017	0:24	320-21962-4	1		13.3		4,4'-Dioctyltin	15084-5	0.34	0.34	UG_KG	U		IN	SURR		N/A	81	82	00000000							320-219962-4 320-215825		
9224701000900	AMOS		MERIDIAN_NAS	4AEART-PWMA-0801-0001	NONG	SVOA	537_MOD	ORG	TANKR	Test America	NONE	NA	SWI7023	SSC	REG	S	A	02/21/2017 13:25	02/22/2017			03/02/2017		03/17/2017	0:24	320-21962-4	1		13.3		1H,1H,2H,2H-Perfluorodecanesulfonic acid (FDOS)	39108-34-4	21	21	PCT_REC			IN	SURR		N/A	80	82	00000000							320-219962-4 320-215825		
9224701000900	AMOS		MERIDIAN_NAS	4AEART-PWMA-0801-0001	NONG	SVOA	537_MOD	ORG	TANKR	Test America	NONE	NA	SWI7023	SSC	REG	S	A	02/21/2017 13:25	02/22/2017			03/02/2017		03/17/2017	0:24	320-21962-4	1		13.3		Perfluorobutanesulfonic acid (PFBS)	375-73-5	0.0308	0.0308	UG_KG			IN	TRG					00000000					0.13	0.34	0.57	320-219962-4 320-215825		
9224701000900	AMOS		MERIDIAN_NAS	4AEART-PWMA-0801-0001	NONG	SVOA	527_MOD	ORG	TANKR	Test America	NONE	NA	SWI7023	SSC	REG	S	A	02/21/2017 13:25	02/22/2017			03/02/2017		03/16/2017	22:27:00	320-21962-4	1		13.3		Perfluorooctanesulfonic acid (PFOS)	1763-23-1	27	27	UG_KG			IN	TRG					00000000					0.13	0.34	0.57	320-219962-4 320-215825		
9224701000900	AMOS		MERIDIAN_NAS	4AEART-PWMA-0801-0001	NONG	SVOA	537_MOD	ORG	TANKR	Test America	NONE	NA	SWI7023	SSC	REG	S	A	02/21/2017 13:25	02/22/2017			03/02/2017		03/17/2017	0:24	320-21962-4	1		13.3		4,4'-Dioctyltin	15084-5	0.34	0.34	UG_KG	U		IN	SURR		N/A	81	82	00000000							320-219962-4 320-215825		
9224701000900	AMOS		MERIDIAN_NAS	4AEART-PWMA-0801-0001	NONG	SVOA	537_MOD	ORG	TANKR	Test America	NONE	NA	SWI7023	SSC	REG	S	A	02/21/2017 13:25	02/22/2017			03/02/2017		03/17/2017	0:24	320-21962-4	1		13.3		1H,1H,2H,2H-Perfluorodecanesulfonic acid (FDOS)	39108-34-4	21	21	PCT_REC			IN	SURR		N/A	80	82	00000000							320-219962-4 320-215825		
9224701000900	AMOS		MERIDIAN_NAS	4AEART-SDAA-0801-0204	NONG	SVOA	537_MOD	ORG	TANKR	Test America	NONE	NA	SWI5035	SSC	REG	W	A	02/22/2017 14:54	02/23/2017			03/02/2017		03/17/2017	0:24	320-21962-5	1		14.7		4,4'-Dioctyltin	15084-5	0.08	0.08	UG_L	U		IN	SURR		N/A	81	82	00000000							320-219962-5 320-215198		
9224701000900	AMOS		MERIDIAN_NAS	4AEART-SDAA-0801-0204	NONG	SVOA	527_MOD	ORG	TANKR	Test America	NONE	NA	SWI5030C	SSC	REG	W	A	02/22/2017 14:54	02/23/2017			03/02/2017		03/16/2017	17:00:00	320-21962-5	1		14.7		1H,1H,2H,2H-Perfluorooctanesulfonic acid (FHOS)	27619-97-2	25	25	PCT_REC			IN	SURR		N/A	80	82	00000000							320-219962-5 320-215198		
9224701000900	AMOS		MERIDIAN_NAS	4AEART-SDAA-0801-0204	NONG	SVOA	537_MOD	ORG	TANKR	Test America	NONE	NA	SWI5035	SSC	REG	W	A	02/22/2017 14:54	02/23/2017			03/02/2017		03/17/2017	0:24	320-21962-5	1		14.7		Perfluorooctanesulfonic acid (PFOS)	1763-23-1	0.72	0.72	UG_KG			IN	TRG					00000000					0.12	0.35	0.56	320-219962-5 320-215825		
9224701000900	AMOS		MERIDIAN_NAS	4AEART-SDAA-0801-0204	NONG	SVOA	527_MOD	ORG	TANKR	Test America	NONE	NA	SWI7023	SSC	REG	S	A	02/21/2017 17:22	02/22/2017			03/02/2017		03/16/2017	17:22:00	320-21962-5	1		14.7		4,4'-Dioctyltin	15084-5	0.34	0.34	UG_KG	U		IN	SURR		N/A	81	82	00000000							320-219962-5 320-215825		
9224701000900	AMOS		MERIDIAN_NAS	4AEART-SDAA-0801-0204	NONG	SVOA	527_MOD	ORG	TANKR	Test America	NONE	NA	SWI7023	SSC	REG	S	A	02/21/2017 17:22	02/22/2017			03/02/2017		03/16/2017	19:45:00	320-21962-5	1		14.7		Perfluorobutanesulfonic acid (PFBS)	375-73-5	0.0308	0.0308	UG_KG			IN	TRG					00000000					0.12	0.35	0.56	320-219962-5 320-215825		
9224701000900	AMOS		MERIDIAN_NAS	4AEART-SDAA-0801-0204	NONG	SVOA	527_MOD	ORG	TANKR	Test America	NONE	NA	SWI7023	SSC	REG	S	A	02/21/2017 17:22	02/22/2017			03/02/2017		03/16/2017	20:40:00	320-21962-5	1		14.7		1H,1H,2H,2H-Perfluorooctanesulfonic acid (FHOS)	27619-97-2	25	25	PCT_REC			IN	SURR		N/A	80	82	00000000							320-219962-5 320-215825		
9224701000900	AMOS		MERIDIAN_NAS	4AEART-SDAA-0801-0204	NONG	SVOA	527_MOD	ORG	TANKR	Test America	NONE	NA	SWI7023	SSC	REG	S	A	02/21/2017 17:22	02/22/2017			03/02/2017		03/16/2017	21:02:00	320-21962-5	1		14.7		1H,1H,2H,2H-Perfluorodecanesulfonic acid (FDOS)	39108-34-4	21	21	PCT_REC			IN	SURR		N/A	80	82	00000000							320-219962-5 320-215825		
9224701000900	AMOS		MERIDIAN_NAS	4AEART-SDAA-0801-0204	NONG	SVOA	537_MOD	ORG	TANKR	Test America	NONE	NA	SWI7023	SSC	REG	S	A	02/21/2017 17:22	02/22/2017			03/02/2017		03/17/2017	0:24	320-21962-5	1		14.7		Perfluorooctanesulfonic acid (PFOS)	1763-23-1	0.72	0.72	UG_KG			IN	TRG					00000000					0.12	0.35	0.56	320-219962-5 320-215825		
9224701000900	AMOS		MERIDIAN_NAS	4AEART-SDAA-0801-0204	NONG	SVOA	527_MOD	ORG	TANKR	Test America	NONE	NA	SWI7023	SSC	REG	S	A	02/21/2017 17:22	02/22/2017			03/02/2017		03/16/2017	22:06:00	320-21962-5	1		14.7		4,4'-Dioctyltin	15084-5	0.34	0.34	UG_KG	U		IN	SURR		N/A	81	82	00000000							320-219962-5 320-215825		
9224701000900	AMOS		MERIDIAN_NAS	4AEART-SDAA-0801-0204	NONG	SVOA	537_MOD	ORG	TANKR	Test America	NONE	NA	SWI7023	SSC	REG	S	A	02/21/2017 17:22	02/22/2017			03/02/2017		03/17/2017	0:24	320-21962-5	1		14.7		1H,1H,2H,2H-Perfluorodecanesulfonic acid (FDOS)	39108-34-4	21	21	PCT_REC			IN	SURR		N/A	80	82	00000000							320-219962-5 320-215825		
9224701000900	AMOS		MERIDIAN_NAS	4AEART-SDAA-0801-0204	NONG	SVOA	537_MOD	ORG	TANKR	Test America	NONE	NA	SWI7023	SSC	REG	S	A	02/21/2017 17:22	02/22/2017			03/02/2017		03/17/2017	0:24	320-21962-5	1		14.7		Perfluorobutanesulfonic acid (PFBS)	375-73-5	0.0308	0.0308	UG_KG			IN	TRG					00000000					0.12	0.35	0.56	320-219962-5 320-215825		
9224701000900	AMOS		MERIDIAN_NAS	4AEART-SDAA-0801-0204	NONG	SVOA	527_MOD	ORG	TANKR	Test America	NONE	NA	SWI7023	SSC	REG	S	A	02/21/2017 17:22	02/22/2017			03/02/2017		03/16/2017	22:27:00	320-21962-5	1		14.7		Perfluorooctanesulfonic acid (PFOS)	1763-23-1	0.72	0.72	UG_KG			IN	TRG					00000000					0.12	0.35	0.56	320-219962-5 320-215825		
9224701000900	AMOS		MERIDIAN_NAS	4AEART-SDAA-0801-0204	NONG	SVOA	537_MOD	ORG	TANKR	Test America	NONE	NA	SWI7023	SSC	REG	S	A	02/21/2017 17:22	02/22/2017			03/02/2017		03/17/2017	0:24	320-21962-5	1		14.7		4,4'-Dioctyltin	15084-5	0.34	0.34	UG_KG	U		IN	SURR		N/A	81	82	00000000							320-219962-5 320-215825		
9224701000900	AMOS		MERIDIAN_NAS	4AEART-SDAA-0801-0204	NONG	SVOA	537_MOD	ORG	TANKR	Test America	NONE	NA	SWI7023	SSC	REG	S	A	02/21/2017 17:22	02/22/2017			03/02/2017		03/17/2017	0:24	320-21962-5	1		14.7		1H,1H,2H,2H-Perfluorodecanesulfonic acid (FDOS)	39108-34-4	21	21	PCT_REC			IN	SURR		N/A	80	82	00000000							320-219962-5 320-215825		
9224701000900	AMOS		MERIDIAN_NAS	4AEART-SDAA-0801-0204	NONG	SVOA	537_MOD	ORG	TANKR	Test America	NONE	NA	SWI7023	SSC	REG	S	A	02/21/2017 17:22	02/22/2017			03/02/2017		03/17/2017	0:24	320-21962-5	1		14.7		Perfluorobutanesulfonic acid (PFBS)	375-73-5	0.0308	0.0308	UG_KG			IN	TRG					00000000					0.12	0.35	0.56	320-219962-5 320-215825		
9224701000900	AMOS		MERIDIAN_NAS	4AEART-SDAA-0801-0204	NONG	SVOA	527_MOD	ORG	TANKR	Test America	NONE	NA	SWI7023	SSC	REG	S	A	02/21/2017 17:22	02/22/2017			03/02/2017		03/16/2017	22:48:00	320-21962-5	1		14.7		Perfluorooctanesulfonic acid (PFOS)	1763-23-1	0.72	0.72	UG_KG			IN	TRG					00000000					0.12	0.35	0.56	320-219962-5 320-215825		
9224701000900	AMOS		MERIDIAN_NAS	4AEART-SDAA-0801-0204	NONG	SVOA	537_MOD	ORG	TANKR	Test America	NONE	NA	SWI7023	SSC	REG	S	A	02/21/2017 17:22	02/22/2017			03/02/2017		03/17/2017	0:24	320-21962-5	1		14.7		4,4'-Dioctyltin	15084-5	0.34	0.34	UG_KG	U		IN	SURR		N/A	81	82	00000000							320-219962-5 320-215825		
9224701000900	AMOS		MERIDIAN_NAS	4AEART-SDAA-0801-0204	NONG	SVOA	537_MOD	ORG	TANKR	Test America	NONE	NA	SWI7023	SSC	REG	S	A	02/21/2017 17:22	02/22/2017			03/02/2017		03/17/2017	0:24	320-21962-5	1		14.7		1H,1H,2H,2H-Perfluorodecanesulfonic acid (FDOS)	39108-34-4	21	21	PCT_REC			IN	SURR		N/A	80	82	00000000							320-219962-5 320-215825		
9224701000900	AMOS		MERIDIAN_NAS	4AEART-SDAA-0801-0204	NONG	SVOA	537_MOD	ORG	TANKR	Test America	NONE	NA	SWI7023	SSC	REG	S	A	02/21/2017 17:22	02/22/2017			03/02/2017		03/17/2017	0:24	320-21962-5	1		14.7		Perfluorobutanesulfonic acid (PFBS)	375-73-5	0.0308	0.0308	UG_KG			IN	TRG					00000000					0.12	0.35	0.56	320-219962-5 320-215825		
9224701000900	AMOS		MERIDIAN_NAS	4AEART-SDAA-0801-0204	NONG	SVOA	527_MOD	ORG	TANKR	Test America	NONE	NA	SWI7023	SSC	REG	S	A	02/21/2017 17:22	02/22/2017			03/02/2017		03/16/2017	23:09:00	320-21962-5	1		14.7		Perfluorooctanesulfonic acid (PFOS)	1763-23-1	0.72	0.72	UG_KG			IN	TRG					00000000					0.12	0.35	0.56	320-219962-5 320-215825		
9224701000900	AMOS		MERIDIAN_NAS	4AEART-SDAA-0801-0204	NONG	SVOA	537_MOD	ORG	TANKR	Test America	NONE	NA	SWI7023	SSC	REG	S	A	02/21/2017 17:22	02/22/2017			03/02/2017		03/17/2017	0:24	320-21962-5	1		14.7		4,4'-Dioctyltin	15084-5	0.34	0.34	UG_KG	U		IN	SURR		N/A	81	82	00000000							320-219962-5 320-215825		
9224701000900	AMOS		MERIDIAN_NAS	4AEART-SDAA-0801-0204	NONG	SVOA	537_MOD	ORG	TANKR	Test America	NONE	NA	SWI7023	SSC	REG	S	A	02/21/2017 17:22	02/22/2017			03/02/2017		03/17/2017	0:24	320-21962-5	1		14.7		1H,1H,2H,2H-Perfluorodecanesulfonic acid (FDOS)	39108-34-4	21	21	PCT_REC			IN	SURR		N/A	80	82	00000000							320-219962-5 320-215825		
9224701000900	AMOS		MERIDIAN_NAS	4AEART-SDAA-0801-0204	NONG	SVOA	537_MOD	ORG	TANKR	Test America	NONE	NA	SWI7023	SSC	REG	S	A	02/21/2017 17:22	02/22/2017			03/02/2017		03/17/2017	0:24	320-21962-5	1		14.7		Perfluorobutanesulfonic acid (PFBS)	375-73-5	0.0308	0.0308	UG_KG			IN	TRG					00000000					0.12	0.35	0.56	320-219962-

Comment_ID	CCG_CTG_Number	Phase	Installation_ID	Sample_Name	CTONE_Code	Analysis_Group	Analytical_Method	PAC_Code	Lab_Code	Lab_Name	Leachate_Method	Sample_Basis	Extraction_Method	Result_Type	Lab_QC_Type	Sample_Medium	QC_Level	Date/Time_Collected	Date_Received	Leachate_Date	Leachate_Time	Extraction_Date	Extraction_Time	Analysis_Date	Analysis_Time	Dilution	Run_Number	Percent_Moisture	Percent_Lipid	Chem_Name	Analyte_ID	Analyte_Value	Original_Analyte_Value	Result_Units	Lab_Qualifier	Validator_Qualifier	QC_Column_Type	Analysis_Result_Type	Result_Narrative	SQL_Control_Limit_Code	QC_Accuracy_Upper	QC_Accuracy_Lower	Control_Limit_Date	QC_Narrative	SQL	Detection_Limit	QSM_Version	DL	LOD	LOQ	Analyte_Batch	Validator_Name	Val_Date
92147010100900	AMIS		MERIDIAN_NAS	NAVY-SDAKC-SB02-0001	NONG	SVOA	537_MOD	ORG	TAMKR	Test America	NONE	WH	METHOD	RES	L	S	02/15/2017 00:00	02/24/2017			03/17/2017	07:00	03/17/2017	13:57:00	320-26103-1	1	L	14.8		Perfluorotetradecanoic acid (PFTeA)	376-06-7	0.35	0.35	ug/L	J		PE	TRG								0.5	0.12	0.35		320-26103-1 320-145459
92147010100900	AMIS		MERIDIAN_NAS	NAVY-SDAKC-SB02-0001	NONG	SVOA	537_MOD	ORG	TAMKR	Test America	NONE	WH	METHOD	RES	L	S	02/15/2017 09:00	02/24/2017			03/17/2017	07:04:00	03/17/2017	13:57:00	320-26103-1	1	L	14.8		1802 PFHXS	1802 PFHXS	100	100	INT_REC			PE	SURR		N/A	150	25	00000000							320-26103-1 320-145459
92147010100900	AMIS		MERIDIAN_NAS	NAVY-SDAKC-SB03-0104	NONG	SVOA	537_MOD	ORG	TAMKR	Test America	NONE	WH	METHOD	RES	L	S	02/15/2017 09:08	02/24/2017			03/17/2017	07:04:00	03/17/2017	13:57:00	320-26103-1	1	L	14.1		Perfluorooctanesulfonic acid (PFOS)	1763-23-1	0.35	0.35	ug/L			PE	TRG								0.5	0.35	0.58		320-26103-1 320-145459
92147010100900	AMIS		MERIDIAN_NAS	NAVY-SDAKC-SB02-0204	NONG	SVOA	537_MOD	ORG	TAMKR	Test America	NONE	WH	METHOD	RES	L	S	02/15/2017 09:08	02/24/2017			03/17/2017	07:04:00	03/17/2017	13:57:00	320-26103-1	1	L	14.1		1802 PFHXS	1802 PFHXS	94	94	INT_REC			PE	SURR		N/A	150	25	00000000							320-26103-1 320-145459
92147010100900	AMIS		MERIDIAN_NAS	NAVY-SDAKC-SB02-0204	NONG	SVOA	537_MOD	ORG	TAMKR	Test America	NONE	WH	METHOD	RES	L	S	02/15/2017 09:08	02/24/2017			03/17/2017	07:04:00	03/17/2017	13:57:00	320-26103-1	1	L	14.1		L3C4 PFOS	L3C4 PFOS	94	94	INT_REC			PE	SURR		N/A	150	25	00000000							320-26103-1 320-145459
92147010100900	AMIS		MERIDIAN_NAS	NAVY-SDAKC-SB02-0208	NONG	SVOA	537_MOD	ORG	SAMER	Test America	NONE	WH	METHOD	RES	L	S	02/15/2017 09:08	02/24/2017			03/17/2017	07:04:00	03/17/2017	13:57:00	320-26103-1	1	L	14.1		Perfluorotetradecanoic acid (PFTeA)	376-06-7	0.35	0.35	ug/L	J		PE	TRG								0.5	0.12	0.35	0.67	320-26103-1 320-145459
92147010100900	AMIS		MERIDIAN_NAS	NAVY-SDAKC-SB03-0104	NONG	SVOA	537_MOD	ORG	TAMKR	Test America	NONE	WH	METHOD	RES	L	S	02/15/2017 10:00	02/24/2017			03/17/2017	07:04:00	03/17/2017	13:57:00	320-26103-1	1	L	15.7		1802 PFHXS	1802 PFHXS	89	89	INT_REC			PE	SURR		N/A	150	25	00000000							320-26103-1 320-145459
92147010100900	AMIS		MERIDIAN_NAS	NAVY-SDAKC-SB03-0201	NONG	SVOA	537_MOD	ORG	TAMKR	Test America	NONE	WH	METHOD	RES	L	S	02/15/2017 09:21	02/24/2017			03/17/2017	07:04:00	03/17/2017	13:57:00	320-26103-1	1	L	15.7		Perfluorotetradecanoic acid (PFTeA)	376-06-7	0.76	0.76	ug/L	J		PE	TRG								0.5	0.12	0.36	0.66	320-26103-1 320-145459
92147010100900	AMIS		MERIDIAN_NAS	NAVY-SDAKC-SB03-0201	NONG	SVOA	537_MOD	ORG	TAMKR	Test America	NONE	WH	METHOD	RES	L	S	02/15/2017 09:21	02/24/2017			03/17/2017	07:04:00	03/17/2017	13:57:00	320-26103-1	1	L	15.7		Perfluorooctanesulfonic acid (PFOS)	1763-23-1	0.76	0.76	ug/L			PE	TRG								0.5	0.35	0.58	0.66	320-26103-1 320-145459
92147010100900	AMIS		MERIDIAN_NAS	NAVY-SDAKC-SB03-0201	NONG	SVOA	537_MOD	ORG	TAMKR	Test America	NONE	WH	METHOD	RES	L	S	02/15/2017 09:21	02/24/2017			03/17/2017	07:04:00	03/17/2017	13:57:00	320-26103-1	1	L	15.7		1802 PFHXS	1802 PFHXS	97	97	INT_REC			PE	SURR		N/A	150	25	00000000							320-26103-1 320-145459
92147010100900	AMIS		MERIDIAN_NAS	NAVY-SDAKC-SB03-0201	NONG	SVOA	537_MOD	ORG	TAMKR	Test America	NONE	WH	METHOD	RES	L	S	02/15/2017 09:21	02/24/2017			03/17/2017	07:04:00	03/17/2017	13:57:00	320-26103-1	1	L	15.7		L3C4 PFOS	L3C4 PFOS	109	109	INT_REC			PE	SURR		N/A	150	25	00000000							320-26103-1 320-145459
92147010100900	AMIS		MERIDIAN_NAS	NAVY-SDAKC-SB03-0201-MS	NONG	SVOA	537_MOD	ORG	TAMKR	Test America	NONE	WH	METHOD	MS	L	S	02/15/2017 09:21	02/24/2017			03/17/2017	07:04:00	03/17/2017	13:57:00	320-26103-1	1	L	15.7		Perfluorotetradecanoic acid (PFTeA)	376-06-7	0.76	0.76	ug/L	J		PE	TRG								0.5	0.12	0.36	0.66	320-26103-1 320-145459
92147010100900	AMIS		MERIDIAN_NAS	NAVY-SDAKC-SB03-0201-MS	NONG	SVOA	537_MOD	ORG	TAMKR	Test America	NONE	WH	METHOD	MS	L	S	02/15/2017 09:21	02/24/2017			03/17/2017	07:04:00	03/17/2017	13:57:00	320-26103-1	1	L	15.7		Perfluorooctanesulfonic acid (PFOS)	1763-23-1	0.76	0.76	ug/L			PE	TRG								0.5	0.35	0.58	0.66	320-26103-1 320-145459
92147010100900	AMIS		MERIDIAN_NAS	NAVY-SDAKC-SB03-0201-MS	NONG	SVOA	537_MOD	ORG	TAMKR	Test America	NONE	WH	METHOD	MS	L	S	02/15/2017 09:21	02/24/2017			03/17/2017	07:04:00	03/17/2017	13:57:00	320-26103-1	1	L	15.7		1802 PFHXS	1802 PFHXS	90	90	INT_REC			PE	SURR		N/A	150	25	00000000							320-26103-1 320-145459
92147010100900	AMIS		MERIDIAN_NAS	NAVY-SDAKC-SB03-0201-MS	NONG	SVOA	537_MOD	ORG	TAMKR	Test America	NONE	WH	METHOD	MS	L	S	02/15/2017 09:21	02/24/2017			03/17/2017	07:04:00	03/17/2017	13:57:00	320-26103-1	1	L	15.7		L3C4 PFOS	L3C4 PFOS	105	105	INT_REC			PE	SURR		N/A	150	25	00000000							320-26103-1 320-145459
92147010100900	AMIS		MERIDIAN_NAS	NAVY-SDAKC-SB03-0201-SD	NONG	SVOA	537_MOD	ORG	TAMKR	Test America	NONE	WH	METHOD	SDU	L	S	02/15/2017 09:21	02/24/2017			03/17/2017	07:04:00	03/17/2017	13:57:00	320-26103-1	1	L	15.7		Perfluorotetradecanoic acid (PFTeA)	376-06-7	0.12	0.12	ug/L	J		PE	TRG								0.5	0.12	0.36	0.66	320-26103-1 320-145459
92147010100900	AMIS		MERIDIAN_NAS	NAVY-SDAKC-SB03-0201-SD	NONG	SVOA	537_MOD	ORG	TAMKR	Test America	NONE	WH	METHOD	SDU	L	S	02/15/2017 09:21	02/24/2017			03/17/2017	07:04:00	03/17/2017	13:57:00	320-26103-1	1	L	15.7		Perfluorooctanesulfonic acid (PFOS)	1763-23-1	0.12	0.12	ug/L			PE	TRG								0.5	0.35	0.58	0.66	320-26103-1 320-145459
92147010100900	AMIS		MERIDIAN_NAS	NAVY-SDAKC-SB03-0201-SD	NONG	SVOA	537_MOD	ORG	TAMKR	Test America	NONE	WH	METHOD	SDU	L	S	02/15/2017 09:21	02/24/2017			03/17/2017	07:04:00	03/17/2017	13:57:00	320-26103-1	1	L	15.7		1802 PFHXS	1802 PFHXS	97	97	INT_REC			PE	SURR		N/A	150	25	00000000							320-26103-1 320-145459
92147010100900	AMIS		MERIDIAN_NAS	NAVY-SDAKC-SB03-0201-SD	NONG	SVOA	537_MOD	ORG	TAMKR	Test America	NONE	WH	METHOD	SDU	L	S	02/15/2017 09:21	02/24/2017			03/17/2017	07:04:00	03/17/2017	13:57:00	320-26103-1	1	L	15.7		L3C4 PFOS	L3C4 PFOS	112	112	INT_REC			PE	SURR		N/A	150	25	00000000							320-26103-1 320-145459
92147010100900	AMIS		MERIDIAN_NAS	NAVY-SDAKC-SB03-0204	NONG	SVOA	537_MOD	ORG	TAMKR	Test America	NONE	WH	METHOD	RES	L	S	02/15/2017 09:33	02/24/2017			03/17/2017	07:04:00	03/17/2017	13:57:00	320-26103-1	1	L	17.6		Perfluorotetradecanoic acid (PFTeA)	376-06-7	0.35	0.35	ug/L	J		PE	TRG								0.5	0.12	0.36	0.66	320-26103-1 320-145459
92147010100900	AMIS		MERIDIAN_NAS	NAVY-SDAKC-SB03-0204	NONG	SVOA	537_MOD	ORG	TAMKR	Test America	NONE	WH	METHOD	RES	L	S	02/15/2017 09:33	02/24/2017			03/17/2017	07:04:00	03/17/2017	13:57:00	320-26103-1	1	L	17.6		Perfluorooctanesulfonic acid (PFOS)	1763-23-1	0.35	0.35	ug/L			PE	TRG								0.5	0.35	0.58	0.66	320-26103-1 320-145459
92147010100900	AMIS		MERIDIAN_NAS	NAVY-SDAKC-SB03-0204	NONG	SVOA	537_MOD	ORG	TAMKR	Test America	NONE	WH	METHOD	RES	L	S	02/15/2017 09:33	02/24/2017			03/17/2017	07:04:00	03/17/2017	13:57:00	320-26103-1	1	L	17.6		1802 PFHXS	1802 PFHXS	96	96	INT_REC			PE	SURR		N/A	150	25	00000000							320-26103-1 320-145459
92147010100900	AMIS		MERIDIAN_NAS	NAVY-SDAKC-SB03-0204	NONG	SVOA	537_MOD	ORG	TAMKR	Test America	NONE	WH	METHOD	RES	L	S	02/15/2017 09:33	02/24/2017			03/17/2017	07:04:00	03/17/2017	13:57:00	320-26103-1	1	L	17.6		L3C4 PFOS	L3C4 PFOS	45	45	INT_REC			PE	SURR		N/A	150	25	00000000							320-26103-1 320-145459
92147010100900	AMIS		MERIDIAN_NAS	NAVY-SDAKC-SB03-0204	NONG	SVOA	537_MOD	ORG	TAMKR	Test America	NONE	WH	METHOD	RES	L	S	02/15/2017 09:41	02/24/2017			03/17/2017	07:04:00	03/17/2017	13:57:00	320-26103-1	1	L	18.1		Perfluorotetradecanoic acid (PFTeA)	376-06-7	0.35	0.35	ug/L	J		PE	TRG								0.5	0.12	0.36	0.66	320-26103-1 320-145459
92147010100900	AMIS		MERIDIAN_NAS	NAVY-SDAKC-SB03-0204	NONG	SVOA	537_MOD	ORG	TAMKR	Test America	NONE	WH	METHOD	RES	L	S	02/15/2017 09:41	02/24/2017			03/17/2017	07:04:00	03/17/2017	13:57:00	320-26103-1	1	L	18.1		Perfluorooctanesulfonic acid (PFOS)	1763-23-1	0.35	0.35	ug/L			PE	TRG								0.5	0.35	0.58	0.66	320-26103-1 320-145459
92147010100900	AMIS		MERIDIAN_NAS	NAVY-SDAKC-SB03-0204	NONG	SVOA	537_MOD	ORG	TAMKR	Test America	NONE	WH	METHOD	RES	L	S	02/15/2017 09:41	02/24/2017			03/17/2017	07:04:00	03/17/2017	13:57:00	320-26103-1	1	L	18.1		1802 PFHXS	1802 PFHXS	93	93	INT_REC			PE	SURR		N/A	150	25	00000000							320-26103-1 320-145459
92147010100900	AMIS		MERIDIAN_NAS	NAVY-SDAKC-SB03-0204	NONG	SVOA	537_MOD	ORG	TAMKR	Test America	NONE	WH	METHOD	RES	L	S	02/15/2017 09:41	02/24/2017			03/17/2017	07:04:00	03/17/2017	13:57:00	320-26103-1	1	L	18.1		L3C4 PFOS	L3C4 PFOS	93	93	INT_REC			PE	SURR		N/A	150	25	00000000							320-26103-1 320-145459
92147010100900	AMIS		MERIDIAN_NAS	NAVY-SDAKC-SB03-0208	NONG	SVOA	537_MOD	ORG	SAMER	Test America	NONE	WH	METHOD	RES	L	S	02/15/2017 09:41	02/24/2017			03/17/2017	07:04:00	03/17/2017	13:57:00	320-26103-1	1	L	18.1		Perfluorotetradecanoic acid (PFTeA)	376-06-7	0.35	0.35	ug/L	J		PE	TRG								0.5	0.12	0.35	0.67	320-26103-1 320-145459
92147010100900	AMIS		MERIDIAN_NAS	NAVY-SDAKC-SB03-0301	NONG	SVOA	537_MOD	ORG	TAMKR	Test America	NONE	WH	METHOD	RES	L	S	02/15/2017 09:50	02/24/2017			03/17/2017	07:04:00	03/17/2017	13:57:00	320-26103-1	1	L	19.2		Perfluorotetradecanoic acid (PFTeA)	376-06-7	0.35	0.35	ug/L	J		PE	TRG								0.5	0.12	0.36	0.66	320-26103-1 320-145459
92147010100900	AMIS		MERIDIAN_NAS	NAVY-SDAKC-SB03-0301	NONG	SVOA	537_MOD	ORG	TAMKR	Test America	NONE	WH	METHOD	RES	L	S	02/15/2017 09:50	02/24/2017			03/17/2017	07:04:00	03/17/2017	13:57:00	320-26103-1	1	L	19.2		Perfluorooctanesulfonic acid (PFOS)	1763-23-1	0.35	0.35	ug/L			PE	TRG								0.5	0.35	0.58	0.66	320-26103-1 320-145459
92147010100900	AMIS		MERIDIAN_NAS	NAVY-SDAKC-SB03-0301	NONG	SVOA	537_MOD	ORG	TAMKR	Test America	NONE	WH	METHOD	RES	L	S	02/15/2017 09:50	02/24/2017			03/17/2017	07:04:00	03/17/2017	13:57:00	320-26103-1	1	L	19.2		1802 PFHXS	1802 PFHXS	93	93	INT_REC			PE	SURR		N/A	150	25	00000000							320-26103-1 320-145459
92147010100900	AMIS		MERIDIAN_NAS	NAVY-SDAKC-SB03-0301	NONG	SVOA	537_MOD	ORG	TAMKR	Test America	NONE	WH	METHOD	RES	L	S	02/15/2017 09:50	02/24/2017			03/17/2017	07:04:00	03/17/2017	13:57:00	320-26103-1	1	L	19.2		L3C4 PFOS	L3C4 PFOS	97	97	INT_REC			PE	SURR		N/A	150	25	00000000							320-26103-1 320-145459
92147010100900	AMIS		MERIDIAN_NAS	NAVY-SDAKC-SB03-0301-MS	NONG	SVOA	537_MOD	ORG	TAMKR	Test America	NONE	WH	METHOD	MS	L	S	02/15/2017 09:50	02/24/2017			03/17/2017	07:04:00	03/17/2017	13:57:00	320-26103-1	1	L	19.2		Perfluorotetradecanoic acid (PFTeA)	376-06-7	0.35	0.35	ug/L	J		PE	TRG								0.5	0.12	0.36	0.66	320-26103-1 320-145459
92147010100900	AMIS		MERIDIAN_NAS	NAVY-SDAKC-SB03-0301-MS	NONG	SVOA	537_MOD	ORG	TAMKR	Test America	NONE	WH	METHOD	MS	L	S	02/15/2017 09:50	02/24/2017			03/17/2017	07:04:00	03/17/2017	13:57:00	320-26103-1	1	L	19.2		Perfluorooctanesulfonic acid (PFOS)	1763-23-1	0.35	0.35	ug/L			PE	TRG								0.5	0.35	0.58	0.66	320-26103-1 320-145459
92147010100900	AMIS		MERIDIAN_NAS	NAVY-SDAKC-SB03-0301-MS	NONG	SVOA	537_MOD	ORG	TAMKR	Test America	NONE	WH	METHOD	MS	L	S	02/15/2017 09:50	02/24/2017			03/17/2017	07:04:00	03/17/2017	13:57:00	320-26103-1	1	L	19.2		1802 PFHXS	1802 PFHXS	93	93	INT_REC			PE	SURR		N/A	150	25	00000000							320-26103-1 320-145459
92147010100900	AMIS		MERIDIAN_NAS	NAVY-SDAKC-SB03-0301-SD	NONG	SVOA	537_MOD	ORG	TAMKR	Test America	NONE	WH	METHOD	SDU	L	S	02/15/2017 09:50	02/24/2017			03/17/2017	07:04:00	03/17/2017	13:57:00	320-26103-1	1	L	19.2		Perfluorotetradecanoic acid (PFTeA)	376-06-7	0.35	0.35	ug/L	J		PE	TRG								0.5	0.12	0.36	0.66	320-26103-1 320-145459
92147010100900	AMIS		MERIDIAN_NAS	NAVY-SDAKC-SB03-0301-SD	NONG	SVOA	537_MOD	ORG	TAMKR	Test America	NONE	WH	METHOD	SDU	L	S	02/15/2017 09:50	02/24/2017			03/17/2017	07:04:00	03/17/2017	13:57:00	320-26103-1	1	L	19.2		Perfluorooctanesulfonic acid (PFOS)	1763-23-1	0.35	0.35	ug/L			PE	TRG								0.5	0.35	0.58	0.66	320-26103-1 320-145459
92147010100900	AMIS		MERIDIAN_NAS	NAVY-SDAKC-SB03-0301-SD	NONG	SVOA	537_MOD	ORG	TAMKR	Test America	NONE	WH	METHOD	SDU	L	S	02/15/2017 09:50	02/24/2017			03/17/2017	07:04:00	03/17/2017	13:57:00	320-26103-1	1	L	19.2		1802 PFHXS	1802 PFHXS	97	97	INT_REC			PE	SURR		N/A	150	25	00000000							320-26103-1 320-145459
92147010100900	AMIS		MERIDIAN_NAS	NAVY-SDAKC-SB03-0301-SD	NONG	SVOA	537_MOD	ORG	TAMKR	Test America	NONE	WH	METHOD	SDU	L	S	02/15/2017 09:50	02/24/2017			03/17/2017	07:04:00	03/17/2017	13:57:00	320-26103-1	1	L	19.2		L3C4 PFOS	L3C4 PFOS	112	112	INT_REC			PE	SURR		N/A	150	25	00000000							320-26103-1 320-145459
92147010100900	AMIS		MERIDIAN_NAS	NAVY-SDAKC-SB03-0304	NONG	SVOA	537_MOD	ORG	TAMKR	Test America	NONE	WH	METHOD	RES	L	S	02/15/2017 10:00	02/24/2017			03/17/2017	07:04:00	03/17/2017	13:57:00	320-26103-1	1	L	20.7		Perfluorotetradecanoic acid (PFTeA)	376-06-7	0.35	0.35	ug/L	J		PE	TRG								0.5	0.12	0.36	0.66	320-26103-1 320-145459
92147010100900	AMIS		MERIDIAN_NAS	NAVY-SDAKC-SB03-0304	NONG	SVOA	537_MOD	ORG	TAMKR	Test America	NONE	WH	METHOD	RES	L	S	02/15/2017 10:00	02/24/2017			03/17/2017	07:04:00	03/17/2017	13:57:00	320-26103-1	1	L	20.7		Perfluorooctanesulfonic acid (PFOS)	1763-23-1	0.35	0.35	ug/L			PE	TRG								0.5	0.35	0.58	0.66	320-26103-1 320-145459
92147010100900	AMIS		MERIDIAN_NAS	NAVY-SDAKC-SB03-0304	NONG	SVOA	537_MOD	ORG	TAMKR	Test America	NONE	WH	METHOD	RES	L	S	02/15/2017 10:00	02/24/2017			03/17/2017	07:04:00	03/17/2017	13:57:00	320-26103-1	1	L	20.7		1802 PFHXS	1802 PFHXS	97	97	INT_REC			PE	SURR		N/A	150	25	00000000							320-26103-1 320-145459
92147010100900	AMIS		MERIDIAN_NAS	NAVY-SDAKC-SB03-0304	NONG	SVOA	537_MOD	ORG	TAMKR	Test America	NONE	WH	METHOD	RES	L	S	02/15/2017 10:00	02/24/2017			03/17/2017	07:04:00	03/17/2017	13:57:00	320-26103-1	1	L	20.7		L3C4 PFOS	L3C4 PFOS	113	113	INT_REC			PE	SURR		N/A	150	25	00000000							320-26103-1 320-145459
92147010100900	AMIS		MERIDIAN_NAS	NAVY-SDAKC-SB03-0304-MS	NONG	SVOA	537_MOD	ORG	TAMKR	Test America	NONE	WH	METHOD	MS	L	S	02/15/2017 10:00	02/24/2017			03/17/2017	07:04:00	03/17/2017	13:57:00	320-26103-1	1	L	20.7		Perfluorotetradecanoic acid (PFTeA)	376-06-7	0.35	0.35	ug/L	J		PE	TRG								0.5	0.12	0.36	0.66	320-26103-1 320-145459
92147010100900	AMIS		MERIDIAN_NAS	NAVY-SDAKC-SB03-0304-MS	NONG	SVOA	537_MOD	ORG	TAMKR	Test America	NONE	WH	METHOD	MS	L	S	02/15/2017 10:00	02/24/2017			03/17/2017	07:04:00	03/17/2017	13:57:00	320-26103-1	1	L	20.7		Perfluorooctanesulfonic acid (PFOS)	1763-23-1	0.35	0.35	ug/L			PE	TRG								0.5	0.35	0.58	0.66	320-26103-1 320-145459
92147010100900	AMIS		MERIDIAN_NAS	NAVY-SDAKC-SB03-0304-MS	NONG	SVOA	537_MOD	ORG	TAMKR	Test America	NONE	WH	METHOD	MS	L	S	02/15/2017 10:00	02/24/2017			03/17/2017	07:04:00	03/17/2017	13:57:00	320-26103-1	1	L	20.7		1802 PFHXS	1802 PFHXS	97	97	INT_REC			PE	SURR		N/A	150	25	00000000							320-26103-1 320-145459
92147010100900	AMIS		MERIDIAN_NAS	NAVY-SDAKC-SB03-0304-MS	NONG	SVOA	537_MOD	ORG	TAMKR	Test America	NONE	WH	METHOD	MS	L	S	02/15/2017 10:00	02/24/2017			03/17/2017	07:04:00	03/17/2017	13:57:00	320-26103-1	1	L	20.7		L3C4 PFOS	L3C4 PFOS	112	112	INT_REC			PE	SURR		N/A	150	25	00000000							320-26103-1 320-145459
92147010100900	AMIS		MERIDIAN_NAS	NAVY-SDAKC-SB03-0304-SD	NONG	SVOA	537_MOD	ORG	TAMKR	Test America	NONE	WH	METHOD	SDU	L	S	02/15/2017 10:00	02/24/2017			03/17/2017	07:04:00	03/17/2017	13:57:00	320-26103-1	1	L	20.7		Perfluorotetradecanoic acid (PFTeA)	376-06-7	0.35	0.35	ug/L	J		PE	TRG								0.5	0.12	0.36	0.66	320-26103-1 320-145459
92147010100900	AMIS		MERIDIAN_NAS	NAVY-SDAKC-SB03-0304-SD	NONG	SVOA	537_MOD	ORG	TAMKR	Test America	NONE	WH	METHOD	SDU	L	S	02/15/2017 10:00	02/24/2017			03/17/2017	07:04:00	03/17/2017	13:57:00	320-26103-1	1	L	20.7		Perfluorooctanesulfonic acid (PFOS)	1763-23-1	0.35	0.35	ug/L			PE	TRG								0.5	0.35	0.58	0.66	320-26103-1 320-145459
92147010100900	AMIS		MERIDIAN_NAS	NAVY-SDAKC-SB03-0304-SD	NONG	SVOA	537_MOD	ORG	TAMKR	Test America	NONE	WH	METHOD	SDU	L	S	02/15/2017 10:00	02/24/2017			03/17/2017	07:04:00	03/17/2017	13:57:00	320-26103-1	1	L	20.7		1802 PFHXS	1802 PFHXS	97	97	INT_REC			PE	SURR		N/A	150	25	00000000							320-26103-1 320-145459
92147010100900	AMIS		MERIDIAN_NAS	NAVY-SDAKC-SB03-0304-SD	NONG	SVOA	537_MOD	ORG	TAMKR	Test America	NONE	WH	METHOD	SDU	L	S	02/15/2017 10:00	02/24/2017			03/17/2017	07:04:00	03/17/2017	13:57:00	320-26103-1	1	L	20.7		L3C4 PFOS	L3C4 PFOS	112	112	INT_REC			PE	SURR		N/A	150	25	00000000							320-26103-1 320-145459
92147010100900	AMIS		MERIDIAN_NAS	NAVY-SWDKN-SB03-0301	NONG	SVOA	537_MOD	ORG	TAMKR	Test America	NONE	WH	METHOD	RES	L	S	02/16/2017 11:05	02/25/2017			03/17/2017	07:04:00	03/17/2017	13:57:00	320-26105-10	1	L	11.9		Perfluorotetradecanoic acid (PFTeA)	376-06-7	0.12	0.12	ug/L	J		PE	TRG								0.5	0.12	0.35	0.66	320-26105-10 320-145459
92147010100900	AMIS		MERIDIAN_NAS	NAVY-SWDKN-SB03-0301	NONG	SVOA	537_MOD	ORG	TAMKR	Test America	NONE	WH	METHOD	RES	L	S	02/16/2017 11:05	02/25/2017			03/17/2017	07:04:00	03/17/2017	13:57:00	320-26105-10	1	L	11.9		Perfluorooctanesulfonic acid (PFOS)	1763-23-1	0.35	0.35	ug/L			PE	TRG								0.5	0.35	0.58	0.66	320-26105-10 320-145459
92147010100900	AMIS		MERIDIAN_NAS	NAVY-SWDKN-SB03-0301	NONG	SVOA	537_MOD	ORG	TAMKR	Test America	NONE	WH	METHOD	RES	L	S	02/16/2017 11:05	02/25/2017			03/17/2017	07:04:00	03/17/2017	13:57:00	320-26105-10	1	L	11.9		1802 PFHXS	1802 PFHXS	85	85	INT_REC			PE	SURR		N/A	150	25	00000000							320-26105-10 320-145459
92147010100900	AMIS		MERIDIAN_NAS	NAVY-SWDKN-SB03-0301	NONG	SVOA	537_MOD	ORG	TAMKR	Test America	NONE	WH	METHOD	RES	L	S	02/16/2017 11:05	02/25/2017			03/17/2017	07:04:00	03/17/2017	13:57:00	320-26105-10	1	L	11.9		L3C4 PFOS	L3C4 PFOS	85	85	INT_REC			PE	SURR		N/A	150	25	00000000							320-26105-10 320-145459
92147010100900	AMIS		MERIDIAN_NAS	NAVY-SWDKN-SB03-0301	NONG	SVOA	537_MOD	ORG	TAMKR	Test America	NONE	WH	METHOD	RES	L	S	02/16/2017 11:05	02/25/2017			03/17/2017	07:04:00	03/17/2017	13:57:00	320-26105-10	1	L	11.9		Perfluorotetradecanoic acid (PFTeA)	376-06-7	0.12	0.12	ug/L	J		PE	TRG								0.5	0.12	0.35	0.66	320-26105-10 320-145459
92147010100900	AMIS		MERIDIAN_NAS	NAVY-SWDKN-SB03-0301	NONG	SVOA	537_MOD	ORG	TAMKR	Test America	NONE	WH	METHOD	RES	L	S	02/16/2017 11:05	02/25/2017			03/17/2017	07:04:00	03/17/2017	13:57:00	320-26105-10	1	L	11.9		1802 PFHXS	1802 PFHXS	89	89	INT_REC			PE	SURR		N/A	150	25	00000000							320-26105-10 320-145459
92147010100900	AMIS		MERIDIAN_NAS	NAVY-SWDKN-SB03-0301	NONG	SVOA	537_MOD	ORG	TAMKR	Test America	NONE	WH	METHOD	RES	L	S	02/16/2017 11:05	02/25/2017			03/17/2017	07:04:00

Contract_ID	DO_CTO_Number	Phase	Installation_ID	Sample_Name	CH2M_Code	Analysis_Group	Analytical_Method	PRC_Code	Lab_Code	Lab_Name	Leachate_Method	Sample_Basis	Extraction_Method	Result_Type	Lab_QC_Type	Sample_Medium	QC_Level	DateTime_Collected	Date_Received	Leachate_Date	Leachate_Time	Extraction_Date	Extraction_Time	Analysis_Date	Analysis_Time	Lab_Sample_ID	Dilution	Run_Number	Percent_Moisture	Percent_Lipid	Chem_Name	Analyte_ID	Analyte_Value	Original_Analyte_Value	Result_Units	Lab_Qualifier	Validator_Qualifier	GC_Column_Type	Analysis_Result_Type	Result_Narrative	QC_Control_Limit_Code	QC_Accuracy_Upper	QC_Accuracy_Lower	Control_Limit_Date	QC_Narrative	MDL	Detection_Limit	QSM_Version	DL	LOD	LOQ	SDG	Analysis_Batch	Validator_Name	Val_Date
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-SWON-SB03-0204	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	DRY	METHOD	000	REG	S	4	02/24/2017 11:40	02/25/2017			20170302	17:04:00	20170311	18:20:00	320-26105-11	1	1	13.6		Perfluorooctanoic acid (PFOA)	335-67-1	8.3	8.3	UG_KG	M	M	PR	TRG						00000000				5.0	0.12	0.35	0.59	320-26105-1	320-154503		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-SWON-SB03-0204	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	DRY	METHOD	000	REG	S	4	02/24/2017 11:40	02/25/2017			20170302	17:04:00	20170311	18:20:00	320-26105-11	1	1	13.6		Perfluorooctane Sulfonate (PFOS)	1763-23-1	8.3	8.3	UG_KG	M	M	PR	TRG				00000000				5.0	0.15	0.35	0.59	320-26105-1	320-154503		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-SWON-SB03-0204	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	DRY	METHOD	000	REG	S	4	02/24/2017 11:40	02/25/2017			20170302	17:04:00	20170311	18:20:00	320-26105-11	1	1	13.6		13C4 PFOA	13C4 PFOA	108	108	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26105-1	320-154503		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-SWON-SB03-0204	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	DRY	METHOD	000	REG	S	4	02/24/2017 11:40	02/25/2017			20170302	17:04:00	20170311	18:20:00	320-26105-11	1	1	13.6		13C4 PFOS	13C4 PFOS	53	53	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26105-1	320-154503		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-SWON-SB03-0204	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	DRY	METHOD	000	REG	S	4	02/24/2017 11:40	02/25/2017			20170302	17:04:00	20170311	18:20:00	320-26105-11	1	1	13.6		Perfluorobutanesulfonic acid (PFBS)	375-73-5	1.6	1.6	UG_KG			PR	TRG				00000000				5.0	0.12	0.35	0.47	320-26105-1	320-154503		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-SWON-SB03-0204	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	DRY	METHOD	000	REG	S	4	02/24/2017 11:40	02/25/2017			20170302	17:04:00	20170311	18:20:00	320-26105-11	1	1	13.6		18O2 PFHXS	18O2 PFHXS	82	82	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26105-1	320-154503		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-08MW03-0217	NONS	SVOA	8270_SIM	SVOA	TAMER	Test America	NONE	NA	SW3510C	000	REG	W	4	02/24/2017 11:30	02/25/2017			20170302	13:45:00	20170314	19:35:00	320-26105-12	1	1			1,4-Dioxane	123-91-1	14	14	UG_L	M	M	PR	TRG				00000000				5.0	0.19	0.48	0.97	320-26105-1	320-154875		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-08MW03-0217	NONS	SVOA	8270_SIM	SVOA	TAMER	Test America	NONE	NA	SW3510C	000	REG	W	4	02/24/2017 11:30	02/25/2017			20170302	13:45:00	20170314	19:35:00	320-26105-12	1	1			Nitrobenzene-D5	4165-60-0	69	69	PCT_REC			PR	SURR		SLSA	91	42	00000000				5.0				320-26105-1	320-154875		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-08MW03-0217	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	02/24/2017 11:30	02/25/2017			20170302	14:24:00	20170306	02:49:00	320-26105-12	1	1			Perfluorooctanoic acid (PFOA)	335-67-1	0.0039	0.0039	UG_L	M	M	PR	TRG				00000000				5.0	7E-04	0.0018	0.0022	320-26105-1	320-153421		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-08MW03-0217	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	02/24/2017 11:30	02/25/2017			20170302	14:24:00	20170306	02:49:00	320-26105-12	1	1			Perfluorooctane Sulfonate (PFOS)	1763-23-1	0.0027	0.0027	UG_L	UM	UM	PR	TRG				00000000				5.0	0.001	0.0027	0.0036	320-26105-1	320-153421		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-08MW03-0217	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	02/24/2017 11:30	02/25/2017			20170302	14:24:00	20170306	02:49:00	320-26105-12	1	1			13C4 PFOA	13C4 PFOA	68	68	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26105-1	320-153421		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-08MW03-0217	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	02/24/2017 11:30	02/25/2017			20170302	14:24:00	20170306	02:49:00	320-26105-12	1	1			13C4 PFOS	13C4 PFOS	131	131	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26105-1	320-153421		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-08MW03-0217	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	02/24/2017 11:30	02/25/2017			20170302	14:24:00	20170306	02:49:00	320-26105-12	1	1			Perfluorobutanesulfonic acid (PFBS)	375-73-5	0.0055	0.0055	UG_L	M	M	PR	TRG				00000000				5.0	8E-04	0.0018	0.0022	320-26105-1	320-153421		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-08MW03-0217	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	02/24/2017 11:30	02/25/2017			20170302	14:24:00	20170306	02:49:00	320-26105-12	1	1			18O2 PFHXS	18O2 PFHXS	141	141	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26105-1	320-153421		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-08MW06-0217	NONS	SVOA	8270_SIM	SVOA	TAMER	Test America	NONE	NA	SW3510C	000	REG	W	4	02/24/2017 13:15	02/25/2017			20170302	13:45:00	20170314	19:58:00	320-26105-13	1	1			1,4-Dioxane	123-91-1	1.4	1.4	UG_L	M	M	PR	TRG				00000000				5.0	0.19	0.48	0.96	320-26105-1	320-154875		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-08MW06-0217	NONS	SVOA	8270_SIM	SVOA	TAMER	Test America	NONE	NA	SW3510C	000	REG	W	4	02/24/2017 13:15	02/25/2017			20170302	13:45:00	20170314	19:58:00	320-26105-13	1	1			Nitrobenzene-D5	4165-60-0	74	74	PCT_REC			PR	SURR		SLSA	91	42	00000000				5.0				320-26105-1	320-154875		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-08MW06-0217	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	02/24/2017 13:15	02/25/2017			20170302	14:24:00	20170306	02:56:00	320-26105-13	1	1			Perfluorooctanoic acid (PFOA)	335-67-1	0.13	0.13	UG_L			PR	TRG				00000000				5.0	7E-04	0.0018	0.0023	320-26105-1	320-153421		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-08MW06-0217	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	02/24/2017 13:15	02/25/2017			20170302	14:24:00	20170306	02:56:00	320-26105-13	1	1			Perfluorooctane Sulfonate (PFOS)	1763-23-1	0.055	0.055	UG_L			PR	TRG				00000000				5.0	0.001	0.0028	0.0037	320-26105-1	320-153421		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-08MW06-0217	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	02/24/2017 13:15	02/25/2017			20170302	14:24:00	20170306	02:56:00	320-26105-13	1	1			13C4 PFOA	13C4 PFOA	59	59	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26105-1	320-153421		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-08MW06-0217	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	02/24/2017 13:15	02/25/2017			20170302	14:24:00	20170306	02:56:00	320-26105-13	1	1			13C4 PFOS	13C4 PFOS	120	120	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26105-1	320-153421		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-08MW06-0217	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	02/24/2017 13:15	02/25/2017			20170302	14:24:00	20170306	02:56:00	320-26105-13	1	1			Perfluorobutanesulfonic acid (PFBS)	375-73-5	0.022	0.022	UG_L	M	M	PR	TRG				00000000				5.0	9E-04	0.0018	0.0023	320-26105-1	320-153421		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-08MW06-0217	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	02/24/2017 13:15	02/25/2017			20170302	14:24:00	20170306	02:56:00	320-26105-13	1	1			18O2 PFHXS	18O2 PFHXS	128	128	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26105-1	320-153421		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-FD02-0217	NONS	SVOA	8270_SIM	SVOA	TAMER	Test America	NONE	NA	SW3510C	000	REG	W	4	02/24/2017 00:00	02/25/2017			20170302	13:45:00	20170314	20:21:00	320-26105-14	1	1			1,4-Dioxane	123-91-1	1.4	1.4	UG_L	M	M	PR	TRG				00000000				5.0	0.19	0.48	0.96	320-26105-1	320-154875		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-FD02-0217	NONS	SVOA	8270_SIM	SVOA	TAMER	Test America	NONE	NA	SW3510C	000	REG	W	4	02/24/2017 00:00	02/25/2017			20170302	13:45:00	20170314	20:21:00	320-26105-14	1	1			Nitrobenzene-D5	4165-60-0	62	62	PCT_REC			PR	SURR		SLSA	91	42	00000000				5.0				320-26105-1	320-154875		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-FD02-0217	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	02/24/2017 00:00	02/25/2017			20170302	14:24:00	20170306	03:11:00	320-26105-14	1	1			Perfluorooctanoic acid (PFOA)	335-67-1	0.13	0.13	UG_L			PR	TRG				00000000				5.0	6E-04	0.0017	0.0021	320-26105-1	320-153421		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-FD02-0217	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	02/24/2017 00:00	02/25/2017			20170302	14:24:00	20170306	03:11:00	320-26105-14	1	1			Perfluorooctane Sulfonate (PFOS)	1763-23-1	0.054	0.054	UG_L			PR	TRG				00000000				5.0	0.001	0.0025	0.0033	320-26105-1	320-153421		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-FD02-0217	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	02/24/2017 00:00	02/25/2017			20170302	14:24:00	20170306	03:11:00	320-26105-14	1	1			13C4 PFOA	13C4 PFOA	65	65	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26105-1	320-153421		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-FD02-0217	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	02/24/2017 00:00	02/25/2017			20170302	14:24:00	20170306	03:11:00	320-26105-14	1	1			13C4 PFOS	13C4 PFOS	124	124	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26105-1	320-153421		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-FD02-0217	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	02/24/2017 00:00	02/25/2017			20170302	14:24:00	20170306	03:11:00	320-26105-14	1	1			Perfluorobutanesulfonic acid (PFBS)	375-73-5	0.02	0.02	UG_L	M	M	PR	TRG				00000000				5.0	8E-04	0.0017	0.0021	320-26105-1	320-153421		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-FD02-0217	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	02/24/2017 00:00	02/25/2017			20170302	14:24:00	20170306	03:11:00	320-26105-14	1	1			18O2 PFHXS	18O2 PFHXS	132	132	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26105-1	320-153421		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-MRD-IA01-0217A	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	02/24/2017 15:30	02/25/2017			20170302	14:24:00	20170306	03:19:00	320-26105-15	1	1			Perfluorooctanoic acid (PFOA)	335-67-1	0.12	0.12	UG_L			PR	TRG				00000000				5.0	7E-04	0.0019	0.0024	320-26105-1	320-153421		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-MRD-IA01-0217A	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	02/24/2017 15:30	02/25/2017			20170302	14:24:00	20170306	03:19:00	320-26105-15	1	1			Perfluorooctane Sulfonate (PFOS)	1763-23-1	0.003	0.003	UG_L	JM	JM	PR	TRG				00000000				5.0	0.001	0.0028	0.0038	320-26105-1	320-153421		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-MRD-IA01-0217A	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	02/24/2017 15:30	02/25/2017			20170302	14:24:00	20170306	03:19:00	320-26105-15	1	1			13C4 PFOA	13C4 PFOA	79	79	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26105-1	320-153421		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-MRD-IA01-0217A	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	02/24/2017 15:30	02/25/2017			20170302	14:24:00	20170306	03:19:00	320-26105-15	1	1			13C4 PFOS	13C4 PFOS	115	115	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26105-1	320-153421		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-MRD-IA01-0217A	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	02/24/2017 15:30	02/25/2017			20170302	14:24:00	20170306	03:19:00	320-26105-15	1	1			Perfluorobutanesulfonic acid (PFBS)	375-73-5	0.0069	0.0069	UG_L	M	M	PR	TRG				00000000				5.0	9E-04	0.0019	0.0024	320-26105-1	320-153421		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-MRD-IA01-0217A	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	02/24/2017 15:30	02/25/2017			20170302	14:24:00	20170306	03:19:00	320-26105-15	1	1			18O2 PFHXS	18O2 PFHXS	107	107	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26105-1	320-153421		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-FD03-0217	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	02/24/2017 00:00	02/25/2017			20170302	14:24:00	20170306	03:26:00	320-26105-16	1	1			Perfluorooctanoic acid (PFOA)	335-67-1	0.12	0.12	UG_L			PR	TRG				00000000				5.0	7E-04	0.0019	0.0024	320-26105-1	320-153421		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-FD03-0217	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	02/24/2017 00:00	02/25/2017			20170302	14:24:00	20170306	03:26:00	320-26105-16	1	1			Perfluorooctane Sulfonate (PFOS)	1763-23-1	0.003	0.003	UG_L	JM	JM	PR	TRG				00000000				5.0	0.001	0.0029	0.0038	320-26105-1	320-153421		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-FD03-0217	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	02/24/2017 00:00	02/25/2017			20170302	14:24:00	20170306	03:26:00	320-26105-16	1	1			13C4 PFOA	13C4 PFOA	83	83	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26105-1	320-153421		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-FD03-0217	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	02/24/2017 00:00	02/25/2017			20170302	14:24:00	20170306	03:26:00	320-26105-16	1	1			13C4 PFOS	13C4 PFOS	133	133	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26105-1	320-153421		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-FD03-0217	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	02/24/2017 00:00	02/25/2017			20170302	14:24:00	20170306	03:26:00	320-26105-16	1	1			Perfluorobutanesulfonic acid (PFBS)	375-73-5	0.0052	0.0052	UG_L	M	M	PR	TRG				00000000				5.0	9E-04	0.0019	0.0024	320-26105-1	320-153421		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-FD03-0217	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	02/24/2017 00:00	02/25/2017			20170302	14:24:00	20170306	03:26:00	320-26105-16	1	1			18O2 PFHXS	18O2 PFHXS	124	124	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26105-1	320-153421		
N6247016D9000	JM01		MERIDIAN_NAS	LCS 320-152910/2-A	NONS	SVOA	8270_SIM	SVOA	TAMER	Test America	NONE	NA	SW3510C	000	BS	W	4	03/02/2017 13:45	03/02/2017			20170302	13:45:00	20170314	15:27:00	LCS 320-152910/2-A	1	1			1,4-Dioxane	123-91-1	32	32	PCT_REC	M	M	PR	TRG		LSA	52	12	00000000				5.0	0.20	0.50	1.0	320-26105-1	320-154875		
N6247016D9000	JM01		MERIDIAN_NAS	LCS 320-152910/2-A	NONS	SVOA	8270_SIM	SVOA	TAMER	Test America	NONE	NA	SW3510C	000	BS	W	4	03/02/2017 13:45	03/02/2017			20170302	13:45:00	20170314	15:27:00	LCS 320-152910/2-A	1	1			Nitrobenzene-D5	4165-60-0	73	73	PCT_REC			PR	SURR		SLSA	91	42	00000000				5.0				320-26105-1	320-154875		
N6247016D9000	JM01		MERIDIAN_NAS	LCS 320-152929/2-A	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	BS	W	4	03/02/2017 14:24	03/02/2017			20170302	14:24:00	20170306	01:56:00	LCS 320-152929/2-A	1	1			Perfluorooctanoic acid (PFOA)	335-67-1	109	109	PCT_REC			PR	TRG		LSA	140	60	00000000				5.0	0.75	2.0	2.5	320-26105-1	320-153421		
N6247016D9000	JM01		MERIDIAN_NAS	LCS 320-152929/2-A	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	BS	W	4	03/02/2017 14:24	03/02/2017			20170302	14:24:00	20170306	01:56:00	LCS 320-152929/2-A	1	1			Perfluorooctane Sulfonate (PFOS)	1763-23-1	104	104	PCT_REC			PR	TRG		LSA	140	60	00000000				5.0	1.3	3.0	4.0	320-26105-1	320-153421		
N6247016D9000	JM01		MERIDIAN_NAS	LCS 320-152929/2-A	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	BS	W	4	03/02/2017 14:24	03/02/2017			20170302	14:24:00	20170306	01:56:00	LCS 320-152929/2-A	1	1			13C4 PFOA	13C4 PFOA	140	140	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26105-1	320-153421		
N6247016D9000	JM01		MERIDIAN_NAS	LCS 320-152929/2-A	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	BS	W	4	03/02/2017 14:24	03/02/2017			20170302	14:24:00	20170306	01:56:00	LCS 320-152929/2-A	1	1			13C4 PFOS	13C4 PFOS	125	125	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26105-1	320-153421		
N6247016D9000	JM01		MERIDIAN_NAS	LCS 320-152929/2-A	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	BS	W	4	03/02/2017 14:24	03/02/2017			20170302	14:24:00	20170306	01:56:00	LCS 320-152929/2-A	1	1			Perfluorobutanesulfonic acid (PFBS)	375-73-5	126	126	PCT_REC			PR	TRG		LSA	150	50	00000000				5.0	0.92	2.0	2.5	320-26105-1	320-153421		
N6247016D9000	JM01		MERIDIAN_NAS	LCS 320-152929/2-A	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	BS	W	4	03/02/2017 14:24	03/02/2017			20170302	14:24:00	20170306	01:56:00	LCS 320-152929/2-A	1	1			18O2 PFHXS	18O2 PFHXS	128	128	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26105-1	320-153421		
N6247016D9000	JM01		MERIDIAN_NAS	LCS 320-152961/2-A	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	WET	METHOD	000	BS	S	4	03/02/2017 17:04	03/02/2017			20170302	17:04:00	20170311	15:50:00	LCS 320-152961/2-A	1	1			Perfluorooctanoic acid (PFOA)	335-67-1	106	106	PCT_REC			PR	TRG		LSA	140	60	00000000				5.0	0.10	0.30	0.50	320-26105-1	320-154503		
N6247016D9000	JM01		MERIDIAN_NAS	LCS 320-152961/2-A	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	WET	METHOD	000	BS	S	4	03/02/2017 17:04	03/02/2017			20170302	17:04:00	20170311	15:50:00	LCS 320-152961/2-A	1	1			Perfluorooctane Sulfonate (PFOS)	1763-23-1	105	105	PCT_REC	M	M	PR	TRG		LSA	140	60	00000000				5.0	0.13	0.30	0.50	320-26105-1	320-154503		
N6247016D9000	JM01		MERIDIAN_NAS	LCS 320-152961/2-A	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	WET	METHOD	000	BS	S	4	03/02/2017 17:04	03/02/2017			20170302	17:04:00	20170311	15:50:00	LCS 320-152961/2-A	1	1			13C4 PFOA	13C4 PFOA	113	113	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26105-1	320-154503		
N6247016D9000	JM01		MERIDIAN_NAS	LCS 320-152961/2-A	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	WET	METHOD	000	BS	S	4	03/02/2017 17:04	03/02/2017			20170302	17:04:00	20170311	15:50:00	LCS 320-152961/2-A	1	1			13C4 PFOS	13C4 PFOS	100	100	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26105-1	320-154503		
N6247016D9000	JM01		MERIDIAN_NAS	LCS 320-152961/2-A	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	WET	METHOD	000	BS	S	4	03/02/2017 17:04	03/02/2017			20170302	17:04:00	20170311	15:50:00	LCS 320-152961/2-A	1	1			Perfluorobutanesulfonic acid (PFBS)	375-73-5	114	114	PCT_REC			PR	TRG		LSA	150	50	00000000				5.0	0.10	0.30	0.40	320-26105-1	320-154503		
N6247016D9000	JM01		MERIDIAN_NAS	LCS 320-152961/2-A	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	WET	METHOD	000	BS	S	4	03/02/2017 17:04	03/02/2017			20170302	17:04:00	20170311	15:50:00	LCS 320-152961/2-A	1	1			18O2 PFHXS	18O2 PFHXS	108	108	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26105-1	320-154503		
N6247016D9000	JM01		MERIDIAN_NAS	LCSD 320-152910/3-A	NONS	SVOA	8270_SIM	SVOA	TAMER	Test America	NONE	NA	SW3510C	000	BSD	W	4	03/02/2017 13:45	03/02/2017			20170302	13:45:00	20170314	15:49:00	LCSD 320-152910/3-A	1	1			1,4-Dioxane	123-91-1	30	30	PCT_REC	M	M	PR	TRG		LSP	52	12	00000000				5.0	0.20	0.50	1.0	320-26105-1	320-154875		
N6247016D9000	JM01		MERIDIAN_NAS	LCSD 320-152910/3-A	NONS	SVOA	8270_SIM	SVOA	TAMER	Test America	NONE	NA	SW3510C	000	BSD	W	4	03/02/2017 13:45	03/02/2017			20170302	13:45:00	20170314	15:49:00	LCSD 320-152910/3-A	1	1			Nitrobenzene-D5	4165-60-0	74	74	PCT_REC			PR	SURR		SLSA	91	42	00000000				5.0				320-26105-1	320-154875		
N6247016D9000	JM01		MERIDIAN_NAS	MB 320-152910/1-A	NONS	SVOA	8270_SIM	SVOA	TAMER	Test America	NONE	NA	SW3510C	000	LB1	W	4	03/02/2017 13:45	03/02/2017			20170302	13:45:00	20170314	15:04:00	MB 320-152910/1-A	1	1			1,4-Dioxane	123-91-1	0.50	0.50	UG_L	U	U	PR	TRG				00000000				5.0	0.20	0.50	1.0	320-26105-1	320-154875		
N6247016D9000	JM01		MERIDIAN_NAS	MB 320-152910/1-A	NONS	SVOA	8270_SIM	SVOA	TAMER	Test America	NONE	NA	SW3510C	000	LB1	W	4	03/02/2017 13:45	03/02/2017			20170302	13:45:00	20170314	15:04:00	MB 320-152910/1-A	1	1			Nitrobenzene-D5	4165-60-0	69	69	PCT_REC			PR	SURR		SLSA	91	42	00000000				5.0				320-26105-1	320-154875		
N6247016D9000	JM01		MERIDIAN_NAS	MB 320-152929/1-A	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	LB1	W	4	03/02/2017 14:24	03/02/2017			20170302	14:24:00	20170306	01:49:00	MB 320-152929/1-A	1	1			Perfluorooctanoic acid (PFOA)	335-67-1	0.002	0.002	UG_L	UM	UM	PR	TRG				00000000				5.0	8E-04	0.002	0.0025	320-26105-1	320-153421		
N6247016D9000	JM01		MERIDIAN_NAS	MB 320-152929/1-A	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	LB1	W	4	03/02/2017 14:24	03/02/2017			20170302	14:24:00	20170306	01:49:00	MB 320-152929/1-A	1	1			Perfluorooctane Sulfonate (PFOS)	1763-23-1	0.003	0.003	UG_L	U	U	PR	TRG				00000000				5.0	0.001	0.003	0.004	320-26105-1	320-153421		
N6247016D9000	JM01		MERIDIAN_NAS	MB 320-152929/1-A	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	LB1	W	4	03/02/2017 14:24	03/02/2017			20170302	14:24:00	20170306	01:49:00	MB 320-152929/1-A	1	1			13C4 PFOA	13C4 PFOA	158	158	PCT_REC	Q	Q	PR	SURR		SMSA	150	25	00000000				5.0				320-26105-1	320-153421		
N6247016D9000	JM01		MERIDIAN_NAS	MB 320-152929/1-A	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	LB1	W	4	03/02/2017 14:24	03/02/2017			20170302	14:24:00	20170306	01:49:00	MB 320-152929/1-A	1	1			13C4 PFOS	13C4 PFOS	128	128	PCT_REC			PR	SURR		SMSA	150	25	00000000				5.0				320-26105-1	320-153421		
N6247016D9000	JM01		MERIDIAN_NAS	MB 320-152929/1-A	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	LB1	W	4	03/02/2017 14:24	03/02/2017			20170302	14:24:00	20170306	01:49:00	MB 320-152929/1-A	1	1			Perfluorobutanesulfonic acid (PFBS)	375-73-5	0.002	0.002	UG_L	U	U	PR	TRG				00000000				5.0	9E-04	0.002	0.0025	320-26105-1	320-153421		
N6247016D9000	JM01		MERIDIAN_NAS	MB 320-152929/1-A	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	LB1	W	4	03/02/2017 14:24	03/02/2017			20170302	14:24:00	20170306	01:49:00	MB 320-152929/1-A	1	1			18O2 PFHXS	18O2 PFHXS	134	134	PCT_REC			PR	SURR		SMSA	150	25	00000000				5.0				320-26105-1	320-153421		
N6247016D9000	JM01		MERIDIAN_NAS	MB 320-152961/1-A	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	WET	METHOD	000	LB1	S	4	03/02/2017 17:04	03/02/2017			20170302	17:04:00	20170311	15:42:00	MB 320-152961/1-A	1	1			Perfluorooctanoic acid (PFOA)	335-67-1	0.30	0.30	UG_KG	UM	UM	PR	TRG				00000000				5.0	0.10	0.30	0.50	320-26105-1	320-154503		
N6247016D9000	JM01		MERIDIAN_NAS	MB 320-152961/1-A	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	WET	METHOD	000	LB1	S	4	03/02/2017 17:04	03/02/2017			20170302	17:04:00	20170311	15:42:00	MB 320-152961/1-A	1	1			Perfluorooctane Sulfonate (PFOS)	1763-23-1	0.30	0.30	UG_KG	U	U	PR	TRG				00000000				5.0	0.13	0.30	0.50	320-26105-1	320-154503		
N6247016D9000	JM01		MERIDIAN_NAS	MB 320-152961/1-A	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	WET	METHOD	000	LB1	S	4	03/02/2017 17:04	03/02/2017			20170302	17:04:00	20170311	15:42:00	MB 320-152961/1-A	1	1			13C4 PFOA	13C4 PFOA	122	122	PCT_REC	M	M	PR	SURR		SMSA	150	25	00000000				5.0				320-26105-1	320-154503		
N6247016D9000	JM01		MERIDIAN_NAS	MB 320-152961/1-A	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	WET	METHOD	000	LB1	S	4	03/02/2017 17:04	03/02/2017			20170302	17:04:00	20170311	15:42:00	MB 320-152961/1-A	1	1			13C4 PFOS	13C4 PFOS	99	99	PCT_REC			PR	SURR		SMSA	150	25	00000000				5.0				320-26105-1	320-154503		
N6247016D9000	JM01		MERIDIAN_NAS	MB 320-152961/1-A	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	WET	METHOD	000	LB1	S	4	03/02/2017 17:04	03/02/2017			20170302	17:04:00	20170311	15:42:00	MB 320-152961/1-A	1	1			Perfluorobutanesulfonic acid (PFBS)	375-73-5	0.30	0.30	UG_KG	U	U	PR	TRG				00000000				5.0	0.10	0.30	0.40	320-26105-1	320-154503		
N6247016D9000	JM01		MERIDIAN_NAS	MB 320-152961/1-A	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	WET	METHOD	000	LB1	S	4	03/02/2017 17:04	03/02/2017			20170302	17:04:00	20170311	15:42:00	MB 320-152961/1-A	1	1			18O2 PFHXS	18O2 PFHXS	113	113	PCT_REC			PR	SURR		SMSA	150	25	00000000				5.0				320-26105-1	320-154503		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-WWTP-MW01-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/01/2017 12:40	03/02/2017			20170306	16:19:00	20170310	22:52:00	320-26263-1	1	1			Perfluorooctanoic acid (PFOA)	335-67-1	0.26	0.26	UG_L	M	M	PR	TRG				00000000				5.0	7E-04	0.0019	0.0024	320-26263-1	320-154459		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-WWTP-MW01-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/01/2017 12:40	03/02/2017			20170306	16:19:00	20170310	22:52:00	320-26263-1	1	1			Perfluorooctane Sulfonate (PFOS)	1763-23-1	0.37	0.37	UG_L	ME	ME	PR	TRG				00000000				5.0	0.001	0.0029	0.0038	320-26263-1	320-154459		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-WWTP-MW01-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/01/2017 12:40	03/02/2017			20170306	16:19:00	20170310	22:52:00	320-26263-1	1	1			13C4 PFOA	13C4 PFOA	85	85	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26263-1	320-154459		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-WWTP-MW01-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/01/2017 12:40	03/02/2017			20170306	16:19:00	20170310	22:52:00	320-26263-1	1	1			13C4 PFOS	13C4 PFOS	107	107	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26263-1	320-154459		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-WWTP-MW01-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/01/2017 12:40	03/02/2017			20170306	16:19:00	20170310	22:52:00	320-26263-1	1	1			Perfluorobutanesulfonic acid (PFBS)	375-73-5	0.025	0.025	UG_L	M	M	PR	TRG				00000000				5.0	9E-04	0.0019	0.0024	320-26263-1	320-154459		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-WWTP-MW01-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/01/2017 12:40	03/02/2017			20170306	16:19:00	20170310	22:52:00	320-26263-1	1	1			18O2 PFHXS	18O2 PFHXS	110	110	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26263-1	320-154459		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-WWTP-MW01-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	DL1	REG	W	4	03/01/2017 12:40	03/02/2017			20170306	16:19:00	20170313	17:16:00	320-26263-1	5	2			Perfluorooctanoic acid (PFOA)	335-67-1	0.27	0.27	UG_L	DM	DM	PR	TRG				00000000				5.0	0.004	0.0096	0.012	320-26263-1	320-154808		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-WWTP-MW01-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	DL1	REG	W	4	03/01/2017 12:40	03/02/2017			20170306	16:19:00	20170313	17:16:00	320-26263-1	5	2			Perfluorooctane Sulfonate (PFOS)	1763-23-1	0.38	0.38	UG_L	DM	DM	PR	TRG				00000000				5.0	0.006	0.014	0.019	320-26263-1	320-154808		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-WWTP-MW01-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	DL1	REG	W	4	03/01/2017 12:40	03/02/2017			20170306	16:19:00	20170313	17:16:00	320-26263-1	5	2			13C4 PFOA	13C4 PFOA	81	81	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26263-1	320-154808		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-WWTP-MW01-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	DL1	REG	W	4	03/01/2017 12:40	03/02/2017			20170306	16:19:00	20170313	17:16:00	320-26263-1	5	2			13C4 PFOS	13C4 PFOS	98	98	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26263-1	320-154808		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-WWTP-MW01-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	DL1	REG	W	4	03/01/2017 12:40	03/02/2017			20170306	16:19:00	20170313	17:16:00	320-26263-1	5	2			Perfluorobutanesulfonic acid (PFBS)	375-73-5	0.018	0.018	UG_L	DM	DM	PR	TRG				00000000				5.0	0.004	0.0096	0.012	320-26263-1	320-154808		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-WWTP-MW01-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	DL1	REG	W	4	03/01/2017 12:40	03/02/2017			20170306	16:19:00	20170313	17:16:00	320-26263-1	5	2			18O2 PFHXS	18O2 PFHXS	116	116	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26263-1	320-154808		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-PWMA-MW01-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/01/2017 14:00	03/02/2017			20170306	16:19:00	20170310	23:00:00	320-26263-2	1	1			Perfluorooctanoic acid (PFOA)	335-67-1	2.5	2.5	UG_L	ME	ME	PR	TRG				00000000				5.0	7E-04	0.0018	0.0023	320-26263-1	320-154459		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-PWMA-MW01-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/01/2017 14:00	03/02/2017			20170306	16:19:00	20170310	23:00:00	320-26263-2	1	1			Perfluorooctane Sulfonate (PFOS)	1763-23-1	1.3	1.3	UG_L	ME	ME	PR	TRG				00000000				5.0	0.001	0.0028	0.0037	320-26263-1	320-154459		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-PWMA-MW01-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/01/2017 14:00	03/02/2017			20170306	16:19:00	20170310	23:00:00	320-26263-2	1	1			13C4 PFOA	13C4 PFOA	48	48	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26263-1	320-154459		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-PWMA-MW01-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/01/2017 14:00	03/02/2017			20170306	16:19:00	20170310	23:00:00	320-26263-2	1	1			13C4 PFOS	13C4 PFOS	99	99	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26263-1	320-154459		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-PWMA-MW01-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/01/2017 14:00	03/02/2017			20170306	16:19:00	20170310	23:00:00	320-26263-2	1	1			Perfluorobutanesulfonic acid (PFBS)	375-73-5	0.65	0.65	UG_L	ME	ME	PR	TRG				00000000				5.0	8E-04	0.0018	0.0023	320-26263-1	320-154459		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-PWMA-MW01-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/01/2017 14:00	03/02/2017			20170306	16:19:00	20170310	23:00:00	320-26263-2	1	1			18O2 PFHXS	18O2 PFHXS	46	46	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26263-1	320-154459		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-PWMA-MW01-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	DL1	REG	W	4	03/01/2017 14:00	03/02/2017			20170306	16:19:00	20170313	17:23:00	320-26263-2	10	2			Perfluorooctanoic acid (PFOA)	335-67-1	4.4	4.4	UG_L	DME	DME	PR	TRG				00000000				5.0	0.007	0.018	0.023	320-26263-1	320-154808		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-PWMA-MW01-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	DL1	REG	W	4	03/01/2017 14:00	03/02/2017			20170306	16:19:00	20170313	17:23:00	320-26263-2	10	2			Perfluorooctane Sulfonate (PFOS)	1763-23-1	1.6	1.6	UG_L	DM	DM	PR	TRG				00000000				5.0	0.012	0.028	0.037	320-26263-1	320-154808		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-PWMA-MW01-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	DL1	REG	W	4	03/01/2017 14:00	03/02/2017			20170306	16:19:00	20170313	17:23:00	320-26263-2	10	2			13C4 PFOA	13C4 PFOA	83	83	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26263-1	320-154808		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-PWMA-MW01-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	DL1	REG	W	4	03/01/2017 14:00	03/02/2017			20170306	16:19:00	20170313	17:23:00	320-26263-2	10	2			13C4 PFOS	13C4 PFOS	112	112	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26263-1	320-154808		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-PWMA-MW01-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	DL1	REG	W	4	03/01/2017 14:00	03/02/2017			20170306	16:19:00	20170313	17:23:00	320-26263-2	10	2			Perfluorobutanesulfonic acid (PFBS)	375-73-5	0.83	0.83	UG_L	D	D	PR	TRG				00000000				5.0	0.008	0.018	0.023	320-26263-1	320-154808		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-PWMA-MW01-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	DL1	REG	W	4	03/01/2017 14:00	03/02/2017			20170306	16:19:00	20170313	17:23:00	320-26263-2	10	2			18O2 PFHXS	18O2 PFHXS	97	97	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26263-1	320-154808		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-PWMA-MW01-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	DL2	REG	W	4	03/01/2017 14:00	03/02/2017			20170306	16:19:00	20170314	15:13:00	320-26263-2	25	3			Perfluorooctanoic acid (PFOA)	335-67-1	4.5	4.5	UG_L	DM	DM	PR	TRG				00000000				5.0	0.017	0.046	0.057	320-26263-1	320-155009		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-PWMA-MW01-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	DL2	REG	W	4	03/01/2017 14:00	03/02/2017			20170306	16:19:00	20170314	15:13:00	320-26263-2	25	3			Perfluorooctane Sulfonate (PFOS)	1763-23-1	1.5	1.5	UG_L	DM	DM	PR	TRG				00000000				5.0	0.029	0.069	0.092	320-26263-1	320-155009		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-PWMA-MW01-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	DL2	REG	W	4	03/01/2017 14:00	03/02/2017			20170306	16:19:00	20170314	15:13:00	320-26263-2	25	3			13C4 PFOA	13C4 PFOA	108	108	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26263-1	320-155009		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-PWMA-MW01-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	DL2	REG	W	4	03/01/2017 14:00	03/02/2017			20170306	16:19:00	20170314	15:13:00	320-26263-2	25	3			13C4 PFOS	13C4 PFOS	112	112	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26263-1	320-155009		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-PWMA-MW01-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	DL2	REG	W	4	03/01/2017 14:00	03/02/2017			20170306	16:19:00	20170314	15:13:00	320-26263-2	25	3			Perfluorobutanesulfonic acid (PFBS)	375-73-5	0.73	0.73	UG_L	D	D	PR	TRG				00000000				5.0	0.021	0.046	0.057	320-26263-1	320-155009		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-PWMA-MW01-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	DL2	REG	W	4	03/01/2017 14:00	03/02/2017			20170306	16:19:00	20170314	15:13:00	320-26263-2	25	3			18O2 PFHXS	18O2 PFHXS	108	108	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26263-1	320-155009		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-UNKNOWN22-MW01-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/01/2017 15:05	03/02/2017			20170306	16:19:00	20170310	23:07:00	320-26263-3	1	1			Perfluorooctanoic acid (PFOA)	335-67-1	0.009	0.009	UG_L	M	M	PR	TRG				00000000				5.0	7E-04	0.0019	0.0023	320-26263-1	320-154459		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-UNKNOWN22-MW01-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/01/2017 15:05	03/02/2017			20170306	16:19:00	20170310	23:07:00	320-26263-3	1	1			Perfluorooctane Sulfonate (PFOS)	1763-23-1	0.002	0.002	UG_L	JM	JM	PR	TRG				00000000				5.0	0.001	0.0028	0.0037	320-26263-1	320-154459		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-UNKNOWN22-MW01-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/01/2017 15:05	03/02/2017			20170306	16:19:00	20170310	23:07:00	320-26263-3	1	1			13C4 PFOA	13C4 PFOA	87	87	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26263-1	320-154459		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-UNKNOWN22-MW01-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/01/2017 15:05	03/02/2017			20170306	16:19:00	20170310	23:07:00	320-26263-3	1	1			13C4 PFOS	13C4 PFOS	118	118	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26263-1	320-154459		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-UNKNOWN22-MW01-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/01/2017 15:05	03/02/2017			20170306	16:19:00	20170310	23:07:00	320-26263-3	1	1			Perfluorobutanesulfonic acid (PFBS)	375-73-5	0.0037	0.0037	UG_L			PR	TRG				00000000				5.0	9E-04	0.0019	0.0023	320-26263-1	320-154459		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-UNKNOWN22-MW01-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/01/2017 15:05	03/02/2017			20170306	16:19:00	20170310	23:07:00	320-26263-3	1	1			18O2 PFHXS	18O2 PFHXS	125	125	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26263-1	320-154459		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-FD04-030117	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/01/2017 00:00	03/02/2017			20170306	16:19:00	20170310	23:15:00	320-26263-4	1	1			Perfluorooctanoic acid (PFOA)	335-67-1	0.0081	0.0081	UG_L	M	M	PR	TRG				00000000				5.0	7E-04	0.0018	0.0023	320-26263-1	320-154459		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-FD04-030117	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/01/2017 00:00	03/02/2017			20170306	16:19:00	20170310	23:15:00	320-26263-4	1	1			Perfluorooctane Sulfonate (PFOS)	1763-23-1	0.0012	0.0012	UG_L	JM	JM	PR	TRG				00000000				5.0	0.001	0.0028	0.0037	320-26263-1	320-154459		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-FD04-030117	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/01/2017 00:00	03/02/2017			20170306	16:19:00	20170310	23:15:00	320-26263-4	1	1			13C4 PFOA	13C4 PFOA	83	83	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26263-1	320-154459		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-FD04-030117	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/01/2017 00:00	03/02/2017			20170306	16:19:00	20170310	23:15:00	320-26263-4	1	1			13C4 PFOS	13C4 PFOS	134	134	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26263-1	320-154459		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-FD04-030117	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/01/2017 00:00	03/02/2017			20170306	16:19:00	20170310	23:15:00	320-26263-4	1	1			Perfluorobutanesulfonic acid (PFBS)	375-73-5	0.0036	0.0036	UG_L			PR	TRG				00000000				5.0	9E-04	0.0018	0.0023	320-26263-1	320-154459		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-FD04-030117	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/01/2017 00:00	03/02/2017			20170306	16:19:00	20170310	23:15:00	320-26263-4	1	1			18O2 PFHXS	18O2 PFHXS	137	137	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26263-1	320-154459		
N6247016D9000	JM01		MERIDIAN_NAS	LCS 320-153501/2-A	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	BS	W	4	03/06/2017 16:19	03/06/2017			20170306	16:19:00	20170310	22:37:00	LCS 320-153501/2-A	1	1			Perfluorooctanoic acid (PFOA)	335-67-1	100	100	PCT_REC			PR	TRG		LSA	140	60	00000000				5.0	0.75	2.0	2.5	320-26263-1	320-154459		
N6247016D9000	JM01		MERIDIAN_NAS	LCS 320-153501/2-A	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	BS	W	4	03/06/2017 16:19	03/06/2017			20170306	16:19:00	20170310	22:37:00	LCS 320-153501/2-A	1	1			Perfluorooctane Sulfonate (PFOS)	1763-23-1	102	102	PCT_REC	M	M	PR	TRG		LSA	140	60	00000000				5.0	1.3	3.0	4.0	320-26263-1	320-154459		
N6247016D9000	JM01		MERIDIAN_NAS	LCS 320-153501/2-A	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	BS	W	4	03/06/2017 16:19	03/06/2017			20170306	16:19:00	20170310	22:37:00	LCS 320-153501/2-A	1	1			13C4 PFOA	13C4 PFOA	148	148	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26263-1	320-154459		
N6247016D9000	JM01		MERIDIAN_NAS	LCS 320-153501/2-A	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	BS	W	4	03/06/2017 16:19	03/06/2017			20170306	16:19:00	20170310	22:37:00	LCS 320-153501/2-A	1	1			13C4 PFOS	13C4 PFOS	132	132	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26263-1	320-154459		
N6247016D9000	JM01		MERIDIAN_NAS	LCS 320-153501/2-A	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	BS	W	4	03/06/2017 16:19	03/06/2017			20170306	16:19:00	20170310	22:37:00	LCS 320-153501/2-A	1	1			Perfluorobutanesulfonic acid (PFBS)	375-73-5	113	113	PCT_REC			PR	TRG		LSA	150	50	00000000				5.0	0.92	2.0	2.5	320-26263-1	320-154459		
N6247016D9000	JM01		MERIDIAN_NAS	LCS 320-153501/2-A	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	BS	W	4	03/06/2017 16:19	03/06/2017			20170306	16:19:00	20170310	22:37:00	LCS 320-153501/2-A	1	1			18O2 PFHXS	18O2 PFHXS	137	137	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26263-1	320-154459		
N6247016D9000	JM01		MERIDIAN_NAS	LCSD 320-153501/3-A	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	BSD	W	4	03/06/2017 16:19	03/06/2017			20170306	16:19:00	20170310	22:45:00	LCSD 320-153501/3-A	1	1			Perfluorooctanoic acid (PFOA)	335-67-1	99	99	PCT_REC			PR	TRG		LSP	140	60	00000000				5.0	0.75	2.0	2.5	320-26263-1	320-154459		
N6247016D9000	JM01		MERIDIAN_NAS	LCSD 320-153501/3-A	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	BSD	W	4	03/06/2017 16:19	03/06/2017			20170306	16:19:00	20170310	22:45:00	LCSD 320-153501/3-A	1	1			Perfluorooctane Sulfonate (PFOS)	1763-23-1	106	106	PCT_REC	M	M	PR	TRG		LSP	140	60	00000000				5.0	1.3	3.0	4.0	320-26263-1	320-154459		
N6247016D9000	JM01		MERIDIAN_NAS	LCSD 320-153501/3-A	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	BSD	W	4	03/06/2017 16:19	03/06/2017			20170306	16:19:00	20170310	22:45:00	LCSD 320-153501/3-A	1	1			13C4 PFOA	13C4 PFOA	140	140	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26263-1	320-154459		
N6247016D9000	JM01		MERIDIAN_NAS	LCSD 320-153501/3-A	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	BSD	W	4	03/06/2017 16:19	03/06/2017			20170306	16:19:00	20170310	22:45:00	LCSD 320-153501/3-A	1	1			13C4 PFOS	13C4 PFOS	123	123	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26263-1	320-154459		
N6247016D9000	JM01		MERIDIAN_NAS	LCSD 320-153501/3-A	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	BSD	W	4	03/06/2017 16:19	03/06/2017			20170306	16:19:00	20170310	22:45:00	LCSD 320-153501/3-A	1	1			Perfluorobutanesulfonic acid (PFBS)	375-73-5	118	118	PCT_REC			PR	TRG		LSP	150	50	00000000				5.0	0.92	2.0	2.5	320-26263-1	320-154459		
N6247016D9000	JM01		MERIDIAN_NAS	LCSD 320-153501/3-A	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	BSD	W	4	03/06/2017 16:19	03/06/2017			20170306	16:19:00	20170310	22:45:00	LCSD 320-153501/3-A	1	1			18O2 PFHXS	18O2 PFHXS	128	128	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26263-1	320-154459		
N6247016D9000	JM01		MERIDIAN_NAS	MB 320-153501/1-A	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	LB1	W	4	03/06/2017 16:19	03/06/2017			20170306	16:19:00	20170310	22:30:00	MB 320-153501/1-A	1	1			Perfluorooctanoic acid (PFOA)	335-67-1	0.002	0.002	UG_L	UM	UM	PR	TRG				00000000				5.0	8E-04	0.002	0.0025	320-26263-1	320-154459		
N6247016D9000	JM01		MERIDIAN_NAS	MB 320-153501/1-A	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	LB1	W	4	03/06/2017 16:19	03/06/2017			20170306	16:19:00	20170310	22:30:00	MB 320-153501/1-A	1	1			Perfluorooctane Sulfonate (PFOS)	1763-23-1	0.003	0.003	UG_L	UM	UM	PR	TRG				00000000				5.0	0.001	0.003	0.004	320-26263-1	320-154459		
N6247016D9000	JM01		MERIDIAN_NAS	MB 320-153501/1-A	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	LB1	W	4	03/06/2017 16:19	03/06/2017			20170306	16:19:00	20170310	22:30:00	MB 320-153501/1-A	1	1			13C4 PFOA	13C4 PFOA	130	130	PCT_REC			PR	SURR		SMSA	150	25	00000000				5.0				320-26263-1	320-154459		
N6247016D9000	JM01		MERIDIAN_NAS	MB 320-153501/1-A	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	LB1	W	4	03/06/2017 16:19	03/06/2017			20170306	16:19:00	20170310	22:30:00	MB 320-153501/1-A	1	1			13C4 PFOS	13C4 PFOS	116	116	PCT_REC			PR	SURR		SMSA	150	25	00000000				5.0				320-26263-1	320-154459		
N6247016D9000	JM01		MERIDIAN_NAS	MB 320-153501/1-A	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	LB1	W	4	03/06/2017 16:19	03/06/2017			20170306	16:19:00	20170310	22:30:00	MB 320-153501/1-A	1	1			Perfluorobutanesulfonic acid (PFBS)	375-73-5	0.002	0.002	UG_L	U	U	PR	TRG				00000000				5.0	9E-04	0.002	0.0025	320-26263-1	320-154459		
N6247016D9000	JM01		MERIDIAN_NAS	MB 320-153501/1-A	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	LB1	W	4	03/06/2017 16:19	03/06/2017			20170306	16:19:00	20170310	22:30:00	MB 320-153501/1-A	1	1			18O2 PFHXS	18O2 PFHXS	124	124	PCT_REC			PR	SURR		SMSA	150	25	00000000				5.0				320-26263-1	320-154459		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-4AMW03-0317	NONS	SVOA	8270_SIM	SVOA	TAMER	Test America	NONE	NA	SW3510C	000	REG	W	4	03/02/2017 12:25	03/03/2017			20170308	08:41:00	20170314	21:50:00	320-26273-1	1	1			1,4-Dioxane	123-91-1	0.48	0.48	UG_L	U	U	PR	TRG				00000000				5.0	0.19	0.48	0.95	320-26273-1	320-154875		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-4AMW03-0317	NONS	SVOA	8270_SIM	SVOA	TAMER	Test America	NONE	NA	SW3510C	000	REG	W	4	03/02/2017 12:25	03/03/2017			20170308	08:41:00	20170314	21:50:00	320-26273-1	1	1			Nitrobenzene-D5	4165-60-0	66	66	PCT_REC			PR	SURR		SLSA	91	42	00000000				5.0				320-26273-1	320-154875		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-4AMW03-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/02/2017 12:25	03/03/2017			20170306	16:19:00	20170310	23:22:00	320-26273-1	1	1			Perfluorooctanoic acid (PFOA)	335-67-1	0.46	0.46	UG_L	ME	ME	PR	TRG				00000000				5.0	7E-04	0.0018	0.0023	320-26273-1	320-154459		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-4AMW03-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/02/2017 12:25	03/03/2017			20170306	16:19:00	20170310	23:22:00	320-26273-1	1	1			Perfluorooctane Sulfonate (PFOS)	1763-23-1	0.093	0.093	UG_L	M	M	PR	TRG				00000000				5.0	0.001	0.0027	0.0037	320-26273-1	320-154459		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-4AMW03-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/02/2017 12:25	03/03/2017			20170306	16:19:00	20170310	23:22:00	320-26273-1	1	1			13C4 PFOA	13C4 PFOA	64	64	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26273-1	320-154459		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-4AMW03-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/02/2017 12:25	03/03/2017			20170306	16:19:00	20170310	23:22:00	320-26273-1	1	1			13C4 PFOS	13C4 PFOS	108	108	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26273-1	320-154459		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-4AMW03-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/02/2017 12:25	03/03/2017			20170306	16:19:00	20170310	23:22:00	320-26273-1	1	1			Perfluorobutanesulfonic acid (PFBS)	375-73-5	0.075	0.075	UG_L			PR	TRG				00000000				5.0	8E-04	0.0018	0.0023	320-26273-1	320-154459		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-4AMW03-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/02/2017 12:25	03/03/2017			20170306	16:19:00	20170310	23:22:00	320-26273-1	1	1			18O2 PFHXS	18O2 PFHXS	75	75	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26273-1	320-154459		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-4AMW03-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	DL1	REG	W	4	03/02/2017 12:25	03/03/2017			20170306	16:19:00	20170313	17:38:00	320-26273-1	5	2			Perfluorooctanoic acid (PFOA)	335-67-1	0.5	0.5	UG_L	DM	DM	PR	TRG				00000000				5.0	0.003	0.0092	0.011	320-26273-1	320-154808		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-4AMW03-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	DL1	REG	W	4	03/02/2017 12:25	03/03/2017			20170306	16:19:00	20170313	17:38:00	320-26273-1	5	2			Perfluorooctane Sulfonate (PFOS)	1763-23-1	0.09	0.09	UG_L	DM	DM	PR	TRG				00000000				5.0	0.006	0.014	0.018	320-26273-1	320-154808		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-4AMW03-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	DL1	REG	W	4	03/02/2017 12:25	03/03/2017			20170306	16:19:00	20170313	17:38:00	320-26273-1	5	2			13C4 PFOA	13C4 PFOA	78	78	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26273-1	320-154808		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-4AMW03-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	DL1	REG	W	4	03/02/2017 12:25	03/03/2017			20170306	16:19:00	20170313	17:38:00	320-26273-1	5	2			13C4 PFOS	13C4 PFOS	111	111	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26273-1	320-154808		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-4AMW03-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	DL1	REG	W	4	03/02/2017 12:25	03/03/2017			20170306	16:19:00	20170313	17:38:00	320-26273-1	5	2			Perfluorobutanesulfonic acid (PFBS)	375-73-5	0.064	0.064	UG_L	DM	DM	PR	TRG				00000000				5.0	0.004	0.0092	0.011	320-26273-1	320-154808		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-4AMW03-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	DL1	REG	W	4	03/02/2017 12:25	03/03/2017			20170306	16:19:00	20170313	17:38:00	320-26273-1	5	2			18O2 PFHXS	18O2 PFHXS	112	112	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26273-1	320-154808		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-MRD-0630-0317	NONS	SVOA	8270_SIM	SVOA	TAMER	Test America	NONE	NA	SW3510C	000	REG	W	4	03/02/2017 10:40	03/03/2017			20170308	08:41:00	20170314	22:13:00	320-26273-2	1	1			1,4-Dioxane	123-91-1	0.76	0.76	UG_L	JM	JM	PR	TRG				00000000				5.0	0.19	0.48	0.97	320-26273-1	320-154875		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-MRD-0630-0317	NONS	SVOA	8270_SIM	SVOA	TAMER	Test America	NONE	NA	SW3510C	000	REG	W	4	03/02/2017 10:40	03/03/2017			20170308	08:41:00	20170314	22:13:00	320-26273-2	1	1			Nitrobenzene-D5	4165-60-0	72	72	PCT_REC			PR	SURR		SLSA	91	42	00000000				5.0				320-26273-1	320-154875		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-MRD-0630-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/02/2017 10:40	03/03/2017			20170306	16:19:00	20170310	23:30:00	320-26273-2	1	1			Perfluorooctanoic acid (PFOA)	335-67-1	0.063	0.063	UG_L	M	M	PR	TRG				00000000				5.0	7E-04	0.0019	0.0024	320-26273-1	320-154459		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-MRD-0630-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/02/2017 10:40	03/03/2017			20170306	16:19:00	20170310	23:30:00	320-26273-2	1	1			Perfluorooctane Sulfonate (PFOS)	1763-23-1	0.1	0.1	UG_L	M	M	PR	TRG				00000000				5.0	0.001	0.0029	0.0039	320-26273-1	320-154459		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-MRD-0630-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/02/2017 10:40	03/03/2017			20170306	16:19:00	20170310	23:30:00	320-26273-2	1	1			13C4 PFOA	13C4 PFOA	94	94	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26273-1	320-154459		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-MRD-0630-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/02/2017 10:40	03/03/2017			20170306	16:19:00	20170310	23:30:00	320-26273-2	1	1			13C4 PFOS	13C4 PFOS	115	115	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26273-1	320-154459		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-MRD-0630-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/02/2017 10:40	03/03/2017			20170306	16:19:00	20170310	23:30:00	320-26273-2	1	1			Perfluorobutanesulfonic acid (PFBS)	375-73-5	0.23	0.23	UG_L			PR	TRG				00000000				5.0	9E-04	0.0019	0.0024	320-26273-1	320-154459		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-MRD-0630-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/02/2017 10:40	03/03/2017			20170306	16:19:00	20170310	23:30:00	320-26273-2	1	1			18O2 PFHXS	18O2 PFHXS	101	101	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26273-1	320-154459		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-4AMW01-0317	NONS	SVOA	8270_SIM	SVOA	TAMER	Test America	NONE	NA	SW3510C	000	REG	W	4	03/02/2017 13:10	03/03/2017			20170308	08:41:00	20170314	22:35:00	320-26273-3	1	1			1,4-Dioxane	123-91-1	0.48	0.48	UG_L	U	U	PR	TRG				00000000				5.0	0.19	0.48	0.96	320-26273-1	320-154875		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-4AMW01-0317	NONS	SVOA	8270_SIM	SVOA	TAMER	Test America	NONE	NA	SW3510C	000	REG	W	4	03/02/2017 13:10	03/03/2017			20170308	08:41:00	20170314	22:35:00	320-26273-3	1	1			Nitrobenzene-D5	4165-60-0	70	70	PCT_REC			PR	SURR		SLSA	91	42	00000000				5.0				320-26273-1	320-154875		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-4AMW01-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/02/2017 13:10	03/03/2017			20170306	16:19:00	20170313	17:46:00	320-26273-3	1	1			Perfluorooctanoic acid (PFOA)	335-67-1	0.017	0.017	UG_L	M	M	PR	TRG				00000000				5.0	7E-04	0.0018	0.0023	320-26273-1	320-154808		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-4AMW01-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/02/2017 13:10	03/03/2017			20170306	16:19:00	20170313	17:46:00	320-26273-3	1	1			Perfluorooctane Sulfonate (PFOS)	1763-23-1	0.0068	0.0068	UG_L	M	M	PR	TRG				00000000				5.0	0.001	0.0028	0.0037	320-26273-1	320-154808		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-4AMW01-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/02/2017 13:10	03/03/2017			20170306	16:19:00	20170313	17:46:00	320-26273-3	1	1			13C4 PFOA	13C4 PFOA	26	26	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26273-1	320-154808		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-4AMW01-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/02/2017 13:10	03/03/2017			20170306	16:19:00	20170313	17:46:00	320-26273-3	1	1			13C4 PFOS	13C4 PFOS	100	100	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26273-1	320-154808		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-4AMW01-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/02/2017 13:10	03/03/2017			20170306	16:19:00	20170313	17:46:00	320-26273-3	1	1			Perfluorobutanesulfonic acid (PFBS)	375-73-5	0.03	0.03	UG_L	M	M	PR	TRG				00000000				5.0	8E-04	0.0018	0.0023	320-26273-1	320-154808		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-4AMW01-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/02/2017 13:10	03/03/2017			20170306	16:19:00	20170313	17:46:00	320-26273-3	1	1			18O2 PFHXS	18O2 PFHXS	128	128	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26273-1	320-154808		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-4CMW01-0317	NONS	SVOA	8270_SIM	SVOA	TAMER	Test America	NONE	NA	SW3510C	000	REG	W	4	03/02/2017 15:30	03/03/2017			20170308	08:41:00	20170314	22:57:00	320-26273-4	1	1			1,4-Dioxane	123-91-1	0.48	0.48	UG_L	U	U	PR	TRG				00000000				5.0	0.19	0.48	0.95	320-26273-1	320-154875		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-4CMW01-0317	NONS	SVOA	8270_SIM	SVOA	TAMER	Test America	NONE	NA	SW3510C	000	REG	W	4	03/02/2017 15:30	03/03/2017			20170308	08:41:00	20170314	22:57:00	320-26273-4	1	1			Nitrobenzene-D5	4165-60-0	64	64	PCT_REC			PR	SURR		SLSA	91	42	00000000				5.0				320-26273-1	320-154875		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-4CMW01-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/02/2017 15:30	03/03/2017			20170306	16:19:00	20170310	23:52:00	320-26273-4	1	1			Perfluorooctanoic acid (PFOA)	335-67-1	0.17	0.17	UG_L	M	M	PR	TRG				00000000				5.0	7E-04	0.0018	0.0023	320-26273-1	320-154459		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-4CMW01-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/02/2017 15:30	03/03/2017			20170306	16:19:00	20170310	23:52:00	320-26273-4	1	1			Perfluorooctane Sulfonate (PFOS)	1763-23-1	0.044	0.044	UG_L	M	M	PR	TRG				00000000				5.0	0.001	0.0027	0.0036	320-26273-1	320-154459		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-4CMW01-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/02/2017 15:30	03/03/2017			20170306	16:19:00	20170310	23:52:00	320-26273-4	1	1			13C4 PFOA	13C4 PFOA	78	78	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26273-1	320-154459		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-4CMW01-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/02/2017 15:30	03/03/2017			20170306	16:19:00	20170310	23:52:00	320-26273-4	1	1			13C4 PFOS	13C4 PFOS	129	129	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26273-1	320-154459		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-4CMW01-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/02/2017 15:30	03/03/2017			20170306	16:19:00	20170310	23:52:00	320-26273-4	1	1			Perfluorobutanesulfonic acid (PFBS)	375-73-5	0.0035	0.0035	UG_L			PR	TRG				00000000				5.0	8E-04	0.0018	0.0023	320-26273-1	320-154459		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-4CMW01-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/02/2017 15:30	03/03/2017			20170306	16:19:00	20170310	23:52:00	320-26273-4	1	1			18O2 PFHXS	18O2 PFHXS	126	126	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26273-1	320-154459		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-4CMW03-0317	NONS	SVOA	8270_SIM	SVOA	TAMER	Test America	NONE	NA	SW3510C	000	REG	W	4	03/02/2017 15:50	03/03/2017			20170308	08:41:00	20170314	23:20:00	320-26273-5	1	1			1,4-Dioxane	123-91-1	0.49	0.49	UG_L	U	U	PR	TRG				00000000				5.0	0.20	0.49	0.98	320-26273-1	320-154875		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-4CMW03-0317	NONS	SVOA	8270_SIM	SVOA	TAMER	Test America	NONE	NA	SW3510C	000	REG	W	4	03/02/2017 15:50	03/03/2017			20170308	08:41:00	20170314	23:20:00	320-26273-5	1	1			Nitrobenzene-D5	4165-60-0	73	73	PCT_REC			PR	SURR		SLSA	91	42	00000000				5.0				320-26273-1	320-154875		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-4CMW03-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/02/2017 15:50	03/03/2017			20170306	16:19:00	20170311	00:00:00	320-26273-5	1	1			Perfluorooctanoic acid (PFOA)	335-67-1	0.044	0.044	UG_L	M	M	PR	TRG				00000000				5.0	7E-04	0.0018	0.0023	320-26273-1	320-154459		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-4CMW03-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/02/2017 15:50	03/03/2017			20170306	16:19:00	20170311	00:00:00	320-26273-5	1	1			Perfluorooctane Sulfonate (PFOS)	1763-23-1	0.0082	0.0082	UG_L	M	M	PR	TRG				00000000				5.0	0.001	0.0028	0.0037	320-26273-1	320-154459		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-4CMW03-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/02/2017 15:50	03/03/2017			20170306	16:19:00	20170311	00:00:00	320-26273-5	1	1			13C4 PFOA	13C4 PFOA	75	75	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26273-1	320-154459		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-4CMW03-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/02/2017 15:50	03/03/2017			20170306	16:19:00	20170311	00:00:00	320-26273-5	1	1			13C4 PFOS	13C4 PFOS	118	118	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26273-1	320-154459		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-4CMW03-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/02/2017 15:50	03/03/2017			20170306	16:19:00	20170311	00:00:00	320-26273-5	1	1			Perfluorobutanesulfonic acid (PFBS)	375-73-5	0.0026	0.0026	UG_L			PR	TRG				00000000				5.0	9E-04	0.0018	0.0023	320-26273-1	320-154459		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-4CMW03-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/02/2017 15:50	03/03/2017			20170306	16:19:00	20170311	00:00:00	320-26273-5	1	1			18O2 PFHXS	18O2 PFHXS	116	116	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26273-1	320-154459		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-FD05-0317	NONS	SVOA	8270_SIM	SVOA	TAMER	Test America	NONE	NA	SW3510C	000	REG	W	4	03/02/2017 00:00	03/03/2017			20170308	08:41:00	20170314	23:42:00	320-26273-6	1	1			1,4-Dioxane	123-91-1	0.48	0.48	UG_L	U	U	PR	TRG				00000000				5.0	0.19	0.48	0.96	320-26273-1	320-154875		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-FD05-0317	NONS	SVOA	8270_SIM	SVOA	TAMER	Test America	NONE	NA	SW3510C	000	REG	W	4	03/02/2017 00:00	03/03/2017			20170308	08:41:00	20170314	23:42:00	320-26273-6	1	1			Nitrobenzene-D5	4165-60-0	63	63	PCT_REC			PR	SURR		SLSA	91	42	00000000				5.0				320-26273-1	320-154875		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-FD05-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/02/2017 00:00	03/03/2017			20170306	16:19:00	20170311	00:07:00	320-26273-6	1	1			Perfluorooctanoic acid (PFOA)	335-67-1	0.16	0.16	UG_L	M	M	PR	TRG				00000000				5.0	7E-04	0.0018	0.0023	320-26273-1	320-154459		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-FD05-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/02/2017 00:00	03/03/2017			20170306	16:19:00	20170311	00:07:00	320-26273-6	1	1			Perfluorooctane Sulfonate (PFOS)	1763-23-1	0.042	0.042	UG_L	M	M	PR	TRG				00000000				5.0	0.001	0.0027	0.0036	320-26273-1	320-154459		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-FD05-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/02/2017 00:00	03/03/2017			20170306	16:19:00	20170311	00:07:00	320-26273-6	1	1			13C4 PFOA	13C4 PFOA	70	70	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26273-1	320-154459		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-FD05-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/02/2017 00:00	03/03/2017			20170306	16:19:00	20170311	00:07:00	320-26273-6	1	1			13C4 PFOS	13C4 PFOS	116	116	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26273-1	320-154459		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-FD05-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/02/2017 00:00	03/03/2017			20170306	16:19:00	20170311	00:07:00	320-26273-6	1	1			Perfluorobutanesulfonic acid (PFBS)	375-73-5	0.0035	0.0035	UG_L			PR	TRG				00000000				5.0	8E-04	0.0018	0.0023	320-26273-1	320-154459		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-FD05-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/02/2017 00:00	03/03/2017			20170306	16:19:00	20170311	00:07:00	320-26273-6	1	1			18O2 PFHXS	18O2 PFHXS	114	114	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26273-1	320-154459		
N6247016D9000	JM01		MERIDIAN_NAS	LCS 320-153501/2-A	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	BS	W	4	03/06/2017 16:19	03/06/2017			20170306	16:19:00	20170310	22:37:00	LCS 320-153501/2-A	1	1			Perfluorooctanoic acid (PFOA)	335-67-1	100	100	PCT_REC			PR	TRG		LSA	140	60	00000000				5.0	0.75	2.0	2.5	320-26273-1	320-154459		
N6247016D9000	JM01		MERIDIAN_NAS	LCS 320-153501/2-A	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	BS	W	4	03/06/2017 16:19	03/06/2017			20170306	16:19:00	20170310	22:37:00	LCS 320-153501/2-A	1	1			Perfluorooctane Sulfonate (PFOS)	1763-23-1	102	102	PCT_REC	M	M	PR	TRG		LSA	140	60	00000000				5.0	1.3	3.0	4.0	320-26273-1	320-154459		
N6247016D9000	JM01		MERIDIAN_NAS	LCS 320-153501/2-A	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	BS	W	4	03/06/2017 16:19	03/06/2017			20170306	16:19:00	20170310	22:37:00	LCS 320-153501/2-A	1	1			13C4 PFOA	13C4 PFOA	148	148	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26273-1	320-154459		
N6247016D9000	JM01		MERIDIAN_NAS	LCS 320-153501/2-A	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	BS	W	4	03/06/2017 16:19	03/06/2017			20170306	16:19:00	20170310	22:37:00	LCS 320-153501/2-A	1	1			13C4 PFOS	13C4 PFOS	132	132	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26273-1	320-154459		
N6247016D9000	JM01		MERIDIAN_NAS	LCS 320-153501/2-A	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	BS	W	4	03/06/2017 16:19	03/06/2017			20170306	16:19:00	20170310	22:37:00	LCS 320-153501/2-A	1	1			Perfluorobutanesulfonic acid (PFBS)	375-73-5	113	113	PCT_REC			PR	TRG		LSA	150	50	00000000				5.0	0.92	2.0	2.5	320-26273-1	320-154459		
N6247016D9000	JM01		MERIDIAN_NAS	LCS 320-153501/2-A	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	BS	W	4	03/06/2017 16:19	03/06/2017			20170306	16:19:00	20170310	22:37:00	LCS 320-153501/2-A	1	1			18O2 PFHXS	18O2 PFHXS	137	137	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26273-1	320-154459		
N6247016D9000	JM01		MERIDIAN_NAS	LCS 320-153806/2-A	NONS	SVOA	8270_SIM	SVOA	TAMER	Test America	NONE	NA	SW3510C	000	BS	W	4	03/08/2017 08:41	03/08/2017			20170308	08:41:00	20170314	21:06:00	LCS 320-153806/2-A	1	1			1,4-Dioxane	123-91-1	32	32	PCT_REC	M	M	PR	TRG		LSA	52	12	00000000				5.0	0.20	0.50	1.0	320-26273-1	320-154875		
N6247016D9000	JM01		MERIDIAN_NAS	LCS 320-153806/2-A	NONS	SVOA	8270_SIM	SVOA	TAMER	Test America	NONE	NA	SW3510C	000	BS	W	4	03/08/2017 08:41	03/08/2017			20170308	08:41:00	20170314	21:06:00	LCS 320-153806/2-A	1	1			Nitrobenzene-D5	4165-60-0	75	75	PCT_REC			PR	SURR		SLSA	91	42	00000000				5.0				320-26273-1	320-154875		
N6247016D9000	JM01		MERIDIAN_NAS	LCSD 320-153501/3-A	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	BSD	W	4	03/06/2017 16:19	03/06/2017			20170306	16:19:00	20170310	22:45:00	LCSD 320-153501/3-A	1	1			Perfluorooctanoic acid (PFOA)	335-67-1	99	99	PCT_REC			PR	TRG		LSP	140	60	00000000				5.0	0.75	2.0	2.5	320-26273-1	320-154459		
N6247016D9000	JM01		MERIDIAN_NAS	LCSD 320-153501/3-A	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	BSD	W	4	03/06/2017 16:19	03/06/2017			20170306	16:19:00	20170310	22:45:00	LCSD 320-153501/3-A	1	1			Perfluorooctane Sulfonate (PFOS)	1763-23-1	106	106	PCT_REC	M	M	PR	TRG		LSP	140	60	00000000				5.0	1.3	3.0	4.0	320-26273-1	320-154459		
N6247016D9000	JM01		MERIDIAN_NAS	LCSD 320-153501/3-A	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	BSD	W	4	03/06/2017 16:19	03/06/2017			20170306	16:19:00	20170310	22:45:00	LCSD 320-153501/3-A	1	1			13C4 PFOA	13C4 PFOA	140	140	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26273-1	320-154459		
N6247016D9000	JM01		MERIDIAN_NAS	LCSD 320-153501/3-A	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	BSD	W	4	03/06/2017 16:19	03/06/2017			20170306	16:19:00	20170310	22:45:00	LCSD 320-153501/3-A	1	1			13C4 PFOS	13C4 PFOS	123	123	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26273-1	320-154459		
N6247016D9000	JM01		MERIDIAN_NAS	LCSD 320-153501/3-A	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	BSD	W	4	03/06/2017 16:19	03/06/2017			20170306	16:19:00	20170310	22:45:00	LCSD 320-153501/3-A	1	1			Perfluorobutanesulfonic acid (PFBS)	375-73-5	118	118	PCT_REC			PR	TRG		LSP	150	50	00000000				5.0	0.92	2.0	2.5	320-26273-1	320-154459		
N6247016D9000	JM01		MERIDIAN_NAS	LCSD 320-153501/3-A	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	BSD	W	4	03/06/2017 16:19	03/06/2017			20170306	16:19:00	20170310	22:45:00	LCSD 320-153501/3-A	1	1			18O2 PFHXS	18O2 PFHXS	128	128	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26273-1	320-154459		
N6247016D9000	JM01		MERIDIAN_NAS	LCSD 320-153806/3-A	NONS	SVOA	8270_SIM	SVOA	TAMER	Test America	NONE	NA	SW3510C	000	BSD	W	4	03/08/2017 08:41	03/08/2017			20170308	08:41:00	20170314	21:28:00	LCSD 320-153806/3-A	1	1			1,4-Dioxane	123-91-1	31	31	PCT_REC	M	M	PR	TRG		LSP	52	12	00000000				5.0	0.20	0.50	1.0	320-26273-1	320-154875		
N6247016D9000	JM01		MERIDIAN_NAS	LCSD 320-153806/3-A	NONS	SVOA	8270_SIM	SVOA	TAMER	Test America	NONE	NA	SW3510C	000	BSD	W	4	03/08/2017 08:41	03/08/2017			20170308	08:41:00	20170314	21:28:00	LCSD 320-153806/3-A	1	1			Nitrobenzene-D5	4165-60-0	71	71	PCT_REC			PR	SURR		SLSA	91	42	00000000				5.0				320-26273-1	320-154875		
N6247016D9000	JM01		MERIDIAN_NAS	MB 320-153501/1-A	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	LB1	W	4	03/06/2017 16:19	03/06/2017			20170306	16:19:00	20170310	22:30:00	MB 320-153501/1-A	1	1			Perfluorooctanoic acid (PFOA)	335-67-1	0.002	0.002	UG_L	UM	UM	PR	TRG				00000000				5.0	8E-04	0.002	0.0025	320-26273-1	320-154459		
N6247016D9000	JM01		MERIDIAN_NAS	MB 320-153501/1-A	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	LB1	W	4	03/06/2017 16:19	03/06/2017			20170306	16:19:00	20170310	22:30:00	MB 320-153501/1-A	1	1			Perfluorooctane Sulfonate (PFOS)	1763-23-1	0.003	0.003	UG_L	UM	UM	PR	TRG				00000000				5.0	0.001	0.003	0.004	320-26273-1	320-154459		
N6247016D9000	JM01		MERIDIAN_NAS	MB 320-153501/1-A	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	LB1	W	4	03/06/2017 16:19	03/06/2017			20170306	16:19:00	20170310	22:30:00	MB 320-153501/1-A	1	1			13C4 PFOA	13C4 PFOA	130	130	PCT_REC			PR	SURR		SMSA	150	25	00000000				5.0				320-26273-1	320-154459		
N6247016D9000	JM01		MERIDIAN_NAS	MB 320-153501/1-A	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	LB1	W	4	03/06/2017 16:19	03/06/2017			20170306	16:19:00	20170310	22:30:00	MB 320-153501/1-A	1	1			13C4 PFOS	13C4 PFOS	116	116	PCT_REC			PR	SURR		SMSA	150	25	00000000				5.0				320-26273-1	320-154459		
N6247016D9000	JM01		MERIDIAN_NAS	MB 320-153501/1-A	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	LB1	W	4	03/06/2017 16:19	03/06/2017			20170306	16:19:00	20170310	22:30:00	MB 320-153501/1-A	1	1			Perfluorobutanesulfonic acid (PFBS)	375-73-5	0.002	0.002	UG_L	U	U	PR	TRG				00000000				5.0	9E-04	0.002	0.0025	320-26273-1	320-154459		
N6247016D9000	JM01		MERIDIAN_NAS	MB 320-153501/1-A	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	LB1	W	4	03/06/2017 16:19	03/06/2017			20170306	16:19:00	20170310	22:30:00	MB 320-153501/1-A	1	1			18O2 PFHXS	18O2 PFHXS	124	124	PCT_REC			PR	SURR		SMSA	150	25	00000000				5.0				320-26273-1	320-154459		
N6247016D9000	JM01		MERIDIAN_NAS	MB 320-153806/1-A	NONS	SVOA	8270_SIM	SVOA	TAMER	Test America	NONE	NA	SW3510C	000	LB1	W	4	03/08/2017 08:41	03/08/2017			20170308	08:41:00	20170314	20:43:00	MB 320-153806/1-A	1	1			1,4-Dioxane	123-91-1	0.50	0.50	UG_L	U	U	PR	TRG				00000000				5.0	0.20	0.50	1.0	320-26273-1	320-154875		
N6247016D9000	JM01		MERIDIAN_NAS	MB 320-153806/1-A	NONS	SVOA	8270_SIM	SVOA	TAMER	Test America	NONE	NA	SW3510C	000	LB1	W	4	03/08/2017 08:41	03/08/2017			20170308	08:41:00	20170314	20:43:00	MB 320-153806/1-A	1	1			Nitrobenzene-D5	4165-60-0	69	69	PCT_REC			PR	SURR		SLSA	91	42	00000000				5.0				320-26273-1	320-154875		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-4DMW01-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/03/2017 10:00	03/04/2017			20170309	10:15:00	20170312	03:43:00	320-26324-1	1	1			Perfluorooctanoic acid (PFOA)	335-67-1	0.22	0.22	UG_L	M	M	PR	TRG				00000000				5.0	7E-04	0.002	0.0025	320-26324-1	320-154520		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-4DMW01-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/03/2017 10:00	03/04/2017			20170309	10:15:00	20170312	03:43:00	320-26324-1	1	1			Perfluorooctane Sulfonate (PFOS)	1763-23-1	0.21	0.21	UG_L	M	M	PR	TRG				00000000				5.0	0.001	0.0029	0.0039	320-26324-1	320-154520		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-4DMW01-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/03/2017 10:00	03/04/2017			20170309	10:15:00	20170312	03:43:00	320-26324-1	1	1			13C4 PFOA	13C4 PFOA	67	67	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26324-1	320-154520		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-4DMW01-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/03/2017 10:00	03/04/2017			20170309	10:15:00	20170312	03:43:00	320-26324-1	1	1			13C4 PFOS	13C4 PFOS	90	90	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26324-1	320-154520		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-4DMW01-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/03/2017 10:00	03/04/2017			20170309	10:15:00	20170312	03:43:00	320-26324-1	1	1			Perfluorobutanesulfonic acid (PFBS)	375-73-5	0.011	0.011	UG_L			PR	TRG				00000000				5.0	9E-04	0.002	0.0025	320-26324-1	320-154520		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-4DMW01-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/03/2017 10:00	03/04/2017			20170309	10:15:00	20170312	03:43:00	320-26324-1	1	1			18O2 PFHXS	18O2 PFHXS	91	91	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26324-1	320-154520		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-4DMW03-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/03/2017 10:50	03/04/2017			20170309	10:15:00	20170312	03:50:00	320-26324-2	1	1			Perfluorooctanoic acid (PFOA)	335-67-1	0.36	0.36	UG_L	M	M	PR	TRG				00000000				5.0	7E-04	0.0019	0.0024	320-26324-1	320-154520		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-4DMW03-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/03/2017 10:50	03/04/2017			20170309	10:15:00	20170312	03:50:00	320-26324-2	1	1			Perfluorooctane Sulfonate (PFOS)	1763-23-1	1.1	1.1	UG_L	ME	ME	PR	TRG				00000000				5.0	0.001	0.0029	0.0038	320-26324-1	320-154520		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-4DMW03-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/03/2017 10:50	03/04/2017			20170309	10:15:00	20170312	03:50:00	320-26324-2	1	1			13C4 PFOA	13C4 PFOA	69	69	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26324-1	320-154520		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-4DMW03-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/03/2017 10:50	03/04/2017			20170309	10:15:00	20170312	03:50:00	320-26324-2	1	1			13C4 PFOS	13C4 PFOS	76	76	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26324-1	320-154520		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-4DMW03-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/03/2017 10:50	03/04/2017			20170309	10:15:00	20170312	03:50:00	320-26324-2	1	1			Perfluorobutanesulfonic acid (PFBS)	375-73-5	0.015	0.015	UG_L	M	M	PR	TRG				00000000				5.0	9E-04	0.0019	0.0024	320-26324-1	320-154520		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-4DMW03-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/03/2017 10:50	03/04/2017			20170309	10:15:00	20170312	03:50:00	320-26324-2	1	1			18O2 PFHXS	18O2 PFHXS	83	83	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26324-1	320-154520		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-4DMW03-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	DL1	REG	W	4	03/03/2017 10:50	03/04/2017			20170309	10:15:00	20170315	20:16:00	320-26324-2	10	2			Perfluorooctanoic acid (PFOA)	335-67-1	0.39	0.39	UG_L	DM	DM	PR	TRG				00000000				5.0	0.007	0.019	0.024	320-26324-1	320-155237		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-4DMW03-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	DL1	REG	W	4	03/03/2017 10:50	03/04/2017			20170309	10:15:00	20170315	20:16:00	320-26324-2	10	2			Perfluorooctane Sulfonate (PFOS)	1763-23-1	1.1	1.1	UG_L	D	D	PR	TRG				00000000				5.0	0.012	0.029	0.038	320-26324-1	320-155237		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-4DMW03-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	DL1	REG	W	4	03/03/2017 10:50	03/04/2017			20170309	10:15:00	20170315	20:16:00	320-26324-2	10	2			13C4 PFOA	13C4 PFOA	93	93	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26324-1	320-155237		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-4DMW03-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	DL1	REG	W	4	03/03/2017 10:50	03/04/2017			20170309	10:15:00	20170315	20:16:00	320-26324-2	10	2			13C4 PFOS	13C4 PFOS	100	100	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26324-1	320-155237		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-4DMW03-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	DL1	REG	W	4	03/03/2017 10:50	03/04/2017			20170309	10:15:00	20170315	20:16:00	320-26324-2	10	2			Perfluorobutanesulfonic acid (PFBS)	375-73-5	0.016	0.016	UG_L	JDM	JDM	PR	TRG				00000000				5.0	0.009	0.019	0.024	320-26324-1	320-155237		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-4DMW03-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	DL1	REG	W	4	03/03/2017 10:50	03/04/2017			20170309	10:15:00	20170315	20:16:00	320-26324-2	10	2			18O2 PFHXS	18O2 PFHXS	113	113	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26324-1	320-155237		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-4BMW02-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/03/2017 13:05	03/04/2017			20170309	10:15:00	20170312	03:58:00	320-26324-3	1	1			Perfluorooctanoic acid (PFOA)	335-67-1	0.0019	0.0019	UG_L	UM	UM	PR	TRG				00000000				5.0	7E-04	0.0019	0.0024	320-26324-1	320-154520		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-4BMW02-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/03/2017 13:05	03/04/2017			20170309	10:15:00	20170312	03:58:00	320-26324-3	1	1			Perfluorooctane Sulfonate (PFOS)	1763-23-1	0.0028	0.0028	UG_L	UM	UM	PR	TRG				00000000				5.0	0.001	0.0028	0.0038	320-26324-1	320-154520		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-4BMW02-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/03/2017 13:05	03/04/2017			20170309	10:15:00	20170312	03:58:00	320-26324-3	1	1			13C4 PFOA	13C4 PFOA	38	38	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26324-1	320-154520		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-4BMW02-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/03/2017 13:05	03/04/2017			20170309	10:15:00	20170312	03:58:00	320-26324-3	1	1			13C4 PFOS	13C4 PFOS	93	93	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26324-1	320-154520		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-4BMW02-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/03/2017 13:05	03/04/2017			20170309	10:15:00	20170312	03:58:00	320-26324-3	1	1			Perfluorobutanesulfonic acid (PFBS)	375-73-5	0.0019	0.0019	UG_L	U	U	PR	TRG				00000000				5.0	9E-04	0.0019	0.0024	320-26324-1	320-154520		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-4BMW02-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/03/2017 13:05	03/04/2017			20170309	10:15:00	20170312	03:58:00	320-26324-3	1	1			18O2 PFHXS	18O2 PFHXS	102	102	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26324-1	320-154520		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-4BMW02-0317-MS	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	MS	W	4	03/03/2017 13:05	03/04/2017			20170309	10:15:00	20170312	04:05:00	320-26324-3	1	1			Perfluorooctanoic acid (PFOA)	335-67-1	109	109	PCT_REC			PR	TRG		MSA	140	60	00000000				5.0	0.70	1.9	2.3	320-26324-1	320-154520		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-4BMW02-0317-MS	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	MS	W	4	03/03/2017 13:05	03/04/2017			20170309	10:15:00	20170312	04:05:00	320-26324-3	1	1			Perfluorooctane Sulfonate (PFOS)	1763-23-1	116	116	PCT_REC	M	M	PR	TRG		MSA	140	60	00000000				5.0	1.2	2.8	3.7	320-26324-1	320-154520		

Contract_ID	DO_CTO_Number	Phase	Installation_ID	Sample_Name	CH2M_Code	Analysis_Group	Analytical_Method	PRC_Code	Lab_Code	Lab_Name	Leachate_Method	Sample_Basis	Extraction_Method	Result_Type	Lab_QC_Type	Sample_Medium	QC_Level	DateTime_Collected	Date_Received	Leachate_Date	Leachate_Time	Extraction_Date	Extraction_Time	Analysis_Date	Analysis_Time	Lab_Sample_ID	Dilution	Run_Number	Percent_Moisture	Percent_Lipid	Chem_Name	Analyte_ID	Analyte_Value	Original_Analyte_Value	Result_Units	Lab_Qualifier	Validator_Qualifier	GC_Column_Type	Analysis_Result_Type	Result_Narrative	QC_Control_Limit_Code	QC_Accuracy_Upper	QC_Accuracy_Lower	Control_Limit_Date	QC_Narrative	MDL	Detection_Limit	QSM_Version	DL	LOD	LOQ	SDG	Analysis_Batch	Validator_Name	Val_Date
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-4BMW02-0317-MS	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	MS	W	4	03/03/2017 13:05	03/04/2017			20170309	10:15:00	20170312	04:05:00	320-26324-3	1	1			13C4 PFOA	13C4 PFOA	40	40	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26324-1	320-154520		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-4BMW02-0317-MS	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	MS	W	4	03/03/2017 13:05	03/04/2017			20170309	10:15:00	20170312	04:05:00	320-26324-3	1	1			13C4 PFOS	13C4 PFOS	91	91	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26324-1	320-154520		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-4BMW02-0317-MS	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	MS	W	4	03/03/2017 13:05	03/04/2017			20170309	10:15:00	20170312	04:05:00	320-26324-3	1	1			Perfluorobutanesulfonic acid (PFBS)	375-73-5	117	117	PCT_REC			PR	TRG		MSA	150	50	00000000				5.0	0.86	1.9	2.3	320-26324-1	320-154520		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-4BMW02-0317-MS	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	MS	W	4	03/03/2017 13:05	03/04/2017			20170309	10:15:00	20170312	04:05:00	320-26324-3	1	1			18O2 PFHXS	18O2 PFHXS	100	100	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26324-1	320-154520		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-4BMW02-0317-SD	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	MSD	W	4	03/03/2017 13:05	03/04/2017			20170309	10:15:00	20170312	04:13:00	320-26324-3	1	1			Perfluorooctanoic acid (PFOA)	335-67-1	109	109	PCT_REC			PR	TRG		MSP	140	60	00000000				5.0	0.70	1.9	2.3	320-26324-1	320-154520		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-4BMW02-0317-SD	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	MSD	W	4	03/03/2017 13:05	03/04/2017			20170309	10:15:00	20170312	04:13:00	320-26324-3	1	1			Perfluorooctane Sulfonate (PFOS)	1763-23-1	115	115	PCT_REC	M	M	PR	TRG		MSP	140	60	00000000				5.0	1.2	2.8	3.7	320-26324-1	320-154520		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-4BMW02-0317-SD	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	MSD	W	4	03/03/2017 13:05	03/04/2017			20170309	10:15:00	20170312	04:13:00	320-26324-3	1	1			13C4 PFOA	13C4 PFOA	49	49	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26324-1	320-154520		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-4BMW02-0317-SD	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	MSD	W	4	03/03/2017 13:05	03/04/2017			20170309	10:15:00	20170312	04:13:00	320-26324-3	1	1			13C4 PFOS	13C4 PFOS	90	90	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26324-1	320-154520		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-4BMW02-0317-SD	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	MSD	W	4	03/03/2017 13:05	03/04/2017			20170309	10:15:00	20170312	04:13:00	320-26324-3	1	1			Perfluorobutanesulfonic acid (PFBS)	375-73-5	125	125	PCT_REC			PR	TRG		MSP	150	50	00000000				5.0	0.85	1.9	2.3	320-26324-1	320-154520		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-4BMW02-0317-SD	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	MSD	W	4	03/03/2017 13:05	03/04/2017			20170309	10:15:00	20170312	04:13:00	320-26324-3	1	1			18O2 PFHXS	18O2 PFHXS	96	96	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26324-1	320-154520		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-4BMW03-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/03/2017 15:15	03/04/2017			20170309	10:15:00	20170312	04:20:00	320-26324-4	1	1			Perfluorooctanoic acid (PFOA)	335-67-1	0.0019	0.0019	UG_L	U	U	PR	TRG					00000000				5.0	7E-04	0.0019	0.0023	320-26324-1	320-154520		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-4BMW03-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/03/2017 15:15	03/04/2017			20170309	10:15:00	20170312	04:20:00	320-26324-4	1	1			Perfluorooctane Sulfonate (PFOS)	1763-23-1	0.0028	0.0028	UG_L	U	U	PR	TRG					00000000				5.0	0.001	0.0028	0.0037	320-26324-1	320-154520		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-4BMW03-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/03/2017 15:15	03/04/2017			20170309	10:15:00	20170312	04:20:00	320-26324-4	1	1			13C4 PFOA	13C4 PFOA	37	37	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26324-1	320-154520		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-4BMW03-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/03/2017 15:15	03/04/2017			20170309	10:15:00	20170312	04:20:00	320-26324-4	1	1			13C4 PFOS	13C4 PFOS	89	89	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26324-1	320-154520		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-4BMW03-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/03/2017 15:15	03/04/2017			20170309	10:15:00	20170312	04:20:00	320-26324-4	1	1			Perfluorobutanesulfonic acid (PFBS)	375-73-5	0.0043	0.0043	UG_L			PR	TRG					00000000				5.0	9E-04	0.0019	0.0023	320-26324-1	320-154520		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-4BMW03-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/03/2017 15:15	03/04/2017			20170309	10:15:00	20170312	04:20:00	320-26324-4	1	1			18O2 PFHXS	18O2 PFHXS	97	97	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26324-1	320-154520		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-EB03-GW-0317	NONS	SVOA	8270_SIM	SVOA	TAMER	Test America	NONE	NA	SW3510C	000	REG	W	4	03/03/2017 14:00	03/04/2017			20170308	08:41:00	20170315	00:04:00	320-26324-5	1	1			1,4-Dioxane	123-91-1	0.57	0.57	UG_L	U	U	PR	TRG					00000000				5.0	0.23	0.57	1.1	320-26324-1	320-154875		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-EB03-GW-0317	NONS	SVOA	8270_SIM	SVOA	TAMER	Test America	NONE	NA	SW3510C	000	REG	W	4	03/03/2017 14:00	03/04/2017			20170308	08:41:00	20170315	00:04:00	320-26324-5	1	1			Nitrobenzene-D5	4165-60-0	76	76	PCT_REC			PR	SURR		SLSA	91	42	00000000				5.0				320-26324-1	320-154875		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-EB03-GW-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/03/2017 14:00	03/04/2017			20170309	10:15:00	20170312	04:28:00	320-26324-5	1	1			Perfluorooctanoic acid (PFOA)	335-67-1	0.0019	0.0019	UG_L	U	U	PR	TRG					00000000				5.0	7E-04	0.0019	0.0024	320-26324-1	320-154520		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-EB03-GW-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/03/2017 14:00	03/04/2017			20170309	10:15:00	20170312	04:28:00	320-26324-5	1	1			Perfluorooctane Sulfonate (PFOS)	1763-23-1	0.0028	0.0028	UG_L	U	U	PR	TRG					00000000				5.0	0.001	0.0028	0.0038	320-26324-1	320-154520		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-EB03-GW-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/03/2017 14:00	03/04/2017			20170309	10:15:00	20170312	04:28:00	320-26324-5	1	1			13C4 PFOA	13C4 PFOA	106	106	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26324-1	320-154520		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-EB03-GW-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/03/2017 14:00	03/04/2017			20170309	10:15:00	20170312	04:28:00	320-26324-5	1	1			13C4 PFOS	13C4 PFOS	90	90	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26324-1	320-154520		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-EB03-GW-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/03/2017 14:00	03/04/2017			20170309	10:15:00	20170312	04:28:00	320-26324-5	1	1			Perfluorobutanesulfonic acid (PFBS)	375-73-5	0.0019	0.0019	UG_L	U	U	PR	TRG					00000000				5.0	9E-04	0.0019	0.0024	320-26324-1	320-154520		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-EB03-GW-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/03/2017 14:00	03/04/2017			20170309	10:15:00	20170312	04:28:00	320-26324-5	1	1			18O2 PFHXS	18O2 PFHXS	99	99	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26324-1	320-154520		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-EB04-GW-0317	NONS	SVOA	8270_SIM	SVOA	TAMER	Test America	NONE	NA	SW3510C	000	REG	W	4	03/03/2017 15:35	03/04/2017			20170308	08:41:00	20170315	00:27:00	320-26324-6	1	1			1,4-Dioxane	123-91-1	0.54	0.54	UG_L	U	U	PR	TRG					00000000				5.0	0.21	0.54	1.1	320-26324-1	320-154875		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-EB04-GW-0317	NONS	SVOA	8270_SIM	SVOA	TAMER	Test America	NONE	NA	SW3510C	000	REG	W	4	03/03/2017 15:35	03/04/2017			20170308	08:41:00	20170315	00:27:00	320-26324-6	1	1			Nitrobenzene-D5	4165-60-0	74	74	PCT_REC			PR	SURR		SLSA	91	42	00000000				5.0				320-26324-1	320-154875		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-EB04-GW-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/03/2017 15:35	03/04/2017			20170309	10:15:00	20170312	04:35:00	320-26324-6	1	1			Perfluorooctanoic acid (PFOA)	335-67-1	0.0019	0.0019	UG_L	U	U	PR	TRG					00000000				5.0	7E-04	0.0019	0.0024	320-26324-1	320-154520		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-EB04-GW-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/03/2017 15:35	03/04/2017			20170309	10:15:00	20170312	04:35:00	320-26324-6	1	1			Perfluorooctane Sulfonate (PFOS)	1763-23-1	0.0029	0.0029	UG_L	U	U	PR	TRG					00000000				5.0	0.001	0.0029	0.0038	320-26324-1	320-154520		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-EB04-GW-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/03/2017 15:35	03/04/2017			20170309	10:15:00	20170312	04:35:00	320-26324-6	1	1			13C4 PFOA	13C4 PFOA	101	101	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26324-1	320-154520		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-EB04-GW-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/03/2017 15:35	03/04/2017			20170309	10:15:00	20170312	04:35:00	320-26324-6	1	1			13C4 PFOS	13C4 PFOS	90	90	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26324-1	320-154520		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-EB04-GW-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/03/2017 15:35	03/04/2017			20170309	10:15:00	20170312	04:35:00	320-26324-6	1	1			Perfluorobutanesulfonic acid (PFBS)	375-73-5	0.0019	0.0019	UG_L	U	U	PR	TRG					00000000				5.0	9E-04	0.0019	0.0024	320-26324-1	320-154520		
N6247016D9000	JM01		MERIDIAN_NAS	MEAFF-EB04-GW-0317	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	REG	W	4	03/03/2017 15:35	03/04/2017			20170309	10:15:00	20170312	04:35:00	320-26324-6	1	1			18O2 PFHXS	18O2 PFHXS	95	95	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26324-1	320-154520		
N6247016D9000	JM01		MERIDIAN_NAS	LCS 320-153806/2-A	NONS	SVOA	8270_SIM	SVOA	TAMER	Test America	NONE	NA	SW3510C	000	BS	W	4	03/08/2017 08:41	03/08/2017			20170308	08:41:00	20170314	21:06:00	LCS 320-153806/2-A	1	1			1,4-Dioxane	123-91-1	32	32	PCT_REC	M	M	PR	TRG		LSA	52	12	00000000				5.0	0.20	0.50	1.0	320-26324-1	320-154875		
N6247016D9000	JM01		MERIDIAN_NAS	LCS 320-153806/2-A	NONS	SVOA	8270_SIM	SVOA	TAMER	Test America	NONE	NA	SW3510C	000	BS	W	4	03/08/2017 08:41	03/08/2017			20170308	08:41:00	20170314	21:06:00	LCS 320-153806/2-A	1	1			Nitrobenzene-D5	4165-60-0	75	75	PCT_REC			PR	SURR		SLSA	91	42	00000000				5.0				320-26324-1	320-154875		
N6247016D9000	JM01		MERIDIAN_NAS	LCS 320-154076/2-A	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	BS	W	4	03/09/2017 10:15	03/09/2017			20170309	10:15:00	20170312	03:35:00	LCS 320-154076/2-A	1	1			Perfluorooctanoic acid (PFOA)	335-67-1	113	113	PCT_REC			PR	TRG		LSA	140	60	00000000				5.0	0.75	2.0	2.5	320-26324-1	320-154520		
N6247016D9000	JM01		MERIDIAN_NAS	LCS 320-154076/2-A	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	BS	W	4	03/09/2017 10:15	03/09/2017			20170309	10:15:00	20170312	03:35:00	LCS 320-154076/2-A	1	1			Perfluorooctane Sulfonate (PFOS)	1763-23-1	113	113	PCT_REC	M	M	PR	TRG		LSA	140	60	00000000				5.0	1.3	3.0	4.0	320-26324-1	320-154520		
N6247016D9000	JM01		MERIDIAN_NAS	LCS 320-154076/2-A	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	BS	W	4	03/09/2017 10:15	03/09/2017			20170309	10:15:00	20170312	03:35:00	LCS 320-154076/2-A	1	1			13C4 PFOA	13C4 PFOA	100	100	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26324-1	320-154520		
N6247016D9000	JM01		MERIDIAN_NAS	LCS 320-154076/2-A	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	BS	W	4	03/09/2017 10:15	03/09/2017			20170309	10:15:00	20170312	03:35:00	LCS 320-154076/2-A	1	1			13C4 PFOS	13C4 PFOS	91	91	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26324-1	320-154520		
N6247016D9000	JM01		MERIDIAN_NAS	LCS 320-154076/2-A	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	BS	W	4	03/09/2017 10:15	03/09/2017			20170309	10:15:00	20170312	03:35:00	LCS 320-154076/2-A	1	1			Perfluorobutanesulfonic acid (PFBS)	375-73-5	126	126	PCT_REC			PR	TRG		LSA	150	50	00000000				5.0	0.92	2.0	2.5	320-26324-1	320-154520		
N6247016D9000	JM01		MERIDIAN_NAS	LCS 320-154076/2-A	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	BS	W	4	03/09/2017 10:15	03/09/2017			20170309	10:15:00	20170312	03:35:00	LCS 320-154076/2-A	1	1			18O2 PFHXS	18O2 PFHXS	95	95	PCT_REC			PR	SURR		SLSA	150	25	00000000				5.0				320-26324-1	320-154520		
N6247016D9000	JM01		MERIDIAN_NAS	LCSD 320-153806/3-A	NONS	SVOA	8270_SIM	SVOA	TAMER	Test America	NONE	NA	SW3510C	000	BSD	W	4	03/08/2017 08:41	03/08/2017			20170308	08:41:00	20170314	21:28:00	LCSD 320-153806/3-A	1	1			1,4-Dioxane	123-91-1	31	31	PCT_REC	M	M	PR	TRG		LSP	52	12	00000000				5.0	0.20	0.50	1.0	320-26324-1	320-154875		
N6247016D9000	JM01		MERIDIAN_NAS	LCSD 320-153806/3-A	NONS	SVOA	8270_SIM	SVOA	TAMER	Test America	NONE	NA	SW3510C	000	BSD	W	4	03/08/2017 08:41	03/08/2017			20170308	08:41:00	20170314	21:28:00	LCSD 320-153806/3-A	1	1			Nitrobenzene-D5	4165-60-0	71	71	PCT_REC			PR	SURR		SLSA	91	42	00000000				5.0				320-26324-1	320-154875		
N6247016D9000	JM01		MERIDIAN_NAS	MB 320-153806/1-A	NONS	SVOA	8270_SIM	SVOA	TAMER	Test America	NONE	NA	SW3510C	000	LB1	W	4	03/08/2017 08:41	03/08/2017			20170308	08:41:00	20170314	20:43:00	MB 320-153806/1-A	1	1			1,4-Dioxane	123-91-1	0.50	0.50	UG_L	U	U	PR	TRG					00000000				5.0	0.20	0.50	1.0	320-26324-1	320-154875		
N6247016D9000	JM01		MERIDIAN_NAS	MB 320-153806/1-A	NONS	SVOA	8270_SIM	SVOA	TAMER	Test America	NONE	NA	SW3510C	000	LB1	W	4	03/08/2017 08:41	03/08/2017			20170308	08:41:00	20170314	20:43:00	MB 320-153806/1-A	1	1			Nitrobenzene-D5	4165-60-0	69	69	PCT_REC			PR	SURR		SLSA	91	42	00000000				5.0				320-26324-1	320-154875		
N6247016D9000	JM01		MERIDIAN_NAS	MB 320-154076/1-A	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	LB1	W	4	03/09/2017 10:15	03/09/2017			20170309	10:15:00	20170312	03:28:00	MB 320-154076/1-A	1	1			Perfluorooctanoic acid (PFOA)	335-67-1	0.002	0.002	UG_L	UM	UM	PR	TRG					00000000				5.0	8E-04	0.002	0.0025	320-26324-1	320-154520		
N6247016D9000	JM01		MERIDIAN_NAS	MB 320-154076/1-A	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	LB1	W	4	03/09/2017 10:15	03/09/2017			20170309	10:15:00	20170312	03:28:00	MB 320-154076/1-A	1	1			Perfluorooctane Sulfonate (PFOS)	1763-23-1	0.003	0.003	UG_L	U	U	PR	TRG					00000000				5.0	0.001	0.003	0.004	320-26324-1	320-154520		
N6247016D9000	JM01		MERIDIAN_NAS	MB 320-154076/1-A	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	LB1	W	4	03/09/2017 10:15	03/09/2017			20170309	10:15:00	20170312	03:28:00	MB 320-154076/1-A	1	1			13C4 PFOA	13C4 PFOA	105	105	PCT_REC			PR	SURR		SMSA	150	25	00000000				5.0				320-26324-1	320-154520		
N6247016D9000	JM01		MERIDIAN_NAS	MB 320-154076/1-A	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	LB1	W	4	03/09/2017 10:15	03/09/2017			20170309	10:15:00	20170312	03:28:00	MB 320-154076/1-A	1	1			13C4 PFOS	13C4 PFOS	88	88	PCT_REC			PR	SURR		SMSA	150	25	00000000				5.0				320-26324-1	320-154520		
N6247016D9000	JM01		MERIDIAN_NAS	MB 320-154076/1-A	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	LB1	W	4	03/09/2017 10:15	03/09/2017			20170309	10:15:00	20170312	03:28:00	MB 320-154076/1-A	1	1			Perfluorobutanesulfonic acid (PFBS)	375-73-5	0.002	0.002	UG_L	U	U	PR	TRG					00000000				5.0	9E-04	0.002	0.0025	320-26324-1	320-154520		
N6247016D9000	JM01		MERIDIAN_NAS	MB 320-154076/1-A	NONS	SVOA	537_MOD	ORG	TAMER	Test America	NONE	NA	SW3535	000	LB1	W	4	03/09/2017 10:15	03/09/2017			20170309	10:15:00	20170312	03:28:00	MB 320-154076/1-A	1	1			18O2 PFHXS	18O2 PFHXS	95	95	PCT_REC			PR	SURR		SMSA	150	25	00000000				5.0				320-26324-1	320-154520		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-EB01-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	REG	W	4	03/03/2017 11:05	03/06/2017			20170314	11:49:00	20170314	11:49:00	SK1680-4	1	1			Dichlorodifluoromethane (Freon-12)	75-71-8	1.0	1.0	UG_L	U	U		TRG									4.2	0.24	1.0	2.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-EB01-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	REG	W	4	03/03/2017 11:05	03/06/2017			20170314	11:49:00	20170314	11:49:00	SK1680-4	1	1			Chloromethane	74-87-3	1.0	1.0	UG_L	U	U		TRG									4.2	0.36	1.0	2.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-EB01-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	REG	W	4	03/03/2017 11:05	03/06/2017			20170314	11:49:00	20170314	11:49:00	SK1680-4	1	1			Vinyl chloride	75-01-4	1.0	1.0	UG_L	U	U		TRG									4.2	0.25	1.0	2.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-EB01-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	REG	W	4	03/03/2017 11:05	03/06/2017			20170314	11:49:00	20170314	11:49:00	SK1680-4	1	1			Bromomethane	74-83-9	1.0	1.0	UG_L	U	U		TRG									4.2	0.49	1.0	2.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-EB01-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	REG	W	4	03/03/2017 11:05	03/06/2017			20170314	11:49:00	20170314	11:49:00	SK1680-4	1	1			Chloroethane	75-00-3	1.0	1.0	UG_L	U	U		TRG									4.2	0.55	1.0	2.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-EB01-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	REG	W	4	03/03/2017 11:05	03/06/2017			20170314	11:49:00	20170314	11:49:00	SK1680-4	1	1			Trichlorofluoromethane (Freon-11)	75-69-4	1.0	1.0	UG_L	U	U		TRG									4.2	0.24	1.0	2.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-EB01-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	REG	W	4	03/03/2017 11:05	03/06/2017			20170314	11:49:00	20170314	11:49:00	SK1680-4	1	1			1,1-Dichloroethene	75-35-4	0.50	0.50	UG_L	U	U		TRG									4.2	0.35	0.50	1.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-EB01-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	REG	W	4	03/03/2017 11:05	03/06/2017			20170314	11:49:00	20170314	11:49:00	SK1680-4	1	1			Carbon disulfide	75-15-0	0.50	0.50	UG_L	U	U		TRG									4.2	0.25	0.50	1.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-EB01-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	REG	W	4	03/03/2017 11:05	03/06/2017			20170314	11:49:00	20170314	11:49:00	SK1680-4	1	1			1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	76-13-1	0.50	0.50	UG_L	U	U		TRG									4.2	0.31	0.50	1.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-EB01-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	REG	W	4	03/03/2017 11:05	03/06/2017			20170314	11:49:00	20170314	11:49:00	SK1680-4	1	1			Methylene chloride	75-09-2	2.5	2.5	UG_L	U	U		TRG									4.2	1.1	2.5	5.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-EB01-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	REG	W	4	03/03/2017 11:05	03/06/2017			20170314	11:49:00	20170314	11:49:00	SK1680-4	1	1			Acetone	67-64-1	2.5	2.5	UG_L	U	U		TRG									4.2	2.2	2.5	5.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-EB01-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	REG	W	4	03/03/2017 11:05	03/06/2017			20170314	11:49:00	20170314	11:49:00	SK1680-4	1	1			trans-1,2-Dichloroethene	156-60-5	0.50	0.50	UG_L	U	U		TRG									4.2	0.25	0.50	1.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-EB01-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	REG	W	4	03/03/2017 11:05	03/06/2017			20170314	11:49:00	20170314	11:49:00	SK1680-4	1	1			Methyl-tert-butyl ether (MTBE)	1634-04-4	0.50	0.50	UG_L	U	U		TRG									4.2	0.36	0.50	1.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-EB01-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	REG	W	4	03/03/2017 11:05	03/06/2017			20170314	11:49:00	20170314	11:49:00	SK1680-4	1	1			1,1-Dichloroethane	75-34-3	0.50	0.50	UG_L	U	U		TRG									4.2	0.21	0.50	1.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-EB01-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	REG	W	4	03/03/2017 11:05	03/06/2017			20170314	11:49:00	20170314	11:49:00	SK1680-4	1	1			cis-1,2-Dichloroethene	156-59-2	0.50	0.50	UG_L	U	U		TRG									4.2	0.21	0.50	1.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-EB01-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	REG	W	4	03/03/2017 11:05	03/06/2017			20170314	11:49:00	20170314	11:49:00	SK1680-4	1	1			Chloroform	67-66-3	0.50	0.50	UG_L	U	U		TRG									4.2	0.32	0.50	1.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-EB01-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	REG	W	4	03/03/2017 11:05	03/06/2017			20170314	11:49:00	20170314	11:49:00	SK1680-4	1	1			1,1,1-Trichloroethane	71-55-6	0.50	0.50	UG_L	U	U		TRG									4.2	0.20	0.50	1.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-EB01-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	REG	W	4	03/03/2017 11:05	03/06/2017			20170314	11:49:00	20170314	11:49:00	SK1680-4	1	1			2-Butanone	78-93-3	2.5	2.5	UG_L	U	U		TRG									4.2	1.3	2.5	5.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-EB01-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	REG	W	4	03/03/2017 11:05	03/06/2017			20170314	11:49:00	20170314	11:49:00	SK1680-4	1	1			Cyclohexane	110-82-7	0.50	0.50	UG_L	U	U		TRG									4.2	0.31	0.50	1.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-EB01-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	REG	W	4	03/03/2017 11:05	03/06/2017			20170314	11:49:00	20170314	11:49:00	SK1680-4	1	1			Carbon tetrachloride	56-23-5	0.50	0.50	UG_L	U	U		TRG									4.2	0.22	0.50	1.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-EB01-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	REG	W	4	03/03/2017 11:05	03/06/2017			20170314	11:49:00	20170314	11:49:00	SK1680-4	1	1			Benzene	71-43-2	0.50	0.50	UG_L	U	U		TRG									4.2	0.26	0.50	1.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-EB01-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	REG	W	4	03/03/2017 11:05	03/06/2017			20170314	11:49:00	20170314	11:49:00	SK1680-4	1	1			1,2-Dichloroethane	107-06-2	0.50	0.50	UG_L	U	U		TRG									4.2	0.20	0.50	1.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-EB01-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	REG	W	4	03/03/2017 11:05	03/06/2017			20170314	11:49:00	20170314	11:49:00	SK1680-4	1	1			Trichloroethene	79-01-6	0.50	0.50	UG_L	U	U		TRG									4.2	0.28	0.50	1.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-EB01-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	REG	W	4	03/03/2017 11:05	03/06/2017			20170314	11:49:00	20170314	11:49:00	SK1680-4	1	1			1,2-Dichloropropane	78-87-5	0.50	0.50	UG_L	U	U		TRG									4.2	0.25	0.50	1.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-EB01-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	REG	W	4	03/03/2017 11:05	03/06/2017			20170314	11:49:00	20170314	11:49:00	SK1680-4	1	1			Bromodichloromethane	75-27-4	0.50	0.50	UG_L	U	U		TRG									4.2	0.33	0.50	1.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-EB01-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	REG	W	4	03/03/2017 11:05	03/06/2017			20170314	11:49:00	20170314	11:49:00	SK1680-4	1	1			cis-1,3-Dichloropropene	10061-01-5	0.50	0.50	UG_L	U	U		TRG									4.2	0.19	0.50	1.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-EB01-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	REG	W	4	03/03/2017 11:05	03/06/2017			20170314	11:49:00	20170314	11:49:00	SK1680-4	1	1			Toluene	108-88-3	0.50	0.50	UG_L	U	U		TRG									4.2	0.27	0.50	1.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-EB01-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	REG	W	4	03/03/2017 11:05	03/06/2017			20170314	11:49:00	20170314	11:49:00	SK1680-4	1	1			4-Methyl-2-pentanone	108-10-1	2.5	2.5	UG_L	U	U		TRG									4.2	1.3	2.5	5.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-EB01-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	REG	W	4	03/03/2017 11:05	03/06/2017			20170314	11:49:00	20170314	11:49:00	SK1680-4	1	1			trans-1,3-Dichloropropene	10061-02-6	0.50	0.50	UG_L	U	U		TRG									4.2	0.20	0.50	1.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-EB01-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	REG	W	4	03/03/2017 11:05	03/06/2017			20170314	11:49:00	20170314	11:49:00	SK1680-4	1	1			1,1,2-Trichloroethane	79-00-5	0.50	0.50	UG_L	U	U		TRG									4.2	0.33	0.50	1.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-EB01-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	REG	W	4	03/03/2017 11:05	03/06/2017			20170314	11:49:00	20170314	11:49:00	SK1680-4	1	1			Tetrachloroethene	127-18-4	0.50	0.50	UG_L	U	U		TRG									4.2	0.40	0.50	1.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-EB01-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	REG	W	4	03/03/2017 11:05	03/06/2017			20170314	11:49:00	20170314	11:49:00	SK1680-4	1	1			Dibromochloromethane	124-48-1	0.50	0.50	UG_L	U	U		TRG									4.2	0.30	0.50	1.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-EB01-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	REG	W	4	03/03/2017 11:05	03/06/2017			20170314	11:49:00	20170314	11:49:00	SK1680-4	1	1			1,2-Dibromoethane	106-93-4	0.50	0.50	UG_L	UL	UL		TRG									4.2	0.22	0.50	1.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-EB01-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	REG	W	4	03/03/2017 11:05	03/06/2017			20170314	11:49:00	20170314	11:49:00	SK1680-4	1	1			2-Hexanone	591-78-6	2.5	2.5	UG_L	U	U		TRG									4.2	1.7	2.5	5.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-EB01-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	REG	W	4	03/03/2017 11:05	03/06/2017			20170314	11:49:00	20170314	11:49:00	SK1680-4	1	1			Chlorobenzene	108-90-7	0.50	0.50	UG_L	U	U		TRG									4.2	0.22	0.50	1.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-EB01-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	REG	W	4	03/03/2017 11:05	03/06/2017			20170314	11:49:00	20170314	11:49:00	SK1680-4	1	1			Ethylbenzene	100-41-4	0.50	0.50	UG_L	U	U		TRG									4.2	0.21	0.50	1.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-EB01-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	REG	W	4	03/03/2017 11:05	03/06/2017			20170314	11:49:00	20170314	11:49:00	SK1680-4	1	1			Styrene	100-42-5	0.50	0.50	UG_L	U	U		TRG									4.2	0.23	0.50	1.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-EB01-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	REG	W	4	03/03/2017 11:05	03/06/2017			20170314	11:49:00	20170314	11:49:00	SK1680-4	1	1			Bromoform	75-25-2	0.50	0.50	UG_L	U	U		TRG									4.2	0.23	0.50	1.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-EB01-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	REG	W	4	03/03/2017 11:05	03/06/2017			20170314	11:49:00	20170314	11:49:00	SK1680-4	1	1			Isopropylbenzene	98-82-8	0.50	0.50	UG_L	U	U		TRG									4.2	0.23	0.50	1.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-EB01-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	REG	W	4	03/03/2017 11:05	03/06/2017			20170314	11:49:00	20170314	11:49:00	SK1680-4	1	1			1,1,2,2-Tetrachloroethane	79-34-5	0.50	0.50	UG_L	U	U		TRG									4.2	0.38	0.50	1.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-EB01-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	REG	W	4	03/03/2017 11:05	03/06/2017			20170314	11:49:00	20170314	11:49:00	SK1680-4	1	1			1,3-Dichlorobenzene	541-73-1	0.50	0.50	UG_L	U	U		TRG									4.2	0.26	0.50	1.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-EB01-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	REG	W	4	03/03/2017 11:05	03/06/2017			20170314	11:49:00	20170314	11:49:00	SK1680-4	1	1			1,4-Dichlorobenzene	106-46-7	0.50	0.50	UG_L	U	U		TRG									4.2	0.24	0.50	1.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-EB01-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	REG	W	4	03/03/2017 11:05	03/06/2017			20170314	11:49:00	20170314	11:49:00	SK1680-4	1	1			1,2-Dichlorobenzene	95-50-1	0.50	0.50	UG_L	U	U		TRG									4.2	0.15	0.50	1.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-EB01-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	REG	W	4	03/03/2017 11:05	03/06/2017			20170314	11:49:00	20170314	11:49:00	SK1680-4	1	1			1,2-Dibromo-3-chloropropane	96-12-8	1.0	1.0	UG_L	U	U		TRG									4.2	0.50	1.0	2.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-EB01-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	REG	W	4	03/03/2017 11:05	03/06/2017			20170314	11:49:00	20170314	11:49:00	SK1680-4	1	1			1,2,4-Trichlorobenzene	120-82-1	0.50	0.50	UG_L	U	U		TRG									4.2	0.37	0.50	1.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-EB01-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	REG	W	4	03/03/2017 11:05	03/06/2017			20170314	11:49:00	20170314	11:49:00	SK1680-4	1	1			Methyl acetate	79-20-9	0.75	0.75	UG_L	U	U		TRG									4.2	0.53	0.75	1.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-EB01-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	REG	W	4	03/03/2017 11:05	03/06/2017			20170314	11:49:00	20170314	11:49:00	SK1680-4	1	1			Methylcyclohexane	108-87-2	0.50	0.50	UG_L	U	U		TRG									4.2	0.30	0.50	1.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-EB01-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	REG	W	4	03/03/2017 11:05	03/06/2017			20170314	11:49:00	20170314	11:49:00	SK1680-4	1	1			Bromochloromethane	74-97-5	0.50	0.50	UG_L	U	U		TRG									4.2	0.21	0.50	1.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-EB01-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	REG	W	4	03/03/2017 11:05	03/06/2017			20170314	11:49:00	20170314	11:49:00	SK1680-4	1	1			o-Xylene	95-47-6	0.50	0.50	UG_L	U	U		TRG									4.2	0.25	0.50	1.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-EB01-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	REG	W	4	03/03/2017 11:05	03/06/2017			20170314	11:49:00	20170314	11:49:00	SK1680-4	1	1			m- and p-Xylene	m&pXYLENE	1.0	1.0	UG_L	U	U		TRG									4.2	0.59	1.0	2.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-EB01-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	REG	W	4	03/03/2017 11:05	03/06/2017			20170314	11:49:00	20170314	11:49:00	SK1680-4	1	1			1,2,3-Trichlorobenzene	87-61-6	0.50	0.50	UG_L	U	U		TRG									4.2	0.27	0.50	1.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-EB01-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	REG	W	4	03/03/2017 11:05	03/06/2017			20170314	11:49:00	20170314	11:49:00	SK1680-4	1	1			Xylene, total	1330-20-7	1.5	1.5	UG_L	UL	UL		TRG									4.2	0.25	1.5	3.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-EB01-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	REG	W	4	03/03/2017 11:05	03/06/2017			20170314	11:49:00	20170314	11:49:00	SK1680-4	1	1			4-Bromofluorobenzene	460-00-4	93.3	93.3	PCT				SURR		SLSA	120	75	20091101				4.2	0	0	0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-EB01-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	REG	W	4	03/03/2017 11:05	03/06/2017			20170314	11:49:00	20170314	11:49:00	SK1680-4	1	1			Toluene-D8	2037-26-5	102.	102.	PCT				SURR		SLSA	120	85	20091101				4.2	0	0	0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-EB01-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	REG	W	4	03/03/2017 11:05	03/06/2017			20170314	11:49:00	20170314	11:49:00	SK1680-4	1	1			1,2-Dichloroethane-d4	17060-07-0	118.	118.	PCT				SURR		SLSA	120	70	20091101				4.2	0	0	0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-EB01-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	REG	W	4	03/03/2017 11:05	03/06/2017			20170314	11:49:00	20170314	11:49:00	SK1680-4	1	1			Dibromofluoromethane	1868-53-7	110.	110.	PCT				SURR		SLSA	115	85	20091101				4.2	0	0	0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	REG	S	4	03/03/2017 00:00	03/06/2017			20170310	15:45:00	20170310	15:45:00	SK1680-2	1	1	34.445		Dichlorodifluoromethane (Freon-12)	75-71-8	7.5	7.5	UG_KG	U	U		TRG									4.2	1.4	7.5	15.	SK1680	WG201121		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	RA0	REG	S	4	03/03/2017 00:00	03/06/2017			20170317	15:17:00	20170317	15:17:00	SK1680-2RA	1	2	34.445		Dichlorodifluoromethane (Freon-12)	75-71-8	6.0	6.0	UG_KG	U	U		TRG									4.2	1.1	6.0	12.	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	RA0	REG	S	4	03/03/2017 00:00	03/06/2017			20170317	15:17:00	20170317	15:17:00	SK1680-2RA	1	2	34.445		Chloromethane	74-87-3	6.0	6.0	UG_KG	U	U		TRG									4.2	1.7	6.0	12.	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	REG	S	4	03/03/2017 00:00	03/06/2017			20170310	15:45:00	20170310	15:45:00	SK1680-2	1	1	34.445		Chloromethane	74-87-3	7.5	7.5	UG_KG	U	U		TRG									4.2	2.1	7.5	15.	SK1680	WG201121		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	REG	S	4	03/03/2017 00:00	03/06/2017			20170310	15:45:00	20170310	15:45:00	SK1680-2	1	1	34.445		Vinyl chloride	75-01-4	7.5	7.5	UG_KG	U	U		TRG									4.2	1.3	7.5	15.	SK1680	WG201121		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	RA0	REG	S	4	03/03/2017 00:00	03/06/2017			20170317	15:17:00	20170317	15:17:00	SK1680-2RA	1	2	34.445		Vinyl chloride	75-01-4	6.0	6.0	UG_KG	U	U		TRG									4.2	1.0	6.0	12.	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	REG	S	4	03/03/2017 00:00	03/06/2017			20170310	15:45:00	20170310	15:45:00	SK1680-2	1	1	34.445		Bromomethane	74-83-9	7.5	7.5	UG_KG	U	U		TRG									4.2	1.6	7.5	15.	SK1680	WG201121		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	RA0	REG	S	4	03/03/2017 00:00	03/06/2017			20170317	15:17:00	20170317	15:17:00	SK1680-2RA	1	2	34.445		Bromomethane	74-83-9	6.0	6.0	UG_KG	U	U		TRG									4.2	1.3	6.0	12.	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	RA0	REG	S	4	03/03/2017 00:00	03/06/2017			20170317	15:17:00	20170317	15:17:00	SK1680-2RA	1	2	34.445		Chloroethane	75-00-3	6.0	6.0	UG_KG	U	U		TRG									4.2	1.6	6.0	12.	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	REG	S	4	03/03/2017 00:00	03/06/2017			20170310	15:45:00	20170310	15:45:00	SK1680-2	1	1	34.445		Chloroethane	75-00-3	7.5	7.5	UG_KG	U	U		TRG									4.2	2.0	7.5	15.	SK1680	WG201121		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	REG	S	4	03/03/2017 00:00	03/06/2017			20170310	15:45:00	20170310	15:45:00	SK1680-2	1	1	34.445		Trichlorofluoromethane (Freon-11)	75-69-4	7.5	7.5	UG_KG	U	U		TRG									4.2	1.4	7.5	15.	SK1680	WG201121		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	RA0	REG	S	4	03/03/2017 00:00	03/06/2017			20170317	15:17:00	20170317	15:17:00	SK1680-2RA	1	2	34.445		Trichlorofluoromethane (Freon-11)	75-69-4	6.0	6.0	UG_KG	U	U		TRG									4.2	1.1	6.0	12.	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	REG	S	4	03/03/2017 00:00	03/06/2017			20170310	15:45:00	20170310	15:45:00	SK1680-2	1	1	34.445		1,1-Dichloroethene	75-35-4	3.8	3.8	UG_KG	U	U		TRG									4.2	1.4	3.8	7.5	SK1680	WG201121		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	RA0	REG	S	4	03/03/2017 00:00	03/06/2017			20170317	15:17:00	20170317	15:17:00	SK1680-2RA	1	2	34.445		1,1-Dichloroethene	75-35-4	3.0	3.0	UG_KG	U	U		TRG									4.2	1.1	3.0	6.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	RA0	REG	S	4	03/03/2017 00:00	03/06/2017			20170317	15:17:00	20170317	15:17:00	SK1680-2RA	1	2	34.445		Carbon disulfide	75-15-0	2.5	2.5	UG_KG	J	J		TRG									4.2	0.94	3.0	6.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	REG	S	4	03/03/2017 00:00	03/06/2017			20170310	15:45:00	20170310	15:45:00	SK1680-2	1	1	34.445		Carbon disulfide	75-15-0	2.6	2.6	UG_KG	J	J		TRG									4.2	1.2	3.8	7.5	SK1680	WG201121		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	REG	S	4	03/03/2017 00:00	03/06/2017			20170310	15:45:00	20170310	15:45:00	SK1680-2	1	1	34.445		1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	76-13-1	3.8	3.8	UG_KG	U	U		TRG									4.2	1.4	3.8	7.5	SK1680	WG201121		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	RA0	REG	S	4	03/03/2017 00:00	03/06/2017			20170317	15:17:00	20170317	15:17:00	SK1680-2RA	1	2	34.445		1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	76-13-1	3.0	3.0	UG_KG	U	U		TRG									4.2	1.1	3.0	6.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	RA0	REG	S	4	03/03/2017 00:00	03/06/2017			20170317	15:17:00	20170317	15:17:00	SK1680-2RA	1	2	34.445		Methylene chloride	75-09-2	15	15	UG_KG	U	U		TRG									4.2	9.5	15.	30.	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	REG	S	4	03/03/2017 00:00	03/06/2017			20170310	15:45:00	20170310	15:45:00	SK1680-2	1	1	34.445		Methylene chloride	75-09-2	19	19	UG_KG	U	U		TRG									4.2	12.	19.	38.	SK1680	WG201121		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	RA0	REG	S	4	03/03/2017 00:00	03/06/2017			20170317	15:17:00	20170317	15:17:00	SK1680-2RA	1	2	34.445		Acetone	67-64-1	33	33	UG_KG					TRG									4.2	6.1	15.	30.	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	REG	S	4	03/03/2017 00:00	03/06/2017			20170310	15:45:00	20170310	15:45:00	SK1680-2	1	1	34.445		Acetone	67-64-1	70	70	UG_KG					TRG									4.2	7.6	19.	38.	SK1680	WG201121		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	RA0	REG	S	4	03/03/2017 00:00	03/06/2017			20170317	15:17:00	20170317	15:17:00	SK1680-2RA	1	2	34.445		trans-1,2-Dichloroethene	156-60-5	3.0	3.0	UG_KG	U	U		TRG									4.2	0.85	3.0	6.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	REG	S	4	03/03/2017 00:00	03/06/2017			20170310	15:45:00	20170310	15:45:00	SK1680-2	1	1	34.445		trans-1,2-Dichloroethene	156-60-5	3.8	3.8	UG_KG	U	U		TRG									4.2	1.1	3.8	7.5	SK1680	WG201121		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	REG	S	4	03/03/2017 00:00	03/06/2017			20170310	15:45:00	20170310	15:45:00	SK1680-2	1	1	34.445		Methyl-tert-butyl ether (MTBE)	1634-04-4	3.8	3.8	UG_KG	U	U		TRG									4.2	1.6	3.8	7.5	SK1680	WG201121		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	RA0	REG	S	4	03/03/2017 00:00	03/06/2017			20170317	15:17:00	20170317	15:17:00	SK1680-2RA	1	2	34.445		Methyl-tert-butyl ether (MTBE)	1634-04-4	3.0	3.0	UG_KG	U	U		TRG									4.2	1.3	3.0	6.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	RA0	REG	S	4	03/03/2017 00:00	03/06/2017			20170317	15:17:00	20170317	15:17:00	SK1680-2RA	1	2	34.445		1,1-Dichloroethane	75-34-3	11	11	UG_KG					TRG									4.2	2.0	3.0	6.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	REG	S	4	03/03/2017 00:00	03/06/2017			20170310	15:45:00	20170310	15:45:00	SK1680-2	1	1	34.445		1,1-Dichloroethane	75-34-3	10	10	UG_KG					TRG									4.2	2.6	3.8	7.5	SK1680	WG201121		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	REG	S	4	03/03/2017 00:00	03/06/2017			20170310	15:45:00	20170310	15:45:00	SK1680-2	1	1	34.445		cis-1,2-Dichloroethene	156-59-2	3.8	3.8	UG_KG	U	U		TRG									4.2	1.4	3.8	7.5	SK1680	WG201121		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	RA0	REG	S	4	03/03/2017 00:00	03/06/2017			20170317	15:17:00	20170317	15:17:00	SK1680-2RA	1	2	34.445		cis-1,2-Dichloroethene	156-59-2	3.0	3.0	UG_KG	U	U		TRG									4.2	1.1	3.0	6.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	REG	S	4	03/03/2017 00:00	03/06/2017			20170310	15:45:00	20170310	15:45:00	SK1680-2	1	1	34.445		Chloroform	67-66-3	3.8	3.8	UG_KG	U	U		TRG									4.2	0.52	3.8	7.5	SK1680	WG201121		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	RA0	REG	S	4	03/03/2017 00:00	03/06/2017			20170317	15:17:00	20170317	15:17:00	SK1680-2RA	1	2	34.445		Chloroform	67-66-3	3.0	3.0	UG_KG	U	U		TRG									4.2	0.42	3.0	6.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	RA0	REG	S	4	03/03/2017 00:00	03/06/2017			20170317	15:17:00	20170317	15:17:00	SK1680-2RA	1	2	34.445		Carbon tetrachloride	56-23-5	3.0	3.0	UG_KG	U	U		TRG									4.2	1.6	3.0	6.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	REG	S	4	03/03/2017 00:00	03/06/2017			20170310	15:45:00	20170310	15:45:00	SK1680-2	1	1	34.445		Carbon tetrachloride	56-23-5	3.8	3.8	UG_KG	U	U		TRG									4.2	2.0	3.8	7.5	SK1680	WG201121		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	RA0	REG	S	4	03/03/2017 00:00	03/06/2017			20170317	15:17:00	20170317	15:17:00	SK1680-2RA	1	2	34.445		1,1,1-Trichloroethane	71-55-6	3.0	3.0	UG_KG	U	U		TRG									4.2	0.50	3.0	6.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	REG	S	4	03/03/2017 00:00	03/06/2017			20170310	15:45:00	20170310	15:45:00	SK1680-2	1	1	34.445		1,1,1-Trichloroethane	71-55-6	3.8	3.8	UG_KG	U	U		TRG									4.2	0.63	3.8	7.5	SK1680	WG201121		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	RA0	REG	S	4	03/03/2017 00:00	03/06/2017			20170317	15:17:00	20170317	15:17:00	SK1680-2RA	1	2	34.445		2-Butanone	78-93-3	15	15	UG_KG	U	U		TRG									4.2	7.1	15.	30.	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	REG	S	4	03/03/2017 00:00	03/06/2017			20170310	15:45:00	20170310	15:45:00	SK1680-2	1	1	34.445		2-Butanone	78-93-3	19	19	UG_KG	U	U		TRG									4.2	8.8	19.	38.	SK1680	WG201121		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	REG	S	4	03/03/2017 00:00	03/06/2017			20170310	15:45:00	20170310	15:45:00	SK1680-2	1	1	34.445		Benzene	71-43-2	65	65	UG_KG					TRG									4.2	1.4	3.8	7.5	SK1680	WG201121		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	RA0	REG	S	4	03/03/2017 00:00	03/06/2017			20170317	15:17:00	20170317	15:17:00	SK1680-2RA	1	2	34.445		Benzene	71-43-2	59	59	UG_KG					TRG									4.2	1.1	3.0	6.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	REG	S	4	03/03/2017 00:00	03/06/2017			20170310	15:45:00	20170310	15:45:00	SK1680-2	1	1	34.445		Cyclohexane	110-82-7	96	96	UG_KG					TRG									4.2	2.1	3.8	7.5	SK1680	WG201121		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	RA0	REG	S	4	03/03/2017 00:00	03/06/2017			20170317	15:17:00	20170317	15:17:00	SK1680-2RA	1	2	34.445		Cyclohexane	110-82-7	120	120	UG_KG					TRG									4.2	1.7	3.0	6.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	RA0	REG	S	4	03/03/2017 00:00	03/06/2017			20170317	15:17:00	20170317	15:17:00	SK1680-2RA	1	2	34.445		1,2-Dichloroethane	107-06-2	3.0	3.0	UG_KG	U	U		TRG									4.2	1.2	3.0	6.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	REG	S	4	03/03/2017 00:00	03/06/2017			20170310	15:45:00	20170310	15:45:00	SK1680-2	1	1	34.445		1,2-Dichloroethane	107-06-2	3.8	3.8	UG_KG	U	U		TRG									4.2	1.5	3.8	7.5	SK1680	WG201121		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	REG	S	4	03/03/2017 00:00	03/06/2017			20170310	15:45:00	20170310	15:45:00	SK1680-2	1	1	34.445		Trichloroethene	79-01-6	3.8	3.8	UG_KG	U	U		TRG									4.2	0.88	3.8	7.5	SK1680	WG201121		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	RA0	REG	S	4	03/03/2017 00:00	03/06/2017			20170317	15:17:00	20170317	15:17:00	SK1680-2RA	1	2	34.445		Trichloroethene	79-01-6	0.82	0.82	UG_KG	J	J		TRG									4.2	0.71	3.0	6.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	RA0	REG	S	4	03/03/2017 00:00	03/06/2017			20170317	15:17:00	20170317	15:17:00	SK1680-2RA	1	2	34.445		1,2-Dichloropropane	78-87-5	3.0	3.0	UG_KG	U	U		TRG									4.2	1.7	3.0	6.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	REG	S	4	03/03/2017 00:00	03/06/2017			20170310	15:45:00	20170310	15:45:00	SK1680-2	1	1	34.445		1,2-Dichloropropane	78-87-5	3.8	3.8	UG_KG	U	U		TRG									4.2	2.1	3.8	7.5	SK1680	WG201121		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	REG	S	4	03/03/2017 00:00	03/06/2017			20170310	15:45:00	20170310	15:45:00	SK1680-2	1	1	34.445		Bromodichloromethane	75-27-4	3.8	3.8	UG_KG	U	U		TRG									4.2	0.90	3.8	7.5	SK1680	WG201121		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	RA0	REG	S	4	03/03/2017 00:00	03/06/2017			20170317	15:17:00	20170317	15:17:00	SK1680-2RA	1	2	34.445		Bromodichloromethane	75-27-4	3.0	3.0	UG_KG	U	U		TRG									4.2	0.72	3.0	6.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	REG	S	4	03/03/2017 00:00	03/06/2017			20170310	15:45:00	20170310	15:45:00	SK1680-2	1	1	34.445		cis-1,3-Dichloropropene	10061-01-5	3.8	3.8	UG_KG	U	U		TRG									4.2	1.1	3.8	7.5	SK1680	WG201121		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	RA0	REG	S	4	03/03/2017 00:00	03/06/2017			20170317	15:17:00	20170317	15:17:00	SK1680-2RA	1	2	34.445		cis-1,3-Dichloropropene	10061-01-5	3.0	3.0	UG_KG	U	U		TRG									4.2	0.86	3.0	6.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	RA0	REG	S	4	03/03/2017 00:00	03/06/2017			20170317	15:17:00	20170317	15:17:00	SK1680-2RA	1	2	34.445		Toluene	108-88-3	22	22	UG_KG					TRG									4.2	1.7	3.0	6.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	REG	S	4	03/03/2017 00:00	03/06/2017			20170310	15:45:00	20170310	15:45:00	SK1680-2	1	1	34.445		Toluene	108-88-3	26	26	UG_KG					TRG									4.2	2.1	3.8	7.5	SK1680	WG201121		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	REG	S	4	03/03/2017 00:00	03/06/2017			20170310	15:45:00	20170310	15:45:00	SK1680-2	1	1	34.445		4-Methyl-2-pentanone	108-10-1	19	19	UG_KG	U	U		TRG									4.2	8.8	19.	38.	SK1680	WG201121		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	RA0	REG	S	4	03/03/2017 00:00	03/06/2017			20170317	15:17:00	20170317	15:17:00	SK1680-2RA	1	2	34.445		4-Methyl-2-pentanone	108-10-1	15	15	UG_KG	U	U		TRG									4.2	7.1	15.	30.	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	RA0	REG	S	4	03/03/2017 00:00	03/06/2017			20170317	15:17:00	20170317	15:17:00	SK1680-2RA	1	2	34.445		Tetrachloroethene	127-18-4	3.0	3.0	UG_KG	U	U		TRG									4.2	1.4	3.0	6.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	REG	S	4	03/03/2017 00:00	03/06/2017			20170310	15:45:00	20170310	15:45:00	SK1680-2	1	1	34.445		Tetrachloroethene	127-18-4	3.8	3.8	UG_KG	U	U		TRG									4.2	1.8	3.8	7.5	SK1680	WG201121		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	REG	S	4	03/03/2017 00:00	03/06/2017			20170310	15:45:00	20170310	15:45:00	SK1680-2	1	1	34.445		trans-1,3-Dichloropropene	10061-02-6	3.8	3.8	UG_KG	U	U		TRG									4.2	1.3	3.8	7.5	SK1680	WG201121		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	RA0	REG	S	4	03/03/2017 00:00	03/06/2017			20170317	15:17:00	20170317	15:17:00	SK1680-2RA	1	2	34.445		trans-1,3-Dichloropropene	10061-02-6	3.0	3.0	UG_KG	UL	UL		TRG									4.2	1.0	3.0	6.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	RA0	REG	S	4	03/03/2017 00:00	03/06/2017			20170317	15:17:00	20170317	15:17:00	SK1680-2RA	1	2	34.445		1,1,2-Trichloroethane	79-00-5	3.0	3.0	UG_KG	U	U		TRG									4.2	1.2	3.0	6.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	REG	S	4	03/03/2017 00:00	03/06/2017			20170310	15:45:00	20170310	15:45:00	SK1680-2	1	1	34.445		1,1,2-Trichloroethane	79-00-5	3.8	3.8	UG_KG	U	U		TRG									4.2	1.4	3.8	7.5	SK1680	WG201121		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	RA0	REG	S	4	03/03/2017 00:00	03/06/2017			20170317	15:17:00	20170317	15:17:00	SK1680-2RA	1	2	34.445		Dibromochloromethane	124-48-1	3.0	3.0	UG_KG	U	U		TRG									4.2	1.2	3.0	6.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	REG	S	4	03/03/2017 00:00	03/06/2017			20170310	15:45:00	20170310	15:45:00	SK1680-2	1	1	34.445		Dibromochloromethane	124-48-1	3.8	3.8	UG_KG	U	U		TRG									4.2	1.5	3.8	7.5	SK1680	WG201121		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	RA0	REG	S	4	03/03/2017 00:00	03/06/2017			20170317	15:17:00	20170317	15:17:00	SK1680-2RA	1	2	34.445		1,2-Dibromoethane	106-93-4	3.0	3.0	UG_KG	U	U		TRG									4.2	1.4	3.0	6.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	REG	S	4	03/03/2017 00:00	03/06/2017			20170310	15:45:00	20170310	15:45:00	SK1680-2	1	1	34.445		1,2-Dibromoethane	106-93-4	3.8	3.8	UG_KG	U	U		TRG									4.2	1.8	3.8	7.5	SK1680	WG201121		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	REG	S	4	03/03/2017 00:00	03/06/2017			20170310	15:45:00	20170310	15:45:00	SK1680-2	1	1	34.445		2-Hexanone	591-78-6	19	19	UG_KG	U	U		TRG									4.2	7.2	19.	38.	SK1680	WG201121		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	RA0	REG	S	4	03/03/2017 00:00	03/06/2017			20170317	15:17:00	20170317	15:17:00	SK1680-2RA	1	2	34.445		2-Hexanone	591-78-6	15	15	UG_KG	U	U		TRG									4.2	5.8	15.	30.	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	RA0	REG	S	4	03/03/2017 00:00	03/06/2017			20170317	15:17:00	20170317	15:17:00	SK1680-2RA	1	2	34.445		Chlorobenzene	108-90-7	3.0	3.0	UG_KG	U	U		TRG									4.2	0.61	3.0	6.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	REG	S	4	03/03/2017 00:00	03/06/2017			20170310	15:45:00	20170310	15:45:00	SK1680-2	1	1	34.445		Chlorobenzene	108-90-7	3.8	3.8	UG_KG	U	U		TRG									4.2	0.76	3.8	7.5	SK1680	WG201121		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	RA0	REG	S	4	03/03/2017 00:00	03/06/2017			20170317	15:17:00	20170317	15:17:00	SK1680-2RA	1	2	34.445		Ethylbenzene	100-41-4	190	190	UG_KG					TRG									4.2	0.78	3.0	6.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	REG	S	4	03/03/2017 00:00	03/06/2017			20170310	15:45:00	20170310	15:45:00	SK1680-2	1	1	34.445		Ethylbenzene	100-41-4	210	210	UG_KG					TRG									4.2	0.98	3.8	7.5	SK1680	WG201121		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	RA0	REG	S	4	03/03/2017 00:00	03/06/2017			20170317	15:17:00	20170317	15:17:00	SK1680-2RA	1	2	34.445		Xylene, total	1330-20-7	40	40	UG_KG					TRG									4.2	1.6	9.0	18.	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	REG	S	4	03/03/2017 00:00	03/06/2017			20170310	15:45:00	20170310	15:45:00	SK1680-2	1	1	34.445		Xylene, total	1330-20-7	50	50	UG_KG					TRG									4.2	2.0	11.	22.	SK1680	WG201121		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	REG	S	4	03/03/2017 00:00	03/06/2017			20170310	15:45:00	20170310	15:45:00	SK1680-2	1	1	34.445		m- and p-Xylene	m&pXYLENE	28	28	UG_KG					TRG									4.2	2.6	7.5	15.	SK1680	WG201121		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	RA0	REG	S	4	03/03/2017 00:00	03/06/2017			20170317	15:17:00	20170317	15:17:00	SK1680-2RA	1	2	34.445		m- and p-Xylene	m&pXYLENE	23	23	UG_KG					TRG									4.2	2.0	6.0	12.	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	RA0	REG	S	4	03/03/2017 00:00	03/06/2017			20170317	15:17:00	20170317	15:17:00	SK1680-2RA	1	2	34.445		o-Xylene	95-47-6	17	17	UG_KG					TRG									4.2	1.6	3.0	6.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	REG	S	4	03/03/2017 00:00	03/06/2017			20170310	15:45:00	20170310	15:45:00	SK1680-2	1	1	34.445		o-Xylene	95-47-6	22	22	UG_KG					TRG									4.2	2.0	3.8	7.5	SK1680	WG201121		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	RA0	REG	S	4	03/03/2017 00:00	03/06/2017			20170317	15:17:00	20170317	15:17:00	SK1680-2RA	1	2	34.445		Styrene	100-42-5	3.0	3.0	UG_KG	U	U		TRG									4.2	0.61	3.0	6.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	REG	S	4	03/03/2017 00:00	03/06/2017			20170310	15:45:00	20170310	15:45:00	SK1680-2	1	1	34.445		Styrene	100-42-5	3.8	3.8	UG_KG	U	U		TRG									4.2	0.76	3.8	7.5	SK1680	WG201121		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	REG	S	4	03/03/2017 00:00	03/06/2017			20170310	15:45:00	20170310	15:45:00	SK1680-2	1	1	34.445		Bromoform	75-25-2	3.8	3.8	UG_KG	U	U		TRG									4.2	1.0	3.8	7.5	SK1680	WG201121		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	RA0	REG	S	4	03/03/2017 00:00	03/06/2017			20170317	15:17:00	20170317	15:17:00	SK1680-2RA	1	2	34.445		Bromoform	75-25-2	3.0	3.0	UG_KG	U	U		TRG									4.2	0.84	3.0	6.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	RA0	REG	S	4	03/03/2017 00:00	03/06/2017			20170317	15:17:00	20170317	15:17:00	SK1680-2RA	1	2	34.445		Isopropylbenzene	98-82-8	67	67	UG_KG					TRG									4.2	1.1	3.0	6.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	REG	S	4	03/03/2017 00:00	03/06/2017			20170310	15:45:00	20170310	15:45:00	SK1680-2	1	1	34.445		Isopropylbenzene	98-82-8	60	60	UG_KG					TRG									4.2	1.4	3.8	7.5	SK1680	WG201121		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	RA0	REG	S	4	03/03/2017 00:00	03/06/2017			20170317	15:17:00	20170317	15:17:00	SK1680-2RA	1	2	34.445		1,1,2,2-Tetrachloroethane	79-34-5	3.0	3.0	UG_KG	U	U		TRG									4.2	1.0	3.0	6.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	REG	S	4	03/03/2017 00:00	03/06/2017			20170310	15:45:00	20170310	15:45:00	SK1680-2	1	1	34.445		1,1,2,2-Tetrachloroethane	79-34-5	3.8	3.8	UG_KG	U	U		TRG									4.2	1.3	3.8	7.5	SK1680	WG201121		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	RA0	REG	S	4	03/03/2017 00:00	03/06/2017			20170317	15:17:00	20170317	15:17:00	SK1680-2RA	1	2	34.445		1,3-Dichlorobenzene	541-73-1	3.0	3.0	UG_KG	U	U		TRG									4.2	0.74	3.0	6.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	REG	S	4	03/03/2017 00:00	03/06/2017			20170310	15:45:00	20170310	15:45:00	SK1680-2	1	1	34.445		1,3-Dichlorobenzene	541-73-1	3.8	3.8	UG_KG	U	U		TRG									4.2	0.93	3.8	7.5	SK1680	WG201121		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	RA0	REG	S	4	03/03/2017 00:00	03/06/2017			20170317	15:17:00	20170317	15:17:00	SK1680-2RA	1	2	34.445		1,4-Dichlorobenzene	106-46-7	1.2	1.2	UG_KG	J	J		TRG									4.2	0.53	3.0	6.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	REG	S	4	03/03/2017 00:00	03/06/2017			20170310	15:45:00	20170310	15:45:00	SK1680-2	1	1	34.445		1,4-Dichlorobenzene	106-46-7	1.0	1.0	UG_KG	J	J		TRG									4.2	0.66	3.8	7.5	SK1680	WG201121		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	RA0	REG	S	4	03/03/2017 00:00	03/06/2017			20170317	15:17:00	20170317	15:17:00	SK1680-2RA	1	2	34.445		1,2-Dichlorobenzene	95-50-1	3.0	3.0	UG_KG	U	U		TRG									4.2	0.94	3.0	6.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	REG	S	4	03/03/2017 00:00	03/06/2017			20170310	15:45:00	20170310	15:45:00	SK1680-2	1	1	34.445		1,2-Dichlorobenzene	95-50-1	3.8	3.8	UG_KG	U	U		TRG									4.2	1.2	3.8	7.5	SK1680	WG201121		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	REG	S	4	03/03/2017 00:00	03/06/2017			20170310	15:45:00	20170310	15:45:00	SK1680-2	1	1	34.445		1,2-Dibromo-3-chloropropane	96-12-8	3.8	3.8	UG_KG	U	U		TRG									4.2	2.2	3.8	7.5	SK1680	WG201121		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	RA0	REG	S	4	03/03/2017 00:00	03/06/2017			20170317	15:17:00	20170317	15:17:00	SK1680-2RA	1	2	34.445		1,2-Dibromo-3-chloropropane	96-12-8	3.0	3.0	UG_KG	U	U		TRG									4.2	1.8	3.0	6.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	RA0	REG	S	4	03/03/2017 00:00	03/06/2017			20170317	15:17:00	20170317	15:17:00	SK1680-2RA	1	2	34.445		1,2,4-Trichlorobenzene	120-82-1	1.1	1.1	UG_KG	JL	JL		TRG									4.2	0.95	3.0	6.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	REG	S	4	03/03/2017 00:00	03/06/2017			20170310	15:45:00	20170310	15:45:00	SK1680-2	1	1	34.445		1,2,4-Trichlorobenzene	120-82-1	3.8	3.8	UG_KG	U	U		TRG									4.2	1.2	3.8	7.5	SK1680	WG201121		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	RA0	REG	S	4	03/03/2017 00:00	03/06/2017			20170317	15:17:00	20170317	15:17:00	SK1680-2RA	1	2	34.445		1,2,3-Trichlorobenzene	87-61-6	3.0	3.0	UG_KG	U	U		TRG									4.2	0.91	3.0	6.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	REG	S	4	03/03/2017 00:00	03/06/2017			20170310	15:45:00	20170310	15:45:00	SK1680-2	1	1	34.445		1,2,3-Trichlorobenzene	87-61-6	3.8	3.8	UG_KG	U	U		TRG									4.2	1.1	3.8	7.5	SK1680	WG201121		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	RA0	REG	S	4	03/03/2017 00:00	03/06/2017			20170317	15:17:00	20170317	15:17:00	SK1680-2RA	1	2	34.445		Bromochloromethane	74-97-5	3.0	3.0	UG_KG	U	U		TRG									4.2	1.1	3.0	6.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	REG	S	4	03/03/2017 00:00	03/06/2017			20170310	15:45:00	20170310	15:45:00	SK1680-2	1	1	34.445		Bromochloromethane	74-97-5	3.8	3.8	UG_KG	U	U		TRG									4.2	1.4	3.8	7.5	SK1680	WG201121		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	REG	S	4	03/03/2017 00:00	03/06/2017			20170310	15:45:00	20170310	15:45:00	SK1680-2	1	1	34.445		Methyl acetate	79-20-9	14	14	UG_KG					TRG									4.2	4.0	4.5	7.5	SK1680	WG201121		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	RA0	REG	S	4	03/03/2017 00:00	03/06/2017			20170317	15:17:00	20170317	15:17:00	SK1680-2RA	1	2	34.445		Methyl acetate	79-20-9	8.8	8.8	UG_KG					TRG									4.2	3.2	3.6	6.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	RA0	REG	S	4	03/03/2017 00:00	03/06/2017			20170317	15:17:00	20170317	15:17:00	SK1680-2RA	1	2	34.445		Methylcyclohexane	108-87-2	130	130	UG_KG					TRG									4.2	1.2	3.0	6.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	REG	S	4	03/03/2017 00:00	03/06/2017			20170310	15:45:00	20170310	15:45:00	SK1680-2	1	1	34.445		Methylcyclohexane	108-87-2	95	95	UG_KG					TRG									4.2	1.4	3.8	7.5	SK1680	WG201121		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	REG	S	4	03/03/2017 00:00	03/06/2017			20170310	15:45:00	20170310	15:45:00	SK1680-2	1	1	34.445		4-Bromofluorobenzene	460-00-4	67.9	67.9	PCT	*	*		SURR		SLSA	120	85	20091101				4.2	0	0	0	SK1680	WG201121		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	RA0	REG	S	4	03/03/2017 00:00	03/06/2017			20170317	15:17:00	20170317	15:17:00	SK1680-2RA	1	2	34.445		4-Bromofluorobenzene	460-00-4	54.1	54.1	PCT	*	*		SURR		SLSA	120	85	20091101				4.2	0	0	0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	RA0	REG	S	4	03/03/2017 00:00	03/06/2017			20170317	15:17:00	20170317	15:17:00	SK1680-2RA	1	2	34.445		Toluene-D8	2037-26-5	95.2	95.2	PCT				SURR		SLSA	115	85	20091101				4.2	0	0	0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	REG	S	4	03/03/2017 00:00	03/06/2017			20170310	15:45:00	20170310	15:45:00	SK1680-2	1	1	34.445		Toluene-D8	2037-26-5	93.7	93.7	PCT				SURR		SLSA	115	85	20091101				4.2	0	0	0	SK1680	WG201121		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	RA0	REG	S	4	03/03/2017 00:00	03/06/2017			20170317	15:17:00	20170317	15:17:00	SK1680-2RA	1	2	34.445		1,2-Dichloroethane-d4	17060-07-0	88.5	88.5	PCT				SURR		SLSA	134	58	20091101				4.2	0	0	0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	REG	S	4	03/03/2017 00:00	03/06/2017			20170310	15:45:00	20170310	15:45:00	SK1680-2	1	1	34.445		1,2-Dichloroethane-d4	17060-07-0	100.	100.	PCT				SURR		SLSA	134	58	20091101				4.2	0	0	0	SK1680	WG201121		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	REG	S	4	03/03/2017 00:00	03/06/2017			20170310	15:45:00	20170310	15:45:00	SK1680-2	1	1	34.445		Dibromofluoromethane	1868-53-7	100.	100.	PCT				SURR		SLSA	130	64	20091101				4.2	0	0	0	SK1680	WG201121		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	RA0	REG	S	4	03/03/2017 00:00	03/06/2017			20170317	15:17:00	20170317	15:17:00	SK1680-2RA	1	2	34.445		Dibromofluoromethane	1868-53-7	97.1	97.1	PCT				SURR		SLSA	130	64	20091101				4.2	0	0	0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-SB20-0708A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	REG	S	4	03/03/2017 09:25	03/06/2017			20170310	15:08:00	20170310	15:08:00	SK1680-1	1	1	34.371		Dichlorodifluoromethane (Freon-12)	75-71-8	6.5	6.5	UG_KG	U	U		TRG									4.2	1.2	6.5	13.	SK1680	WG201121		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-SB20-0708A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	RA0	REG	S	4	03/03/2017 09:25	03/06/2017			20170317	14:39:00	20170317	14:39:00	SK1680-1RA	1	2	34.371		Dichlorodifluoromethane (Freon-12)	75-71-8	7.5	7.5	UG_KG	U	U		TRG									4.2	1.4	7.5	15.	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-SB20-0708A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	REG	S	4	03/03/2017 09:25	03/06/2017			20170310	15:08:00	20170310	15:08:00	SK1680-1	1	1	34.371		Chloromethane	74-87-3	6.5	6.5	UG_KG	U	U		TRG									4.2	1.8	6.5	13.	SK1680	WG201121		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-SB20-0708A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	RA0	REG	S	4	03/03/2017 09:25	03/06/2017			20170317	14:39:00	20170317	14:39:00	SK1680-1RA	1	2	34.371		Chloromethane	74-87-3	7.5	7.5	UG_KG	U	U		TRG									4.2	2.1	7.5	15.	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-SB20-0708A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	REG	S	4	03/03/2017 09:25	03/06/2017			20170310	15:08:00	20170310	15:08:00	SK1680-1	1	1	34.371		Vinyl chloride	75-01-4	6.5	6.5	UG_KG	U	U		TRG									4.2	1.1	6.5	13.	SK1680	WG201121		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-SB20-0708A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	RA0	REG	S	4	03/03/2017 09:25	03/06/2017			20170317	14:39:00	20170317	14:39:00	SK1680-1RA	1	2	34.371		Vinyl chloride	75-01-4	7.5	7.5	UG_KG	U	U		TRG									4.2	1.3	7.5	15.	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-SB20-0708A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	REG	S	4	03/03/2017 09:25	03/06/2017			20170310	15:08:00	20170310	15:08:00	SK1680-1	1	1	34.371		Bromomethane	74-83-9	6.5	6.5	UG_KG	U	U		TRG									4.2	1.4	6.5	13.	SK1680	WG201121		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-SB20-0708A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	RA0	REG	S	4	03/03/2017 09:25	03/06/2017			20170317	14:39:00	20170317	14:39:00	SK1680-1RA	1	2	34.371		Bromomethane	74-83-9	7.5	7.5	UG_KG	U	U		TRG									4.2	1.6	7.5	15.	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-SB20-0708A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	REG	S	4	03/03/2017 09:25	03/06/2017			20170310	15:08:00	20170310	15:08:00	SK1680-1	1	1	34.371		Chloroethane	75-00-3	6.5	6.5	UG_KG	U	U		TRG									4.2	1.7	6.5	13.	SK1680	WG201121		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-SB20-0708A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	RA0	REG	S	4	03/03/2017 09:25	03/06/2017			20170317	14:39:00	20170317	14:39:00	SK1680-1RA	1	2	34.371		Chloroethane	75-00-3	7.5	7.5	UG_KG	U	U		TRG									4.2	2.0	7.5	15.	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-SB20-0708A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	RA0	REG	S	4	03/03/2017 09:25	03/06/2017			20170317	14:39:00	20170317	14:39:00	SK1680-1RA	1	2	34.371		Trichlorofluoromethane (Freon-11)	75-69-4	7.5	7.5	UG_KG	U	U		TRG									4.2	1.4	7.5	15.	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-SB20-0708A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	REG	S	4	03/03/2017 09:25	03/06/2017			20170310	15:08:00	20170310	15:08:00	SK1680-1	1	1	34.371		Trichlorofluoromethane (Freon-11)	75-69-4	6.5	6.5	UG_KG	U	U		TRG									4.2	1.2	6.5	13.	SK1680	WG201121		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-SB20-0708A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	REG	S	4	03/03/2017 09:25	03/06/2017			20170310	15:08:00	20170310	15:08:00	SK1680-1	1	1	34.371		1,1-Dichloroethene	75-35-4	3.2	3.2	UG_KG	U	U		TRG									4.2	1.2	3.2	6.5	SK1680	WG201121		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-SB20-0708A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	RA0	REG	S	4	03/03/2017 09:25	03/06/2017			20170317	14:39:00	20170317	14:39:00	SK1680-1RA	1	2	34.371		1,1-Dichloroethene	75-35-4	3.8	3.8	UG_KG	U	U		TRG									4.2	1.4	3.8	7.5	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-SB20-0708A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	REG	S	4	03/03/2017 09:25	03/06/2017			20170310	15:08:00	20170310	15:08:00	SK1680-1	1	1	34.371		Carbon disulfide	75-15-0	2.0	2.0	UG_KG	J	J		TRG									4.2	1.0	3.2	6.5	SK1680	WG201121		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-SB20-0708A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	RA0	REG	S	4	03/03/2017 09:25	03/06/2017			20170317	14:39:00	20170317	14:39:00	SK1680-1RA	1	2	34.371		Carbon disulfide	75-15-0	2.0	2.0	UG_KG	J	J		TRG									4.2	1.2	3.8	7.5	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-SB20-0708A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	REG	S	4	03/03/2017 09:25	03/06/2017			20170310	15:08:00	20170310	15:08:00	SK1680-1	1	1	34.371		1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	76-13-1	3.2	3.2	UG_KG	U	U		TRG									4.2	1.2	3.2	6.5	SK1680	WG201121		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-SB20-0708A	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	RA0	REG	S	4	03/03/2017 09:25	03/06/2017			20170317	14:39:00	20170317	14:39:00	SK1680-1RA	1	2	34.371		1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	76-13-1	3.8	3.8	UG_KG	U	U		TRG									4.2	1.4	3.8	7.5	SK1680	WG201539		

Comment_ID	CCG_XTU_Number	Phase	Installation_ID	Sample_Name	ICSDB_Code	Analysis_Group	Analytical_Method	PAC_Code	Lab_Code	Lab_Name	Leachate_Method	Sample_Basis	Extraction_Method	Result_Type	Lab_QC_Type	Sample_Medium	QC_Level	Date/Time_Collected	Date_Received	Leachate_Date	Leachate_Time	Extraction_Date	Extraction_Time	Analysis_Date	Analysis_Time	Lab_Sample_ID	Dilution	Run_Number	Percent_Moisture	Percent_Lipid	Chem_Name	Analyte_ID	Analyte_Value	Original_Analyte_Value	Result_Units	Lab_Qualifier	Validator_Qualifier	QC_Column_Type	Analysis_Result_Type	Result_Narrative	SQC_Control_Limit_Code	QC_Accuracy_Upper	QC_Accuracy_Lower	Control_Limit_Date	QC_Narrative	MDL	Detection_Limit	CRM_Version	EIL	UCL	LOQ	SDG	Analysis_Batch	Validator_Name	Val_Date
9224701000900	AWDI		MERIDIAN_NAD	3dl108-SB20-0708A	NZNE	VOA	8260C	VOA	EAS	BATHURST ANALYTICAL		3dl	5W5005	RES		L	4	01/03/2017 09:25	03/06/2017			20170317	13:08:00	20170317	15:08:00	SI10685-1	5		84.373		Methylene chloride	75-09-2	0.5	0.5	ug_4G	U			TRG									4.2	0.5	0.5	SI10685	WH201101		
9224701000900	AWDI		MERIDIAN_NAD	3dl108-SB20-0708A	NZNE	VOA	8260C	VOA	EAS	BATHURST ANALYTICAL		3dl	5W5005	RES		L	4	01/03/2017 09:25	03/06/2017			20170317	13:08:00	20170317	15:08:00	SI10685-1	5		84.373		Toluene	108-88-3	0.5	0.5	ug_4G	U			TRG									4.2	0.5	0.5	SI10685	WH201101		
9224701000900	AWDI		MERIDIAN_NAD	3dl108-SB20-0708A	NZNE	VOA	8260C	VOA	EAS	BATHURST ANALYTICAL		3dl	5W5005	RES		L	4	01/03/2017 09:25	03/06/2017			20170317	13:08:00	20170317	15:08:00	SI10685-1	5		84.373		Styrene	100-42-5	0.5	0.5	ug_4G	U			TRG									4.2	0.5	0.5	SI10685	WH201101		
9224701000900	AWDI		MERIDIAN_NAD	3dl108-SB20-0708A	NZNE	VOA	8260C	VOA	EAS	BATHURST ANALYTICAL		3dl	5W5005	RES		L	4	01/03/2017 09:25	03/06/2017			20170317	13:08:00	20170317	15:08:00	SI10685-1	5		84.373		Tetrachloroethene	127-18-4	0.5	0.5	ug_4G	U			TRG									4.2	0.5	0.5	SI10685	WH201101		
9224701000900	AWDI		MERIDIAN_NAD	3dl108-SB20-0708A	NZNE	VOA	8260C	VOA	EAS	BATHURST ANALYTICAL		3dl	5W5005	RES		L	4	01/03/2017 09:25	03/06/2017			20170317	13:08:00	20170317	15:08:00	SI10685-1	5		84.373		1,1,2,2-Tetrachloroethane	79-34-5	0.5	0.5	ug_4G	U			TRG									4.2	0.5	0.5	SI10685	WH201101		
9224701000900	AWDI		MERIDIAN_NAD	3dl108-SB20-0708A	NZNE	VOA	8260C	VOA	EAS	BATHURST ANALYTICAL		3dl	5W5005	RES		L	4	01/03/2017 09:25	03/06/2017			20170317	13:08:00	20170317	15:08:00	SI10685-1	5		84.373		Trichloroethene	79-01-6	0.5	0.5	ug_4G	U			TRG									4.2	0.5	0.5	SI10685	WH201101		
9224701000900	AWDI		MERIDIAN_NAD	3dl108-SB20-0708A	NZNE	VOA	8260C	VOA	EAS	BATHURST ANALYTICAL		3dl	5W5005	RES		L	4	01/03/2017 09:25	03/06/2017			20170317	13:08:00	20170317	15:08:00	SI10685-1	5		84.373		Vinyl chloride	75-01-4	0.5	0.5	ug_4G	U			TRG									4.2	0.5	0.5	SI10685	WH201101		
9224701000900	AWDI		MERIDIAN_NAD	3dl108-SB20-0708A	NZNE	VOA	8260C	VOA	EAS	BATHURST ANALYTICAL		3dl	5W5005	RES		L	4	01/03/2017 09:25	03/06/2017			20170317	13:08:00	20170317	15:08:00	SI10685-1	5		84.373		Xylene, total	1330-20-7	1.5	1.5	ug_4G	U			TRG									4.2	1.5	1.5	SI10685	WH201101		
9224701000900	AWDI		MERIDIAN_NAD	3dl108-SB20-0708A	NZNE	VOA	8260C	VOA	EAS	BATHURST ANALYTICAL		3dl	5W5005	RES		L	4	01/03/2017 09:25	03/06/2017			20170317	14:19:00	20170317	16:19:00	SI10687-1	5		84.373		Methyl-tert-butyl ether (MTBE)	1634-04-4	0.8	0.8	ug_4G	U			TRG									4.2	0.8	0.8	SI10687	WH201101		
9224701000900	AWDI		MERIDIAN_NAD	3dl108-SB20-0708A	NZNE	VOA	8260C	VOA	EAS	BATHURST ANALYTICAL		3dl	5W5005	RES		L	4	01/03/2017 09:25	03/06/2017			20170317	14:19:00	20170317	16:19:00	SI10687-1	5		84.373		Chloroethane	75-00-3	0.8	0.8	ug_4G	U			TRG									4.2	0.8	0.8	SI10687	WH201101		
9224701000900	AWDI		MERIDIAN_NAD	3dl108-SB20-0708A	NZNE	VOA	8260C	VOA	EAS	BATHURST ANALYTICAL		3dl	5W5005	RES		L	4	01/03/2017 09:25	03/06/2017			20170317	14:19:00	20170317	16:19:00	SI10687-1	5		84.373		1,1-Dichloroethene	75-35-4	0.5	0.5	ug_4G	U			TRG									4.2	0.5	0.5	SI10687	WH201101		
9224701000900	AWDI		MERIDIAN_NAD	3dl108-SB20-0708A	NZNE	VOA	8260C	VOA	EAS	BATHURST ANALYTICAL		3dl	5W5005	RES		L	4	01/03/2017 09:25	03/06/2017			20170317	14:19:00	20170317	16:19:00	SI10687-1	5		84.373		Dichloromethane	75-09-2	1.5	1.5	ug_4G	U			TRG									4.2	1.5	1.5	SI10687	WH201101		
9224701000900	AWDI		MERIDIAN_NAD	3dl108-SB20-0708A	NZNE	VOA	8260C	VOA	EAS	BATHURST ANALYTICAL		3dl	5W5005	RES		L	4	01/03/2017 09:25	03/06/2017			20170317	14:19:00	20170317	16:19:00	SI10687-1	5		84.373		Methyl-tert-butyl ether (MTBE)	1634-04-4	0.8	0.8	ug_4G	U			TRG									4.2	0.8	0.8	SI10687	WH201101		
9224701000900	AWDI		MERIDIAN_NAD	3dl108-SB20-0708A	NZNE	VOA	8260C	VOA	EAS	BATHURST ANALYTICAL		3dl	5W5005	RES		L	4	01/03/2017 09:25	03/06/2017			20170317	14:19:00	20170317	16:19:00	SI10687-1	5		84.373		Chloroethane	75-00-3	0.8	0.8	ug_4G	U			TRG									4.2	0.8	0.8	SI10687	WH201101		
9224701000900	AWDI		MERIDIAN_NAD	3dl108-SB20-0708A	NZNE	VOA	8260C	VOA	EAS	BATHURST ANALYTICAL		3dl	5W5005	RES		L	4	01/03/2017 09:25	03/06/2017			20170317	15:08:00	20170317	17:08:00	SI10688-1	5		84.373		Benzene	71-43-2	0.5	0.5	ug_4G	U			TRG									4.2	0.5	0.5	SI10688	WH201101		
9224701000900	AWDI		MERIDIAN_NAD	3dl108-SB20-0708A	NZNE	VOA	8260C	VOA	EAS	BATHURST ANALYTICAL		3dl	5W5005	RES		L	4	01/03/2017 09:25	03/06/2017			20170317	15:08:00	20170317	17:08:00	SI10688-1	5		84.373		Cyclohexane	110-82-7	0.5	0.5	ug_4G	U			TRG									4.2	0.5	0.5	SI10688	WH201101		
9224701000900	AWDI		MERIDIAN_NAD	3dl108-SB20-0708A	NZNE	VOA	8260C	VOA	EAS	BATHURST ANALYTICAL		3dl	5W5005	RES		L	4	01/03/2017 09:25	03/06/2017			20170317	15:08:00	20170317	17:08:00	SI10688-1	5		84.373		Cyclohexane	110-82-7	0.5	0.5	ug_4G	U			TRG									4.2	0.5	0.5	SI10688	WH201101		
9224701000900	AWDI		MERIDIAN_NAD	3dl108-SB20-0708A	NZNE	VOA	8260C	VOA	EAS	BATHURST ANALYTICAL		3dl	5W5005	RES		L	4	01/03/2017 09:25	03/06/2017			20170317	15:08:00	20170317	17:08:00	SI10688-1	5		84.373		1,2-Dichloroethane	107-06-2	0.3	0.3	ug_4G	U			TRG									4.2	0.3	0.3	SI10688	WH201101		
9224701000900	AWDI		MERIDIAN_NAD	3dl108-SB20-0708A	NZNE	VOA	8260C	VOA	EAS	BATHURST ANALYTICAL		3dl	5W5005	RES		L	4	01/03/2017 09:25	03/06/2017			20170317	15:08:00	20170317	17:08:00	SI10688-1	5		84.373		1,2-Dichloroethane	107-06-2	0.3	0.3	ug_4G	U			TRG									4.2	0.3	0.3	SI10688	WH201101		
9224701000900	AWDI		MERIDIAN_NAD	3dl108-SB20-0708A	NZNE	VOA	8260C	VOA	EAS	BATHURST ANALYTICAL		3dl	5W5005	RES		L	4	01/03/2017 09:25	03/06/2017			20170317	15:08:00	20170317	17:08:00	SI10688-1	5		84.373		Trichloroethene	79-01-6	0.2	0.2	ug_4G	U			TRG									4.2	0.2	0.2	SI10688	WH201101		
9224701000900	AWDI		MERIDIAN_NAD	3dl108-SB20-0708A	NZNE	VOA	8260C	VOA	EAS	BATHURST ANALYTICAL		3dl	5W5005	RES		L	4	01/03/2017 09:25	03/06/2017			20170317	15:08:00	20170317	17:08:00	SI10688-1	5		84.373		Vinyl chloride	75-01-4	0.2	0.2	ug_4G	U			TRG									4.2	0.2	0.2	SI10688	WH201101		
9224701000900	AWDI		MERIDIAN_NAD	3dl108-SB20-0708A	NZNE	VOA	8260C	VOA	EAS	BATHURST ANALYTICAL		3dl	5W5005	RES		L	4	01/03/2017 09:25	03/06/2017			20170317	15:08:00	20170317	17:08:00	SI10688-1	5		84.373		Xylene, total	1330-20-7	0.6	0.6	ug_4G	U			TRG									4.2	0.6	0.6	SI10688	WH201101		
9224701000900	AWDI		MERIDIAN_NAD	3dl108-SB20-0708A	NZNE	VOA	8260C	VOA	EAS	BATHURST ANALYTICAL		3dl	5W5005	RES		L	4	01/03/2017 09:25	03/06/2017			20170317	15:08:00	20170317	17:08:00	SI10688-1	5		84.373		1,3-Dichlorobenzene	541-73-1	0.2	0.2	ug_4G	U			TRG									4.2	0.2	0.2	SI10688	WH201101		
9224701000900	AWDI		MERIDIAN_NAD	3dl108-SB20-0708A	NZNE	VOA	8260C	VOA	EAS	BATHURST ANALYTICAL		3dl	5W5005	RES		L	4	01/03/2017 09:25	03/06/2017			20170317	15:08:00	20170317	17:08:00	SI10688-1	5		84.373		1,4-Dichlorobenzene	106-46-7	0.4	0.4	ug_4G	U			TRG									4.2	0.57	1.2	SI10688	WH201101		
9224701000900	AWDI		MERIDIAN_NAD	3dl108-SB20-0708A	NZNE	VOA	8260C	VOA	EAS	BATHURST ANALYTICAL		3dl	5W5005	RES		L	4	01/03/2017 09:25	03/06/2017			20170317	15:08:00	20170317	17:08:00	SI10688-1	5		84.373		1,2-Dichlorobenzene	95-50-1	0.4	0.4	ug_4G	U			TRG									4.2	0.4	0.4	SI10688	WH201101		
9224701000900	AWDI		MERIDIAN_NAD	3dl108-SB20-0708A	NZNE	VOA	8260C	VOA	EAS	BATHURST ANALYTICAL		3dl	5W5005	RES		L	4	01/03/2017 09:25	03/06/2017			20170317	15:08:00	20170317	17:08:00	SI10688-1	5		84.373		1,2-Dibromo-3-chloropropane	96-12-8	0.2	0.2	ug_4G	U			TRG									4.2	0.2	0.2	SI10688	WH201101		
9224701000900	AWDI		MERIDIAN_NAD	3dl108-SB20-0708A	NZNE	VOA	8260C	VOA	EAS	BATHURST ANALYTICAL		3dl	5W5005	RES		L	4	01/03/2017 09:25	03/06/2017			20170317	15:08:00	20170317	17:08:00	SI10688-1	5		84.373		1,2,4-Trichlorobenzene	120-82-1	0.3	0.3	ug_4G	U			TRG									4.2	0.3	0.3	SI10688	WH201101		
9224701000900	AWDI		MERIDIAN_NAD	3dl108-SB20-0708A	NZNE	VOA	8260C	VOA	EAS	BATHURST ANALYTICAL		3dl	5W5005	RES		L	4	01/03/2017 09:25	03/06/2017			20170317	15:08:00	20170317	17:08:00	SI10688-1	5		84.373		Hexachlorobutadiene	87-68-3	0.6	0.6	ug_4G	U			TRG									4.2	0.96	0.6	SI10688	WH201101		
9224701000900	AWDI		MERIDIAN_NAD	3dl108-SB20-0708A	NZNE	VOA	8260C	VOA	EAS	BATHURST ANALYTICAL		3dl	5W5005	RES		L	4	01/03/2017 09:25	03/06/2017			20170317	15:08:00	20170317	17:08:00	SI10688-1	5		84.373		Carbon tetrachloride	56-23-5	0.3	0.3	ug_4G	U			TRG									4.2	0.3	0.3	SI10688	WH201101		
9224701000900	AWDI		MERIDIAN_NAD	3dl108-SB20-0708A	NZNE	VOA	8260C	VOA	EAS	BATHURST ANALYTICAL		3dl	5W5005	RES		L	4	01/03/2017 09:25	03/06/2017			20170317	15:08:00	20170317	17:08:00	SI10688-1	5		84.373		Isopropylbenzene	98-82-8	0.4	0.4	ug_4G	U			TRG									4.2	0.4	0.4	SI10688	WH201101		
9224701000900	AWDI		MERIDIAN_NAD	3dl108-SB20-0708A	NZNE	VOA	8260C	VOA	EAS	BATHURST ANALYTICAL		3dl	5W5005	RES		L	4	01/03/2017 09:25	03/06/2017			20170317	15:08:00	20170317	17:08:00	SI10688-1	5		84.373		1,1,2,2-Tetrachloroethane	79-34-5	0.2	0.2	ug_4G	U			TRG									4.2	0.2	0.2	SI10688	WH201101		
9224701000900	AWDI		MERIDIAN_NAD	3dl108-SB20-0708A	NZNE	VOA	8260C	VOA	EAS	BATHURST ANALYTICAL		3dl	5W5005	RES		L	4	01/03/2017 09:25	03/06/2017			20170317	15:08:00	20170317	17:08:00	SI10688-1	5		84.373		1,2,3-Trichloropropane	96-18-4	0.5	0.5	ug_4G	U			TRG									4.2	0.5	0.5	SI10688	WH201101		
9224701000900	AWDI		MERIDIAN_NAD	3dl108-SB20-0708A	NZNE	VOA	8260C	VOA	EAS	BATHURST ANALYTICAL		3dl	5W5005	RES		L	4	01/03/2017 09:25	03/06/2017			20170317	15:08:00	20170317	17:08:00	SI10688-1	5		84.373		n-Propylbenzene	103-65-1	0.2	0.2	ug_4G	U			TRG									4.2	0.2	0.2	SI10688	WH201101		
9224701000900	AWDI		MERIDIAN_NAD	3dl108-SB20-0708A	NZNE	VOA	8260C	VOA	EAS	BATHURST ANALYTICAL		3dl	5W5005	RES		L	4	01/03/2017 09:25	03/06/2017			20170317	15:08:00	20170317	17:08:00	SI10688-1	5		84.373		1,3,5-Trimethylbenzene	108-67-8	0.5	0.5	ug_4G	U			TRG									4.2	0.5	0.5	SI10688	WH201101		
9224701000900	AWDI		MERIDIAN_NAD	3dl108-SB20-0708A	NZNE	VOA	8260C	VOA	EAS	BATHURST ANALYTICAL		3dl	5W5005	RES		L	4	01/03/2017 09:25	03/06/2017			20170317	15:08:00	20170317	17:08:00	SI10688-1	5		84.373		1,2,4-Trimethylbenzene	95-63-6	0.5	0.5	ug_4G	U			TRG									4.2	0.5	0.5	SI10688	WH201101		
9224701000900	AWDI		MERIDIAN_NAD	3dl108-SB20-0708A	NZNE	VOA	8260C	VOA	EAS	BATHURST ANALYTICAL		3dl	5W5005	RES		L	4	01/03/2017 09:25	03/06/2017			20170317	15:08:00	20170317	17:08:00	SI10688-1	5		84.373		sec-Butylbenzene	135-98-8	0.5	0.5	ug_4G	U			TRG									4.2	0.5	0.5	SI10688	WH201101		
9224701000900	AWDI		MERIDIAN_NAD	3dl108-SB20-0708A	NZNE	VOA	8260C	VOA	EAS	BATHURST ANALYTICAL		3dl	5W5005	RES		L	4	01/03/2017 09:25	03/06/2017			20170317	15:08:00	20170317	17:08:00	SI10688-1	5		84.373		1,3-Dichlorobenzene	541-73-1	0.2	0.2	ug_4G	U			TRG									4.2	0.2	0.2	SI10688	WH201101		
9224701000900	AWDI		MERIDIAN_NAD	3dl108-SB20-0708A	NZNE	VOA	8260C	VOA	EAS	BATHURST ANALYTICAL		3dl	5W5005	RES		L	4	01/03/2017 09:25	03/06/2017			20170317	15:08:00	20170317	17:08:00	SI10688-1	5		84.373		1,4-Dichlorobenzene	106-46-7	0.4	0.4	ug_4G	U			TRG									4.2	0.57	1.2	SI10688	WH201101		
9224701000900	AWDI		MERIDIAN_NAD	3dl108-SB20-0708A	NZNE	VOA	8260C	VOA	EAS	BATHURST ANALYTICAL		3dl	5W5005	RES		L	4	01/03/2017 09:25	03/06/2017			20170317	15:08:00	20170317	17:08:00	SI10688-1	5		84.373		1,2-Dichlorobenzene	95-50-1	0.4	0.4	ug_4G	U			TRG									4.2	0.4	0.4	SI10688	WH201101		
9224701000900	AWDI		MERIDIAN_NAD	3dl108-SB20-0708A	NZNE	VOA	8260C	VOA	EAS	BATHURST ANALYTICAL		3dl	5W5005	RES		L	4	01/03/2017 09:25	03/06/2017			20170317	15:08:00	20170317	17:08:00	SI10688-1	5		84.373		1,2-Dibromo-3-chloropropane	96-12-8	0.2	0.2	ug_4G	U			TRG									4.2	0.2	0.2	SI10688	WH201101		
9224701000900	AWDI		MERIDIAN_NAD	3dl108-SB20-0708A	NZNE	VOA	8260C	VOA	EAS	BATHURST ANALYTICAL		3dl	5W5005	RES		L	4	01/03/2017 09:25	03/06/2017			20170317	15:08:00	20170317	17:08:00	SI10688-1	5		84.373		1,2,4-Trichlorobenzene	120-82-1	0.3	0.3	ug_4G	U			TRG									4.2	0.3	0.3	SI10688	WH201101		
9224701000900	AWDI		MERIDIAN_NAD	3dl108-SB20-0708A	NZNE	VOA	8260C	VOA	EAS	BATHURST ANALYTICAL		3dl	5W5005	RES		L	4	01/03/2017 09:25	03/06/2017			20170317	15:08:00	20170317	17:08:00	SI10688-1	5		84.373		Hexachlorobutadiene	87-68-3	0.6	0.6	ug_4G	U			TRG									4.2	0.96	0.6	SI10688	WH201101		
9224701000900	AWDI		MERIDIAN_NAD	3dl108-SB20-0708A	NZNE	VOA	8260C	VOA	EAS	BATHURST ANALYTICAL		3dl	5W5005	RES		L	4	01/03/2017 09:25	03/06/2017			20170317	15:08:00	20170317	17:08:00	SI10688-1	5		84.373		Naphthalene	91-20-3	0.5	0.5	ug_4G	U			TRG									4.2	0.5	0.5	SI10688	WH201101		
9224701000900	AWDI		MERIDIAN_NAD	3dl108-SB20-0708A	NZNE	VOA	8260C	VOA	EAS	BATHURST ANALYTICAL		3dl	5W5005	RES		L	4	01/03/2017 09:25	03/06/2017			20170317	15:08:00	20170317	17:08:00	SI10688-1	5		84.373		1,2,3-Trichlorobenzene	87-61-6	0.5	0.5	ug_4G	U			TRG									4.2	0.5	0.5	SI10688	WH201101		
9224701000900	AWDI		MERIDIAN_NAD	3dl108-SB20-0708A	NZNE	VOA	8260C	VOA	EAS	BATHURST ANALYTICAL		3dl	5W5005	RES		L	4	01/03/2017 09:25	03/06/2017			20170317	15:08:00	20170317	17:08:00	SI10688-1	5		84.373		Bromoform	75-25-2	0.5	0.5	ug_4G	U			TRG									4.2	0.5	0.5	SI10688	WH201101		
9224701000900	AWDI		MERIDIAN_NAD	3dl108-SB20-0708A	NZNE	VOA	8260C	VOA	EAS	BATHURST ANALYTICAL		3dl	5W5005	RES		L	4	01/03/2017 09:25	03/06/2017			20170317	15:08:00	20170317	17:08:00	SI10688-1	5		84.373		Methyl acetate	79-20-9	20	20	ug_4G	U			TRG									4.2	2.5	5	SI10688	WH201101		
9224701000900	AWDI		MERIDIAN_NAD	3dl108-SB20-0708A	NZNE	VOA	8260C	VOA	EAS	BATHURST ANALYTICAL		3dl	5W5005	RES		L	4	01/03/2017 09:25	03/06/2017			20170317	15:08:00	20170317	17:08:00	SI10688-1	5		84.373		Methylcyclohexane	108-87-2	139	139	ug_4G				TRG									4.2	1.2	2.5	SI10688	WH201101		
9224701000900	AWDI		MERIDIAN_NAD	3dl108-SB20-0708A	NZNE	VOA	8260C	VOA	EAS	BATHURST ANALYTICAL		3dl	5W5005	RES		L	4	01/03/2017 09:25	03/06/2017			20170317	15:08:00	20170317	17:08:00	SI10688-1	5		84.373		Methylcyclohexane	108-87-2	139	139	ug_4G	U			TRG									4.2	1.2	2.5	SI10688	WH201101		
9224701000900	AWDI		MERIDIAN_NAD	3dl108-SB20-0708A	NZNE	VOA	8260C	VOA	EAS	BATHURST ANALYTICAL		3dl	5W5005	RES		L	4	01/03/2017 09:25	03/06/2017			20170317	14:19:00	20170317	16:19:00	SI10687-1	5		84.373		m-&p-Xylene	1330-20-7	1.5	1.5	ug_4G	U			TRG									4.2	1.5	1.5	SI10687	WH201101		
9224701000900	AWDI		MERIDIAN_NAD	3dl108-SB20-0708A	NZNE	VOA	8260C	VOA	EAS	BATHURST ANALYTICAL		3dl	5W5005	RES		L	4	01/03/2017 09:25	03/06/2017			20170317	14:19:00	20170317	16:19:00	SI10687-1	5		84.373		o-Xylene	95-47-6	0.5	0.5	ug_4G	U			TRG									4.2	0.5	0.5	SI10687	WH201101		
9224701000900	AWDI		MERIDIAN_NAD	3dl108-SB20-0708A	NZNE	VOA	8260C	VOA	EAS	BATHURST ANALYTICAL		3dl	5W5005	RES		L	4	01/03/2017 09:25	03/06/2017			20170317	14:19:00	20170317	16:19:00	SI10687-1	5		84.373		Toluene-D8	2037-26-5	91.6	91.6	PCT				SURR			SLSA	115	85	20091101								
9224701000900	AWDI		MERIDIAN_NAD	3dl108-SB20-0708A	NZNE	VOA	8260C	VOA	EAS	BATHURST ANALYTICAL		3dl	5W5005	RES		L	4	01/03/2017 09:25	03/06/2017			20170317	14:19:00	20170317	16:19:00	SI10687-1	5		84.373		1,2-Dichloroethane-d4	17060-07-0	115	115	PCT				SURR			SLSA	139	58	20091101								
9224701000900	AWDI		MERIDIAN_NAD	3dl108-SB20-0708A	NZNE	VOA	8260C	VOA	EAS	BATHURST ANALYTICAL		3dl	5W5005	RES		L	4	01/03/2017 09:25	03/06/2017			20170317	14:19:00	20170317	16:19:00	SI10687-1	5		84.373		Dibromofluoromethane (Freon-12)	1868-53-7	107	107	PCT				SURR			SLSA	130	64	20091101								
9224701000900	AWDI		MERIDIAN_NAD	3dl108-SB20-0708A	NZNE	VOA	8260C	VOA	EAS	BATHURST ANALYTICAL		3dl	5W5005	RES		L	4	01/03/2017 09:25	03/06/2017			20170317	14:19:00	20170317	16:19:00	SI10687-1	5		84.373		Dibromofluoromethane	1868-53-7	107	107	PCT				SURR			SLSA	130	64	20091101								
9224701000900	AWDI		MERIDIAN_NAD	3dl108-SB20-0708A	NZNE	VOA	8260C	VOA	EAS	BATHURST ANALYTICAL		3dl	5W5005	RES		L	4	01/03/2017 09:25	03/06/2017			20170317	14:19:00	20170317	16:19:00	SI10687-1	5		84.373		Toluene-D8	2037-26-5	91.6	91.6	PCT				SURR			SLSA	115	85	20091101								
9224701000900	AWDI		MERIDIAN_NAD	3dl108-SB20-0708A	NZNE	VOA	8260C	VOA	EAS	BATHURST ANALYTICAL		3dl	5W5005	RES		L	4	01/03/2017 09:25	03/06/2017			20170317	14:19:00	20170317	16:19:00	SI10687-1	5		84.373		4-Bromofluorobenzene	460-00-4	94.5	94.5	PCT				SURR			SLSA	120	85	20091101								
9224701000900	AWDI		MERIDIAN_NAD	3dl108-SB20-0708A	NZNE	VOA	8260C	VOA	EAS	BATHURST ANALYTICAL		3dl	5W5005	RES		L	4	01/03/2017 09:25	03/06/2017			20170317	14:19:00	20170317	16:19:00	SI10687-1	5		84.373		1,2-Dichloroethane-d4	17060-07-0	115	115	PCT				SURR			SLSA	139	58	20091101								
9224701000900	AWDI		MERIDIAN_NAD	3dl108-SB20-0708A	NZNE	VOA	8260C	VOA	EAS	BATHURST ANALYTICAL		3dl	5W5005	RES		L	4	01/03/2017 09:25	03/06/2017			20170317	14:19:00	20170317	16:19:00	SI10687-1	5		84.373		Dibromofluoromethane	1868-53-7	107	107	PCT				SURR			SLSA	130	64	20091101								
9224701000900	AWDI		MERIDIAN_NAD	3dl108-SB21-0708A	NZNE	VOA	8260C	VOA	EAS	BATHURST ANALYTICAL		3dl	5W5005	RES		L	4	01/03/2017 10:45	03/06/2017			20170317	14:19:00	20170317	16:19:00	SI10687-3	5		84.344		Vinyl chloride	75-01-4	0.5	0.5	ug_4G	U			TRG									4.2	0.5	0.5	SI10687	WH201101		
9224701000900	AWDI		MERIDIAN_NAD	3dl108-SB21-0708A	NZNE	VOA	8260C	VOA	EAS	BATHURST ANALYTICAL		3dl	5W5005	RES		L	4	01/03/2017 10:45	03/06/2017			20170317	14:19:00	20170317	16:19:00	SI10687-3	5		84.344		Chloroethane	75-00-3	0.8	0.8	ug_4G	U			TRG									4.2	0.8	0.8	SI10687	WH201101		
9224701000900	AWDI		MERIDIAN_NAD	3dl108-SB21-0708A	NZNE

Comment_ID	OCG_XTU_Number	Phase	Installation_ID	Sample_Name	CNTRL_Code	Analysis_Group	Analytical_Method	PAC_Code	Lab_Code	Lab_Name	Leachate_Method	Sample_Basis	Connection_Method	Result_Type	Lab_QC_Type	Sample_Medium	QC_Level	Date/Time_Collected	Date_Received	Leachate_Date	Leachate_Time	Extraction_Date	Extraction_Time	Analysis_Date	Analysis_Time	Lab_Sample_ID	Dilution	Run_Number	Percent_Moisture	Percent_Lipid	Chem_Name	Analyte_ID	Analyte_Value	Original_Analyte_Value	Result_Units	Lab_Qualifier	Validator_Qualifier	QC_Column_Type	Analysis_Result_Type	Result_Narrative	SQC_Control_Limit_Code	QC_Accuracy_Upper	QC_Accuracy_Lower	Control_Limit_Date	QC_Narrative	MDL	Detection_Limit	CRM_Version	DL	LOD	LOQ	SDG	Analysis_Batch	Validator_Name	Val_Date
9224701000900	AWDI			MERIDIAN_NAD_	9453038-SB21-07084	NONE	HDA	82600	HDA	EAS	EATHOUSH ANALYTICAL		89Y	SWS005	000	REG	L	4	03/03/2017 10:45	03/06/2017			03/09/2017	16:22:00	20170310	16:22:00	SA18680-3	1	L	24.344		1,2,3-Trichlorobenzene	87-61-6	0.8	0.8	ug_KG	U			TRG												4.2	0.4	1.6	7.5	SA16680	WILSON123	
9224701000900	AWDI			MERIDIAN_NAD_	9453038-SB21-07084	NONE	HDA	82600	HDA	EAS	EATHOUSH ANALYTICAL		89Y	SWS005	000	REG	L	4	03/03/2017 10:45	03/06/2017			03/09/2017	16:22:00	20170310	16:22:00	SA18680-3	1	L	24.344		Dibromochloromethane	124-48-1	0.8	1.8	ug_KG	U			TRG												4.2	0.1	1.8	7.5	SA16680	WILSON123	
9224701000900	AWDI			MERIDIAN_NAD_	9453038-SB19-07084	NONE	HDA	82600	HDA	EAS	EATHOUSH ANALYTICAL		89Y	SWS005	000	REG	L	4	03/03/2017 10:45	03/06/2017			03/09/2017	16:22:00	20170310	16:22:00	SA18680-3	1	L	24.344		1,2-Dibromoethane	106-93-4	0.8	1.8	ug_KG	U			TRG												4.2	0.1	1.8	7.5	SA16680	WILSON123	
9224701000900	AWDI			MERIDIAN_NAD_	9453038-SB21-07084	NONE	HDA	82600	HDA	EAS	EATHOUSH ANALYTICAL		89Y	SWS005	000	REG	L	4	03/03/2017 10:45	03/06/2017			03/09/2017	16:22:00	20170310	16:22:00	SA18680-3	1	L	24.344		2-Hexanone	591-78-6	70	70	ug_KG	U			TRG												4.2	7.2	35	38	SA16680	WILSON123	
9224701000900	AWDI			MERIDIAN_NAD_	9453038-SB19-07084	NONE	HDA	82600	HDA	EAS	EATHOUSH ANALYTICAL		89Y	SWS005	000	REG	L	4	03/03/2017 10:45	03/06/2017			03/09/2017	16:22:00	20170310	16:22:00	SA18680-3	1	L	24.344		Chlorobenzene	108-90-7	0.8	1.8	ug_KG	U			TRG												4.2	0.4	1.8	7.5	SA16680	WILSON123	
9224701000900	AWDI			MERIDIAN_NAD_	9453038-SB21-07084	NONE	HDA	82600	HDA	EAS	EATHOUSH ANALYTICAL		89Y	SWS005	000	REG	L	4	03/03/2017 10:45	03/06/2017			03/09/2017	16:22:00	20170310	16:22:00	SA18680-3	1	L	24.344		Ethylbenzene	100-41-4	0.8	1.8	ug_KG	U			TRG												4.2	0.4	1.8	7.5	SA16680	WILSON123	
9224701000900	AWDI			MERIDIAN_NAD_	9453038-SB21-07084	NONE	HDA	82600	HDA	EAS	EATHOUSH ANALYTICAL		89Y	SWS005	000	REG	L	4	03/03/2017 10:45	03/06/2017			03/09/2017	16:22:00	20170310	16:22:00	SA18680-3	1	L	24.344		Xylene, total	1330-20-7	1.6	3.1	ug_KG	UM	UM		TRG												4.2	0.8	3.1	15	SA16680	WILSON123	
9224701000900	AWDI			MERIDIAN_NAD_	9453038-SB19-07084	NONE	HDA	82600	HDA	EAS	EATHOUSH ANALYTICAL		89Y	SWS005	000	REG	L	4	03/03/2017 10:45	03/06/2017			03/09/2017	16:22:00	20170310	16:22:00	SA18680-3	1	L	24.344		m- and p-Xylene	179601-23-1	0.8	1.8	ug_KG	UM	UM		TRG												4.2	0.4	1.8	7.5	SA16680	WILSON123	
9224701000900	AWDI			MERIDIAN_NAD_	9453038-SB21-07084	NONE	HDA	82600	HDA	EAS	EATHOUSH ANALYTICAL		89Y	SWS005	000	REG	L	4	03/03/2017 10:45	03/06/2017			03/09/2017	16:22:00	20170310	16:22:00	SA18680-3	1	L	24.344		o-Xylene	95-47-6	0.8	1.8	ug_KG	UM	UM		TRG												4.2	0.4	1.8	7.5	SA16680	WILSON123	
9224701000900	AWDI			MERIDIAN_NAD_	9453038-SB19-07084	NONE	HDA	82600	HDA	EAS	EATHOUSH ANALYTICAL		89Y	SWS005	000	REG	L	4	03/03/2017 10:45	03/06/2017			03/09/2017	16:22:00	20170310	16:22:00	SA18680-3	1	L	24.344		Styrene	100-42-5	0.8	1.8	ug_KG	UMM	UMM		TRG												4.2	0.4	1.8	7.5	SA16680	WILSON123	
9224701000900	AWDI			MERIDIAN_NAD_	9453038-SB21-07084	NONE	HDA	82600	HDA	EAS	EATHOUSH ANALYTICAL		89Y	SWS005	000	REG	L	4	03/03/2017 10:45	03/06/2017			03/09/2017	16:22:00	20170310	16:22:00	SA18680-3	1	L	24.344		Bromoform	75-25-2	0.8	1.8	ug_KG	UM	UM		TRG												4.2	0.8	1.8	7.5	SA16680	WILSON123	
9224701000900	AWDI			MERIDIAN_NAD_	9453038-SB19-07084	NONE	HDA	82600	HDA	EAS	EATHOUSH ANALYTICAL		89Y	SWS005	000	REG	L	4	03/03/2017 10:45	03/06/2017			03/09/2017	16:22:00	20170310	16:22:00	SA18680-3	1	L	24.344		1,1,2,2-Tetrachloroethane	79-34-5	0.8	1.8	ug_KG	UM	UM		TRG												4.2	0.4	1.8	7.5	SA16680	WILSON123	
9224701000900	AWDI			MERIDIAN_NAD_	9453038-SB21-07084	NONE	HDA	82600	HDA	EAS	EATHOUSH ANALYTICAL		89Y	SWS005	000	REG	L	4	03/03/2017 10:45	03/06/2017			03/09/2017	16:22:00	20170310	16:22:00	SA18680-3	1	L	24.344		1,4-Dichlorobenzene	106-46-7	0.8	1.8	ug_KG	UM	UM		TRG												4.2	0.4	1.8	7.5	SA16680	WILSON123	
9224701000900	AWDI			MERIDIAN_NAD_	9453038-SB19-07084	NONE	HDA	82600	HDA	EAS	EATHOUSH ANALYTICAL		89Y	SWS005	000	REG	L	4	03/03/2017 10:45	03/06/2017			03/09/2017	16:22:00	20170310	16:22:00	SA18680-3	1	L	24.344		1,2-Dichlorobenzene	95-50-1	0.8	1.8	ug_KG	UM	UM		TRG												4.2	0.4	1.8	7.5	SA16680	WILSON123	
9224701000900	AWDI			MERIDIAN_NAD_	9453038-SB21-07084	NONE	HDA	82600	HDA	EAS	EATHOUSH ANALYTICAL		89Y	SWS005	000	REG	L	4	03/03/2017 10:45	03/06/2017			03/09/2017	16:22:00	20170310	16:22:00	SA18680-3	1	L	24.344		Styrene	100-42-5	0.8	1.8	ug_KG	UM	UM		TRG												4.2	0.4	1.8	7.5	SA16680	WILSON123	
9224701000900	AWDI			MERIDIAN_NAD_	9453038-SB19-07084	NONE	HDA	82600	HDA	EAS	EATHOUSH ANALYTICAL		89Y	SWS005	000	REG	L	4	03/03/2017 10:45	03/06/2017			03/09/2017	16:22:00	20170310	16:22:00	SA18680-3	1	L	24.344		Bromoform	75-25-2	0.8	1.8	ug_KG	UM	UM		TRG												4.2	0.8	1.8	7.5	SA16680	WILSON123	
9224701000900	AWDI			MERIDIAN_NAD_	9453038-SB21-07084	NONE	HDA	82600	HDA	EAS	EATHOUSH ANALYTICAL		89Y	SWS005	000	REG	L	4	03/03/2017 10:45	03/06/2017			03/09/2017	16:22:00	20170310	16:22:00	SA18680-3	1	L	24.344		1,1,2,2-Tetrachloroethane	79-34-5	0.8	1.8	ug_KG	UM	UM		TRG												4.2	0.4	1.8	7.5	SA16680	WILSON123	
9224701000900	AWDI			MERIDIAN_NAD_	9453038-SB19-07084	NONE	HDA	82600	HDA	EAS	EATHOUSH ANALYTICAL		89Y	SWS005	000	REG	L	4	03/03/2017 10:45	03/06/2017			03/09/2017	16:22:00	20170310	16:22:00	SA18680-3	1	L	24.344		1,4-Dichlorobenzene	106-46-7	0.8	1.8	ug_KG	UM	UM		TRG												4.2	0.4	1.8	7.5	SA16680	WILSON123	
9224701000900	AWDI			MERIDIAN_NAD_	9453038-SB21-07084	NONE	HDA	82600	HDA	EAS	EATHOUSH ANALYTICAL		89Y	SWS005	000	REG	L	4	03/03/2017 10:45	03/06/2017			03/09/2017	16:22:00	20170310	16:22:00	SA18680-3	1	L	24.344		1,2-Dichlorobenzene	95-50-1	0.8	1.8	ug_KG	UM	UM		TRG												4.2	0.4	1.8	7.5	SA16680	WILSON123	
9224701000900	AWDI			MERIDIAN_NAD_	9453038-SB19-07084	NONE	HDA	82600	HDA	EAS	EATHOUSH ANALYTICAL		89Y	SWS005	000	REG	L	4	03/03/2017 10:45	03/06/2017			03/09/2017	16:22:00	20170310	16:22:00	SA18680-3	1	L	24.344		Styrene	100-42-5	0.8	1.8	ug_KG	UM	U

Contract_ID	DO_CTO_Number	Phase	Installation_ID	Sample_Name	CH2M_Code	Analysis_Group	Analytical_Method	PRC_Code	Lab_Code	Lab_Name	Leachate_Method	Sample_Basis	Extraction_Method	Result_Type	Lab_QC_Type	Sample_Medium	QC_Level	DateTime_Collected	Date_Received	Leachate_Date	Leachate_Time	Extraction_Date	Extraction_Time	Analysis_Date	Analysis_Time	Lab_Sample_ID	Dilution	Run_Number	Percent_Moisture	Percent_Lipid	Chem_Name	Analyte_ID	Analyte_Value	Original_Analyte_Value	Result_Units	Lab_Qualifier	Validator_Qualifier	GC_Column_Type	Analysis_Result_Type	Result_Narrative	QC_Control_Limit_Code	QC_Accuracy_Upper	QC_Accuracy_Lower	Control_Limit_Date	QC_Narrative	MDL	Detection_Limit	QSM_Version	DL	LOD	LOQ	SDG	Analysis_Batch	Validator_Name	Val_Date
N6247016D9000	JM01		MERIDIAN_NAS	WG201342-BLANK	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	BLK	W	4	03/14/2017 10:37	03/14/2017			20170314	10:37:00	20170314	10:37:00	WG201342-2	1	1			1,2-Dichlorobenzene	95-50-1	0.50	0.50	UG_L	U	U		TRG									4.2	0.15	0.50	1.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	WG201342-BLANK	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	BLK	W	4	03/14/2017 10:37	03/14/2017			20170314	10:37:00	20170314	10:37:00	WG201342-2	1	1			1,2-Dibromo-3-chloropropane	96-12-8	1.0	1.0	UG_L	U	U		TRG									4.2	0.50	1.0	2.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	WG201342-BLANK	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	BLK	W	4	03/14/2017 10:37	03/14/2017			20170314	10:37:00	20170314	10:37:00	WG201342-2	1	1			1,2,4-Trichlorobenzene	120-82-1	0.50	0.50	UG_L	U	U		TRG									4.2	0.37	0.50	1.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	WG201342-BLANK	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	BLK	W	4	03/14/2017 10:37	03/14/2017			20170314	10:37:00	20170314	10:37:00	WG201342-2	1	1			Methyl acetate	79-20-9	0.75	0.75	UG_L	U	U		TRG									4.2	0.53	0.75	1.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	WG201342-BLANK	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	BLK	W	4	03/14/2017 10:37	03/14/2017			20170314	10:37:00	20170314	10:37:00	WG201342-2	1	1			Methylcyclohexane	108-87-2	0.50	0.50	UG_L	U	U		TRG									4.2	0.30	0.50	1.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	WG201342-BLANK	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	BLK	W	4	03/14/2017 10:37	03/14/2017			20170314	10:37:00	20170314	10:37:00	WG201342-2	1	1			Bromochloromethane	74-97-5	0.50	0.50	UG_L	U	U		TRG									4.2	0.21	0.50	1.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	WG201342-BLANK	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	BLK	W	4	03/14/2017 10:37	03/14/2017			20170314	10:37:00	20170314	10:37:00	WG201342-2	1	1			o-Xylene	95-47-6	0.50	0.50	UG_L	U	U		TRG									4.2	0.25	0.50	1.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	WG201342-BLANK	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	BLK	W	4	03/14/2017 10:37	03/14/2017			20170314	10:37:00	20170314	10:37:00	WG201342-2	1	1			m- and p-Xylene	m&pXYLENE	1.0	1.0	UG_L	U	U		TRG									4.2	0.59	1.0	2.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	WG201342-BLANK	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	BLK	W	4	03/14/2017 10:37	03/14/2017			20170314	10:37:00	20170314	10:37:00	WG201342-2	1	1			1,2,3-Trichlorobenzene	87-61-6	0.50	0.50	UG_L	U	U		TRG									4.2	0.27	0.50	1.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	WG201342-BLANK	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	BLK	W	4	03/14/2017 10:37	03/14/2017			20170314	10:37:00	20170314	10:37:00	WG201342-2	1	1			Xylene, total	1330-20-7	1.5	1.5	UG_L	U	U		TRG									4.2	0.25	1.5	3.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	WG201342-BLANK	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	BLK	W	4	03/14/2017 10:37	03/14/2017			20170314	10:37:00	20170314	10:37:00	WG201342-2	1	1			4-Bromofluorobenzene	460-00-4	93.5	93.5	PCT				SURR		SLSA	120	75	20091101				4.2	0	0	0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	WG201342-BLANK	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	BLK	W	4	03/14/2017 10:37	03/14/2017			20170314	10:37:00	20170314	10:37:00	WG201342-2	1	1			Toluene-D8	2037-26-5	102.	102.	PCT				SURR		SLSA	120	85	20091101				4.2	0	0	0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	WG201342-BLANK	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	BLK	W	4	03/14/2017 10:37	03/14/2017			20170314	10:37:00	20170314	10:37:00	WG201342-2	1	1			1,2-Dichloroethane-d4	17060-07-0	115.	115.	PCT				SURR		SLSA	120	70	20091101				4.2	0	0	0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	WG201342-BLANK	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	BLK	W	4	03/14/2017 10:37	03/14/2017			20170314	10:37:00	20170314	10:37:00	WG201342-2	1	1			Dibromofluoromethane	1868-53-7	107.	107.	PCT				SURR		SLSA	115	85	20091101				4.2	0	0	0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	WG201342-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	BS	W	4	03/14/2017 09:21	03/14/2017			20170314	09:21:00	20170314	09:21:00	WG201342-1	1	1			Dichlorodifluoromethane (Freon-12)	75-71-8	32.8	32.8	UG_L				TRG		LSA	155	30	20091101				4.2	0.24	1.0	2.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	WG201342-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	BS	W	4	03/14/2017 09:21	03/14/2017			20170314	09:21:00	20170314	09:21:00	WG201342-1	1	1			Chloromethane	74-87-3	38.8	38.8	UG_L				TRG		LSA	125	40	20091101				4.2	0.36	1.0	2.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	WG201342-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	BS	W	4	03/14/2017 09:21	03/14/2017			20170314	09:21:00	20170314	09:21:00	WG201342-1	1	1			Vinyl chloride	75-01-4	40.8	40.8	UG_L				TRG		LSA	145	50	20091101				4.2	0.25	1.0	2.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	WG201342-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	BS	W	4	03/14/2017 09:21	03/14/2017			20170314	09:21:00	20170314	09:21:00	WG201342-1	1	1			Bromomethane	74-83-9	46.6	46.6	UG_L				TRG		LSA	145	30	20091101				4.2	0.49	1.0	2.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	WG201342-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	BS	W	4	03/14/2017 09:21	03/14/2017			20170314	09:21:00	20170314	09:21:00	WG201342-1	1	1			Chloroethane	75-00-3	51.1	51.1	UG_L				TRG		LSA	135	60	20091101				4.2	0.55	1.0	2.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	WG201342-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	BS	W	4	03/14/2017 09:21	03/14/2017			20170314	09:21:00	20170314	09:21:00	WG201342-1	1	1			Trichlorofluoromethane (Freon-11)	75-69-4	40.6	40.6	UG_L				TRG		LSA	145	60	20091101				4.2	0.24	1.0	2.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	WG201342-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	BS	W	4	03/14/2017 09:21	03/14/2017			20170314	09:21:00	20170314	09:21:00	WG201342-1	1	1			1,1-Dichloroethene	75-35-4	40.8	40.8	UG_L				TRG		LSA	130	70	20091101				4.2	0.35	0.50	1.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	WG201342-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	BS	W	4	03/14/2017 09:21	03/14/2017			20170314	09:21:00	20170314	09:21:00	WG201342-1	1	1			Carbon disulfide	75-15-0	48.4	48.4	UG_L				TRG		LSA	160	35	20091101				4.2	0.25	0.50	1.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	WG201342-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	BS	W	4	03/14/2017 09:21	03/14/2017			20170314	09:21:00	20170314	09:21:00	WG201342-1	1	1			1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	76-13-1	39.9	39.9	UG_L				TRG		LSA	126	73	20091101				4.2	0.31	0.50	1.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	WG201342-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	BS	W	4	03/14/2017 09:21	03/14/2017			20170314	09:21:00	20170314	09:21:00	WG201342-1	1	1			Methylene chloride	75-09-2	43.1	43.1	UG_L				TRG		LSA	140	55	20091101				4.2	1.1	2.5	5.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	WG201342-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	BS	W	4	03/14/2017 09:21	03/14/2017			20170314	09:21:00	20170314	09:21:00	WG201342-1	1	1			Acetone	67-64-1	50.7	50.7	UG_L				TRG		LSA	140	40	20091101				4.2	2.2	2.5	5.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	WG201342-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	BS	W	4	03/14/2017 09:21	03/14/2017			20170314	09:21:00	20170314	09:21:00	WG201342-1	1	1			trans-1,2-Dichloroethene	156-60-5	43.3	43.3	UG_L				TRG		LSA	140	60	20091101				4.2	0.25	0.50	1.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	WG201342-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	BS	W	4	03/14/2017 09:21	03/14/2017			20170314	09:21:00	20170314	09:21:00	WG201342-1	1	1			Methyl-tert-butyl ether (MTBE)	1634-04-4	89.8	89.8	UG_L				TRG		LSA	125	65	20091101				4.2	0.36	0.50	1.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	WG201342-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	BS	W	4	03/14/2017 09:21	03/14/2017			20170314	09:21:00	20170314	09:21:00	WG201342-1	1	1			1,1-Dichloroethane	75-34-3	43.4	43.4	UG_L				TRG		LSA	135	70	20091101				4.2	0.21	0.50	1.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	WG201342-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	BS	W	4	03/14/2017 09:21	03/14/2017			20170314	09:21:00	20170314	09:21:00	WG201342-1	1	1			cis-1,2-Dichloroethene	156-59-2	40.0	40.0	UG_L				TRG		LSA	125	70	20091101				4.2	0.21	0.50	1.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	WG201342-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	BS	W	4	03/14/2017 09:21	03/14/2017			20170314	09:21:00	20170314	09:21:00	WG201342-1	1	1			Chloroform	67-66-3	41.8	41.8	UG_L				TRG		LSA	135	65	20091101				4.2	0.32	0.50	1.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	WG201342-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	BS	W	4	03/14/2017 09:21	03/14/2017			20170314	09:21:00	20170314	09:21:00	WG201342-1	1	1			1,1,1-Trichloroethane	71-55-6	43.4	43.4	UG_L				TRG		LSA	130	65	20091101				4.2	0.20	0.50	1.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	WG201342-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	BS	W	4	03/14/2017 09:21	03/14/2017			20170314	09:21:00	20170314	09:21:00	WG201342-1	1	1			2-Butanone	78-93-3	37.9	37.9	UG_L				TRG		LSA	150	30	20091101				4.2	1.3	2.5	5.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	WG201342-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	BS	W	4	03/14/2017 09:21	03/14/2017			20170314	09:21:00	20170314	09:21:00	WG201342-1	1	1			Cyclohexane	110-82-7	44.0	44.0	UG_L				TRG		LSA	133	71	20091101				4.2	0.31	0.50	1.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	WG201342-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	BS	W	4	03/14/2017 09:21	03/14/2017			20170314	09:21:00	20170314	09:21:00	WG201342-1	1	1			Carbon tetrachloride	56-23-5	46.8	46.8	UG_L				TRG		LSA	140	65	20091101				4.2	0.22	0.50	1.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	WG201342-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	BS	W	4	03/14/2017 09:21	03/14/2017			20170314	09:21:00	20170314	09:21:00	WG201342-1	1	1			Benzene	71-43-2	41.2	41.2	UG_L				TRG		LSA	120	80	20091101				4.2	0.26	0.50	1.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	WG201342-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	BS	W	4	03/14/2017 09:21	03/14/2017			20170314	09:21:00	20170314	09:21:00	WG201342-1	1	1			1,2-Dichloroethane	107-06-2	42.3	42.3	UG_L				TRG		LSA	130	70	20091101				4.2	0.20	0.50	1.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	WG201342-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	BS	W	4	03/14/2017 09:21	03/14/2017			20170314	09:21:00	20170314	09:21:00	WG201342-1	1	1			Trichloroethene	79-01-6	44.7	44.7	UG_L				TRG		LSA	125	70	20091101				4.2	0.28	0.50	1.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	WG201342-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	BS	W	4	03/14/2017 09:21	03/14/2017			20170314	09:21:00	20170314	09:21:00	WG201342-1	1	1			1,2-Dichloropropane	78-87-5	43.7	43.7	UG_L				TRG		LSA	125	75	20091101				4.2	0.25	0.50	1.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	WG201342-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	BS	W	4	03/14/2017 09:21	03/14/2017			20170314	09:21:00	20170314	09:21:00	WG201342-1	1	1			Bromodichloromethane	75-27-4	44.9	44.9	UG_L				TRG		LSA	120	75	20091101				4.2	0.33	0.50	1.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	WG201342-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	BS	W	4	03/14/2017 09:21	03/14/2017			20170314	09:21:00	20170314	09:21:00	WG201342-1	1	1			cis-1,3-Dichloropropene	10061-01-5	48.0	48.0	UG_L				TRG		LSA	130	70	20091101				4.2	0.19	0.50	1.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	WG201342-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	BS	W	4	03/14/2017 09:21	03/14/2017			20170314	09:21:00	20170314	09:21:00	WG201342-1	1	1			Toluene	108-88-3	41.8	41.8	UG_L				TRG		LSA	120	75	20091101				4.2	0.27	0.50	1.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	WG201342-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	BS	W	4	03/14/2017 09:21	03/14/2017			20170314	09:21:00	20170314	09:21:00	WG201342-1	1	1			4-Methyl-2-pentanone	108-10-1	41.9	41.9	UG_L				TRG		LSA	135	60	20091101				4.2	1.3	2.5	5.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	WG201342-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	BS	W	4	03/14/2017 09:21	03/14/2017			20170314	09:21:00	20170314	09:21:00	WG201342-1	1	1			trans-1,3-Dichloropropene	10061-02-6	45.2	45.2	UG_L				TRG		LSA	140	55	20091101				4.2	0.20	0.50	1.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	WG201342-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	BS	W	4	03/14/2017 09:21	03/14/2017			20170314	09:21:00	20170314	09:21:00	WG201342-1	1	1			1,1,2-Trichloroethane	79-00-5	42.5	42.5	UG_L				TRG		LSA	125	75	20091101				4.2	0.33	0.50	1.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	WG201342-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	BS	W	4	03/14/2017 09:21	03/14/2017			20170314	09:21:00	20170314	09:21:00	WG201342-1	1	1			Tetrachloroethene	127-18-4	42.6	42.6	UG_L				TRG		LSA	150	45	20091101				4.2	0.40	0.50	1.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	WG201342-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	BS	W	4	03/14/2017 09:21	03/14/2017			20170314	09:21:00	20170314	09:21:00	WG201342-1	1	1			Dibromochloromethane	124-48-1	48.2	48.2	UG_L				TRG		LSA	135	60	20091101				4.2	0.30	0.50	1.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	WG201342-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	BS	W	4	03/14/2017 09:21	03/14/2017			20170314	09:21:00	20170314	09:21:00	WG201342-1	1	1			1,2-Dibromoethane	106-93-4	37.5	37.5	UG_L	*	*		TRG		LSA	120	80	20091101				4.2	0.22	0.50	1.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	WG201342-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	BS	W	4	03/14/2017 09:21	03/14/2017			20170314	09:21:00	20170314	09:21:00	WG201342-1	1	1			2-Hexanone	591-78-6	36.0	36.0	UG_L				TRG		LSA	130	55	20091101				4.2	1.7	2.5	5.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	WG201342-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	BS	W	4	03/14/2017 09:21	03/14/2017			20170314	09:21:00	20170314	09:21:00	WG201342-1	1	1			Chlorobenzene	108-90-7	43.2	43.2	UG_L				TRG		LSA	120	80	20091101				4.2	0.22	0.50	1.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	WG201342-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	BS	W	4	03/14/2017 09:21	03/14/2017			20170314	09:21:00	20170314	09:21:00	WG201342-1	1	1			Ethylbenzene	100-41-4	44.0	44.0	UG_L				TRG		LSA	125	75	20091101				4.2	0.21	0.50	1.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	WG201342-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	BS	W	4	03/14/2017 09:21	03/14/2017			20170314	09:21:00	20170314	09:21:00	WG201342-1	1	1			Styrene	100-42-5	46.2	46.2	UG_L				TRG		LSA	135	65	20091101				4.2	0.23	0.50	1.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	WG201342-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	BS	W	4	03/14/2017 09:21	03/14/2017			20170314	09:21:00	20170314	09:21:00	WG201342-1	1	1			Bromoform	75-25-2	47.1	47.1	UG_L				TRG		LSA	130	70	20091101				4.2	0.23	0.50	1.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	WG201342-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	BS	W	4	03/14/2017 09:21	03/14/2017			20170314	09:21:00	20170314	09:21:00	WG201342-1	1	1			Isopropylbenzene	98-82-8	46.9	46.9	UG_L				TRG		LSA	125	75	20091101				4.2	0.23	0.50	1.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	WG201342-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	BS	W	4	03/14/2017 09:21	03/14/2017			20170314	09:21:00	20170314	09:21:00	WG201342-1	1	1			1,1,2,2-Tetrachloroethane	79-34-5	41.9	41.9	UG_L				TRG		LSA	130	65	20091101				4.2	0.38	0.50	1.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	WG201342-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	BS	W	4	03/14/2017 09:21	03/14/2017			20170314	09:21:00	20170314	09:21:00	WG201342-1	1	1			1,3-Dichlorobenzene	541-73-1	44.5	44.5	UG_L				TRG		LSA	125	75	20091101				4.2	0.26	0.50	1.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	WG201342-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	BS	W	4	03/14/2017 09:21	03/14/2017			20170314	09:21:00	20170314	09:21:00	WG201342-1	1	1			1,4-Dichlorobenzene	106-46-7	42.8	42.8	UG_L				TRG		LSA	125	75	20091101				4.2	0.24	0.50	1.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	WG201342-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	BS	W	4	03/14/2017 09:21	03/14/2017			20170314	09:21:00	20170314	09:21:00	WG201342-1	1	1			1,2-Dichlorobenzene	95-50-1	45.0	45.0	UG_L				TRG		LSA	120	70	20091101				4.2	0.15	0.50	1.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	WG201342-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	BS	W	4	03/14/2017 09:21	03/14/2017			20170314	09:21:00	20170314	09:21:00	WG201342-1	1	1			1,2-Dibromo-3-chloropropane	96-12-8	35.1	35.1	UG_L				TRG		LSA	130	50	20091101				4.2	0.50	1.0	2.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	WG201342-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	BS	W	4	03/14/2017 09:21	03/14/2017			20170314	09:21:00	20170314	09:21:00	WG201342-1	1	1			1,2,4-Trichlorobenzene	120-82-1	45.4	45.4	UG_L				TRG		LSA	135	65	20091101				4.2	0.37	0.50	1.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	WG201342-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	BS	W	4	03/14/2017 09:21	03/14/2017			20170314	09:21:00	20170314	09:21:00	WG201342-1	1	1			Methyl acetate	79-20-9	36.8	36.8	UG_L				TRG		LSA	132	70	20091101				4.2	0.53	0.75	1.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	WG201342-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	BS	W	4	03/14/2017 09:21	03/14/2017			20170314	09:21:00	20170314	09:21:00	WG201342-1	1	1			Methylcyclohexane	108-87-2	41.1	41.1	UG_L				TRG		LSA	125	73	20091101				4.2	0.30	0.50	1.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	WG201342-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	BS	W	4	03/14/2017 09:21	03/14/2017			20170314	09:21:00	20170314	09:21:00	WG201342-1	1	1			Bromochloromethane	74-97-5	42.5	42.5	UG_L				TRG		LSA	130	65	20091101				4.2	0.21	0.50	1.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	WG201342-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	BS	W	4	03/14/2017 09:21	03/14/2017			20170314	09:21:00	20170314	09:21:00	WG201342-1	1	1			o-Xylene	95-47-6	44.6	44.6	UG_L				TRG		LSA	120	80	20091101				4.2	0.25	0.50	1.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	WG201342-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	BS	W	4	03/14/2017 09:21	03/14/2017			20170314	09:21:00	20170314	09:21:00	WG201342-1	1	1			m- and p-Xylene	m&pXYLENE	88.8	88.8	UG_L				TRG		LSA	130	75	20091101				4.2	0.59	1.0	2.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	WG201342-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	BS	W	4	03/14/2017 09:21	03/14/2017			20170314	09:21:00	20170314	09:21:00	WG201342-1	1	1			1,2,3-Trichlorobenzene	87-61-6	43.3	43.3	UG_L				TRG		LSA	140	55	20091101				4.2	0.27	0.50	1.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	WG201342-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	BS	W	4	03/14/2017 09:21	03/14/2017			20170314	09:21:00	20170314	09:21:00	WG201342-1	1	1			Xylene, total	1330-20-7	133.	133.	UG_L	*	*		TRG		LSA	116	89	20091101				4.2	0.25	1.5	3.0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	WG201342-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	BS	W	4	03/14/2017 09:21	03/14/2017			20170314	09:21:00	20170314	09:21:00	WG201342-1	1	1			4-Bromofluorobenzene	460-00-4	95.9	95.9	PCT				SURR		SLSA	120	75	20091101				4.2	0	0	0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	WG201342-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	BS	W	4	03/14/2017 09:21	03/14/2017			20170314	09:21:00	20170314	09:21:00	WG201342-1	1	1			Toluene-D8	2037-26-5	101.	101.	PCT				SURR		SLSA	120	85	20091101				4.2	0	0	0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	WG201342-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	BS	W	4	03/14/2017 09:21	03/14/2017			20170314	09:21:00	20170314	09:21:00	WG201342-1	1	1			1,2-Dichloroethane-d4	17060-07-0	102.	102.	PCT				SURR		SLSA	120	70	20091101				4.2	0	0	0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	WG201342-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		WET	SW5030	000	BS	W	4	03/14/2017 09:21	03/14/2017			20170314	09:21:00	20170314	09:21:00	WG201342-1	1	1			Dibromofluoromethane	1868-53-7	99.3	99.3	PCT				SURR		SLSA	115	85	20091101				4.2	0	0	0	SK1680	WG201342		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-BLANK	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BLK	S	4	03/17/2017 11:45	03/17/2017			20170317	11:45:00	20170317	11:45:00	WG201539-2	1	1			Dichlorodifluoromethane (Freon-12)	75-71-8	5.0	5.0	UG_KG	U	U		TRG									4.2	0.92	5.0	10.	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-BLANK	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BLK	S	4	03/17/2017 11:45	03/17/2017			20170317	11:45:00	20170317	11:45:00	WG201539-2	1	1			Chloromethane	74-87-3	5.0	5.0	UG_KG	U	U		TRG									4.2	1.4	5.0	10.	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-BLANK	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BLK	S	4	03/17/2017 11:45	03/17/2017			20170317	11:45:00	20170317	11:45:00	WG201539-2	1	1			Vinyl chloride	75-01-4	5.0	5.0	UG_KG	U	U		TRG									4.2	0.87	5.0	10.	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-BLANK	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BLK	S	4	03/17/2017 11:45	03/17/2017			20170317	11:45:00	20170317	11:45:00	WG201539-2	1	1			Bromomethane	74-83-9	5.0	5.0	UG_KG	U	U		TRG									4.2	1.1	5.0	10.	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-BLANK	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BLK	S	4	03/17/2017 11:45	03/17/2017			20170317	11:45:00	20170317	11:45:00	WG201539-2	1	1			Chloroethane	75-00-3	5.0	5.0	UG_KG	U	U		TRG									4.2	1.3	5.0	10.	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-BLANK	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BLK	S	4	03/17/2017 11:45	03/17/2017			20170317	11:45:00	20170317	11:45:00	WG201539-2	1	1			Trichlorofluoromethane (Freon-11)	75-69-4	5.0	5.0	UG_KG	U	U		TRG									4.2	0.91	5.0	10.	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-BLANK	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BLK	S	4	03/17/2017 11:45	03/17/2017			20170317	11:45:00	20170317	11:45:00	WG201539-2	1	1			1,1-Dichloroethene	75-35-4	2.5	2.5	UG_KG	U	U		TRG									4.2	0.93	2.5	5.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-BLANK	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BLK	S	4	03/17/2017 11:45	03/17/2017			20170317	11:45:00	20170317	11:45:00	WG201539-2	1	1			Carbon disulfide	75-15-0	2.5	2.5	UG_KG	U	U		TRG									4.2	0.78	2.5	5.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-BLANK	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BLK	S	4	03/17/2017 11:45	03/17/2017			20170317	11:45:00	20170317	11:45:00	WG201539-2	1	1			1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	76-13-1	2.5	2.5	UG_KG	U	U		TRG									4.2	0.90	2.5	5.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-BLANK	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BLK	S	4	03/17/2017 11:45	03/17/2017			20170317	11:45:00	20170317	11:45:00	WG201539-2	1	1			Methylene chloride	75-09-2	12	12	UG_KG	U	U		TRG									4.2	7.9	12.	25.	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-BLANK	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BLK	S	4	03/17/2017 11:45	03/17/2017			20170317	11:45:00	20170317	11:45:00	WG201539-2	1	1			Acetone	67-64-1	12	12	UG_KG	U	U		TRG									4.2	5.1	12.	25.	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-BLANK	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BLK	S	4	03/17/2017 11:45	03/17/2017			20170317	11:45:00	20170317	11:45:00	WG201539-2	1	1			trans-1,2-Dichloroethene	156-60-5	2.5	2.5	UG_KG	U	U		TRG									4.2	0.71	2.5	5.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-BLANK	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BLK	S	4	03/17/2017 11:45	03/17/2017			20170317	11:45:00	20170317	11:45:00	WG201539-2	1	1			Methyl-tert-butyl ether (MTBE)	1634-04-4	2.5	2.5	UG_KG	U	U		TRG									4.2	1.1	2.5	5.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-BLANK	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BLK	S	4	03/17/2017 11:45	03/17/2017			20170317	11:45:00	20170317	11:45:00	WG201539-2	1	1			1,1-Dichloroethane	75-34-3	2.5	2.5	UG_KG	U	U		TRG									4.2	1.7	2.5	5.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-BLANK	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BLK	S	4	03/17/2017 11:45	03/17/2017			20170317	11:45:00	20170317	11:45:00	WG201539-2	1	1			cis-1,2-Dichloroethene	156-59-2	2.5	2.5	UG_KG	U	U		TRG									4.2	0.91	2.5	5.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-BLANK	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BLK	S	4	03/17/2017 11:45	03/17/2017			20170317	11:45:00	20170317	11:45:00	WG201539-2	1	1			Chloroform	67-66-3	2.5	2.5	UG_KG	U	U		TRG									4.2	0.35	2.5	5.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-BLANK	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BLK	S	4	03/17/2017 11:45	03/17/2017			20170317	11:45:00	20170317	11:45:00	WG201539-2	1	1			Carbon tetrachloride	56-23-5	2.5	2.5	UG_KG	U	U		TRG									4.2	1.3	2.5	5.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-BLANK	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BLK	S	4	03/17/2017 11:45	03/17/2017			20170317	11:45:00	20170317	11:45:00	WG201539-2	1	1			1,1,1-Trichloroethane	71-55-6	2.5	2.5	UG_KG	U	U		TRG									4.2	0.42	2.5	5.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-BLANK	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BLK	S	4	03/17/2017 11:45	03/17/2017			20170317	11:45:00	20170317	11:45:00	WG201539-2	1	1			2-Butanone	78-93-3	12	12	UG_KG	U	U		TRG									4.2	5.9	12.	25.	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-BLANK	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BLK	S	4	03/17/2017 11:45	03/17/2017			20170317	11:45:00	20170317	11:45:00	WG201539-2	1	1			Benzene	71-43-2	2.5	2.5	UG_KG	U	U		TRG									4.2	0.92	2.5	5.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-BLANK	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BLK	S	4	03/17/2017 11:45	03/17/2017			20170317	11:45:00	20170317	11:45:00	WG201539-2	1	1			Cyclohexane	110-82-7	2.5	2.5	UG_KG	U	U		TRG									4.2	1.4	2.5	5.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-BLANK	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BLK	S	4	03/17/2017 11:45	03/17/2017			20170317	11:45:00	20170317	11:45:00	WG201539-2	1	1			1,2-Dichloroethane	107-06-2	2.5	2.5	UG_KG	U	U		TRG									4.2	1.0	2.5	5.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-BLANK	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BLK	S	4	03/17/2017 11:45	03/17/2017			20170317	11:45:00	20170317	11:45:00	WG201539-2	1	1			Trichloroethene	79-01-6	2.5	2.5	UG_KG	U	U		TRG									4.2	0.59	2.5	5.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-BLANK	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BLK	S	4	03/17/2017 11:45	03/17/2017			20170317	11:45:00	20170317	11:45:00	WG201539-2	1	1			1,2-Dichloropropane	78-87-5	2.5	2.5	UG_KG	U	U		TRG									4.2	1.4	2.5	5.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-BLANK	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BLK	S	4	03/17/2017 11:45	03/17/2017			20170317	11:45:00	20170317	11:45:00	WG201539-2	1	1			Bromodichloromethane	75-27-4	2.5	2.5	UG_KG	U	U		TRG									4.2	0.60	2.5	5.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-BLANK	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BLK	S	4	03/17/2017 11:45	03/17/2017			20170317	11:45:00	20170317	11:45:00	WG201539-2	1	1			cis-1,3-Dichloropropene	10061-01-5	2.5	2.5	UG_KG	U	U		TRG									4.2	0.72	2.5	5.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-BLANK	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BLK	S	4	03/17/2017 11:45	03/17/2017			20170317	11:45:00	20170317	11:45:00	WG201539-2	1	1			Toluene	108-88-3	2.5	2.5	UG_KG	U	U		TRG									4.2	1.4	2.5	5.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-BLANK	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BLK	S	4	03/17/2017 11:45	03/17/2017			20170317	11:45:00	20170317	11:45:00	WG201539-2	1	1			4-Methyl-2-pentanone	108-10-1	12	12	UG_KG	U	U		TRG									4.2	5.9	12.	25.	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-BLANK	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BLK	S	4	03/17/2017 11:45	03/17/2017			20170317	11:45:00	20170317	11:45:00	WG201539-2	1	1			Tetrachloroethene	127-18-4	2.5	2.5	UG_KG	U	U		TRG									4.2	1.2	2.5	5.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-BLANK	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BLK	S	4	03/17/2017 11:45	03/17/2017			20170317	11:45:00	20170317	11:45:00	WG201539-2	1	1			trans-1,3-Dichloropropene	10061-02-6	2.5	2.5	UG_KG	U	U		TRG									4.2	0.86	2.5	5.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-BLANK	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BLK	S	4	03/17/2017 11:45	03/17/2017			20170317	11:45:00	20170317	11:45:00	WG201539-2	1	1			1,1,2-Trichloroethane	79-00-5	2.5	2.5	UG_KG	U	U		TRG									4.2	0.97	2.5	5.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-BLANK	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BLK	S	4	03/17/2017 11:45	03/17/2017			20170317	11:45:00	20170317	11:45:00	WG201539-2	1	1			Dibromochloromethane	124-48-1	2.5	2.5	UG_KG	U	U		TRG									4.2	1.0	2.5	5.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-BLANK	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BLK	S	4	03/17/2017 11:45	03/17/2017			20170317	11:45:00	20170317	11:45:00	WG201539-2	1	1			1,2-Dibromoethane	106-93-4	2.5	2.5	UG_KG	U	U		TRG									4.2	1.2	2.5	5.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-BLANK	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BLK	S	4	03/17/2017 11:45	03/17/2017			20170317	11:45:00	20170317	11:45:00	WG201539-2	1	1			2-Hexanone	591-78-6	12	12	UG_KG	U	U		TRG									4.2	4.8	12.	25.	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-BLANK	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BLK	S	4	03/17/2017 11:45	03/17/2017			20170317	11:45:00	20170317	11:45:00	WG201539-2	1	1			Chlorobenzene	108-90-7	2.5	2.5	UG_KG	U	U		TRG									4.2	0.51	2.5	5.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-BLANK	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BLK	S	4	03/17/2017 11:45	03/17/2017			20170317	11:45:00	20170317	11:45:00	WG201539-2	1	1			Ethylbenzene	100-41-4	2.5	2.5	UG_KG	U	U		TRG									4.2	0.65	2.5	5.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-BLANK	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BLK	S	4	03/17/2017 11:45	03/17/2017			20170317	11:45:00	20170317	11:45:00	WG201539-2	1	1			Xylene, total	1330-20-7	7.5	7.5	UG_KG	U	U		TRG									4.2	1.3	7.5	15.	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-BLANK	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BLK	S	4	03/17/2017 11:45	03/17/2017			20170317	11:45:00	20170317	11:45:00	WG201539-2	1	1			m- and p-Xylene	m&pXYLENE	5.0	5.0	UG_KG	U	U		TRG									4.2	1.7	5.0	10.	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-BLANK	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BLK	S	4	03/17/2017 11:45	03/17/2017			20170317	11:45:00	20170317	11:45:00	WG201539-2	1	1			o-Xylene	95-47-6	2.5	2.5	UG_KG	U	U		TRG									4.2	1.3	2.5	5.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-BLANK	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BLK	S	4	03/17/2017 11:45	03/17/2017			20170317	11:45:00	20170317	11:45:00	WG201539-2	1	1			Styrene	100-42-5	2.5	2.5	UG_KG	U	U		TRG									4.2	0.51	2.5	5.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-BLANK	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BLK	S	4	03/17/2017 11:45	03/17/2017			20170317	11:45:00	20170317	11:45:00	WG201539-2	1	1			Bromoform	75-25-2	2.5	2.5	UG_KG	U	U		TRG									4.2	0.70	2.5	5.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-BLANK	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BLK	S	4	03/17/2017 11:45	03/17/2017			20170317	11:45:00	20170317	11:45:00	WG201539-2	1	1			Isopropylbenzene	98-82-8	2.5	2.5	UG_KG	U	U		TRG									4.2	0.92	2.5	5.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-BLANK	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BLK	S	4	03/17/2017 11:45	03/17/2017			20170317	11:45:00	20170317	11:45:00	WG201539-2	1	1			1,1,2,2-Tetrachloroethane	79-34-5	2.5	2.5	UG_KG	U	U		TRG									4.2	0.84	2.5	5.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-BLANK	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BLK	S	4	03/17/2017 11:45	03/17/2017			20170317	11:45:00	20170317	11:45:00	WG201539-2	1	1			1,3-Dichlorobenzene	541-73-1	2.5	2.5	UG_KG	U	U		TRG									4.2	0.62	2.5	5.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-BLANK	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BLK	S	4	03/17/2017 11:45	03/17/2017			20170317	11:45:00	20170317	11:45:00	WG201539-2	1	1			1,4-Dichlorobenzene	106-46-7	2.5	2.5	UG_KG	U	U		TRG									4.2	0.44	2.5	5.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-BLANK	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BLK	S	4	03/17/2017 11:45	03/17/2017			20170317	11:45:00	20170317	11:45:00	WG201539-2	1	1			1,2-Dichlorobenzene	95-50-1	2.5	2.5	UG_KG	U	U		TRG									4.2	0.78	2.5	5.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-BLANK	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BLK	S	4	03/17/2017 11:45	03/17/2017			20170317	11:45:00	20170317	11:45:00	WG201539-2	1	1			1,2-Dibromo-3-chloropropane	96-12-8	2.5	2.5	UG_KG	U	U		TRG									4.2	1.5	2.5	5.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-BLANK	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BLK	S	4	03/17/2017 11:45	03/17/2017			20170317	11:45:00	20170317	11:45:00	WG201539-2	1	1			1,2,4-Trichlorobenzene	120-82-1	2.5	2.5	UG_KG	U	U		TRG									4.2	0.79	2.5	5.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-BLANK	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BLK	S	4	03/17/2017 11:45	03/17/2017			20170317	11:45:00	20170317	11:45:00	WG201539-2	1	1			1,2,3-Trichlorobenzene	87-61-6	2.5	2.5	UG_KG	U	U		TRG									4.2	0.76	2.5	5.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-BLANK	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BLK	S	4	03/17/2017 11:45	03/17/2017			20170317	11:45:00	20170317	11:45:00	WG201539-2	1	1			Bromochloromethane	74-97-5	2.5	2.5	UG_KG	U	U		TRG									4.2	0.91	2.5	5.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-BLANK	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BLK	S	4	03/17/2017 11:45	03/17/2017			20170317	11:45:00	20170317	11:45:00	WG201539-2	1	1			Methyl acetate	79-20-9	3.0	3.0	UG_KG	U	U		TRG									4.2	2.7	3.0	5.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-BLANK	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BLK	S	4	03/17/2017 11:45	03/17/2017			20170317	11:45:00	20170317	11:45:00	WG201539-2	1	1			Methylcyclohexane	108-87-2	2.5	2.5	UG_KG	U	U		TRG									4.2	0.96	2.5	5.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-BLANK	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BLK	S	4	03/17/2017 11:45	03/17/2017			20170317	11:45:00	20170317	11:45:00	WG201539-2	1	1			4-Bromofluorobenzene	460-00-4	101.	101.	PCT				SURR		SLSA	120	85	20091101				4.2	0	0	0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-BLANK	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BLK	S	4	03/17/2017 11:45	03/17/2017			20170317	11:45:00	20170317	11:45:00	WG201539-2	1	1			Toluene-D8	2037-26-5	103.	103.	PCT				SURR		SLSA	115	85	20091101				4.2	0	0	0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-BLANK	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BLK	S	4	03/17/2017 11:45	03/17/2017			20170317	11:45:00	20170317	11:45:00	WG201539-2	1	1			1,2-Dichloroethane-d4	17060-07-0	112.	112.	PCT				SURR		SLSA	134	58	20091101				4.2	0	0	0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-BLANK	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BLK	S	4	03/17/2017 11:45	03/17/2017			20170317	11:45:00	20170317	11:45:00	WG201539-2	1	1			Dibromofluoromethane	1868-53-7	106.	106.	PCT				SURR		SLSA	130	64	20091101				4.2	0	0	0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BS	S	4	03/17/2017 09:38	03/17/2017			20170317	09:38:00	20170317	09:38:00	WG201539-1	1	1			Dichlorodifluoromethane (Freon-12)	75-71-8	42.6	42.6	UG_KG				TRG		LSA	135	35	20091101				4.2	0.92	5.0	10.	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BS	S	4	03/17/2017 09:38	03/17/2017			20170317	09:38:00	20170317	09:38:00	WG201539-1	1	1			Chloromethane	74-87-3	46.6	46.6	UG_KG				TRG		LSA	130	50	20091101				4.2	1.4	5.0	10.	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BS	S	4	03/17/2017 09:38	03/17/2017			20170317	09:38:00	20170317	09:38:00	WG201539-1	1	1			Vinyl chloride	75-01-4	51.0	51.0	UG_KG				TRG		LSA	125	60	20091101				4.2	0.87	5.0	10.	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BS	S	4	03/17/2017 09:38	03/17/2017			20170317	09:38:00	20170317	09:38:00	WG201539-1	1	1			Bromomethane	74-83-9	53.7	53.7	UG_KG				TRG		LSA	160	30	20091101				4.2	1.1	5.0	10.	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BS	S	4	03/17/2017 09:38	03/17/2017			20170317	09:38:00	20170317	09:38:00	WG201539-1	1	1			Chloroethane	75-00-3	55.8	55.8	UG_KG				TRG		LSA	155	40	20091101				4.2	1.3	5.0	10.	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BS	S	4	03/17/2017 09:38	03/17/2017			20170317	09:38:00	20170317	09:38:00	WG201539-1	1	1			Trichlorofluoromethane (Freon-11)	75-69-4	60.8	60.8	UG_KG				TRG		LSA	185	25	20091101				4.2	0.91	5.0	10.	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BS	S	4	03/17/2017 09:38	03/17/2017			20170317	09:38:00	20170317	09:38:00	WG201539-1	1	1			1,1-Dichloroethene	75-35-4	54.6	54.6	UG_KG				TRG		LSA	135	65	20091101				4.2	0.93	2.5	5.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BS	S	4	03/17/2017 09:38	03/17/2017			20170317	09:38:00	20170317	09:38:00	WG201539-1	1	1			Carbon disulfide	75-15-0	63.2	63.2	UG_KG				TRG		LSA	160	45	20091101				4.2	0.78	2.5	5.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BS	S	4	03/17/2017 09:38	03/17/2017			20170317	09:38:00	20170317	09:38:00	WG201539-1	1	1			1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	76-13-1	54.9	54.9	UG_KG				TRG		LSA	135	67	20091101				4.2	0.90	2.5	5.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BS	S	4	03/17/2017 09:38	03/17/2017			20170317	09:38:00	20170317	09:38:00	WG201539-1	1	1			Methylene chloride	75-09-2	49.5	49.5	UG_KG				TRG		LSA	140	55	20091101				4.2	7.9	12.	25.	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BS	S	4	03/17/2017 09:38	03/17/2017			20170317	09:38:00	20170317	09:38:00	WG201539-1	1	1			Acetone	67-64-1	59.4	59.4	UG_KG				TRG		LSA	160	20	20091101				4.2	5.1	12.	25.	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BS	S	4	03/17/2017 09:38	03/17/2017			20170317	09:38:00	20170317	09:38:00	WG201539-1	1	1			trans-1,2-Dichloroethene	156-60-5	58.7	58.7	UG_KG				TRG		LSA	135	65	20091101				4.2	0.71	2.5	5.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BS	S	4	03/17/2017 09:38	03/17/2017			20170317	09:38:00	20170317	09:38:00	WG201539-1	1	1			Methyl-tert-butyl ether (MTBE)	1634-04-4	119.	119.	UG_KG				TRG		LSA	125	81	20091101				4.2	1.1	2.5	5.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BS	S	4	03/17/2017 09:38	03/17/2017			20170317	09:38:00	20170317	09:38:00	WG201539-1	1	1			1,1-Dichloroethane	75-34-3	57.4	57.4	UG_KG				TRG		LSA	125	75	20091101				4.2	1.7	2.5	5.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BS	S	4	03/17/2017 09:38	03/17/2017			20170317	09:38:00	20170317	09:38:00	WG201539-1	1	1			cis-1,2-Dichloroethene	156-59-2	52.0	52.0	UG_KG				TRG		LSA	125	65	20091101				4.2	0.91	2.5	5.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BS	S	4	03/17/2017 09:38	03/17/2017			20170317	09:38:00	20170317	09:38:00	WG201539-1	1	1			Chloroform	67-66-3	56.1	56.1	UG_KG				TRG		LSA	125	70	20091101				4.2	0.35	2.5	5.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BS	S	4	03/17/2017 09:38	03/17/2017			20170317	09:38:00	20170317	09:38:00	WG201539-1	1	1			Carbon tetrachloride	56-23-5	58.9	58.9	UG_KG				TRG		LSA	135	65	20091101				4.2	1.3	2.5	5.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BS	S	4	03/17/2017 09:38	03/17/2017			20170317	09:38:00	20170317	09:38:00	WG201539-1	1	1			1,1,1-Trichloroethane	71-55-6	57.8	57.8	UG_KG				TRG		LSA	135	70	20091101				4.2	0.42	2.5	5.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BS	S	4	03/17/2017 09:38	03/17/2017			20170317	09:38:00	20170317	09:38:00	WG201539-1	1	1			2-Butanone	78-93-3	54.7	54.7	UG_KG				TRG		LSA	160	30	20091101				4.2	5.9	12.	25.	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BS	S	4	03/17/2017 09:38	03/17/2017			20170317	09:38:00	20170317	09:38:00	WG201539-1	1	1			Benzene	71-43-2	54.5	54.5	UG_KG				TRG		LSA	125	75	20091101				4.2	0.92	2.5	5.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BS	S	4	03/17/2017 09:38	03/17/2017			20170317	09:38:00	20170317	09:38:00	WG201539-1	1	1			Cyclohexane	110-82-7	57.9	57.9	UG_KG				TRG		LSA	128	75	20091101				4.2	1.4	2.5	5.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BS	S	4	03/17/2017 09:38	03/17/2017			20170317	09:38:00	20170317	09:38:00	WG201539-1	1	1			1,2-Dichloroethane	107-06-2	57.2	57.2	UG_KG				TRG		LSA	135	70	20091101				4.2	1.0	2.5	5.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BS	S	4	03/17/2017 09:38	03/17/2017			20170317	09:38:00	20170317	09:38:00	WG201539-1	1	1			Trichloroethene	79-01-6	58.8	58.8	UG_KG				TRG		LSA	125	75	20091101				4.2	0.59	2.5	5.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BS	S	4	03/17/2017 09:38	03/17/2017			20170317	09:38:00	20170317	09:38:00	WG201539-1	1	1			1,2-Dichloropropane	78-87-5	55.7	55.7	UG_KG				TRG		LSA	120	70	20091101				4.2	1.4	2.5	5.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BS	S	4	03/17/2017 09:38	03/17/2017			20170317	09:38:00	20170317	09:38:00	WG201539-1	1	1			Bromodichloromethane	75-27-4	58.4	58.4	UG_KG				TRG		LSA	130	70	20091101				4.2	0.60	2.5	5.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BS	S	4	03/17/2017 09:38	03/17/2017			20170317	09:38:00	20170317	09:38:00	WG201539-1	1	1			cis-1,3-Dichloropropene	10061-01-5	58.7	58.7	UG_KG				TRG		LSA	125	70	20091101				4.2	0.72	2.5	5.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BS	S	4	03/17/2017 09:38	03/17/2017			20170317	09:38:00	20170317	09:38:00	WG201539-1	1	1			Toluene	108-88-3	53.7	53.7	UG_KG				TRG		LSA	125	70	20091101				4.2	1.4	2.5	5.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BS	S	4	03/17/2017 09:38	03/17/2017			20170317	09:38:00	20170317	09:38:00	WG201539-1	1	1			4-Methyl-2-pentanone	108-10-1	56.5	56.5	UG_KG				TRG		LSA	145	45	20091101				4.2	5.9	12.	25.	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BS	S	4	03/17/2017 09:38	03/17/2017			20170317	09:38:00	20170317	09:38:00	WG201539-1	1	1			Tetrachloroethene	127-18-4	55.1	55.1	UG_KG				TRG		LSA	140	65	20091101				4.2	1.2	2.5	5.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BS	S	4	03/17/2017 09:38	03/17/2017			20170317	09:38:00	20170317	09:38:00	WG201539-1	1	1			trans-1,3-Dichloropropene	10061-02-6	63.2	63.2	UG_KG	*	*		TRG		LSA	125	65	20091101				4.2	0.86	2.5	5.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BS	S	4	03/17/2017 09:38	03/17/2017			20170317	09:38:00	20170317	09:38:00	WG201539-1	1	1			1,1,2-Trichloroethane	79-00-5	56.5	56.5	UG_KG				TRG		LSA	125	60	20091101				4.2	0.97	2.5	5.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BS	S	4	03/17/2017 09:38	03/17/2017			20170317	09:38:00	20170317	09:38:00	WG201539-1	1	1			Dibromochloromethane	124-48-1	57.8	57.8	UG_KG				TRG		LSA	130	65	20091101				4.2	1.0	2.5	5.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BS	S	4	03/17/2017 09:38	03/17/2017			20170317	09:38:00	20170317	09:38:00	WG201539-1	1	1			1,2-Dibromoethane	106-93-4	55.7	55.7	UG_KG				TRG		LSA	125	70	20091101				4.2	1.2	2.5	5.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BS	S	4	03/17/2017 09:38	03/17/2017			20170317	09:38:00	20170317	09:38:00	WG201539-1	1	1			2-Hexanone	591-78-6	54.6	54.6	UG_KG				TRG		LSA	145	45	20091101				4.2	4.8	12.	25.	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BS	S	4	03/17/2017 09:38	03/17/2017			20170317	09:38:00	20170317	09:38:00	WG201539-1	1	1			Chlorobenzene	108-90-7	54.8	54.8	UG_KG				TRG		LSA	125	75	20091101				4.2	0.51	2.5	5.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BS	S	4	03/17/2017 09:38	03/17/2017			20170317	09:38:00	20170317	09:38:00	WG201539-1	1	1			Ethylbenzene	100-41-4	53.4	53.4	UG_KG				TRG		LSA	125	75	20091101				4.2	0.65	2.5	5.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BS	S	4	03/17/2017 09:38	03/17/2017			20170317	09:38:00	20170317	09:38:00	WG201539-1	1	1			Xylene, total	1330-20-7	163.	163.	UG_KG				TRG		LSA	114	81	20091101				4.2	1.3	7.5	15.	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BS	S	4	03/17/2017 09:38	03/17/2017			20170317	09:38:00	20170317	09:38:00	WG201539-1	1	1			m- and p-Xylene	m&pXYLENE	110.	110.	UG_KG				TRG		LSA	125	80	20091101				4.2	1.7	5.0	10.	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BS	S	4	03/17/2017 09:38	03/17/2017			20170317	09:38:00	20170317	09:38:00	WG201539-1	1	1			o-Xylene	95-47-6	53.9	53.9	UG_KG				TRG		LSA	125	75	20091101				4.2	1.3	2.5	5.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BS	S	4	03/17/2017 09:38	03/17/2017			20170317	09:38:00	20170317	09:38:00	WG201539-1	1	1			Styrene	100-42-5	55.4	55.4	UG_KG				TRG		LSA	125	75	20091101				4.2	0.51	2.5	5.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BS	S	4	03/17/2017 09:38	03/17/2017			20170317	09:38:00	20170317	09:38:00	WG201539-1	1	1			Bromoform	75-25-2	59.4	59.4	UG_KG				TRG		LSA	135	55	20091101				4.2	0.70	2.5	5.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BS	S	4	03/17/2017 09:38	03/17/2017			20170317	09:38:00	20170317	09:38:00	WG201539-1	1	1			Isopropylbenzene	98-82-8	55.2	55.2	UG_KG				TRG		LSA	130	75	20091101				4.2	0.92	2.5	5.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BS	S	4	03/17/2017 09:38	03/17/2017			20170317	09:38:00	20170317	09:38:00	WG201539-1	1	1			1,1,2,2-Tetrachloroethane	79-34-5	53.9	53.9	UG_KG				TRG		LSA	130	55	20091101				4.2	0.84	2.5	5.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BS	S	4	03/17/2017 09:38	03/17/2017			20170317	09:38:00	20170317	09:38:00	WG201539-1	1	1			1,3-Dichlorobenzene	541-73-1	57.3	57.3	UG_KG				TRG		LSA	125	70	20091101				4.2	0.62	2.5	5.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BS	S	4	03/17/2017 09:38	03/17/2017			20170317	09:38:00	20170317	09:38:00	WG201539-1	1	1			1,4-Dichlorobenzene	106-46-7	57.5	57.5	UG_KG				TRG		LSA	125	70	20091101				4.2	0.44	2.5	5.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BS	S	4	03/17/2017 09:38	03/17/2017			20170317	09:38:00	20170317	09:38:00	WG201539-1	1	1			1,2-Dichlorobenzene	95-50-1	55.4	55.4	UG_KG				TRG		LSA	120	75	20091101				4.2	0.78	2.5	5.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BS	S	4	03/17/2017 09:38	03/17/2017			20170317	09:38:00	20170317	09:38:00	WG201539-1	1	1			1,2-Dibromo-3-chloropropane	96-12-8	59.8	59.8	UG_KG				TRG		LSA	135	40	20091101				4.2	1.5	2.5	5.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BS	S	4	03/17/2017 09:38	03/17/2017			20170317	09:38:00	20170317	09:38:00	WG201539-1	1	1			1,2,4-Trichlorobenzene	120-82-1	65.6	65.6	UG_KG	*	*		TRG		LSA	130	65	20091101				4.2	0.79	2.5	5.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BS	S	4	03/17/2017 09:38	03/17/2017			20170317	09:38:00	20170317	09:38:00	WG201539-1	1	1			1,2,3-Trichlorobenzene	87-61-6	60.3	60.3	UG_KG				TRG		LSA	135	60	20091101				4.2	0.76	2.5	5.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BS	S	4	03/17/2017 09:38	03/17/2017			20170317	09:38:00	20170317	09:38:00	WG201539-1	1	1			Bromochloromethane	74-97-5	54.8	54.8	UG_KG				TRG		LSA	125	70	20091101				4.2	0.91	2.5	5.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BS	S	4	03/17/2017 09:38	03/17/2017			20170317	09:38:00	20170317	09:38:00	WG201539-1	1	1			Methyl acetate	79-20-9	51.9	51.9	UG_KG				TRG		LSA	133	72	20091101				4.2	2.7	3.0	5.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BS	S	4	03/17/2017 09:38	03/17/2017			20170317	09:38:00	20170317	09:38:00	WG201539-1	1	1			Methylcyclohexane	108-87-2	62.3	62.3	UG_KG				TRG		LSA	127	71	20091101				4.2	0.96	2.5	5.0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BS	S	4	03/17/2017 09:38	03/17/2017			20170317	09:38:00	20170317	09:38:00	WG201539-1	1	1			4-Bromofluorobenzene	460-00-4	104.	104.	PCT				SURR		SLSA	120	85	20091101				4.2	0	0	0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BS	S	4	03/17/2017 09:38	03/17/2017			20170317	09:38:00	20170317	09:38:00	WG201539-1	1	1			Toluene-D8	2037-26-5	102.	102.	PCT				SURR		SLSA	115	85	20091101				4.2	0	0	0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BS	S	4	03/17/2017 09:38	03/17/2017			20170317	09:38:00	20170317	09:38:00	WG201539-1	1	1			1,2-Dichloroethane-d4	17060-07-0	110.	110.	PCT				SURR		SLSA	134	58	20091101				4.2	0	0	0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	WG201539-LCS	NONE	VOA	8260C	VOA	KAS	KATAHDIN ANALYTICAL		DRY	SW5035	000	BS	S	4	03/17/2017 09:38	03/17/2017			20170317	09:38:00	20170317	09:38:00	WG201539-1	1	1			Dibromofluoromethane	1868-53-7	106.	106.	PCT				SURR		SLSA	130	64	20091101				4.2	0	0	0	SK1680	WG201539		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-FD04-0217A	NONE	WCHEM	2540G	PCHAR	KAS	KATAHDIN ANALYTICAL		DRY	METHOD	000	REG	S	4	03/03/2017 00:00	03/06/2017			20170322	15:02:00	20170323	16:57:00	SK1680-2	1	1	34.445		% Solids	%SOLIDS	66.	66.	PCT				TRG									4.2	1	1	1	SK1680	WG201818		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-SB20-0708A	NONE	WCHEM	2540G	PCHAR	KAS	KATAHDIN ANALYTICAL		DRY	METHOD	000	REG	S	4	03/03/2017 09:25	03/06/2017			20170322	15:01:00	20170323	16:57:00	SK1680-1	1	1	34.371		% Solids	%SOLIDS	66.	66.	PCT				TRG									4.2	1	1	1	SK1680	WG201818		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-SB21-0708A-LR	NONE	WCHEM	2540G	PCHAR	KAS	KATAHDIN ANALYTICAL		DRY	METHOD	000	LR	S	4	03/03/2017 10:45	03/06/2017			20170322	15:06:00	20170323	17:00:00	WG201818-3	1	1	24.344		% Solids	%SOLIDS	75.	75.	PCT				TRG									4.2	1	1	1	SK1680	WG201818		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-SB21-0708A	NONE	WCHEM	2540G	PCHAR	KAS	KATAHDIN ANALYTICAL		DRY	METHOD	000	REG	S	4	03/03/2017 10:45	03/06/2017			20170322	15:03:00	20170323	16:58:00	SK1680-3	1	1	24.344		% Solids	%SOLIDS	76.	76.	PCT				TRG									4.2	1	1	1	SK1680	WG201818		
N6247016D9000	JM01		MERIDIAN_NAS	MES08-TB02-0317	NONE	WCHEM	2540G	PCHAR	KAS	KATAHDIN ANALYTICAL		DRY	METHOD	000	REG	S	4	03/03/2017 08:00	03/06/2017			20170321	12:01:00	20170321	13:14:00	SK1680-5	1	1			% Solids	%SOLIDS	100	100	PCT				TRG									4.2	1	1	1	SK1680	WG201745		
N6247016D9000	JM01		MERIDIAN_NAS	WG201818-BLANK	NONE	WCHEM	2540G	PCHAR	KAS	KATAHDIN ANALYTICAL		DRY	METHOD	000	BLK	S	4	03/22/2017 15:04	03/22/2017			20170322	15:04:00	20170323	17:00:00	WG201818-1	1	1			% Solids	%SOLIDS	100	100	PCT				TRG									4.2	1	1	1	SK1680	WG201818		
N6247016D9000	JM01		MERIDIAN_NAS	WG201818-LCS	NONE	WCHEM	2540G	PCHAR	KAS	KATAHDIN ANALYTICAL		DRY	METHOD	000	BS	S	4	03/22/2017 15:05	03/22/2017			20170322	15:05:00	20170323	17:00:00	WG201818-2	1	1			% Solids	%SOLIDS	89.	89.	PCT				TRG		LSA	110	90	20091101				4.2	1	1	1	SK1680	WG201818		

ENVIRONMENTAL
Data Services, Inc.

DATA VALIDATION SUMMARY REPORT
NAVAL AIR STATION MERIDIAN, MISSISSIPPI

Client: CH2M HILL, Inc., Virginia Beach, Virginia
SDG: 320-25962-1
Laboratory: Test America Laboratories, West Sacramento, California
Site: Naval Air Station Meridian, JM01, Meridian, Mississippi
Date: October 28, 2017

PFCs			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1†	MEAFF-MRD-1A01-0217	320-25962-1	Water
2†	MEAFF-MRD-1A01P-0217	320-25962-2	Water
3*	MEAFF-EB01-022117-SO	320-25962-3	Water
4*	MEAFF-PWMA-SB01-0001	320-25962-4	Soil
4DL*	MEAFF-PWMA-SB01-0001DL	320-25962-4DL	Soil
5*	MEAFF-PWMA-SB01-0204	320-25962-5	Soil

* - PFCs only † - 1,4-Dioxane only

A full data validation was performed on the analytical data for two water samples, two soil samples, and one aqueous equipment blank sample collected on February 21, 2017 by CH2M HILL at the NAS Meridian site in Mississippi. 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)" and the Test America Laboratories (TAL) Standard Operating Procedure for the analysis of 1,4-dioxane by GC/MS-SIM.

Specific method references are as follows:

Analysis	*Method References*
PFCs	USEPA Method 537 Modified
SVOC-SIM (1,4-Dioxane)	TAL SOP WS-MS-0011

The data have been validated according to the protocols and quality control (QC) requirements of the analytical methods, the Draft Sampling and Analysis Plan, Perfluorinated Compounds Site Inspection, Naval Air Station Meridian, Task Order JM01, August 2016, and the USEPA National Functional Guidelines for Organic Data Review as follows:

- The USEPA "Contract Laboratories Program National Functional Guidelines for Superfund Organic Methods Data Review," January 2017;
- USEPA Region 4 "Data Validation Standard Operating Procedures for CLP Organic Data using GC/MS and GC/ECD", Rev. 0.0, February 2016;
- and the reviewer's professional judgment.

The following data quality indicators were reviewed for this report:

Organics

- Holding times and sample preservation
- Liquid/Gas Chromatography/Mass Spectrometry (LC/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. There were no qualifications.

Perfluorinated Compounds (PFCs)

Holding Times

- All samples were extracted within 14 days for water and soil samples and analyzed within 28 days.

LC/MS Tuning

- All criteria were met.

Initial Calibration

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

Continuing Calibration

- All percent difference (%D) and RRF criteria were met.

Method Blank

- The method blanks exhibited the following contamination.

Blank ID	Compound	Conc. ug/kg	Qualifier	Affected Samples
320-152015/1-A	PFOS	0.178	None	All Associated >10X

Field QC Blank

- The field QC sample results are summarized below.

Blank ID	Compound	Conc. ng/L	Qualifier	Affected Samples
MEAFF-EB01-022117-SO	None - ND	-	-	-

Surrogate Spike Recoveries

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

Sample ID	Surrogate	%R	Qualifier
3	13C4-PFOA	152%	None - Sample ND

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

- The MS/MSD samples were not analyzed.

Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD)

- The LCS/LCSD samples exhibited acceptable percent recoveries (%R) and RPD values.

Target Compound Identification

- All mass spectra and quantitation criteria were met.

Compound Quantitation

- Several samples results were flagged (M) by the laboratory indicating manual integration. These flags were removed by the reviewer.
- EDS Sample ID 4 was flagged (E) by the laboratory for PFOS exceeding the linear range of the instrument. The sample was diluted and reanalyzed and the dilution result for PFOS should be used for reporting purposes.

Field Duplicate Sample Precision

- Field duplicate samples were not collected.

Semivolatile Organic Compounds (1,4-Dioxane)

Holding Times

- All samples were extracted within 7 days for water samples and analyzed within 40 days.

GC/MS Tuning

- All criteria were met.

Initial Calibration

- The initial calibrations exhibited acceptable %RSD and/or correlation coefficients and mean RRF criteria.

Continuing Calibration

- The continuing calibrations exhibited acceptable %D and RRF criteria.

Method Blank

- The method blanks were free of contamination.

Field Blank

- Field QC samples were not collected.

Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate recoveries.

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

- MS/MSD samples were not analyzed.

Laboratory Control Samples/Laboratory Control Sample Duplicate (LCS/LCSD)

- The LCS samples exhibited acceptable percent recoveries (%R) and RPD values.

Internal Standard (IS) Area Performance

- All internal standards met response and retention time (RT) criteria.

Target Compound Identification

- All mass spectra and quantitation criteria were met.

Compound Quantitation

- All criteria were met.

Field Duplicate Sample Precision

- Field duplicate results are summarized below.

Compound	MEAFF-MRD-1A01-0217 ug/L	MEAFF-MRD-1A01P-0217 ug/L	RPD	Qualifier
None	ND	ND	-	-

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

Signed: Nancy Weaver Dated: 11/2/17

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

3

Lab Name: TestAmerica Sacramento Job No.: 320-25962-1

SDG No.:

Client Sample ID: MEAFF-EB01-022117-SO Lab Sample ID: 320-25962-3

Matrix: Water Lab File ID: 2017.03.02A_009.d

Analysis Method: 537 (Modified) Date Collected: 02/21/2017 13:25

Extraction Method: 3535 Date Extracted: 02/28/2017 16:42

Sample wt/vol: 279.3(mL) Date Analyzed: 03/02/2017 11:12

Con. Extract Vol.: 0.50(mL) Dilution Factor: 1

Injection Volume: 2(uL) GC Column: GeminiC18 3x100 ID: 3(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 152836 Units: ng/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
335-67-1	Perfluorooctanoic acid (PFOA)	1.8	U M	2.2	1.8	0.67
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	2.7	U	3.6	2.7	1.1
375-73-5	Perfluorobutanesulfonic acid (PFBS)	1.8	U	2.2	1.8	0.82

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL00990	13C4 PFOA	152	D	25-150
STL00991	13C4 PFOS	135		25-150
STL00994	18O2 PFHxS	141		25-150

JLW 10/28/17

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

4

Lab Name: TestAmerica Sacramento | Job No.: 320-25962-1

SDG No.:

Client Sample ID: MEAFF-PWMA-SB01-0001 | Lab Sample ID: 320-25962-4

Matrix: Solid | Lab File ID: 2017.03.01A_012.d

Analysis Method: 537 (Modified) | Date Collected: 02/21/2017 13:35

Extraction Method: SHAKE | Date Extracted: 02/23/2017 17:22

Sample wt/vol: 5.05(g) | Date Analyzed: 03/01/2017 19:45

Con. Extract Vol.: 1.00(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: GeminiC18 3x100 ID: 3(mm)

% Moisture: 13.3 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 152825 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
335-67-1	Perfluorooctanoic acid (PFOA)	27		0.57	0.34	0.12
1763-23-1	*Perfluorooctanesulfonic acid (PFOS)*	270 ~~220~~	~~E~~	5.7 ~~0.57~~	3.4 ~~0.34~~	1.4 ~~0.14~~
375-73-5	Perfluorobutanesulfonic acid (PFBS)	2.0	M	0.46	0.34	0.12

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL00990	13C4 PFOA	111		25-150
STL00991	13C4 PFOS	55		25-150
STL00994	1802 PFHxS	95		25-150

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FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

4DL

Lab Name: TestAmerica Sacramento Job No.: 320-25962-1

SDG No.:

Client Sample ID: MEAFF-PWMA-SB01-0001 DL Lab Sample ID: 320-25962-4 DL

Matrix: Solid Lab File ID: 2017.03.03A_008.d

Analysis Method: 537 (Modified) Date Collected: 02/21/2017 13:35

Extraction Method: SHAKE Date Extracted: 02/23/2017 17:22

Sample wt/vol: 5.05(g) Date Analyzed: 03/03/2017 09:53

Con. Extract Vol.: 1.00(mL) Dilution Factor: 10

Injection Volume: 2(uL) GC Column: GeminiC18 3x100 ID: 3(mm)

% Moisture: 13.3 GPC Cleanup:(Y/N) N

Analysis Batch No.: 153020 Units: ug/Kg

use original results

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
335-67-1	Perfluorooctanoic acid (PFOA)	28	D M	5.7	3.4	1.2
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	270	D	5.7	3.4	1.4
375-73-5	Perfluorobutanesulfonic acid (PFBS)	1.6	J D M	4.6	3.4	1.2

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL00990	13C4 PFOA	136		25-150
STL00991	13C4 PFOS	90		25-150
STL00994	1802 PFHxS	122		25-150

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FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

5

Lab Name: TestAmerica Sacramento | Job No.: 320-25962-1

SDG No.:

Client Sample ID: MEAFF-PWMA-SB01-0204 | Lab Sample ID: 320-25962-5

Matrix: Solid | Lab File ID: 2017.03.01A_014.d

Analysis Method: 537 (Modified) | Date Collected: 02/21/2017 13:40

Extraction Method: SHAKE | Date Extracted: 02/23/2017 17:22

Sample wt/vol: 4.97(g) | Date Analyzed: 03/01/2017 20:00

Con. Extract Vol.: 1.00(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: GeminiC18 3x100 ID: 3(mm)

% Moisture: 14.7 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 152825 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
335-67-1	Perfluorooctanoic acid (PFOA)	5.5	M	0.59	0.35	0.12
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	30	M	0.59	0.35	0.15
375-73-5	Perfluorobutanesulfonic acid (PFBS)	0.95	M	0.47	0.35	0.12

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL00990	13C4 PFOA	101	M	25-150
STL00991	13C4 PFOS	56	M	25-150
STL00994	18O2 PFHxS	95	M	25-150

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FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

1

Lab Name: TestAmerica Sacramento | Job No.: 320-25962-1

SDG No.:

Client Sample ID: MEAFF-MRD-1A01-0217 | Lab Sample ID: 320-25962-1

Matrix: Water | Lab File ID: S030614.D

Analysis Method: WS-MS-0011 | Date Collected: 02/21/2017 15:55

Extract. Method: 3510C | Date Extracted: 02/24/2017 15:44

Sample wt/vol: 1049(mL) | Date Analyzed: 03/06/2017 16:12

Con. Extract Vol.: 1.0(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 153398 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
123-91-1	1,4-Dioxane	0.48	U	0.95	0.48	0.19

CAS NO.	SURROGATE	%REC	Q	LIMITS
4165-60-0	Nitrobenzene-d5	61		42-91

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

2

Lab Name: TestAmerica Sacramento | Job No.: 320-25962-1

SDG No.:

Client Sample ID: MEAFF-MRD-1A01P-0217 | Lab Sample ID: 320-25962-2

Matrix: Water | Lab File ID: S030615.D

Analysis Method: WS-MS-0011 | Date Collected: 02/21/2017 15:55

Extract. Method: 3510C | Date Extracted: 02/24/2017 15:44

Sample wt/vol: 1035.2(mL) | Date Analyzed: 03/06/2017 16:34

Con. Extract Vol.: 1.0(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 153398 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
123-91-1	1,4-Dioxane	0.48	U	0.97	0.48	0.19

CAS NO.	SURROGATE	%REC	Q	LIMITS
4165-60-0	Nitrobenzene-d5	63		42-91