

Technical Report

Perfluoroalkyl Substances (PFAS)

prepared for:

Aqua Environmental Lab
56 Church Hill Road
Newtown CT, 06470
Attention: T. Braun

Report Date: 08/25/2022
Client Project ID: 293454/293455
York Project (SDG) No.: 22H1037

CT Cert. No. PH-0723

New Jersey Cert. No. CT005 and NY037



New York Cert. Nos. 10854 and 12058

PA Cert. No. 68-04440

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RICHMOND HILL, NY 11418
ClientServices@yorklab.com

Report Date: 08/25/2022
Client Project ID: 293454/293455
York Project (SDG) No.: 22H1037

Aqua Environmental Lab
56 Church Hill Road
Newtown CT, 06470
Attention: T. Braun

Purpose and Results

This report contains the analytical data for the sample(s) identified on the attached chain-of-custody received in our laboratory on August 17, 2022 and listed below. The project was identified as your project: **293454/293455**.

The analyses were conducted utilizing appropriate EPA methods as detailed in the data summary tables.

All samples were received in proper condition meeting the customary acceptance requirements for environmental samples except those indicated under the Sample and Analysis Qualifiers section of this report.

All analyses met the method and laboratory standard operating procedure requirements except as indicated by any data flags, the meaning of which are explained in the Sample and Data Qualifiers Relating to This Work Order section of this report and case narrative if applicable.

Please contact Client Services at 203.325.1371 with any questions regarding this report or e-mail clientservices@yorklab.com.

<u>York Sample ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Date Collected</u>	<u>Date Received</u>
22H1037-01	293454	Drinking Water	08/17/2022	08/17/2022
22H1037-02	293455	Drinking Water	08/17/2022	08/17/2022

General Notes for York Project (SDG) No.: 22H1037

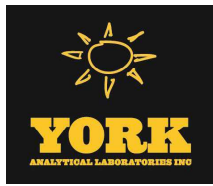
1. The RLs and MDLs (Reporting Limit and Method Detection Limit respectively) reported are adjusted for any dilution necessary due to the levels of target and/or non-target analytes and matrix interference. The RL(REPORTING LIMIT) is based upon the lowest standard utilized for the calibration where applicable.
2. Samples are retained for a period of thirty days after submittal of report, unless other arrangements are made.
3. York's liability for the above data is limited to the dollar value paid to York for the referenced project.
4. This report shall not be reproduced without the written approval of York Analytical Laboratories, Inc.
5. All analyses conducted met method or Laboratory SOP requirements. See the Sample and Data Qualifiers Section for further information.
6. It is noted that no analyses reported herein were subcontracted to another laboratory, unless noted in the report.
7. This report reflects results that relate only to the samples submitted on the attached chain-of-custody form(s) received by York.
8. Analyses conducted at York Analytical Laboratories, Inc. Stratford, CT are indicated by NY Cert. No. 10854; those conducted at York Analytical Laboratories, Inc., Richmond Hill, NY are indicated by NY Cert. No. 12058.

Approved By: 

Cassie L. Mosher
Laboratory Manager

Date: 08/25/2022





Sample Information

Client Sample ID: 293454

York Sample ID: 22H1037-01

<u>York Project (SDG) No.</u> 22H1037	<u>Client Project ID</u> 293454/293455	<u>Matrix</u> Drinking Water	<u>Collection Date/Time</u> August 17, 2022 12:30 pm	<u>Date Received</u> 08/17/2022
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PFAS, EPA 537.1 List

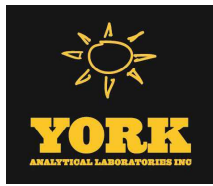
Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 537.1 SPE DVB

CAS No.	Parameter	Result	Flag	Maximum Contaminant Level		Units	Reported to LOQ	Reference Method	Date/Time Analyzed	Analyst
				MCL, ng/L						
375-73-5	Perfluorobutanesulfonic acid (PFBS)	ND		0		ng/L	1.67	EPA 537.1	08/19/2022 11:40	ESJ
							Certifications:	NELAC-NY12058	08/22/2022 17:27	
307-24-4	Perfluorohexanoic acid (PFHxA)	ND		0		ng/L	1.67	EPA 537.1	08/19/2022 11:40	ESJ
							Certifications:	NELAC-NY12058	08/22/2022 17:27	
375-85-9	Perfluoroheptanoic acid (PFHpA)	ND		0		ng/L	1.67	EPA 537.1	08/19/2022 11:40	ESJ
							Certifications:	NELAC-NY12058	08/22/2022 17:27	
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	ND		0		ng/L	1.67	EPA 537.1	08/19/2022 11:40	ESJ
							Certifications:	NELAC-NY12058	08/22/2022 17:27	
335-67-1	Perfluorooctanoic acid (PFOA)	ND		10		ng/L	1.67	EPA 537.1	08/19/2022 11:40	ESJ
							Certifications:	NELAC-NY12058	08/22/2022 17:27	
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	ND		10		ng/L	1.67	EPA 537.1	08/19/2022 11:40	ESJ
							Certifications:	NELAC-NY12058	08/22/2022 17:27	
375-95-1	Perfluorononanoic acid (PFNA)	ND		0		ng/L	1.67	EPA 537.1	08/19/2022 11:40	ESJ
							Certifications:	NELAC-NY12058	08/22/2022 17:27	
335-76-2	Perfluorodecanoic acid (PFDA)	ND		0		ng/L	1.67	EPA 537.1	08/19/2022 11:40	ESJ
							Certifications:	NELAC-NY12058	08/22/2022 17:27	
2058-94-8	Perfluoroundecanoic acid (PFUnA)	ND		0		ng/L	1.67	EPA 537.1	08/19/2022 11:40	ESJ
							Certifications:	NELAC-NY12058	08/22/2022 17:27	
307-55-1	Perfluorododecanoic acid (PFDoA)	ND		0		ng/L	1.67	EPA 537.1	08/19/2022 11:40	ESJ
							Certifications:	NELAC-NY12058	08/22/2022 17:27	
72629-94-8	Perfluorotridecanoic acid (PFTrDA)	ND		0		ng/L	1.67	EPA 537.1	08/19/2022 11:40	ESJ
							Certifications:	NELAC-NY12058	08/22/2022 17:27	
376-06-7	Perfluorotetradecanoic acid (PFTA)	ND		0		ng/L	1.67	EPA 537.1	08/19/2022 11:40	ESJ
							Certifications:	NELAC-NY12058	08/22/2022 17:27	
2355-31-9	N-MeFOSAA	ND		0		ng/L	1.67	EPA 537.1	08/19/2022 11:40	ESJ
							Certifications:	NELAC-NY12058	08/22/2022 17:27	
2991-50-6	N-EtFOSAA	ND		0		ng/L	1.67	EPA 537.1	08/19/2022 11:40	ESJ
							Certifications:	NELAC-NY12058	08/22/2022 17:27	
756426-58-1	9CL-PF3ONS	ND		0		ng/L	1.67	EPA 537.1	08/19/2022 11:40	ESJ
							Certifications:	NELAC-NY12058	08/22/2022 17:27	
763051-92-9	11CL-PF3OUdS	ND		0		ng/L	1.67	EPA 537.1	08/19/2022 11:40	ESJ
							Certifications:	NELAC-NY12058	08/22/2022 17:27	
13252-13-6	HFPO-DA (Gen-X)	ND		0		ng/L	1.67	EPA 537.1	08/19/2022 11:40	ESJ
							Certifications:	NELAC-NY12058	08/22/2022 17:27	
919005-14-4	ADONA	ND		0		ng/L	1.67	EPA 537.1	08/19/2022 11:40	ESJ
							Certifications:	NELAC-NY12058	08/22/2022 17:27	

Surrogate Recoveries	Result	Acceptance Range
Surrogate: <i>d5-N-EtFOSAA</i>	130 %	70-130
Surrogate: <i>13C-PFDA</i>	98.8 %	70-130
Surrogate: <i>13C-PFHxA</i>	74.5 %	70-130
Surrogate: <i>M3HFPO-DA</i>	85.5 %	70-130



Sample Information

Client Sample ID: 293454

York Sample ID: 22H1037-01

<u>York Project (SDG) No.</u> 22H1037	<u>Client Project ID</u> 293454/293455	<u>Matrix</u> Drinking Water	<u>Collection Date/Time</u> August 17, 2022 12:30 pm	<u>Date Received</u> 08/17/2022
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Sample Information

Client Sample ID: 293455

York Sample ID: 22H1037-02

<u>York Project (SDG) No.</u> 22H1037	<u>Client Project ID</u> 293454/293455	<u>Matrix</u> Drinking Water	<u>Collection Date/Time</u> August 17, 2022 12:40 pm	<u>Date Received</u> 08/17/2022
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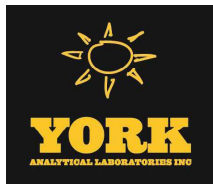
PFAS, EPA 537.1 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 537.1 SPE DVB

CAS No.	Parameter	Result	Flag	Maximum Contaminant Level		Units	Reported to LOQ	Reference Method	Date/Time Analyzed	Analyst
				MCL, ng/L						
375-73-5	Perfluorobutanesulfonic acid (PFBS)	ND		0		ng/L	1.67	EPA 537.1	08/19/2022 11:40	ESJ
							Certifications:	NELAC-NY12058	08/22/2022 17:55	
307-24-4	Perfluorohexanoic acid (PFHxA)	ND		0		ng/L	1.67	EPA 537.1	08/19/2022 11:40	ESJ
							Certifications:	NELAC-NY12058	08/22/2022 17:55	
375-85-9	Perfluoroheptanoic acid (PFHpA)	ND		0		ng/L	1.67	EPA 537.1	08/19/2022 11:40	ESJ
							Certifications:	NELAC-NY12058	08/22/2022 17:55	
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	ND		0		ng/L	1.67	EPA 537.1	08/19/2022 11:40	ESJ
							Certifications:	NELAC-NY12058	08/22/2022 17:55	
335-67-1	Perfluorooctanoic acid (PFOA)	ND		10		ng/L	1.67	EPA 537.1	08/19/2022 11:40	ESJ
							Certifications:	NELAC-NY12058	08/22/2022 17:55	
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	ND		10		ng/L	1.67	EPA 537.1	08/19/2022 11:40	ESJ
							Certifications:	NELAC-NY12058	08/22/2022 17:55	
375-95-1	Perfluorononanoic acid (PFNA)	ND		0		ng/L	1.67	EPA 537.1	08/19/2022 11:40	ESJ
							Certifications:	NELAC-NY12058	08/22/2022 17:55	
335-76-2	Perfluorodecanoic acid (PFDA)	ND		0		ng/L	1.67	EPA 537.1	08/19/2022 11:40	ESJ
							Certifications:	NELAC-NY12058	08/22/2022 17:55	
2058-94-8	Perfluoroundecanoic acid (PFUnA)	ND		0		ng/L	1.67	EPA 537.1	08/19/2022 11:40	ESJ
							Certifications:	NELAC-NY12058	08/22/2022 17:55	
307-55-1	Perfluorododecanoic acid (PFDoA)	ND		0		ng/L	1.67	EPA 537.1	08/19/2022 11:40	ESJ
							Certifications:	NELAC-NY12058	08/22/2022 17:55	
72629-94-8	Perfluorotridecanoic acid (PFTTrDA)	ND		0		ng/L	1.67	EPA 537.1	08/19/2022 11:40	ESJ
							Certifications:	NELAC-NY12058	08/22/2022 17:55	
376-06-7	Perfluorotetradecanoic acid (PFTA)	ND		0		ng/L	1.67	EPA 537.1	08/19/2022 11:40	ESJ
							Certifications:	NELAC-NY12058	08/22/2022 17:55	
2355-31-9	N-MeFOSAA	ND		0		ng/L	1.67	EPA 537.1	08/19/2022 11:40	ESJ
							Certifications:	NELAC-NY12058	08/22/2022 17:55	
2991-50-6	N-EtFOSAA	ND		0		ng/L	1.67	EPA 537.1	08/19/2022 11:40	ESJ
							Certifications:	NELAC-NY12058	08/22/2022 17:55	
756426-58-1	9CL-PF3ONS	ND		0		ng/L	1.67	EPA 537.1	08/19/2022 11:40	ESJ
							Certifications:	NELAC-NY12058	08/22/2022 17:55	
763051-92-9	11CL-PF3OUdS	ND		0		ng/L	1.67	EPA 537.1	08/19/2022 11:40	ESJ
							Certifications:	NELAC-NY12058	08/22/2022 17:55	
13252-13-6	HFPO-DA (Gen-X)	ND		0		ng/L	1.67	EPA 537.1	08/19/2022 11:40	ESJ
							Certifications:	NELAC-NY12058	08/22/2022 17:55	
919005-14-4	ADONA	ND		0		ng/L	1.67	EPA 537.1	08/19/2022 11:40	ESJ
							Certifications:	NELAC-NY12058	08/22/2022 17:55	



Sample Information

Client Sample ID: 293455

York Sample ID: 22H1037-02

York Project (SDG) No.
22H1037

Client Project ID
293454/293455

Matrix
Drinking Water

Collection Date/Time
August 17, 2022 12:40 pm

Date Received
08/17/2022

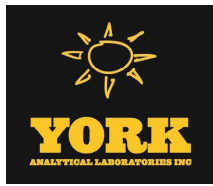
PFAS, EPA 537.1 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 537.1 SPE DVB

CAS No.	Parameter	Result	Flag	Maximum Contaminant Level		Reported to LOQ	Reference Method	Date/Time Analyzed	Analyst
				MCL, ng/L	Units				
	Surrogate Recoveries	Result		Acceptance Range					
	<i>Surrogate: d5-N-EtFOSAA</i>	<i>110 %</i>		<i>70-130</i>					
	<i>Surrogate: 13C-PFDA</i>	<i>96.2 %</i>		<i>70-130</i>					
	<i>Surrogate: 13C-PFHxA</i>	<i>78.5 %</i>		<i>70-130</i>					
	<i>Surrogate: M3HFPO-DA</i>	<i>87.0 %</i>		<i>70-130</i>					



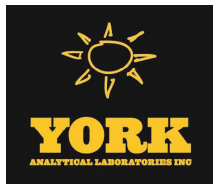
Analytical Batch Summary

Batch ID: BH21223

Preparation Method: EPA 537.1 SPE DVB

Prepared By: BAMW

YORK Sample ID	Client Sample ID	Preparation Date
22H1037-01	293454	08/19/22
22H1037-02	293455	08/19/22
BH21223-BLK1	Blank	08/19/22
BH21223-BS1	LCS	08/19/22
BH21223-BS2	LCS	08/19/22
BH21223-DUP1	Duplicate	08/19/22
BH21223-MS1	Matrix Spike	08/19/22



PFAS Target compounds by LC/MS-MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
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Batch BH21223 - EPA 537.1 SPE DVB

Blank (BH21223-BLK1)

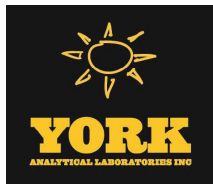
Prepared: 08/19/2022 Analyzed: 08/22/2022

Perfluorobutanesulfonic acid (PFBS)	ND	2.00	ng/L								
Perfluorohexanoic acid (PFHxA)	ND	2.00	"								
Perfluoroheptanoic acid (PFHpA)	ND	2.00	"								
Perfluorohexanesulfonic acid (PFHxS)	ND	2.00	"								
Perfluorooctanoic acid (PFOA)	ND	2.00	"								
Perfluorooctanesulfonic acid (PFOS)	ND	2.00	"								
Perfluorononanoic acid (PFNA)	ND	2.00	"								
Perfluorodecanoic acid (PFDA)	ND	2.00	"								
Perfluoroundecanoic acid (PFUnA)	ND	2.00	"								
Perfluorododecanoic acid (PFDoA)	ND	2.00	"								
Perfluorotridecanoic acid (PFTTrDA)	ND	2.00	"								
Perfluorotetradecanoic acid (PFTA)	ND	2.00	"								
N-MeFOSAA	ND	2.00	"								
N-EtFOSAA	ND	2.00	"								
9CL-PF3ONS	ND	2.00	"								
11CL-PF3OUdS	ND	2.00	"								
HFPO-DA (Gen-X)	ND	2.00	"								
ADONA	ND	2.00	"								
<i>Surrogate: d5-N-EtFOSAA</i>	<i>374</i>		<i>"</i>	<i>320</i>		<i>117</i>	<i>70-130</i>				
<i>Surrogate: 13C-PFDA</i>	<i>93.2</i>		<i>"</i>	<i>80.0</i>		<i>116</i>	<i>70-130</i>				
<i>Surrogate: 13C-PFHxA</i>	<i>69.5</i>		<i>"</i>	<i>80.0</i>		<i>86.9</i>	<i>70-130</i>				
<i>Surrogate: M3HFPO-DA</i>	<i>80.2</i>		<i>"</i>	<i>80.0</i>		<i>100</i>	<i>70-130</i>				

LCS (BH21223-BS1)

Prepared: 08/19/2022 Analyzed: 08/22/2022

Perfluorobutanesulfonic acid (PFBS)	43.8	2.00	ng/L	35.4		124	70-130				
Perfluorohexanoic acid (PFHxA)	50.1	2.00	"	40.0		125	70-130				
Perfluoroheptanoic acid (PFHpA)	51.3	2.00	"	40.0		128	70-130				
Perfluorohexanesulfonic acid (PFHxS)	55.5	2.00	"	38.0		146	70-130	High Bias			
Perfluorooctanoic acid (PFOA)	50.1	2.00	"	40.0		125	70-130				
Perfluorooctanesulfonic acid (PFOS)	49.3	2.00	"	38.4		128	70-130				
Perfluorononanoic acid (PFNA)	43.8	2.00	"	40.0		109	70-130				
Perfluorodecanoic acid (PFDA)	47.3	2.00	"	40.0		118	70-130				
Perfluoroundecanoic acid (PFUnA)	47.5	2.00	"	40.0		119	70-130				
Perfluorododecanoic acid (PFDoA)	53.1	2.00	"	40.0		133	70-130	High Bias			
Perfluorotridecanoic acid (PFTTrDA)	42.2	2.00	"	40.0		105	70-130				
Perfluorotetradecanoic acid (PFTA)	41.4	2.00	"	40.0		104	70-130				
N-MeFOSAA	53.0	2.00	"	40.0		132	70-130	High Bias			
N-EtFOSAA	55.4	2.00	"	40.0		138	70-130	High Bias			
9CL-PF3ONS	51.9	2.00	"	37.4		139	60-130	High Bias			
11CL-PF3OUdS	44.5	2.00	"	37.8		118	60-130				
HFPO-DA (Gen-X)	50.6	2.00	"	40.0		127	60-130				
ADONA	48.2	2.00	"	37.8		127	60-130				
<i>Surrogate: d5-N-EtFOSAA</i>	<i>432</i>		<i>"</i>	<i>320</i>		<i>135</i>	<i>70-130</i>				
<i>Surrogate: 13C-PFDA</i>	<i>86.7</i>		<i>"</i>	<i>80.0</i>		<i>108</i>	<i>70-130</i>				
<i>Surrogate: 13C-PFHxA</i>	<i>62.5</i>		<i>"</i>	<i>80.0</i>		<i>78.2</i>	<i>70-130</i>				
<i>Surrogate: M3HFPO-DA</i>	<i>70.5</i>		<i>"</i>	<i>80.0</i>		<i>88.1</i>	<i>70-130</i>				



PFAS Target compounds by LC/MS-MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
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Batch BH21223 - EPA 537.1 SPE DVB

LCS (BH21223-BS2)

Prepared: 08/19/2022 Analyzed: 08/22/2022

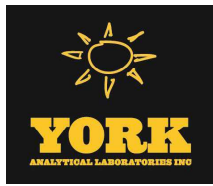
Perfluorobutanesulfonic acid (PFBS)	4.56	2.00	ng/L	3.54		129	70-130				
Perfluorohexanoic acid (PFHxA)	5.16	2.00	"	4.00		129	70-130				
Perfluoroheptanoic acid (PFHpA)	5.12	2.00	"	4.00		128	70-130				
Perfluorohexanesulfonic acid (PFHxS)	5.31	2.00	"	3.80		140	70-130	High Bias			
Perfluorooctanoic acid (PFOA)	5.29	2.00	"	4.00		132	70-130	High Bias			
Perfluorooctanesulfonic acid (PFOS)	5.50	2.00	"	3.84		143	70-130	High Bias			
Perfluorononanoic acid (PFNA)	4.70	2.00	"	4.00		117	70-130				
Perfluorodecanoic acid (PFDA)	5.02	2.00	"	4.00		126	70-130				
Perfluoroundecanoic acid (PFUnA)	4.98	2.00	"	4.00		124	70-130				
Perfluorododecanoic acid (PFDoA)	4.81	2.00	"	4.00		120	70-130				
Perfluorotridecanoic acid (PFTriDA)	4.17	2.00	"	4.00		104	70-130				
Perfluorotetradecanoic acid (PFTA)	4.11	2.00	"	4.00		103	70-130				
N-MeFOSAA	5.84	2.00	"	4.00		146	70-130	High Bias			
N-EtFOSAA	5.34	2.00	"	4.00		133	70-130	High Bias			
9CL-PF3ONS	5.10	2.00	"	3.74		136	60-130	High Bias			
11CL-PF3OUdS	4.19	2.00	"	3.78		111	60-130				
HFPO-DA (Gen-X)	5.25	2.00	"	4.00		131	60-130	High Bias			
ADONA	5.19	2.00	"	3.78		137	60-130	High Bias			
Surrogate: d5-N-EtFOSAA	400		"	320		125	70-130				
Surrogate: 13C-PFDA	88.7		"	80.0		111	70-130				
Surrogate: 13C-PFHxA	60.2		"	80.0		75.2	70-130				
Surrogate: M3HFPO-DA	69.1		"	80.0		86.4	70-130				

Duplicate (BH21223-DUP1)

*Source sample: 22H1063-02 (Duplicate)

Prepared: 08/19/2022 Analyzed: 08/22/2022

Perfluorobutanesulfonic acid (PFBS)	ND	0.806	ng/L		ND						25
Perfluorohexanoic acid (PFHxA)	0.605	0.806	"		0.615				1.75		25
Perfluoroheptanoic acid (PFHpA)	ND	0.806	"		ND						25
Perfluorohexanesulfonic acid (PFHxS)	ND	0.806	"		ND						25
Perfluorooctanoic acid (PFOA)	0.698	0.806	"		0.762				8.70		25
Perfluorooctanesulfonic acid (PFOS)	ND	0.806	"		ND						25
Perfluorononanoic acid (PFNA)	ND	0.806	"		ND						25
Perfluorodecanoic acid (PFDA)	ND	0.806	"		ND						25
Perfluoroundecanoic acid (PFUnA)	ND	0.806	"		ND						25
Perfluorododecanoic acid (PFDoA)	ND	0.806	"		ND						25
Perfluorotridecanoic acid (PFTriDA)	ND	0.806	"		ND						25
Perfluorotetradecanoic acid (PFTA)	ND	0.806	"		ND						25
N-MeFOSAA	ND	0.806	"		ND						25
N-EtFOSAA	ND	0.806	"		ND						25
9CL-PF3ONS	ND	0.806	"		ND						25
11CL-PF3OUdS	ND	0.806	"		ND						25
HFPO-DA (Gen-X)	ND	0.806	"		ND						25
ADONA	ND	0.806	"		ND						25
Surrogate: d5-N-EtFOSAA	152		"	129		118	70-130				
Surrogate: 13C-PFDA	34.3		"	32.3		106	70-130				
Surrogate: 13C-PFHxA	26.7		"	32.3		82.6	70-130				
Surrogate: M3HFPO-DA	29.4		"	32.3		91.3	70-130				



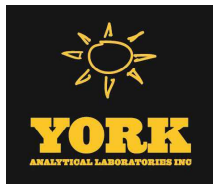
PFAS Target compounds by LC/MS-MS - Quality Control Data

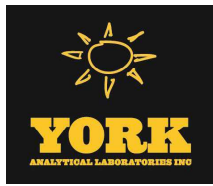
York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
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Batch BH21223 - EPA 537.1 SPE DVB

Matrix Spike (BH21223-MS1)	*Source sample: 22H1069-01 (Matrix Spike)						Prepared: 08/19/2022 Analyzed: 08/22/2022				
Perfluorobutanesulfonic acid (PFBS)	43.5	0.833	ng/L	29.5	0.279	147	70-130	High Bias			
Perfluorohexanoic acid (PFHxA)	45.5	0.833	"	33.3	1.59	132	70-130	High Bias			
Perfluoroheptanoic acid (PFHpA)	46.6	0.833	"	33.3	1.08	137	70-130	High Bias			
Perfluorohexanesulfonic acid (PFHxS)	51.1	0.833	"	31.7	ND	161	70-130	High Bias			
Perfluorooctanoic acid (PFOA)	47.5	0.833	"	33.3	2.48	135	70-130	High Bias			
Perfluorooctanesulfonic acid (PFOS)	44.3	0.833	"	32.0	ND	138	70-130	High Bias			
Perfluorononanoic acid (PFNA)	40.7	0.833	"	33.3	ND	122	70-130				
Perfluorodecanoic acid (PFDA)	38.2	0.833	"	33.3	ND	115	70-130				
Perfluoroundecanoic acid (PFUnA)	36.9	0.833	"	33.3	ND	111	70-130				
Perfluorododecanoic acid (PFDoA)	39.3	0.833	"	33.3	ND	118	70-130				
Perfluorotridecanoic acid (PFTriDA)	36.9	0.833	"	33.3	ND	111	70-130				
Perfluorotetradecanoic acid (PFTA)	32.4	0.833	"	33.3	ND	97.2	70-130				
N-MeFOSAA	45.1	0.833	"	33.3	ND	135	70-130	High Bias			
N-EtFOSAA	42.5	0.833	"	33.3	ND	128	70-130				
9CL-PF3ONS	44.7	0.833	"	31.2	ND	143	70-130	High Bias			
11CL-PF3OUdS	30.5	0.833	"	31.5	ND	96.9	70-130				
HFPO-DA (Gen-X)	41.4	0.833	"	33.3	ND	124	70-130				
ADONA	40.7	0.833	"	31.5	ND	129	50-130				
Surrogate: d5-N-EtFOSAA	142		"	133		106	70-130				
Surrogate: 13C-PFDA	31.1		"	33.3		93.4	70-130				
Surrogate: 13C-PFHxA	25.9		"	33.3		77.7	70-130				
Surrogate: M3HFPO-DA	28.8		"	33.3		86.5	70-130				



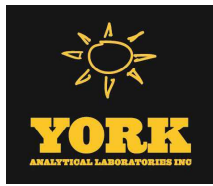


Sample and Data Qualifiers Relating to This Work Order

PFSH	The recovery for this PFAS surrogate was above control limits
PFLH	The recovery for this PFAS compound was above control limits
PFAS-MSH	The recovery for this matrix spike compound was above control limits possibly due to matrix effects or non-homogeneity of the sample versus the native sample

Definitions and Other Explanations

*	Analyte is not certified or the state of the samples origination does not offer certification for the Analyte.
ND	NOT DETECTED - the analyte is not detected at the Reported to level (LOQ/RL or LOD/MDL)
RL	REPORTING LIMIT - the minimum reportable value based upon the lowest point in the analyte calibration curve.
LOQ	LIMIT OF QUANTITATION - the minimum concentration of a target analyte that can be reported within a specified degree of confidence. This is the lowest point in an analyte calibration curve that has been subjected to all steps of the processing/analysis and verified to meet defined criteria. This is based upon NELAC 2009 Standards and applies to all analyses.
LOD	LIMIT OF DETECTION - a verified estimate of the minimum concentration of a substance in a given matrix that an analytical process can reliably detect. This is based upon NELAC 2009 Standards and applies to all analyses conducted under the auspices of EPA SW -846.
MDL	METHOD DETECTION LIMIT - a statistically derived estimate of the minimum amount of a substance an analytical system can reliably detect with a 99% confidence that the concentration of the substance is greater than zero. This is based upon 40 CFR Part 136 Appendix B and applies only to EPA 600 and 200 series methods.
Reported to	This indicates that the data for a particular analysis is reported to either the LOD/MDL, or the LOQ/RL. In cases where the "Reported to" is located above the LOD/MDL, any value between this and the LOQ represents an estimated value which is "J" flagged accordingly. This applies to volatile and semi-volatile target compounds only.
NR	Not reported
RPD	Relative Percent Difference
Wet	The data has been reported on an as-received (wet weight) basis
Low Bias	Low Bias flag indicates that the recovery of the flagged analyte is below the laboratory or regulatory lower control limit. The data user should take note that this analyte may be biased low but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
High Bias	High Bias flag indicates that the recovery of the flagged analyte is above the laboratory or regulatory upper control limit. The data user should take note that this analyte may be biased high but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
Non-Dir.	Non-dir. flag (Non-Directional Bias) indicates that the Relative Percent Difference (RPD) (a measure of precision) among the MS and MSD data is outside the laboratory or regulatory control limit. This alerts the data user where the MS and MSD are from site-specific samples that the RPD is high due to either non-homogeneous distribution of target analyte between the MS/MSD or indicates poor reproducibility for other reasons.
MCL	This is the Maximum Contaminant Level in ng/L (ppt) established by the NYSDOH for these compounds where an MCL is reported. Exceedences are flagged according.





Field Chain-of-Custody Record

YORK Analytical Laboratories, Inc. (YORK)'s Standard Terms & Conditions are listed on the back side of this document. This document serves as your written authorization for YORK to proceed with the analyses requested below. Your signature binds you to YORK's Standard Terms & Conditions.

YORK Project No.
2241037

120 Research Drive Stratford, CT 06615 132-02 89th Ave Queens, NY 11418 clientservices@yorklab.com www.yorklab.com 800-306-YORK 800-306-9675 Page of

YOUR Information		Report To:		Invoice To:		YOUR Project Number		Turn-Around Time	
Company: AguaEva Lab	Address:	Company:	Address:	Company:	Address:	YOUR Project Name		RUSH - Next Day	
Phone:..	Phone:..	Address:	Address:	Phone:..	Phone:..			RUSH - Two Day	
Contact:	Contact:	Other:	Other:	Contact:	Contact:			RUSH - Three Day	
E-mail:	E-mail:	Sample Matrix	Sample Matrix	E-mail:	E-mail:			RUSH - Four Day	
		Sample Matrix	Sample Matrix					Standard (5-7 Day)	

Please print clearly and legibly. All information must be complete. Samples will not be logged in and the turn-around-time clock will not begin until any questions by YORK are resolved.

western Schools

Matrix Codes	Samples From	Report / EDD Type (circle selections)	YORK Reg. Comp.
S - soil / solid	New York	Summary Report	Compared to the following Regulation(s): (please fill in)
GW - groundwater	New Jersey	QA Report	CT RCP Standard Excel EDD
DW - drinking water	Connecticut	<input checked="" type="checkbox"/> NY ASP A Package	CT RCP DQA/DUE EQUIS (Standard)
WW - wastewater	Pennsylvania	<input type="checkbox"/> NY ASP B Package	NJDEP Reduced NYSDEC EQUIS
O - Oil Other:	Other:		Deliverables NUDEP SRP HazSite
			Other: NJDKQP
Sample Matrix	Date/Time Sampled	Analysis Requested	Container Description
DW	8/17/02 12:30pm	PFOAS	
1	8/17/02 12:40pm	H	

Comments:

Samples iced/chilled at time of lab pickup? circle Yes or No

Preservation: (check all that apply)

HCl ___ MeOH ___ HNO3 ___ H2SO4 ___ NaOH ___

ZnAc ___ Ascorbic Acid ___ Other: ___

1. Samples Relinquished by / Company Date/Time

2. Samples Relinquished by / Company Date/Time

3. Samples Received by / Company Date/Time

4. Samples Received by / Company Date/Time

5. Samples Received in LAB by Date/Time Temperature

11/17/02 1449 60

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