Fibertec
environmental
services

Friday, May 20, 2022

Fibertec Project Number:	A08381
Project Identification:	22E0269 /22E0269
Submittal Date:	05/09/2022

Mr. Tim Brewer
Trace Analytical Laboratories, Inc.
2241 Black Creek Road
Muskegon, MI 49444

Dear Mr. Brewer,

Thank you for selecting Fibertec Environmental Services as your analytical laboratory. The samples you submitted have been analyzed in accordance with NELAC standards and the results compiled in the attached report. Any exceptions to NELAC compliance are noted in the report. These results apply only to those samples submitted. Please note TO-15 samples will be disposed of 7 calendar days after the reporting date. All other samples will be disposed of 30 days after the reporting date.

Percent Solids for sample -001 were reported at 11.4%.

If you have any questions regarding these results or if we may be of further assistance to you, please contact me at (517) 699-0345.

Sincerely,

Sue Ricketts

By Sue Ricketts at 3:44 PM, May 20, 2022

For Daryl P. Strandbergh
Laboratory Director

Enclosures

Fibertec environmental services

Analytical Laboratory Report
Laboratory Project Number: A08381
Laboratory Sample Number: A08381-001

Order: A08381
Date: 05/20/22

Client Identification:	**Trace Analytical Laboratories, Inc.**	Sample Description:	**Biosilds PFAS 22E0269-01**	Chain of Custody:	**NA**
Client Project Name:	**22E0269**	Sample No:		Collect Date:	**05/04/22**
Client Project No:	**22E0269**	Sample Matrix:	**Biosolids**	Collect Time:	**10:30**

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

PFAS **Aliquot ID: A08381-001** **Matrix: Biosolids**
Method: ASTM D7968-17a **Description: Biosilds PFAS 22E0269-01**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
‡ 1. ADONA	U		µg/kg	2.0	1.0	05/16/22	PS22E16G	05/17/22	SM22E17B	SKG
‡ 2. 9Cl-PF3ONS	U		µg/kg	2.0	1.0	05/16/22	PS22E16G	05/17/22	SM22E17B	SKG
‡ 3. 11Cl-PF3OUdS	U		µg/kg	2.0	1.0	05/16/22	PS22E16G	05/17/22	SM22E17B	SKG
‡ 4. N-EtFOSAA	**7.9**		µg/kg	2.0	1.0	05/16/22	PS22E16G	05/17/22	SM22E17B	SKG
‡ 5. FtS 4:2	U	EIS+	µg/kg	2.0	1.0	05/16/22	PS22E16G	05/17/22	SM22E17B	SKG
‡ 6. FtS 6:2	U		µg/kg	2.0	1.0	05/16/22	PS22E16G	05/17/22	SM22E17B	SKG
‡ 7. FtS 8:2	U		µg/kg	2.0	1.0	05/16/22	PS22E16G	05/17/22	SM22E17B	SKG
‡ 8. HFPO-DA	U	L+	µg/kg	2.0	1.0	05/16/22	PS22E16G	05/17/22	SM22E17B	SKG
‡ 9. N-MeFOSAA	**8.1**		µg/kg	2.0	1.0	05/16/22	PS22E16G	05/17/22	SM22E17B	SKG
‡ 10. PFBA	U		µg/kg	2.0	1.0	05/16/22	PS22E16G	05/17/22	SM22E17B	SKG
‡ 11. PFBS	U		µg/kg	2.0	1.0	05/16/22	PS22E16G	05/17/22	SM22E17B	SKG
‡ 12. PFDA	U		µg/kg	2.0	1.0	05/16/22	PS22E16G	05/17/22	SM22E17B	SKG
‡ 13. PFDoA	U		µg/kg	2.0	1.0	05/16/22	PS22E16G	05/17/22	SM22E17B	SKG
‡ 14. PFDS	U		µg/kg	2.0	1.0	05/16/22	PS22E16G	05/17/22	SM22E17B	SKG
‡ 15. PFHpA	U		µg/kg	2.0	1.0	05/16/22	PS22E16G	05/17/22	SM22E17B	SKG
‡ 16. PFHpS	U		µg/kg	2.0	1.0	05/16/22	PS22E16G	05/17/22	SM22E17B	SKG
‡ 17. PFHxA	U		µg/kg	2.0	1.0	05/16/22	PS22E16G	05/17/22	SM22E17B	SKG
‡ 18. PFHxS-Total	U		µg/kg	2.0	1.0	05/16/22	PS22E16G	05/17/22	SM22E17B	SKG
‡ 19. PFNA	U		µg/kg	2.0	1.0	05/16/22	PS22E16G	05/17/22	SM22E17B	SKG
‡ 20. PFNS	U		µg/kg	2.0	1.0	05/16/22	PS22E16G	05/17/22	SM22E17B	SKG
‡ 21. PFOA	U		µg/kg	2.0	1.0	05/16/22	PS22E16G	05/17/22	SM22E17B	SKG
‡ 22. PFOSA	U		µg/kg	2.0	1.0	05/16/22	PS22E16G	05/17/22	SM22E17B	SKG
‡ 23. PFOS-Total	U		µg/kg	2.0	1.0	05/16/22	PS22E16G	05/17/22	SM22E17B	SKG
‡ 24. PFPeA	U		µg/kg	2.0	1.0	05/16/22	PS22E16G	05/17/22	SM22E17B	SKG
‡ 25. PFPeS	U		µg/kg	2.0	1.0	05/16/22	PS22E16G	05/17/22	SM22E17B	SKG
‡ 26. PFTeA	U		µg/kg	2.0	1.0	05/16/22	PS22E16G	05/17/22	SM22E17B	SKG
‡ 27. PFTriA	U	L+	µg/kg	2.0	1.0	05/16/22	PS22E16G	05/17/22	SM22E17B	SKG
‡ 28. PFUnA	U		µg/kg	2.0	1.0	05/16/22	PS22E16G	05/17/22	SM22E17B	SKG

Acronym (Param)	Analyte Name	CAS Number
1. ADONA	4,8-dioxa-3H-perfluorononanoic acid	919005-14-4
2. 9Cl-PF3ONS	9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid	756426-58-1
3. 11Cl-PF3OUdS	11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	763051-92-9
4. N-EtFOSAA	2-(N-Ethylperfluorooctanesulfonamido) acetic acid	2991-50-6
5. FtS 4:2	Fluorotelomer sulphonic acid 4:2	757124-72-4
6. FtS 6:2	Fluorotelomer sulphonic acid 6:2	27619-97-2
7. FtS 8:2	Fluorotelomer sulphonic acid 8:2	39108-34-4
8. HFPO-DA	Hexafluoropropylene oxide dimer acid	13252-13-6
9. N-MeFOSAA	2-(N-Methylperfluorooctanesulfonamido) acetic acid	2355-31-9
10. PFBA	Perfluorobutanoic acid	375-22-4
11. PFBS	Perfluorobutanesulfonic acid	375-73-5
12. PFDA	Perfluorodecanoic acid	335-76-2
13. PFDoA	Perfluorododecanoic acid	307-55-1
14. PFDS	Perfluorodecanesulfonic acid	335-77-3
15. PFHpA	Perfluoroheptanoic acid	375-85-9
16. PFHpS	Perfluoroheptanesulfonic acid	375-92-8
17. PFHxA	Perfluorohexanoic acid	307-24-4
18. PFHxS-Total	Perfluorohexanesulfonic acid	355-46-4
19. PFNA	Perfluorononanoic acid	375-95-1
20. PFNS	Perfluorononanesulfonic acid	68259-12-1
21. PFOA	Perfluorooctanoic acid	335-67-1
22. PFOSA	Perfluorooctanesulfonamide	754-91-6
23. PFOS-Total	Perfluorooctanesulfonic acid	1763-23-1
24. PFPeA	Perfluoropentanoic acid	2706-90-3
25. PFPeS	Perfluoropentanesulfonic acid	2706-91-4
26. PFTeA	Perfluorotetradecanoic acid	376-06-7
27. PFTriA	Perfluorotridecanoic acid	72629-94-8
28. PFUnA	Perfluoroundecanoic acid	2058-94-8

Definitions/ Qualifiers:

A: Spike recovery or precision unusable due to dilution.
B: The analyte was detected in the associated method blank.
E: The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.
J: The concentration is an estimated value.
M: Modified Method
U: The analyte was not detected at or above the reporting limit.
X: Matrix Interference has resulted in a raised reporting limit or distorted result.
W: Results reported on a wet-weight basis.
***:** Value reported is outside QC limits

Exception Summary:

EIS+ : The Isotope Dilution/Extracted Internal Standard area exceeds the upper control limit.
L+ : Recovery in the associated laboratory sample (LCS) exceeds the upper control limit. Results may be biased high.

Analysis Locations:

All analyses performed in Holt.

NELAP ACCREDITED TNI LABORATORY

Accreditation Number(s):

T104704518-19-8 (TX)