FieldTurf
A Tarkett Sports Company

THE ULTIMATE
SURFACE EXPERIENCE

Mike D'Agostino
Region 9 School District Chairperson
Joel Barlow High School
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203-240-6588

April 10, 2023

Re: PFAS

Mike,

As requested, contained in this letter and the attachments is information about the use of PFAS in FieldTurf's products.

PFAS of Concern

PFAS has become a concern in many industries due to what is often described as a category of PFAS "of concern." We have tested our standard sports fibers for those specific PFAS with none to be found. Attached to this letter you will find the PFAS test results of 30 compounds in accordance with U.S. Environmental Protection Agency (EPA) Method 537 Modified (537M) – the test done to determine the presence of PFAS in drinking water.

In addition to the "PFAS of concern," some clients have asked for a more comprehensive test protocol of additional PFAS – including those deemed safe and used in everyday household items. Keep in mind that there are over 4,700 known PFAS that are used in a multitude of industries and in products such as fast food containers/wrappers, microwave popcorn bags, pizza boxes, candy wrappers, water resistant clothing, cleaning products as well as personal care products (shampoo, dental floss) and cosmetics (nail polish, eye makeup).

Additional PFAS Testing

We believe wholeheartedly in the safety of our products and have voluntarily submitted our products for additional testing, most recently with the City of Portsmouth (MA). The complete report is attached to this letter. Here is a quick summary of the results:

- Of the materials tested, the carpet sample had the least amount of detectable PFAS – none in the pre-treatment sample.
- "As shown in Table 1, there were no detectable concentrations of PFAS in the FieldTurf, synthetic turf carpet pre-treatment sample. The following eight individual PFAS were detected at very low concentrations in the TOP Assay after extreme oxidizing conditions."
- The report concluded: "Based on this evaluation, the detection of very low levels of a limited number of PFAS in the synthetic turf components does not represent a human health risk to those using the synthetic turf ballfields."

Please feel free to reach out should you have any additional questions or require any additional testing.

Sincerely,

Darren Gill
Executive Vice-President

DAVID TETER CONSULTING

November 26, 2019

Mr. Darren Gill
Senior Vice President of Marketing and Innovation
FieldTurf
7445 Côte-de-Liesse Suite 200
Montreal, Quebec H4T 1G2
Canada

RE: FieldTurf Synthetic Turf Carpet PFAS Testing Results

Dear Mr. Gill:

David Teter Consulting has prepared this letter report to present the results of testing of FieldTurf synthetic turf carpet for per- and polyfluoroalkyl substances (PFAS).

SYNTHETIC TURF CARPET PFAS SAMPLING AND ANALYSIS

FieldTurf USA, Inc. shipped 1-square-foot samples of each of the following synthetic turf carpets to ALS Environmental of Kelso, Washington under standard chain-of-custody protocols:

- FieldTurf Classic HD;
- FieldTurf Core;
- FieldTurf Revolution
- FieldTurf Revolution 360;
- FieldTurf XM6; and
- FieldTurf XT with Mattex.

Each synthetic turf carpet sample was shipped separately. ALS Environmental analyzed each sample of synthetic turf carpet for total PFAS (30 compounds) by U.S. Environmental Protection Agency (EPA) Method 537 Modified (537M). No analytical problems were encountered that significantly affected the quality of the sample data.

SYNTHETIC TURF CARPET PFAS TESTING RESULTS

As shown in Table 1, PFAS were not detected above the laboratory reporting limit in any of the tested synthetic turf carpets.

CLOSING

I appreciate the opportunity to work with you on this project. Should you have any questions or require additional information, please do not hesitate to contact me at (415) 889-8875 or at david@davidteterconsulting.com.

Sincerely,

David Teter, PhD, PE
Principal Engineer

Enclosures
Table 1 – PFAS Testing Results for FieldTurf Synthetic Turf Carpets

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TABLE 1 - Total PFAS Testing Results for FieldTurf Synthetic Turf Carpets. All results are presented in unit of nanograms per gram (ng/g).

Analyte Class	Analyte Name	Fieldturf Synthetic Turf Carpet					
		Classic HD	Core	Revolution	Revolution 360	XM6	XT (with Mattex)
Perfluoroalkane Sulfonic Acids	Perfluorobutane sulfonic acid (PFBS)	< 0.79	< 0.71	< 0.71	< 0.81	< 0.98	< 0.73
	Perfluoropentane sulfonic acid (PFPeS)	< 0.79	< 0.68	< 0.71	< 0.81	< 0.98	< 0.73
	Perfluorohexane sulfonic acid (PFHxS)	< 0.79	< 0.73	< 0.73	< 0.81	< 0.98	< 0.73
	Perfluoroheptane sulfonic acid (PFHpS)	< 0.79	< 0.68	< 0.71	< 0.81	< 0.98	< 0.73
	Perfluorooctane sulfonic acid (PFOS)	< 0.79	< 0.68	< 0.71	< 0.81	< 0.98	< 0.73
	Perfluorononane sulfonic acid (PFNS)	< 0.79	< 0.68	< 0.71	< 0.81	< 0.98	< 0.73
	Perfluorodecane sulfonic acid (PFDS)	< 0.79	< 0.68	< 0.71	< 0.81	< 0.98	< 0.73
Perfluoroalkane Carboxylic Acids	Perfluorobutanoic acid (PFBA)	< 0.80	< 0.80	< 0.80	< 0.81	< 0.98	< 0.80
	Perfluoropentanoic acid (PFPeA)	< 0.80	< 0.80	< 0.80	< 0.81	< 0.98	< 0.80
	Perfluorohexanoic acid (PFHxA)	< 0.80	< 0.80	< 0.80	< 0.81	< 0.98	< 0.80
	Perfluoroheptanoic acid (PFHpA)	< 0.79	< 0.68	< 0.71	< 0.81	< 0.98	< 0.73
	Perfluorooctanoic acid (PFOA)	< 0.79	< 0.68	< 0.71	< 0.81	< 0.98	< 0.73
	Perfluorononanoic acid (PFNA)	< 0.80	< 0.80	< 0.80	< 0.81	< 0.98	< 0.80
	Perfluorodecanoic acid (PFDA)	< 0.80	< 0.80	< 0.80	< 0.81	< 0.98	< 0.80
	Perfluoroundecanoic acid (PFUnDA)	< 0.79	< 0.68	< 0.71	< 0.81	< 0.98	< 0.73
	Perfluorododecanoic acid (PFDoDA)	< 0.80	< 0.80	< 0.80	< 0.81	< 0.98	< 0.80
	Perfluorotridecanoic acid (PFTrDA)	< 0.80	< 0.80	< 0.80	< 0.81	< 0.98	< 0.80
	Perfluorotetradecanoic acid (PFTeDA)	< 0.79	< 0.68	< 0.71	< 0.81	< 0.98	< 0.73
Perfluoroalkyl Sulfonamides	Perfluorooctane sulfonamide (FOSA)	< 0.79	< 0.68	< 0.71	< 0.81	< 0.98	< 0.73
	N-Methyl perfluorooctane sulfonamide (MeFOSA)	< 0.79	< 0.68	< 0.71	< 0.81	< 0.98	< 0.73
	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	< 0.79	< 0.68	< 0.71	< 0.81	< 0.98	< 0.73
	N-Methyl perfluorooctane sulfonamidoethanol	< 0.79	< 0.68	< 0.71	< 0.81	< 0.98	< 0.73
	N-Ethyl perfluorooctane sulfonamidoethanol	< 0.79	< 0.68	< 0.71	< 0.81	< 0.98	< 0.73
	N-Methyl perfluorooctane sulfonamidoacetic acid	< 0.80	< 0.80	< 0.80	< 0.81	< 0.98	< 0.80
	N-Ethyl perfluorooctane sulfonamidoacetic acid	< 0.79	< 0.68	< 0.71	< 0.81	< 0.98	< 0.73
(n:2) Fluorotelomer Sulfonic Acids	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	< 0.79	< 0.68	< 0.71	< 0.81	< 0.98	< 0.73
	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	< 0.79	< 0.68	< 0.71	< 0.81	< 0.98	< 0.73
	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	< 0.79	< 0.68	< 0.71	< 0.81	< 0.98	< 0.73
	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	< 0.79	< 0.68	< 0.71	< 0.81	< 0.98	< 0.73

Technical Memorandum

To: Peter H. Rice, Director of Public Works (City of Portsmouth, NH)
Suzanne Woodland (Deputy City Attorney)

From: Elizabeth Denly, TRC Vice President, PFAS Initiative Leader & Chemistry Director
Dr. Karen Vetrano, TRC Risk Assessment and Toxicology Manager

Date: June 7, 2022

Subject: Evaluation of PFAS in Synthetic Turf

1.0 SUMMARY OF INVESTIGATION

The City of Portsmouth recently installed a synthetic turf ballfield. Due to concerns raised by community members, the material used for the synthetic turf was evaluated for the potential presence of per- and polyfluoroalkyl substances (PFAS).

TRC prepared a sampling and analysis plan (SAP) in February 2022 which provided details and requirements on the following:

- Sampling procedures for the materials under investigation: carpet/grass, in-fill material, and the shock pad;
- Requirements for packaging of these materials by the manufacturer and shipping of these materials to the analytical laboratory;
- Procedures to be used by the analytical laboratory for the homogenization/compositing, extraction, and analysis of each material;
- Reporting limit goals for the individual PFAS analyses in each material; and
- Required field and analytical quality control samples and measurement criteria.

TRC worked directly with the synthetic turf manufacturers to establish an appropriate procedure for the collection of representative samples for analysis. TRC also worked directly with the analytical laboratory, Eurofins TestAmerica (Eurofins) in Lancaster, Pennsylvania, to ensure appropriate procedures would be used by the laboratory for the handling of these materials and that the resulting data would be representative of the materials under evaluation.

The evaluation was performed using the same synthetic turf material product purchased and installed by the City of Portsmouth, but the samples of this material that underwent evaluation were obtained directly from the manufacturers. Figures 1 through 3 provide photographs of the samples submitted for analysis.

- US Greentech (Safeshell Infill): Sample ID: Safeshell #1-3
- FieldTurf (Synthetic Turf Carpet): Sample ID: Carpet-001
- Schmitz Foam Products (ProPlay Pad): Sample ID: PP Pad-001

Prior to the laboratory extraction process, each material was disaggregated using a cryo-mill which reduced each material down to a homogenous powdery material. This process helped to ensure a representative sample of each material was being used in the extraction. Eurofins performed three analyses of each sample.

1) 70 individual PFAS using a modified version of USEPA Method 537.1, with isotope dilution liquid chromatography/dual mass spectrometry (i.e., pre-oxidation analysis)
2) Total oxidizable precursor (TOP) assay
3) Non-targeted analysis using quadrupole time of flight mass spectrometry (QTOF-MS).

Three equipment blanks were generated by the laboratory during the cryo-milling process to ensure the equipment was not contributing PFAS to the samples and that the equipment was properly decontaminated between samples. The equipment blanks were analyzed for only the 70 individual PFAS. Equipment blanks were associated with the samples as follows:

- EB-001: associated with Carpet-001
- EB-002: associated with PP Pad-001
- EB-003: associated with Safeshell #1-3

2.0 ANALYTICAL RESULTS

The results of the analyses for the 70 PFAS and TOP Assay are presented in Table 1. The results of the q-TOF analyses are discussed below and provided in Attachment 1. Copies of the laboratory data packages are provided in Attachment 1.

TOP Assay

TOP Assay analyses were performed on each sample. The purpose of the TOP Assay analyses was to determine if PFAS precursors are present in the samples. There are thousands of potential PFAS precursors, with only several that are commonly analyzed for by commercial laboratories. The current analytical method can quantify a list of 70 PFAS; the list of compounds includes perfluoroalkyl acids (PFAAs) and select PFAS precursors. This method is not designed to identify and report on the full suite of PFAS that may be present in each sample. However, through a strong oxidation procedure, the TOP Assay analysis causes the breakdown of PFAS precursor compounds into the measurable and regulated PFAAs. As a result, this investigation was designed to quantify the potential risk of accelerating precursor transformation into PFAAs that could result from the oxidation of these samples, a worst-case scenario. The analysis was completed by utilizing a pre- and post-TOP Assay procedure.

The post-oxidation analyses of the three samples did not result in a significant increase of PFAAs, indicating that these materials do not contain a significant mass of precursor PFAS. Potential transformation or oxidation of these materials in the future will therefore not likely cause an increase in the PFAA concentrations and will not result in additional risk.

Non-targeted QTOF-MS Results

Non-targeted QTOF-MS analyses were performed on each sample to determine if “other” PFAS were present that were not included in the analysis of the 70 individual PFAS. Consistent with the TOP Assay analyses, the QTOF-MS analyses did not reveal the presence of a significant mass of “other” PFAS. The QTOF-MS data are qualitative in nature; results represent qualitative estimations of presumptive positives. The process used to identify these peaks is described in the data package in Attachment 1.

There were several additional peaks identified in these samples but only one peak was tentatively

identified in sample Carpet-001 as bis(2,2,3,3,4,4,4- heptafluorobutyl) carbonate; this peak had a lower intensity than some of the unknown peaks also noted in this sample. Most of the compounds screened after the non-target analysis appeared as [M-H]-, which indicates a loss of hydrogen after dissociation in water. This indicates the presence of either a carboxylic or sulfonic acid functional group in the backbone of the compounds. However, in almost all cases, the identifications of these peaks were not available and reported as "unknown".

Data Usability Evaluation

An evaluation of analytical data usability was performed and included the following parameters:
• Holding times and sample preservation
• Blanks (method and equipment)
• Isotopically labeled surrogate results
• Laboratory control sample (LCS) results
• Internal standards
• Sample results and reporting limits

The focus of the review was to ensure that the laboratory generated valid data for the PFAS results, and that results were usable for project objectives. Due to significantly low recoveries of PS Acid and EVE Acid in the LCS analyses, the nondetect results for these compounds are not usable for project objectives in the pre-oxidation analyses of all samples.

The following data quality nonconformances were noted, all of which have a minor impact on the usability of the data.

- Holding Times
  - The equipment blank samples were analyzed one to three days outside of the holding time. There is no significant effect on these results due to the minor holding time nonconformance.
- Method Blank Contamination
  - The positive results for PFOSA in equipment blank EB-001 and PFOS in equipment blanks EB-001, EB-002, and EB-003 are likely false positives due to method blank contamination.
  - The positive results for 6:2 FTS in the post-oxidation analyses of samples Carpet-001 and PP Pad-001 are likely false positives due to method blank contamination.
- Equipment Blank Contamination
  - The positive result for HFPO-DA in the post-oxidation analysis of sample PP Pad-001 is likely a false positive due to equipment blank contamination.
- Isotopically Labeled Surrogate Results
  - Potential uncertainty exists for 6:2 FTCA and 7:3 FTCA in the post-oxidation analyses of samples Carpet-001 and PP Pad-001 and 8:2 FTCA in the post-oxidation analysis of sample Safeshell #1-3 due to slightly low recoveries of the associated isotopically labeled surrogates.
  - Potential uncertainty exists for PFPeA in the pre-oxidation analysis of sample Safeshell #1-3 due to high recovery of the associated isotopically labeled surrogate.
- Ion Ratios
  - Potential uncertainty exists for the positive results for 6:2 FTS and PFOS in the post-oxidation analysis of sample Carpet-001 and 6:2 FTS, PFHxA, and PFHpA in the post-oxidation analysis of sample PP Pad-001 due to ion ratios outside of the

acceptance criteria.

In general, data are usable for project decisions based on a review of the accuracy, precision, and sensitivity of the data. With the exception of PS Acid and EVE Acid, the PFAS data are valid as reported and may be used for decision-making purposes.

3.0 PRELIMINARY RISK EVALUATION

A preliminary evaluation of the potential risk of exposure to PFAS detected in the synthetic turf components was performed. Consideration was made as to which turf components contain PFAS and the types of exposure applicable to those components.

As previously discussed, Table 1 presents the results of the analyses for the 70 PFAS and TOP Assay which are denoted under each sample as "Pre-Treatment" and "Post-Treatment", respectively. As discussed above, the TOP Assay subjects the samples to strong oxidizers, under specific laboratory conditions in order to accelerate potential precursor oxidation into the measurable and regulated PFAAs, thus representing a worst-case scenario.

The USEPA (USEPA 2022a) and individual states (ITRC 2022) have derived health-based soil screening criteria under residential exposures for some of the PFAS. Table 2 presents a comparison of the detected concentrations to USEPA and New Hampshire (NH) human health-based residential soil screening values. When neither of these values were available, the lowest available screening value was obtained from another state. Finally, if there were no promulgated screening values available for a detected compound, the lowest NH residential soil screening level (PFOS) was used as a surrogate. Comparing detected concentrations in the synthetic turf components (i.e., grass/carpet, shock pad, and infill material) to available soil screening criteria is highly conservative (i.e., health protective). For example, USEPA residential soil screening criteria assume a combination of ingestion, dermal contact and inhalation (if volatile) exposures over a period of 24 hours/day, 350 days/year for 6 years for non-cancer effects and over a period of 350 days/year for a combined 26 years (20-year-old adult and 6-year-old child combined exposures) (USEPA 2014, 2022b). Exposures to the synthetic turf components will be much less than the assumed residential soil exposures. Additionally, the primary route of exposure for residential soils is ingestion, whereas exposure to the synthetic turf carpet and infill would be through limited dermal exposure. It is not expected that there would be physical contact with the shock pad since it is beneath the carpet and infill material.

<u>Carpet Sample</u>

As shown in Table 1, there were no detectable concentrations of PFAS in the FieldTurf, synthetic turf carpet pre-treatment sample. The following eight individual PFAS were detected at very low concentrations in the TOP Assay after extreme oxidizing conditions:

- 6:2 Fluorotelomer sulfonic acid*
- HFPODA (Gen-X)
- Perfluorobutanoic Acid (PFBA)
- Perfluorohexanoic Acid (PFHxA)
- Perfluorooctanesulfonic Acid (PFOS)
- Perfluoropentanoic Acid (PFPeA)
- PPF Acid (Pentafluoropentionic Acid)
- R-EVE

*It should be noted that 6:2 Fluorotelomer sulfonic acid was also detected in a blank sample and therefore is not considered an actual detection in this sample.

With the exception of PPF Acid, all the detected compounds were below 1 nanogram/gram (ng/g), which is equivalent to 0.001 milligrams per kilogram (mg/kg). PPF acid was detected at 1.08 ng/g (0.00108 mg/kg).

As shown in Table 2, for those detected concentrations in the post-treatment carpet sample with residential soil screening values, all were well below their respective values, ranging from 446 (HFPODA) to 24,120 (Perfluorobutanoic acid) times lower. Two detected compounds do not have screening criteria. Conservatively assuming that these compounds are as toxic as PFOS, the detected concentrations were well below the surrogate PFOS screening value, ranging from 92 (PPF Acid) to 1,472 (R-EVE) times lower.

ProPlay Pad

As shown in Table 1, there were three PFAS with very low detected concentrations in the ProPlay (PP) Pad pre-treatment sample:

- Perfluorononanoic acid (PFNA)
- Perfluortridecanoic acid (PFTrDA)
- Perfluoroundecanoic acid (PFUnA)

The following six PFAS were detected at very low concentrations in the TOP Assay after extreme oxidizing conditions:

- 6:2 Fluorotelomer sulfonic acid*
- HFPODA (Gen-X)
- Perfluoroheptanoic Acid (PFHpA)
- Perfluorohexanoic Acid (PFHxA)
- PPF Acid (Perfluoropropionic Acid)
- R-EVE

*It should be noted that 6:2 Fluorotelomer sulfonic acid was also detected in a blank sample and therefore is not considered an actual detection in this sample.

All the detected compounds were below 1 ng/g, which is equivalent to 0.001 mg/kg.

As shown in Table 2, for those detected concentrations in the PP Pad sample with residential soil screening values, all were well below the documented screening value. For the pre-treatment samples, concentrations ranged from 117 (Perfluoroundecanoic acid) to 2,252 (Perfluorononanoic acid) times lower, while for the post-treatment samples, concentrations ranged from 119 (Perfluoroheptanoic acid) to 1,875 (Perfluorohexanoic acid) times lower than their respective health-based values. Two detected compounds do not have screening criteria. Conservatively assuming that these compounds are as toxic as PFOS, the detected concentrations were well below the surrogate PFOS screening value, ranging from 408 (PPF Acid) to 735 (R-EVE) times lower.

Safeshell #1-3 Infill

As shown in Table 1, there were six PFAS with very low detected concentrations in the SafeShell Infill pre-treatment sample:

- PEPA (Perfluoro-2-ethoxypropanoic acid)
- Perfluoropentanoic Acid (PFPeA)
- PFMOAA (Perfluoro-2-methoxyacetic acid)
- PFO2HxA (Perfluoro (3,5-dioxahexanoic)acid)
- PMPA (Perfluoro-2-methoxypropanoic acid)
- PPF Acid (Perfluoropropionic Acid)

The following four PFAS were detected at very low concentrations in the TOP Assay after extreme oxidizing conditions:

- 6:2 FTCA (6:2 Fluorotelomer carboxylic acid)
- 6:2 FTUCA (6:2 Fluorotelomer unsaturated carboxylic acid)
- PFO2HxA (Perfluoro (3,5-dioxahexanoic)acid)
- TAF (Perfluoro (3,5,7,9,11-pentaoxadodecanoic) acid

With the exception of PFMOAA and PPF acid in the pre-treatment sample, all the detected compounds were below 1 ng/g, which is equivalent to 0.001 mg/kg. PFMOAA was detected at a concentration of 5.16 ng/g (0.00516 mg/kg) and PPF acid was detected at a concentration of 41 ng/g (0.041 mg/kg).

As shown in Table 2, only Perfluoropentanoic acid, detected in the pre-treatment SafeShell sample has an associated soil screening value and was 1500 times lower than that value. Five of the compounds detected in the pre-treatment sample did not have associated screening values. Conservatively assuming that these compounds are as toxic as PFOS, the detected concentrations were below the surrogate PFOS screening value, ranging from 2.5 (PPF Acid) to 2,169 (PMPA) times lower.

None of the post-treatment detected compounds had associated soil screening values. Conservatively assuming that these compounds are as toxic as PFOS, the detected concentrations were well below the surrogate PFOS screening value, ranging from 325 (PFO2HxA) to 2,353 (6:2 FTCA) times lower.

Conclusions

A preliminary evaluation of the potential risk of exposure to PFAS detected in the components of the synthetic turf system (grass/carpet, infill, and shock pad) was conducted by comparing the detected concentrations to available promulgated federal and state residential soil screening levels (USEPA, 2022a, ITRC, 2022). These screening values are meant to establish unlimited use of contaminated soil sites and therefore are extremely conservative (i.e., health protective) when used for comparing concentrations in synthetic turf.

Two primary PFAS analyses were conducted on the synthetic turf components, a modified version of EPA Method 537.1 which can detect 70 individual PFAS and the TOP Assay. The TOP Assay is meant as a worst-case condition and is used to quantify the potential risk of accelerating precursor transformation into PFAAs that could result from the oxidation of these samples in nature, thereby increasing the types and concentrations of PFAAs. The post-oxidation analyses of the three samples did not result in a significant increase of PFAAs, indicating that these materials do not contain a significant mass of precursor PFAS. Potential transformation or oxidation of these materials in the future will not cause an increase in PFAA concentrations and will not result in additional risk.

Of the synthetic turf components, the grass/carpet and infill material would be expected to be the two components in which there will be physical contact. The carpet sample had no detectable PFAS in the pre-treatment sample. Post-treatment samples showed very low level, trace concentrations (as evidenced in Table 1 as “J”, estimated values) of a limited number of PFAS. When compared to the health-based soil screening levels, all concentrations were orders of magnitude below the target benchmark levels, thus indicating no significant risk from exposure to these compounds.

The Shellsafe Infill material had very low-level concentrations of a limited number of PFAS in the pre-treatment and post-treatment samples. With the exception of PPF Acid detected in the pre-treatment sample, all were orders of magnitude below the target benchmark levels, thus indicating no significant risk from exposure to these compounds. PPF Acid does not have a promulgated health-based soil screening level and was compared to the NH residential soil screening level for PFOS and was 2.5 times lower, which still indicates no potential significant risk from this exposure. PPF Acid is a small molecule consisting of only two fully fluorinated carbons and is considered an ultra-short chain PFAA (Bjornsdotter, M.K et al. 2020). Unlike PFOS which bioaccumulates and has an estimated half-life in humans of over 5 years (i.e., the body concentration decreases by half every 5 years with no additional exposure), PPF Acid is not expected to bioaccumulate, thus decreasing potential chronic toxicity. Therefore the comparison with the PFOS screening level as a surrogate is very conservative.

The comparison of detected PFAS concentrations in the shock pad to soil concentrations is an extremely conservative evaluation since it is covered by the grass/carpet and infill material and thus not available for contact. Nevertheless, the same evaluation was conducted. The shock pad had very low-level concentrations of a limited number of PFAS in the pre-treatment and post-treatment samples. All concentrations were orders of magnitude below the target benchmark levels, thus indicating no significant risk from exposure to these compounds.

Based on this evaluation, the detection of very low levels of a limited number of PFAS in the synthetic turf components does not represent a human health risk to those using the synthetic turf ballfields.

References

Björnsdotter, M.K., Yeung, L.W.Y., Kärrman, A. et al. 2020. Challenges in the analytical determination of ultra-short-chain perfluoroalkyl acids and implications for environmental and human health. Anal Bioanal Chem 412, 4785–4796. On-line at: https://link.springer.com/article/10.1007/s00216-020-02692-8

ITRC 2022. Interstate Technology Regulatory Council (ITRC). PFAS – Per – Polyfluoroalkyl Substances. PFAS Water and Soil Values Table Excel File. Updated April. On-line at: Fact Sheets – PFAS — Per- and Polyfluoroalkyl Substances (itrcweb.org)

USEPA 2014. Memorandum: Human Health Evaluation Manual, Supplemental Guidance: Update of Standard Default Exposure Factors. OSWER Directive 9200.1-1200, February 6.

USEPA 2022a. Regional Screening Levels (RSLs) – Generic Tables. Summary Table (TR=1E-06, THQ = 1.0). May. On-line at: https://www.epa.gov/risk/regional-screening-levels-rsls-generic-tables

USEPA 2022b. Regional Screening Levels (RSLs) – Equations. May. On-line at: https://www.epa.gov/risk/regional-screening-levels-rsls-equations#res

FIGURES

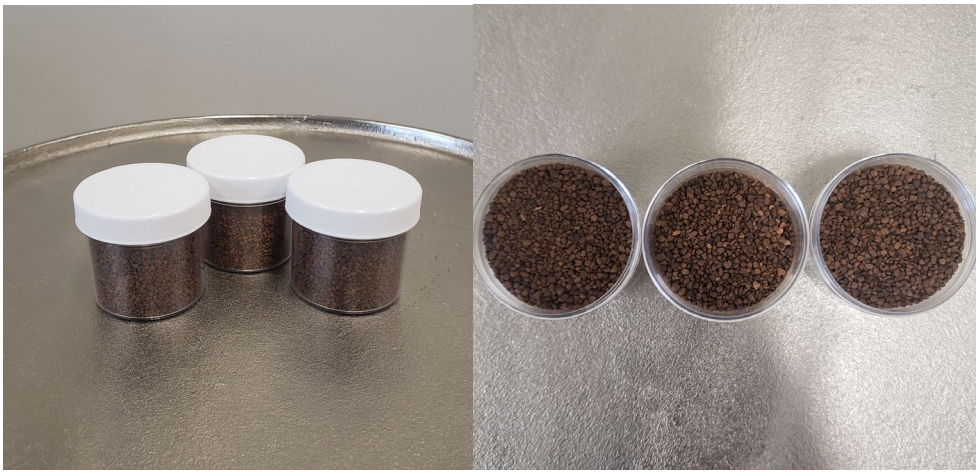


Figure 1: US Greentech (Safeshell Infill)

Figure 2: FieldTurf (Synthetic Turf Carpet)

Figure 3: Schmitz Foam Products (ProPlay Pad)

TABLES

Table 1
Summary of Analytical Results for Synthetic Turf Samples -- March 2022
Portsmouth, NH

		Sample Name:	**Carpet-001**				**PP Pad-001**			
		Lab Sample ID:	410-75808-1				410-76735-1			
		Sample Date:	3/8/2022				3/16/2022			
		Sample Type:	Pre-Treatment		Post-Treatment		Pre-Treatment		Post-Treatment	
		Units:	ng/g		ng/g		ng/g		ng/g	
Analysis	Analyte									
PFAS										
	10:2 FTCA		0.120	U	0.120	U	0.120	U	0.120	U
	10:2 FTS		0.400	U	0.400	U	0.399	U	0.400	U
	10:2 FTUCA		0.120	U	0.120	U	0.120	U	0.120	U
	11Cl-PF3OUdS		0.120	U	0.120	U	0.120	U	0.120	U
	3:3 FTCA		0.120	U	0.120	U	0.120	U	0.120	U
	4:2 Fluorotelomer sulfonic acid		0.400	U	0.400	U	0.399	U	0.400	U
	5:3 FTCA		0.120	U	0.120	U	0.120	U	0.120	U
	6:2 Fluorotelomer sulfonic acid		0.400	U	**0.187**	**JBI**	0.399	U	**0.162**	**JBI**
	6:2 FTCA		0.120	U	0.120	U	0.120	U	0.120	U
	6:2 FTUCA		0.120	U	0.120	U	0.120	U	0.120	U
	7:3 FTCA		0.120	U	0.120	U	0.120	U	0.120	U
	8:2 Fluorotelomer sulfonic acid		0.600	U	0.600	U	0.599	U	0.600	U
	8:2 FTCA		0.120	U	0.120	U	0.120	U	0.120	U
	8:2 FTUCA		0.120	U	0.120	U	0.120	U	0.120	U
	9Cl-PF3ONS		0.400	U	0.400	U	0.399	U	0.400	U
	DONA		0.600	U	0.120	U	0.599	U	0.120	U
	EVE Acid		0.120	U	0.120	U	0.120	U	0.120	U
	HFPODA		0.400	U	**0.515**	**J**	0.399	U	**0.526**	**J**
	Hydro-EVE Acid		0.120	U	0.120	U	0.120	U	0.120	U
	Hydrolyzed PSDA		0.120	U	0.120	U	0.120	U	0.120	U
	Hydro-PS Acid		0.120	U	0.120	U	0.120	U	0.120	U
	MTP		0.120	U	0.120	U	0.120	U	0.120	U
	NEtFOSA		0.400	U	0.400	U	0.399	U	0.400	U
	NEtFOSAA		0.400	U	0.400	U	0.399	U	0.400	U
	NEtFOSE		0.400	U	0.400	U	0.399	U	0.400	U
	NMeFOSA		0.400	U	0.400	U	0.399	U	0.400	U
	NMeFOSAA		0.400	U	0.400	U	0.399	U	0.400	U
	NMeFOSE		0.400	U	0.400	U	0.399	U	0.400	U
	NVHOS		0.120	U	0.120	U	0.120	U	0.120	U
	PEPA		0.120	U	0.120	U	0.120	U	0.120	U
	Perfluoro (2-ethoxyethane) sulfonic acid		0.120	U	0.120	U	0.120	U	0.120	U
	Perfluoro-4-ethylcyclohexanesulfonic acid		0.120	U	0.120	U	0.120	U	0.120	U
	Perfluorobutanesulfonic acid		0.400	U	0.400	U	0.399	U	0.400	U
	Perfluorobutanoic acid		0.400	U	**0.199**	**J**	0.399	U	0.400	U
	Perfluorodecanesulfonic acid		0.120	U	0.120	U	0.120	U	0.120	U
	Perfluorodecanoic acid		0.120	U	0.120	U	0.120	U	0.120	U
	Perfluorododecanesulfonic acid		0.400	U	0.400	U	0.399	U	0.400	U
	Perfluorododecanoic acid		0.120	U	0.120	U	0.120	U	0.120	U
	Perfluoroheptanesulfonic acid		0.120	U	0.120	U	0.120	U	0.120	U
	Perfluoroheptanoic acid		0.120	U	0.120	U	0.120	U	**0.210**	**I**
	Perfluorohexadecanoic acid		0.120	U	0.120	U	0.120	U	0.120	U
	Perfluorohexanesulfonic acid		0.120	U	0.120	U	0.120	U	0.120	U
	Perfluorohexanoic acid		0.120	U	**0.0570**	**J**	0.120	U	**0.160**	**I**
	Perfluorononanesulfonic acid		0.120	U	0.120	U	0.120	U	0.120	U
	Perfluorononanoic acid		0.120	U	0.120	U	**0.0444**	**J**	0.120	U
	Perfluorooctadecanoic acid		0.120	U	0.120	U	0.120	U	0.120	U
	Perfluorooctanesulfonamide		0.120	U	0.120	U	0.120	U	0.120	U
	Perfluorooctanesulfonic acid		0.120	U	**0.135**	**I**	0.120	U	0.120	U

Table 1
Summary of Analytical Results for Synthetic Turf Samples -- March 2022
Portsmouth, NH

		Sample Name:	**Carpet-001**				**PP Pad-001**			
		Lab Sample ID:	410-75808-1				410-76735-1			
		Sample Date:	3/8/2022				3/16/2022			
		Sample Type:	Pre-Treatment		Post-Treatment		Pre-Treatment		Post-Treatment	
		Units:	ng/g		ng/g		ng/g		ng/g	
Analysis	Analyte									
	Perfluorooctanoic acid		0.120	U	0.120	U	0.120	U	0.120	U
	Perfluoropentanesulfonic acid		0.120	U	0.120	U	0.120	U	0.120	U
	Perfluoropentanoic acid		0.120	U	**0.0499**	**J**	0.120	U	0.120	U
	Perfluoropropanesulfonic acid		0.120	U	0.120	U	0.120	U	0.120	U
	Perfluorotetradecanoic acid		0.120	U	0.120	U	0.120	U	0.120	U
	Perfluorotridecanoic acid		0.120	U	0.120	U	**0.0406**	**J**	0.120	U
	Perfluoroundecanoic acid		0.120	U	0.120	U	**0.0538**	**J**	0.120	U
	PFECA A		0.120	U	0.120	U	0.120	U	0.120	U
	PFECA B		0.120	U	0.120	U	0.120	U	0.120	U
	PFECA F		0.120	U	0.120	U	0.120	U	0.120	U
	PFECA G		0.120	U	0.120	U	0.120	U	0.120	U
	PFMOAA		0.120	U	0.120	U	0.120	U	0.120	U
	PFO2HxA		0.120	U	0.120	U	0.120	U	0.120	U
	PFO3OA		0.120	U	0.120	U	0.120	U	0.120	U
	PFO4DA		0.120	U	0.120	U	0.120	U	0.120	U
	PMPA		0.120	U	0.120	U	0.120	U	0.120	U
	PPF Acid		0.120	U	**1.08**	**J**	0.120	U	**0.245**	
	PS Acid		0.120	U	0.120	U	0.120	U	0.120	U
	R-EVE		0.120	U	**0.0679**	**J**	0.120	U	**0.136**	
	R-PSDA		0.120	U	0.120	U	0.120	U	0.120	U
	R-PSDCA		0.120	U	0.120	U	0.120	U	0.120	U
	TAF		0.120	U	0.120	U	0.120	U	0.120	U
	Total PFCA		0.300	U	**0.306**		0.300	U	**0.370**	

Notes:

ng/g - nanograms per gram.

ng/L - nanograms per liter.

B - Compound was found in the laboraotry method blank and sample.

I - Value is EMPC (estimated maximum possible concentration).

J - Estimated value.

NA - Not applicable.

U - Analyte was not detected at specified quantitation limit.

Values in **bold** indicate the analyte was detected.

PFAS - Per- and Poly-fluoroalkyl Substances.

Table 1
Summary of Analytical Results for Synthetic Turf Samples -- March 2022
Portsmouth, NH

		Sample Name:	**Safeshell #1-3**				**EB-001**		**EB-002**		**EB 003**	
		Lab Sample ID:	410-76903-1				410-75808-2		410-76735-2		410-76903-4	
		Sample Date:	3/9/2022				3/21/2022		3/21/2022		3/22/2022	
		Sample Type:	Pre-Treatment		Post-Treatment		Equipment Blank		Equipment Blank		Equipment Blank	
		Units:	ng/g		ng/g		ng/L		ng/L		ng/L	
Analysis	Analyte											
PFAS												
	10:2 FTCA		0.118	U	0.120	U	1.70	U	2.00	U	1.90	U
	10:2 FTS		0.394	U	0.399	U	4.24	U	5.00	U	4.76	U
	10:2 FTUCA		0.118	U	0.120	U	1.70	U	2.00	U	1.90	U
	11Cl-PF3OUdS		0.118	U	0.120	U	1.70	U	2.00	U	1.90	U
	3:3 FTCA		0.118	U	0.120	U	1.70	U	2.00	U	1.90	U
	4:2 Fluorotelomer sulfonic acid		0.394	U	0.399	U	1.70	U	2.00	U	1.90	U
	5:3 FTCA		0.118	U	0.120	U	1.70	U	2.00	U	1.90	U
	6:2 Fluorotelomer sulfonic acid		0.394	U	0.399	U	4.24	U	5.00	U	4.76	U
	6:2 FTCA		0.118	U	**0.0425**	**J**	1.70	U	2.00	U	1.90	U
	6:2 FTUCA		0.118	U	**0.149**		1.70	U	2.00	U	1.90	U
	7:3 FTCA		0.118	U	0.120	U	1.70	U	2.00	U	1.90	U
	8:2 Fluorotelomer sulfonic acid		0.591	U	0.599	U	2.54	U	3.00	U	2.85	U
	8:2 FTCA		0.118	U	0.120	U	1.70	U	2.00	U	1.90	U
	8:2 FTUCA		0.118	U	0.120	U	1.70	U	2.00	U	1.90	U
	9Cl-PF3ONS		0.394	U	0.399	U	1.70	U	2.00	U	1.90	U
	DONA		0.591	U	0.120	U	1.70	U	2.00	U	1.90	U
	EVE Acid		0.118	U	0.120	U	8.48	U	9.99	U	9.52	U
	HFPODA		0.394	U	0.599	U	2.54	U	**0.609**	**J**	2.85	U
	Hydro-EVE Acid		0.118	U	0.120	U	1.70	U	2.00	U	1.90	U
	Hydrolyzed PSDA		0.118	U	0.120	U	1.70	U	2.00	U	1.90	U
	Hydro-PS Acid		0.118	U	0.120	U	1.70	U	2.00	U	1.90	U
	MTP		0.118	U	0.120	U	4.24	U	5.00	U	4.76	U
	NEtFOSA		0.394	U	0.399	U	4.24	U	5.00	U	4.76	U
	NEtFOSAA		0.394	U	0.399	U	2.54	U	3.00	U	2.85	U
	NEtFOSE		0.394	U	0.399	U	2.54	U	3.00	U	2.85	U
	NMeFOSA		0.394	U	0.399	U	2.54	U	3.00	U	2.85	U
	NMeFOSAA		0.394	U	0.399	U	1.70	U	2.00	U	1.90	U
	NMeFOSE		0.394	U	0.399	U	2.54	U	3.00	U	2.85	U
	NVHOS		0.118	U	0.120	U	1.70	U	2.00	U	1.90	U
	PEPA		**0.0687**	**J**	0.120	U	1.70	U	2.00	U	1.90	U
	Perfluoro (2-ethoxyethane) sulfonic acid		0.118	U	0.120	U	1.70	U	2.00	U	1.90	U
	Perfluoro-4-ethylcyclohexanesulfonic acid		0.118	U	0.120	U	1.70	U	2.00	U	1.90	U
	Perfluorobutanesulfonic acid		0.394	U	0.399	U	1.70	U	2.00	U	1.90	U
	Perfluorobutanoic acid		0.394	U	0.399	U	4.24	U	5.00	U	4.76	U
	Perfluorodecanesulfonic acid		0.118	U	0.120	U	1.70	U	2.00	U	1.90	U
	Perfluorodecanoic acid		0.118	U	0.120	U	1.70	U	2.00	U	1.90	U
	Perfluorododecanesulfonic acid		0.394	U	0.399	U	2.54	U	3.00	U	2.85	U
	Perfluorododecanoic acid		0.118	U	0.120	U	1.70	U	2.00	U	1.90	U
	Perfluoroheptanesulfonic acid		0.118	U	0.120	U	1.70	U	2.00	U	1.90	U
	Perfluoroheptanoic acid		0.118	U	0.120	U	1.70	U	2.00	U	1.90	U
	Perfluorohexadecanoic acid		0.118	U	0.120	U	2.54	U	3.00	U	2.85	U
	Perfluorohexanesulfonic acid		0.118	U	0.120	U	1.70	U	2.00	U	1.90	U
	Perfluorohexanoic acid		0.118	U	0.120	U	1.70	U	2.00	U	1.90	U
	Perfluorononanesulfonic acid		0.118	U	0.120	U	1.70	U	2.00	U	1.90	U
	Perfluorononanoic acid		0.118	U	0.120	U	1.70	U	2.00	U	1.90	U
	Perfluorooctadecanoic acid		0.118	U	0.120	U	2.54	U	3.00	U	2.85	U
	Perfluorooctanesulfonamide		0.118	U	0.120	U	**0.447**	**J**	2.00	U	1.90	U
	Perfluorooctanesulfonic acid		0.118	U	0.120	U	**0.501**	**J**	**0.804**	**J**	**0.731**	**J**

Table 1
Summary of Analytical Results for Synthetic Turf Samples -- March 2022
Portsmouth, NH

		Sample Name:	**Safeshell #1-3**				**EB-001**		**EB-002**		**EB 003**	
		Lab Sample ID:	410-76903-1				410-75808-2		410-76735-2		410-76903-4	
		Sample Date:	3/9/2022				3/21/2022		3/21/2022		3/22/2022	
		Sample Type:	Pre-Treatment		Post-Treatment		Equipment Blank		Equipment Blank		Equipment Blank	
		Units:	ng/g		ng/g		ng/L		ng/L		ng/L	
Analysis	Analyte											
	Perfluorooctanoic acid		0.118	U	0.120	U	1.70	U	2.00	U	1.90	U
	Perfluoropentanesulfonic acid		0.118	U	0.120	U	1.70	U	2.00	U	1.90	U
	Perfluoropentanoic acid		**0.200**		0.120	U	1.70	U	2.00	U	1.90	U
	Perfluoropropanesulfonic acid		0.118	U	0.120	U	1.70	U	2.00	U	1.90	U
	Perfluorotetradecanoic acid		0.118	U	0.120	U	1.70	U	2.00	U	1.90	U
	Perfluorotridecanoic acid		0.118	U	0.120	U	1.70	U	2.00	U	1.90	U
	Perfluoroundecanoic acid		0.118	U	0.120	U	1.70	U	2.00	U	1.90	U
	PFECA A		0.118	U	0.120	U	1.70	U	2.00	U	1.90	U
	PFECA B		0.118	U	0.120	U	1.70	U	2.00	U	1.90	U
	PFECA F		0.118	U	0.120	U	1.70	U	2.00	U	1.90	U
	PFECA G		0.118	U	0.120	U	1.70	U	2.00	U	1.90	U
	PFMOAA		**5.16**		0.120	U	1.70	U	2.00	U	1.90	U
	PFO2HxA		**0.0644**	**J**	**0.308**		1.70	U	2.00	U	1.90	U
	PFO3OA		0.118	U	0.120	U	1.70	U	2.00	U	1.90	U
	PFO4DA		0.118	U	0.120	U	1.70	U	2.00	U	1.90	U
	PMPA		**0.0461**	**J**	0.120	U	1.70	U	2.00	U	1.90	U
	PPF Acid		**41.0**		0.120	U	4.24	U	5.00	U	4.76	U
	PS Acid		0.118	U	0.120	U	8.48	U	9.99	U	9.52	U
	R-EVE		0.118	U	0.120	U	1.70	U	2.00	U	1.90	U
	R-PSDA		0.118	U	0.120	U	1.70	U	2.00	U	1.90	U
	R-PSDCA		0.118	U	0.120	U	1.70	U	2.00	U	1.90	U
	TAF		0.118	U	**0.0859**	**J**	4.24	U	5.00	U	4.76	U
	Total PFCA		**0.200**	**J**	0.300	U	NA		NA		NA	

Notes:
ng/g - nanograms per gram.
ng/L - nanograms per liter.
B - Compound was found in the laboraotry method blank and sample.
I - Value is EMPC (estimated maximum possible concentration).
J - Estimated value.
NA - Not applicable.
U - Analyte was not detected at specified quantitation limit.
Values in **bold** indicate the analyte was detected.
PFAS - Per- and Poly-fluoroalkyl Substances.

Table 2
Comparison of Risk-Based Soil Screening Levels with Detected PFAS Concentrations
Portsmouth, NH

		Residential Soil Screening Levels													
					Sample Name:	**Carpet-001**		**PP Pad-001**				**Safeshell #1-3**			
					Sample Date:	3/8/2022		3/16/2022				3/9/2022			
		EPA RSL	NH DCRB	Lowest Alternate State Level	Sample Type:	Post-Treatment		Pre-Treatment		Post-Treatment		Pre-Treatment		Post-Treatment	
Analyte	CAS #	mg/kg	mg/kg	mg/kg	Units:	ng/g	mg/kg	ng/g	mg/kg	ng/g	mg/kg	ng/g	mg/kg	ng/g	mg/kg
6:2 FTCA (a)	53826-12-3	NA	0.1	NA		--	--	--	--	--	--	--	--	0.0425	0.00004
6:2 FTUCA (a)	70887-88-6	NA	0.1	NA		--	--	--	--	--	--	--	--	0.149	0.00015
HFPODA	13252-13-6	0.23	NA	NA		0.515	0.00052	--	--	0.526	0.00053	--	--	--	--
PEPA (a)	267239-61-2	NA	0.1	NA		--	--	--	--	--	--	0.0687	0.00007	--	--
Perfluorobutanoic acid	375-22-4	NA	NA	4.8 (HI EAL)		0.199	0.00020	--	--	--	--	--	--	--	--
Perfluoroheptanoic acid	375-85-9	NA	NA	0.025 (HI EAL)		--	--	--	--	0.21	0.00021	--	--	--	--
Perfluorohexanoic acid	307-24-4	NA	NA	0.3 (TX PCL)		0.057	0.00006	--	--	0.16	0.00016	--	--	--	--
Perfluorononanoic acid	375-95-1	0.19	0.1	NA		--	--	0.0444	0.00004	--	--	--	--	--	--
Perfluorooctanesulfonic acid	1763-23-1	0.13	0.1	NA		0.135	0.00014	--	--	--	--	--	--	--	--
Perfluoropentanoic acid	2706-90-3	NA	NA	0.3 (TX PCL)		0.0499	0.00005	--	--	--	--	0.2	0.00020	--	--
Perfluorotridecanoic acid	72629-94-8	NA	NA	0.0084 (HI EAL)		--	--	0.0406	0.00004	--	--	--	--	--	--
Perfluoroundecanoic acid	2058-94-8	NA	NA	0.0063 (HI EAL)		--	--	0.0538	0.00005	--	--	--	--	--	--
PFMOAA (a)	674-13-5	NA	0.1	NA		--	--	--	--	--	--	5.16	0.00516	--	--
PFO2HxA (a)	39492-88-1	NA	0.1	NA		--	--	--	--	--	--	0.0644	0.00006	0.308	0.00031
PMPA (a)	13140-29-9	NA	0.1	NA		--	--	--	--	--	--	0.0461	0.00005	--	--
PPF Acid (a)	422-64-0	NA	0.1	NA		1.08	0.00108	--	--	0.245	0.00025	41	0.04100	--	--
R-EVE (a)	2416366-22-6	NA	0.1	NA		0.0679	0.00007	--	--	0.136	0.00014	--	--	--	--
TAF (a)	39492-91-6	NA	0.1	NA		--	--	--	--	--	--	--	--	0.0859	0.000086
Total PFCA	TOTAL PFCA	NA	NA	NA		0.306	0.00031	--	--	0.37	0.00037	0.2	0.00020	--	--

(a) NH residential PFOS value used as a surrogate.
EPA RSL = USEPA Regional Screening Level (USEPA 2022)
NH DCRB = New Hampshire Direct Contact Risk-Based Soil Concentration (ITRC 2022)
TX PCL = Texas Protective Concentration Level (ITRC 2022)
HI EAL = Hawaii Environmental Action Level, unrestricted land use scenario (ITRC 2022)

ATTACHMENT 1
ANALYTICAL DATA PACKAGES

eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601
Tel: (717)656-2300

Laboratory Job ID: 410-75808-1
Client Project/Site: Synthetic Turf

For:
TRC Companies, Inc
650 Suffolk Street
Lowell, Massachusetts 01854

Attn: Elizabeth Denly

Marrissa Williams

Authorized for release by:
5/13/2022 12:05:09 PM

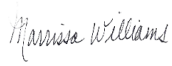
Marrissa Williams, Project Manager
(717)556-7246
Marrissa.Williams@et.eurofinsus.com

Analytical test results meet all requirements of the associated regulatory program (e.g., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis. Data qualifiers are applied to note exceptions. Noncompliant quality control (QC) is further explained in narrative comments.
· QC results that exceed the upper limits and are associated with non-detect samples are qualified but further narration is not required since the bias is high and does not change a non-detect result. Further narration is also not required with QC blank detection when the associated sample concentration is non-detect or more than ten times the level in the blank.
· Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD is performed, unless otherwise specified in the method.
· Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.
Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Measurement uncertainty values, as applicable, are available upon request.

Test results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" and tested in the laboratory are not performed within 15 minutes of collection.

This report shall not be reproduced except in full, without the written approval of the laboratory.



Marrissa Williams
Project Manager
5/13/2022 12:05:09 PM

Table of Contents

Client: TRC Companies, Inc
Job ID: 410-75808-1
Project/Site: Synthetic Turf

Qualifiers

LCMS

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
*+	LCS and/or LCSD is outside acceptance limits, high biased.
*5-	Isotope dilution analyte is outside acceptance limits, low biased.
*5+	Isotope dilution analyte is outside acceptance limits, high biased.
B	Compound was found in the blank and sample.
cn	Refer to Case Narrative for further detail
E	Result exceeded calibration range.
H	Sample was prepped or analyzed beyond the specified holding time
I	Value is EMPC (estimated maximum possible concentration).
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

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
1C	Result is from the primary column on a dual-column method.
2C	Result is from the confirmation column on a dual-column method.
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
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)
TNTC	Too Numerous To Count

Job ID: 410-75808-1

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

Narrative

Job Narrative
410-75808-1

Receipt
The samples were received on 3/11/2022 10:17 AM, 3/18/2022 8:41 AM, 3/21/2022 12:09 PM and 3/21/2022 2:00 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 3 coolers at receipt time were 15.5°C, 16.4°C and 17.2°C

Receipt Exceptions
The following samples were received at the laboratory outside the required temperature criteria: Safeshell #1-3 (410-76903-1), Safeshell #2 (410-76903-2), Safeshell #3 (410-76903-3) and EB 003 (410-76903-4). This does not meet regulatory requirements. The client was contacted regarding this issue, and the laboratory was instructed to proceed with analysis.

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

PFAS
Method 537_IDA_TOPS: The sample injection standard peak areas in the following sample: Carpet-001 (410-75808-1) are outside of the QC limits for both the initial injection and the re-injection. The values here are from the initial injection of the sample.The recovery for a target analyte(s) in the laboratory control spike sample associated with the following sample: Carpet-001 (410-75808-1) is outside the QC acceptance limits. The QC limits applied to this data are advisory and the associated results are estimated.Target analytes were detected in the method blank associated with post oxidation samples: Carpet-001 (410-75808-1). No further action was taken.

Method 537_IDA_TOPS: The recovery for a target analyte(s) in the laboratory control spike sample associated with the following sample: PP Pad-001 (410-76735-1) is outside the QC acceptance limits. The QC limits applied to this data are advisory and the associated results are estimated.Target analytes were detected in the method blank associated with post oxidation samples: PP Pad-001 (410-76735-1). No further action was taken.

Method 537_IDA_TOPS: The sample injection standard peak areas in the following sample: Safeshell #1-3 (410-76903-1) are outside of the QC limits for both the initial injection and the re-injection. The values here are from the initial injection of the sample.The recovery for a target analyte(s) in the laboratory control spike sample associated with the following sample: Safeshell #1-3 (410-76903-1) is outside the QC acceptance limits. The QC limits applied to this data are advisory and the associated results are estimated.

Method PFC_IDA: The following samples were analyzed one day past the extract hold time: EB-001 (410-75808-2) and EB-002 (410-76735-2). The data is reported.

Method PFC_IDA: The recovery for a target analyte(s) in the laboratory control spike(s) associated with the following samples: EB-001 (410-75808-2) and EB-002 (410-76735-2) is outside the QC acceptance limits. Sufficient sample volume was not available to re-extract this sample.Target analyte(s) were detected in the method blank associated with the following samples: EB-001 (410-75808-2) and EB-002 (410-76735-2). Sufficient sample volume was not available to re-extract this sample.

Method PFC_IDA: The labeled isotope recovery is outside of the QC acceptance limits in the following sample: EB 003 (410-76903-4). Since the recovery is biased high and the associated target analyte is not detected, the data is reported.The following sample was analyzed past the extract hold time: EB 003 (410-76903-4). The data is reported.The recovery for a target analyte(s) in the laboratory control spike(s) associated with the following sample: EB 003 (410-76903-4) is outside the QC acceptance limits. Sufficient sample volume was not available to re-extract this sample.Target analyte(s) were detected in the method blank associated with the following sample: EB 003 (410-76903-4). Sufficient sample volume was not available to re-extract this sample.

Method PFC_IDA: The recovery for target analyte Perfluorooctadecanoic acid is outside the QC acceptance limits in the closing continuing calibration verification standard. Since the result is high and target Perfluorooctadecanoic acid is not detected in the following samples: Carpet-001 (410-75808-1) and PP Pad-001 (410-76735-1), the data is reported.

Method PFC_IDA: The recovery for the labeled isotope(s) in the following samples: Carpet-001 (410-75808-1) and PP Pad-001

Job ID: 410-75808-1 (Continued)

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC (Continued)

(410-76735-1) is outside the QC acceptance limits. Since the recovery is high and the native analyte is not detected in the sample, the data is reported.

Method PFC_IDA: The recovery for the labeled isotope(s) in the following sample: Safeshell #1-3 (410-76903-1) is outside the QC acceptance limits due to the matrix of the sample.

Method PFC_IDA: The recovery for the labeled isotope(s) and target analyte(s) in the laboratory control spike samples associated with samplesCarpet-001 (410-75808-1), PP Pad-001 (410-76735-1) and Safeshell #1-3 (410-76903-1) is outside of QC acceptance limits. The QC limits should be considered advisory until sufficient data points can be obtained to generate statistical limits.Poor recoveries for PS Acid and Eve Acid were observed in the laboratory control spike samples associated with samples: Carpet-001 (410-75808-1), PP Pad-001 (410-76735-1) and Safeshell #1-3 (410-76903-1). The results reported for PS acid and Eve Acid should be considered estimated.

Method PFC_IDA: The recovery for the labeled isotope(s) in the method blank associated with samples: Safeshell #1-3 (410-76903-1) is outside the QC acceptance limits. Since the recovery is high and the associated native analyte is not detected in the method blank, the data is reported.

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

Detection Summary

Client: TRC Companies, Inc
Project/Site: Synthetic Turf

Job ID: 410-75808-1

Client Sample ID: Carpet-001 — Lab Sample ID: 410-75808-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
6:2 Fluorotelomer sulfonic acid	0.187	J H I B cn	0.400	0.120	ng/g	1		537 TOP	Post-Treatment
HFPODA	0.515	J H cn	0.600	0.200	ng/g	1		537 TOP	Post-Treatment
Perfluorobutanoic acid	0.199	J H cn	0.400	0.160	ng/g	1		537 TOP	Post-Treatment
Perfluorohexanoic acid	0.0570	J H cn	0.120	0.0400	ng/g	1		537 TOP	Post-Treatment
Perfluorooctanesulfonic acid	0.135	H I cn	0.120	0.0400	ng/g	1		537 TOP	Post-Treatment
Perfluoropentanoic acid	0.0499	J H cn	0.120	0.0400	ng/g	1		537 TOP	Post-Treatment
PPF Acid	1.08	H *+ cn	0.120	0.0400	ng/g	1		537 TOP	Post-Treatment
R-EVE	0.0679	J H cn	0.120	0.0400	ng/g	1		537 TOP	Post-Treatment
PFBA	0.199				ng/g	1		Total PFCA-Dif	Total/NA
PFPA	0.0499				ng/g	1		Total PFCA-Dif	Total/NA
PFHxA	0.0570				ng/g	1		Total PFCA-Dif	Total/NA
PFHpA	0.000				ng/g	1		Total PFCA-Dif	Total/NA
PFOA	0.000				ng/g	1		Total PFCA-Dif	Total/NA
PFNA	0.000				ng/g	1		Total PFCA-Dif	Total/NA
Total PFCA	0.306				ng/g	1		Total PFCA-Dif	Total/NA
Total PFCA	0.306		0.300	0.100	ng/g	1		Total PFCA-Sum	Post-Treatment

Client Sample ID: EB-001 — Lab Sample ID: 410-75808-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanesulfonamide	0.447	J H B cn	1.70	0.424	ng/L	1		537 IDA	Total/NA
Perfluorooctanesulfonic acid	0.501	J H B cn	1.70	0.424	ng/L	1		537 IDA	Total/NA

Client Sample ID: PP Pad-001 — Lab Sample ID: 410-76735-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorononanoic acid	0.0444	J cn	0.120	0.0399	ng/g	1		537 IDA	Pre-Treatment
Perfluorotridecanoic acid	0.0406	J cn	0.120	0.0399	ng/g	1		537 IDA	Pre-Treatment
Perfluoroundecanoic acid	0.0538	J cn	0.120	0.0399	ng/g	1		537 IDA	Pre-Treatment
6:2 Fluorotelomer sulfonic acid	0.162	J H I B cn	0.400	0.120	ng/g	1		537 TOP	Post-Treatment
HFPODA	0.526	J H cn	0.600	0.200	ng/g	1		537 TOP	Post-Treatment
Perfluoroheptanoic acid	0.210	H I cn	0.120	0.0400	ng/g	1		537 TOP	Post-Treatment
Perfluorohexanoic acid	0.160	H I cn	0.120	0.0400	ng/g	1		537 TOP	Post-Treatment
PPF Acid	0.245	H *+ cn	0.120	0.0400	ng/g	1		537 TOP	Post-Treatment
R-EVE	0.136	H cn	0.120	0.0400	ng/g	1		537 TOP	Post-Treatment
PFBA	0.000				ng/g	1		Total PFCA-Dif	Total/NA
PFPA	0.000				ng/g	1		Total PFCA-Dif	Total/NA
PFHxA	0.160				ng/g	1		Total PFCA-Dif	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: PP Pad-001 (Continued) — Lab Sample ID: 410-76735-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
PFHpA	0.210				ng/g	1		Total PFCA-Dif	Total/NA
PFOA	0.000				ng/g	1		Total PFCA-Dif	Total/NA
PFNA	0.000				ng/g	1		Total PFCA-Dif	Total/NA
Total PFCA	0.370				ng/g	1		Total PFCA-Dif	Total/NA
Total PFCA	0.370		0.300	0.100	ng/g	1		Total PFCA-Sum	Post-Treatment

Client Sample ID: EB-002 — Lab Sample ID: 410-76735-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
HFPODA	0.609	J H cn	3.00	0.500	ng/L	1		537 IDA	Total/NA
Perfluorooctanesulfonic acid	0.804	J H B cn	2.00	0.500	ng/L	1		537 IDA	Total/NA

Client Sample ID: Safeshell #1-3 — Lab Sample ID: 410-76903-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
PEPA	0.0687	J cn	0.118	0.0394	ng/g	1		537 IDA	Pre-Treatment
Perfluoropentanoic acid	0.200	cn	0.118	0.0394	ng/g	1		537 IDA	Pre-Treatment
PFMOAA	5.16	*- cn	0.118	0.0394	ng/g	1		537 IDA	Pre-Treatment
PFO2HxA	0.0644	J cn	0.118	0.0394	ng/g	1		537 IDA	Pre-Treatment
PMPA	0.0461	J cn	0.118	0.0394	ng/g	1		537 IDA	Pre-Treatment
PPF Acid - DL	41.0	*-	1.18	0.394	ng/g	10		537 IDA	Pre-Treatment
6:2 FTCA	0.0425	J H *+ cn	0.120	0.0399	ng/g	1		537 TOP	Post-Treatment
6:2 FTUCA	0.149	H *- cn	0.120	0.0399	ng/g	1		537 TOP	Post-Treatment
PFO2HxA	0.308	H *+ cn	0.120	0.0399	ng/g	1		537 TOP	Post-Treatment
TAF	0.0859	J H *+ cn	0.120	0.0399	ng/g	1		537 TOP	Post-Treatment
PFBA	0.000				ng/g	1		Total PFCA-Dif	Total/NA
PFPA	0.000				ng/g	1		Total PFCA-Dif	Total/NA
PFHxA	0.000				ng/g	1		Total PFCA-Dif	Total/NA
PFHpA	0.000				ng/g	1		Total PFCA-Dif	Total/NA
PFOA	0.000				ng/g	1		Total PFCA-Dif	Total/NA
PFNA	0.000				ng/g	1		Total PFCA-Dif	Total/NA
Total PFCA	0.000				ng/g	1		Total PFCA-Dif	Total/NA
Total PFCA	0.200	J	0.300	0.100	ng/g	1		Total PFCA-Sum	Pre-Treatment

Client Sample ID: EB 003 — Lab Sample ID: 410-76903-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanesulfonic acid	0.731	J H B cn	1.90	0.476	ng/L	1		537 IDA	Total/NA

This Detection Summary does not include radiochemical test results.

Client: TRC Companies, Inc
Project/Site: Synthetic Turf

Job ID: 410-75808-1

Client Sample ID: Carpet-001
Date Collected: 03/08/22 17:12
Date Received: 03/11/22 10:17

Lab Sample ID: 410-75808-1
Matrix: Solid

Method: 537 IDA - EPA 537 Isotope Dilution - Pre-Treatment

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
10:2 FTCA	<0.0400	cn	0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 12:18	1
10:2 FTS	<0.120	cn	0.400	0.120	ng/g		04/04/22 11:19	04/06/22 12:18	1
10:2 FTUCA	<0.0400	cn	0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 12:18	1
11Cl-PF3OUdS	<0.0400	cn	0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 12:18	1
3:3 FTCA	<0.0400	cn	0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 12:18	1
4:2 Fluorotelomer sulfonic acid	<0.120	cn	0.400	0.120	ng/g		04/04/22 11:19	04/06/22 12:18	1
5:3 FTCA	<0.0400	cn	0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 12:18	1
6:2 Fluorotelomer sulfonic acid	<0.120	cn	0.400	0.120	ng/g		04/04/22 11:19	04/06/22 12:18	1
6:2 FTCA	<0.0400	cn	0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 12:18	1
6:2 FTUCA	<0.0400	cn	0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 12:18	1
7:3 FTCA	<0.0400	*- cn	0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 12:18	1
8:2 Fluorotelomer sulfonic acid	<0.120	cn	0.600	0.120	ng/g		04/04/22 11:19	04/06/22 12:18	1
8:2 FTCA	<0.0400	cn	0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 12:18	1
8:2 FTUCA	<0.0400	cn	0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 12:18	1
9Cl-PF3ONS	<0.0400	cn	0.400	0.0400	ng/g		04/04/22 11:19	04/06/22 12:18	1
DONA	<0.0400	cn	0.600	0.0400	ng/g		04/04/22 11:19	04/06/22 12:18	1
EVE Acid	<0.0400	*- cn	0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 12:18	1
HFPODA	<0.0800	cn	0.400	0.0800	ng/g		04/04/22 11:19	04/06/22 12:18	1
Hydro-EVE Acid	<0.0400	cn	0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 12:18	1
Hydrolyzed PSDA	<0.0400	*- cn	0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 12:18	1
Hydro-PS Acid	<0.0400	cn	0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 12:18	1
MTP	<0.0400	*- cn	0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 12:18	1
NEtFOSA	<0.100	cn	0.400	0.100	ng/g		04/04/22 11:19	04/06/22 12:18	1
NEtFOSAA	<0.0400	cn	0.400	0.0400	ng/g		04/04/22 11:19	04/06/22 12:18	1
NEtFOSE	<0.100	cn	0.400	0.100	ng/g		04/04/22 11:19	04/06/22 12:18	1
NMeFOSA	<0.100	cn	0.400	0.100	ng/g		04/04/22 11:19	04/06/22 12:18	1
NMeFOSAA	<0.0400	cn	0.400	0.0400	ng/g		04/04/22 11:19	04/06/22 12:18	1
NMeFOSE	<0.100	cn	0.400	0.100	ng/g		04/04/22 11:19	04/06/22 12:18	1
NVHOS	<0.0400	cn	0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 12:18	1
PEPA	<0.0400	cn	0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 12:18	1
Perfluoro (2-ethoxyethane) sulfonic acid	<0.0400	cn	0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 12:18	1
Perfluoro-4-ethylcyclohexanesulfonic acid	<0.0400	cn	0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 12:18	1
Perfluorobutanesulfonic acid	<0.0800	cn	0.400	0.0800	ng/g		04/04/22 11:19	04/06/22 12:18	1
Perfluorobutanoic acid	<0.160	cn	0.400	0.160	ng/g		04/04/22 11:19	04/06/22 12:18	1
Perfluorodecanesulfonic acid	<0.0400	cn	0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 12:18	1
Perfluorodecanoic acid	<0.0400	cn	0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 12:18	1
Perfluorododecanesulfonic acid	<0.0400	cn	0.400	0.0400	ng/g		04/04/22 11:19	04/06/22 12:18	1
Perfluorododecanoic acid	<0.0400	cn	0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 12:18	1
Perfluoroheptanesulfonic acid	<0.0400	cn	0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 12:18	1
Perfluoroheptanoic acid	<0.0400	cn	0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 12:18	1
Perfluorohexadecanoic acid	<0.0400	cn	0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 12:18	1
Perfluorohexanesulfonic acid	<0.0400	cn	0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 12:18	1
Perfluorohexanoic acid	<0.0400	cn	0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 12:18	1
Perfluorononanesulfonic acid	<0.0400	cn	0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 12:18	1
Perfluorononanoic acid	<0.0400	cn	0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 12:18	1
Perfluorooctadecanoic acid	<0.0400	cn	0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 12:18	1
Perfluorooctanesulfonamide	<0.0400	cn	0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 12:18	1
Perfluorooctanesulfonic acid	<0.0400	cn	0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 12:18	1

Client Sample ID: Carpet-001
Date Collected: 03/08/22 17:12
Date Received: 03/11/22 10:17

Lab Sample ID: 410-75808-1
Matrix: Solid

Method: 537 IDA - EPA 537 Isotope Dilution - Pre-Treatment (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanoic acid	<0.0400	cn	0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 12:18	1
Perfluoropentanesulfonic acid	<0.0400	cn	0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 12:18	1
Perfluoropentanoic acid	<0.0400	cn	0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 12:18	1
Perfluoropropanesulfonic acid	<0.0400	cn	0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 12:18	1
Perfluorotetradecanoic acid	<0.0400	cn	0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 12:18	1
Perfluorotridecanoic acid	<0.0400	cn	0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 12:18	1
Perfluoroundecanoic acid	<0.0400	cn	0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 12:18	1
PFECA A	<0.0400	cn	0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 12:18	1
PFECA B	<0.0400	cn	0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 12:18	1
PFECA F	<0.0400	cn	0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 12:18	1
PFECA G	<0.0400	*- cn	0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 12:18	1
PFMOAA	<0.0400	*- cn	0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 12:18	1
PFO2HxA	<0.0400	cn	0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 12:18	1
PFO3OA	<0.0400	*- cn	0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 12:18	1
PFO4DA	<0.0400	cn	0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 12:18	1
PMPA	<0.0400	cn	0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 12:18	1
PPF Acid	<0.0400	*- cn	0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 12:18	1
PS Acid	<0.0400	*- cn	0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 12:18	1
R-EVE	<0.0400	*- cn	0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 12:18	1
R-PSDA	<0.0400	*- cn	0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 12:18	1
R-PSDCA	<0.0400	*- cn	0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 12:18	1
TAF	<0.0400	cn	0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 12:18	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
d5-NEtFOSAA	*169*	*cn*	*10 - 193*	*04/04/22 11:19*	*04/06/22 12:18*	*1*
d3-NMeFOSAA	*131*	*cn*	*10 - 178*	*04/04/22 11:19*	*04/06/22 12:18*	*1*
13C3 HFPO-DA	*138*	*cn*	*10 - 169*	*04/04/22 11:19*	*04/06/22 12:18*	*1*
d7-N-MeFOSE-M	*94*	*cn*	*10 - 179*	*04/04/22 11:19*	*04/06/22 12:18*	*1*
d9-N-EtFOSE-M	*99*	*cn*	*10 - 185*	*04/04/22 11:19*	*04/06/22 12:18*	*1*
M2-6:2 FTS	*197*	*cn*	*10 - 200*	*04/04/22 11:19*	*04/06/22 12:18*	*1*
M2-8:2 FTS	*269*	**5+ cn*	*15 - 200*	*04/04/22 11:19*	*04/06/22 12:18*	*1*
13C3 PFBS	*151*	*cn*	*27 - 179*	*04/04/22 11:19*	*04/06/22 12:18*	*1*
M2-4:2 FTS	*330*	**5+ cn*	*10 - 200*	*04/04/22 11:19*	*04/06/22 12:18*	*1*
13C5 PFHxA	*149*	*cn*	*10 - 174*	*04/04/22 11:19*	*04/06/22 12:18*	*1*
13C9 PFNA	*164*	*cn*	*26 - 165*	*04/04/22 11:19*	*04/06/22 12:18*	*1*
13C6 PFDA	*148*	*cn*	*26 - 161*	*04/04/22 11:19*	*04/06/22 12:18*	*1*
13C7 PFUnA	*137*	*cn*	*12 - 173*	*04/04/22 11:19*	*04/06/22 12:18*	*1*
13C3 PFHxS	*157*	*cn*	*24 - 171*	*04/04/22 11:19*	*04/06/22 12:18*	*1*
13C2-PFDoDA	*117*	*cn*	*11 - 166*	*04/04/22 11:19*	*04/06/22 12:18*	*1*
d5-NEtPFOSA	*85*	*cn*	*10 - 180*	*04/04/22 11:19*	*04/06/22 12:18*	*1*
d3-NMePFOSA	*83*	*cn*	*10 - 175*	*04/04/22 11:19*	*04/06/22 12:18*	*1*
13C2-2-Perfluorohexylethanoic acid	*260*	**5+ cn*	*10 - 200*	*04/04/22 11:19*	*04/06/22 12:18*	*1*
13C2-2-Perfluorooctylethanoic acid	*364*	**5+ cn*	*10 - 200*	*04/04/22 11:19*	*04/06/22 12:18*	*1*
13C2-2-Perfluorodecylethanoic acid	*328*	**5+ cn*	*10 - 200*	*04/04/22 11:19*	*04/06/22 12:18*	*1*
13C2-2H-Perfluoro-2-octenoic acid	*114*	*cn*	*10 - 164*	*04/04/22 11:19*	*04/06/22 12:18*	*1*
13C2-2H-Perfluoro-2-decenoic acid	*154*	*cn*	*10 - 162*	*04/04/22 11:19*	*04/06/22 12:18*	*1*
13C2-2H-Perfluoro-2-dodecenoic acid	*157*	*cn*	*10 - 161*	*04/04/22 11:19*	*04/06/22 12:18*	*1*
13C4 PFBA	*144*	*cn*	*28 - 153*	*04/04/22 11:19*	*04/06/22 12:18*	*1*
13C5 PFPeA	*147*	*cn*	*24 - 161*	*04/04/22 11:19*	*04/06/22 12:18*	*1*

Client: TRC Companies, Inc
Project/Site: Synthetic Turf

Job ID: 410-75808-1

Client Sample ID: Carpet-001
Date Collected: 03/08/22 17:12
Date Received: 03/11/22 10:17

Lab Sample ID: 410-75808-1
Matrix: Solid

Method: 537 IDA - EPA 537 Isotope Dilution - Pre-Treatment (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFHpA	146	cn	10 - 178	04/04/22 11:19	04/06/22 12:18	1
13C8 PFOA	152	cn	26 - 159	04/04/22 11:19	04/06/22 12:18	1
13C8 PFOS	155	*5+ cn	41 - 154	04/04/22 11:19	04/06/22 12:18	1
13C8 FOSA	133	cn	14 - 163	04/04/22 11:19	04/06/22 12:18	1
13C2 PFTeDA	129	cn	10 - 169	04/04/22 11:19	04/06/22 12:18	1

Client: TRC Companies, Inc
Project/Site: Synthetic Turf

Job ID: 410-75808-1

Client Sample ID: Carpet-001
Date Collected: 03/08/22 17:12
Date Received: 03/11/22 10:17

Lab Sample ID: 410-75808-1
Matrix: Solid

Method: 537 TOP - Fluorinated Alkyl Substances - Post-Treatment

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
10:2 FTCA	<0.0400	H *+ cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:51	1
10:2 FTS	<0.120	H cn	0.400	0.120	ng/g		05/10/22 10:06	05/12/22 12:51	1
10:2 FTUCA	<0.0400	H *- cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:51	1
11Cl-PF3OUdS	<0.0400	H cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:51	1
3:3 FTCA	<0.0400	H cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:51	1
4:2 Fluorotelomer sulfonic acid	<0.120	H cn	0.400	0.120	ng/g		05/10/22 10:06	05/12/22 12:51	1
5:3 FTCA	<0.0400	H cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:51	1
6:2 Fluorotelomer sulfonic acid	**0.187**	**J H I B cn**	0.400	0.120	ng/g		05/10/22 10:06	05/12/22 12:51	1
6:2 FTCA	<0.0400	H *+ cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:51	1
6:2 FTUCA	<0.0400	H *- cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:51	1
7:3 FTCA	<0.0400	H cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:51	1
8:2 Fluorotelomer sulfonic acid	<0.120	H cn	0.600	0.120	ng/g		05/10/22 10:06	05/12/22 12:51	1
8:2 FTCA	<0.0400	H *+ cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:51	1
8:2 FTUCA	<0.0400	H *- cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:51	1
9Cl-PF3ONS	<0.0400	H cn	0.400	0.0400	ng/g		05/10/22 10:06	05/12/22 12:51	1
DONA	<0.0400	H cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:51	1
EVE Acid	<0.0400	H *+ cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:51	1
HFPODA	**0.515**	**J H cn**	0.600	0.200	ng/g		05/10/22 10:06	05/12/22 12:51	1
Hydro-EVE Acid	<0.0400	H *+ cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:51	1
Hydrolyzed PSDA	<0.0400	H *- cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:51	1
Hydro-PS Acid	<0.0400	H cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:51	1
MTP	<0.0400	H *+ cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:51	1
NEtFOSA	<0.100	H cn	0.400	0.100	ng/g		05/10/22 10:06	05/12/22 12:51	1
NEtFOSAA	<0.0400	H cn	0.400	0.0400	ng/g		05/10/22 10:06	05/12/22 12:51	1
NEtFOSE	<0.100	H cn	0.400	0.100	ng/g		05/10/22 10:06	05/12/22 12:51	1
NMeFOSA	<0.100	H cn	0.400	0.100	ng/g		05/10/22 10:06	05/12/22 12:51	1
NMeFOSAA	<0.0400	H cn	0.400	0.0400	ng/g		05/10/22 10:06	05/12/22 12:51	1
NMeFOSE	<0.100	H cn	0.400	0.100	ng/g		05/10/22 10:06	05/12/22 12:51	1
NVHOS	<0.0400	H cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:51	1
PEPA	<0.0400	H *+ cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:51	1
Perfluoro (2-ethoxyethane) sulfonic acid	<0.0400	H cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:51	1
Perfluoro-4-ethylcyclohexanesulfonic acid	<0.0400	H cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:51	1
Perfluorobutanesulfonic acid	<0.0800	H cn	0.400	0.0800	ng/g		05/10/22 10:06	05/12/22 12:51	1
Perfluorobutanoic acid	**0.199**	**J H cn**	0.400	0.160	ng/g		05/10/22 10:06	05/12/22 12:51	1
Perfluorodecanesulfonic acid	<0.0400	H cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:51	1
Perfluorodecanoic acid	<0.0400	H cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:51	1
Perfluorododecanesulfonic acid	<0.0400	H cn	0.400	0.0400	ng/g		05/10/22 10:06	05/12/22 12:51	1
Perfluorododecanoic acid	<0.0400	H cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:51	1
Perfluoroheptanesulfonic acid	<0.0400	H cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:51	1
Perfluoroheptanoic acid	<0.0400	H cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:51	1
Perfluorohexadecanoic acid	<0.0400	H cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:51	1
Perfluorohexanesulfonic acid	<0.0400	H cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:51	1
Perfluorohexanoic acid	**0.0570**	**J H cn**	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:51	1
Perfluorononanesulfonic acid	<0.0400	H cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:51	1
Perfluorononanoic acid	<0.0400	H cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:51	1
Perfluorooctadecanoic acid	<0.0400	H cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:51	1
Perfluorooctanesulfonamide	<0.0400	H cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:51	1
Perfluorooctanesulfonic acid	**0.135**	**H I cn**	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:51	1

Client: TRC Companies, Inc
Project/Site: Synthetic Turf

Job ID: 410-75808-1

Client Sample ID: Carpet-001
Date Collected: 03/08/22 17:12
Date Received: 03/11/22 10:17

Lab Sample ID: 410-75808-1
Matrix: Solid

Method: 537 TOP - Fluorinated Alkyl Substances - Post-Treatment (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanoic acid	<0.0400	H cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:51	1
Perfluoropentanesulfonic acid	<0.0400	H cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:51	1
Perfluoropentanoic acid	**0.0499**	**J H cn**	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:51	1
Perfluoropropanesulfonic acid	<0.0400	H *+ cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:51	1
Perfluorotetradecanoic acid	<0.0400	H cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:51	1
Perfluorotridecanoic acid	<0.0400	H cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:51	1
Perfluoroundecanoic acid	<0.0400	H cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:51	1
PFECA A	<0.0400	H cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:51	1
PFECA B	<0.0400	H *- cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:51	1
PFECA F	<0.0400	H *+ cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:51	1
PFECA G	<0.0400	H cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:51	1
PFMOAA	<0.0400	H *+ cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:51	1
PFO2HxA	<0.0400	H *+ cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:51	1
PFO3OA	<0.0400	H *+ cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:51	1
PFO4DA	<0.0400	H *+ cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:51	1
PMPA	<0.0400	H *+ cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:51	1
PPF Acid	**1.08**	**H *+ cn**	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:51	1
PS Acid	<0.0400	H *- cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:51	1
R-EVE	**0.0679**	**J H cn**	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:51	1
R-PSDA	<0.0400	H *- cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:51	1
R-PSDCA	<0.0400	H cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:51	1
TAF	<0.0400	H *+ cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:51	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
M2-6:2 FTS	*522*	**5+ cn*	*10 - 200*	*05/10/22 10:06*	*05/12/22 12:51*	*1*
M2-8:2 FTS	*488*	**5+ cn*	*15 - 200*	*05/10/22 10:06*	*05/12/22 12:51*	*1*
13C2 PFTeDA	*247*	**5+ cn*	*10 - 169*	*05/10/22 10:06*	*05/12/22 12:51*	*1*
13C3 HFPO-DA	*108*	*cn*	*10 - 169*	*05/10/22 10:06*	*05/12/22 12:51*	*1*
13C3 PFBS	*125*	*cn*	*27 - 179*	*05/10/22 10:06*	*05/12/22 12:51*	*1*
13C4 PFBA	*99*	*cn*	*28 - 153*	*05/10/22 10:06*	*05/12/22 12:51*	*1*
13C4 PFHpA	*144*	*cn*	*10 - 178*	*05/10/22 10:06*	*05/12/22 12:51*	*1*
13C5 PFPeA	*68*	*cn*	*24 - 161*	*05/10/22 10:06*	*05/12/22 12:51*	*1*
13C8 PFOA	*112*	*cn*	*26 - 159*	*05/10/22 10:06*	*05/12/22 12:51*	*1*
13C8 PFOS	*138*	*cn*	*41 - 154*	*05/10/22 10:06*	*05/12/22 12:51*	*1*
d5-NEtFOSAA	*384*	**5+ cn*	*10 - 193*	*05/10/22 10:06*	*05/12/22 12:51*	*1*
d7-N-MeFOSE-M	*121*	*cn*	*10 - 179*	*05/10/22 10:06*	*05/12/22 12:51*	*1*
d9-N-EtFOSE-M	*188*	**5+ cn*	*10 - 185*	*05/10/22 10:06*	*05/12/22 12:51*	*1*
13C3 PFHxS	*171*	*cn*	*24 - 171*	*05/10/22 10:06*	*05/12/22 12:51*	*1*
13C5 PFHxA	*92*	*cn*	*10 - 174*	*05/10/22 10:06*	*05/12/22 12:51*	*1*
13C6 PFDA	*168*	**5+ cn*	*26 - 161*	*05/10/22 10:06*	*05/12/22 12:51*	*1*
13C7 PFUnA	*213*	**5+ cn*	*12 - 173*	*05/10/22 10:06*	*05/12/22 12:51*	*1*
d3-NMePFOSA	*106*	*cn*	*10 - 175*	*05/10/22 10:06*	*05/12/22 12:51*	*1*
d5-NEtPFOSA	*119*	*cn*	*10 - 180*	*05/10/22 10:06*	*05/12/22 12:51*	*1*
13C8 FOSA	*167*	**5+ cn*	*14 - 163*	*05/10/22 10:06*	*05/12/22 12:51*	*1*
13C2-PFDoDA	*158*	*cn*	*11 - 166*	*05/10/22 10:06*	*05/12/22 12:51*	*1*
13C9 PFNA	*110*	*cn*	*26 - 165*	*05/10/22 10:06*	*05/12/22 12:51*	*1*
13C2-2-Perfluorohexylethanoic acid	*48*	**5- cn*	*50 - 150*	*05/10/22 10:06*	*05/12/22 12:51*	*1*
13C2-2-Perfluorooctylethanoic acid	*111*	*cn*	*50 - 150*	*05/10/22 10:06*	*05/12/22 12:51*	*1*
13C2-2-Perfluorodecylethanoic acid	*181*	**5+ cn*	*50 - 150*	*05/10/22 10:06*	*05/12/22 12:51*	*1*
13C2-2H-Perfluoro-2-octenoic acid	*66*	*cn*	*50 - 150*	*05/10/22 10:06*	*05/12/22 12:51*	*1*

Client: TRC Companies, Inc
Project/Site: Synthetic Turf

Job ID: 410-75808-1

Client Sample ID: Carpet-001
Date Collected: 03/08/22 17:12
Date Received: 03/11/22 10:17

Lab Sample ID: 410-75808-1
Matrix: Solid

Method: 537 TOP - Fluorinated Alkyl Substances - Post-Treatment (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2-2H-Perfluoro-2-decenoic acid	199	*5+ cn	50 - 150	05/10/22 10:06	05/12/22 12:51	1
13C2-2H-Perfluoro-2-dodecenoic acid	265	*5+ cn	50 - 150	05/10/22 10:06	05/12/22 12:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFHxA	84	cn	10 - 137	05/10/22 10:06	05/12/22 12:51	1
13C4 PFOA	109	cn	10 - 146	05/10/22 10:06	05/12/22 12:51	1
13C2 PFUnA	109	cn	10 - 143	05/10/22 10:06	05/12/22 12:51	1

Client: TRC Companies, Inc
Project/Site: Synthetic Turf

Job ID: 410-75808-1

Client Sample ID: Carpet-001
Date Collected: 03/08/22 17:12
Date Received: 03/11/22 10:17

Lab Sample ID: 410-75808-1
Matrix: Solid

Method: Total PFCA-Dif - Total PFCA (Treatment Difference)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PFBA	0.199				ng/g			05/13/22 13:16	1
PFPA	0.0499				ng/g			05/13/22 13:16	1
PFHxA	0.0570				ng/g			05/13/22 13:16	1
PFHpA	0.000				ng/g			05/13/22 13:16	1
PFOA	0.000				ng/g			05/13/22 13:16	1
PFNA	0.000				ng/g			05/13/22 13:16	1
Total PFCA	0.306				ng/g			05/13/22 13:16	1

Client: TRC Companies, Inc
Project/Site: Synthetic Turf

Job ID: 410-75808-1

Client Sample ID: Carpet-001
Date Collected: 03/08/22 17:12
Date Received: 03/11/22 10:17

Lab Sample ID: 410-75808-1
Matrix: Solid

Method: Total PFCA-Sum - Total PFCA (Summary) - Pre-Treatment

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total PFCA	<0.100		0.300	0.100	ng/g			05/13/22 13:14	1

Client: TRC Companies, Inc
Project/Site: Synthetic Turf

Job ID: 410-75808-1

Client Sample ID: Carpet-001
Date Collected: 03/08/22 17:12
Date Received: 03/11/22 10:17

Lab Sample ID: 410-75808-1
Matrix: Solid

Method: Total PFCA-Sum - Total PFCA (Summary) - Post-Treatment

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total PFCA	0.306		0.300	0.100	ng/g			05/13/22 13:14	1

Client: TRC Companies, Inc
Project/Site: Synthetic Turf

Job ID: 410-75808-1

Client Sample ID: EB-001
Date Collected: 03/21/22 13:53
Date Received: 03/21/22 14:00

Lab Sample ID: 410-75808-2
Matrix: Water

Method: 537 IDA - EPA 537 Isotope Dilution

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
10:2 FTCA	<0.424	H cn	1.70	0.424	ng/L		04/04/22 06:59	05/03/22 01:18	1
10:2 FTS	<0.848	H cn	4.24	0.848	ng/L		04/04/22 06:59	05/03/22 01:18	1
10:2 FTUCA	<0.594	H cn	1.70	0.594	ng/L		04/04/22 06:59	05/03/22 01:18	1
11Cl-PF3OUdS	<0.424	H cn	1.70	0.424	ng/L		04/04/22 06:59	05/03/22 01:18	1
3:3 FTCA	<0.254	H cn	1.70	0.254	ng/L		04/04/22 06:59	05/03/22 01:18	1
4:2 Fluorotelomer sulfonic acid	<0.424	H cn	1.70	0.424	ng/L		04/04/22 06:59	05/03/22 01:18	1
5:3 FTCA	<0.170	H cn	1.70	0.170	ng/L		04/04/22 06:59	05/03/22 01:18	1
6:2 Fluorotelomer sulfonic acid	<1.70	H cn	4.24	1.70	ng/L		04/04/22 06:59	05/03/22 01:18	1
6:2 FTCA	<0.339	H cn	1.70	0.339	ng/L		04/04/22 06:59	05/03/22 01:18	1
6:2 FTUCA	<0.424	H cn	1.70	0.424	ng/L		04/04/22 06:59	05/03/22 01:18	1
7:3 FTCA	<0.254	H cn	1.70	0.254	ng/L		04/04/22 06:59	05/03/22 01:18	1
8:2 Fluorotelomer sulfonic acid	<0.848	H cn	2.54	0.848	ng/L		04/04/22 06:59	05/03/22 01:18	1
8:2 FTCA	<0.339	H cn	1.70	0.339	ng/L		04/04/22 06:59	05/03/22 01:18	1
8:2 FTUCA	<0.424	H cn	1.70	0.424	ng/L		04/04/22 06:59	05/03/22 01:18	1
9Cl-PF3ONS	<0.424	H cn	1.70	0.424	ng/L		04/04/22 06:59	05/03/22 01:18	1
DONA	<0.424	H cn	1.70	0.424	ng/L		04/04/22 06:59	05/03/22 01:18	1
EVE Acid	<2.54	H cn	8.48	2.54	ng/L		04/04/22 06:59	05/03/22 01:18	1
HFPODA	<0.424	H cn	2.54	0.424	ng/L		04/04/22 06:59	05/03/22 01:18	1
Hydro-EVE Acid	<0.170	H cn	1.70	0.170	ng/L		04/04/22 06:59	05/03/22 01:18	1
Hydrolyzed PSDA	<0.763	H cn	1.70	0.763	ng/L		04/04/22 06:59	05/03/22 01:18	1
Hydro-PS Acid	<0.170	H cn	1.70	0.170	ng/L		04/04/22 06:59	05/03/22 01:18	1
MTP	<1.70	H cn	4.24	1.70	ng/L		04/04/22 06:59	05/03/22 01:18	1
NEtFOSA	<0.848	H cn	4.24	0.848	ng/L		04/04/22 06:59	05/03/22 01:18	1
NEtFOSAA	<0.424	H cn	2.54	0.424	ng/L		04/04/22 06:59	05/03/22 01:18	1
NEtFOSE	<0.848	H cn	2.54	0.848	ng/L		04/04/22 06:59	05/03/22 01:18	1
NMeFOSA	<0.848	H cn	2.54	0.848	ng/L		04/04/22 06:59	05/03/22 01:18	1
NMeFOSAA	<0.509	H cn	1.70	0.509	ng/L		04/04/22 06:59	05/03/22 01:18	1
NMeFOSE	<0.848	H cn	2.54	0.848	ng/L		04/04/22 06:59	05/03/22 01:18	1
NVHOS	<0.170	H cn	1.70	0.170	ng/L		04/04/22 06:59	05/03/22 01:18	1
PEPA	<0.170	H cn	1.70	0.170	ng/L		04/04/22 06:59	05/03/22 01:18	1
Perfluoro (2-ethoxyethane) sulfonic acid	<0.170	H cn	1.70	0.170	ng/L		04/04/22 06:59	05/03/22 01:18	1
Perfluoro-4-ethylcyclohexanesulfonic acid	<0.170	H cn	1.70	0.170	ng/L		04/04/22 06:59	05/03/22 01:18	1
Perfluorobutanesulfonic acid	<0.424	H cn	1.70	0.424	ng/L		04/04/22 06:59	05/03/22 01:18	1
Perfluorobutanoic acid	<1.70	H cn	4.24	1.70	ng/L		04/04/22 06:59	05/03/22 01:18	1
Perfluorodecanesulfonic acid	<0.424	H cn	1.70	0.424	ng/L		04/04/22 06:59	05/03/22 01:18	1
Perfluorodecanoic acid	<0.424	H cn	1.70	0.424	ng/L		04/04/22 06:59	05/03/22 01:18	1
Perfluorododecanesulfonic acid	<0.424	H cn	2.54	0.424	ng/L		04/04/22 06:59	05/03/22 01:18	1
Perfluorododecanoic acid	<0.424	H cn	1.70	0.424	ng/L		04/04/22 06:59	05/03/22 01:18	1
Perfluoroheptanesulfonic acid	<0.424	H cn	1.70	0.424	ng/L		04/04/22 06:59	05/03/22 01:18	1
Perfluoroheptanoic acid	<0.424	H cn	1.70	0.424	ng/L		04/04/22 06:59	05/03/22 01:18	1
Perfluorohexadecanoic acid	<0.848	H cn	2.54	0.848	ng/L		04/04/22 06:59	05/03/22 01:18	1
Perfluorohexanesulfonic acid	<0.424	H cn	1.70	0.424	ng/L		04/04/22 06:59	05/03/22 01:18	1
Perfluorohexanoic acid	<0.424	H cn	1.70	0.424	ng/L		04/04/22 06:59	05/03/22 01:18	1
Perfluorononanesulfonic acid	<0.424	H cn	1.70	0.424	ng/L		04/04/22 06:59	05/03/22 01:18	1
Perfluorononanoic acid	<0.424	H cn	1.70	0.424	ng/L		04/04/22 06:59	05/03/22 01:18	1
Perfluorooctadecanoic acid	<0.848	H cn	2.54	0.848	ng/L		04/04/22 06:59	05/03/22 01:18	1
Perfluorooctanesulfonamide	**0.447**	**J H B cn**	1.70	0.424	ng/L		04/04/22 06:59	05/03/22 01:18	1
Perfluorooctanesulfonic acid	**0.501**	**J H B cn**	1.70	0.424	ng/L		04/04/22 06:59	05/03/22 01:18	1

Client: TRC Companies, Inc
Project/Site: Synthetic Turf

Job ID: 410-75808-1

Client Sample ID: EB-001
Date Collected: 03/21/22 13:53
Date Received: 03/21/22 14:00

Lab Sample ID: 410-75808-2
Matrix: Water

Method: 537 IDA - EPA 537 Isotope Dilution (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanoic acid	<0.424	H cn	1.70	0.424	ng/L		04/04/22 06:59	05/03/22 01:18	1
Perfluoropentanesulfonic acid	<0.424	H cn	1.70	0.424	ng/L		04/04/22 06:59	05/03/22 01:18	1
Perfluoropentanoic acid	<0.424	H cn	1.70	0.424	ng/L		04/04/22 06:59	05/03/22 01:18	1
Perfluoropropanesulfonic acid	<0.170	H cn	1.70	0.170	ng/L		04/04/22 06:59	05/03/22 01:18	1
Perfluorotetradecanoic acid	<0.424	H cn	1.70	0.424	ng/L		04/04/22 06:59	05/03/22 01:18	1
Perfluorotridecanoic acid	<0.424	H cn	1.70	0.424	ng/L		04/04/22 06:59	05/03/22 01:18	1
Perfluoroundecanoic acid	<0.424	H cn	1.70	0.424	ng/L		04/04/22 06:59	05/03/22 01:18	1
PFECA A	<0.170	H cn	1.70	0.170	ng/L		04/04/22 06:59	05/03/22 01:18	1
PFECA B	<0.170	H cn	1.70	0.170	ng/L		04/04/22 06:59	05/03/22 01:18	1
PFECA F	<0.170	H cn	1.70	0.170	ng/L		04/04/22 06:59	05/03/22 01:18	1
PFECA G	<0.170	H cn	1.70	0.170	ng/L		04/04/22 06:59	05/03/22 01:18	1
PFMOAA	<0.170	H cn	1.70	0.170	ng/L		04/04/22 06:59	05/03/22 01:18	1
PFO2HxA	<0.170	H cn	1.70	0.170	ng/L		04/04/22 06:59	05/03/22 01:18	1
PFO3OA	<0.170	H cn	1.70	0.170	ng/L		04/04/22 06:59	05/03/22 01:18	1
PFO4DA	<0.594	H cn	1.70	0.594	ng/L		04/04/22 06:59	05/03/22 01:18	1
PMPA	<0.170	H cn	1.70	0.170	ng/L		04/04/22 06:59	05/03/22 01:18	1
PPF Acid	<1.70	H cn	4.24	1.70	ng/L		04/04/22 06:59	05/03/22 01:18	1
PS Acid	<2.54	H cn	8.48	2.54	ng/L		04/04/22 06:59	05/03/22 01:18	1
R-EVE	<0.339	H cn	1.70	0.339	ng/L		04/04/22 06:59	05/03/22 01:18	1
R-PSDA	<0.424	H cn	1.70	0.424	ng/L		04/04/22 06:59	05/03/22 01:18	1
R-PSDCA	<0.170	H cn	1.70	0.170	ng/L		04/04/22 06:59	05/03/22 01:18	1
TAF	<1.70	H cn	4.24	1.70	ng/L		04/04/22 06:59	05/03/22 01:18	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
d5-NEtFOSAA	*125*	*cn*	*29 - 195*	*04/04/22 06:59*	*05/03/22 01:18*	*1*
d3-NMeFOSAA	*129*	*cn*	*31 - 174*	*04/04/22 06:59*	*05/03/22 01:18*	*1*
13C3 HFPO-DA	*121*	*cn*	*17 - 185*	*04/04/22 06:59*	*05/03/22 01:18*	*1*
d7-N-MeFOSE-M	*96*	*cn*	*10 - 178*	*04/04/22 06:59*	*05/03/22 01:18*	*1*
d9-N-EtFOSE-M	*95*	*cn*	*10 - 177*	*04/04/22 06:59*	*05/03/22 01:18*	*1*
M2-6:2 FTS	*128*	*cn*	*17 - 200*	*04/04/22 06:59*	*05/03/22 01:18*	*1*
M2-8:2 FTS	*132*	*cn*	*33 - 200*	*04/04/22 06:59*	*05/03/22 01:18*	*1*
13C3 PFBS	*140*	*cn*	*16 - 200*	*04/04/22 06:59*	*05/03/22 01:18*	*1*
M2-4:2 FTS	*126*	*cn*	*10 - 200*	*04/04/22 06:59*	*05/03/22 01:18*	*1*
13C5 PFHxA	*101*	*cn*	*24 - 179*	*04/04/22 06:59*	*05/03/22 01:18*	*1*
13C9 PFNA	*125*	*cn*	*51 - 167*	*04/04/22 06:59*	*05/03/22 01:18*	*1*
13C6 PFDA	*128*	*cn*	*49 - 163*	*04/04/22 06:59*	*05/03/22 01:18*	*1*
13C7 PFUnA	*125*	*cn*	*34 - 174*	*04/04/22 06:59*	*05/03/22 01:18*	*1*
13C3 PFHxS	*128*	*cn*	*28 - 188*	*04/04/22 06:59*	*05/03/22 01:18*	*1*
13C2-PFDoDA	*115*	*cn*	*17 - 176*	*04/04/22 06:59*	*05/03/22 01:18*	*1*
d5-NEtPFOSA	*53*	*cn*	*10 - 159*	*04/04/22 06:59*	*05/03/22 01:18*	*1*
d3-NMePFOSA	*53*	*cn*	*10 - 155*	*04/04/22 06:59*	*05/03/22 01:18*	*1*
13C2-2-Perfluorohexylethanoic acid	*80*	*cn*	*10 - 200*	*04/04/22 06:59*	*05/03/22 01:18*	*1*
13C2-2-Perfluorooctylethanoic acid	*99*	*cn*	*10 - 200*	*04/04/22 06:59*	*05/03/22 01:18*	*1*
13C2-2-Perfluorodecylethanoic acid	*78*	*cn*	*10 - 200*	*04/04/22 06:59*	*05/03/22 01:18*	*1*
13C2-2H-Perfluoro-2-octenoic acid	*143*	*cn*	*20 - 173*	*04/04/22 06:59*	*05/03/22 01:18*	*1*
13C2-2H-Perfluoro-2-decenoic acid	*141*	*cn*	*21 - 166*	*04/04/22 06:59*	*05/03/22 01:18*	*1*
13C2-2H-Perfluoro-2-dodecenoic acid	*130*	*cn*	*14 - 166*	*04/04/22 06:59*	*05/03/22 01:18*	*1*
13C4 PFBA	*128*	*cn*	*42 - 165*	*04/04/22 06:59*	*05/03/22 01:18*	*1*
13C5 PFPeA	*134*	*cn*	*38 - 187*	*04/04/22 06:59*	*05/03/22 01:18*	*1*

Client: TRC Companies, Inc
Project/Site: Synthetic Turf

Job ID: 410-75808-1

Client Sample ID: EB-001
Date Collected: 03/21/22 13:53
Date Received: 03/21/22 14:00

Lab Sample ID: 410-75808-2
Matrix: Water

Method: 537 IDA - EPA 537 Isotope Dilution (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFHpA	123	cn	31 - 182	04/04/22 06:59	05/03/22 01:18	1
13C8 PFOA	124	cn	48 - 162	04/04/22 06:59	05/03/22 01:18	1
13C8 PFOS	123	cn	51 - 159	04/04/22 06:59	05/03/22 01:18	1
13C8 FOSA	102	cn	10 - 168	04/04/22 06:59	05/03/22 01:18	1
13C2 PFTeDA	110	cn	10 - 179	04/04/22 06:59	05/03/22 01:18	1

Client: TRC Companies, Inc
Project/Site: Synthetic Turf

Job ID: 410-75808-1

Client Sample ID: PP Pad-001
Date Collected: 03/16/22 13:30
Date Received: 03/18/22 08:41

Lab Sample ID: 410-76735-1
Matrix: Solid

Method: 537 IDA - EPA 537 Isotope Dilution - Pre-Treatment

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
10:2 FTCA	<0.0399	cn	0.120	0.0399	ng/g		04/04/22 11:19	04/06/22 12:29	1
10:2 FTS	<0.120	cn	0.399	0.120	ng/g		04/04/22 11:19	04/06/22 12:29	1
10:2 FTUCA	<0.0399	cn	0.120	0.0399	ng/g		04/04/22 11:19	04/06/22 12:29	1
11Cl-PF3OUdS	<0.0399	cn	0.120	0.0399	ng/g		04/04/22 11:19	04/06/22 12:29	1
3:3 FTCA	<0.0399	cn	0.120	0.0399	ng/g		04/04/22 11:19	04/06/22 12:29	1
4:2 Fluorotelomer sulfonic acid	<0.120	cn	0.399	0.120	ng/g		04/04/22 11:19	04/06/22 12:29	1
5:3 FTCA	<0.0399	cn	0.120	0.0399	ng/g		04/04/22 11:19	04/06/22 12:29	1
6:2 Fluorotelomer sulfonic acid	<0.120	cn	0.399	0.120	ng/g		04/04/22 11:19	04/06/22 12:29	1
6:2 FTCA	<0.0399	cn	0.120	0.0399	ng/g		04/04/22 11:19	04/06/22 12:29	1
6:2 FTUCA	<0.0399	cn	0.120	0.0399	ng/g		04/04/22 11:19	04/06/22 12:29	1
7:3 FTCA	<0.0399	*- cn	0.120	0.0399	ng/g		04/04/22 11:19	04/06/22 12:29	1
8:2 Fluorotelomer sulfonic acid	<0.120	cn	0.599	0.120	ng/g		04/04/22 11:19	04/06/22 12:29	1
8:2 FTCA	<0.0399	cn	0.120	0.0399	ng/g		04/04/22 11:19	04/06/22 12:29	1
8:2 FTUCA	<0.0399	cn	0.120	0.0399	ng/g		04/04/22 11:19	04/06/22 12:29	1
9Cl-PF3ONS	<0.0399	cn	0.399	0.0399	ng/g		04/04/22 11:19	04/06/22 12:29	1
DONA	<0.0399	cn	0.599	0.0399	ng/g		04/04/22 11:19	04/06/22 12:29	1
EVE Acid	<0.0399	*- cn	0.120	0.0399	ng/g		04/04/22 11:19	04/06/22 12:29	1
HFPODA	<0.0798	cn	0.399	0.0798	ng/g		04/04/22 11:19	04/06/22 12:29	1
Hydro-EVE Acid	<0.0399	cn	0.120	0.0399	ng/g		04/04/22 11:19	04/06/22 12:29	1
Hydrolyzed PSDA	<0.0399	*- cn	0.120	0.0399	ng/g		04/04/22 11:19	04/06/22 12:29	1
Hydro-PS Acid	<0.0399	cn	0.120	0.0399	ng/g		04/04/22 11:19	04/06/22 12:29	1
MTP	<0.0399	*- cn	0.120	0.0399	ng/g		04/04/22 11:19	04/06/22 12:29	1
NEtFOSA	<0.0998	cn	0.399	0.0998	ng/g		04/04/22 11:19	04/06/22 12:29	1
NEtFOSAA	<0.0399	cn	0.399	0.0399	ng/g		04/04/22 11:19	04/06/22 12:29	1
NEtFOSE	<0.0998	cn	0.399	0.0998	ng/g		04/04/22 11:19	04/06/22 12:29	1
NMeFOSA	<0.0998	cn	0.399	0.0998	ng/g		04/04/22 11:19	04/06/22 12:29	1
NMeFOSAA	<0.0399	cn	0.399	0.0399	ng/g		04/04/22 11:19	04/06/22 12:29	1
NMeFOSE	<0.0998	cn	0.399	0.0998	ng/g		04/04/22 11:19	04/06/22 12:29	1
NVHOS	<0.0399	cn	0.120	0.0399	ng/g		04/04/22 11:19	04/06/22 12:29	1
PEPA	<0.0399	cn	0.120	0.0399	ng/g		04/04/22 11:19	04/06/22 12:29	1
Perfluoro (2-ethoxyethane) sulfonic acid	<0.0399	cn	0.120	0.0399	ng/g		04/04/22 11:19	04/06/22 12:29	1
Perfluoro-4-ethylcyclohexanesulfonic acid	<0.0399	cn	0.120	0.0399	ng/g		04/04/22 11:19	04/06/22 12:29	1
Perfluorobutanesulfonic acid	<0.0798	cn	0.399	0.0798	ng/g		04/04/22 11:19	04/06/22 12:29	1
Perfluorobutanoic acid	<0.160	cn	0.399	0.160	ng/g		04/04/22 11:19	04/06/22 12:29	1
Perfluorodecanesulfonic acid	<0.0399	cn	0.120	0.0399	ng/g		04/04/22 11:19	04/06/22 12:29	1
Perfluorodecanoic acid	<0.0399	cn	0.120	0.0399	ng/g		04/04/22 11:19	04/06/22 12:29	1
Perfluorododecanesulfonic acid	<0.0399	cn	0.399	0.0399	ng/g		04/04/22 11:19	04/06/22 12:29	1
Perfluorododecanoic acid	<0.0399	cn	0.120	0.0399	ng/g		04/04/22 11:19	04/06/22 12:29	1
Perfluoroheptanesulfonic acid	<0.0399	cn	0.120	0.0399	ng/g		04/04/22 11:19	04/06/22 12:29	1
Perfluoroheptanoic acid	<0.0399	cn	0.120	0.0399	ng/g		04/04/22 11:19	04/06/22 12:29	1
Perfluorohexadecanoic acid	<0.0399	cn	0.120	0.0399	ng/g		04/04/22 11:19	04/06/22 12:29	1
Perfluorohexanesulfonic acid	<0.0399	cn	0.120	0.0399	ng/g		04/04/22 11:19	04/06/22 12:29	1
Perfluorohexanoic acid	<0.0399	cn	0.120	0.0399	ng/g		04/04/22 11:19	04/06/22 12:29	1
Perfluorononanesulfonic acid	<0.0399	cn	0.120	0.0399	ng/g		04/04/22 11:19	04/06/22 12:29	1
Perfluorononanoic acid	**0.0444**	**J cn**	0.120	0.0399	ng/g		04/04/22 11:19	04/06/22 12:29	1
Perfluorooctadecanoic acid	<0.0399	cn	0.120	0.0399	ng/g		04/04/22 11:19	04/06/22 12:29	1
Perfluorooctanesulfonamide	<0.0399	cn	0.120	0.0399	ng/g		04/04/22 11:19	04/06/22 12:29	1
Perfluorooctanesulfonic acid	<0.0399	cn	0.120	0.0399	ng/g		04/04/22 11:19	04/06/22 12:29	1

Client: TRC Companies, Inc
Project/Site: Synthetic Turf

Job ID: 410-75808-1

Client Sample ID: PP Pad-001
Date Collected: 03/16/22 13:30
Date Received: 03/18/22 08:41

Lab Sample ID: 410-76735-1
Matrix: Solid

Method: 537 IDA - EPA 537 Isotope Dilution - Pre-Treatment (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanoic acid	<0.0399	cn	0.120	0.0399	ng/g		04/04/22 11:19	04/06/22 12:29	1
Perfluoropentanesulfonic acid	<0.0399	cn	0.120	0.0399	ng/g		04/04/22 11:19	04/06/22 12:29	1
Perfluoropentanoic acid	<0.0399	cn	0.120	0.0399	ng/g		04/04/22 11:19	04/06/22 12:29	1
Perfluoropropanesulfonic acid	<0.0399	cn	0.120	0.0399	ng/g		04/04/22 11:19	04/06/22 12:29	1
Perfluorotetradecanoic acid	<0.0399	cn	0.120	0.0399	ng/g		04/04/22 11:19	04/06/22 12:29	1
Perfluorotridecanoic acid	**0.0406**	**J cn**	0.120	0.0399	ng/g		04/04/22 11:19	04/06/22 12:29	1
Perfluoroundecanoic acid	**0.0538**	**J cn**	0.120	0.0399	ng/g		04/04/22 11:19	04/06/22 12:29	1
PFECA A	<0.0399	cn	0.120	0.0399	ng/g		04/04/22 11:19	04/06/22 12:29	1
PFECA B	<0.0399	cn	0.120	0.0399	ng/g		04/04/22 11:19	04/06/22 12:29	1
PFECA F	<0.0399	cn	0.120	0.0399	ng/g		04/04/22 11:19	04/06/22 12:29	1
PFECA G	<0.0399	*- cn	0.120	0.0399	ng/g		04/04/22 11:19	04/06/22 12:29	1
PFMOAA	<0.0399	*- cn	0.120	0.0399	ng/g		04/04/22 11:19	04/06/22 12:29	1
PFO2HxA	<0.0399	cn	0.120	0.0399	ng/g		04/04/22 11:19	04/06/22 12:29	1
PFO3OA	<0.0399	*- cn	0.120	0.0399	ng/g		04/04/22 11:19	04/06/22 12:29	1
PFO4DA	<0.0399	cn	0.120	0.0399	ng/g		04/04/22 11:19	04/06/22 12:29	1
PMPA	<0.0399	cn	0.120	0.0399	ng/g		04/04/22 11:19	04/06/22 12:29	1
PPF Acid	<0.0399	*- cn	0.120	0.0399	ng/g		04/04/22 11:19	04/06/22 12:29	1
PS Acid	<0.0399	*- cn	0.120	0.0399	ng/g		04/04/22 11:19	04/06/22 12:29	1
R-EVE	<0.0399	*- cn	0.120	0.0399	ng/g		04/04/22 11:19	04/06/22 12:29	1
R-PSDA	<0.0399	*- cn	0.120	0.0399	ng/g		04/04/22 11:19	04/06/22 12:29	1
R-PSDCA	<0.0399	*- cn	0.120	0.0399	ng/g		04/04/22 11:19	04/06/22 12:29	1
TAF	<0.0399	cn	0.120	0.0399	ng/g		04/04/22 11:19	04/06/22 12:29	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
d5-NEtFOSAA	*124*	*cn*	*10 - 193*	*04/04/22 11:19*	*04/06/22 12:29*	*1*
d3-NMeFOSAA	*138*	*cn*	*10 - 178*	*04/04/22 11:19*	*04/06/22 12:29*	*1*
13C3 HFPO-DA	*145*	*cn*	*10 - 169*	*04/04/22 11:19*	*04/06/22 12:29*	*1*
d7-N-MeFOSE-M	*147*	*cn*	*10 - 179*	*04/04/22 11:19*	*04/06/22 12:29*	*1*
d9-N-EtFOSE-M	*179*	*cn*	*10 - 185*	*04/04/22 11:19*	*04/06/22 12:29*	*1*
M2-6:2 FTS	*198*	*cn*	*10 - 200*	*04/04/22 11:19*	*04/06/22 12:29*	*1*
M2-8:2 FTS	*162*	*cn*	*15 - 200*	*04/04/22 11:19*	*04/06/22 12:29*	*1*
13C3 PFBS	*138*	*cn*	*27 - 179*	*04/04/22 11:19*	*04/06/22 12:29*	*1*
M2-4:2 FTS	*353*	**5+ cn*	*10 - 200*	*04/04/22 11:19*	*04/06/22 12:29*	*1*
13C5 PFHxA	*146*	*cn*	*10 - 174*	*04/04/22 11:19*	*04/06/22 12:29*	*1*
13C9 PFNA	*154*	*cn*	*26 - 165*	*04/04/22 11:19*	*04/06/22 12:29*	*1*
13C6 PFDA	*150*	*cn*	*26 - 161*	*04/04/22 11:19*	*04/06/22 12:29*	*1*
13C7 PFUnA	*120*	*cn*	*12 - 173*	*04/04/22 11:19*	*04/06/22 12:29*	*1*
13C3 PFHxS	*140*	*cn*	*24 - 171*	*04/04/22 11:19*	*04/06/22 12:29*	*1*
13C2-PFDoDA	*147*	*cn*	*11 - 166*	*04/04/22 11:19*	*04/06/22 12:29*	*1*
d5-NEtPFOSA	*122*	*cn*	*10 - 180*	*04/04/22 11:19*	*04/06/22 12:29*	*1*
d3-NMePFOSA	*138*	*cn*	*10 - 175*	*04/04/22 11:19*	*04/06/22 12:29*	*1*
13C2-2-Perfluorohexylethanoic acid	*304*	**5+ cn*	*10 - 200*	*04/04/22 11:19*	*04/06/22 12:29*	*1*
13C2-2-Perfluorooctylethanoic acid	*270*	**5+ cn*	*10 - 200*	*04/04/22 11:19*	*04/06/22 12:29*	*1*
13C2-2-Perfluorodecylethanoic acid	*307*	**5+ cn*	*10 - 200*	*04/04/22 11:19*	*04/06/22 12:29*	*1*
13C2-2H-Perfluoro-2-octenoic acid	*134*	*cn*	*10 - 164*	*04/04/22 11:19*	*04/06/22 12:29*	*1*
13C2-2H-Perfluoro-2-decenoic acid	*128*	*cn*	*10 - 162*	*04/04/22 11:19*	*04/06/22 12:29*	*1*
13C2-2H-Perfluoro-2-dodecenoic acid	*141*	*cn*	*10 - 161*	*04/04/22 11:19*	*04/06/22 12:29*	*1*
13C4 PFBA	*148*	*cn*	*28 - 153*	*04/04/22 11:19*	*04/06/22 12:29*	*1*
13C5 PFPeA	*164*	**5+ cn*	*24 - 161*	*04/04/22 11:19*	*04/06/22 12:29*	*1*

Client: TRC Companies, Inc
Project/Site: Synthetic Turf

Job ID: 410-75808-1

Client Sample ID: PP Pad-001
Date Collected: 03/16/22 13:30
Date Received: 03/18/22 08:41

Lab Sample ID: 410-76735-1
Matrix: Solid

Method: 537 IDA - EPA 537 Isotope Dilution - Pre-Treatment (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFHpA	147	cn	10 - 178	04/04/22 11:19	04/06/22 12:29	1
13C8 PFOA	137	cn	26 - 159	04/04/22 11:19	04/06/22 12:29	1
13C8 PFOS	146	cn	41 - 154	04/04/22 11:19	04/06/22 12:29	1
13C8 FOSA	149	cn	14 - 163	04/04/22 11:19	04/06/22 12:29	1
13C2 PFTeDA	141	cn	10 - 169	04/04/22 11:19	04/06/22 12:29	1

Client: TRC Companies, Inc
Project/Site: Synthetic Turf

Job ID: 410-75808-1

Client Sample ID: PP Pad-001
Date Collected: 03/16/22 13:30
Date Received: 03/18/22 08:41

Lab Sample ID: 410-76735-1
Matrix: Solid

Method: 537 TOP - Fluorinated Alkyl Substances - Post-Treatment

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
10:2 FTCA	<0.0400	H *+ cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 13:13	1
10:2 FTS	<0.120	H cn	0.400	0.120	ng/g		05/10/22 10:06	05/12/22 13:13	1
10:2 FTUCA	<0.0400	H *- cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 13:13	1
11Cl-PF3OUdS	<0.0400	H cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 13:13	1
3:3 FTCA	<0.0400	H cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 13:13	1
4:2 Fluorotelomer sulfonic acid	<0.120	H cn	0.400	0.120	ng/g		05/10/22 10:06	05/12/22 13:13	1
5:3 FTCA	<0.0400	H cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 13:13	1
6:2 Fluorotelomer sulfonic acid	**0.162**	**J H I B cn**	0.400	0.120	ng/g		05/10/22 10:06	05/12/22 13:13	1
6:2 FTCA	<0.0400	H *+ cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 13:13	1
6:2 FTUCA	<0.0400	H *- cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 13:13	1
7:3 FTCA	<0.0400	H cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 13:13	1
8:2 Fluorotelomer sulfonic acid	<0.120	H cn	0.600	0.120	ng/g		05/10/22 10:06	05/12/22 13:13	1
8:2 FTCA	<0.0400	H *+ cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 13:13	1
8:2 FTUCA	<0.0400	H *- cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 13:13	1
9Cl-PF3ONS	<0.0400	H cn	0.400	0.0400	ng/g		05/10/22 10:06	05/12/22 13:13	1
DONA	<0.0400	H cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 13:13	1
EVE Acid	<0.0400	H *+ cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 13:13	1
HFPODA	**0.526**	**J H cn**	0.600	0.200	ng/g		05/10/22 10:06	05/12/22 13:13	1
Hydro-EVE Acid	<0.0400	H *+ cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 13:13	1
Hydrolyzed PSDA	<0.0400	H *- cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 13:13	1
Hydro-PS Acid	<0.0400	H cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 13:13	1
MTP	<0.0400	H *+ cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 13:13	1
NEtFOSA	<0.100	H cn	0.400	0.100	ng/g		05/10/22 10:06	05/12/22 13:13	1
NEtFOSAA	<0.0400	H cn	0.400	0.0400	ng/g		05/10/22 10:06	05/12/22 13:13	1
NEtFOSE	<0.100	H cn	0.400	0.100	ng/g		05/10/22 10:06	05/12/22 13:13	1
NMeFOSA	<0.100	H cn	0.400	0.100	ng/g		05/10/22 10:06	05/12/22 13:13	1
NMeFOSAA	<0.0400	H cn	0.400	0.0400	ng/g		05/10/22 10:06	05/12/22 13:13	1
NMeFOSE	<0.100	H cn	0.400	0.100	ng/g		05/10/22 10:06	05/12/22 13:13	1
NVHOS	<0.0400	H cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 13:13	1
PEPA	<0.0400	H *+ cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 13:13	1
Perfluoro (2-ethoxyethane) sulfonic acid	<0.0400	H cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 13:13	1
Perfluoro-4-ethylcyclohexanesulfonic acid	<0.0400	H cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 13:13	1
Perfluorobutanesulfonic acid	<0.0800	H cn	0.400	0.0800	ng/g		05/10/22 10:06	05/12/22 13:13	1
Perfluorobutanoic acid	<0.160	H cn	0.400	0.160	ng/g		05/10/22 10:06	05/12/22 13:13	1
Perfluorodecanesulfonic acid	<0.0400	H cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 13:13	1
Perfluorodecanoic acid	<0.0400	H cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 13:13	1
Perfluorododecanesulfonic acid	<0.0400	H cn	0.400	0.0400	ng/g		05/10/22 10:06	05/12/22 13:13	1
Perfluorododecanoic acid	<0.0400	H cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 13:13	1
Perfluoroheptanesulfonic acid	<0.0400	H cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 13:13	1
Perfluoroheptanoic acid	**0.210**	**H I cn**	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 13:13	1
Perfluorohexadecanoic acid	<0.0400	H cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 13:13	1
Perfluorohexanesulfonic acid	<0.0400	H cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 13:13	1
Perfluorohexanoic acid	**0.160**	**H I cn**	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 13:13	1
Perfluorononanesulfonic acid	<0.0400	H cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 13:13	1
Perfluorononanoic acid	<0.0400	H cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 13:13	1
Perfluorooctadecanoic acid	<0.0400	H cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 13:13	1
Perfluorooctanesulfonamide	<0.0400	H cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 13:13	1
Perfluorooctanesulfonic acid	<0.0400	H cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 13:13	1

Client: TRC Companies, Inc
Project/Site: Synthetic Turf

Job ID: 410-75808-1

Client Sample ID: PP Pad-001
Date Collected: 03/16/22 13:30
Date Received: 03/18/22 08:41

Lab Sample ID: 410-76735-1
Matrix: Solid

Method: 537 TOP - Fluorinated Alkyl Substances - Post-Treatment (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanoic acid	<0.0400	H cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 13:13	1
Perfluoropentanesulfonic acid	<0.0400	H cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 13:13	1
Perfluoropentanoic acid	<0.0400	H cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 13:13	1
Perfluoropropanesulfonic acid	<0.0400	H *+ cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 13:13	1
Perfluorotetradecanoic acid	<0.0400	H cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 13:13	1
Perfluorotridecanoic acid	<0.0400	H cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 13:13	1
Perfluoroundecanoic acid	<0.0400	H cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 13:13	1
PFECA A	<0.0400	H cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 13:13	1
PFECA B	<0.0400	H *- cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 13:13	1
PFECA F	<0.0400	H *+ cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 13:13	1
PFECA G	<0.0400	H cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 13:13	1
PFMOAA	<0.0400	H *+ cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 13:13	1
PFO2HxA	<0.0400	H *+ cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 13:13	1
PFO3OA	<0.0400	H *+ cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 13:13	1
PFO4DA	<0.0400	H *+ cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 13:13	1
PMPA	<0.0400	H *+ cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 13:13	1
PPF Acid	**0.245**	**H *+ cn**	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 13:13	1
PS Acid	<0.0400	H *- cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 13:13	1
R-EVE	**0.136**	**H cn**	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 13:13	1
R-PSDA	<0.0400	H *- cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 13:13	1
R-PSDCA	<0.0400	H cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 13:13	1
TAF	<0.0400	H *+ cn	0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 13:13	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
M2-6:2 FTS	*321*	**5+ cn*	*10 - 200*	*05/10/22 10:06*	*05/12/22 13:13*	*1*
M2-8:2 FTS	*223*	**5+ cn*	*15 - 200*	*05/10/22 10:06*	*05/12/22 13:13*	*1*
13C2 PFTeDA	*90*	*cn*	*10 - 169*	*05/10/22 10:06*	*05/12/22 13:13*	*1*
13C3 HFPO-DA	*75*	*cn*	*10 - 169*	*05/10/22 10:06*	*05/12/22 13:13*	*1*
13C3 PFBS	*105*	*cn*	*27 - 179*	*05/10/22 10:06*	*05/12/22 13:13*	*1*
13C4 PFBA	*85*	*cn*	*28 - 153*	*05/10/22 10:06*	*05/12/22 13:13*	*1*
13C4 PFHpA	*96*	*cn*	*10 - 178*	*05/10/22 10:06*	*05/12/22 13:13*	*1*
13C5 PFPeA	*81*	*cn*	*24 - 161*	*05/10/22 10:06*	*05/12/22 13:13*	*1*
13C8 PFOA	*90*	*cn*	*26 - 159*	*05/10/22 10:06*	*05/12/22 13:13*	*1*
13C8 PFOS	*108*	*cn*	*41 - 154*	*05/10/22 10:06*	*05/12/22 13:13*	*1*
d5-NEtFOSAA	*115*	*cn*	*10 - 193*	*05/10/22 10:06*	*05/12/22 13:13*	*1*
d7-N-MeFOSE-M	*70*	*cn*	*10 - 179*	*05/10/22 10:06*	*05/12/22 13:13*	*1*
d9-N-EtFOSE-M	*65*	*cn*	*10 - 185*	*05/10/22 10:06*	*05/12/22 13:13*	*1*
13C3 PFHxS	*107*	*cn*	*24 - 171*	*05/10/22 10:06*	*05/12/22 13:13*	*1*
13C5 PFHxA	*77*	*cn*	*10 - 174*	*05/10/22 10:06*	*05/12/22 13:13*	*1*
13C6 PFDA	*98*	*cn*	*26 - 161*	*05/10/22 10:06*	*05/12/22 13:13*	*1*
13C7 PFUnA	*82*	*cn*	*12 - 173*	*05/10/22 10:06*	*05/12/22 13:13*	*1*
d3-NMePFOSA	*56*	*cn*	*10 - 175*	*05/10/22 10:06*	*05/12/22 13:13*	*1*
d5-NEtPFOSA	*50*	*cn*	*10 - 180*	*05/10/22 10:06*	*05/12/22 13:13*	*1*
13C8 FOSA	*55*	*cn*	*14 - 163*	*05/10/22 10:06*	*05/12/22 13:13*	*1*
13C2-PFDoDA	*91*	*cn*	*11 - 166*	*05/10/22 10:06*	*05/12/22 13:13*	*1*
13C9 PFNA	*101*	*cn*	*26 - 165*	*05/10/22 10:06*	*05/12/22 13:13*	*1*
13C2-2-Perfluorohexylethanoic acid	*40*	**5- cn*	*50 - 150*	*05/10/22 10:06*	*05/12/22 13:13*	*1*
13C2-2-Perfluorooctylethanoic acid	*53*	*cn*	*50 - 150*	*05/10/22 10:06*	*05/12/22 13:13*	*1*
13C2-2-Perfluorodecylethanoic acid	*66*	*cn*	*50 - 150*	*05/10/22 10:06*	*05/12/22 13:13*	*1*
13C2-2H-Perfluoro-2-octenoic acid	*83*	*cn*	*50 - 150*	*05/10/22 10:06*	*05/12/22 13:13*	*1*

Client: TRC Companies, Inc
Project/Site: Synthetic Turf

Job ID: 410-75808-1

Client Sample ID: PP Pad-001
Date Collected: 03/16/22 13:30
Date Received: 03/18/22 08:41

Lab Sample ID: 410-76735-1
Matrix: Solid

Method: 537 TOP - Fluorinated Alkyl Substances - Post-Treatment (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2-2H-Perfluoro-2-decenoic acid	110	cn	50 - 150	05/10/22 10:06	05/12/22 13:13	1
13C2-2H-Perfluoro-2-dodecenoic acid	133	cn	50 - 150	05/10/22 10:06	05/12/22 13:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFHxA	73	cn	10 - 137	05/10/22 10:06	05/12/22 13:13	1
13C4 PFOA	99	cn	10 - 146	05/10/22 10:06	05/12/22 13:13	1
13C2 PFUnA	90	cn	10 - 143	05/10/22 10:06	05/12/22 13:13	1

Client: TRC Companies, Inc
Project/Site: Synthetic Turf

Job ID: 410-75808-1

Client Sample ID: PP Pad-001
Date Collected: 03/16/22 13:30
Date Received: 03/18/22 08:41

Lab Sample ID: 410-76735-1
Matrix: Solid

Method: Total PFCA-Dif - Total PFCA (Treatment Difference)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PFBA	0.000				ng/g			05/13/22 13:16	1
PFPA	0.000				ng/g			05/13/22 13:16	1
PFHxA	0.160				ng/g			05/13/22 13:16	1
PFHpA	0.210				ng/g			05/13/22 13:16	1
PFOA	0.000				ng/g			05/13/22 13:16	1
PFNA	0.000				ng/g			05/13/22 13:16	1
Total PFCA	0.370				ng/g			05/13/22 13:16	1

Client: TRC Companies, Inc
Project/Site: Synthetic Turf

Job ID: 410-75808-1

Client Sample ID: PP Pad-001
Date Collected: 03/16/22 13:30
Date Received: 03/18/22 08:41

Lab Sample ID: 410-76735-1
Matrix: Solid

Method: Total PFCA-Sum - Total PFCA (Summary) - Pre-Treatment

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total PFCA	<0.100		0.300	0.100	ng/g			05/13/22 13:14	1

Client Sample Results

Client: TRC Companies, Inc
Project/Site: Synthetic Turf

Job ID: 410-75808-1

Client Sample ID: PP Pad-001
Date Collected: 03/16/22 13:30
Date Received: 03/18/22 08:41

Lab Sample ID: 410-76735-1
Matrix: Solid

Method: Total PFCA-Sum - Total PFCA (Summary) - Post-Treatment

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total PFCA	0.370		0.300	0.100	ng/g			05/13/22 13:14	1

Client: TRC Companies, Inc
Project/Site: Synthetic Turf

Job ID: 410-75808-1

Client Sample ID: EB-002
Date Collected: 03/21/22 13:53
Date Received: 03/21/22 14:00

Lab Sample ID: 410-76735-2
Matrix: Water

Method: 537 IDA - EPA 537 Isotope Dilution

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
10:2 FTCA	<0.500	H cn	2.00	0.500	ng/L		04/04/22 06:59	05/03/22 01:29	1
10:2 FTS	<0.999	H cn	5.00	0.999	ng/L		04/04/22 06:59	05/03/22 01:29	1
10:2 FTUCA	<0.699	H cn	2.00	0.699	ng/L		04/04/22 06:59	05/03/22 01:29	1
11Cl-PF3OUdS	<0.500	H cn	2.00	0.500	ng/L		04/04/22 06:59	05/03/22 01:29	1
3:3 FTCA	<0.300	H cn	2.00	0.300	ng/L		04/04/22 06:59	05/03/22 01:29	1
4:2 Fluorotelomer sulfonic acid	<0.500	H cn	2.00	0.500	ng/L		04/04/22 06:59	05/03/22 01:29	1
5:3 FTCA	<0.200	H cn	2.00	0.200	ng/L		04/04/22 06:59	05/03/22 01:29	1
6:2 Fluorotelomer sulfonic acid	<2.00	H cn	5.00	2.00	ng/L		04/04/22 06:59	05/03/22 01:29	1
6:2 FTCA	<0.400	H cn	2.00	0.400	ng/L		04/04/22 06:59	05/03/22 01:29	1
6:2 FTUCA	<0.500	H cn	2.00	0.500	ng/L		04/04/22 06:59	05/03/22 01:29	1
7:3 FTCA	<0.300	H cn	2.00	0.300	ng/L		04/04/22 06:59	05/03/22 01:29	1
8:2 Fluorotelomer sulfonic acid	<0.999	H cn	3.00	0.999	ng/L		04/04/22 06:59	05/03/22 01:29	1
8:2 FTCA	<0.400	H cn	2.00	0.400	ng/L		04/04/22 06:59	05/03/22 01:29	1
8:2 FTUCA	<0.500	H cn	2.00	0.500	ng/L		04/04/22 06:59	05/03/22 01:29	1
9Cl-PF3ONS	<0.500	H cn	2.00	0.500	ng/L		04/04/22 06:59	05/03/22 01:29	1
DONA	<0.500	H cn	2.00	0.500	ng/L		04/04/22 06:59	05/03/22 01:29	1
EVE Acid	<3.00	H cn	9.99	3.00	ng/L		04/04/22 06:59	05/03/22 01:29	1
HFPODA	**0.609**	**J H cn**	3.00	0.500	ng/L		04/04/22 06:59	05/03/22 01:29	1
Hydro-EVE Acid	<0.200	H cn	2.00	0.200	ng/L		04/04/22 06:59	05/03/22 01:29	1
Hydrolyzed PSDA	<0.899	H cn	2.00	0.899	ng/L		04/04/22 06:59	05/03/22 01:29	1
Hydro-PS Acid	<0.200	H cn	2.00	0.200	ng/L		04/04/22 06:59	05/03/22 01:29	1
MTP	<2.00	H cn	5.00	2.00	ng/L		04/04/22 06:59	05/03/22 01:29	1
NEtFOSA	<0.999	H cn	5.00	0.999	ng/L		04/04/22 06:59	05/03/22 01:29	1
NEtFOSAA	<0.500	H cn	3.00	0.500	ng/L		04/04/22 06:59	05/03/22 01:29	1
NEtFOSE	<0.999	H cn	3.00	0.999	ng/L		04/04/22 06:59	05/03/22 01:29	1
NMeFOSA	<0.999	H cn	3.00	0.999	ng/L		04/04/22 06:59	05/03/22 01:29	1
NMeFOSAA	<0.600	H cn	2.00	0.600	ng/L		04/04/22 06:59	05/03/22 01:29	1
NMeFOSE	<0.999	H cn	3.00	0.999	ng/L		04/04/22 06:59	05/03/22 01:29	1
NVHOS	<0.200	H cn	2.00	0.200	ng/L		04/04/22 06:59	05/03/22 01:29	1
PEPA	<0.200	H cn	2.00	0.200	ng/L		04/04/22 06:59	05/03/22 01:29	1
Perfluoro (2-ethoxyethane) sulfonic acid	<0.200	H cn	2.00	0.200	ng/L		04/04/22 06:59	05/03/22 01:29	1
Perfluoro-4-ethylcyclohexanesulfonic acid	<0.200	H cn	2.00	0.200	ng/L		04/04/22 06:59	05/03/22 01:29	1
Perfluorobutanesulfonic acid	<0.500	H cn	2.00	0.500	ng/L		04/04/22 06:59	05/03/22 01:29	1
Perfluorobutanoic acid	<2.00	H cn	5.00	2.00	ng/L		04/04/22 06:59	05/03/22 01:29	1
Perfluorodecanesulfonic acid	<0.500	H cn	2.00	0.500	ng/L		04/04/22 06:59	05/03/22 01:29	1
Perfluorodecanoic acid	<0.500	H cn	2.00	0.500	ng/L		04/04/22 06:59	05/03/22 01:29	1
Perfluorododecanesulfonic acid	<0.500	H cn	3.00	0.500	ng/L		04/04/22 06:59	05/03/22 01:29	1
Perfluorododecanoic acid	<0.500	H cn	2.00	0.500	ng/L		04/04/22 06:59	05/03/22 01:29	1
Perfluoroheptanesulfonic acid	<0.500	H cn	2.00	0.500	ng/L		04/04/22 06:59	05/03/22 01:29	1
Perfluoroheptanoic acid	<0.500	H cn	2.00	0.500	ng/L		04/04/22 06:59	05/03/22 01:29	1
Perfluorohexadecanoic acid	<0.999	H cn	3.00	0.999	ng/L		04/04/22 06:59	05/03/22 01:29	1
Perfluorohexanesulfonic acid	<0.500	H cn	2.00	0.500	ng/L		04/04/22 06:59	05/03/22 01:29	1
Perfluorohexanoic acid	<0.500	H cn	2.00	0.500	ng/L		04/04/22 06:59	05/03/22 01:29	1
Perfluorononanesulfonic acid	<0.500	H cn	2.00	0.500	ng/L		04/04/22 06:59	05/03/22 01:29	1
Perfluorononanoic acid	<0.500	H cn	2.00	0.500	ng/L		04/04/22 06:59	05/03/22 01:29	1
Perfluorooctadecanoic acid	<0.999	H cn	3.00	0.999	ng/L		04/04/22 06:59	05/03/22 01:29	1
Perfluorooctanesulfonamide	<0.500	H cn	2.00	0.500	ng/L		04/04/22 06:59	05/03/22 01:29	1
Perfluorooctanesulfonic acid	**0.804**	**J H B cn**	2.00	0.500	ng/L		04/04/22 06:59	05/03/22 01:29	1

Client: TRC Companies, Inc
Project/Site: Synthetic Turf

Job ID: 410-75808-1

Client Sample ID: EB-002
Date Collected: 03/21/22 13:53
Date Received: 03/21/22 14:00

Lab Sample ID: 410-76735-2
Matrix: Water

Method: 537 IDA - EPA 537 Isotope Dilution (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanoic acid	<0.500	H cn	2.00	0.500	ng/L		04/04/22 06:59	05/03/22 01:29	1
Perfluoropentanesulfonic acid	<0.500	H cn	2.00	0.500	ng/L		04/04/22 06:59	05/03/22 01:29	1
Perfluoropentanoic acid	<0.500	H cn	2.00	0.500	ng/L		04/04/22 06:59	05/03/22 01:29	1
Perfluoropropanesulfonic acid	<0.200	H cn	2.00	0.200	ng/L		04/04/22 06:59	05/03/22 01:29	1
Perfluorotetradecanoic acid	<0.500	H cn	2.00	0.500	ng/L		04/04/22 06:59	05/03/22 01:29	1
Perfluorotridecanoic acid	<0.500	H cn	2.00	0.500	ng/L		04/04/22 06:59	05/03/22 01:29	1
Perfluoroundecanoic acid	<0.500	H cn	2.00	0.500	ng/L		04/04/22 06:59	05/03/22 01:29	1
PFECA A	<0.200	H cn	2.00	0.200	ng/L		04/04/22 06:59	05/03/22 01:29	1
PFECA B	<0.200	H cn	2.00	0.200	ng/L		04/04/22 06:59	05/03/22 01:29	1
PFECA F	<0.200	H cn	2.00	0.200	ng/L		04/04/22 06:59	05/03/22 01:29	1
PFECA G	<0.200	H cn	2.00	0.200	ng/L		04/04/22 06:59	05/03/22 01:29	1
PFMOAA	<0.200	H cn	2.00	0.200	ng/L		04/04/22 06:59	05/03/22 01:29	1
PFO2HxA	<0.200	H cn	2.00	0.200	ng/L		04/04/22 06:59	05/03/22 01:29	1
PFO3OA	<0.200	H cn	2.00	0.200	ng/L		04/04/22 06:59	05/03/22 01:29	1
PFO4DA	<0.699	H cn	2.00	0.699	ng/L		04/04/22 06:59	05/03/22 01:29	1
PMPA	<0.200	H cn	2.00	0.200	ng/L		04/04/22 06:59	05/03/22 01:29	1
PPF Acid	<2.00	H cn	5.00	2.00	ng/L		04/04/22 06:59	05/03/22 01:29	1
PS Acid	<3.00	H cn	9.99	3.00	ng/L		04/04/22 06:59	05/03/22 01:29	1
R-EVE	<0.400	H cn	2.00	0.400	ng/L		04/04/22 06:59	05/03/22 01:29	1
R-PSDA	<0.500	H cn	2.00	0.500	ng/L		04/04/22 06:59	05/03/22 01:29	1
R-PSDCA	<0.200	H cn	2.00	0.200	ng/L		04/04/22 06:59	05/03/22 01:29	1
TAF	<2.00	H cn	5.00	2.00	ng/L		04/04/22 06:59	05/03/22 01:29	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
d5-NEtFOSAA	*131*	*cn*	*29 - 195*	*04/04/22 06:59*	*05/03/22 01:29*	*1*
d3-NMeFOSAA	*135*	*cn*	*31 - 174*	*04/04/22 06:59*	*05/03/22 01:29*	*1*
13C3 HFPO-DA	*109*	*cn*	*17 - 185*	*04/04/22 06:59*	*05/03/22 01:29*	*1*
d7-N-MeFOSE-M	*111*	*cn*	*10 - 178*	*04/04/22 06:59*	*05/03/22 01:29*	*1*
d9-N-EtFOSE-M	*112*	*cn*	*10 - 177*	*04/04/22 06:59*	*05/03/22 01:29*	*1*
M2-6:2 FTS	*130*	*cn*	*17 - 200*	*04/04/22 06:59*	*05/03/22 01:29*	*1*
M2-8:2 FTS	*135*	*cn*	*33 - 200*	*04/04/22 06:59*	*05/03/22 01:29*	*1*
13C3 PFBS	*128*	*cn*	*16 - 200*	*04/04/22 06:59*	*05/03/22 01:29*	*1*
M2-4:2 FTS	*113*	*cn*	*10 - 200*	*04/04/22 06:59*	*05/03/22 01:29*	*1*
13C5 PFHxA	*116*	*cn*	*24 - 179*	*04/04/22 06:59*	*05/03/22 01:29*	*1*
13C9 PFNA	*118*	*cn*	*51 - 167*	*04/04/22 06:59*	*05/03/22 01:29*	*1*
13C6 PFDA	*134*	*cn*	*49 - 163*	*04/04/22 06:59*	*05/03/22 01:29*	*1*
13C7 PFUnA	*131*	*cn*	*34 - 174*	*04/04/22 06:59*	*05/03/22 01:29*	*1*
13C3 PFHxS	*126*	*cn*	*28 - 188*	*04/04/22 06:59*	*05/03/22 01:29*	*1*
13C2-PFDoDA	*125*	*cn*	*17 - 176*	*04/04/22 06:59*	*05/03/22 01:29*	*1*
d5-NEtPFOSA	*108*	*cn*	*10 - 159*	*04/04/22 06:59*	*05/03/22 01:29*	*1*
d3-NMePFOSA	*105*	*cn*	*10 - 155*	*04/04/22 06:59*	*05/03/22 01:29*	*1*
13C2-2-Perfluorohexylethanoic acid	*79*	*cn*	*10 - 200*	*04/04/22 06:59*	*05/03/22 01:29*	*1*
13C2-2-Perfluorooctylethanoic acid	*103*	*cn*	*10 - 200*	*04/04/22 06:59*	*05/03/22 01:29*	*1*
13C2-2-Perfluorodecylethanoic acid	*86*	*cn*	*10 - 200*	*04/04/22 06:59*	*05/03/22 01:29*	*1*
13C2-2H-Perfluoro-2-octenoic acid	*147*	*cn*	*20 - 173*	*04/04/22 06:59*	*05/03/22 01:29*	*1*
13C2-2H-Perfluoro-2-decenoic acid	*165*	*cn*	*21 - 166*	*04/04/22 06:59*	*05/03/22 01:29*	*1*
13C2-2H-Perfluoro-2-dodecenoic acid	*159*	*cn*	*14 - 166*	*04/04/22 06:59*	*05/03/22 01:29*	*1*
13C4 PFBA	*124*	*cn*	*42 - 165*	*04/04/22 06:59*	*05/03/22 01:29*	*1*
13C5 PFPeA	*118*	*cn*	*38 - 187*	*04/04/22 06:59*	*05/03/22 01:29*	*1*

Client: TRC Companies, Inc
Project/Site: Synthetic Turf

Job ID: 410-75808-1

Client Sample ID: EB-002
Date Collected: 03/21/22 13:53
Date Received: 03/21/22 14:00

Lab Sample ID: 410-76735-2
Matrix: Water

Method: 537 IDA - EPA 537 Isotope Dilution (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFHpA	117	cn	31 - 182	04/04/22 06:59	05/03/22 01:29	1
13C8 PFOA	120	cn	48 - 162	04/04/22 06:59	05/03/22 01:29	1
13C8 PFOS	118	cn	51 - 159	04/04/22 06:59	05/03/22 01:29	1
13C8 FOSA	113	cn	10 - 168	04/04/22 06:59	05/03/22 01:29	1
13C2 PFTeDA	118	cn	10 - 179	04/04/22 06:59	05/03/22 01:29	1

Client: TRC Companies, Inc
Project/Site: Synthetic Turf

Job ID: 410-75808-1

Client Sample ID: Safeshell #1-3
Date Collected: 03/09/22 15:00
Date Received: 03/21/22 12:09

Lab Sample ID: 410-76903-1
Matrix: Solid

Method: 537 IDA - EPA 537 Isotope Dilution - Pre-Treatment

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
10:2 FTCA	<0.0394	cn	0.118	0.0394	ng/g		04/04/22 11:19	04/06/22 20:59	1
10:2 FTS	<0.118	cn	0.394	0.118	ng/g		04/04/22 11:19	04/06/22 20:59	1
10:2 FTUCA	<0.0394	cn	0.118	0.0394	ng/g		04/04/22 11:19	04/06/22 20:59	1
11Cl-PF3OUdS	<0.0394	cn	0.118	0.0394	ng/g		04/04/22 11:19	04/06/22 20:59	1
3:3 FTCA	<0.0394	cn	0.118	0.0394	ng/g		04/04/22 11:19	04/06/22 20:59	1
4:2 Fluorotelomer sulfonic acid	<0.118	cn	0.394	0.118	ng/g		04/04/22 11:19	04/06/22 20:59	1
5:3 FTCA	<0.0394	cn	0.118	0.0394	ng/g		04/04/22 11:19	04/06/22 20:59	1
6:2 Fluorotelomer sulfonic acid	<0.118	cn	0.394	0.118	ng/g		04/04/22 11:19	04/06/22 20:59	1
6:2 FTCA	<0.0394	cn	0.118	0.0394	ng/g		04/04/22 11:19	04/06/22 20:59	1
6:2 FTUCA	<0.0394	cn	0.118	0.0394	ng/g		04/04/22 11:19	04/06/22 20:59	1
7:3 FTCA	<0.0394	*- cn	0.118	0.0394	ng/g		04/04/22 11:19	04/06/22 20:59	1
8:2 Fluorotelomer sulfonic acid	<0.118	cn	0.591	0.118	ng/g		04/04/22 11:19	04/06/22 20:59	1
8:2 FTCA	<0.0394	cn	0.118	0.0394	ng/g		04/04/22 11:19	04/06/22 20:59	1
8:2 FTUCA	<0.0394	cn	0.118	0.0394	ng/g		04/04/22 11:19	04/06/22 20:59	1
9Cl-PF3ONS	<0.0394	cn	0.394	0.0394	ng/g		04/04/22 11:19	04/06/22 20:59	1
DONA	<0.0394	cn	0.591	0.0394	ng/g		04/04/22 11:19	04/06/22 20:59	1
EVE Acid	<0.0394	*- cn	0.118	0.0394	ng/g		04/04/22 11:19	04/06/22 20:59	1
HFPODA	<0.0787	cn	0.394	0.0787	ng/g		04/04/22 11:19	04/06/22 20:59	1
Hydro-EVE Acid	<0.0394	cn	0.118	0.0394	ng/g		04/04/22 11:19	04/06/22 20:59	1
Hydrolyzed PSDA	<0.0394	*- cn	0.118	0.0394	ng/g		04/04/22 11:19	04/06/22 20:59	1
Hydro-PS Acid	<0.0394	cn	0.118	0.0394	ng/g		04/04/22 11:19	04/06/22 20:59	1
MTP	<0.0394	*- cn	0.118	0.0394	ng/g		04/04/22 11:19	04/06/22 20:59	1
NEtFOSA	<0.0984	cn	0.394	0.0984	ng/g		04/04/22 11:19	04/06/22 20:59	1
NEtFOSAA	<0.0394	cn	0.394	0.0394	ng/g		04/04/22 11:19	04/06/22 20:59	1
NEtFOSE	<0.0984	cn	0.394	0.0984	ng/g		04/04/22 11:19	04/06/22 20:59	1
NMeFOSA	<0.0984	cn	0.394	0.0984	ng/g		04/04/22 11:19	04/06/22 20:59	1
NMeFOSAA	<0.0394	cn	0.394	0.0394	ng/g		04/04/22 11:19	04/06/22 20:59	1
NMeFOSE	<0.0984	cn	0.394	0.0984	ng/g		04/04/22 11:19	04/06/22 20:59	1
NVHOS	<0.0394	cn	0.118	0.0394	ng/g		04/04/22 11:19	04/06/22 20:59	1
PEPA	**0.0687**	**J cn**	0.118	0.0394	ng/g		04/04/22 11:19	04/06/22 20:59	1
Perfluoro (2-ethoxyethane) sulfonic acid	<0.0394	cn	0.118	0.0394	ng/g		04/04/22 11:19	04/06/22 20:59	1
Perfluoro-4-ethylcyclohexanesulfonic acid	<0.0394	cn	0.118	0.0394	ng/g		04/04/22 11:19	04/06/22 20:59	1
Perfluorobutanesulfonic acid	<0.0787	cn	0.394	0.0787	ng/g		04/04/22 11:19	04/06/22 20:59	1
Perfluorobutanoic acid	<0.157	cn	0.394	0.157	ng/g		04/04/22 11:19	04/06/22 20:59	1
Perfluorodecanesulfonic acid	<0.0394	cn	0.118	0.0394	ng/g		04/04/22 11:19	04/06/22 20:59	1
Perfluorodecanoic acid	<0.0394	cn	0.118	0.0394	ng/g		04/04/22 11:19	04/06/22 20:59	1
Perfluorododecanesulfonic acid	<0.0394	cn	0.394	0.0394	ng/g		04/04/22 11:19	04/06/22 20:59	1
Perfluorododecanoic acid	<0.0394	cn	0.118	0.0394	ng/g		04/04/22 11:19	04/06/22 20:59	1
Perfluoroheptanesulfonic acid	<0.0394	cn	0.118	0.0394	ng/g		04/04/22 11:19	04/06/22 20:59	1
Perfluoroheptanoic acid	<0.0394	cn	0.118	0.0394	ng/g		04/04/22 11:19	04/06/22 20:59	1
Perfluorohexadecanoic acid	<0.0394	cn	0.118	0.0394	ng/g		04/04/22 11:19	04/06/22 20:59	1
Perfluorohexanesulfonic acid	<0.0394	cn	0.118	0.0394	ng/g		04/04/22 11:19	04/06/22 20:59	1
Perfluorohexanoic acid	<0.0394	cn	0.118	0.0394	ng/g		04/04/22 11:19	04/06/22 20:59	1
Perfluorononanesulfonic acid	<0.0394	cn	0.118	0.0394	ng/g		04/04/22 11:19	04/06/22 20:59	1
Perfluorononanoic acid	<0.0394	cn	0.118	0.0394	ng/g		04/04/22 11:19	04/06/22 20:59	1
Perfluorooctadecanoic acid	<0.0394	cn	0.118	0.0394	ng/g		04/04/22 11:19	04/06/22 20:59	1
Perfluorooctanesulfonamide	<0.0394	cn	0.118	0.0394	ng/g		04/04/22 11:19	04/06/22 20:59	1
Perfluorooctanesulfonic acid	<0.0394	cn	0.118	0.0394	ng/g		04/04/22 11:19	04/06/22 20:59	1

Client: TRC Companies, Inc
Project/Site: Synthetic Turf

Job ID: 410-75808-1

Client Sample ID: Safeshell #1-3
Date Collected: 03/09/22 15:00
Date Received: 03/21/22 12:09

Lab Sample ID: 410-76903-1
Matrix: Solid

Method: 537 IDA - EPA 537 Isotope Dilution - Pre-Treatment (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanoic acid	<0.0394	cn	0.118	0.0394	ng/g		04/04/22 11:19	04/06/22 20:59	1
Perfluoropentanesulfonic acid	<0.0394	cn	0.118	0.0394	ng/g		04/04/22 11:19	04/06/22 20:59	1
Perfluoropentanoic acid	**0.200**	**cn**	0.118	0.0394	ng/g		04/04/22 11:19	04/06/22 20:59	1
Perfluoropropanesulfonic acid	<0.0394	cn	0.118	0.0394	ng/g		04/04/22 11:19	04/06/22 20:59	1
Perfluorotetradecanoic acid	<0.0394	cn	0.118	0.0394	ng/g		04/04/22 11:19	04/06/22 20:59	1
Perfluorotridecanoic acid	<0.0394	cn	0.118	0.0394	ng/g		04/04/22 11:19	04/06/22 20:59	1
Perfluoroundecanoic acid	<0.0394	cn	0.118	0.0394	ng/g		04/04/22 11:19	04/06/22 20:59	1
PFECA A	<0.0394	cn	0.118	0.0394	ng/g		04/04/22 11:19	04/06/22 20:59	1
PFECA B	<0.0394	cn	0.118	0.0394	ng/g		04/04/22 11:19	04/06/22 20:59	1
PFECA F	<0.0394	cn	0.118	0.0394	ng/g		04/04/22 11:19	04/06/22 20:59	1
PFECA G	<0.0394	*- cn	0.118	0.0394	ng/g		04/04/22 11:19	04/06/22 20:59	1
PFMOAA	**5.16**	***- cn**	0.118	0.0394	ng/g		04/04/22 11:19	04/06/22 20:59	1
PFO2HxA	**0.0644**	**J cn**	0.118	0.0394	ng/g		04/04/22 11:19	04/06/22 20:59	1
PFO3OA	<0.0394	*- cn	0.118	0.0394	ng/g		04/04/22 11:19	04/06/22 20:59	1
PFO4DA	<0.0394	cn	0.118	0.0394	ng/g		04/04/22 11:19	04/06/22 20:59	1
PMPA	**0.0461**	**J cn**	0.118	0.0394	ng/g		04/04/22 11:19	04/06/22 20:59	1
PS Acid	<0.0394	*- cn	0.118	0.0394	ng/g		04/04/22 11:19	04/06/22 20:59	1
R-EVE	<0.0394	*- cn	0.118	0.0394	ng/g		04/04/22 11:19	04/06/22 20:59	1
R-PSDA	<0.0394	*- cn	0.118	0.0394	ng/g		04/04/22 11:19	04/06/22 20:59	1
R-PSDCA	<0.0394	*- cn	0.118	0.0394	ng/g		04/04/22 11:19	04/06/22 20:59	1
TAF	<0.0394	cn	0.118	0.0394	ng/g		04/04/22 11:19	04/06/22 20:59	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
d5-NEtFOSAA	*171*	*cn*	*10 - 193*	*04/04/22 11:19*	*04/06/22 20:59*	*1*
d3-NMeFOSAA	*174*	*cn*	*10 - 178*	*04/04/22 11:19*	*04/06/22 20:59*	*1*
13C3 HFPO-DA	*116*	*cn*	*10 - 169*	*04/04/22 11:19*	*04/06/22 20:59*	*1*
d7-N-MeFOSE-M	*120*	*cn*	*10 - 179*	*04/04/22 11:19*	*04/06/22 20:59*	*1*
d9-N-EtFOSE-M	*108*	*cn*	*10 - 185*	*04/04/22 11:19*	*04/06/22 20:59*	*1*
M2-6:2 FTS	*188*	*cn*	*10 - 200*	*04/04/22 11:19*	*04/06/22 20:59*	*1*
M2-8:2 FTS	*241*	**5+ cn*	*15 - 200*	*04/04/22 11:19*	*04/06/22 20:59*	*1*
13C3 PFBS	*221*	**5+ cn*	*27 - 179*	*04/04/22 11:19*	*04/06/22 20:59*	*1*
M2-4:2 FTS	*230*	**5+ cn*	*10 - 200*	*04/04/22 11:19*	*04/06/22 20:59*	*1*
13C5 PFHxA	*97*	*cn*	*10 - 174*	*04/04/22 11:19*	*04/06/22 20:59*	*1*
13C9 PFNA	*131*	*cn*	*26 - 165*	*04/04/22 11:19*	*04/06/22 20:59*	*1*
13C6 PFDA	*131*	*cn*	*26 - 161*	*04/04/22 11:19*	*04/06/22 20:59*	*1*
13C7 PFUnA	*153*	*cn*	*12 - 173*	*04/04/22 11:19*	*04/06/22 20:59*	*1*
13C3 PFHxS	*142*	*cn*	*24 - 171*	*04/04/22 11:19*	*04/06/22 20:59*	*1*
13C2-PFDoDA	*151*	*cn*	*11 - 166*	*04/04/22 11:19*	*04/06/22 20:59*	*1*
d5-NEtPFOSA	*93*	*cn*	*10 - 180*	*04/04/22 11:19*	*04/06/22 20:59*	*1*
d3-NMePFOSA	*103*	*cn*	*10 - 175*	*04/04/22 11:19*	*04/06/22 20:59*	*1*
13C2-2-Perfluorohexylethanoic acid	*125*	*cn*	*10 - 200*	*04/04/22 11:19*	*04/06/22 20:59*	*1*
13C2-2-Perfluorooctylethanoic acid	*188*	*cn*	*10 - 200*	*04/04/22 11:19*	*04/06/22 20:59*	*1*
13C2-2-Perfluorodecylethanoic acid	*210*	**5+ cn*	*10 - 200*	*04/04/22 11:19*	*04/06/22 20:59*	*1*
13C2-2H-Perfluoro-2-octenoic acid	*68*	*cn*	*10 - 164*	*04/04/22 11:19*	*04/06/22 20:59*	*1*
13C2-2H-Perfluoro-2-decenoic acid	*83*	*cn*	*10 - 162*	*04/04/22 11:19*	*04/06/22 20:59*	*1*
13C2-2H-Perfluoro-2-dodecenoic acid	*112*	*cn*	*10 - 161*	*04/04/22 11:19*	*04/06/22 20:59*	*1*
13C4 PFBA	*127*	*cn*	*28 - 153*	*04/04/22 11:19*	*04/06/22 20:59*	*1*
13C5 PFPeA	*174*	**5+ cn*	*24 - 161*	*04/04/22 11:19*	*04/06/22 20:59*	*1*
13C4 PFHpA	*112*	*cn*	*10 - 178*	*04/04/22 11:19*	*04/06/22 20:59*	*1*

Client: TRC Companies, Inc
Project/Site: Synthetic Turf

Job ID: 410-75808-1

Client Sample ID: Safeshell #1-3
Date Collected: 03/09/22 15:00
Date Received: 03/21/22 12:09

Lab Sample ID: 410-76903-1
Matrix: Solid

Method: 537 IDA - EPA 537 Isotope Dilution - Pre-Treatment (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 PFOA	118	cn	26 - 159	04/04/22 11:19	04/06/22 20:59	1
13C8 PFOS	129	cn	41 - 154	04/04/22 11:19	04/06/22 20:59	1
13C8 FOSA	119	cn	14 - 163	04/04/22 11:19	04/06/22 20:59	1
13C2 PFTeDA	153	cn	10 - 169	04/04/22 11:19	04/06/22 20:59	1

Client: TRC Companies, Inc
Project/Site: Synthetic Turf

Job ID: 410-75808-1

Client Sample ID: Safeshell #1-3
Date Collected: 03/09/22 15:00
Date Received: 03/21/22 12:09

Lab Sample ID: 410-76903-1
Matrix: Solid

Method: 537 IDA - EPA 537 Isotope Dilution - Pre-Treatment - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PPF Acid	41.0	*-	1.18	0.394	ng/g		04/04/22 11:19	04/06/22 21:10	10

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*144*		*28 - 153*	*04/04/22 11:19*	*04/06/22 21:10*	*10*

Client: TRC Companies, Inc
Project/Site: Synthetic Turf

Job ID: 410-75808-1

Client Sample ID: Safeshell #1-3
Date Collected: 03/09/22 15:00
Date Received: 03/21/22 12:09

Lab Sample ID: 410-76903-1
Matrix: Solid

Method: 537 TOP - Fluorinated Alkyl Substances - Post-Treatment

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
10:2 FTCA	<0.0399	H *+ cn	0.120	0.0399	ng/g		05/10/22 10:06	05/12/22 13:24	1
10:2 FTS	<0.120	H cn	0.399	0.120	ng/g		05/10/22 10:06	05/12/22 13:24	1
10:2 FTUCA	<0.0399	H *- cn	0.120	0.0399	ng/g		05/10/22 10:06	05/12/22 13:24	1
11Cl-PF3OUdS	<0.0399	H cn	0.120	0.0399	ng/g		05/10/22 10:06	05/12/22 13:24	1
3:3 FTCA	<0.0399	H cn	0.120	0.0399	ng/g		05/10/22 10:06	05/12/22 13:24	1
4:2 Fluorotelomer sulfonic acid	<0.120	H cn	0.399	0.120	ng/g		05/10/22 10:06	05/12/22 13:24	1
5:3 FTCA	<0.0399	H cn	0.120	0.0399	ng/g		05/10/22 10:06	05/12/22 13:24	1
6:2 Fluorotelomer sulfonic acid	<0.120	H cn	0.399	0.120	ng/g		05/10/22 10:06	05/12/22 13:24	1
6:2 FTCA	**0.0425**	**J H *+ cn**	0.120	0.0399	ng/g		05/10/22 10:06	05/12/22 13:24	1
6:2 FTUCA	**0.149**	**H *- cn**	0.120	0.0399	ng/g		05/10/22 10:06	05/12/22 13:24	1
7:3 FTCA	<0.0399	H cn	0.120	0.0399	ng/g		05/10/22 10:06	05/12/22 13:24	1
8:2 Fluorotelomer sulfonic acid	<0.120	H cn	0.599	0.120	ng/g		05/10/22 10:06	05/12/22 13:24	1
8:2 FTCA	<0.0399	H *+ cn	0.120	0.0399	ng/g		05/10/22 10:06	05/12/22 13:24	1
8:2 FTUCA	<0.0399	H *- cn	0.120	0.0399	ng/g		05/10/22 10:06	05/12/22 13:24	1
9Cl-PF3ONS	<0.0399	H cn	0.399	0.0399	ng/g		05/10/22 10:06	05/12/22 13:24	1
DONA	<0.0399	H cn	0.120	0.0399	ng/g		05/10/22 10:06	05/12/22 13:24	1
EVE Acid	<0.0399	H *+ cn	0.120	0.0399	ng/g		05/10/22 10:06	05/12/22 13:24	1
HFPODA	<0.200	H cn	0.599	0.200	ng/g		05/10/22 10:06	05/12/22 13:24	1
Hydro-EVE Acid	<0.0399	H *+ cn	0.120	0.0399	ng/g		05/10/22 10:06	05/12/22 13:24	1
Hydrolyzed PSDA	<0.0399	H *- cn	0.120	0.0399	ng/g		05/10/22 10:06	05/12/22 13:24	1
Hydro-PS Acid	<0.0399	H cn	0.120	0.0399	ng/g		05/10/22 10:06	05/12/22 13:24	1
MTP	<0.0399	H *+ cn	0.120	0.0399	ng/g		05/10/22 10:06	05/12/22 13:24	1
NEtFOSA	<0.0998	H cn	0.399	0.0998	ng/g		05/10/22 10:06	05/12/22 13:24	1
NEtFOSAA	<0.0399	H cn	0.399	0.0399	ng/g		05/10/22 10:06	05/12/22 13:24	1
NEtFOSE	<0.0998	H cn	0.399	0.0998	ng/g		05/10/22 10:06	05/12/22 13:24	1
NMeFOSA	<0.0998	H cn	0.399	0.0998	ng/g		05/10/22 10:06	05/12/22 13:24	1
NMeFOSAA	<0.0399	H cn	0.399	0.0399	ng/g		05/10/22 10:06	05/12/22 13:24	1
NMeFOSE	<0.0998	H cn	0.399	0.0998	ng/g		05/10/22 10:06	05/12/22 13:24	1
NVHOS	<0.0399	H cn	0.120	0.0399	ng/g		05/10/22 10:06	05/12/22 13:24	1
PEPA	<0.0399	H *+ cn	0.120	0.0399	ng/g		05/10/22 10:06	05/12/22 13:24	1
Perfluoro (2-ethoxyethane) sulfonic acid	<0.0399	H cn	0.120	0.0399	ng/g		05/10/22 10:06	05/12/22 13:24	1
Perfluoro-4-ethylcyclohexanesulfonic acid	<0.0399	H cn	0.120	0.0399	ng/g		05/10/22 10:06	05/12/22 13:24	1
Perfluorobutanesulfonic acid	<0.0798	H cn	0.399	0.0798	ng/g		05/10/22 10:06	05/12/22 13:24	1
Perfluorobutanoic acid	<0.160	H cn	0.399	0.160	ng/g		05/10/22 10:06	05/12/22 13:24	1
Perfluorodecanesulfonic acid	<0.0399	H cn	0.120	0.0399	ng/g		05/10/22 10:06	05/12/22 13:24	1
Perfluorodecanoic acid	<0.0399	H cn	0.120	0.0399	ng/g		05/10/22 10:06	05/12/22 13:24	1
Perfluorododecanesulfonic acid	<0.0399	H cn	0.399	0.0399	ng/g		05/10/22 10:06	05/12/22 13:24	1
Perfluorododecanoic acid	<0.0399	H cn	0.120	0.0399	ng/g		05/10/22 10:06	05/12/22 13:24	1
Perfluoroheptanesulfonic acid	<0.0399	H cn	0.120	0.0399	ng/g		05/10/22 10:06	05/12/22 13:24	1
Perfluoroheptanoic acid	<0.0399	H cn	0.120	0.0399	ng/g		05/10/22 10:06	05/12/22 13:24	1
Perfluorohexadecanoic acid	<0.0399	H cn	0.120	0.0399	ng/g		05/10/22 10:06	05/12/22 13:24	1
Perfluorohexanesulfonic acid	<0.0399	H cn	0.120	0.0399	ng/g		05/10/22 10:06	05/12/22 13:24	1
Perfluorohexanoic acid	<0.0399	H cn	0.120	0.0399	ng/g		05/10/22 10:06	05/12/22 13:24	1
Perfluorononanesulfonic acid	<0.0399	H cn	0.120	0.0399	ng/g		05/10/22 10:06	05/12/22 13:24	1
Perfluorononanoic acid	<0.0399	H cn	0.120	0.0399	ng/g		05/10/22 10:06	05/12/22 13:24	1
Perfluorooctadecanoic acid	<0.0399	H cn	0.120	0.0399	ng/g		05/10/22 10:06	05/12/22 13:24	1
Perfluorooctanesulfonamide	<0.0399	H cn	0.120	0.0399	ng/g		05/10/22 10:06	05/12/22 13:24	1
Perfluorooctanesulfonic acid	<0.0399	H cn	0.120	0.0399	ng/g		05/10/22 10:06	05/12/22 13:24	1

Client: TRC Companies, Inc
Project/Site: Synthetic Turf

Job ID: 410-75808-1

Client Sample ID: Safeshell #1-3
Date Collected: 03/09/22 15:00
Date Received: 03/21/22 12:09

Lab Sample ID: 410-76903-1
Matrix: Solid

Method: 537 TOP - Fluorinated Alkyl Substances - Post-Treatment (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanoic acid	<0.0399	H cn	0.120	0.0399	ng/g		05/10/22 10:06	05/12/22 13:24	1
Perfluoropentanesulfonic acid	<0.0399	H cn	0.120	0.0399	ng/g		05/10/22 10:06	05/12/22 13:24	1
Perfluoropentanoic acid	<0.0399	H cn	0.120	0.0399	ng/g		05/10/22 10:06	05/12/22 13:24	1
Perfluoropropanesulfonic acid	<0.0399	H *+ cn	0.120	0.0399	ng/g		05/10/22 10:06	05/12/22 13:24	1
Perfluorotetradecanoic acid	<0.0399	H cn	0.120	0.0399	ng/g		05/10/22 10:06	05/12/22 13:24	1
Perfluorotridecanoic acid	<0.0399	H cn	0.120	0.0399	ng/g		05/10/22 10:06	05/12/22 13:24	1
Perfluoroundecanoic acid	<0.0399	H cn	0.120	0.0399	ng/g		05/10/22 10:06	05/12/22 13:24	1
PFECA A	<0.0399	H cn	0.120	0.0399	ng/g		05/10/22 10:06	05/12/22 13:24	1
PFECA B	<0.0399	H *- cn	0.120	0.0399	ng/g		05/10/22 10:06	05/12/22 13:24	1
PFECA F	<0.0399	H *+ cn	0.120	0.0399	ng/g		05/10/22 10:06	05/12/22 13:24	1
PFECA G	<0.0399	H cn	0.120	0.0399	ng/g		05/10/22 10:06	05/12/22 13:24	1
PFMOAA	<0.0399	H *+ cn	0.120	0.0399	ng/g		05/10/22 10:06	05/12/22 13:24	1
PFO2HxA	**0.308**	**H *+ cn**	0.120	0.0399	ng/g		05/10/22 10:06	05/12/22 13:24	1
PFO3OA	<0.0399	H *+ cn	0.120	0.0399	ng/g		05/10/22 10:06	05/12/22 13:24	1
PFO4DA	<0.0399	H *+ cn	0.120	0.0399	ng/g		05/10/22 10:06	05/12/22 13:24	1
PMPA	<0.0399	H *+ cn	0.120	0.0399	ng/g		05/10/22 10:06	05/12/22 13:24	1
PPF Acid	<0.0399	H *+ cn	0.120	0.0399	ng/g		05/10/22 10:06	05/12/22 13:24	1
PS Acid	<0.0399	H *- cn	0.120	0.0399	ng/g		05/10/22 10:06	05/12/22 13:24	1
R-EVE	<0.0399	H cn	0.120	0.0399	ng/g		05/10/22 10:06	05/12/22 13:24	1
R-PSDA	<0.0399	H *- cn	0.120	0.0399	ng/g		05/10/22 10:06	05/12/22 13:24	1
R-PSDCA	<0.0399	H cn	0.120	0.0399	ng/g		05/10/22 10:06	05/12/22 13:24	1
TAF	**0.0859**	**J H *+ cn**	0.120	0.0399	ng/g		05/10/22 10:06	05/12/22 13:24	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
M2-6:2 FTS	*587*	**5+ cn*	*10 - 200*	*05/10/22 10:06*	*05/12/22 13:24*	*1*
M2-8:2 FTS	*385*	**5+ cn*	*15 - 200*	*05/10/22 10:06*	*05/12/22 13:24*	*1*
13C2 PFTeDA	*80*	*cn*	*10 - 169*	*05/10/22 10:06*	*05/12/22 13:24*	*1*
13C3 HFPO-DA	*78*	*cn*	*10 - 169*	*05/10/22 10:06*	*05/12/22 13:24*	*1*
13C3 PFBS	*190*	**5+ cn*	*27 - 179*	*05/10/22 10:06*	*05/12/22 13:24*	*1*
13C4 PFBA	*93*	*cn*	*28 - 153*	*05/10/22 10:06*	*05/12/22 13:24*	*1*
13C4 PFHpA	*113*	*cn*	*10 - 178*	*05/10/22 10:06*	*05/12/22 13:24*	*1*
13C5 PFPeA	*125*	*cn*	*24 - 161*	*05/10/22 10:06*	*05/12/22 13:24*	*1*
13C8 PFOA	*96*	*cn*	*26 - 159*	*05/10/22 10:06*	*05/12/22 13:24*	*1*
13C8 PFOS	*110*	*cn*	*41 - 154*	*05/10/22 10:06*	*05/12/22 13:24*	*1*
d5-NEtFOSAA	*119*	*cn*	*10 - 193*	*05/10/22 10:06*	*05/12/22 13:24*	*1*
d7-N-MeFOSE-M	*34*	*cn*	*10 - 179*	*05/10/22 10:06*	*05/12/22 13:24*	*1*
d9-N-EtFOSE-M	*53*	*cn*	*10 - 185*	*05/10/22 10:06*	*05/12/22 13:24*	*1*
13C3 PFHxS	*149*	*cn*	*24 - 171*	*05/10/22 10:06*	*05/12/22 13:24*	*1*
13C5 PFHxA	*75*	*cn*	*10 - 174*	*05/10/22 10:06*	*05/12/22 13:24*	*1*
13C6 PFDA	*85*	*cn*	*26 - 161*	*05/10/22 10:06*	*05/12/22 13:24*	*1*
13C7 PFUnA	*73*	*cn*	*12 - 173*	*05/10/22 10:06*	*05/12/22 13:24*	*1*
d3-NMePFOSA	*41*	*cn*	*10 - 175*	*05/10/22 10:06*	*05/12/22 13:24*	*1*
d5-NEtPFOSA	*45*	*cn*	*10 - 180*	*05/10/22 10:06*	*05/12/22 13:24*	*1*
13C8 FOSA	*55*	*cn*	*14 - 163*	*05/10/22 10:06*	*05/12/22 13:24*	*1*
13C2-PFDoDA	*59*	*cn*	*11 - 166*	*05/10/22 10:06*	*05/12/22 13:24*	*1*
13C9 PFNA	*101*	*cn*	*26 - 165*	*05/10/22 10:06*	*05/12/22 13:24*	*1*
13C2-2-Perfluorohexylethanoic acid	*54*	*cn*	*50 - 150*	*05/10/22 10:06*	*05/12/22 13:24*	*1*
13C2-2-Perfluorooctylethanoic acid	*48*	**5- cn*	*50 - 150*	*05/10/22 10:06*	*05/12/22 13:24*	*1*
13C2-2-Perfluorodecylethanoic acid	*56*	*cn*	*50 - 150*	*05/10/22 10:06*	*05/12/22 13:24*	*1*
13C2-2H-Perfluoro-2-octenoic acid	*100*	*cn*	*50 - 150*	*05/10/22 10:06*	*05/12/22 13:24*	*1*

Client: TRC Companies, Inc
Project/Site: Synthetic Turf

Job ID: 410-75808-1

Client Sample ID: Safeshell #1-3
Date Collected: 03/09/22 15:00
Date Received: 03/21/22 12:09

Lab Sample ID: 410-76903-1
Matrix: Solid

Method: 537 TOP - Fluorinated Alkyl Substances - Post-Treatment (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2-2H-Perfluoro-2-decenoic acid	102	cn	50 - 150	05/10/22 10:06	05/12/22 13:24	1
13C2-2H-Perfluoro-2-dodecenoic acid	123	cn	50 - 150	05/10/22 10:06	05/12/22 13:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFHxA	79	cn	10 - 137	05/10/22 10:06	05/12/22 13:24	1
13C4 PFOA	120	cn	10 - 146	05/10/22 10:06	05/12/22 13:24	1
13C2 PFUnA	119	cn	10 - 143	05/10/22 10:06	05/12/22 13:24	1

Client: TRC Companies, Inc
Project/Site: Synthetic Turf

Job ID: 410-75808-1

Client Sample ID: Safeshell #1-3
Date Collected: 03/09/22 15:00
Date Received: 03/21/22 12:09

Lab Sample ID: 410-76903-1
Matrix: Solid

Method: Total PFCA-Dif - Total PFCA (Treatment Difference)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PFBA	0.000				ng/g			05/13/22 13:16	1
PFPA	0.000				ng/g			05/13/22 13:16	1
PFHxA	0.000				ng/g			05/13/22 13:16	1
PFHpA	0.000				ng/g			05/13/22 13:16	1
PFOA	0.000				ng/g			05/13/22 13:16	1
PFNA	0.000				ng/g			05/13/22 13:16	1
Total PFCA	0.000				ng/g			05/13/22 13:16	1

Client: TRC Companies, Inc
Project/Site: Synthetic Turf

Job ID: 410-75808-1

Client Sample ID: Safeshell #1-3
Date Collected: 03/09/22 15:00
Date Received: 03/21/22 12:09

Lab Sample ID: 410-76903-1
Matrix: Solid

Method: Total PFCA-Sum - Total PFCA (Summary) - Pre-Treatment

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total PFCA	0.200	J	0.300	0.100	ng/g			05/13/22 13:14	1

Client: TRC Companies, Inc
Project/Site: Synthetic Turf

Job ID: 410-75808-1

Client Sample ID: Safeshell #1-3
Date Collected: 03/09/22 15:00
Date Received: 03/21/22 12:09

Lab Sample ID: 410-76903-1
Matrix: Solid

Method: Total PFCA-Sum - Total PFCA (Summary) - Post-Treatment

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total PFCA	<0.100		0.300	0.100	ng/g			05/13/22 13:14	1

Client: TRC Companies, Inc
Project/Site: Synthetic Turf

Job ID: 410-75808-1

Client Sample ID: EB 003
Date Collected: 03/22/22 00:00
Date Received: 03/21/22 12:09

Lab Sample ID: 410-76903-4
Matrix: Water

Method: 537 IDA - EPA 537 Isotope Dilution

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
10:2 FTCA	<0.476	H *- cn	1.90	0.476	ng/L		04/04/22 06:59	05/05/22 08:05	1
10:2 FTS	<0.952	H cn	4.76	0.952	ng/L		04/04/22 06:59	05/05/22 08:05	1
10:2 FTUCA	<0.666	H cn	1.90	0.666	ng/L		04/04/22 06:59	05/05/22 08:05	1
11Cl-PF3OUdS	<0.476	H cn	1.90	0.476	ng/L		04/04/22 06:59	05/05/22 08:05	1
3:3 FTCA	<0.285	H cn	1.90	0.285	ng/L		04/04/22 06:59	05/05/22 08:05	1
4:2 Fluorotelomer sulfonic acid	<0.476	H cn	1.90	0.476	ng/L		04/04/22 06:59	05/05/22 08:05	1
5:3 FTCA	<0.190	H *- cn	1.90	0.190	ng/L		04/04/22 06:59	05/05/22 08:05	1
6:2 Fluorotelomer sulfonic acid	<1.90	H cn	4.76	1.90	ng/L		04/04/22 06:59	05/05/22 08:05	1
6:2 FTCA	<0.381	H *- cn	1.90	0.381	ng/L		04/04/22 06:59	05/05/22 08:05	1
6:2 FTUCA	<0.476	H cn	1.90	0.476	ng/L		04/04/22 06:59	05/05/22 08:05	1
7:3 FTCA	<0.285	H cn	1.90	0.285	ng/L		04/04/22 06:59	05/05/22 08:05	1
8:2 Fluorotelomer sulfonic acid	<0.952	H cn	2.85	0.952	ng/L		04/04/22 06:59	05/05/22 08:05	1
8:2 FTCA	<0.381	H *- cn	1.90	0.381	ng/L		04/04/22 06:59	05/05/22 08:05	1
8:2 FTUCA	<0.476	H cn	1.90	0.476	ng/L		04/04/22 06:59	05/05/22 08:05	1
9Cl-PF3ONS	<0.476	H cn	1.90	0.476	ng/L		04/04/22 06:59	05/05/22 08:05	1
DONA	<0.476	H cn	1.90	0.476	ng/L		04/04/22 06:59	05/05/22 08:05	1
EVE Acid	<2.85	H *- cn	9.52	2.85	ng/L		04/04/22 06:59	05/05/22 08:05	1
HFPODA	<0.476	H cn	2.85	0.476	ng/L		04/04/22 06:59	05/05/22 08:05	1
Hydro-EVE Acid	<0.190	H cn	1.90	0.190	ng/L		04/04/22 06:59	05/05/22 08:05	1
Hydrolyzed PSDA	<0.856	H cn	1.90	0.856	ng/L		04/04/22 06:59	05/05/22 08:05	1
Hydro-PS Acid	<0.190	H cn	1.90	0.190	ng/L		04/04/22 06:59	05/05/22 08:05	1
MTP	<1.90	H cn	4.76	1.90	ng/L		04/04/22 06:59	05/05/22 08:05	1
NEtFOSA	<0.952	H cn	4.76	0.952	ng/L		04/04/22 06:59	05/05/22 08:05	1
NEtFOSAA	<0.476	H cn	2.85	0.476	ng/L		04/04/22 06:59	05/05/22 08:05	1
NEtFOSE	<0.952	H cn	2.85	0.952	ng/L		04/04/22 06:59	05/05/22 08:05	1
NMeFOSA	<0.952	H cn	2.85	0.952	ng/L		04/04/22 06:59	05/05/22 08:05	1
NMeFOSAA	<0.571	H cn	1.90	0.571	ng/L		04/04/22 06:59	05/05/22 08:05	1
NMeFOSE	<0.952	H cn	2.85	0.952	ng/L		04/04/22 06:59	05/05/22 08:05	1
NVHOS	<0.190	H cn	1.90	0.190	ng/L		04/04/22 06:59	05/05/22 08:05	1
PEPA	<0.190	H cn	1.90	0.190	ng/L		04/04/22 06:59	05/05/22 08:05	1
Perfluoro (2-ethoxyethane) sulfonic acid	<0.190	H cn	1.90	0.190	ng/L		04/04/22 06:59	05/05/22 08:05	1
Perfluoro-4-ethylcyclohexanesulfonic acid	<0.190	H cn	1.90	0.190	ng/L		04/04/22 06:59	05/05/22 08:05	1
Perfluorobutanesulfonic acid	<0.476	H cn	1.90	0.476	ng/L		04/04/22 06:59	05/05/22 08:05	1
Perfluorobutanoic acid	<1.90	H cn	4.76	1.90	ng/L		04/04/22 06:59	05/05/22 08:05	1
Perfluorodecanesulfonic acid	<0.476	H cn	1.90	0.476	ng/L		04/04/22 06:59	05/05/22 08:05	1
Perfluorodecanoic acid	<0.476	H cn	1.90	0.476	ng/L		04/04/22 06:59	05/05/22 08:05	1
Perfluorododecanesulfonic acid	<0.476	H cn	2.85	0.476	ng/L		04/04/22 06:59	05/05/22 08:05	1
Perfluorododecanoic acid	<0.476	H cn	1.90	0.476	ng/L		04/04/22 06:59	05/05/22 08:05	1
Perfluoroheptanesulfonic acid	<0.476	H cn	1.90	0.476	ng/L		04/04/22 06:59	05/05/22 08:05	1
Perfluoroheptanoic acid	<0.476	H cn	1.90	0.476	ng/L		04/04/22 06:59	05/05/22 08:05	1
Perfluorohexadecanoic acid	<0.952	H cn	2.85	0.952	ng/L		04/04/22 06:59	05/05/22 08:05	1
Perfluorohexanesulfonic acid	<0.476	H cn	1.90	0.476	ng/L		04/04/22 06:59	05/05/22 08:05	1
Perfluorohexanoic acid	<0.476	H cn	1.90	0.476	ng/L		04/04/22 06:59	05/05/22 08:05	1
Perfluorononanesulfonic acid	<0.476	H cn	1.90	0.476	ng/L		04/04/22 06:59	05/05/22 08:05	1
Perfluorononanoic acid	<0.476	H cn	1.90	0.476	ng/L		04/04/22 06:59	05/05/22 08:05	1
Perfluorooctadecanoic acid	<0.952	H cn	2.85	0.952	ng/L		04/04/22 06:59	05/05/22 08:05	1
Perfluorooctanesulfonamide	<0.476	H cn	1.90	0.476	ng/L		04/04/22 06:59	05/05/22 08:05	1
Perfluorooctanesulfonic acid	**0.731**	**J H B cn**	1.90	0.476	ng/L		04/04/22 06:59	05/05/22 08:05	1

Client: TRC Companies, Inc
Project/Site: Synthetic Turf

Job ID: 410-75808-1

Client Sample ID: EB 003
Date Collected: 03/22/22 00:00
Date Received: 03/21/22 12:09

Lab Sample ID: 410-76903-4
Matrix: Water

Method: 537 IDA - EPA 537 Isotope Dilution (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanoic acid	<0.476	H cn	1.90	0.476	ng/L		04/04/22 06:59	05/05/22 08:05	1
Perfluoropentanesulfonic acid	<0.476	H cn	1.90	0.476	ng/L		04/04/22 06:59	05/05/22 08:05	1
Perfluoropentanoic acid	<0.476	H cn	1.90	0.476	ng/L		04/04/22 06:59	05/05/22 08:05	1
Perfluoropropanesulfonic acid	<0.190	H cn	1.90	0.190	ng/L		04/04/22 06:59	05/05/22 08:05	1
Perfluorotetradecanoic acid	<0.476	H cn	1.90	0.476	ng/L		04/04/22 06:59	05/05/22 08:05	1
Perfluorotridecanoic acid	<0.476	H cn	1.90	0.476	ng/L		04/04/22 06:59	05/05/22 08:05	1
Perfluoroundecanoic acid	<0.476	H cn	1.90	0.476	ng/L		04/04/22 06:59	05/05/22 08:05	1
PFECA A	<0.190	H cn	1.90	0.190	ng/L		04/04/22 06:59	05/05/22 08:05	1
PFECA B	<0.190	H cn	1.90	0.190	ng/L		04/04/22 06:59	05/05/22 08:05	1
PFECA F	<0.190	H cn	1.90	0.190	ng/L		04/04/22 06:59	05/05/22 08:05	1
PFECA G	<0.190	H cn	1.90	0.190	ng/L		04/04/22 06:59	05/05/22 08:05	1
PFMOAA	<0.190	H *- cn	1.90	0.190	ng/L		04/04/22 06:59	05/05/22 08:05	1
PFO2HxA	<0.190	H cn	1.90	0.190	ng/L		04/04/22 06:59	05/05/22 08:05	1
PFO3OA	<0.190	H cn	1.90	0.190	ng/L		04/04/22 06:59	05/05/22 08:05	1
PFO4DA	<0.666	H cn	1.90	0.666	ng/L		04/04/22 06:59	05/05/22 08:05	1
PMPA	<0.190	H cn	1.90	0.190	ng/L		04/04/22 06:59	05/05/22 08:05	1
PPF Acid	<1.90	H cn	4.76	1.90	ng/L		04/04/22 06:59	05/05/22 08:05	1
PS Acid	<2.85	H *- cn	9.52	2.85	ng/L		04/04/22 06:59	05/05/22 08:05	1
R-EVE	<0.381	H cn	1.90	0.381	ng/L		04/04/22 06:59	05/05/22 08:05	1
R-PSDA	<0.476	H *- cn	1.90	0.476	ng/L		04/04/22 06:59	05/05/22 08:05	1
R-PSDCA	<0.190	H *- cn	1.90	0.190	ng/L		04/04/22 06:59	05/05/22 08:05	1
TAF	<1.90	H cn	4.76	1.90	ng/L		04/04/22 06:59	05/05/22 08:05	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFTeDA	*125*	*cn*	*10 - 179*	*04/04/22 06:59*	*05/05/22 08:05*	*1*
13C2-2H-Perfluoro-2-decenoic acid	*170*	**5+ cn*	*21 - 166*	*04/04/22 06:59*	*05/05/22 08:05*	*1*
13C2-2H-Perfluoro-2-dodecenoic acid	*156*	*cn*	*14 - 166*	*04/04/22 06:59*	*05/05/22 08:05*	*1*
13C2-2H-Perfluoro-2-octenoic acid	*171*	*cn*	*20 - 173*	*04/04/22 06:59*	*05/05/22 08:05*	*1*
13C2-2-Perfluorodecylethanoic acid	*114*	*cn*	*10 - 200*	*04/04/22 06:59*	*05/05/22 08:05*	*1*
13C2-2-Perfluorohexylethanoic acid	*98*	*cn*	*10 - 200*	*04/04/22 06:59*	*05/05/22 08:05*	*1*
13C2-2-Perfluorooctylethanoic acid	*133*	*cn*	*10 - 200*	*04/04/22 06:59*	*05/05/22 08:05*	*1*
13C2-PFDoDA	*127*	*cn*	*17 - 176*	*04/04/22 06:59*	*05/05/22 08:05*	*1*
13C3 HFPO-DA	*138*	*cn*	*17 - 185*	*04/04/22 06:59*	*05/05/22 08:05*	*1*
13C3 PFBS	*141*	*cn*	*16 - 200*	*04/04/22 06:59*	*05/05/22 08:05*	*1*
13C3 PFHxS	*136*	*cn*	*28 - 188*	*04/04/22 06:59*	*05/05/22 08:05*	*1*
13C4 PFBA	*131*	*cn*	*42 - 165*	*04/04/22 06:59*	*05/05/22 08:05*	*1*
13C4 PFHpA	*131*	*cn*	*31 - 182*	*04/04/22 06:59*	*05/05/22 08:05*	*1*
13C5 PFHxA	*124*	*cn*	*24 - 179*	*04/04/22 06:59*	*05/05/22 08:05*	*1*
13C5 PFPeA	*133*	*cn*	*38 - 187*	*04/04/22 06:59*	*05/05/22 08:05*	*1*
13C6 PFDA	*133*	*cn*	*49 - 163*	*04/04/22 06:59*	*05/05/22 08:05*	*1*
13C7 PFUnA	*132*	*cn*	*34 - 174*	*04/04/22 06:59*	*05/05/22 08:05*	*1*
13C8 FOSA	*119*	*cn*	*10 - 168*	*04/04/22 06:59*	*05/05/22 08:05*	*1*
13C8 PFOA	*127*	*cn*	*48 - 162*	*04/04/22 06:59*	*05/05/22 08:05*	*1*
13C8 PFOS	*131*	*cn*	*51 - 159*	*04/04/22 06:59*	*05/05/22 08:05*	*1*
13C9 PFNA	*126*	*cn*	*51 - 167*	*04/04/22 06:59*	*05/05/22 08:05*	*1*
d3-NMeFOSAA	*150*	*cn*	*31 - 174*	*04/04/22 06:59*	*05/05/22 08:05*	*1*
d3-NMePFOSA	*120*	*cn*	*10 - 155*	*04/04/22 06:59*	*05/05/22 08:05*	*1*
d5-NEtFOSAA	*148*	*cn*	*29 - 195*	*04/04/22 06:59*	*05/05/22 08:05*	*1*
d5-NEtPFOSA	*120*	*cn*	*10 - 159*	*04/04/22 06:59*	*05/05/22 08:05*	*1*

Client: TRC Companies, Inc
Project/Site: Synthetic Turf

Job ID: 410-75808-1

Client Sample ID: EB 003
Date Collected: 03/22/22 00:00
Date Received: 03/21/22 12:09

Lab Sample ID: 410-76903-4
Matrix: Water

Method: 537 IDA - EPA 537 Isotope Dilution (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
d7-N-MeFOSE-M	129	cn	10 - 178	04/04/22 06:59	05/05/22 08:05	1
d9-N-EtFOSE-M	120	cn	10 - 177	04/04/22 06:59	05/05/22 08:05	1
M2-4:2 FTS	141	cn	10 - 200	04/04/22 06:59	05/05/22 08:05	1
M2-6:2 FTS	129	cn	17 - 200	04/04/22 06:59	05/05/22 08:05	1
M2-8:2 FTS	144	cn	33 - 200	04/04/22 06:59	05/05/22 08:05	1

Surrogate Summary

Client: TRC Companies, Inc
Project/Site: Synthetic Turf

Job ID: 410-75808-1

Method: 537 TOP - Fluorinated Alkyl Substances

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

		Percent Surrogate Recovery (Acceptance Limits)		
		PFHxA	PFOA	PFUnA
Lab Sample ID	Client Sample ID	(10-137)	(10-146)	(10-143)
LCS 410-253462/3-B	Lab Control Sample	86	120	95
LCSD 410-253462/4-B	Lab Control Sample Dup	115	137	123
MB 410-253462/2-B	Method Blank	101	128	111

Surrogate Legend

PFHxA = 13C2 PFHxA
PFOA = 13C4 PFOA
PFUnA = 13C2 PFUnA

Method: 537 TOP - Fluorinated Alkyl Substances

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

		Percent Surrogate Recovery (Acceptance Limits)		
		PFHxA	PFOA	PFUnA
Lab Sample ID	Client Sample ID			
MB 410-253462/1-B	Method Blank			

Surrogate Legend

PFHxA = 13C2 PFHxA
PFOA = 13C4 PFOA
PFUnA = 13C2 PFUnA

Method: 537 TOP - Fluorinated Alkyl Substances

Matrix: Solid **Prep Type: Post-Treatment**

		Percent Surrogate Recovery (Acceptance Limits)		
		PFHxA	PFOA	PFUnA
Lab Sample ID	Client Sample ID	(10-137)	(10-146)	(10-143)
410-75808-1	Carpet-001	84 cn	109 cn	109 cn
410-76735-1	PP Pad-001	73 cn	99 cn	90 cn
410-76903-1	Safeshell #1-3	79 cn	120 cn	119 cn

Surrogate Legend

PFHxA = 13C2 PFHxA
PFOA = 13C4 PFOA
PFUnA = 13C2 PFUnA

Isotope Dilution Summary

Client: TRC Companies, Inc
Project/Site: Synthetic Turf

Job ID: 410-75808-1

Method: 537 IDA - EPA 537 Isotope Dilution

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

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		HFPODA	C3PFBS	C3PFHS	13C5PHA	PFDoDA	C6PFDA	13C7PUA	MFHEA
Lab Sample ID	Client Sample ID	(10-169)	(27-179)	(24-171)	(10-174)	(11-166)	(26-161)	(12-173)	(10-200)
LCS 410-240631/2-B	Lab Control Sample	137	160	154	148	139	155	150	232 *5+
LCSD 410-240631/3-B	Lab Control Sample Dup	139	153	151	146	133	155	153	258 *5+
MB 410-240631/1-B	Method Blank	129	152	154	139	134	152	147	244 *5+

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		MFOEA	MFDEA	C9PFNA	MFHUEA	d3NMFOS	MFOUEA	d3NMFSA	MFDUEA
Lab Sample ID	Client Sample ID	(10-200)	(10-200)	(26-165)	(10-164)	(10-178)	(10-162)	(10-175)	(10-161)
LCS 410-240631/2-B	Lab Control Sample	237 *5+	218 *5+	154	121	150	126	137	111
LCSD 410-240631/3-B	Lab Control Sample Dup	234 *5+	226 *5+	147	124	139	118	139	113
MB 410-240631/1-B	Method Blank	218 *5+	208 *5+	148	119	132	116	131	102

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		d5NEFOS	PFBA	d5NPFSA	PFPeA	C4PFHA	NMFM	C8PFOA	NEFM
Lab Sample ID	Client Sample ID	(10-193)	(28-153)	(10-180)	(24-161)	(10-178)	(10-179)	(26-159)	(10-185)
LCS 410-240631/2-B	Lab Control Sample	155	147	146	152	153	144	159	137
LCSD 410-240631/3-B	Lab Control Sample Dup	153	143	148	151	150	143	147	133
MB 410-240631/1-B	Method Blank	154	147	141	146	152	133	150	129

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		C8PFOS	M242FTS	M262FTS	PFOSA	M282FTS	PFTDA		
Lab Sample ID	Client Sample ID	(41-154)	(10-200)	(10-200)	(14-163)	(15-200)	(10-169)		
LCS 410-240631/2-B	Lab Control Sample	146	176	165	155	135	137		
LCSD 410-240631/3-B	Lab Control Sample Dup	145	168	160	153	147	130		
MB 410-240631/1-B	Method Blank	148	160	161	150	155	125		

Surrogate Legend

HFPODA = 13C3 HFPO-DA
C3PFBS = 13C3 PFBS
C3PFHS = 13C3 PFHxS
13C5PHA = 13C5 PFHxA
PFDoDA = 13C2-PFDoDA
C6PFDA = 13C6 PFDA
13C7PUA = 13C7 PFUnA
MFHEA = 13C2-2-Perfluorohexylethanoic acid
MFOEA = 13C2-2-Perfluorooctylethanoic acid
MFDEA = 13C2-2-Perfluorodecylethanoic acid
C9PFNA = 13C9 PFNA
MFHUEA = 13C2-2H-Perfluoro-2-octenoic acid
d3NMFOS = d3-NMeFOSAA
MFOUEA = 13C2-2H-Perfluoro-2-decenoic acid
d3NMFSA = d3-NMePFOSA
MFDUEA = 13C2-2H-Perfluoro-2-dodecenoic acid
d5NEFOS = d5-NEtFOSAA
PFBA = 13C4 PFBA
d5NPFSA = d5-NEtPFOSA
PFPeA = 13C5 PFPeA
C4PFHA = 13C4 PFHpA
NMFM = d7-N-MeFOSE-M
C8PFOA = 13C8 PFOA
NEFM = d9-N-EtFOSE-M
C8PFOS = 13C8 PFOS
M242FTS = M2-4:2 FTS

Client: TRC Companies, Inc
Job ID: 410-75808-1
Project/Site: Synthetic Turf

M262FTS = M2-6:2 FTS
PFOSA = 13C8 FOSA
M282FTS = M2-8:2 FTS
PFTDA = 13C2 PFTeDA

Method: 537 IDA - EPA 537 Isotope Dilution

Matrix: Solid **Prep Type: Pre-Treatment**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		d5NEFOS	d3NMFOS	HFPODA	NMFM	NEFM	M262FTS	M282FTS	C3PFBS
Lab Sample ID	Client Sample ID	(10-193)	(10-178)	(10-169)	(10-179)	(10-185)	(10-200)	(15-200)	(27-179)
410-75808-1	Carpet-001	169 cn	131 cn	138 cn	94 cn	99 cn	197 cn	269 *5+ cn	151 cn
410-76735-1	PP Pad-001	124 cn	138 cn	145 cn	147 cn	179 cn	198 cn	162 cn	138 cn
410-76903-1	Safeshell #1-3	171 cn	174 cn	116 cn	120 cn	108 cn	188 cn	241 *5+ cn	221 *5+ cn
410-76903-1 - DL	Safeshell #1-3								

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		M242FTS	13C5PHA	C9PFNA	C6PFDA	13C7PUA	C3PFHS	PFDoDA	d5NPFSA
Lab Sample ID	Client Sample ID	(10-200)	(10-174)	(26-165)	(26-161)	(12-173)	(24-171)	(11-166)	(10-180)
410-75808-1	Carpet-001	330 *5+ cn	149 cn	164 cn	148 cn	137 cn	157 cn	117 cn	85 cn
410-76735-1	PP Pad-001	353 *5+ cn	146 cn	154 cn	150 cn	120 cn	140 cn	147 cn	122 cn
410-76903-1	Safeshell #1-3	230 *5+ cn	97 cn	131 cn	131 cn	153 cn	142 cn	151 cn	93 cn
410-76903-1 - DL	Safeshell #1-3								

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		d3NMFSA	MFHEA	MFOEA	MFDEA	MFHUEA	MFOUEA	MFDUEA	PFBA
Lab Sample ID	Client Sample ID	(10-175)	(10-200)	(10-200)	(10-200)	(10-164)	(10-162)	(10-161)	(28-153)
410-75808-1	Carpet-001	83 cn	260 *5+ cn	364 *5+ cn	328 *5+ cn	114 cn	154 cn	157 cn	144 cn
410-76735-1	PP Pad-001	138 cn	304 *5+ cn	270 *5+ cn	307 *5+ cn	134 cn	128 cn	141 cn	148 cn
410-76903-1	Safeshell #1-3	103 cn	125 cn	188 cn	210 *5+ cn	68 cn	83 cn	112 cn	127 cn
410-76903-1 - DL	Safeshell #1-3								144

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		PFPeA	C4PFHA	C8PFOA	C8PFOS	PFOSA	PFTDA		
Lab Sample ID	Client Sample ID	(24-161)	(10-178)	(26-159)	(41-154)	(14-163)	(10-169)		
410-75808-1	Carpet-001	147 cn	146 cn	152 cn	155 *5+ cn	133 cn	129 cn		
410-76735-1	PP Pad-001	164 *5+ cn	147 cn	137 cn	146 cn	149 cn	141 cn		
410-76903-1	Safeshell #1-3	174 *5+ cn	112 cn	118 cn	129 cn	119 cn	153 cn		
410-76903-1 - DL	Safeshell #1-3								

Surrogate Legend

d5NEFOS = d5-NEtFOSAA
d3NMFOS = d3-NMeFOSAA
HFPODA = 13C3 HFPO-DA
NMFM = d7-N-MeFOSE-M
NEFM = d9-N-EtFOSE-M
M262FTS = M2-6:2 FTS
M282FTS = M2-8:2 FTS
C3PFBS = 13C3 PFBS
M242FTS = M2-4:2 FTS
13C5PHA = 13C5 PFHxA

Isotope Dilution Summary

Client: TRC Companies, Inc
Job ID: 410-75808-1
Project/Site: Synthetic Turf

C9PFNA = 13C9 PFNA
C6PFDA = 13C6 PFDA
13C7PUA = 13C7 PFUnA
C3PFHS = 13C3 PFHxS
PFDoDA = 13C2-PFDoDA
d5NPFSA = d5-NEtPFOSA
d3NMFSA = d3-NMePFOSA
MFHEA = 13C2-2-Perfluorohexylethanoic acid
MFOEA = 13C2-2-Perfluorooctylethanoic acid
MFDEA = 13C2-2-Perfluorodecylethanoic acid
MFHUEA = 13C2-2H-Perfluoro-2-octenoic acid
MFOUEA = 13C2-2H-Perfluoro-2-decenoic acid
MFDUEA = 13C2-2H-Perfluoro-2-dodecenoic acid
PFBA = 13C4 PFBA
PFPeA = 13C5 PFPeA
C4PFHA = 13C4 PFHpA
C8PFOA = 13C8 PFOA
C8PFOS = 13C8 PFOS
PFOSA = 13C8 FOSA
PFTDA = 13C2 PFTeDA

Method: 537 IDA - EPA 537 Isotope Dilution

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

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		d5NEFOS	d3NMFOS	HFPODA	NMFM	NEFM	M262FTS	M282FTS	C3PFBS
Lab Sample ID	Client Sample ID	(29-195)	(31-174)	(17-185)	(10-178)	(10-177)	(17-200)	(33-200)	(16-200)
410-75808-2	EB-001	125 cn	129 cn	121 cn	96 cn	95 cn	128 cn	132 cn	140 cn
410-76735-2	EB-002	131 cn	135 cn	109 cn	111 cn	112 cn	130 cn	135 cn	128 cn
410-76903-4	EB 003	148 cn	150 cn	138 cn	129 cn	120 cn	129 cn	144 cn	141 cn
LCS 410-240479/3-A	Lab Control Sample	128	128	112	102	104	119	109	124
LCSD 410-240479/4-A	Lab Control Sample Dup	131	135	112	103	108	115	128	125
MB 410-240479/1-A	Method Blank	134	134	117	112	111	134	136	128

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		M242FTS	13C5PHA	C9PFNA	C6PFDA	13C7PUA	C3PFHS	PFDoDA	d5NPFSA
Lab Sample ID	Client Sample ID	(10-200)	(24-179)	(51-167)	(49-163)	(34-174)	(28-188)	(17-176)	(10-159)
410-75808-2	EB-001	126 cn	101 cn	125 cn	128 cn	125 cn	128 cn	115 cn	53 cn
410-76735-2	EB-002	113 cn	116 cn	118 cn	134 cn	131 cn	126 cn	125 cn	108 cn
410-76903-4	EB 003	141 cn	124 cn	126 cn	133 cn	132 cn	136 cn	127 cn	120 cn
LCS 410-240479/3-A	Lab Control Sample	109	116	118	118	118	120	116	85
LCSD 410-240479/4-A	Lab Control Sample Dup	110	112	117	125	121	120	121	98
MB 410-240479/1-A	Method Blank	115	115	119	126	126	129	117	102

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		d3NMFSA	MFHEA	MFOEA	MFDEA	MFHUEA	MFOUEA	MFDUEA	PFBA
Lab Sample ID	Client Sample ID	(10-155)	(10-200)	(10-200)	(10-200)	(20-173)	(21-166)	(14-166)	(42-165)
410-75808-2	EB-001	53 cn	80 cn	99 cn	78 cn	143 cn	141 cn	130 cn	128 cn
410-76735-2	EB-002	105 cn	79 cn	103 cn	86 cn	147 cn	165 cn	159 cn	124 cn
410-76903-4	EB 003	120 cn	98 cn	133 cn	114 cn	171 cn	170 *5+ cn	156 cn	131 cn
LCS 410-240479/3-A	Lab Control Sample	84	84	108	103	138	136	134	115
LCSD 410-240479/4-A	Lab Control Sample Dup	96	82	112	102	134	143	136	111
MB 410-240479/1-A	Method Blank	98	77	92	90	156	163	150	124

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		PFPeA	C4PFHA	C8PFOA	C8PFOS	PFOSA	PFTDA		
Lab Sample ID	Client Sample ID	(38-187)	(31-182)	(48-162)	(51-159)	(10-168)	(10-179)		
410-75808-2	EB-001	134 cn	123 cn	124 cn	123 cn	102 cn	110 cn		

Method: 537 IDA - EPA 537 Isotope Dilution (Continued)

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

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFPeA (38-187)	C4PFHA (31-182)	C8PFOA (48-162)	C8PFOS (51-159)	PFOSA (10-168)	PFTDA (10-179)		
410-76735-2	EB-002	118 cn	117 cn	120 cn	118 cn	113 cn	118 cn		
410-76903-4	EB 003	133 cn	131 cn	127 cn	131 cn	119 cn	125 cn		
LCS 410-240479/3-A	Lab Control Sample	123	118	118	120	105	118		
LCSD 410-240479/4-A	Lab Control Sample Dup	105	114	116	122	109	118		
MB 410-240479/1-A	Method Blank	126	124	118	127	104	115		

Surrogate Legend

d5NEFOS = d5-NEtFOSAA
d3NMFOS = d3-NMeFOSAA
HFPODA = 13C3 HFPO-DA
NMFM = d7-N-MeFOSE-M
NEFM = d9-N-EtFOSE-M
M262FTS = M2-6:2 FTS
M282FTS = M2-8:2 FTS
C3PFBS = 13C3 PFBS
M242FTS = M2-4:2 FTS
13C5PHA = 13C5 PFHxA
C9PFNA = 13C9 PFNA
C6PFDA = 13C6 PFDA
13C7PUA = 13C7 PFUnA
C3PFHS = 13C3 PFHxS
PFDoDA = 13C2-PFDoDA
d5NPFSA = d5-NEtPFOSA
d3NMFSA = d3-NMePFOSA
MFHEA = 13C2-2-Perfluorohexylethanoic acid
MFOEA = 13C2-2-Perfluorooctylethanoic acid
MFDEA = 13C2-2-Perfluorodecylethanoic acid
MFHUEA = 13C2-2H-Perfluoro-2-octenoic acid
MFOUEA = 13C2-2H-Perfluoro-2-decenoic acid
MFDUEA = 13C2-2H-Perfluoro-2-dodecenoic acid
PFBA = 13C4 PFBA
PFPeA = 13C5 PFPeA
C4PFHA = 13C4 PFHpA
C8PFOA = 13C8 PFOA
C8PFOS = 13C8 PFOS
PFOSA = 13C8 FOSA
PFTDA = 13C2 PFTeDA

Method: 537 TOP - Fluorinated Alkyl Substances

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

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	M262FTS (10-200)	M282FTS (15-200)	PFTDA (10-169)	HFPODA (10-169)	C3PFBS (27-179)	PFBA (28-153)	C4PFHA (10-178)	PFPeA (24-161)
LCS 410-253462/3-B	Lab Control Sample	211 *5+	167	86	107	166	99	103	136
LCSD 410-253462/4-B	Lab Control Sample Dup	221 *5+	176	110	130	205 *5+	122	129	174 *5+
MB 410-253462/2-B	Method Blank	347 *5+	236 *5+	101	130	139	120	100	122

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	C8PFOA (26-159)	C8PFOS (41-154)	d5NEFOS (10-193)	NMFM (10-179)	NEFM (10-185)	C3PFHS (24-171)	13C5PHA (10-174)	C6PFDA (26-161)
LCS 410-253462/3-B	Lab Control Sample	105	117	109	81	79	114	90	104

Isotope Dilution Summary

Client: TRC Companies, Inc
Job ID: 410-75808-1
Project/Site: Synthetic Turf

Method: 537 TOP - Fluorinated Alkyl Substances (Continued)

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

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		C8PFOA	C8PFOS	d5NEFOS	NMFM	NEFM	C3PFHS	13C5PHA	C6PFDA
Lab Sample ID	Client Sample ID	(26-159)	(41-154)	(10-193)	(10-179)	(10-185)	(24-171)	(10-174)	(26-161)
LCSD 410-253462/4-B	Lab Control Sample Dup	131	153	135	104	105	134	122	140
MB 410-253462/2-B	Method Blank	122	152	147	98	89	135	110	129

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		13C7PUA	d3NMFSA	d5NPFSA	PFOSA	PFDoDA	C9PFNA	MFHEA	MFOEA
Lab Sample ID	Client Sample ID	(12-173)	(10-175)	(10-180)	(14-163)	(11-166)	(26-165)	(50-150)	(50-150)
LCS 410-253462/3-B	Lab Control Sample	87	79	70	79	95	99	72	57
LCSD 410-253462/4-B	Lab Control Sample Dup	114	86	79	111	121	137	95	82
MB 410-253462/2-B	Method Blank	113	77	72	100	123	134	66	90

		Percent Isotope Dilution Recovery (Acceptance Limits)			
		MFDEA	MFHUEA	MFOUEA	MFDUEA
Lab Sample ID	Client Sample ID	(50-150)	(50-150)	(50-150)	(50-150)
LCS 410-253462/3-B	Lab Control Sample	63	116	96	118
LCSD 410-253462/4-B	Lab Control Sample Dup	78	148	118	151 *5+
MB 410-253462/2-B	Method Blank	80	113	161 *5+	170 *5+

Surrogate Legend

M262FTS = M2-6:2 FTS
M282FTS = M2-8:2 FTS
PFTDA = 13C2 PFTeDA
HFPODA = 13C3 HFPO-DA
C3PFBS = 13C3 PFBS
PFBA = 13C4 PFBA
C4PFHA = 13C4 PFHpA
PFPeA = 13C5 PFPeA
C8PFOA = 13C8 PFOA
C8PFOS = 13C8 PFOS
d5NEFOS = d5-NEtFOSAA
NMFM = d7-N-MeFOSE-M
NEFM = d9-N-EtFOSE-M
C3PFHS = 13C3 PFHxS
13C5PHA = 13C5 PFHxA
C6PFDA = 13C6 PFDA
13C7PUA = 13C7 PFUnA
d3NMFSA = d3-NMePFOSA
d5NPFSA = d5-NEtPFOSA
PFOSA = 13C8 FOSA
PFDoDA = 13C2-PFDoDA
C9PFNA = 13C9 PFNA
MFHEA = 13C2-2-Perfluorohexylethanoic acid
MFOEA = 13C2-2-Perfluorooctylethanoic acid
MFDEA = 13C2-2-Perfluorodecylethanoic acid
MFHUEA = 13C2-2H-Perfluoro-2-octenoic acid
MFOUEA = 13C2-2H-Perfluoro-2-decenoic acid
MFDUEA = 13C2-2H-Perfluoro-2-dodecenoic acid

Isotope Dilution Summary

Client: TRC Companies, Inc
Job ID: 410-75808-1
Project/Site: Synthetic Turf

Method: 537 TOP - Fluorinated Alkyl Substances

Matrix: Solid **Prep Type: Post-Treatment**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		M262FTS	M282FTS	PFTDA	HFPODA	C3PFBS	PFBA	C4PFHA	PFPeA
Lab Sample ID	Client Sample ID	(10-200)	(15-200)	(10-169)	(10-169)	(27-179)	(28-153)	(10-178)	(24-161)
410-75808-1	Carpet-001	522 *5+ cn	488 *5+ cn	247 *5+ cn	108 cn	125 cn	99 cn	144 cn	68 cn
410-76735-1	PP Pad-001	321 *5+ cn	223 *5+ cn	90 cn	75 cn	105 cn	85 cn	96 cn	81 cn
410-76903-1	Safeshell #1-3	587 *5+ cn	385 *5+ cn	80 cn	78 cn	190 *5+ cn	93 cn	113 cn	125 cn

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		C8PFOA	C8PFOS	d5NEFOS	NMFM	NEFM	C3PFHS	13C5PHA	C6PFDA
Lab Sample ID	Client Sample ID	(26-159)	(41-154)	(10-193)	(10-179)	(10-185)	(24-171)	(10-174)	(26-161)
410-75808-1	Carpet-001	112 cn	138 cn	384 *5+ cn	121 cn	188 *5+ cn	171 cn	92 cn	168 *5+ cn
410-76735-1	PP Pad-001	90 cn	108 cn	115 cn	70 cn	65 cn	107 cn	77 cn	98 cn
410-76903-1	Safeshell #1-3	96 cn	110 cn	119 cn	34 cn	53 cn	149 cn	75 cn	85 cn

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		13C7PUA	d3NMFSA	d5NPFSA	PFOSA	PFDoDA	C9PFNA	MFHEA	MFOEA
Lab Sample ID	Client Sample ID	(12-173)	(10-175)	(10-180)	(14-163)	(11-166)	(26-165)	(50-150)	(50-150)
410-75808-1	Carpet-001	213 *5+ cn	106 cn	119 cn	167 *5+ cn	158 cn	110 cn	48 *5- cn	111 cn
410-76735-1	PP Pad-001	82 cn	56 cn	50 cn	55 cn	91 cn	101 cn	40 *5- cn	53 cn
410-76903-1	Safeshell #1-3	73 cn	41 cn	45 cn	55 cn	59 cn	101 cn	54 cn	48 *5- cn

		Percent Isotope Dilution Recovery (Acceptance Limits)			
		MFDEA	MFHUEA	MFOUEA	MFDUEA
Lab Sample ID	Client Sample ID	(50-150)	(50-150)	(50-150)	(50-150)
410-75808-1	Carpet-001	181 *5+ cn	66 cn	199 *5+ cn	265 *5+ cn
410-76735-1	PP Pad-001	66 cn	83 cn	110 cn	133 cn
410-76903-1	Safeshell #1-3	56 cn	100 cn	102 cn	123 cn

Surrogate Legend

M262FTS = M2-6:2 FTS
M282FTS = M2-8:2 FTS
PFTDA = 13C2 PFTeDA
HFPODA = 13C3 HFPO-DA
C3PFBS = 13C3 PFBS
PFBA = 13C4 PFBA
C4PFHA = 13C4 PFHpA
PFPeA = 13C5 PFPeA
C8PFOA = 13C8 PFOA
C8PFOS = 13C8 PFOS
d5NEFOS = d5-NEtFOSAA
NMFM = d7-N-MeFOSE-M
NEFM = d9-N-EtFOSE-M
C3PFHS = 13C3 PFHxS
13C5PHA = 13C5 PFHxA
C6PFDA = 13C6 PFDA
13C7PUA = 13C7 PFUnA
d3NMFSA = d3-NMePFOSA
d5NPFSA = d5-NEtPFOSA
PFOSA = 13C8 FOSA
PFDoDA = 13C2-PFDoDA
C9PFNA = 13C9 PFNA

Isotope Dilution Summary

Client: TRC Companies, Inc
Job ID: 410-75808-1
Project/Site: Synthetic Turf

MFHEA = 13C2-2-Perfluorohexylethanoic acid
MFOEA = 13C2-2-Perfluorooctylethanoic acid
MFDEA = 13C2-2-Perfluorodecylethanoic acid
MFHUEA = 13C2-2H-Perfluoro-2-octenoic acid
MFOUEA = 13C2-2H-Perfluoro-2-decenoic acid
MFDUEA = 13C2-2H-Perfluoro-2-dodecenoic acid

Method: 537 IDA - EPA 537 Isotope Dilution

Lab Sample ID: MB 410-240479/1-A
Matrix: Water
Analysis Batch: 250678

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 240479

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
10:2 FTCA	<0.500		2.00	0.500	ng/L		04/04/22 06:59	05/03/22 01:07	1
10:2 FTS	<1.00		5.00	1.00	ng/L		04/04/22 06:59	05/03/22 01:07	1
10:2 FTUCA	<0.700		2.00	0.700	ng/L		04/04/22 06:59	05/03/22 01:07	1
11Cl-PF3OUdS	<0.500		2.00	0.500	ng/L		04/04/22 06:59	05/03/22 01:07	1
3:3 FTCA	<0.300		2.00	0.300	ng/L		04/04/22 06:59	05/03/22 01:07	1
4:2 Fluorotelomer sulfonic acid	<0.500		2.00	0.500	ng/L		04/04/22 06:59	05/03/22 01:07	1
5:3 FTCA	<0.200		2.00	0.200	ng/L		04/04/22 06:59	05/03/22 01:07	1
6:2 Fluorotelomer sulfonic acid	<2.00		5.00	2.00	ng/L		04/04/22 06:59	05/03/22 01:07	1
6:2 FTCA	<0.400		2.00	0.400	ng/L		04/04/22 06:59	05/03/22 01:07	1
6:2 FTUCA	<0.500		2.00	0.500	ng/L		04/04/22 06:59	05/03/22 01:07	1
7:3 FTCA	<0.300		2.00	0.300	ng/L		04/04/22 06:59	05/03/22 01:07	1
8:2 Fluorotelomer sulfonic acid	<1.00		3.00	1.00	ng/L		04/04/22 06:59	05/03/22 01:07	1
8:2 FTCA	<0.400		2.00	0.400	ng/L		04/04/22 06:59	05/03/22 01:07	1
8:2 FTUCA	<0.500		2.00	0.500	ng/L		04/04/22 06:59	05/03/22 01:07	1
9Cl-PF3ONS	<0.500		2.00	0.500	ng/L		04/04/22 06:59	05/03/22 01:07	1
DONA	<0.500		2.00	0.500	ng/L		04/04/22 06:59	05/03/22 01:07	1
EVE Acid	<3.00		10.0	3.00	ng/L		04/04/22 06:59	05/03/22 01:07	1
HFPODA	<0.500		3.00	0.500	ng/L		04/04/22 06:59	05/03/22 01:07	1
Hydro-EVE Acid	<0.200		2.00	0.200	ng/L		04/04/22 06:59	05/03/22 01:07	1
Hydrolyzed PSDA	<0.900		2.00	0.900	ng/L		04/04/22 06:59	05/03/22 01:07	1
Hydro-PS Acid	<0.200		2.00	0.200	ng/L		04/04/22 06:59	05/03/22 01:07	1
MTP	<2.00		5.00	2.00	ng/L		04/04/22 06:59	05/03/22 01:07	1
NEtFOSA	<1.00		5.00	1.00	ng/L		04/04/22 06:59	05/03/22 01:07	1
NEtFOSAA	<0.500		3.00	0.500	ng/L		04/04/22 06:59	05/03/22 01:07	1
NEtFOSE	<1.00		3.00	1.00	ng/L		04/04/22 06:59	05/03/22 01:07	1
NMeFOSA	<1.00		3.00	1.00	ng/L		04/04/22 06:59	05/03/22 01:07	1
NMeFOSAA	<0.600		2.00	0.600	ng/L		04/04/22 06:59	05/03/22 01:07	1
NMeFOSE	<1.00		3.00	1.00	ng/L		04/04/22 06:59	05/03/22 01:07	1
NVHOS	<0.200		2.00	0.200	ng/L		04/04/22 06:59	05/03/22 01:07	1
PEPA	<0.200		2.00	0.200	ng/L		04/04/22 06:59	05/03/22 01:07	1
Perfluoro (2-ethoxyethane) sulfonic acid	<0.200		2.00	0.200	ng/L		04/04/22 06:59	05/03/22 01:07	1
Perfluoro-4-ethylcyclohexanesulfonic acid	<0.200		2.00	0.200	ng/L		04/04/22 06:59	05/03/22 01:07	1
Perfluorobutanesulfonic acid	<0.500		2.00	0.500	ng/L		04/04/22 06:59	05/03/22 01:07	1
Perfluorobutanoic acid	<2.00		5.00	2.00	ng/L		04/04/22 06:59	05/03/22 01:07	1
Perfluorodecanesulfonic acid	<0.500		2.00	0.500	ng/L		04/04/22 06:59	05/03/22 01:07	1
Perfluorodecanoic acid	<0.500		2.00	0.500	ng/L		04/04/22 06:59	05/03/22 01:07	1
Perfluorododecanesulfonic acid	<0.500		3.00	0.500	ng/L		04/04/22 06:59	05/03/22 01:07	1
Perfluorododecanoic acid	<0.500		2.00	0.500	ng/L		04/04/22 06:59	05/03/22 01:07	1
Perfluoroheptanesulfonic acid	<0.500		2.00	0.500	ng/L		04/04/22 06:59	05/03/22 01:07	1
Perfluoroheptanoic acid	<0.500		2.00	0.500	ng/L		04/04/22 06:59	05/03/22 01:07	1
Perfluorohexadecanoic acid	<1.00		3.00	1.00	ng/L		04/04/22 06:59	05/03/22 01:07	1
Perfluorohexanesulfonic acid	<0.500		2.00	0.500	ng/L		04/04/22 06:59	05/03/22 01:07	1
Perfluorohexanoic acid	<0.500		2.00	0.500	ng/L		04/04/22 06:59	05/03/22 01:07	1
Perfluorononanesulfonic acid	<0.500		2.00	0.500	ng/L		04/04/22 06:59	05/03/22 01:07	1
Perfluorononanoic acid	<0.500		2.00	0.500	ng/L		04/04/22 06:59	05/03/22 01:07	1
Perfluorooctadecanoic acid	<1.00		3.00	1.00	ng/L		04/04/22 06:59	05/03/22 01:07	1
Perfluorooctanesulfonamide	0.5231	J	2.00	0.500	ng/L		04/04/22 06:59	05/03/22 01:07	1

Method: 537 IDA - EPA 537 Isotope Dilution (Continued)

Lab Sample ID: MB 410-240479/1-A
Matrix: Water
Analysis Batch: 250678

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 240479

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid	0.7280	J	2.00	0.500	ng/L		04/04/22 06:59	05/03/22 01:07	1
Perfluorooctanoic acid	<0.500		2.00	0.500	ng/L		04/04/22 06:59	05/03/22 01:07	1
Perfluoropentanesulfonic acid	<0.500		2.00	0.500	ng/L		04/04/22 06:59	05/03/22 01:07	1
Perfluoropentanoic acid	<0.500		2.00	0.500	ng/L		04/04/22 06:59	05/03/22 01:07	1
Perfluoropropanesulfonic acid	<0.200		2.00	0.200	ng/L		04/04/22 06:59	05/03/22 01:07	1
Perfluorotetradecanoic acid	<0.500		2.00	0.500	ng/L		04/04/22 06:59	05/03/22 01:07	1
Perfluorotridecanoic acid	<0.500		2.00	0.500	ng/L		04/04/22 06:59	05/03/22 01:07	1
Perfluoroundecanoic acid	<0.500		2.00	0.500	ng/L		04/04/22 06:59	05/03/22 01:07	1
PFECA A	<0.200		2.00	0.200	ng/L		04/04/22 06:59	05/03/22 01:07	1
PFECA B	<0.200		2.00	0.200	ng/L		04/04/22 06:59	05/03/22 01:07	1
PFECA F	<0.200		2.00	0.200	ng/L		04/04/22 06:59	05/03/22 01:07	1
PFECA G	<0.200		2.00	0.200	ng/L		04/04/22 06:59	05/03/22 01:07	1
PFMOAA	<0.200		2.00	0.200	ng/L		04/04/22 06:59	05/03/22 01:07	1
PFO2HxA	<0.200		2.00	0.200	ng/L		04/04/22 06:59	05/03/22 01:07	1
PFO3OA	<0.200		2.00	0.200	ng/L		04/04/22 06:59	05/03/22 01:07	1
PFO4DA	<0.700		2.00	0.700	ng/L		04/04/22 06:59	05/03/22 01:07	1
PMPA	<0.200		2.00	0.200	ng/L		04/04/22 06:59	05/03/22 01:07	1
PPF Acid	<2.00		5.00	2.00	ng/L		04/04/22 06:59	05/03/22 01:07	1
PS Acid	<3.00		10.0	3.00	ng/L		04/04/22 06:59	05/03/22 01:07	1
R-EVE	<0.400		2.00	0.400	ng/L		04/04/22 06:59	05/03/22 01:07	1
R-PSDA	<0.500		2.00	0.500	ng/L		04/04/22 06:59	05/03/22 01:07	1
R-PSDCA	<0.200		2.00	0.200	ng/L		04/04/22 06:59	05/03/22 01:07	1
TAF	<2.00		5.00	2.00	ng/L		04/04/22 06:59	05/03/22 01:07	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*117*		*17 - 185*	*04/04/22 06:59*	*05/03/22 01:07*	*1*
13C3 PFBS	*128*		*16 - 200*	*04/04/22 06:59*	*05/03/22 01:07*	*1*
13C3 PFHxS	*129*		*28 - 188*	*04/04/22 06:59*	*05/03/22 01:07*	*1*
13C5 PFHxA	*115*		*24 - 179*	*04/04/22 06:59*	*05/03/22 01:07*	*1*
13C2-PFDoDA	*117*		*17 - 176*	*04/04/22 06:59*	*05/03/22 01:07*	*1*
13C6 PFDA	*126*		*49 - 163*	*04/04/22 06:59*	*05/03/22 01:07*	*1*
13C7 PFUnA	*126*		*34 - 174*	*04/04/22 06:59*	*05/03/22 01:07*	*1*
13C2-2-Perfluorohexylethanoic acid	*77*		*10 - 200*	*04/04/22 06:59*	*05/03/22 01:07*	*1*
13C2-2-Perfluorooctylethanoic acid	*92*		*10 - 200*	*04/04/22 06:59*	*05/03/22 01:07*	*1*
13C2-2-Perfluorodecylethanoic acid	*90*		*10 - 200*	*04/04/22 06:59*	*05/03/22 01:07*	*1*
13C2-2H-Perfluoro-2-octenoic acid	*156*		*20 - 173*	*04/04/22 06:59*	*05/03/22 01:07*	*1*
13C9 PFNA	*119*		*51 - 167*	*04/04/22 06:59*	*05/03/22 01:07*	*1*
13C2-2H-Perfluoro-2-decenoic acid	*163*		*21 - 166*	*04/04/22 06:59*	*05/03/22 01:07*	*1*
d3-NMeFOSAA	*134*		*31 - 174*	*04/04/22 06:59*	*05/03/22 01:07*	*1*
13C2-2H-Perfluoro-2-dodecenoic acid	*150*		*14 - 166*	*04/04/22 06:59*	*05/03/22 01:07*	*1*
d3-NMePFOSA	*98*		*10 - 155*	*04/04/22 06:59*	*05/03/22 01:07*	*1*
13C4 PFBA	*124*		*42 - 165*	*04/04/22 06:59*	*05/03/22 01:07*	*1*
d5-NEtFOSAA	*134*		*29 - 195*	*04/04/22 06:59*	*05/03/22 01:07*	*1*
13C5 PFPeA	*126*		*38 - 187*	*04/04/22 06:59*	*05/03/22 01:07*	*1*
d5-NEtPFOSA	*102*		*10 - 159*	*04/04/22 06:59*	*05/03/22 01:07*	*1*
13C4 PFHpA	*124*		*31 - 182*	*04/04/22 06:59*	*05/03/22 01:07*	*1*
d7-N-MeFOSE-M	*112*		*10 - 178*	*04/04/22 06:59*	*05/03/22 01:07*	*1*
13C8 PFOA	*118*		*48 - 162*	*04/04/22 06:59*	*05/03/22 01:07*	*1*

Method: 537 IDA - EPA 537 Isotope Dilution (Continued)

Lab Sample ID: MB 410-240479/1-A
Matrix: Water
Analysis Batch: 250678

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 240479

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
d9-N-EtFOSE-M	111		10 - 177	04/04/22 06:59	05/03/22 01:07	1
13C8 PFOS	127		51 - 159	04/04/22 06:59	05/03/22 01:07	1
M2-4:2 FTS	115		10 - 200	04/04/22 06:59	05/03/22 01:07	1
13C8 FOSA	104		10 - 168	04/04/22 06:59	05/03/22 01:07	1
M2-6:2 FTS	134		17 - 200	04/04/22 06:59	05/03/22 01:07	1
13C2 PFTeDA	115		10 - 179	04/04/22 06:59	05/03/22 01:07	1
M2-8:2 FTS	136		33 - 200	04/04/22 06:59	05/03/22 01:07	1

Lab Sample ID: LCS 410-240479/3-A
Matrix: Water
Analysis Batch: 251038

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 240479

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
10:2 FTCA	25.6	15.84	*-	ng/L		62	70 - 130
10:2 FTS	24.7	22.12		ng/L		90	50 - 146
10:2 FTUCA	25.6	18.99		ng/L		74	70 - 130
11Cl-PF3OUdS	23.8	18.23		ng/L		77	53 - 139
3:3 FTCA	25.6	19.04		ng/L		74	70 - 130
4:2 Fluorotelomer sulfonic acid	23.9	17.48		ng/L		73	55 - 139
5:3 FTCA	25.6	17.63	*-	ng/L		69	70 - 130
6:2 Fluorotelomer sulfonic acid	24.3	16.33		ng/L		67	28 - 173
6:2 FTCA	25.6	16.75	*-	ng/L		65	70 - 130
6:2 FTUCA	25.6	17.84		ng/L		70	70 - 130
7:3 FTCA	25.6	31.51		ng/L		123	70 - 130
8:2 Fluorotelomer sulfonic acid	24.5	17.71		ng/L		72	55 - 138
8:2 FTCA	25.6	16.34	*-	ng/L		64	70 - 130
8:2 FTUCA	25.6	22.46		ng/L		88	70 - 130
9Cl-PF3ONS	23.8	18.09		ng/L		76	59 - 135
DONA	24.2	18.83		ng/L		78	55 - 143
EVE Acid	25.6	<3.00	*-	ng/L		6	70 - 130
HFPODA	25.6	21.30		ng/L		83	50 - 135
Hydro-EVE Acid	25.6	22.73		ng/L		89	70 - 130
Hydrolyzed PSDA	25.6	22.23		ng/L		87	70 - 130
Hydro-PS Acid	25.6	22.07		ng/L		86	70 - 130
MTP	25.6	21.70		ng/L		85	70 - 130
NEtFOSA	25.6	18.47		ng/L		72	61 - 134
NEtFOSAA	25.6	18.75		ng/L		73	55 - 134
NEtFOSE	25.6	19.77		ng/L		77	60 - 136
NMeFOSA	25.6	18.89		ng/L		74	64 - 143
NMeFOSAA	25.6	18.66		ng/L		73	59 - 140
NMeFOSE	25.6	18.66		ng/L		73	55 - 144
NVHOS	25.6	18.13		ng/L		71	70 - 130
PEPA	25.6	21.33		ng/L		83	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid	22.8	17.50		ng/L		77	70 - 130
Perfluoro-4-ethylcyclohexanesulfonic acid	23.6	17.58		ng/L		74	70 - 130
Perfluorobutanesulfonic acid	22.7	19.67		ng/L		87	53 - 138
Perfluorobutanoic acid	25.6	18.73		ng/L		73	59 - 136

Method: 537 IDA - EPA 537 Isotope Dilution (Continued)

Lab Sample ID: LCS 410-240479/3-A
Matrix: Water
Analysis Batch: 251038

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 240479

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorodecanesulfonic acid	24.7	17.78		ng/L		72	55 - 137
Perfluorodecanoic acid	25.6	20.94		ng/L		82	56 - 138
Perfluorododecanesulfonic acid	24.8	18.13		ng/L		73	48 - 138
Perfluorododecanoic acid	25.6	19.80		ng/L		77	59 - 143
Perfluoroheptanesulfonic acid	24.4	17.80		ng/L		73	56 - 140
Perfluoroheptanoic acid	25.6	19.64		ng/L		77	59 - 145
Perfluorohexadecanoic acid	25.6	21.02		ng/L		82	41 - 158
Perfluorohexanesulfonic acid	23.3	17.38		ng/L		74	58 - 134
Perfluorohexanoic acid	25.6	20.11		ng/L		79	58 - 139
Perfluorononanesulfonic acid	24.6	17.77		ng/L		72	59 - 136
Perfluorononanoic acid	25.6	19.54		ng/L		76	61 - 139
Perfluorooctadecanoic acid	25.6	21.22		ng/L		83	29 - 172
Perfluorooctanesulfonamide	25.6	19.74		ng/L		77	43 - 167
Perfluorooctanesulfonic acid	23.7	19.06		ng/L		80	45 - 150
Perfluorooctanoic acid	25.6	20.92		ng/L		82	51 - 145
Perfluoropentanesulfonic acid	24.0	18.32		ng/L		76	55 - 140
Perfluoropentanoic acid	25.6	19.75		ng/L		77	57 - 141
Perfluoropropanesulfonic acid	23.4	19.84		ng/L		85	70 - 130
Perfluorotetradecanoic acid	25.6	20.17		ng/L		79	62 - 139
Perfluorotridecanoic acid	25.6	19.67		ng/L		77	58 - 146
Perfluoroundecanoic acid	25.6	20.58		ng/L		80	60 - 141
PFECA A	25.6	20.62		ng/L		81	70 - 130
PFECA B	25.6	23.08		ng/L		90	70 - 130
PFECA F	25.6	23.64		ng/L		92	70 - 130
PFECA G	25.6	19.27		ng/L		75	70 - 130
PFMOAA	25.6	17.46	*-	ng/L		68	70 - 130
PFO2HxA	25.6	21.10		ng/L		82	70 - 130
PFO3OA	25.6	20.47		ng/L		80	70 - 130
PFO4DA	25.6	21.96		ng/L		86	70 - 130
PMPA	25.6	20.03		ng/L		78	70 - 130
PPF Acid	25.6	24.44		ng/L		95	70 - 130
PS Acid	25.6	<3.00	*-	ng/L		9	70 - 130
R-EVE	25.6	23.12		ng/L		90	70 - 130
R-PSDA	25.6	17.46	*-	ng/L		68	70 - 130
R-PSDCA	25.6	17.91		ng/L		70	70 - 130
TAF	25.6	20.99		ng/L		82	70 - 130

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C3 HFPO-DA	*112*		*17 - 185*
13C3 PFBS	*124*		*16 - 200*
13C3 PFHxS	*120*		*28 - 188*
13C5 PFHxA	*116*		*24 - 179*
13C2-PFDoDA	*116*		*17 - 176*
13C6 PFDA	*118*		*49 - 163*
13C7 PFUnA	*118*		*34 - 174*
13C2-2-Perfluorohexylethanoic acid	*84*		*10 - 200*
13C2-2-Perfluorooctylethanoic acid	*108*		*10 - 200*

Method: 537 IDA - EPA 537 Isotope Dilution (Continued)

Lab Sample ID: LCS 410-240479/3-A
Matrix: Water
Analysis Batch: 251038

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 240479

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C2-2-Perfluorodecylethanoic acid	103		10 - 200
13C2-2H-Perfluoro-2-octenoic acid	138		20 - 173
13C9 PFNA	118		51 - 167
13C2-2H-Perfluoro-2-decenoic acid	136		21 - 166
d3-NMeFOSAA	128		31 - 174
13C2-2H-Perfluoro-2-dodecenoic acid	134		14 - 166
d3-NMePFOSA	84		10 - 155
13C4 PFBA	115		42 - 165
d5-NEtFOSAA	128		29 - 195
13C5 PFPeA	123		38 - 187
d5-NEtPFOSA	85		10 - 159
13C4 PFHpA	118		31 - 182
d7-N-MeFOSE-M	102		10 - 178
13C8 PFOA	118		48 - 162
d9-N-EtFOSE-M	104		10 - 177
13C8 PFOS	120		51 - 159
M2-4:2 FTS	109		10 - 200
13C8 FOSA	105		10 - 168
M2-6:2 FTS	119		17 - 200
13C2 PFTeDA	118		10 - 179
M2-8:2 FTS	109		33 - 200

Lab Sample ID: LCSD 410-240479/4-A
Matrix: Water
Analysis Batch: 251038

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 240479

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
10:2 FTCA			25.6	16.60	*-	ng/L		65	70 - 130	5	30
10:2 FTS			24.7	18.64		ng/L		76	50 - 146	17	30
10:2 FTUCA			25.6	20.04		ng/L		78	70 - 130	5	30
11Cl-PF3OUdS			23.8	18.15		ng/L		76	53 - 139	0	30
3:3 FTCA			25.6	22.17		ng/L		87	70 - 130	15	30
4:2 Fluorotelomer sulfonic acid			23.9	18.36		ng/L		77	55 - 139	5	30
5:3 FTCA			25.6	18.20		ng/L		71	70 - 130	3	30
6:2 Fluorotelomer sulfonic acid			24.3	17.07		ng/L		70	28 - 173	4	30
6:2 FTCA			25.6	17.27	*-	ng/L		67	70 - 130	3	30
6:2 FTUCA			25.6	17.91		ng/L		70	70 - 130	0	30
7:3 FTCA			25.6	32.75		ng/L		128	70 - 130	4	30
8:2 Fluorotelomer sulfonic acid			24.5	15.63		ng/L		64	55 - 138	13	30
8:2 FTCA			25.6	17.13	*-	ng/L		67	70 - 130	5	30
8:2 FTUCA			25.6	21.83		ng/L		85	70 - 130	3	30
9Cl-PF3ONS			23.8	18.54		ng/L		78	59 - 135	2	30
DONA			24.2	18.77		ng/L		78	55 - 143	0	30
EVE Acid			25.6	<3.00	*-	ng/L		8	70 - 130	19	30
HFPODA			25.6	20.26		ng/L		79	50 - 135	5	30
Hydro-EVE Acid			25.6	23.01		ng/L		90	70 - 130	1	30

Method: 537 IDA - EPA 537 Isotope Dilution (Continued)

Lab Sample ID: LCSD 410-240479/4-A
Matrix: Water
Analysis Batch: 251038

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 240479

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Hydrolyzed PSDA	25.6	20.83		ng/L		81	70 - 130	6	30
Hydro-PS Acid	25.6	21.05		ng/L		82	70 - 130	5	30
MTP	25.6	20.85		ng/L		81	70 - 130	4	30
NEtFOSA	25.6	18.54		ng/L		72	61 - 134	0	30
NEtFOSAA	25.6	19.65		ng/L		77	55 - 134	5	30
NEtFOSE	25.6	20.30		ng/L		79	60 - 136	3	30
NMeFOSA	25.6	19.89		ng/L		78	64 - 143	5	30
NMeFOSAA	25.6	19.08		ng/L		75	59 - 140	2	30
NMeFOSE	25.6	19.21		ng/L		75	55 - 144	3	30
NVHOS	25.6	18.03		ng/L		70	70 - 130	1	30
PEPA	25.6	21.56		ng/L		84	70 - 130	1	30
Perfluoro (2-ethoxyethane) sulfonic acid	22.8	17.27		ng/L		76	70 - 130	1	30
Perfluoro-4-ethylcyclohexanesulfonic acid	23.6	18.45		ng/L		78	70 - 130	5	30
Perfluorobutanesulfonic acid	22.7	17.99		ng/L		79	53 - 138	9	30
Perfluorobutanoic acid	25.6	19.08		ng/L		75	59 - 136	2	30
Perfluorodecanesulfonic acid	24.7	17.85		ng/L		72	55 - 137	0	30
Perfluorodecanoic acid	25.6	20.00		ng/L		78	56 - 138	5	30
Perfluorododecanesulfonic acid	24.8	18.98		ng/L		77	48 - 138	5	30
Perfluorododecanoic acid	25.6	19.48		ng/L		76	59 - 143	2	30
Perfluoroheptanesulfonic acid	24.4	18.00		ng/L		74	56 - 140	1	30
Perfluoroheptanoic acid	25.6	20.54		ng/L		80	59 - 145	4	30
Perfluorohexadecanoic acid	25.6	21.29		ng/L		83	41 - 158	1	30
Perfluorohexanesulfonic acid	23.3	17.96		ng/L		77	58 - 134	3	30
Perfluorohexanoic acid	25.6	20.84		ng/L		81	58 - 139	4	30
Perfluorononanesulfonic acid	24.6	18.32		ng/L		75	59 - 136	3	30
Perfluorononanoic acid	25.6	20.39		ng/L		80	61 - 139	4	30
Perfluorooctadecanoic acid	25.6	22.47		ng/L		88	29 - 172	6	30
Perfluorooctanesulfonamide	25.6	19.92		ng/L		78	43 - 167	1	30
Perfluorooctanesulfonic acid	23.7	19.51		ng/L		82	45 - 150	2	30
Perfluorooctanoic acid	25.6	21.75		ng/L		85	51 - 145	4	30
Perfluoropentanesulfonic acid	24.0	18.01		ng/L		75	55 - 140	2	30
Perfluoropentanoic acid	25.6	14.63		ng/L		57	57 - 141	30	30
Perfluoropropanesulfonic acid	23.4	20.37		ng/L		87	70 - 130	3	30
Perfluorotetradecanoic acid	25.6	20.24		ng/L		79	62 - 139	0	30
Perfluorotridecanoic acid	25.6	20.58		ng/L		80	58 - 146	5	30
Perfluoroundecanoic acid	25.6	21.71		ng/L		85	60 - 141	5	30
PFECA A	25.6	20.10		ng/L		79	70 - 130	3	30
PFECA B	25.6	21.80		ng/L		85	70 - 130	6	30
PFECA F	25.6	23.82		ng/L		93	70 - 130	1	30
PFECA G	25.6	19.31		ng/L		75	70 - 130	0	30
PFMOAA	25.6	17.62	*-	ng/L		69	70 - 130	1	30
PFO2HxA	25.6	22.24		ng/L		87	70 - 130	5	30
PFO3OA	25.6	21.60		ng/L		84	70 - 130	5	30
PFO4DA	25.6	21.85		ng/L		85	70 - 130	0	30
PMPA	25.6	19.12		ng/L		75	70 - 130	5	30
PPF Acid	25.6	24.15		ng/L		94	70 - 130	1	30
PS Acid	25.6	<3.00	*-	ng/L		9	70 - 130	7	30

Method: 537 IDA - EPA 537 Isotope Dilution (Continued)

Lab Sample ID: LCSD 410-240479/4-A
Matrix: Water
Analysis Batch: 251038

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 240479

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
R-EVE			25.6	21.31		ng/L		83	70 - 130	8	30
R-PSDA			25.6	15.61	*-	ng/L		61	70 - 130	11	30
R-PSDCA			25.6	17.21	*-	ng/L		67	70 - 130	4	30
TAF			25.6	21.26		ng/L		83	70 - 130	1	30

Isotope Dilution	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
13C3 HFPO-DA	*112*		*17 - 185*
13C3 PFBS	*125*		*16 - 200*
13C3 PFHxS	*120*		*28 - 188*
13C5 PFHxA	*112*		*24 - 179*
13C2-PFDoDA	*121*		*17 - 176*
13C6 PFDA	*125*		*49 - 163*
13C7 PFUnA	*121*		*34 - 174*
13C2-2-Perfluorohexylethanoic acid	*82*		*10 - 200*
13C2-2-Perfluorooctylethanoic acid	*112*		*10 - 200*
13C2-2-Perfluorodecylethanoic acid	*102*		*10 - 200*
13C2-2H-Perfluoro-2-octenoic acid	*134*		*20 - 173*
13C9 PFNA	*117*		*51 - 167*
13C2-2H-Perfluoro-2-decenoic acid	*143*		*21 - 166*
d3-NMeFOSAA	*135*		*31 - 174*
13C2-2H-Perfluoro-2-dodecenoic acid	*136*		*14 - 166*
d3-NMePFOSA	*96*		*10 - 155*
13C4 PFBA	*111*		*42 - 165*
d5-NEtFOSAA	*131*		*29 - 195*
13C5 PFPeA	*105*		*38 - 187*
d5-NEtPFOSA	*98*		*10 - 159*
13C4 PFHpA	*114*		*31 - 182*
d7-N-MeFOSE-M	*103*		*10 - 178*
13C8 PFOA	*116*		*48 - 162*
d9-N-EtFOSE-M	*108*		*10 - 177*
13C8 PFOS	*122*		*51 - 159*
M2-4:2 FTS	*110*		*10 - 200*
13C8 FOSA	*109*		*10 - 168*
M2-6:2 FTS	*115*		*17 - 200*
13C2 PFTeDA	*118*		*10 - 179*
M2-8:2 FTS	*128*		*33 - 200*

Lab Sample ID: MB 410-240631/1-B
Matrix: Solid
Analysis Batch: 241603

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 240631

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
10:2 FTCA	<0.0400		0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 11:45	1
10:2 FTS	<0.120		0.400	0.120	ng/g		04/04/22 11:19	04/06/22 11:45	1

Method: 537 IDA - EPA 537 Isotope Dilution (Continued)

Lab Sample ID: MB 410-240631/1-B
Matrix: Solid
Analysis Batch: 241603

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 240631

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
10:2 FTUCA	<0.0400		0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 11:45	1
11Cl-PF3OUdS	<0.0400		0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 11:45	1
3:3 FTCA	<0.0400		0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 11:45	1
4:2 Fluorotelomer sulfonic acid	<0.120		0.400	0.120	ng/g		04/04/22 11:19	04/06/22 11:45	1
5:3 FTCA	<0.0400		0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 11:45	1
6:2 Fluorotelomer sulfonic acid	<0.120		0.400	0.120	ng/g		04/04/22 11:19	04/06/22 11:45	1
6:2 FTCA	<0.0400		0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 11:45	1
6:2 FTUCA	<0.0400		0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 11:45	1
7:3 FTCA	<0.0400		0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 11:45	1
8:2 Fluorotelomer sulfonic acid	<0.120		0.600	0.120	ng/g		04/04/22 11:19	04/06/22 11:45	1
8:2 FTCA	<0.0400		0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 11:45	1
8:2 FTUCA	<0.0400		0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 11:45	1
9Cl-PF3ONS	<0.0400		0.400	0.0400	ng/g		04/04/22 11:19	04/06/22 11:45	1
DONA	<0.0400		0.600	0.0400	ng/g		04/04/22 11:19	04/06/22 11:45	1
EVE Acid	<0.0400		0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 11:45	1
HFPODA	<0.0800		0.400	0.0800	ng/g		04/04/22 11:19	04/06/22 11:45	1
Hydro-EVE Acid	<0.0400		0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 11:45	1
Hydrolyzed PSDA	<0.0400		0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 11:45	1
Hydro-PS Acid	<0.0400		0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 11:45	1
MTP	<0.0400		0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 11:45	1
NEtFOSA	<0.100		0.400	0.100	ng/g		04/04/22 11:19	04/06/22 11:45	1
NEtFOSAA	<0.0400		0.400	0.0400	ng/g		04/04/22 11:19	04/06/22 11:45	1
NEtFOSE	<0.100		0.400	0.100	ng/g		04/04/22 11:19	04/06/22 11:45	1
NMeFOSA	<0.100		0.400	0.100	ng/g		04/04/22 11:19	04/06/22 11:45	1
NMeFOSAA	<0.0400		0.400	0.0400	ng/g		04/04/22 11:19	04/06/22 11:45	1
NMeFOSE	<0.100		0.400	0.100	ng/g		04/04/22 11:19	04/06/22 11:45	1
NVHOS	<0.0400		0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 11:45	1
PEPA	<0.0400		0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 11:45	1
Perfluoro (2-ethoxyethane) sulfonic acid	<0.0400		0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 11:45	1
Perfluoro-4-ethylcyclohexanesulfonic acid	<0.0400		0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 11:45	1
Perfluorobutanesulfonic acid	<0.0800		0.400	0.0800	ng/g		04/04/22 11:19	04/06/22 11:45	1
Perfluorobutanoic acid	<0.160		0.400	0.160	ng/g		04/04/22 11:19	04/06/22 11:45	1
Perfluorodecanesulfonic acid	<0.0400		0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 11:45	1
Perfluorodecanoic acid	<0.0400		0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 11:45	1
Perfluorododecanesulfonic acid	<0.0400		0.400	0.0400	ng/g		04/04/22 11:19	04/06/22 11:45	1
Perfluorododecanoic acid	<0.0400		0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 11:45	1
Perfluoroheptanesulfonic acid	<0.0400		0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 11:45	1
Perfluoroheptanoic acid	<0.0400		0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 11:45	1
Perfluorohexadecanoic acid	<0.0400		0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 11:45	1
Perfluorohexanesulfonic acid	<0.0400		0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 11:45	1
Perfluorohexanoic acid	<0.0400		0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 11:45	1
Perfluorononanesulfonic acid	<0.0400		0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 11:45	1
Perfluorononanoic acid	<0.0400		0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 11:45	1
Perfluorooctadecanoic acid	<0.0400		0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 11:45	1
Perfluorooctanesulfonamide	<0.0400		0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 11:45	1
Perfluorooctanesulfonic acid	<0.0400		0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 11:45	1
Perfluorooctanoic acid	<0.0400		0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 11:45	1

Method: 537 IDA - EPA 537 Isotope Dilution (Continued)

Lab Sample ID: MB 410-240631/1-B
Matrix: Solid
Analysis Batch: 241603

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 240631

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoropentanesulfonic acid	<0.0400		0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 11:45	1
Perfluoropentanoic acid	<0.0400		0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 11:45	1
Perfluoropropanesulfonic acid	<0.0400		0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 11:45	1
Perfluorotetradecanoic acid	<0.0400		0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 11:45	1
Perfluorotridecanoic acid	<0.0400		0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 11:45	1
Perfluoroundecanoic acid	<0.0400		0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 11:45	1
PFECA A	<0.0400		0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 11:45	1
PFECA B	<0.0400		0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 11:45	1
PFECA F	<0.0400		0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 11:45	1
PFECA G	<0.0400		0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 11:45	1
PFMOAA	<0.0400		0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 11:45	1
PFO2HxA	<0.0400		0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 11:45	1
PFO3OA	<0.0400		0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 11:45	1
PFO4DA	<0.0400		0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 11:45	1
PMPA	<0.0400		0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 11:45	1
PPF Acid	<0.0400		0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 11:45	1
PS Acid	<0.0400		0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 11:45	1
R-EVE	<0.0400		0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 11:45	1
R-PSDA	<0.0400		0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 11:45	1
R-PSDCA	<0.0400		0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 11:45	1
TAF	<0.0400		0.120	0.0400	ng/g		04/04/22 11:19	04/06/22 11:45	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*129*		*10 - 169*	*04/04/22 11:19*	*04/06/22 11:45*	*1*
13C3 PFBS	*152*		*27 - 179*	*04/04/22 11:19*	*04/06/22 11:45*	*1*
13C3 PFHxS	*154*		*24 - 171*	*04/04/22 11:19*	*04/06/22 11:45*	*1*
13C5 PFHxA	*139*		*10 - 174*	*04/04/22 11:19*	*04/06/22 11:45*	*1*
13C2-PFDoDA	*134*		*11 - 166*	*04/04/22 11:19*	*04/06/22 11:45*	*1*
13C6 PFDA	*152*		*26 - 161*	*04/04/22 11:19*	*04/06/22 11:45*	*1*
13C7 PFUnA	*147*		*12 - 173*	*04/04/22 11:19*	*04/06/22 11:45*	*1*
13C2-2-Perfluorohexylethanoic acid	*244*	*5+	*10 - 200*	*04/04/22 11:19*	*04/06/22 11:45*	*1*
13C2-2-Perfluorooctylethanoic acid	*218*	*5+	*10 - 200*	*04/04/22 11:19*	*04/06/22 11:45*	*1*
13C2-2-Perfluorodecylethanoic acid	*208*	*5+	*10 - 200*	*04/04/22 11:19*	*04/06/22 11:45*	*1*
13C2-2H-Perfluoro-2-octenoic acid	*119*		*10 - 164*	*04/04/22 11:19*	*04/06/22 11:45*	*1*
13C9 PFNA	*148*		*26 - 165*	*04/04/22 11:19*	*04/06/22 11:45*	*1*
13C2-2H-Perfluoro-2-decenoic acid	*116*		*10 - 162*	*04/04/22 11:19*	*04/06/22 11:45*	*1*
d3-NMeFOSAA	*132*		*10 - 178*	*04/04/22 11:19*	*04/06/22 11:45*	*1*
13C2-2H-Perfluoro-2-dodecenoic acid	*102*		*10 - 161*	*04/04/22 11:19*	*04/06/22 11:45*	*1*
d3-NMePFOSA	*131*		*10 - 175*	*04/04/22 11:19*	*04/06/22 11:45*	*1*
13C4 PFBA	*147*		*28 - 153*	*04/04/22 11:19*	*04/06/22 11:45*	*1*
d5-NEtFOSAA	*154*		*10 - 193*	*04/04/22 11:19*	*04/06/22 11:45*	*1*
13C5 PFPeA	*146*		*24 - 161*	*04/04/22 11:19*	*04/06/22 11:45*	*1*
d5-NEtPFOSA	*141*		*10 - 180*	*04/04/22 11:19*	*04/06/22 11:45*	*1*
13C4 PFHpA	*152*		*10 - 178*	*04/04/22 11:19*	*04/06/22 11:45*	*1*
d7-N-MeFOSE-M	*133*		*10 - 179*	*04/04/22 11:19*	*04/06/22 11:45*	*1*
13C8 PFOA	*150*		*26 - 159*	*04/04/22 11:19*	*04/06/22 11:45*	*1*
d9-N-EtFOSE-M	*129*		*10 - 185*	*04/04/22 11:19*	*04/06/22 11:45*	*1*
13C8 PFOS	*148*		*41 - 154*	*04/04/22 11:19*	*04/06/22 11:45*	*1*

Method: 537 IDA - EPA 537 Isotope Dilution (Continued)

Lab Sample ID: MB 410-240631/1-B
Matrix: Solid
Analysis Batch: 241603

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 240631

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
M2-4:2 FTS	160		10 - 200	04/04/22 11:19	04/06/22 11:45	1
13C8 FOSA	150		14 - 163	04/04/22 11:19	04/06/22 11:45	1
M2-6:2 FTS	161		10 - 200	04/04/22 11:19	04/06/22 11:45	1
13C2 PFTeDA	125		10 - 169	04/04/22 11:19	04/06/22 11:45	1
M2-8:2 FTS	155		15 - 200	04/04/22 11:19	04/06/22 11:45	1

Lab Sample ID: LCS 410-240631/2-B
Matrix: Solid
Analysis Batch: 241603

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 240631

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
10:2 FTCA	5.00	4.032		ng/g		81	70 - 130
10:2 FTS	4.82	3.815		ng/g		79	46 - 143
10:2 FTUCA	5.00	4.082		ng/g		82	70 - 130
11Cl-PF3OUdS	4.65	3.767		ng/g		81	55 - 135
3:3 FTCA	5.00	3.749		ng/g		75	70 - 130
4:2 Fluorotelomer sulfonic acid	4.67	3.136		ng/g		67	58 - 131
5:3 FTCA	5.00	3.959		ng/g		79	70 - 130
6:2 Fluorotelomer sulfonic acid	4.74	3.262		ng/g		69	59 - 135
6:2 FTCA	5.00	4.368		ng/g		87	70 - 130
6:2 FTUCA	5.00	3.966		ng/g		79	70 - 130
7:3 FTCA	5.00	2.692	*-	ng/g		54	70 - 130
8:2 Fluorotelomer sulfonic acid	4.79	4.141		ng/g		86	55 - 133
8:2 FTCA	5.00	4.160		ng/g		83	70 - 130
8:2 FTUCA	5.00	3.641		ng/g		73	70 - 130
9Cl-PF3ONS	4.65	4.004		ng/g		86	62 - 130
DONA	4.73	3.756		ng/g		79	57 - 137
EVE Acid	5.00	0.2785	*-	ng/g		6	70 - 130
HFPODA	5.00	4.392		ng/g		88	49 - 135
Hydro-EVE Acid	5.00	3.972		ng/g		79	70 - 130
Hydrolyzed PSDA	5.00	3.430	*-	ng/g		69	70 - 130
Hydro-PS Acid	5.00	3.694		ng/g		74	70 - 130
MTP	5.00	2.987	*-	ng/g		60	70 - 130
NEtFOSA	5.00	3.782		ng/g		76	60 - 123
NEtFOSAA	5.00	3.389		ng/g		68	57 - 127
NEtFOSE	5.00	4.146		ng/g		83	60 - 126
NMeFOSA	5.00	4.005		ng/g		80	60 - 129
NMeFOSAA	5.00	3.471		ng/g		69	60 - 134
NMeFOSE	5.00	3.931		ng/g		79	60 - 130
NVHOS	5.00	3.590		ng/g		72	70 - 130
PEPA	5.00	4.333		ng/g		87	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid	4.45	3.163		ng/g		71	70 - 130
Perfluoro-4-ethylcyclohexanesulfonic acid	4.61	3.710		ng/g		80	70 - 130
Perfluorobutanesulfonic acid	4.43	3.388		ng/g		77	54 - 130
Perfluorobutanoic acid	5.00	3.974		ng/g		79	60 - 128
Perfluorodecanesulfonic acid	4.82	3.468		ng/g		72	57 - 132
Perfluorodecanoic acid	5.00	3.670		ng/g		73	56 - 133

Method: 537 IDA - EPA 537 Isotope Dilution (Continued)

Lab Sample ID: LCS 410-240631/2-B
Matrix: Solid
Analysis Batch: 241603

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 240631

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorododecanesulfonic acid	4.84	3.836		ng/g		79	38 - 145
Perfluorododecanoic acid	5.00	3.838		ng/g		77	60 - 135
Perfluoroheptanesulfonic acid	4.76	3.666		ng/g		77	59 - 132
Perfluoroheptanoic acid	5.00	3.828		ng/g		77	59 - 137
Perfluorohexadecanoic acid	5.00	3.775		ng/g		76	38 - 147
Perfluorohexanesulfonic acid	4.56	3.601		ng/g		79	59 - 129
Perfluorohexanoic acid	5.00	3.985		ng/g		80	59 - 132
Perfluorononanesulfonic acid	4.80	3.601		ng/g		75	60 - 132
Perfluorononanoic acid	5.00	3.539		ng/g		71	61 - 134
Perfluorooctadecanoic acid	5.00	3.261		ng/g		65	16 - 160
Perfluorooctanesulfonamide	5.00	3.695		ng/g		74	47 - 149
Perfluorooctanesulfonic acid	4.63	3.586		ng/g		78	61 - 126
Perfluorooctanoic acid	5.00	3.532		ng/g		71	59 - 131
Perfluoropentanesulfonic acid	4.69	3.323		ng/g		71	57 - 133
Perfluoropentanoic acid	5.00	3.370		ng/g		67	58 - 134
Perfluoropropanesulfonic acid	4.58	3.903		ng/g		85	70 - 130
Perfluorotetradecanoic acid	5.00	3.888		ng/g		78	62 - 134
Perfluorotridecanoic acid	5.00	3.894		ng/g		78	53 - 143
Perfluoroundecanoic acid	5.00	3.923		ng/g		78	60 - 134
PFECA A	5.00	3.706		ng/g		74	70 - 130
PFECA B	5.00	3.796		ng/g		76	70 - 130
PFECA F	5.00	4.552		ng/g		91	70 - 130
PFECA G	5.00	3.336	*-	ng/g		67	70 - 130
PFMOAA	5.00	2.695	*-	ng/g		54	70 - 130
PFO2HxA	5.00	3.877		ng/g		78	70 - 130
PFO3OA	5.00	3.347	*-	ng/g		67	70 - 130
PFO4DA	5.00	3.611		ng/g		72	70 - 130
PMPA	5.00	3.552		ng/g		71	70 - 130
PPF Acid	5.00	3.466	*-	ng/g		69	70 - 130
PS Acid	5.00	0.2898	*-	ng/g		6	70 - 130
R-EVE	5.00	2.675	*-	ng/g		54	70 - 130
R-PSDA	5.00	2.523	*-	ng/g		50	70 - 130
R-PSDCA	5.00	2.871	*-	ng/g		57	70 - 130
TAF	5.00	3.531		ng/g		71	70 - 130

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C3 HFPO-DA	*137*		*10 - 169*
13C3 PFBS	*160*		*27 - 179*
13C3 PFHxS	*154*		*24 - 171*
13C5 PFHxA	*148*		*10 - 174*
13C2-PFDoDA	*139*		*11 - 166*
13C6 PFDA	*155*		*26 - 161*
13C7 PFUnA	*150*		*12 - 173*
13C2-2-Perfluorohexylethanoic acid	*232*	*5+	*10 - 200*
13C2-2-Perfluorooctylethanoic acid	*237*	*5+	*10 - 200*
13C2-2-Perfluorodecylethanoic acid	*218*	*5+	*10 - 200*

Method: 537 IDA - EPA 537 Isotope Dilution (Continued)

Lab Sample ID: LCS 410-240631/2-B
Matrix: Solid
Analysis Batch: 241603

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 240631

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C2-2H-Perfluoro-2-octenoic acid	*121*		*10 - 164*
13C9 PFNA	*154*		*26 - 165*
13C2-2H-Perfluoro-2-decenoic acid	*126*		*10 - 162*
d3-NMeFOSAA	*150*		*10 - 178*
13C2-2H-Perfluoro-2-dodecenoic acid	*111*		*10 - 161*
d3-NMePFOSA	*137*		*10 - 175*
13C4 PFBA	*147*		*28 - 153*
d5-NEtFOSAA	*155*		*10 - 193*
13C5 PFPeA	*152*		*24 - 161*
d5-NEtPFOSA	*146*		*10 - 180*
13C4 PFHpA	*153*		*10 - 178*
d7-N-MeFOSE-M	*144*		*10 - 179*
13C8 PFOA	*159*		*26 - 159*
d9-N-EtFOSE-M	*137*		*10 - 185*
13C8 PFOS	*146*		*41 - 154*
M2-4:2 FTS	*176*		*10 - 200*
13C8 FOSA	*155*		*14 - 163*
M2-6:2 FTS	*165*		*10 - 200*
13C2 PFTeDA	*137*		*10 - 169*
M2-8:2 FTS	*135*		*15 - 200*

Lab Sample ID: LCSD 410-240631/3-B
Matrix: Solid
Analysis Batch: 241603

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 240631

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
10:2 FTCA			5.00	3.638		ng/g		73	70 - 130	10	30
10:2 FTS			4.82	3.463		ng/g		72	46 - 143	10	30
10:2 FTUCA			5.00	3.829		ng/g		77	70 - 130	6	30
11Cl-PF3OUdS			4.65	3.549		ng/g		76	55 - 135	6	30
3:3 FTCA			5.00	3.921		ng/g		78	70 - 130	4	30
4:2 Fluorotelomer sulfonic acid			4.67	3.213		ng/g		69	58 - 131	2	30
5:3 FTCA			5.00	4.056		ng/g		81	70 - 130	2	30
6:2 Fluorotelomer sulfonic acid			4.74	3.294		ng/g		69	59 - 135	1	30
6:2 FTCA			5.00	4.024		ng/g		80	70 - 130	8	30
6:2 FTUCA			5.00	3.842		ng/g		77	70 - 130	3	30
7:3 FTCA			5.00	2.372	*-	ng/g		47	70 - 130	13	30
8:2 Fluorotelomer sulfonic acid			4.79	3.950		ng/g		82	55 - 133	5	30
8:2 FTCA			5.00	4.236		ng/g		85	70 - 130	2	30
8:2 FTUCA			5.00	3.907		ng/g		78	70 - 130	7	30
9Cl-PF3ONS			4.65	3.672		ng/g		79	62 - 130	9	30
DONA			4.73	3.851		ng/g		82	57 - 137	2	30
EVE Acid			5.00	0.2270	*-	ng/g		5	70 - 130	20	30
HFPODA			5.00	4.383		ng/g		88	49 - 135	0	30
Hydro-EVE Acid			5.00	3.806		ng/g		76	70 - 130	4	30
Hydrolyzed PSDA			5.00	3.363	*-	ng/g		67	70 - 130	2	30
Hydro-PS Acid			5.00	3.681		ng/g		74	70 - 130	0	30

Method: 537 IDA - EPA 537 Isotope Dilution (Continued)

Lab Sample ID: LCSD 410-240631/3-B
Matrix: Solid
Analysis Batch: 241603

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 240631

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
MTP	5.00	3.095	*-	ng/g		62	70 - 130	4	30
NEtFOSA	5.00	3.766		ng/g		75	60 - 123	0	30
NEtFOSAA	5.00	3.458		ng/g		69	57 - 127	2	30
NEtFOSE	5.00	4.177		ng/g		84	60 - 126	1	30
NMeFOSA	5.00	4.008		ng/g		80	60 - 129	0	30
NMeFOSAA	5.00	3.840		ng/g		77	60 - 134	10	30
NMeFOSE	5.00	4.013		ng/g		80	60 - 130	2	30
NVHOS	5.00	3.659		ng/g		73	70 - 130	2	30
PEPA	5.00	4.336		ng/g		87	70 - 130	0	30
Perfluoro (2-ethoxyethane) sulfonic acid	4.45	3.206		ng/g		72	70 - 130	1	30
Perfluoro-4-ethylcyclohexanesulfonic acid	4.61	3.616		ng/g		78	70 - 130	3	30
Perfluorobutanesulfonic acid	4.43	3.454		ng/g		78	54 - 130	2	30
Perfluorobutanoic acid	5.00	3.997		ng/g		80	60 - 128	1	30
Perfluorodecanesulfonic acid	4.82	3.405		ng/g		71	57 - 132	2	30
Perfluorodecanoic acid	5.00	3.709		ng/g		74	56 - 133	1	30
Perfluorododecanesulfonic acid	4.84	3.795		ng/g		78	38 - 145	1	30
Perfluorododecanoic acid	5.00	3.865		ng/g		77	60 - 135	1	30
Perfluoroheptanesulfonic acid	4.76	3.564		ng/g		75	59 - 132	3	30
Perfluoroheptanoic acid	5.00	4.131		ng/g		83	59 - 137	8	30
Perfluorohexadecanoic acid	5.00	3.471		ng/g		69	38 - 147	8	30
Perfluorohexanesulfonic acid	4.56	3.737		ng/g		82	59 - 129	4	30
Perfluorohexanoic acid	5.00	3.930		ng/g		79	59 - 132	1	30
Perfluorononanesulfonic acid	4.80	3.560		ng/g		74	60 - 132	1	30
Perfluorononanoic acid	5.00	3.606		ng/g		72	61 - 134	2	30
Perfluorooctadecanoic acid	5.00	3.333		ng/g		67	16 - 160	2	30
Perfluorooctanesulfonamide	5.00	3.579		ng/g		72	47 - 149	3	30
Perfluorooctanesulfonic acid	4.63	3.550		ng/g		77	61 - 126	1	30
Perfluorooctanoic acid	5.00	3.681		ng/g		74	59 - 131	4	30
Perfluoropentanesulfonic acid	4.69	3.532		ng/g		75	57 - 133	6	30
Perfluoropentanoic acid	5.00	3.429		ng/g		69	58 - 134	2	30
Perfluoropropanesulfonic acid	4.58	3.728		ng/g		81	70 - 130	5	30
Perfluorotetradecanoic acid	5.00	3.783		ng/g		76	62 - 134	3	30
Perfluorotridecanoic acid	5.00	3.798		ng/g		76	53 - 143	2	30
Perfluoroundecanoic acid	5.00	3.680		ng/g		74	60 - 134	6	30
PFECA A	5.00	3.715		ng/g		74	70 - 130	0	30
PFECA B	5.00	3.855		ng/g		77	70 - 130	2	30
PFECA F	5.00	4.665		ng/g		93	70 - 130	2	30
PFECA G	5.00	3.291	*-	ng/g		66	70 - 130	1	30
PFMOAA	5.00	2.768	*-	ng/g		55	70 - 130	3	30
PFO2HxA	5.00	3.931		ng/g		79	70 - 130	1	30
PFO3OA	5.00	3.435	*-	ng/g		69	70 - 130	3	30
PFO4DA	5.00	3.600		ng/g		72	70 - 130	0	30
PMPA	5.00	3.590		ng/g		72	70 - 130	1	30
PPF Acid	5.00	3.394	*-	ng/g		68	70 - 130	2	30
PS Acid	5.00	0.2500	*-	ng/g		5	70 - 130	15	30
R-EVE	5.00	2.620	*-	ng/g		52	70 - 130	2	30
R-PSDA	5.00	2.479	*-	ng/g		50	70 - 130	2	30

Method: 537 IDA - EPA 537 Isotope Dilution (Continued)

Lab Sample ID: LCSD 410-240631/3-B
Matrix: Solid
Analysis Batch: 241603

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 240631

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
R-PSDCA			5.00	2.820	*-	ng/g		56	70 - 130	2	30
TAF			5.00	3.552		ng/g		71	70 - 130	1	30

Isotope Dilution	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
13C3 HFPO-DA	*139*		*10 - 169*
13C3 PFBS	*153*		*27 - 179*
13C3 PFHxS	*151*		*24 - 171*
13C5 PFHxA	*146*		*10 - 174*
13C2-PFDoDA	*133*		*11 - 166*
13C6 PFDA	*155*		*26 - 161*
13C7 PFUnA	*153*		*12 - 173*
13C2-2-Perfluorohexylethanoic acid	*258*	*5+	*10 - 200*
13C2-2-Perfluorooctylethanoic acid	*234*	*5+	*10 - 200*
13C2-2-Perfluorodecylethanoic acid	*226*	*5+	*10 - 200*
13C2-2H-Perfluoro-2-octenoic acid	*124*		*10 - 164*
13C9 PFNA	*147*		*26 - 165*
13C2-2H-Perfluoro-2-decenoic acid	*118*		*10 - 162*
d3-NMeFOSAA	*139*		*10 - 178*
13C2-2H-Perfluoro-2-dodecenoic acid	*113*		*10 - 161*
d3-NMePFOSA	*139*		*10 - 175*
13C4 PFBA	*143*		*28 - 153*
d5-NEtFOSAA	*153*		*10 - 193*
13C5 PFPeA	*151*		*24 - 161*
d5-NEtPFOSA	*148*		*10 - 180*
13C4 PFHpA	*150*		*10 - 178*
d7-N-MeFOSE-M	*143*		*10 - 179*
13C8 PFOA	*147*		*26 - 159*
d9-N-EtFOSE-M	*133*		*10 - 185*
13C8 PFOS	*145*		*41 - 154*
M2-4:2 FTS	*168*		*10 - 200*
13C8 FOSA	*153*		*14 - 163*
M2-6:2 FTS	*160*		*10 - 200*
13C2 PFTeDA	*130*		*10 - 169*
M2-8:2 FTS	*147*		*15 - 200*

Method: 537 TOP - Fluorinated Alkyl Substances

Lab Sample ID: MB 410-253462/1-B
Matrix: Solid
Analysis Batch: 254465

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 253462

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA				*05/10/22 10:06*	*05/12/22 12:07*	*1*
13C4 PFOA				*05/10/22 10:06*	*05/12/22 12:07*	*1*

Method: 537 TOP - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: MB 410-253462/1-B
Matrix: Solid
Analysis Batch: 254465

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 253462

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFUnA				05/10/22 10:06	05/12/22 12:07	1

Lab Sample ID: MB 410-253462/2-B
Matrix: Solid
Analysis Batch: 254465

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 253462

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
10:2 FTCA	<0.0400		0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:18	1
10:2 FTS	<0.120		0.400	0.120	ng/g		05/10/22 10:06	05/12/22 12:18	1
10:2 FTUCA	<0.0400		0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:18	1
11Cl-PF3OUdS	<0.0400		0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:18	1
3:3 FTCA	<0.0400		0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:18	1
4:2 Fluorotelomer sulfonic acid	<0.120		0.400	0.120	ng/g		05/10/22 10:06	05/12/22 12:18	1
5:3 FTCA	<0.0400		0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:18	1
6:2 Fluorotelomer sulfonic acid	0.1366	J	0.400	0.120	ng/g		05/10/22 10:06	05/12/22 12:18	1
6:2 FTCA	<0.0400		0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:18	1
6:2 FTUCA	<0.0400		0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:18	1
7:3 FTCA	<0.0400		0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:18	1
8:2 Fluorotelomer sulfonic acid	<0.120		0.600	0.120	ng/g		05/10/22 10:06	05/12/22 12:18	1
8:2 FTCA	<0.0400		0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:18	1
8:2 FTUCA	<0.0400		0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:18	1
9Cl-PF3ONS	<0.0400		0.400	0.0400	ng/g		05/10/22 10:06	05/12/22 12:18	1
DONA	<0.0400		0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:18	1
EVE Acid	<0.0400		0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:18	1
HFPODA	<0.200		0.600	0.200	ng/g		05/10/22 10:06	05/12/22 12:18	1
Hydro-EVE Acid	<0.0400		0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:18	1
Hydrolyzed PSDA	<0.0400		0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:18	1
Hydro-PS Acid	<0.0400		0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:18	1
MTP	<0.0400		0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:18	1
NEtFOSA	<0.100		0.400	0.100	ng/g		05/10/22 10:06	05/12/22 12:18	1
NEtFOSAA	<0.0400		0.400	0.0400	ng/g		05/10/22 10:06	05/12/22 12:18	1
NEtFOSE	<0.100		0.400	0.100	ng/g		05/10/22 10:06	05/12/22 12:18	1
NMeFOSA	<0.100		0.400	0.100	ng/g		05/10/22 10:06	05/12/22 12:18	1
NMeFOSAA	<0.0400		0.400	0.0400	ng/g		05/10/22 10:06	05/12/22 12:18	1
NMeFOSE	<0.100		0.400	0.100	ng/g		05/10/22 10:06	05/12/22 12:18	1
NVHOS	<0.0400		0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:18	1
PEPA	<0.0400		0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:18	1
Perfluoro (2-ethoxyethane) sulfonic acid	<0.0400		0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:18	1
Perfluoro-4-ethylcyclohexanesulfonic acid	<0.0400		0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:18	1
Perfluorobutanesulfonic acid	<0.0800		0.400	0.0800	ng/g		05/10/22 10:06	05/12/22 12:18	1
Perfluorobutanoic acid	<0.160		0.400	0.160	ng/g		05/10/22 10:06	05/12/22 12:18	1
Perfluorodecanesulfonic acid	<0.0400		0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:18	1
Perfluorodecanoic acid	<0.0400		0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:18	1
Perfluorododecanesulfonic acid	<0.0400		0.400	0.0400	ng/g		05/10/22 10:06	05/12/22 12:18	1
Perfluorododecanoic acid	<0.0400		0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:18	1
Perfluoroheptanesulfonic acid	<0.0400		0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:18	1
Perfluoroheptanoic acid	<0.0400		0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:18	1

Method: 537 TOP - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: MB 410-253462/2-B
Matrix: Solid
Analysis Batch: 254465

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 253462

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexadecanoic acid	<0.0400		0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:18	1
Perfluorohexanesulfonic acid	<0.0400		0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:18	1
Perfluorohexanoic acid	<0.0400		0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:18	1
Perfluorononanesulfonic acid	<0.0400		0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:18	1
Perfluorononanoic acid	<0.0400		0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:18	1
Perfluorooctadecanoic acid	<0.0400		0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:18	1
Perfluorooctanesulfonamide	<0.0400		0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:18	1
Perfluorooctanesulfonic acid	<0.0400		0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:18	1
Perfluorooctanoic acid	<0.0400		0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:18	1
Perfluoropentanesulfonic acid	<0.0400		0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:18	1
Perfluoropentanoic acid	<0.0400		0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:18	1
Perfluoropropanesulfonic acid	<0.0400		0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:18	1
Perfluorotetradecanoic acid	<0.0400		0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:18	1
Perfluorotridecanoic acid	<0.0400		0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:18	1
Perfluoroundecanoic acid	<0.0400		0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:18	1
PFECA A	<0.0400		0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:18	1
PFECA B	<0.0400		0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:18	1
PFECA F	<0.0400		0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:18	1
PFECA G	<0.0400		0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:18	1
PFMOAA	<0.0400		0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:18	1
PFO2HxA	<0.0400		0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:18	1
PFO3OA	<0.0400		0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:18	1
PFO4DA	<0.0400		0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:18	1
PMPA	<0.0400		0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:18	1
PPF Acid	<0.0400		0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:18	1
PS Acid	<0.0400		0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:18	1
R-EVE	<0.0400		0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:18	1
R-PSDA	<0.0400		0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:18	1
R-PSDCA	<0.0400		0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:18	1
TAF	<0.0400		0.120	0.0400	ng/g		05/10/22 10:06	05/12/22 12:18	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
M2-6:2 FTS	*347*	*5+	*10 - 200*	*05/10/22 10:06*	*05/12/22 12:18*	*1*
M2-8:2 FTS	*236*	*5+	*15 - 200*	*05/10/22 10:06*	*05/12/22 12:18*	*1*
13C2 PFTeDA	*101*		*10 - 169*	*05/10/22 10:06*	*05/12/22 12:18*	*1*
13C3 HFPO-DA	*130*		*10 - 169*	*05/10/22 10:06*	*05/12/22 12:18*	*1*
13C3 PFBS	*139*		*27 - 179*	*05/10/22 10:06*	*05/12/22 12:18*	*1*
13C4 PFBA	*120*		*28 - 153*	*05/10/22 10:06*	*05/12/22 12:18*	*1*
13C4 PFHpA	*100*		*10 - 178*	*05/10/22 10:06*	*05/12/22 12:18*	*1*
13C5 PFPeA	*122*		*24 - 161*	*05/10/22 10:06*	*05/12/22 12:18*	*1*
13C8 PFOA	*122*		*26 - 159*	*05/10/22 10:06*	*05/12/22 12:18*	*1*
13C8 PFOS	*152*		*41 - 154*	*05/10/22 10:06*	*05/12/22 12:18*	*1*
d5-NEtFOSAA	*147*		*10 - 193*	*05/10/22 10:06*	*05/12/22 12:18*	*1*
d7-N-MeFOSE-M	*98*		*10 - 179*	*05/10/22 10:06*	*05/12/22 12:18*	*1*
d9-N-EtFOSE-M	*89*		*10 - 185*	*05/10/22 10:06*	*05/12/22 12:18*	*1*
13C3 PFHxS	*135*		*24 - 171*	*05/10/22 10:06*	*05/12/22 12:18*	*1*
13C5 PFHxA	*110*		*10 - 174*	*05/10/22 10:06*	*05/12/22 12:18*	*1*
13C6 PFDA	*129*		*26 - 161*	*05/10/22 10:06*	*05/12/22 12:18*	*1*
13C7 PFUnA	*113*		*12 - 173*	*05/10/22 10:06*	*05/12/22 12:18*	*1*

Method: 537 TOP - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: MB 410-253462/2-B
Matrix: Solid
Analysis Batch: 254465

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 253462

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
d3-NMePFOSA	77		10 - 175	05/10/22 10:06	05/12/22 12:18	1
d5-NEtPFOSA	72		10 - 180	05/10/22 10:06	05/12/22 12:18	1
13C8 FOSA	100		14 - 163	05/10/22 10:06	05/12/22 12:18	1
13C2-PFDoDA	123		11 - 166	05/10/22 10:06	05/12/22 12:18	1
13C9 PFNA	134		26 - 165	05/10/22 10:06	05/12/22 12:18	1
13C2-2-Perfluorohexylethanoic acid	66		50 - 150	05/10/22 10:06	05/12/22 12:18	1
13C2-2-Perfluorooctylethanoic acid	90		50 - 150	05/10/22 10:06	05/12/22 12:18	1
13C2-2-Perfluorodecylethanoic acid	80		50 - 150	05/10/22 10:06	05/12/22 12:18	1
13C2-2H-Perfluoro-2-octenoic acid	113		50 - 150	05/10/22 10:06	05/12/22 12:18	1
13C2-2H-Perfluoro-2-decenoic acid	161	*5+	50 - 150	05/10/22 10:06	05/12/22 12:18	1
13C2-2H-Perfluoro-2-dodecenoic acid	170	*5+	50 - 150	05/10/22 10:06	05/12/22 12:18	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFHxA	101		10 - 137	05/10/22 10:06	05/12/22 12:18	1
13C4 PFOA	128		10 - 146	05/10/22 10:06	05/12/22 12:18	1
13C2 PFUnA	111		10 - 143	05/10/22 10:06	05/12/22 12:18	1

Lab Sample ID: LCS 410-253462/3-B
Matrix: Solid
Analysis Batch: 254465

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 253462

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
10:2 FTCA	10.0	15.01	*+	ng/g		150	70 - 130
10:2 FTS	9.64	9.544		ng/g		99	46 - 143
10:2 FTUCA	10.0	5.156	*-	ng/g		52	70 - 130
11Cl-PF3OUdS	9.30	7.140		ng/g		77	55 - 135
3:3 FTCA	10.0	9.301		ng/g		93	70 - 130
4:2 Fluorotelomer sulfonic acid	9.34	5.937		ng/g		64	58 - 131
5:3 FTCA	10.0	7.645		ng/g		76	70 - 130
6:2 Fluorotelomer sulfonic acid	9.48	8.032	I	ng/g		85	59 - 135
6:2 FTCA	10.0	15.15	*+	ng/g		152	70 - 130
6:2 FTUCA	10.0	6.489	*-	ng/g		65	70 - 130
7:3 FTCA	10.0	10.91		ng/g		109	70 - 130
8:2 Fluorotelomer sulfonic acid	9.58	7.579		ng/g		79	55 - 133
8:2 FTCA	10.0	15.10	*+	ng/g		151	70 - 130
8:2 FTUCA	10.0	5.904	*-	ng/g		59	70 - 130
9Cl-PF3ONS	9.30	7.672		ng/g		82	62 - 130
DONA	9.45	5.776		ng/g		61	57 - 137
EVE Acid	10.0	10.86		ng/g		109	70 - 130
HFPODA	10.0	8.060		ng/g		81	49 - 135
Hydro-EVE Acid	10.0	13.06	*+	ng/g		131	70 - 130
Hydrolyzed PSDA	10.0	6.717	*-	ng/g		67	70 - 130
Hydro-PS Acid	10.0	8.772		ng/g		88	70 - 130
MTP	10.0	13.00		ng/g		130	70 - 130
NEtFOSA	10.0	8.087		ng/g		81	60 - 123
NEtFOSAA	10.0	7.654		ng/g		77	57 - 127
NEtFOSE	10.0	7.925		ng/g		79	60 - 126
NMeFOSA	10.0	9.111		ng/g		91	60 - 129

Method: 537 TOP - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCS 410-253462/3-B
Matrix: Solid
Analysis Batch: 254465

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 253462

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
NMeFOSAA	10.0	7.897		ng/g		79	60 - 134
NMeFOSE	10.0	8.663		ng/g		87	60 - 130
NVHOS	10.0	9.059		ng/g		91	70 - 130
PEPA	10.0	13.58	*+	ng/g		136	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid	8.90	8.566		ng/g		96	70 - 130
Perfluoro-4-ethylcyclohexanesulfonic acid	9.22	7.650		ng/g		83	70 - 130
Perfluorobutanesulfonic acid	8.85	8.515		ng/g		96	54 - 130
Perfluorobutanoic acid	10.0	10.17		ng/g		102	60 - 128
Perfluorodecanesulfonic acid	9.64	7.421		ng/g		77	57 - 132
Perfluorodecanoic acid	10.0	10.11		ng/g		101	56 - 133
Perfluorododecanesulfonic acid	9.68	7.025		ng/g		73	38 - 145
Perfluorododecanoic acid	10.0	10.03		ng/g		100	60 - 135
Perfluoroheptanesulfonic acid	9.52	8.841		ng/g		93	59 - 132
Perfluoroheptanoic acid	10.0	8.063		ng/g		81	59 - 137
Perfluorohexadecanoic acid	10.0	11.37		ng/g		114	38 - 147
Perfluorohexanesulfonic acid	9.12	7.780		ng/g		85	59 - 129
Perfluorohexanoic acid	10.0	10.00		ng/g		100	59 - 132
Perfluorononanesulfonic acid	9.60	7.595		ng/g		79	60 - 132
Perfluorononanoic acid	10.0	9.804		ng/g		98	61 - 134
Perfluorooctadecanoic acid	10.0	8.622		ng/g		86	16 - 160
Perfluorooctanesulfonamide	10.0	8.481		ng/g		85	47 - 149
Perfluorooctanesulfonic acid	9.26	7.131		ng/g		77	61 - 126
Perfluorooctanoic acid	10.0	10.61		ng/g		106	59 - 131
Perfluoropentanesulfonic acid	9.38	9.043		ng/g		96	57 - 133
Perfluoropentanoic acid	10.0	9.226		ng/g		92	58 - 134
Perfluoropropanesulfonic acid	9.16	14.90	*+	ng/g		163	70 - 130
Perfluorotetradecanoic acid	10.0	9.796		ng/g		98	62 - 134
Perfluorotridecanoic acid	10.0	8.489		ng/g		85	53 - 143
Perfluoroundecanoic acid	10.0	11.62		ng/g		116	60 - 134
PFECA A	10.0	7.758		ng/g		78	70 - 130
PFECA B	10.0	6.389	*-	ng/g		64	70 - 130
PFECA F	10.0	13.42	*+	ng/g		134	70 - 130
PFECA G	10.0	11.06		ng/g		111	70 - 130
PFMOAA	10.0	14.27	*+	ng/g		143	70 - 130
PFO2HxA	10.0	15.15	*+	ng/g		152	70 - 130
PFO3OA	10.0	13.22	*+	ng/g		132	70 - 130
PFO4DA	10.0	16.24	*+	ng/g		162	70 - 130
PMPA	10.0	14.70	*+	ng/g		147	70 - 130
PPF Acid	10.0	13.46	*+	ng/g		135	70 - 130
PS Acid	10.0	5.698	*-	ng/g		57	70 - 130
R-EVE	10.0	7.937		ng/g		79	70 - 130
R-PSDA	10.0	5.532	*-	ng/g		55	70 - 130
R-PSDCA	10.0	8.890		ng/g		89	70 - 130
TAF	10.0	15.71	*+	ng/g		157	70 - 130

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
M2-6:2 FTS	*211*	**5+*	*10 - 200*

Method: 537 TOP - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCS 410-253462/3-B
Matrix: Solid
Analysis Batch: 254465

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 253462

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
M2-8:2 FTS	167		15 - 200
13C2 PFTeDA	86		10 - 169
13C3 HFPO-DA	107		10 - 169
13C3 PFBS	166		27 - 179
13C4 PFBA	99		28 - 153
13C4 PFHpA	103		10 - 178
13C5 PFPeA	136		24 - 161
13C8 PFOA	105		26 - 159
13C8 PFOS	117		41 - 154
d5-NEtFOSAA	109		10 - 193
d7-N-MeFOSE-M	81		10 - 179
d9-N-EtFOSE-M	79		10 - 185
13C3 PFHxS	114		24 - 171
13C5 PFHxA	90		10 - 174
13C6 PFDA	104		26 - 161
13C7 PFUnA	87		12 - 173
d3-NMePFOSA	79		10 - 175
d5-NEtPFOSA	70		10 - 180
13C8 FOSA	79		14 - 163
13C2-PFDoDA	95		11 - 166
13C9 PFNA	99		26 - 165
13C2-2-Perfluorohexylethanoic acid	72		50 - 150
13C2-2-Perfluorooctylethanoic acid	57		50 - 150
13C2-2-Perfluorodecylethanoic acid	63		50 - 150
13C2-2H-Perfluoro-2-octenoic acid	116		50 - 150
13C2-2H-Perfluoro-2-decenoic acid	96		50 - 150
13C2-2H-Perfluoro-2-dodecenoic acid	118		50 - 150

Surrogate	LCS %Recovery	LCS Qualifier	Limits
13C2 PFHxA	86		10 - 137
13C4 PFOA	120		10 - 146
13C2 PFUnA	95		10 - 143

Lab Sample ID: LCSD 410-253462/4-B
Matrix: Solid
Analysis Batch: 254465

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 253462

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
10:2 FTCA			10.0	16.87	*+	ng/g		169	70 - 130	12	30
10:2 FTS			9.64	10.17		ng/g		105	46 - 143	6	30
10:2 FTUCA			10.0	5.480	*-	ng/g		55	70 - 130	6	30
11Cl-PF3OUdS			9.30	7.470		ng/g		80	55 - 135	5	30
3:3 FTCA			10.0	9.508		ng/g		95	70 - 130	2	30
4:2 Fluorotelomer sulfonic acid			9.34	7.425		ng/g		79	58 - 131	22	30

Method: 537 TOP - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCSD 410-253462/4-B
Matrix: Solid
Analysis Batch: 254465

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 253462

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
5:3 FTCA	10.0	7.768		ng/g		78	70 - 130	2	30
6:2 Fluorotelomer sulfonic acid	9.48	8.488	I	ng/g		90	59 - 135	6	30
6:2 FTCA	10.0	13.97	*+	ng/g		140	70 - 130	8	30
6:2 FTUCA	10.0	6.303	*-	ng/g		63	70 - 130	3	30
7:3 FTCA	10.0	9.743		ng/g		97	70 - 130	11	30
8:2 Fluorotelomer sulfonic acid	9.58	8.239		ng/g		86	55 - 133	8	30
8:2 FTCA	10.0	14.69	*+	ng/g		147	70 - 130	3	30
8:2 FTUCA	10.0	6.229	*-	ng/g		62	70 - 130	5	30
9Cl-PF3ONS	9.30	7.640		ng/g		82	62 - 130	0	30
DONA	9.45	5.386		ng/g		57	57 - 137	7	30
EVE Acid	10.0	14.12	*+	ng/g		141	70 - 130	26	30
HFPODA	10.0	8.845		ng/g		88	49 - 135	9	30
Hydro-EVE Acid	10.0	12.94		ng/g		129	70 - 130	1	30
Hydrolyzed PSDA	10.0	6.384	*-	ng/g		64	70 - 130	5	30
Hydro-PS Acid	10.0	8.841		ng/g		88	70 - 130	1	30
MTP	10.0	13.30	*+	ng/g		133	70 - 130	2	30
NEtFOSA	10.0	7.704		ng/g		77	60 - 123	5	30
NEtFOSAA	10.0	8.283	E	ng/g		83	57 - 127	8	30
NEtFOSE	10.0	7.731		ng/g		77	60 - 126	2	30
NMeFOSA	10.0	9.454		ng/g		95	60 - 129	4	30
NMeFOSAA	10.0	8.254	E	ng/g		83	60 - 134	4	30
NMeFOSE	10.0	9.294		ng/g		93	60 - 130	7	30
NVHOS	10.0	9.239		ng/g		92	70 - 130	2	30
PEPA	10.0	13.65	*+	ng/g		137	70 - 130	1	30
Perfluoro (2-ethoxyethane) sulfonic acid	8.90	8.762		ng/g		98	70 - 130	2	30
Perfluoro-4-ethylcyclohexanesulfonic acid	9.22	8.382		ng/g		91	70 - 130	9	30
Perfluorobutanesulfonic acid	8.85	8.411		ng/g		95	54 - 130	1	30
Perfluorobutanoic acid	10.0	10.43		ng/g		104	60 - 128	3	30
Perfluorodecanesulfonic acid	9.64	7.418		ng/g		77	57 - 132	0	30
Perfluorodecanoic acid	10.0	9.594		ng/g		96	56 - 133	5	30
Perfluorododecanesulfonic acid	9.68	7.530		ng/g		78	38 - 145	7	30
Perfluorododecanoic acid	10.0	9.921		ng/g		99	60 - 135	1	30
Perfluoroheptanesulfonic acid	9.52	9.169		ng/g		96	59 - 132	4	30
Perfluoroheptanoic acid	10.0	8.460		ng/g		85	59 - 137	5	30
Perfluorohexadecanoic acid	10.0	11.32		ng/g		113	38 - 147	0	30
Perfluorohexanesulfonic acid	9.12	7.925		ng/g		87	59 - 129	2	30
Perfluorohexanoic acid	10.0	9.946		ng/g		99	59 - 132	1	30
Perfluorononanesulfonic acid	9.60	8.222		ng/g		86	60 - 132	8	30
Perfluorononanoic acid	10.0	10.35		ng/g		104	61 - 134	5	30
Perfluorooctadecanoic acid	10.0	9.282		ng/g		93	16 - 160	7	30
Perfluorooctanesulfonamide	10.0	8.166		ng/g		82	47 - 149	4	30
Perfluorooctanesulfonic acid	9.26	7.469		ng/g		81	61 - 126	5	30
Perfluorooctanoic acid	10.0	10.79		ng/g		108	59 - 131	2	30
Perfluoropentanesulfonic acid	9.38	9.020		ng/g		96	57 - 133	0	30
Perfluoropentanoic acid	10.0	9.793		ng/g		98	58 - 134	6	30
Perfluoropropanesulfonic acid	9.16	15.38	*+	ng/g		168	70 - 130	3	30
Perfluorotetradecanoic acid	10.0	10.02		ng/g		100	62 - 134	2	30

Method: 537 TOP - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCSD 410-253462/4-B
Matrix: Solid
Analysis Batch: 254465

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 253462

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorotridecanoic acid			10.0	9.078		ng/g		91	53 - 143	7	30
Perfluoroundecanoic acid			10.0	11.08		ng/g		111	60 - 134	5	30
PFECA A			10.0	8.062		ng/g		81	70 - 130	4	30
PFECA B			10.0	6.949	*-	ng/g		69	70 - 130	8	30
PFECA F			10.0	13.90	*+	ng/g		139	70 - 130	3	30
PFECA G			10.0	10.32		ng/g		103	70 - 130	7	30
PFMOAA			10.0	15.01	*+	ng/g		150	70 - 130	5	30
PFO2HxA			10.0	15.62	*+	ng/g		156	70 - 130	3	30
PFO3OA			10.0	15.05	*+	ng/g		150	70 - 130	13	30
PFO4DA			10.0	17.34	*+	ng/g		173	70 - 130	7	30
PMPA			10.0	15.34	*+	ng/g		153	70 - 130	4	30
PPF Acid			10.0	14.36	*+	ng/g		144	70 - 130	6	30
PS Acid			10.0	6.849	*-	ng/g		68	70 - 130	18	30
R-EVE			10.0	8.480	E	ng/g		85	70 - 130	7	30
R-PSDA			10.0	5.838	*-	ng/g		58	70 - 130	5	30
R-PSDCA			10.0	8.997		ng/g		90	70 - 130	1	30
TAF			10.0	16.01	*+	ng/g		160	70 - 130	2	30

Isotope Dilution	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
M2-6:2 FTS	*221*	*5+	*10 - 200*
M2-8:2 FTS	*176*		*15 - 200*
13C2 PFTeDA	*110*		*10 - 169*
13C3 HFPO-DA	*130*		*10 - 169*
13C3 PFBS	*205*	*5+	*27 - 179*
13C4 PFBA	*122*		*28 - 153*
13C4 PFHpA	*129*		*10 - 178*
13C5 PFPeA	*174*	*5+	*24 - 161*
13C8 PFOA	*131*		*26 - 159*
13C8 PFOS	*153*		*41 - 154*
d5-NEtFOSAA	*135*		*10 - 193*
d7-N-MeFOSE-M	*104*		*10 - 179*
d9-N-EtFOSE-M	*105*		*10 - 185*
13C3 PFHxS	*134*		*24 - 171*
13C5 PFHxA	*122*		*10 - 174*
13C6 PFDA	*140*		*26 - 161*
13C7 PFUnA	*114*		*12 - 173*
d3-NMePFOSA	*86*		*10 - 175*
d5-NEtPFOSA	*79*		*10 - 180*
13C8 FOSA	*111*		*14 - 163*
13C2-PFDoDA	*121*		*11 - 166*
13C9 PFNA	*137*		*26 - 165*
13C2-2-Perfluorohexylethanoic acid	*95*		*50 - 150*
13C2-2-Perfluorooctylethanoic acid	*82*		*50 - 150*
13C2-2-Perfluorodecylethanoic acid	*78*		*50 - 150*
13C2-2H-Perfluoro-2-octenoic acid	*148*		*50 - 150*

Method: 537 TOP - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCSD 410-253462/4-B
Matrix: Solid
Analysis Batch: 254465

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 253462

Isotope Dilution	LCSD %Recovery	LCSD Qualifier	Limits
13C2-2H-Perfluoro-2-decenoic acid	118		50 - 150
13C2-2H-Perfluoro-2-dodecenoic acid	151	*5+	50 - 150

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
13C2 PFHxA	115		10 - 137
13C4 PFOA	137		10 - 146
13C2 PFUnA	123		10 - 143

LCMS

Prep Batch: 240479

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-75808-2	EB-001	Total/NA	Water	537 IDA	
410-76735-2	EB-002	Total/NA	Water	537 IDA	
410-76903-4	EB 003	Total/NA	Water	537 IDA	
MB 410-240479/1-A	Method Blank	Total/NA	Water	537 IDA	
LCS 410-240479/3-A	Lab Control Sample	Total/NA	Water	537 IDA	
LCSD 410-240479/4-A	Lab Control Sample Dup	Total/NA	Water	537 IDA	

Prep Batch: 240631

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-75808-1	Carpet-001	Pre-Treatment	Solid	TOP Pre-Prep	
410-76735-1	PP Pad-001	Pre-Treatment	Solid	TOP Pre-Prep	
410-76903-1 - DL	Safeshell #1-3	Pre-Treatment	Solid	TOP Pre-Prep	
410-76903-1	Safeshell #1-3	Pre-Treatment	Solid	TOP Pre-Prep	
MB 410-240631/1-B	Method Blank	Total/NA	Solid	TOP Pre-Prep	
LCS 410-240631/2-B	Lab Control Sample	Total/NA	Solid	TOP Pre-Prep	
LCSD 410-240631/3-B	Lab Control Sample Dup	Total/NA	Solid	TOP Pre-Prep	

Cleanup Batch: 241190

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-75808-1	Carpet-001	Pre-Treatment	Solid	Extract Aliquot	240631
410-76735-1	PP Pad-001	Pre-Treatment	Solid	Extract Aliquot	240631
410-76903-1 - DL	Safeshell #1-3	Pre-Treatment	Solid	Extract Aliquot	240631
410-76903-1	Safeshell #1-3	Pre-Treatment	Solid	Extract Aliquot	240631
MB 410-240631/1-B	Method Blank	Total/NA	Solid	Extract Aliquot	240631
LCS 410-240631/2-B	Lab Control Sample	Total/NA	Solid	Extract Aliquot	240631
LCSD 410-240631/3-B	Lab Control Sample Dup	Total/NA	Solid	Extract Aliquot	240631

Analysis Batch: 241603

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-75808-1	Carpet-001	Pre-Treatment	Solid	537 IDA	241190
410-76735-1	PP Pad-001	Pre-Treatment	Solid	537 IDA	241190
410-76903-1	Safeshell #1-3	Pre-Treatment	Solid	537 IDA	241190
410-76903-1 - DL	Safeshell #1-3	Pre-Treatment	Solid	537 IDA	241190
MB 410-240631/1-B	Method Blank	Total/NA	Solid	537 IDA	241190
LCS 410-240631/2-B	Lab Control Sample	Total/NA	Solid	537 IDA	241190
LCSD 410-240631/3-B	Lab Control Sample Dup	Total/NA	Solid	537 IDA	241190

Analysis Batch: 250678

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-75808-2	EB-001	Total/NA	Water	537 IDA	240479
410-76735-2	EB-002	Total/NA	Water	537 IDA	240479
MB 410-240479/1-A	Method Blank	Total/NA	Water	537 IDA	240479

Analysis Batch: 251038

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 410-240479/3-A	Lab Control Sample	Total/NA	Water	537 IDA	240479
LCSD 410-240479/4-A	Lab Control Sample Dup	Total/NA	Water	537 IDA	240479

Analysis Batch: 251322

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-76903-4	EB 003	Total/NA	Water	537 IDA	240479

LCMS

Prep Batch: 253462

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-75808-1	Carpet-001	Post-Treatment	Solid	TOP Post-Prep	
410-75808-1 - RA	Carpet-001	Post-Treatment	Solid	TOP Post-Prep	
410-76735-1	PP Pad-001	Post-Treatment	Solid	TOP Post-Prep	
410-76903-1 - RA	Safeshell #1-3	Post-Treatment	Solid	TOP Post-Prep	
410-76903-1	Safeshell #1-3	Post-Treatment	Solid	TOP Post-Prep	
MB 410-253462/1-B	Method Blank	Total/NA	Solid	TOP Post-Prep	
MB 410-253462/2-B	Method Blank	Total/NA	Solid	TOP Post-Prep	
LCS 410-253462/3-B	Lab Control Sample	Total/NA	Solid	TOP Post-Prep	
LCSD 410-253462/4-B	Lab Control Sample Dup	Total/NA	Solid	TOP Post-Prep	

Cleanup Batch: 254035

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-75808-1 - RA	Carpet-001	Post-Treatment	Solid	Extract Aliquot	253462
410-75808-1	Carpet-001	Post-Treatment	Solid	Extract Aliquot	253462
410-76735-1	PP Pad-001	Post-Treatment	Solid	Extract Aliquot	253462
410-76903-1	Safeshell #1-3	Post-Treatment	Solid	Extract Aliquot	253462
410-76903-1 - RA	Safeshell #1-3	Post-Treatment	Solid	Extract Aliquot	253462
MB 410-253462/1-B	Method Blank	Total/NA	Solid	Extract Aliquot	253462
MB 410-253462/2-B	Method Blank	Total/NA	Solid	Extract Aliquot	253462
LCS 410-253462/3-B	Lab Control Sample	Total/NA	Solid	Extract Aliquot	253462
LCSD 410-253462/4-B	Lab Control Sample Dup	Total/NA	Solid	Extract Aliquot	253462

Analysis Batch: 254465

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-75808-1	Carpet-001	Post-Treatment	Solid	537 TOP	254035
410-75808-1 - RA	Carpet-001	Post-Treatment	Solid	537 TOP	254035
410-76735-1	PP Pad-001	Post-Treatment	Solid	537 TOP	254035
410-76903-1	Safeshell #1-3	Post-Treatment	Solid	537 TOP	254035
410-76903-1 - RA	Safeshell #1-3	Post-Treatment	Solid	537 TOP	254035
MB 410-253462/1-B	Method Blank	Total/NA	Solid	537 TOP	254035
MB 410-253462/2-B	Method Blank	Total/NA	Solid	537 TOP	254035
LCS 410-253462/3-B	Lab Control Sample	Total/NA	Solid	537 TOP	254035
LCSD 410-253462/4-B	Lab Control Sample Dup	Total/NA	Solid	537 TOP	254035

Analysis Batch: 255026

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-75808-1	Carpet-001	Post-Treatment	Solid	Total PFCA-Sum	
410-75808-1	Carpet-001	Pre-Treatment	Solid	Total PFCA-Sum	
410-76735-1	PP Pad-001	Post-Treatment	Solid	Total PFCA-Sum	
410-76735-1	PP Pad-001	Pre-Treatment	Solid	Total PFCA-Sum	
410-76903-1	Safeshell #1-3	Post-Treatment	Solid	Total PFCA-Sum	
410-76903-1	Safeshell #1-3	Pre-Treatment	Solid	Total PFCA-Sum	

Analysis Batch: 255030

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-75808-1	Carpet-001	Total/NA	Solid	Total PFCA-Dif	
410-76735-1	PP Pad-001	Total/NA	Solid	Total PFCA-Dif	
410-76903-1	Safeshell #1-3	Total/NA	Solid	Total PFCA-Dif	

Client Sample ID: Carpet-001

Lab Sample ID: 410-75808-1

Date Collected: 03/08/22 17:12

Matrix: Solid

Date Received: 03/11/22 10:17

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Pre-Treatment	Prep	TOP Pre-Prep			240631	04/04/22 11:19	S7AC	ELLE
Pre-Treatment	Cleanup	Extract Aliquot			241190	04/05/22 12:39	S7AC	ELLE
Pre-Treatment	Analysis	537 IDA		1	241603	04/06/22 12:18	UUV6	ELLE
Post-Treatment	Prep	TOP Post-Prep			253462	05/10/22 10:06	S7AC	ELLE
Post-Treatment	Cleanup	Extract Aliquot			254035	05/11/22 11:49	S7AC	ELLE
Post-Treatment	Analysis	537 TOP		1	254465	05/12/22 12:51	MT26	ELLE
Post-Treatment	Prep	TOP Post-Prep	RA		253462	05/10/22 10:06	S7AC	ELLE
Post-Treatment	Cleanup	Extract Aliquot	RA		254035	05/11/22 11:49	S7AC	ELLE
Post-Treatment	Analysis	537 TOP	RA	1	254465	05/12/22 13:02	MT26	ELLE
Total/NA	Analysis	Total PFCA-Dif		1	255030	05/13/22 13:16	MT26	ELLE
Post-Treatment	Analysis	Total PFCA-Sum		1	255026	05/13/22 13:14	MT26	ELLE
Pre-Treatment	Analysis	Total PFCA-Sum		1	255026	05/13/22 13:14	MT26	ELLE

Client Sample ID: EB-001

Lab Sample ID: 410-75808-2

Date Collected: 03/21/22 13:53

Matrix: Water

Date Received: 03/21/22 14:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537 IDA			240479	04/04/22 06:59	RC3V	ELLE
Total/NA	Analysis	537 IDA		1	250678	05/03/22 01:18	MT26	ELLE

Client Sample ID: PP Pad-001

Lab Sample ID: 410-76735-1

Date Collected: 03/16/22 13:30

Matrix: Solid

Date Received: 03/18/22 08:41

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Pre-Treatment	Prep	TOP Pre-Prep			240631	04/04/22 11:19	S7AC	ELLE
Pre-Treatment	Cleanup	Extract Aliquot			241190	04/05/22 12:39	S7AC	ELLE
Pre-Treatment	Analysis	537 IDA		1	241603	04/06/22 12:29	UUV6	ELLE
Post-Treatment	Prep	TOP Post-Prep			253462	05/10/22 10:06	S7AC	ELLE
Post-Treatment	Cleanup	Extract Aliquot			254035	05/11/22 11:49	S7AC	ELLE
Post-Treatment	Analysis	537 TOP		1	254465	05/12/22 13:13	MT26	ELLE
Total/NA	Analysis	Total PFCA-Dif		1	255030	05/13/22 13:16	MT26	ELLE
Post-Treatment	Analysis	Total PFCA-Sum		1	255026	05/13/22 13:14	MT26	ELLE
Pre-Treatment	Analysis	Total PFCA-Sum		1	255026	05/13/22 13:14	MT26	ELLE

Client Sample ID: EB-002

Lab Sample ID: 410-76735-2

Date Collected: 03/21/22 13:53

Matrix: Water

Date Received: 03/21/22 14:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537 IDA			240479	04/04/22 06:59	RC3V	ELLE
Total/NA	Analysis	537 IDA		1	250678	05/03/22 01:29	MT26	ELLE

Lab Chronicle

Client: TRC Companies, Inc
Project/Site: Synthetic Turf

Job ID: 410-75808-1

Client Sample ID: Safeshell #1-3

Lab Sample ID: 410-76903-1

Date Collected: 03/09/22 15:00

Matrix: Solid

Date Received: 03/21/22 12:09

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Pre-Treatment	Prep	TOP Pre-Prep			240631	04/04/22 11:19	S7AC	ELLE
Pre-Treatment	Cleanup	Extract Aliquot			241190	04/05/22 12:39	S7AC	ELLE
Pre-Treatment	Analysis	537 IDA		1	241603	04/06/22 20:59	UUV6	ELLE
Pre-Treatment	Prep	TOP Pre-Prep	DL		240631	04/04/22 11:19	S7AC	ELLE
Pre-Treatment	Cleanup	Extract Aliquot	DL		241190	04/05/22 12:39	S7AC	ELLE
Pre-Treatment	Analysis	537 IDA	DL	10	241603	04/06/22 21:10	UUV6	ELLE
Post-Treatment	Prep	TOP Post-Prep			253462	05/10/22 10:06	S7AC	ELLE
Post-Treatment	Cleanup	Extract Aliquot			254035	05/11/22 11:49	S7AC	ELLE
Post-Treatment	Analysis	537 TOP		1	254465	05/12/22 13:24	MT26	ELLE
Post-Treatment	Prep	TOP Post-Prep	RA		253462	05/10/22 10:06	S7AC	ELLE
Post-Treatment	Cleanup	Extract Aliquot	RA		254035	05/11/22 11:49	S7AC	ELLE
Post-Treatment	Analysis	537 TOP	RA	1	254465	05/12/22 13:35	MT26	ELLE
Total/NA	Analysis	Total PFCA-Dif		1	255030	05/13/22 13:16	MT26	ELLE
Post-Treatment	Analysis	Total PFCA-Sum		1	255026	05/13/22 13:14	MT26	ELLE
Pre-Treatment	Analysis	Total PFCA-Sum		1	255026	05/13/22 13:14	MT26	ELLE

Client Sample ID: EB 003

Lab Sample ID: 410-76903-4

Date Collected: 03/22/22 00:00

Matrix: Water

Date Received: 03/21/22 12:09

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537 IDA			240479	04/04/22 06:59	RC3V	ELLE
Total/NA	Analysis	537 IDA		1	251322	05/05/22 08:05	UCD3	ELLE

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Non-targeted analysis (NTA) of turf samples by qToF

Analytical procedure for PFAS analysis

UPLC Methods

PFAS were analyzed in negative ionization mode using a UPLC-QToF-HRMS (AB Sciex X500R QTOF system) equipped with a Phenomenex Gemini C18 column (3 mm x 50 mm, 3 µm) in TOF MSMS and information dependent acquisition (IDA) mode. A gradient solvent program was operated with 20 mM sodium acetate in MilliQ water (solution A) and 20mM sodium acetate in LC-MS grade methanol having 0.5% water (solution B). The details of the gradient method are provided in Table S2. Signals were acquired between the 0.1 and 11.5 minutes with total run time of 12 minutes.

Table 1. Gradient solvent program for the UPLC

Time (min)	Flowrate (mL/min)	%A	%B
0.0	0.5	95	5
0.5	0.5	95	5
1.5	0.5	40	60
3.0	0.5	5	95
9.0	0.5	5	95
9.2	0.5	95	5
12.0	0.5	95	5

Mass spectroscopy method

Three samples were run in negative and positive mode collision energy in IDA mode. Sample's analytes were fragmented at 25V (±10V) in both TOF MS and TOF MSMS. Source and gas parameters were kept constant, where ion source gas 1 and 2 kept at 30 psi, curtain gas 25 psi, CAD gas 7 psi, temperature 300°C, spray voltage and delustering potential (DP) were -4100 V and

-80V (DP spread 20 V). For other IDA criteria, maximum candidate ions 10, intensity threshold exceeds 200 cps and dynamic background subtraction were used. Mass range was set at 100 to 1000 Da with accumulation time 0.08s and 0.25s in MS and MSMS, respectively.

Non-targeted analysis (NTA)

Data were processed with SCIEX LibraryView deconvolution software. This software extracts the raw chromatograms across a defined mass range from 0-5000AMU and examines peaks of interest utilizing exact mass and MS/MS fragmentation. The peaks are compared to the 5070 unique PFAS compounds from Fluoros 2.5, in house ClPFPECA (Chlorofluoro ether carboxylic acids), Fluorochemical_HR_MS and Labeled PFAS library where the software algorithm assigns possible matches to each peak, or feature. The features were then evaluated to confirm ample signal-to-noise as well as confirming the compound fit to the library match. The precursor mass tolerance ±0.2 Da and fragment mass tolerance ±0.1 Da was used. The reported results include only peaks with a signal-to-noise greater than 10:1 and that have a library confidence of less than 5ppm error. These are the recommended settings provided by the manufacturer. One thing the software cannot account for are isomers. For the molecular formula determination C_{0-20}, H_{0-5}, F_{0-60}, N_{0-1}, O_{0-16} and S_{0-2} was used. Post data generation, a filtering algorithm was used to reduce the m/z signals of the blank (methanol) from each sample with a filter of mass error of 5 ppm and RT window of 1 min.

Results

Results are presented in separate file for each sample and labeled as 240_156265_A-1-A_Pos, 240_156265_A-1-A_Neg and 240_156265_A-1-A_Neg_lowCE for data acquired in positive, negative and negative ionization of low CE, respectively.

Compiled data for all the samples are reported in excel files “NTA_data” and “NTA_data_5ppm” for all the screened ions and unique ions with 5 ppm mass error, respectively.

Accreditation/Certification Summary

Client: TRC Companies, Inc
Project/Site: Synthetic Turf

Job ID: 410-75808-1

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

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

Authority	Program	Identification Number	Expiration Date
Massachusetts	State	M-PA009	06-30-22

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
537 IDA	537 IDA	Water	10:2 FTCA
537 IDA	537 IDA	Water	10:2 FTS
537 IDA	537 IDA	Water	10:2 FTUCA
537 IDA	537 IDA	Water	11Cl-PF3OUdS
537 IDA	537 IDA	Water	3:3 FTCA
537 IDA	537 IDA	Water	4:2 Fluorotelomer sulfonic acid
537 IDA	537 IDA	Water	5:3 FTCA
537 IDA	537 IDA	Water	6:2 Fluorotelomer sulfonic acid
537 IDA	537 IDA	Water	6:2 FTCA
537 IDA	537 IDA	Water	6:2 FTUCA
537 IDA	537 IDA	Water	7:3 FTCA
537 IDA	537 IDA	Water	8:2 Fluorotelomer sulfonic acid
537 IDA	537 IDA	Water	8:2 FTCA
537 IDA	537 IDA	Water	8:2 FTUCA
537 IDA	537 IDA	Water	9Cl-PF3ONS
537 IDA	537 IDA	Water	DONA
537 IDA	537 IDA	Water	EVE Acid
537 IDA	537 IDA	Water	HFPODA
537 IDA	537 IDA	Water	Hydro-EVE Acid
537 IDA	537 IDA	Water	Hydrolyzed PSDA
537 IDA	537 IDA	Water	Hydro-PS Acid
537 IDA	537 IDA	Water	MTP
537 IDA	537 IDA	Water	NEtFOSA
537 IDA	537 IDA	Water	NEtFOSAA
537 IDA	537 IDA	Water	NEtFOSE
537 IDA	537 IDA	Water	NMeFOSA
537 IDA	537 IDA	Water	NMeFOSAA
537 IDA	537 IDA	Water	NMeFOSE
537 IDA	537 IDA	Water	NVHOS
537 IDA	537 IDA	Water	PEPA
537 IDA	537 IDA	Water	Perfluoro (2-ethoxyethane) sulfonic acid
537 IDA	537 IDA	Water	Perfluoro-4-ethylcyclohexanesulfonic acid
537 IDA	537 IDA	Water	Perfluorobutanesulfonic acid
537 IDA	537 IDA	Water	Perfluorobutanoic acid
537 IDA	537 IDA	Water	Perfluorodecanesulfonic acid
537 IDA	537 IDA	Water	Perfluorodecanoic acid
537 IDA	537 IDA	Water	Perfluorododecanesulfonic acid
537 IDA	537 IDA	Water	Perfluorododecanoic acid
537 IDA	537 IDA	Water	Perfluoroheptanesulfonic acid
537 IDA	537 IDA	Water	Perfluoroheptanoic acid
537 IDA	537 IDA	Water	Perfluorohexadecanoic acid
537 IDA	537 IDA	Water	Perfluorohexanesulfonic acid
537 IDA	537 IDA	Water	Perfluorohexanoic acid
537 IDA	537 IDA	Water	Perfluorononanesulfonic acid
537 IDA	537 IDA	Water	Perfluorononanoic acid

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC (Continued)

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

Authority	Program	Identification Number	Expiration Date

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
537 IDA	537 IDA	Water	Perfluorooctadecanoic acid
537 IDA	537 IDA	Water	Perfluorooctanesulfonamide
537 IDA	537 IDA	Water	Perfluorooctanesulfonic acid
537 IDA	537 IDA	Water	Perfluorooctanoic acid
537 IDA	537 IDA	Water	Perfluoropentanesulfonic acid
537 IDA	537 IDA	Water	Perfluoropentanoic acid
537 IDA	537 IDA	Water	Perfluoropropanesulfonic acid
537 IDA	537 IDA	Water	Perfluorotetradecanoic acid
537 IDA	537 IDA	Water	Perfluorotridecanoic acid
537 IDA	537 IDA	Water	Perfluoroundecanoic acid
537 IDA	537 IDA	Water	PFECA A
537 IDA	537 IDA	Water	PFECA B
537 IDA	537 IDA	Water	PFECA F
537 IDA	537 IDA	Water	PFECA G
537 IDA	537 IDA	Water	PFMOAA
537 IDA	537 IDA	Water	PFO2HxA
537 IDA	537 IDA	Water	PFO3OA
537 IDA	537 IDA	Water	PFO4DA
537 IDA	537 IDA	Water	PMPA
537 IDA	537 IDA	Water	PPF Acid
537 IDA	537 IDA	Water	PS Acid
537 IDA	537 IDA	Water	R-EVE
537 IDA	537 IDA	Water	R-PSDA
537 IDA	537 IDA	Water	R-PSDCA
537 IDA	537 IDA	Water	TAF
537 IDA	TOP Pre-Prep	Solid	10:2 FTCA
537 IDA	TOP Pre-Prep	Solid	10:2 FTS
537 IDA	TOP Pre-Prep	Solid	10:2 FTUCA
537 IDA	TOP Pre-Prep	Solid	11Cl-PF3OUdS
537 IDA	TOP Pre-Prep	Solid	3:3 FTCA
537 IDA	TOP Pre-Prep	Solid	4:2 Fluorotelomer sulfonic acid
537 IDA	TOP Pre-Prep	Solid	5:3 FTCA
537 IDA	TOP Pre-Prep	Solid	6:2 Fluorotelomer sulfonic acid
537 IDA	TOP Pre-Prep	Solid	6:2 FTCA
537 IDA	TOP Pre-Prep	Solid	6:2 FTUCA
537 IDA	TOP Pre-Prep	Solid	7:3 FTCA
537 IDA	TOP Pre-Prep	Solid	8:2 Fluorotelomer sulfonic acid
537 IDA	TOP Pre-Prep	Solid	8:2 FTCA
537 IDA	TOP Pre-Prep	Solid	8:2 FTUCA
537 IDA	TOP Pre-Prep	Solid	9Cl-PF3ONS
537 IDA	TOP Pre-Prep	Solid	DONA
537 IDA	TOP Pre-Prep	Solid	EVE Acid
537 IDA	TOP Pre-Prep	Solid	HFPODA
537 IDA	TOP Pre-Prep	Solid	Hydro-EVE Acid
537 IDA	TOP Pre-Prep	Solid	Hydrolyzed PSDA
537 IDA	TOP Pre-Prep	Solid	Hydro-PS Acid
537 IDA	TOP Pre-Prep	Solid	MTP

Client: TRC Companies, Inc
Project/Site: Synthetic Turf

Job ID: 410-75808-1

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC (Continued)

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

Authority	Program	Identification Number	Expiration Date

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
537 IDA	TOP Pre-Prep	Solid	NEtFOSA
537 IDA	TOP Pre-Prep	Solid	NEtFOSAA
537 IDA	TOP Pre-Prep	Solid	NEtFOSE
537 IDA	TOP Pre-Prep	Solid	NMeFOSA
537 IDA	TOP Pre-Prep	Solid	NMeFOSAA
537 IDA	TOP Pre-Prep	Solid	NMeFOSE
537 IDA	TOP Pre-Prep	Solid	NVHOS
537 IDA	TOP Pre-Prep	Solid	PEPA
537 IDA	TOP Pre-Prep	Solid	Perfluoro (2-ethoxyethane) sulfonic acid
537 IDA	TOP Pre-Prep	Solid	Perfluoro-4-ethylcyclohexanesulfonic acid
537 IDA	TOP Pre-Prep	Solid	Perfluorobutanesulfonic acid
537 IDA	TOP Pre-Prep	Solid	Perfluorobutanoic acid
537 IDA	TOP Pre-Prep	Solid	Perfluorodecanesulfonic acid
537 IDA	TOP Pre-Prep	Solid	Perfluorodecanoic acid
537 IDA	TOP Pre-Prep	Solid	Perfluorododecanesulfonic acid
537 IDA	TOP Pre-Prep	Solid	Perfluorododecanoic acid
537 IDA	TOP Pre-Prep	Solid	Perfluoroheptanesulfonic acid
537 IDA	TOP Pre-Prep	Solid	Perfluoroheptanoic acid
537 IDA	TOP Pre-Prep	Solid	Perfluorohexadecanoic acid
537 IDA	TOP Pre-Prep	Solid	Perfluorohexanesulfonic acid
537 IDA	TOP Pre-Prep	Solid	Perfluorohexanoic acid
537 IDA	TOP Pre-Prep	Solid	Perfluorononanesulfonic acid
537 IDA	TOP Pre-Prep	Solid	Perfluorononanoic acid
537 IDA	TOP Pre-Prep	Solid	Perfluorooctadecanoic acid
537 IDA	TOP Pre-Prep	Solid	Perfluorooctanesulfonamide
537 IDA	TOP Pre-Prep	Solid	Perfluorooctanesulfonic acid
537 IDA	TOP Pre-Prep	Solid	Perfluorooctanoic acid
537 IDA	TOP Pre-Prep	Solid	Perfluoropentanesulfonic acid
537 IDA	TOP Pre-Prep	Solid	Perfluoropentanoic acid
537 IDA	TOP Pre-Prep	Solid	Perfluoropropanesulfonic acid
537 IDA	TOP Pre-Prep	Solid	Perfluorotetradecanoic acid
537 IDA	TOP Pre-Prep	Solid	Perfluorotridecanoic acid
537 IDA	TOP Pre-Prep	Solid	Perfluoroundecanoic acid
537 IDA	TOP Pre-Prep	Solid	PFECA A
537 IDA	TOP Pre-Prep	Solid	PFECA B
537 IDA	TOP Pre-Prep	Solid	PFECA F
537 IDA	TOP Pre-Prep	Solid	PFECA G
537 IDA	TOP Pre-Prep	Solid	PFMOAA
537 IDA	TOP Pre-Prep	Solid	PFO2HxA
537 IDA	TOP Pre-Prep	Solid	PFO3OA
537 IDA	TOP Pre-Prep	Solid	PFO4DA
537 IDA	TOP Pre-Prep	Solid	PMPA
537 IDA	TOP Pre-Prep	Solid	PPF Acid
537 IDA	TOP Pre-Prep	Solid	PS Acid
537 IDA	TOP Pre-Prep	Solid	R-EVE
537 IDA	TOP Pre-Prep	Solid	R-PSDA
537 IDA	TOP Pre-Prep	Solid	R-PSDCA

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC (Continued)

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

Authority	Program	Identification Number	Expiration Date

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
537 IDA	TOP Pre-Prep	Solid	TAF
537 TOP	TOP Post-Prep	Solid	10:2 FTCA
537 TOP	TOP Post-Prep	Solid	10:2 FTS
537 TOP	TOP Post-Prep	Solid	10:2 FTUCA
537 TOP	TOP Post-Prep	Solid	11Cl-PF3OUdS
537 TOP	TOP Post-Prep	Solid	3:3 FTCA
537 TOP	TOP Post-Prep	Solid	4:2 Fluorotelomer sulfonic acid
537 TOP	TOP Post-Prep	Solid	5:3 FTCA
537 TOP	TOP Post-Prep	Solid	6:2 Fluorotelomer sulfonic acid
537 TOP	TOP Post-Prep	Solid	6:2 FTCA
537 TOP	TOP Post-Prep	Solid	6:2 FTUCA
537 TOP	TOP Post-Prep	Solid	7:3 FTCA
537 TOP	TOP Post-Prep	Solid	8:2 Fluorotelomer sulfonic acid
537 TOP	TOP Post-Prep	Solid	8:2 FTCA
537 TOP	TOP Post-Prep	Solid	8:2 FTUCA
537 TOP	TOP Post-Prep	Solid	9Cl-PF3ONS
537 TOP	TOP Post-Prep	Solid	DONA
537 TOP	TOP Post-Prep	Solid	EVE Acid
537 TOP	TOP Post-Prep	Solid	HFPODA
537 TOP	TOP Post-Prep	Solid	Hydro-EVE Acid
537 TOP	TOP Post-Prep	Solid	Hydrolyzed PSDA
537 TOP	TOP Post-Prep	Solid	Hydro-PS Acid
537 TOP	TOP Post-Prep	Solid	MTP
537 TOP	TOP Post-Prep	Solid	NEtFOSA
537 TOP	TOP Post-Prep	Solid	NEtFOSAA
537 TOP	TOP Post-Prep	Solid	NEtFOSE
537 TOP	TOP Post-Prep	Solid	NMeFOSA
537 TOP	TOP Post-Prep	Solid	NMeFOSAA
537 TOP	TOP Post-Prep	Solid	NMeFOSE
537 TOP	TOP Post-Prep	Solid	NVHOS
537 TOP	TOP Post-Prep	Solid	PEPA
537 TOP	TOP Post-Prep	Solid	Perfluoro (2-ethoxyethane) sulfonic acid
537 TOP	TOP Post-Prep	Solid	Perfluoro-4-ethylcyclohexanesulfonic acid
537 TOP	TOP Post-Prep	Solid	Perfluorobutanesulfonic acid
537 TOP	TOP Post-Prep	Solid	Perfluorobutanoic acid
537 TOP	TOP Post-Prep	Solid	Perfluorodecanesulfonic acid
537 TOP	TOP Post-Prep	Solid	Perfluorodecanoic acid
537 TOP	TOP Post-Prep	Solid	Perfluorododecanesulfonic acid
537 TOP	TOP Post-Prep	Solid	Perfluorododecanoic acid
537 TOP	TOP Post-Prep	Solid	Perfluoroheptanesulfonic acid
537 TOP	TOP Post-Prep	Solid	Perfluoroheptanoic acid
537 TOP	TOP Post-Prep	Solid	Perfluorohexadecanoic acid
537 TOP	TOP Post-Prep	Solid	Perfluorohexanesulfonic acid
537 TOP	TOP Post-Prep	Solid	Perfluorohexanoic acid
537 TOP	TOP Post-Prep	Solid	Perfluorononanesulfonic acid
537 TOP	TOP Post-Prep	Solid	Perfluorononanoic acid
537 TOP	TOP Post-Prep	Solid	Perfluorooctadecanoic acid

Client: TRC Companies, Inc
Job ID: 410-75808-1
Project/Site: Synthetic Turf

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC (Continued)

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

Authority	Program	Identification Number	Expiration Date

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
537 TOP	TOP Post-Prep	Solid	Perfluorooctanesulfonamide
537 TOP	TOP Post-Prep	Solid	Perfluorooctanesulfonic acid
537 TOP	TOP Post-Prep	Solid	Perfluorooctanoic acid
537 TOP	TOP Post-Prep	Solid	Perfluoropentanesulfonic acid
537 TOP	TOP Post-Prep	Solid	Perfluoropentanoic acid
537 TOP	TOP Post-Prep	Solid	Perfluoropropanesulfonic acid
537 TOP	TOP Post-Prep	Solid	Perfluorotetradecanoic acid
537 TOP	TOP Post-Prep	Solid	Perfluorotridecanoic acid
537 TOP	TOP Post-Prep	Solid	Perfluoroundecanoic acid
537 TOP	TOP Post-Prep	Solid	PFECA A
537 TOP	TOP Post-Prep	Solid	PFECA B
537 TOP	TOP Post-Prep	Solid	PFECA F
537 TOP	TOP Post-Prep	Solid	PFECA G
537 TOP	TOP Post-Prep	Solid	PFMOAA
537 TOP	TOP Post-Prep	Solid	PFO2HxA
537 TOP	TOP Post-Prep	Solid	PFO3OA
537 TOP	TOP Post-Prep	Solid	PFO4DA
537 TOP	TOP Post-Prep	Solid	PMPA
537 TOP	TOP Post-Prep	Solid	PPF Acid
537 TOP	TOP Post-Prep	Solid	PS Acid
537 TOP	TOP Post-Prep	Solid	R-EVE
537 TOP	TOP Post-Prep	Solid	R-PSDA
537 TOP	TOP Post-Prep	Solid	R-PSDCA
537 TOP	TOP Post-Prep	Solid	TAF
Total PFCA-Dif		Solid	PFBA
Total PFCA-Dif		Solid	PFHpA
Total PFCA-Dif		Solid	PFHxA
Total PFCA-Dif		Solid	PFNA
Total PFCA-Dif		Solid	PFOA
Total PFCA-Dif		Solid	PFPA
Total PFCA-Dif		Solid	Total PFCA
Total PFCA-Sum		Solid	Total PFCA

Method Summary

Client: TRC Companies, Inc
Project/Site: Synthetic Turf

Job ID: 410-75808-1

Method	Method Description	Protocol	Laboratory
537 IDA	EPA 537 Isotope Dilution	EPA	ELLE
537 TOP	Fluorinated Alkyl Substances	EPA	ELLE
Total PFCA-Dif	Total PFCA (Treatment Difference)	TAL SOP	ELLE
Total PFCA-Sum	Total PFCA (Summary)	TAL SOP	ELLE
537 IDA	EPA 537 Isotope Dilution	EPA	ELLE
Extract Aliquot	Preparation, Extract Aliquot	None	ELLE
TOP Post-Prep	Shake Extraction with Ultrasonic Bath Extraction	SW846	ELLE
TOP Pre-Prep	Shake Extraction with Ultrasonic Bath Extraction	SW846	ELLE

Protocol References:

EPA = US Environmental Protection Agency

None = None

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Sample Summary

Client: TRC Companies, Inc
Project/Site: Synthetic Turf

Job ID: 410-75808-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
410-75808-1	Carpet-001	Solid	03/08/22 17:12	03/11/22 10:17
410-75808-2	EB-001	Water	03/21/22 13:53	03/21/22 14:00
410-76735-1	PP Pad-001	Solid	03/16/22 13:30	03/18/22 08:41
410-76735-2	EB-002	Water	03/21/22 13:53	03/21/22 14:00
410-76903-1	Safeshell #1-3	Solid	03/09/22 15:00	03/21/22 12:09
410-76903-4	EB 003	Water	03/22/22 00:00	03/21/22 12:09

410-75808 Chain of Custody

LC

Chain of Custody Record

eurofins | Environment Testing America

	Sampler: Iris Lopez	Lab PM: Marrissa Williams	Carrier Tracking No(s): 5815-2349-5387 FedEx	COC No:
Client Contact: Elizabeth Denly	Phone: 706-383-5844	E-Mail: Rex.Young@fieldturf.com	State of Origin: Georgia	Page: 1
Company: TRC	PWSID: NA			Job #:
Address: 650 Suffolk Street	Due Date Requested: see below			
City: Lowell	TAT Requested (days): 70 PFAS & TOP Assay: 15 business days; Non-target analysis: 25 business days			
State, Zip: MA, 01854	Compliance Project: Δ Yes Δ No			
Phone: 978-656-3577	PO #: 178559			
Email: edenly@trccompanies.com	WO #: NA			
Project Name: Synthetic Turf	Project #: 474501			
Site: NA	SSOW#: NA			

Analysis Requested

Preservation Codes:

A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2O3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - pH 4-5; Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	PFAS Target List of 70 PFAS: See quote 41009406 - 1 & SAP	TOP Assay PFAS: See quote 41009406 - 1 & SAP	Non-target PFAS: See quote 41009406 - 1 & SAP	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
Carpet-001	3/8/22	5:12 pm	G	S		X	X	X		See SAP for homogenization requirements

Possible Hazard Identification

■ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

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

☐ Return To Client ■ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify) **Level IV and EQuIS EDD**

Special Instructions/QC Requirements: **See SAP for lab-generated equipment blank requirements**

Empty Kit Relinquished by: NA	Date: NA	Time: NA	FedEx Express

Relinquished by: Rex Young	Date/Time: 3/9/22	Company: Field Turf	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time: 3/11/22 10:17	Company ECE

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 15.5

Ver: 01/16/2019

410-76735 Chain of Custody

Chain of Custody Record

eurofins | Environment Testing America

Client Contact: Elizabeth Denly	Sampler: Phil Jauregui -- Schmitz Foam Products	Lab PM: Marrissa Williams	Carrier Tracking No(s): 1ZR63A500344491382	COC No:
	Phone: (517) 781-6620	E-Mail: p.jauregui@schmitzfoam.com	State of Origin: Michigan	Page: 1
Company: TRC	PWSID: NA			Job #:
Address: 650 Suffolk Street	Due Date Requested: see below			
City: Lowell	TAT Requested (days): 70 PFAS & TOP Assay: 15 business days; Non-target analysis: 25 business days			
State, Zip: MA, 01854	Compliance Project: Δ Yes Δ No			
Phone: 978-656-3577	PO #: 178559			
Email: edenly@trccompanies.com	WO #: NA			
Project Name: Synthetic Turf	Project #: 474501			
Site: NA	SSOW#: NA			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	PFAS Target List of 70 PFAS: See quote 41009406 - 1 & SAP	TOP Assay PFAS: See quote 41009406 - 1 & SAP	Non-target PFAS: See quote 41009406 - 1 & SAP	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
PP Pad-001	3/16/22	1:30 PM	G	S			X	X	X		See SAP for homogenization requirements

Possible Hazard Identification

■ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

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

☐ Return To Client ■ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify) **Level IV and EQuIS EDD**

Special Instructions/QC Requirements: **See SAP for lab-generated equipment blank requirements**

Empty Kit Relinquished by: NA | Date: NA | Time: NA | Method of Shipment: UPS Ground

Relinquished by: Phil Jauregui	Date/Time: 3/16/2022, 1:30 PM	Company: Schmitz Foam Products	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time: 3/18/22 8AM	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: 16.1

Ver: 01/16/2019

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Chain of Custody Record

eurofins | Environment Testing America

410-76903 Chain of Custody

Clie	Sampler: Adam Coleman	Lab PM: Marrissa Williams	Carrier Tracking No(s):	COC No:
Client Contact: Elizabeth Denly	Phone: 513.313.1584	E-Mail: acoleman@usgreentech.com	State of Origin: Arkansas	Page: 1
Company: TRC	PWSID: NA			Job #:
Address:650 Suffolk Street	Due Date Requested: see below			
City:Lowell	TAT Requested (days): 70 PFAS & TOP Assay: 15 business days; Non-target analysis: 25 business days			
State, Zip: MA, 01854	Compliance Project: Δ Yes Δ No			
Phone: 978-656-3577	PO #: 178559			
Email: edenly@trccompanies.com	WO #: NA			
Project Name: Synthetic Turf	Project #: 474501			
Site: NA	SSOW#: NA			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=wastoil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	PFAS Target List of 70 PFAS: See quote 41009406 - 1 & SAP	TOP Assay PFAS: See quote 41009406 - 1 & SAP	Non-target PFAS: See quote 41009406 - 1 & SAP	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
Safeshell #1	3/9/22	15:00 EST	G	S			X	X	X		See SAP for homogenization requirements
Safeshell #2	3/9/22	15:00 EST	G	S			X	X	X		See SAP for homogenization requirements
Safeshell #3	3/9/22	15:00 EST	G	S			X	X	X		See SAP for homogenization requirements

Possible Hazard Identification

■ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

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

☐ Return To Client ■ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify) **Level IV and EQuIS EDD**

Special Instructions/QC Requirements: **See SAP for lab-generated equipment blank requirements**

Empty Kit Relinquished by: NA	Date: NA	Time: NA	Method of Shipment: Fedex

Relinquished by: Adam Coleman	Date/Time: 3/15/2022	Company USGreentech	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time: 3/21/22 12:09	Company ELLET

Custody Seals Intact: Δ Yes (Δ No)	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 17.2

Ver: 01/16/2019

Login Sample Receipt Checklist

Client: TRC Companies, Inc

Job Number: 410-75808-1

Login Number: 75808
List Number: 1
Creator: Bryan, Debra A

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC

Question	Answer	Comment
The cooler's custody seal is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	False	No ice present, no attempt to chill
Cooler Temperature is acceptable (</=6C, not frozen).	False	Thermal preservation not required.
Cooler Temperature is recorded.	True	
WV: Container Temperature is acceptable (</=6C, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Sample containers have legible labels.	False	Refer to Job Narrative for details.
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	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	True	
Sample custody seals are intact.	N/A	

Login Sample Receipt Checklist

Client: TRC Companies, Inc

Job Number: 410-75808-1

Login Number: 76735

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC

List Number: 1

Creator: McCaskey, Jonathan

Question	Answer	Comment
The cooler's custody seal is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	False	No ice present, no attempt to chill
Cooler Temperature is acceptable (</=6C, not frozen).	False	Thermal preservation not required.
Cooler Temperature is recorded.	True	
WV: Container Temperature is acceptable (</=6C, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	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	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	True	
Sample custody seals are intact.	N/A	

Login Sample Receipt Checklist

Client: TRC Companies, Inc

Job Number: 410-75808-1

Login Number: 76903
List Number: 1
Creator: Bryan, Debra A

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC

Question	Answer	Comment
The cooler's custody seal is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	False	No ice present, no attempt to chill
Cooler Temperature is acceptable (</=6C, not frozen).	False	Refer to Job Narrative for details.
Cooler Temperature is recorded.	True	
WV: Container Temperature is acceptable (</=6C, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	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	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	True	
Sample custody seals are intact.	N/A	

NON-TARGETED ANALYSIS (NTA) SUMMARY REPORT

Eurofins Environmental Testing America
Eurofins Lancaster Laboratories Environmental LLC
2425 New Holland Pike
Lancaster, PA, 17601, USA
Tel: (717) 556 7231

Laboratory Job ID: 410-75808-1, 410-76735-1, 76903-1

Client: TRC

Project: Synthetic Turf

For: Elizabeth Denly

Authorized for release by: Charles Neslund,
Scientific Officer and PFAS Practice Leader

Table of Contents

This report summarizes the results of the NTA (Non-Target Analysis) performed on the three samples submitted to Eurofins Lancaster Laboratories Environment Testing. The three samples are detailed below;

ELLET Job #	Client Description
Job# 410-75808-1	Carpet-001
Job# 410-76735-1	PP Pad-001
Job# 410-76903-1	Safeshell #1-3

The analysis was performed using UPLC-QToF-MS (ultra performance liquid chromatography quadrapole time-of-flight-mass spectroscopy). The results summarized in the attached tables represent qualitative estimations of presumptive positives. As such, Eurofins Lancaster Laboratories Environment Testing did not have available purified analytical standards to confirm results for each presumptive positive.

Sample Preparation

The samples did not present any issues during preparation. The extract generated from the extraction and analysis of each sample for a targeted list of PFAS, by LC/MS/MS, was used for NTA analysis and analyzed without dilution.

Analytical methods

UPLC Methods

PFAS were analyzed in negative ionization mode using a UPLC-QToF-HRMS (AB Sciex X500R QTOF system) equipped with a Phenomenex Gemini C18 column (3 mm x 50 mm, 3 µm) in TOF MSMS and information dependent acquisition (IDA) mode. A gradient solvent program was operated with 20 mM sodium acetate in MilliQ water (solution A) and 20mM sodium acetate in LC-MS grade methanol having 0.5% water (solution B). The details of the gradient method are provided in Table 1. Signals were acquired between the 0.1 and 11.5 minutes with total run time of 12 minutes.

Table 1. Gradient solvent program for the UPLC

Time (min)	Flowrate (mL/min)	%A	%B
0.0	0.5	95	5
0.5	0.5	95	5
1.5	0.5	40	60
3.0	0.5	5	95
9.0	0.5	5	95
9.2	0.5	95	5
12.0	0.5	95	5

Mass spectroscopy method

Three samples were acquired with negative and positive mode collision energy in IDA mode. Each sample's analytes were fragmented at 25V (±10V) in both TOF MS and TOF MSMS. Source and gas parameters were kept constant, where ion source gas 1 and 2 kept at 30 psi, curtain gas 25 psi, CAD gas 7 psi, temperature 300°C, spray voltage and delustering potential (DP) were -4100 V and -80V (DP spread 20 V). For other IDA criteria, maximum candidate ions 10, intensity threshold exceeds 200 cps and dynamic background subtraction were used. Mass range was set at 100 to 1000 Da with accumulation time 0.08s and 0.25s in MS and MSMS, respectively.

Non-targeted analysis (NTA)

Data were processed with SCIEX LibraryView deconvolution software. This software extracts the raw chromatograms across a defined mass range from 0-1500AMU and examines peaks of interest utilizing exact mass and MS/MS fragmentation. The peaks are compared to the 5,070 unique PFAS compounds from different fluorinated compounds library where the software algorithm assigns possible matches to each peak, or feature. The features were then evaluated to confirm ample signal-to-noise as well as confirming the compound fit to the library match. The precursor mass tolerance ±0.2 Da and fragment mass tolerance ±0.1 Da was used. The reported results include only peaks with a signal-to-noise greater than 10:1, absolute intensity more than 1000 and that have a library confidence of less than 5ppm error. These are the recommended settings provided by the manufacturer. One thing the software cannot account for are isomers. For the molecular formula determination, settings of $C_{0\text{-}20}$, $H_{0\text{-}5}$, $F_{0\text{-}60}$, $N_{0\text{-}1}$, $O_{0\text{-}16}$ and $S_{0\text{-}2}$ were used, where the subscript values represent the allowable number of that specific element that could be present in any proposed emipirical formula. Post data generation, a filtering algorithm was used to subtract the m/z signals of the blank (methanol) from each sample.

Results

These data are qualitative in nature. While qualitative compounds do have different areas/intensities, this does not always correlate to more or less abundance in the sample. Vastly different ionization efficiencies of NTA compounds can occur which impacts estimation and speculation about relative concentrations.

Results are presented in separate tables for each sample and labeled as 75808_Neg, 75808_Pos, 76735_Neg, 76735_Pos, 76903_Neg and 76903_Pos. "Neg" and "Pos" represent for data acquired in positive and negative ionization, respectively.

Table 2. NTA results for sample "75808_Neg" acquired in negative polarity

S.N.	Compound Formula	Compound Name	Area	Retention Time	Adduct / Charge	Precursor Mass	Found At Mass	Mass Error (ppm)
1	{222.16131}	unknown	7.57E+05	4.15	[M-H]-	221.1546	221.1535	-4.97
2	{224.14073}	unknown	5.23E+04	4.15	[M-H_2O-H]-	205.1234	205.1232	-0.97
3	{220.18219}	unknown	5.57E+04	4.25	[M-H]-	219.1755	219.175	-2.28
4	{375.25069}	unknown	6.19E+05	4.26	[M-H]-	374.244	374.2432	-2.14
5	{184.14566}	unknown	3.43E+04	4.26	[M-H]-	183.1389	183.1387	-1.09
6	C9H4F14O3	Bis(2,2,3,3,4,4,4-heptafluorobutyl) carbonate	8.41E+04	4.66	[M+H]+	427.001	426.9992	-4.2
7	{250.15980}	unknown	2.14E+05	4.67	[M-H]-	249.1531	249.1523	-3.21
8	{276.20765}	unknown	1.14E+04	5.14	[M-H]-	275.2009	275.2009	0
9	{454.30651}	unknown	1.34E+06	6.21	[M+Cl]-	489.2765	489.276	-1.02
10	{282.25479}	unknown	1.28E+07	8.34	[M-H]-	281.2481	281.2472	-3.20
11	{656.42655}	unknown	9.67E+05	8.49	[M-H]-	655.4198	655.4191	-1.06
12	{490.26753}	unknown	2.12E+05	8.86	[M-H]-	489.2608	489.261	0.40
13	{270.25560}	unknown	5.17E+05	8.98	[M-H]-	269.2489	269.2481	-2.97

Table 3. NTA results for sample "75808_Pos" acquired in positive polarity

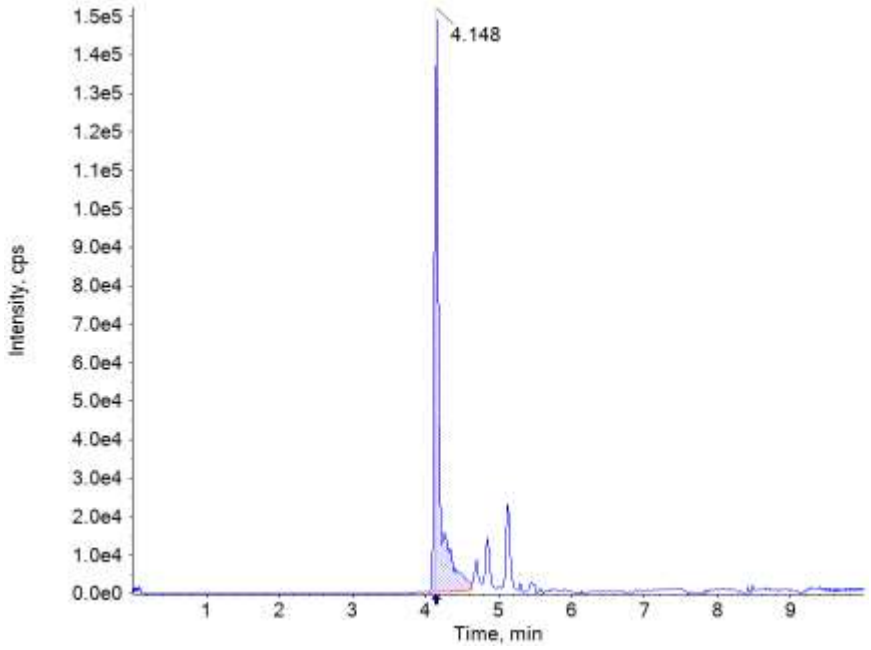
S.N.	Compound Formula	Compound Name	Area	Retention Time	Adduct / Charge	Precursor Mass	Found At Mass	Mass Error (ppm)
1	{692.24754}	unknown	1.38E+04	5.4	[M-H]-	691.2408	691.2405	-0.43
2	{656.41163}	unknown	1.03E+06	6.06	[M-H]-	655.4049	655.4041	-1.22
3	{178.10490}	unknown	2.87E+05	9.4	[M-H]-	177.0982	177.0974	-4.52

Compounds chromatographs and mass spectra for sample “75808_neg” acquired in negative polarity

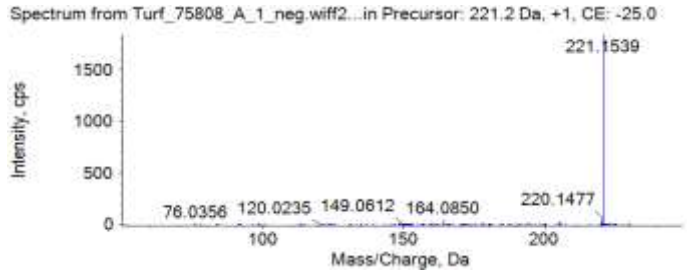
1. 221.1535 / 4.14 (Library/Formula)

Retention Time: 4.15 minutes
Precursor m/z : 221.1546
Fit (%) N/A **RFit (%)** N/A

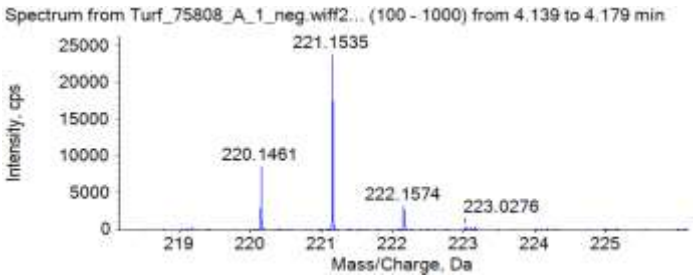
Analyte Name:
221.1535 / 4.14



Acquired / Library MSMS



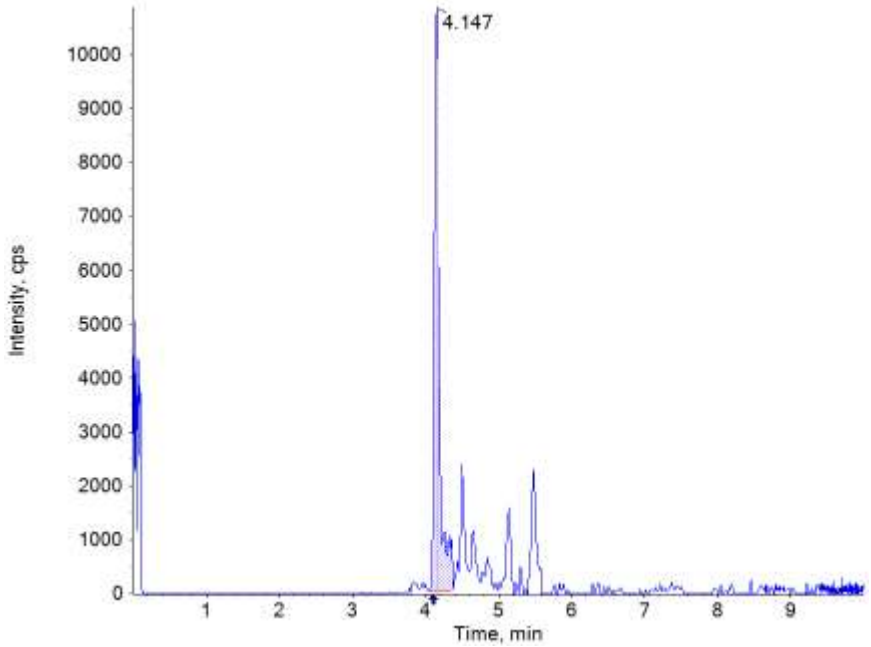
Acquired / Theoretical MS



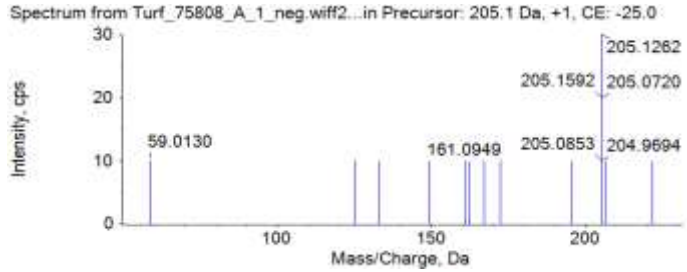
2. 205.1223 / 4.10 [M-H2O-H]- (Library/Formula)

Retention Time: 4.15 minutes
Precursor m/z : 205.1234
Fit (%) N/A **RFit (%)** N/A

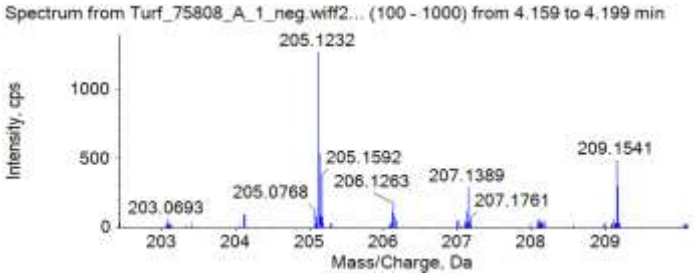
Analyte Name:
205.1223 / 4.10 [M-H2O-H]-



Acquired / Library MSMS



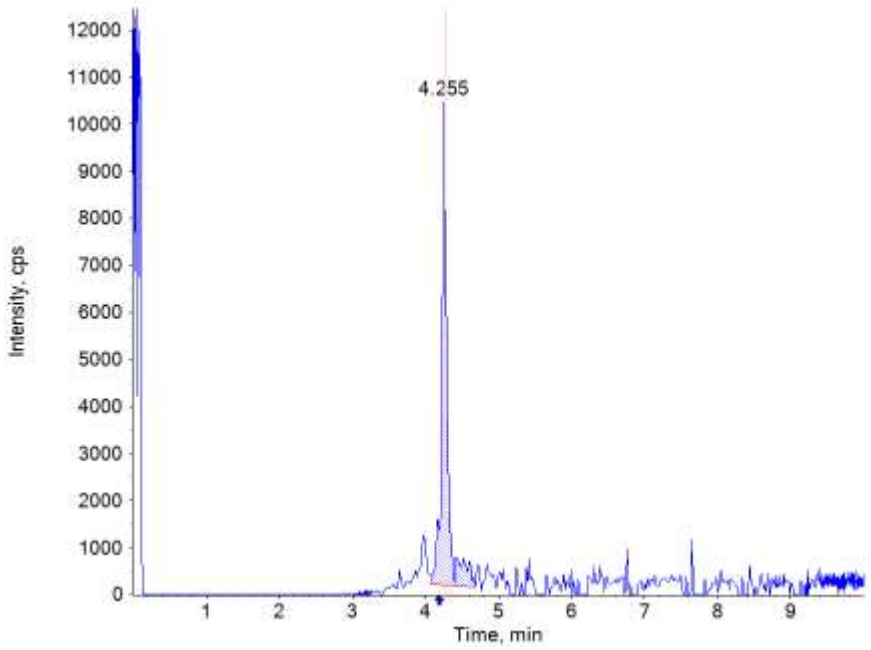
Acquired / Theoretical MS



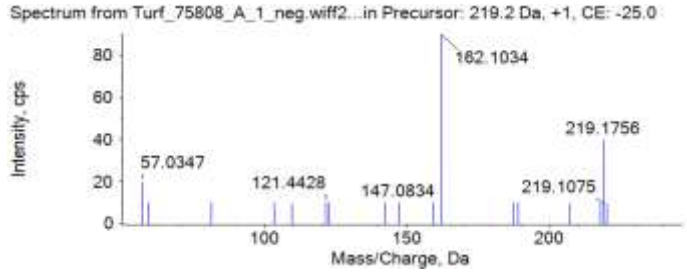
3. 219.1744 / 4.18 (Library/Formula)

Retention Time: 4.25 minutes
Precursor m/z : 219.1755
Fit (%) N/A **RFit (%)** N/A

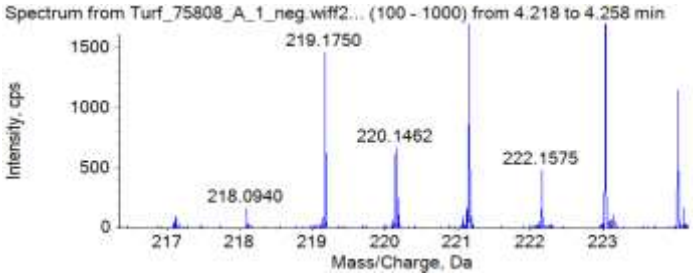
Analyte Name:
219.1744 / 4.18



Acquired / Library MSMS



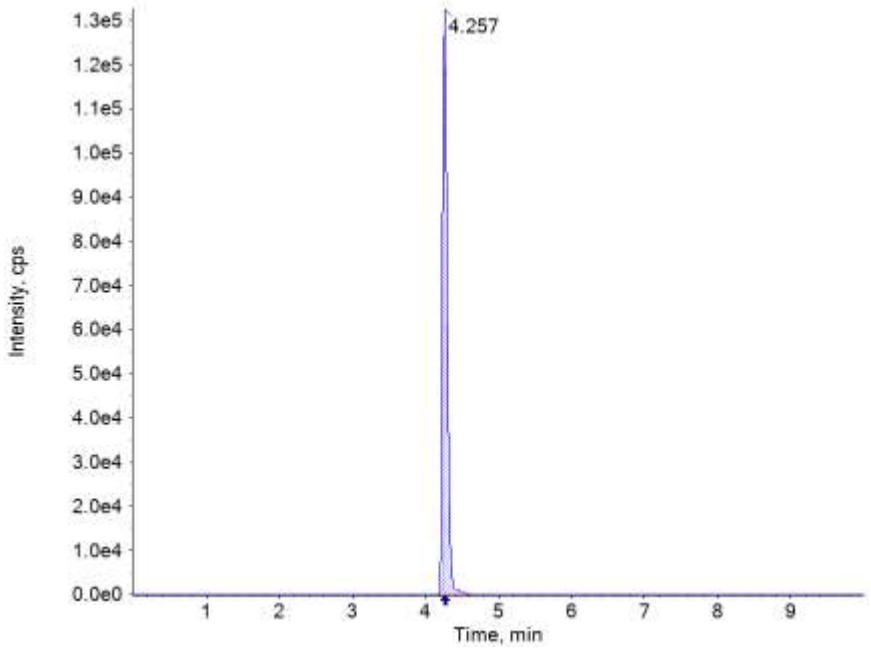
Acquired / Theoretical MS



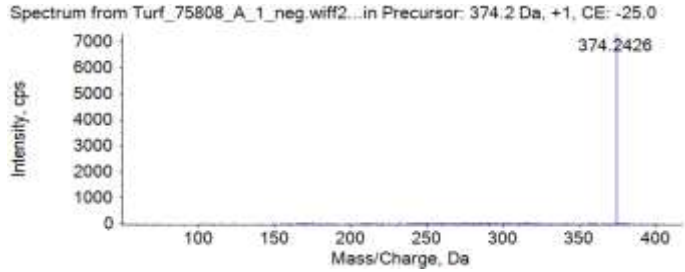
4. 374.2429 / 4.26 (Library/Formula)

Retention Time: 4.26 minutes
Precursor m/z : 374.2440
Fit (%) N/A **RFit (%)** N/A

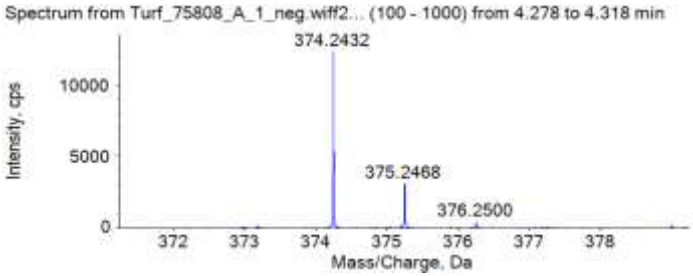
Analyte Name:
374.2429 / 4.26



Acquired / Library MSMS



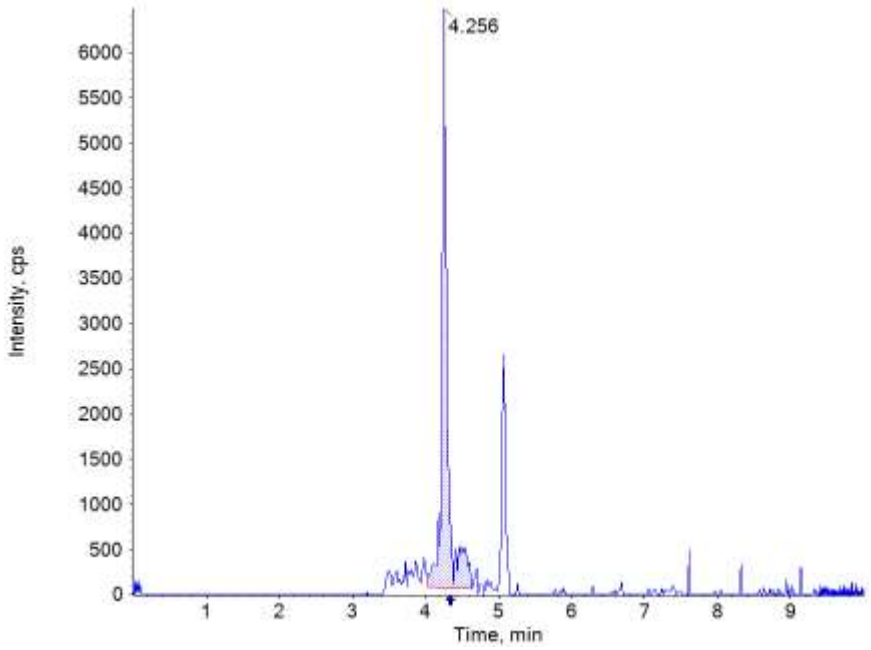
Acquired / Theoretical MS



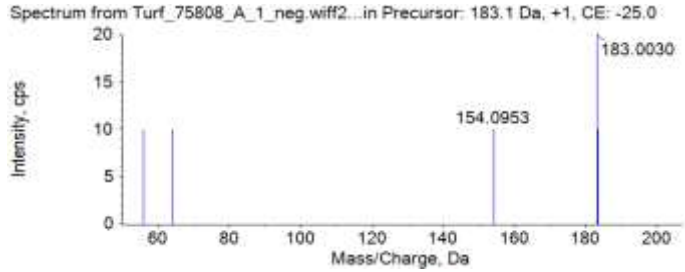
5. 183.1378 / 4.33 (Library/Formula)

Retention Time: 4.26 minutes
Precursor m/z : 183.1389
Fit (%) N/A **RFit (%)** N/A

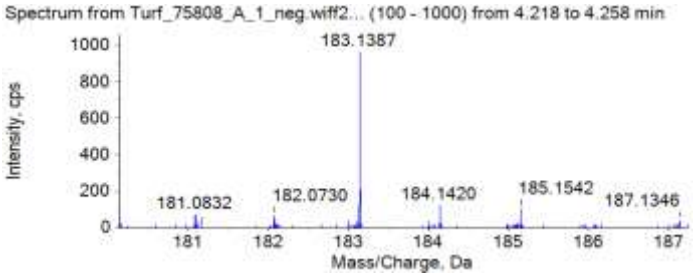
Analyte Name:
183.1378 / 4.33



Acquired / Library MSMS



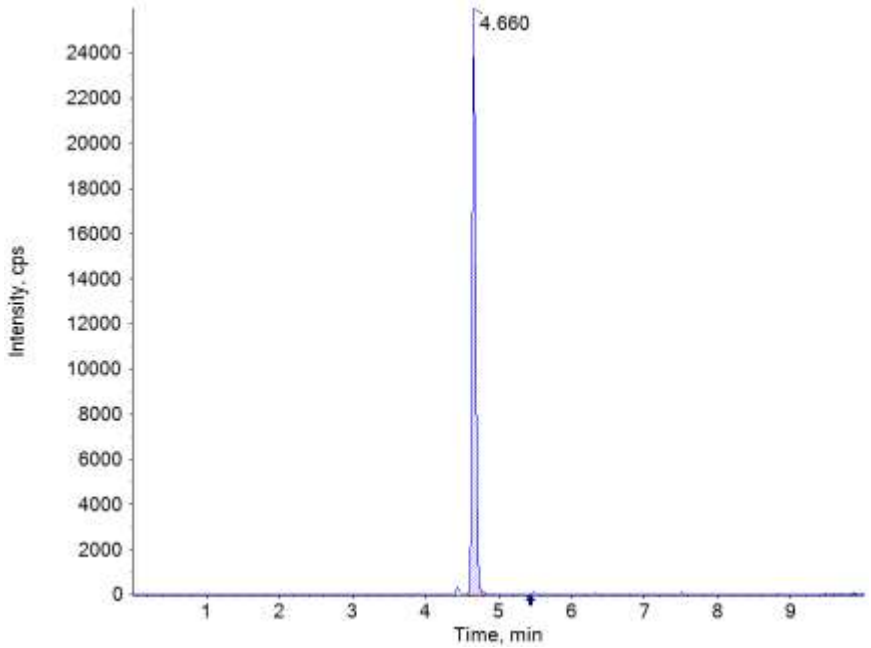
Acquired / Theoretical MS



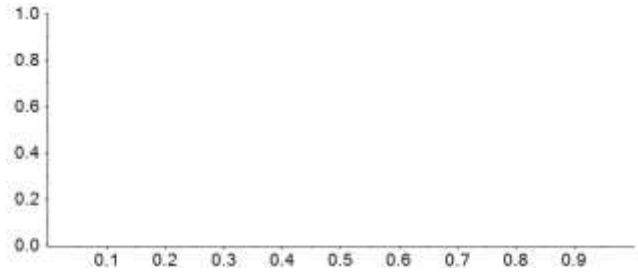
6. Bis(2,2,3,3,4,4,4-heptafluorobutyl) carbonate (Library/Formula)

Retention Time: 4.66 minutes
Precursor m/z : 427.0010
Fit (%) N/A **RFit (%)** N/A

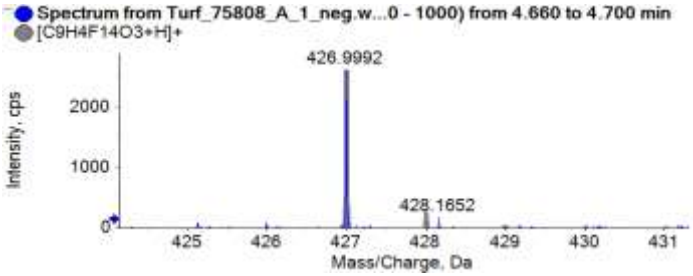
Analyte Name:
Bis(2,2,3,3,4,4,4-heptafluorobutyl) carbonate



Acquired / Library MSMS



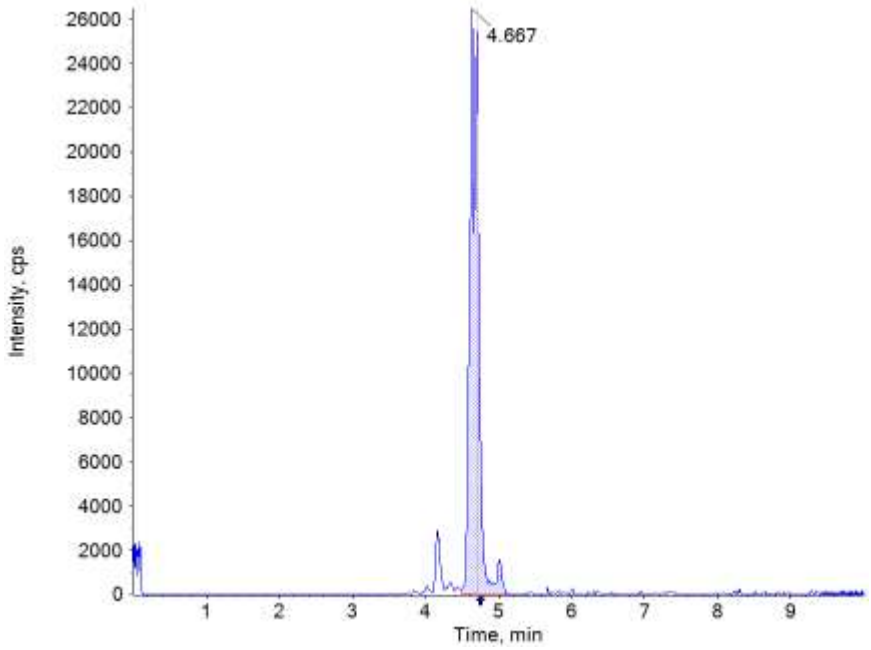
Acquired / Theoretical MS



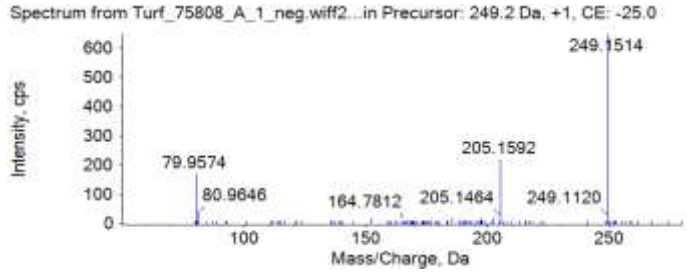
7. 249.1520 / 4.75 (Library/Formula)

Retention Time: 4.67 minutes
Precursor m/z : 249.1531
Fit (%) N/A **RFit (%)** N/A

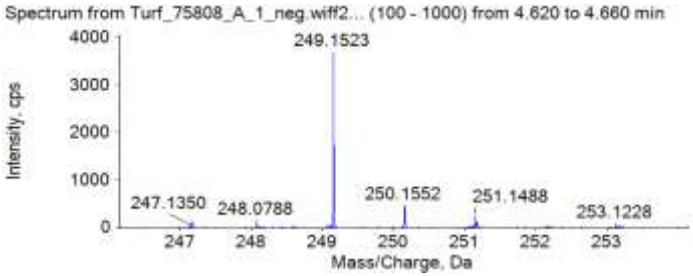
Analyte Name:
249.1520 / 4.75



Acquired / Library MSMS



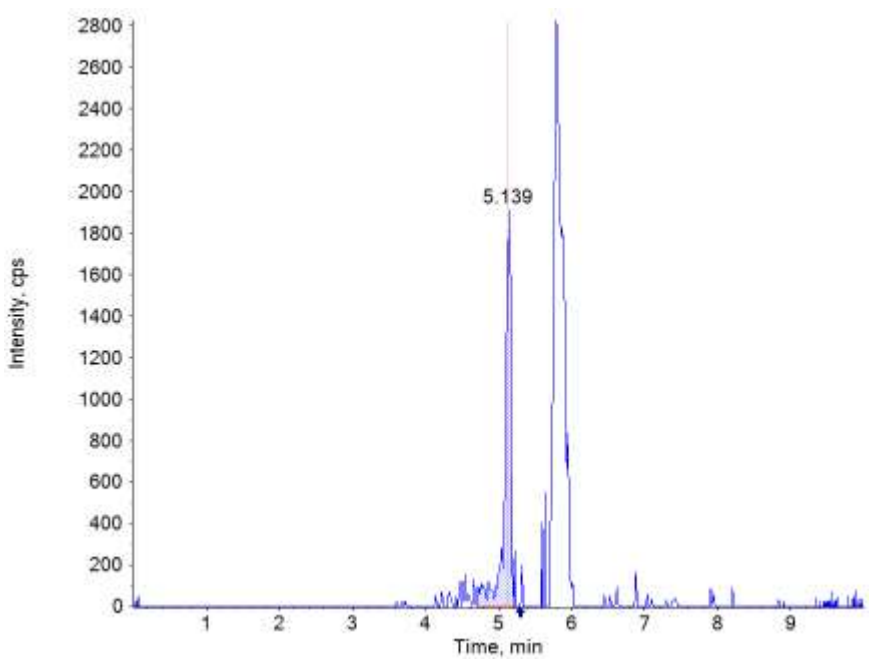
Acquired / Theoretical MS



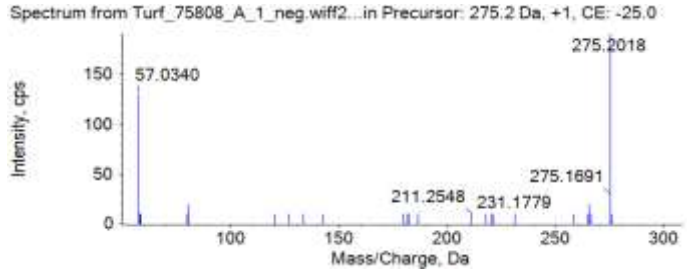
8. 275.1998 / 5.29 (Library/Formula)

Retention Time: 5.14 minutes
Precursor m/z : 275.2009
Fit (%) N/A **RFit (%)** N/A

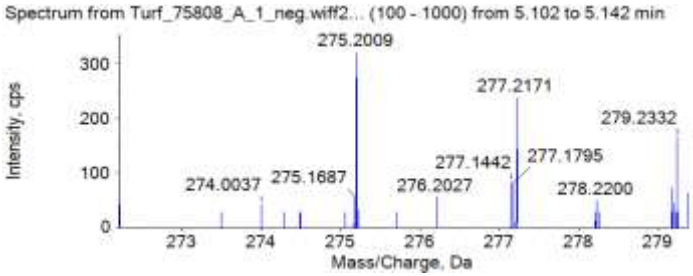
Analyte Name:
275.1998 / 5.29



Acquired / Library MSMS



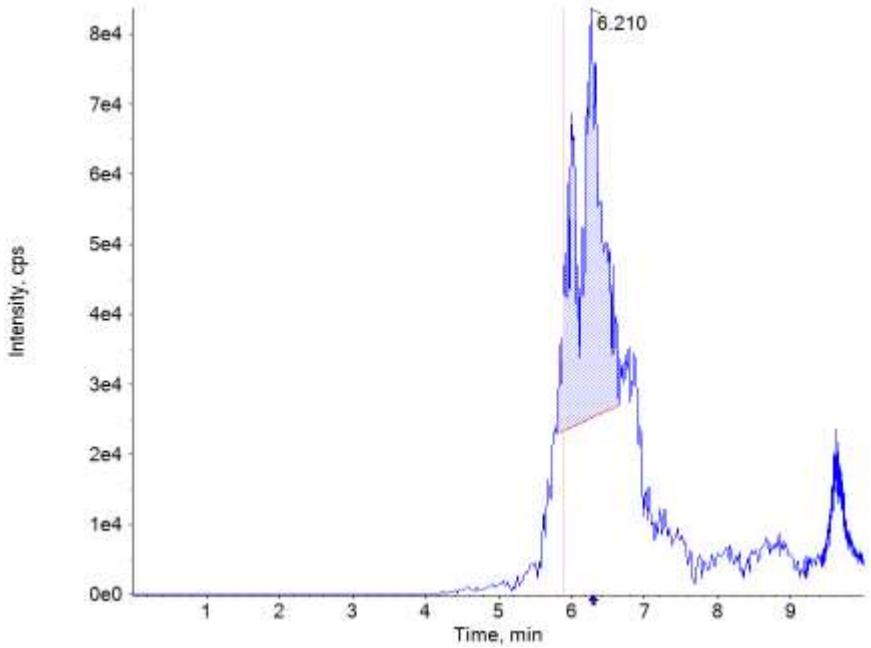
Acquired / Theoretical MS



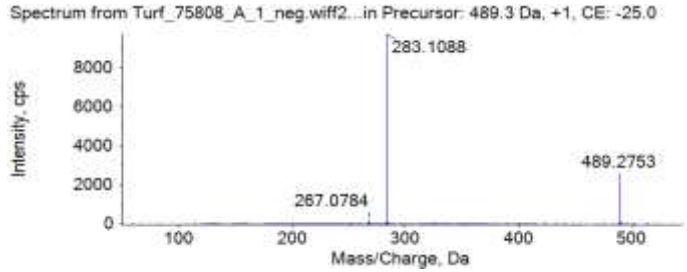
9. 489.2754 / 6.29 [M+Cl]- (Library/Formula)

Retention Time: 6.21 minutes
Precursor m/z : 489.2765
Fit (%) N/A **RFit (%)** N/A

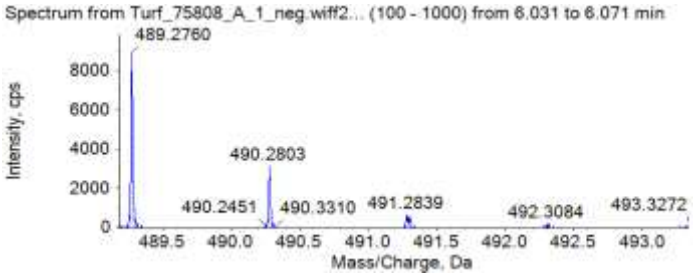
Analyte Name:
489.2754 / 6.29 [M+Cl]-



Acquired / Library MSMS



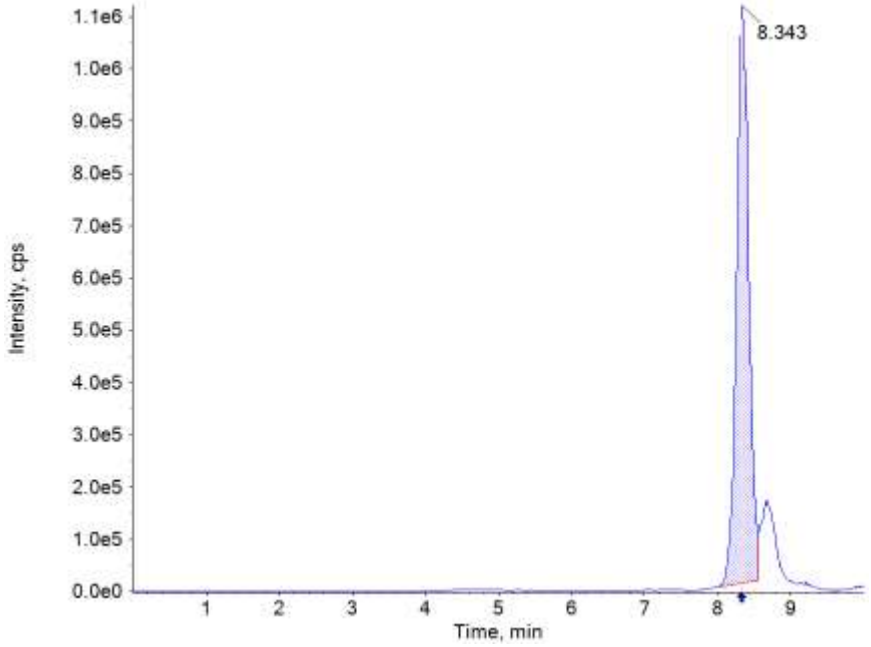
Acquired / Theoretical MS



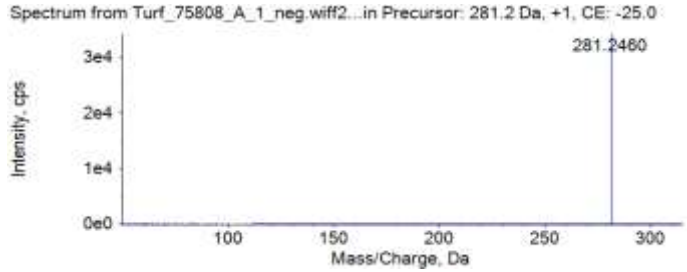
10. 281.2470 / 8.32 (Library/Formula)

Retention Time: 8.34 minutes
Precursor m/z : 281.2481
Fit (%) N/A **RFit (%)** N/A

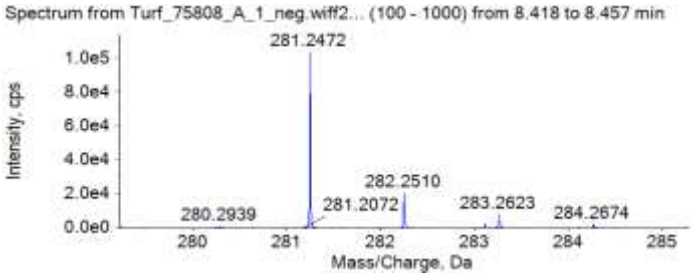
Analyte Name:
281.2470 / 8.32



Acquired / Library MSMS



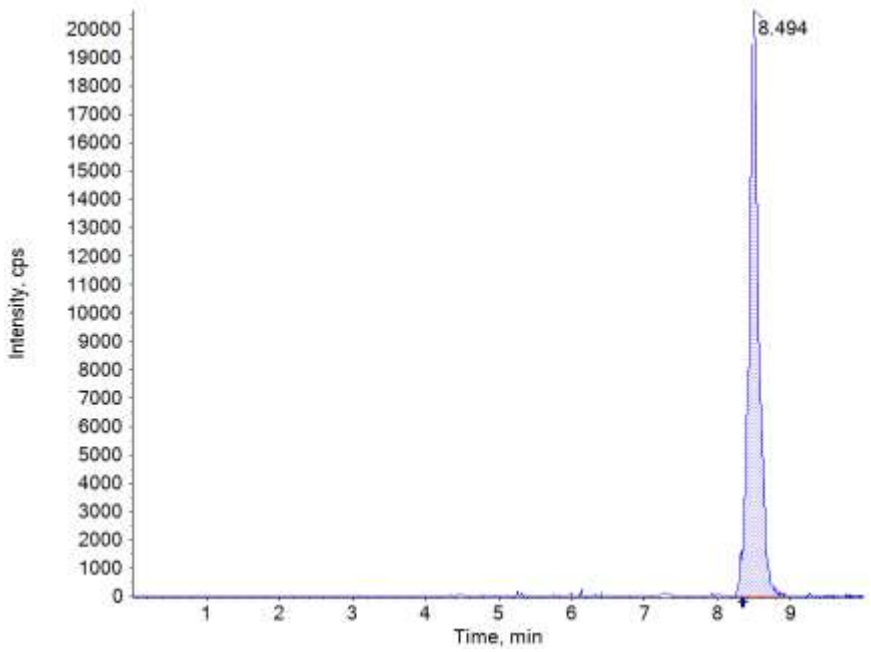
Acquired / Theoretical MS



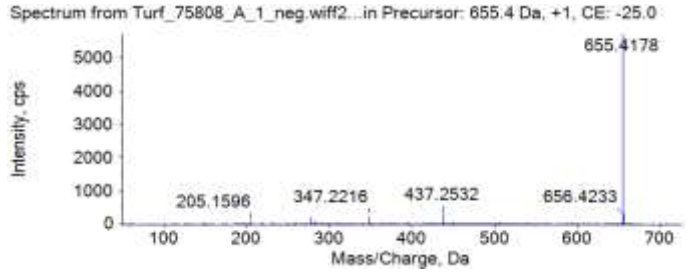
11. 655.4394 / 8.34 (Library/Formula)

Retention Time: 8.49 minutes
Precursor m/z : 655.4405
Fit (%) N/A **RFit (%)** N/A

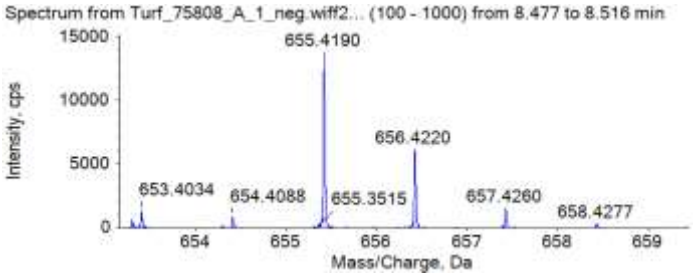
Analyte Name:
655.4394 / 8.34



Acquired / Library MSMS



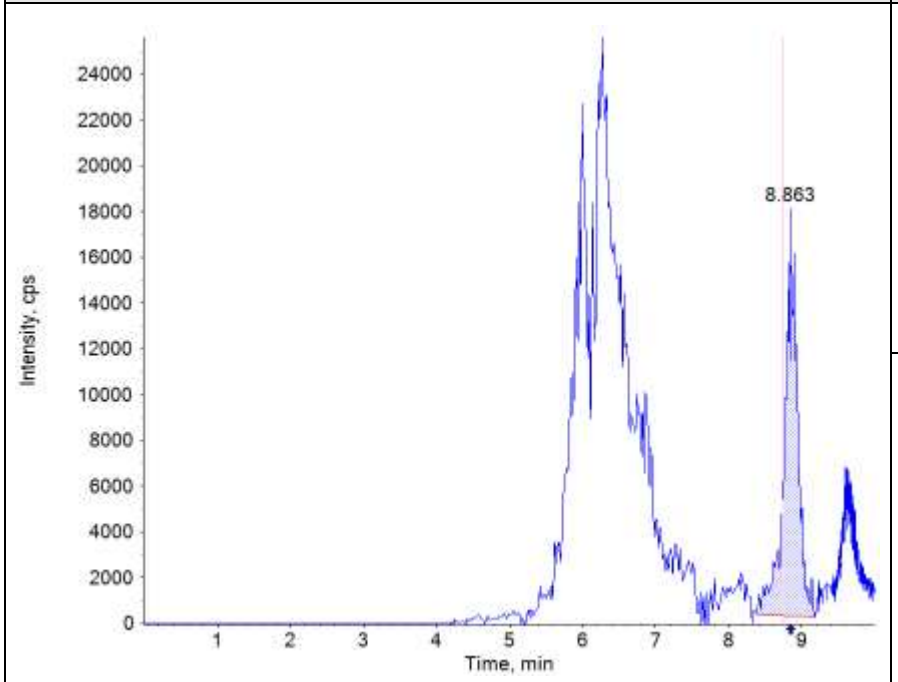
Acquired / Theoretical MS



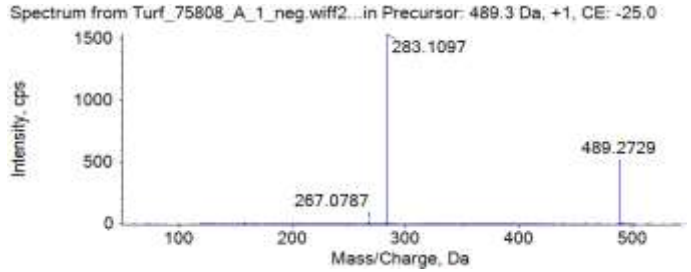
12. 489.2597 / 8.85 (Library/Formula)

Retention Time: 8.86 minutes
Precursor m/z : 489.2608
Fit (%) N/A **RFit (%)** N/A

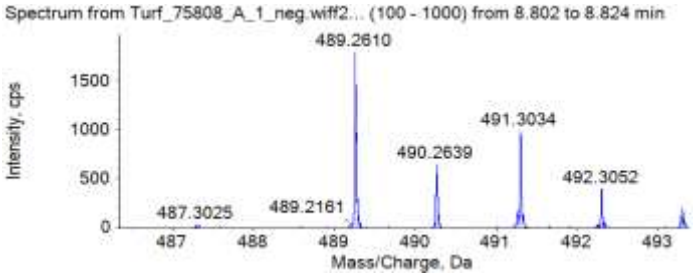
Analyte Name:
489.2597 / 8.85



Acquired / Library MSMS



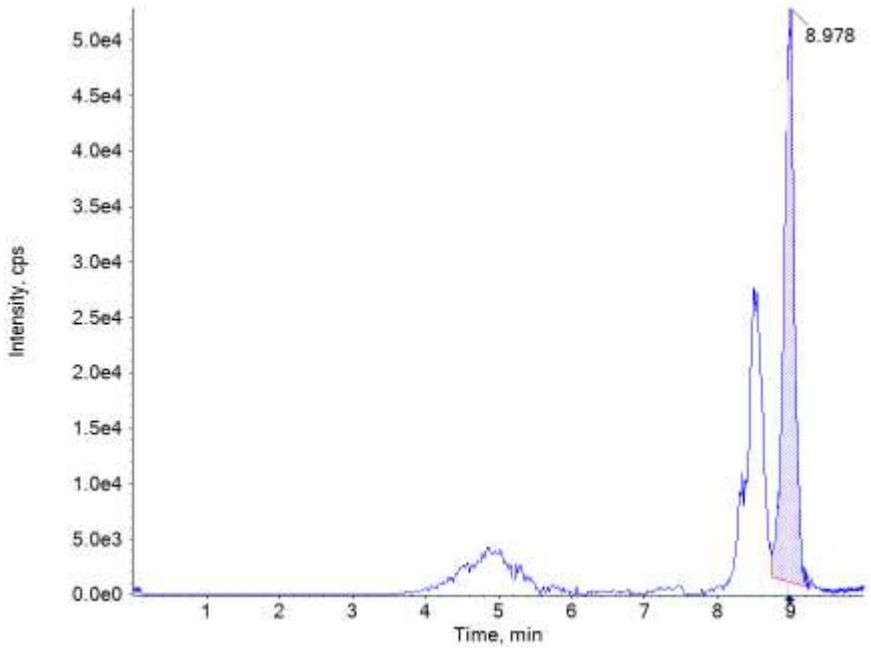
Acquired / Theoretical MS



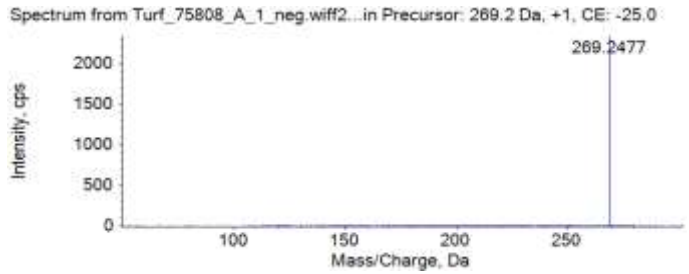
13. 269.2478 / 8.98 (Library/Formula)

Retention Time: 8.98 minutes
Precursor m/z : 269.2489
Fit (%) N/A **RFit (%)** N/A

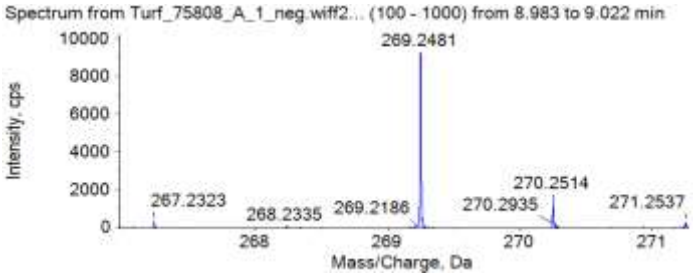
Analyte Name:
269.2478 / 8.98



Acquired / Library MSMS



Acquired / Theoretical MS

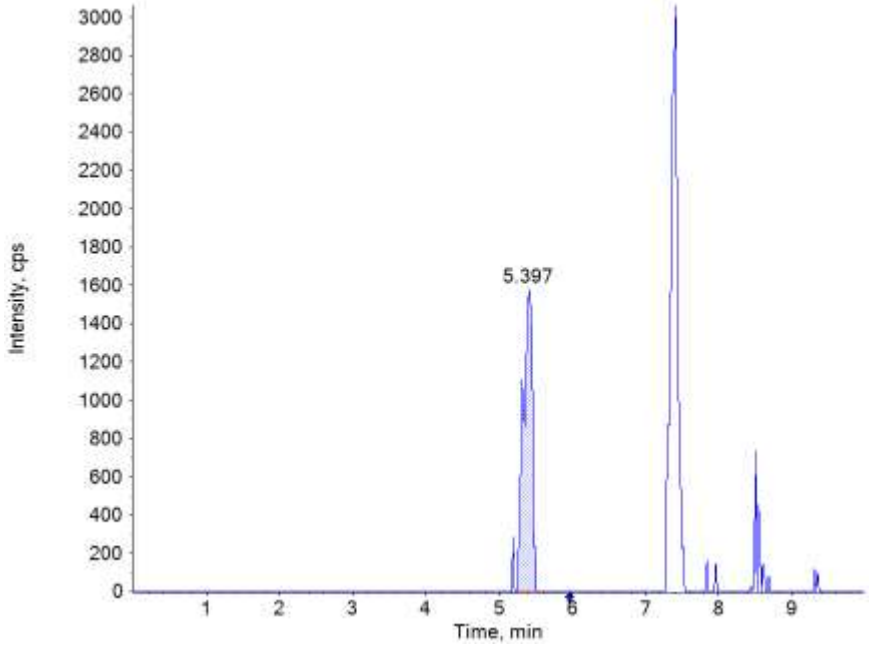


Compounds chromatographs and mass spectra for sample “75808_pos” acquired in positive polarity

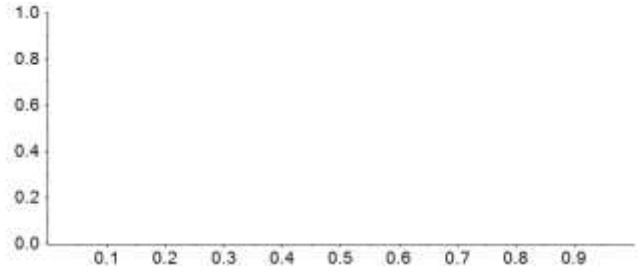
1. 691.2397 / 5.96 (Library/Formula)

Retention Time: 5.40 minutes
Precursor m/z : 691.2408
Fit (%) N/A **RFit (%)** N/A

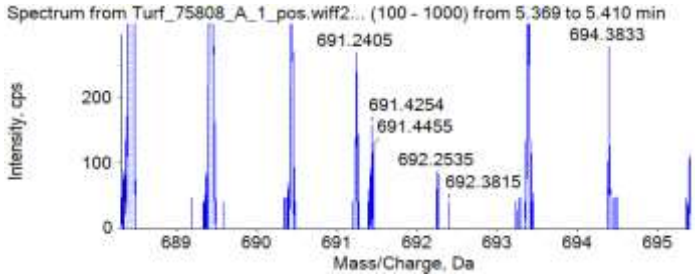
Analyte Name:
691.2397 / 5.96



Acquired / Library MSMS



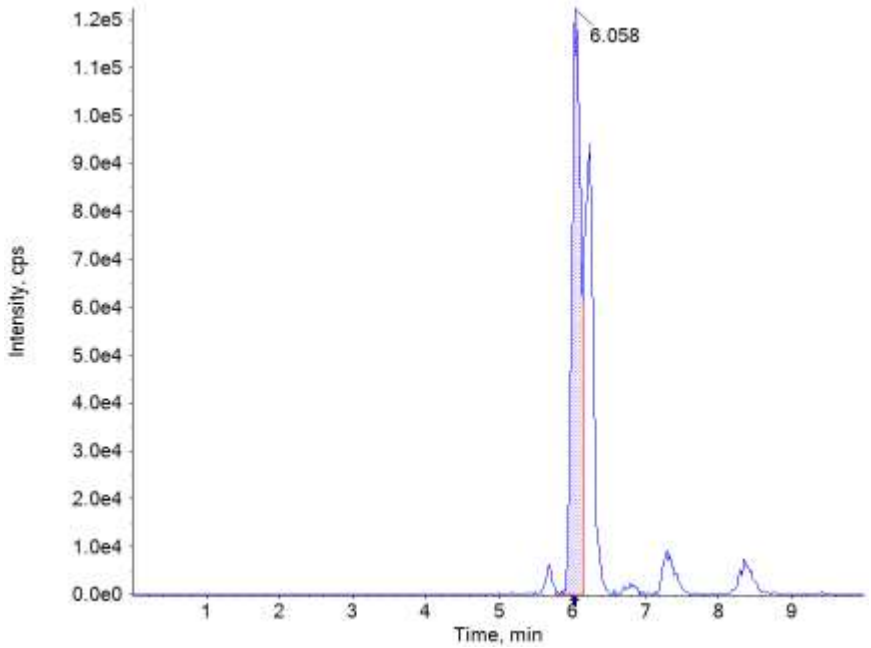
Acquired / Theoretical MS



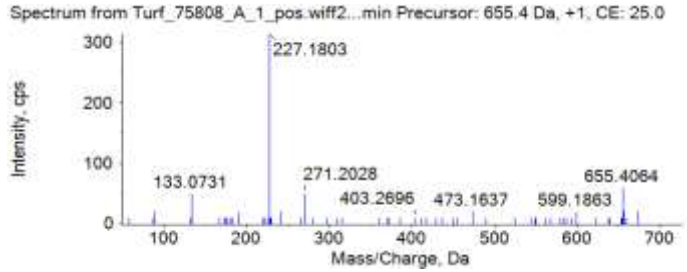
2. 655.4038 / 6.03 (Library/Formula)

Retention Time: 6.06 minutes
Precursor m/z : 655.4049
Fit (%) N/A **RFit (%)** N/A

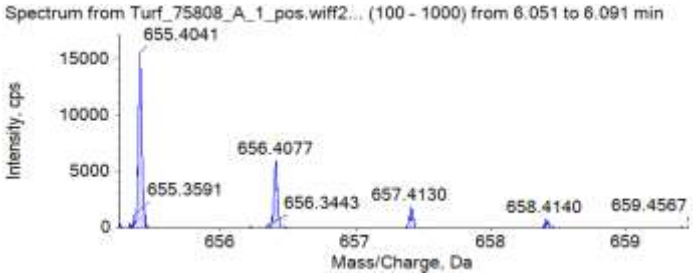
Analyte Name:
655.4038 / 6.03



Acquired / Library MSMS



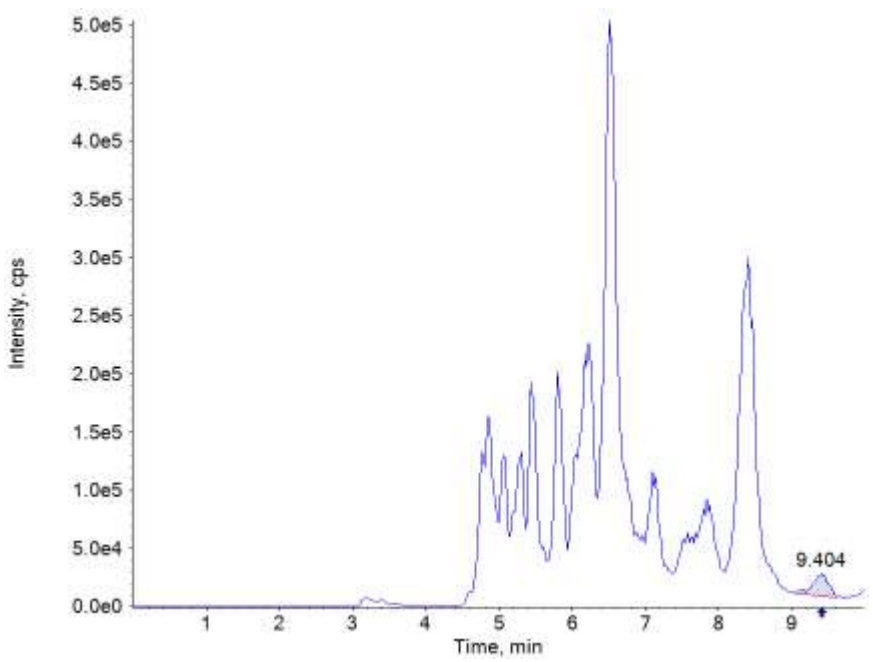
Acquired / Theoretical MS



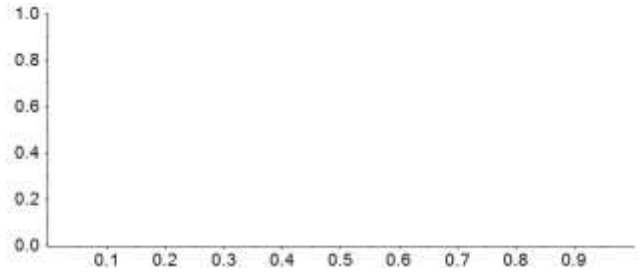
3. 177.0971 / 9.41 (Library/Formula)

Retention Time: 9.40 minutes
Precursor m/z : 177.0982
Fit (%) N/A **RFit (%)** N/A

Analyte Name:
177.0971 / 9.41



Acquired / Library MSMS



Acquired / Theoretical MS

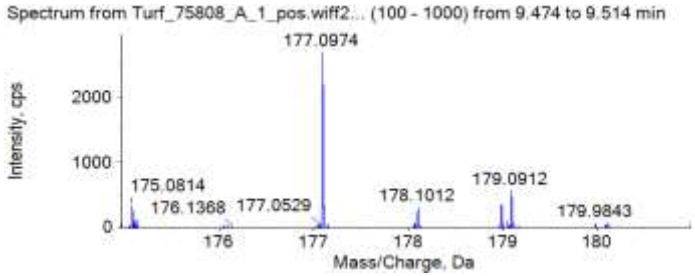


Table 4. NTA results for sample "76935_Neg" acquired in negative polarity

S.N.	Compound Formula	Compound name	Area	Retention Time	Adduct / Charge	Precursor Mass	Found At Mass	Mass Error (ppm)
1	{452.33572}	unknown	1.94E+04	3.33	[M-H]-	451.329	451.3278	-2.66
2	{213.06473}	unknown	1.03E+05	3.42	[M-H]-	212.058	212.0572	-3.77

Table 5. NTA results for sample "76935_Pos" acquired in positive polarity

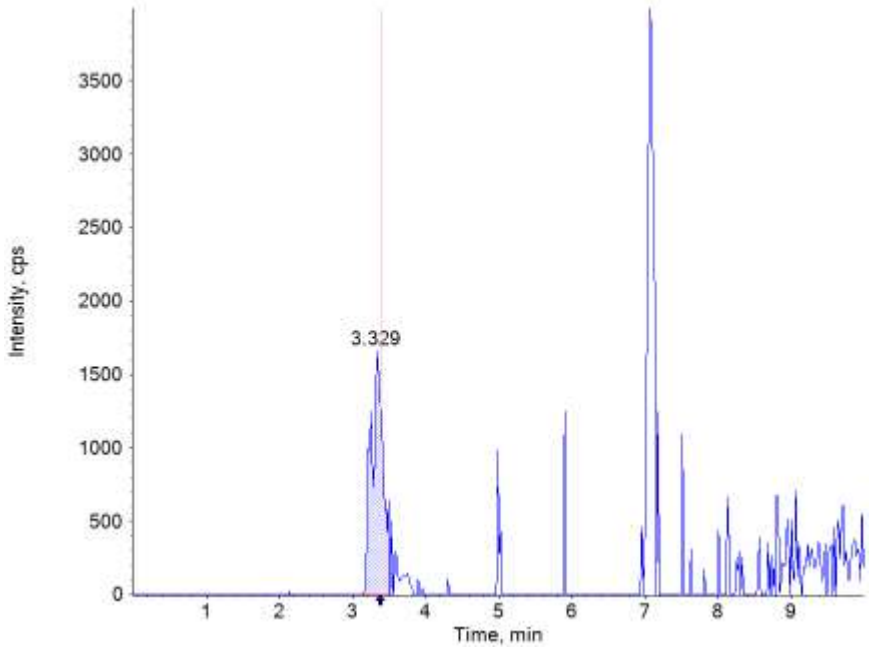
S.N.	Compound Formula	Compound name	Area	Retention Time	Adduct / Charge	Precursor Mass	Found At Mass	Mass Error (ppm)
1	{705.45637}	unknown	4.70E+04	5.62	[M-H]-	704.4496	704.4505	1.28

Compounds chromatographs and mass spectra for sample “76735_neg” acquired in negative polarity

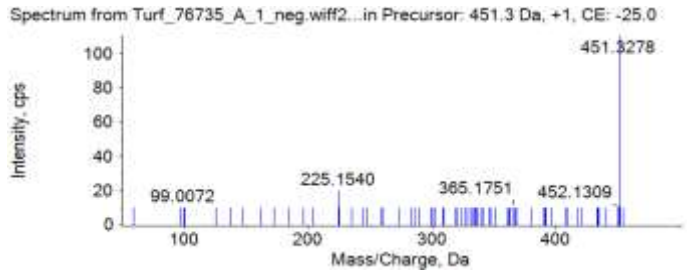
1. 451.3279 / 3.37 [M-H]- (Library/Formula)

Retention Time: 3.33 minutes
Precursor m/z : 451.3290
Fit (%) N/A **RFit (%)** N/A

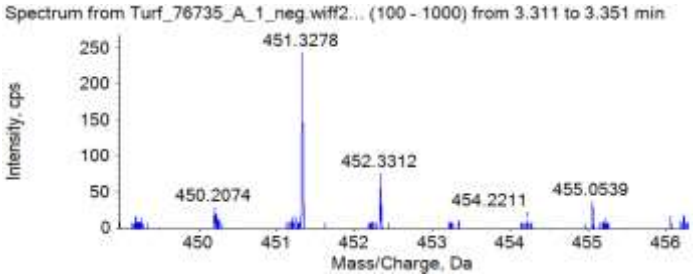
Analyte Name:
451.3279 / 3.37 [M-H]-



Acquired / Library MSMS



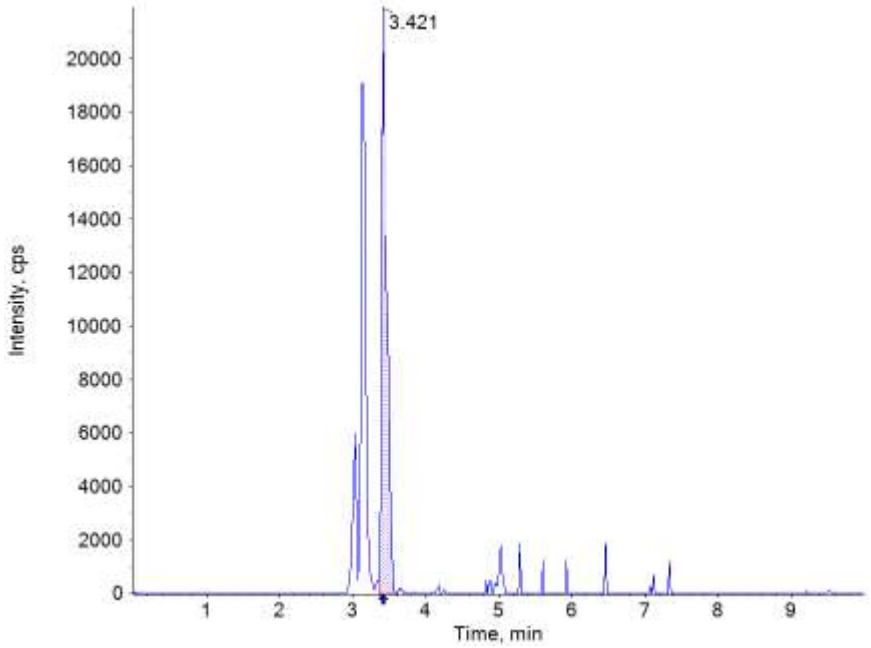
Acquired / Theoretical MS



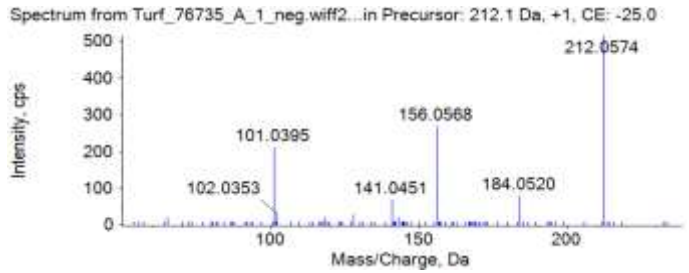
2. 212.0569 / 3.41 (Library/Formula)

Retention Time: 3.42 minutes
Precursor m/z : 212.0580
Fit (%) N/A **RFit (%)** N/A

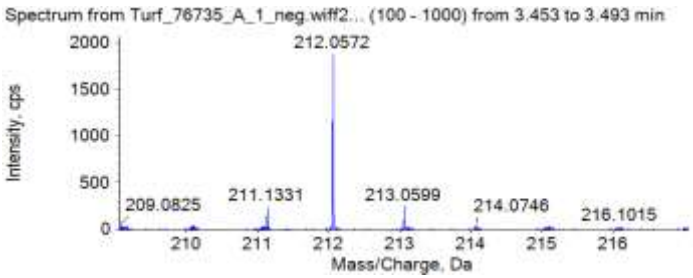
Analyte Name:
212.0569 / 3.41



Acquired / Library MSMS



Acquired / Theoretical MS

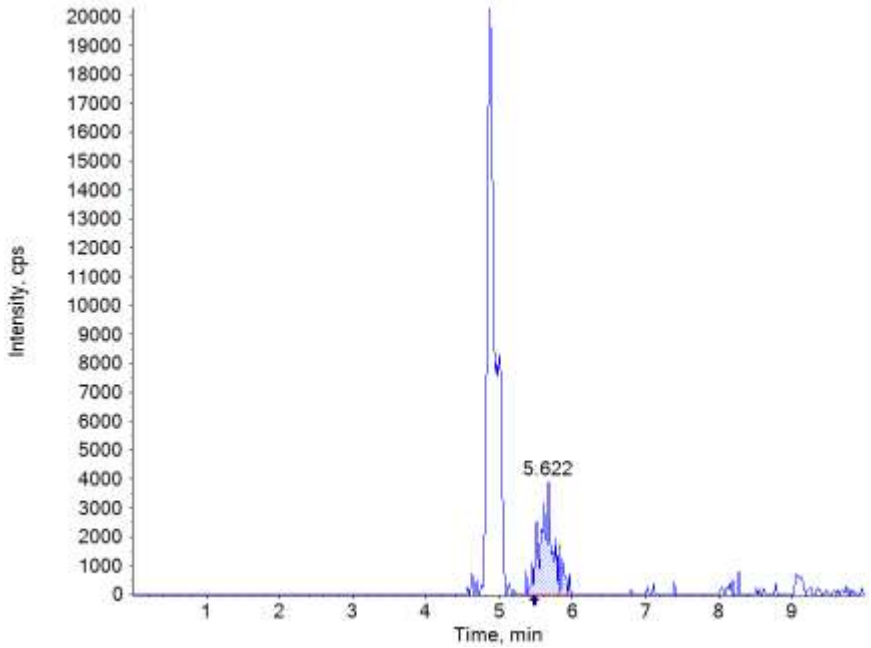


Compounds chromatographs and mass spectra for sample “76735_pos” acquired in positive polarity

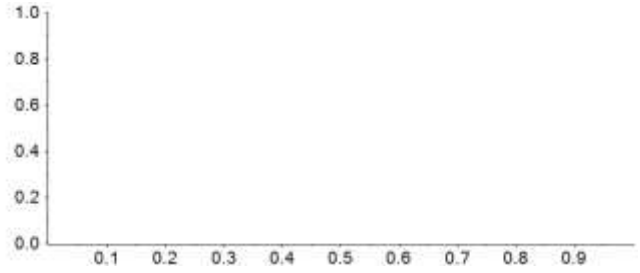
1. 704.4485 / 5.47 (Library/Formula)

Retention Time: 5.62 minutes
Precursor m/z : 704.4496
Fit (%) N/A **RFit (%)** N/A

Analyte Name:
704.4485 / 5.47



Acquired / Library MSMS



Acquired / Theoretical MS

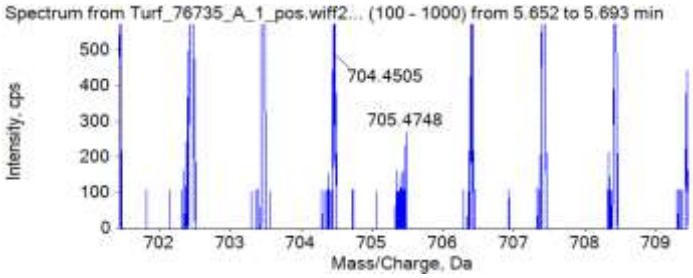


Table 6. NTA results for sample "76903_Neg"

S.N.	Compound Formula	Compound name	Area	Retention Time	Adduct / Charge	Precursor Mass	Found At Mass	Mass Error (ppm)
1	{224.14073}	unknown	1.03E+05	4.12	[M-H2O-H]-	205.1234	205.1223	-5.36
2	{300.20708}	unknown	8.39E+04	5.38	[M-H]-	299.2004	299.2	-1.34

Table 7. NTA results for sample "76903_Pos"

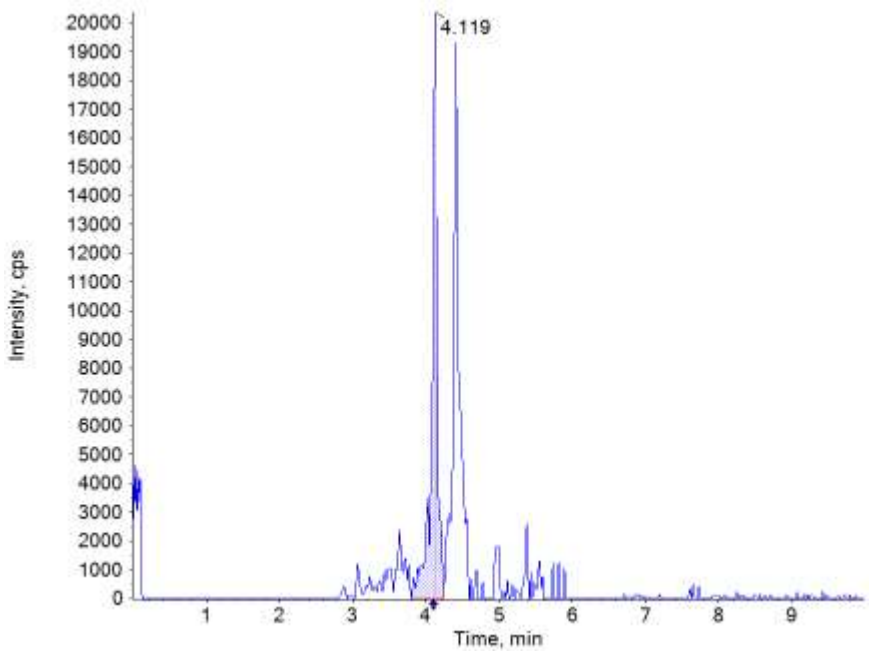
S.N.	Compound Formula	Compound name	Area	Retention Time	Adduct / Charge	Precursor Mass	Found At Mass	Mass Error (ppm)
1	{312.27000}	unknown	7.44E+04	9.15	[M-H]-	311.2633	311.2631	-0.642543238
2	{240.13271}	unknown	1.87E+04	5.91	[M-H]-	239.126	239.1265	2.090943496
3	{243.23080}	unknown	1.13E+04	5.64	[M-H]-	242.2241	242.2248	2.889877502

Compounds chromatographs and mass spectra for sample “76903_neg” acquired in negative polarity

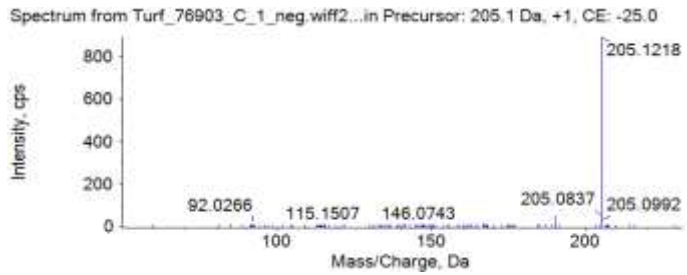
1. 205.1223 / 4.10 [M-H2O-H]- (Library/Formula)

Retention Time: 4.12 minutes
Precursor m/z : 205.1234
Fit (%) N/A **RFit (%)** N/A

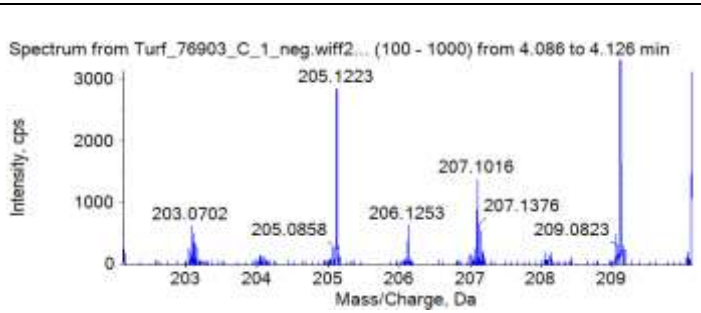
Analyte Name:
205.1223 / 4.10 [M-H2O-H]-



Acquired / Library MSMS



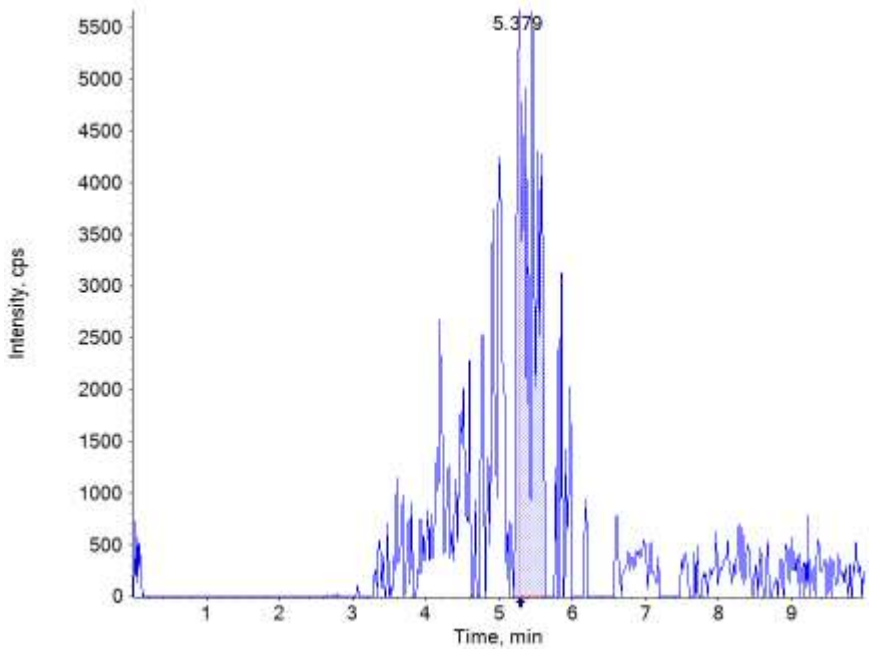
Acquired / Theoretical MS



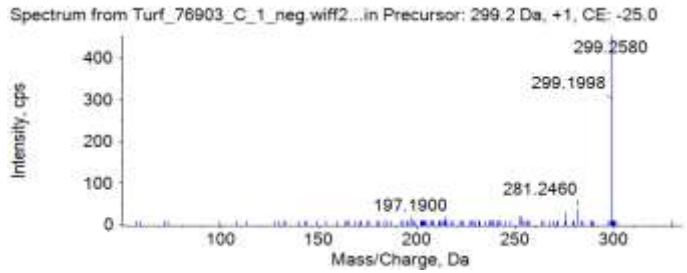
2. 299.1993 / 5.29 [M-H]- (Library/Formula)

Retention Time: 5.38 minutes
Precursor m/z : 299.2004
Fit (%) N/A **RFit (%)** N/A

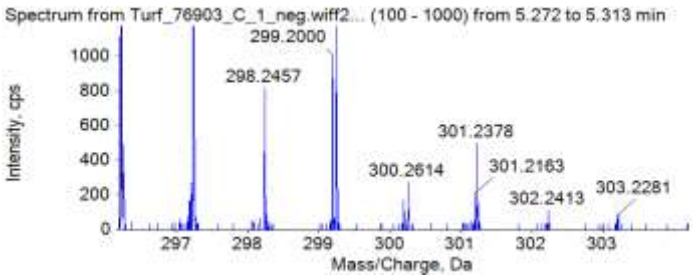
Analyte Name:
299.1993 / 5.29 [M-H]-



Acquired / Library MSMS



Acquired / Theoretical MS

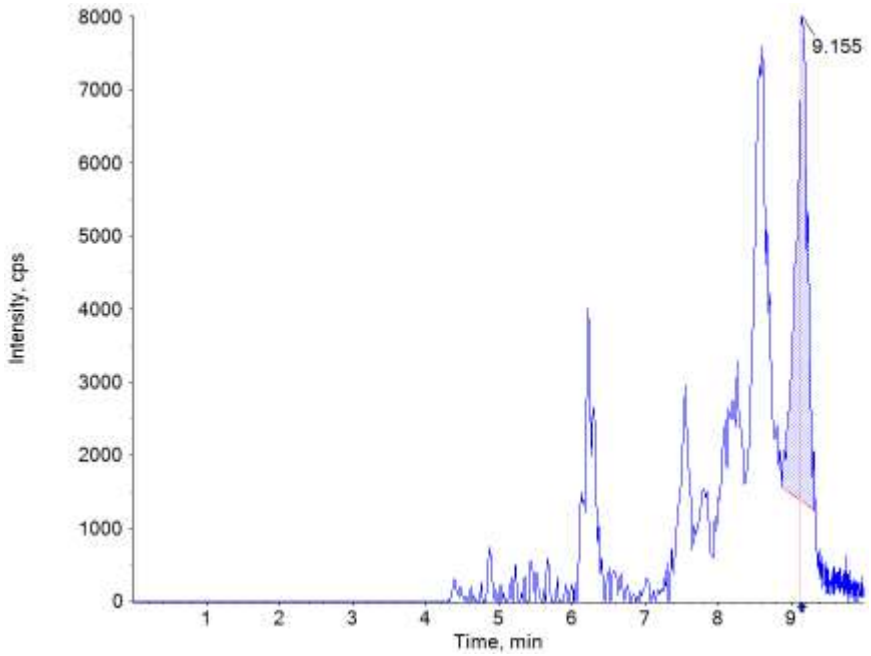


Compounds chromatographs and mass spectra for sample “76735_pos” acquired in positive polarity

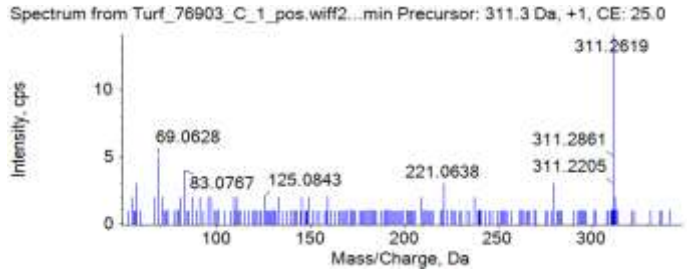
1. 311.2622 / 9.14 (Library/Formula)

Retention Time: 9.15 minutes
Precursor m/z : 311.2633
Fit (%) N/A **RFit (%)** N/A

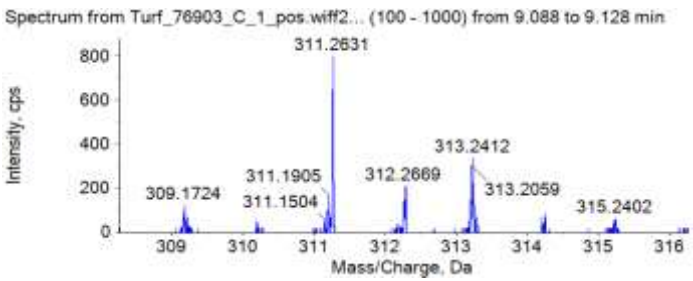
Analyte Name:
311.2622 / 9.14



Acquired / Library MSMS



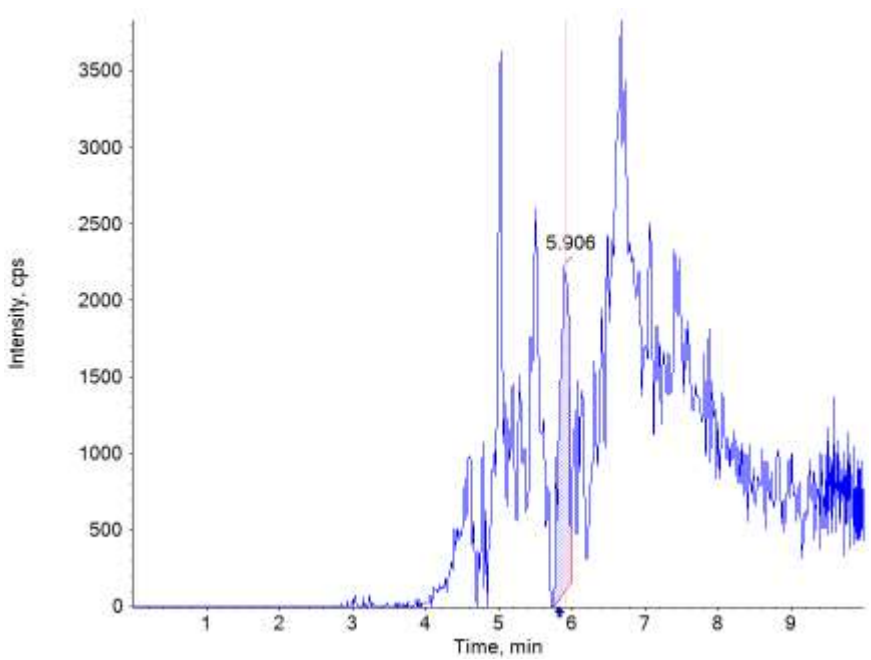
Acquired / Theoretical MS



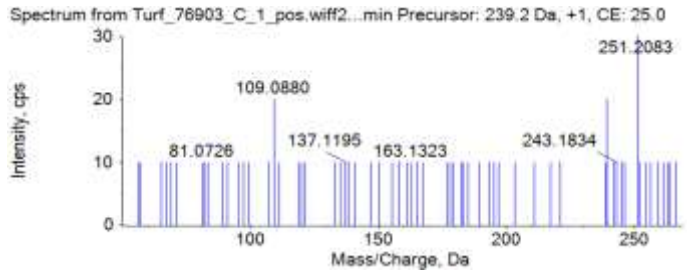
2. 239.1249 / 5.82 (Library/Formula)

Retention Time: 5.91 minutes
Precursor m/z : 239.1260
Fit (%) N/A **RFit (%)** N/A

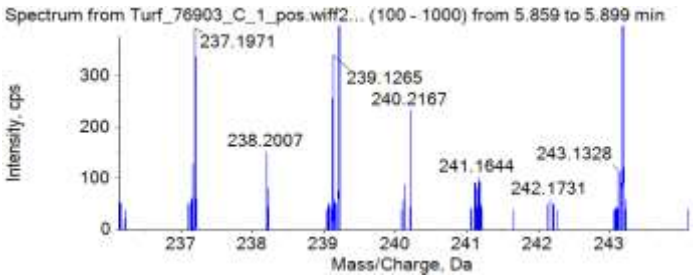
Analyte Name:
239.1249 / 5.82



Acquired / Library MSMS



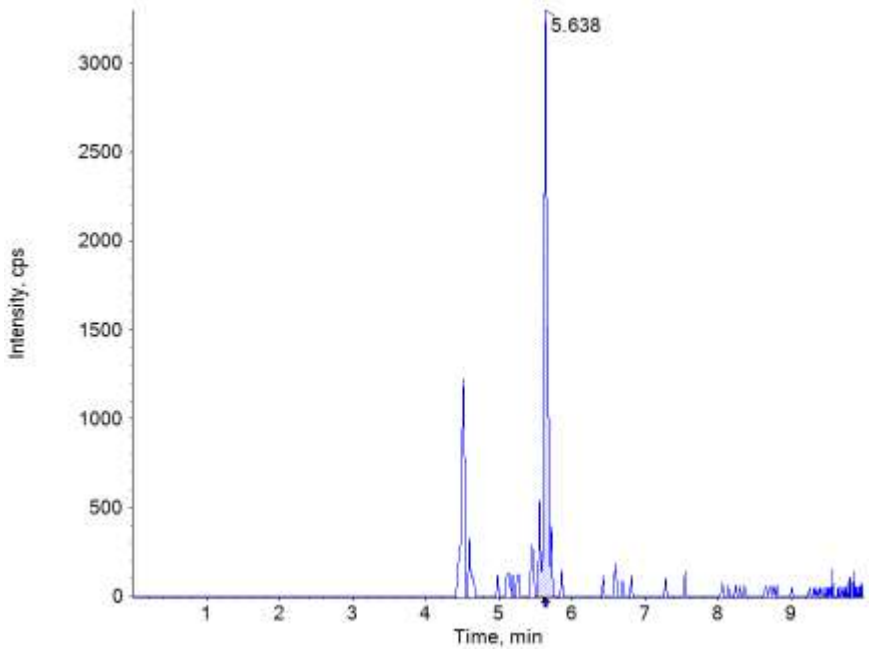
Acquired / Theoretical MS



3. 242.2230 / 5.63 (Library/Formula)

Retention Time: 5.64 minutes
Precursor m/z : 242.2241
Fit (%) N/A **RFit (%)** N/A

Analyte Name:
242.2230 / 5.63



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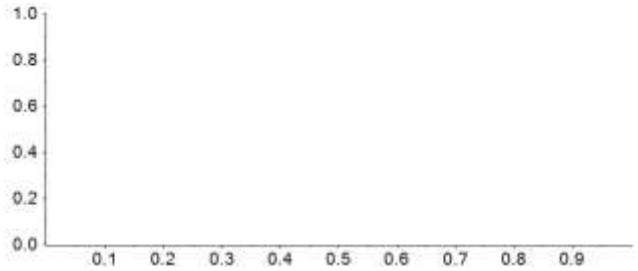

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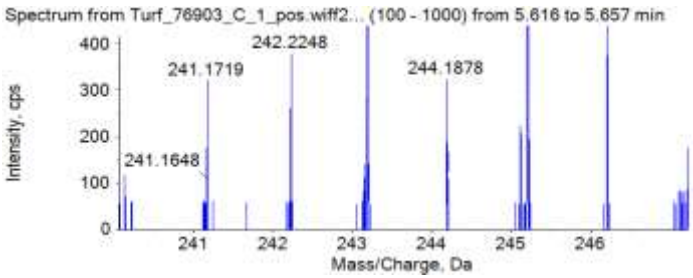

General Conclusion

Most of the compounds screened after NTA appeared as [M-H]-, which indicate a loss of hydrogen after dissociation in water. This indicate the presence of either a carboxylic or sulfonic acid functional group in the backbone of the compounds.