Sampling Soils and Semisolids (>2% Solids) for Per- & Polyfluoroalkyl Substances (PFAS) using ASTM D7968 Modified

Please read and understand this entire procedure prior to beginning any sampling.

[NOTE: The maximum holding time for a sample stored above freezing, and at or below 6 degrees C (> 0 °C to ≤ 6 °C) is 28 days from sample collection until analysis.

SAMPLING PROCEDURE

BEFORE YOU BEGIN

(1) It is important to get familiarized with this ASTM D7968 Modified sampling procedure prior to beginning with the sampling. Sampling guidelines must be followed to perform the sampling correctly. Additional PFAS Sampling Guidance is available from the Michigan EGLE MPART website at: https://www.michigan.gov/pfasresponse/0,9038,7-365-88059_91297---,00.html.

(2) Be aware that PFAS contamination can easily occur while sampling. PFAS can be present in cosmetics & lotions, insect repellents & sunscreens, fast food wrappers, recycled paper products, latex gloves, and certain treated clothing. Best practice is to avoid using these products.

[NOTE: For more specific details, and to find out about approved products vs. non-approved products visit the Michigan EGLE links provided above and in the References section.]

(3) Wash your hands thoroughly before collecting samples.

(4) Gather and wear all appropriate PPE such as powderless nitrile gloves, safety glasses, etc.

(5) Each PFAS kit contains 1 Field Blank (FB) tube, 1 Trip Blank (TB) tube, and 1 sample bottle.

(a) The Field Blank (FB) tube contains 2 g of clean Ottawa sand.

(b) The Trip Blank (TB) tube contains 2 g of clean Ottawa sand and is custody-sealed.

(6) One kit is utilized per sampling site to avoid cross contamination. After sampling, please return each PFAS sample kit to the cooler in which it was originally provided.

SAMPLING STEPS

Reminders:

- Please WASH YOUR HANDS thoroughly prior to beginning with the sample collection.
- Please DO NOT break the custody seal on the Trip Blank (TB).
- Please DO NOT dump out the sand that is provided in the 15-mL FB and TB tubes.

(1) Gather and wear appropriate PPE; ensure a new clean pair of powderless nitrile gloves are worn for each sampling event.

(2) Remove the Field Blank (FB) tube from the sampling kit. Open the Field Blank (FB) tube and expose the content to the sampling environment. Please leave the Field Blank (FB) tube open until the sample is collected. After sample collection, recap the Field Blank (FB) tube and place the tube in the original resealable bag that was provided.

(3) The empty 250-mL Polypropylene (PP) bottle is provided in its own resealable bag. Remove the 250-mL bottle from the resealable bag.

(4) To collect the sample, first uncap the bottle. Using a clean PFAS-free scoop or shovel apparatus (aluminum or stainless steel is acceptable), transfer the soil / semisolid sample into the bottle, being careful to prevent the sample from contacting any other surfaces or materials. Recap the bottle.

(5) Fill out the sample bottle label and place the sample bottle into its original resealable bag.

(6) Place all rebagged sample containers back into the cooler in which they were originally sent.

(7) Place NATURAL ICE that has been double-bagged into the cooler to immediately begin chilling the samples to at or below 6 °C (≤ 6 °C).

FINAL STEPS

(1) Record the sample location, date, and time on the Chain-Of-Custody (COC) Record, FORM-N0013A. Ensure this information matches with the sample bottle labels.

(2) It is best to have chilled the samples prior to being packed for shipping or transport. Just prior to shipping or transport, repack the cooler with fresh double-bagged NATURAL ICE (drain out as much melted ice as possible).
(3) Be sure to maintain the temperature from > 0 °C to ≤ 6 °C during sample shipment/transport.

ACKNOWLEDEGEMENT

I hereby acknowledge that I ____ (Int), **HAVE** / **HAVE NOT** (circle one) collected all submitted samples for Per- and Polyfluoroalkyl Substances (PFAS) testing as summarized above. I understand that not collecting samples using ASTM D7968 procedures may jeopardize the validity of any results obtained.

_____ _____
(Signature) (Date)

Submit this document with the completed Chain-of-Custody Record that accompanies samples.

Reference Information

Bottles & Supplies

PROVIDED ROUTINELY
(1) Each PFAS kit for soils / semisolids contains:
  (a) One Trip Blank (TB), custody-sealed 15-mL conical tube containing 2 g of clean Ottawa sand
  (b) One Field Blank (FB), 15-mL conical tube containing 2 g of clean Ottawa sand
  (c) One 250-mL Polypropylene (PP) bottle for sample collection
(2) Each container is provided in a resealable plastic bag.
(3) Each PFAS kit for soils and semisolids (>2% solids) is provided in its own dedicated cooler.

References

(1) ASTM International. 2017a. Standard Test Method for Determination of Polyfluorinated Compounds in Soil by Liquid Chromatography Tandem Mass Spectrometry (LC/MS/MS). ASTM D7968. ASTM International: West Conshohocken, PA.
(2) Michigan DEQ. 2018. General PFAS Sampling Guidance. MI EGLE: Lansing, October 16.
(3) Michigan DEQ. 2018. Soil PFAS Sampling Guidance. MI EGLE: Lansing, November.
(4) Michigan EGLE. 2019. Biosolids & Sludge PFAS Sampling Guidance. MI EGLE: Lansing, October.

Revision History

Rev	Description of Change	Originator	Reviewer	Approver	Source File	Effective Date
0	Initial Release (based on working draft)	JEK-296	JKP-288	JMS-225	SOP-N0177-R0.docx	7/20/21