



## PFAS (PFC) EPA Method 533 / 537.1 Sampling Instructions

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### Sampling Clothing



- Avoid wearing clothing or boots containing Gore-Tex or using materials containing Tyvek.
- Avoid using cosmetics, moisturizers, heavy fabric softeners on clothes the day of sampling.
- Use PFAS-free sunscreens.
- Avoid insect repellants.
- No aluminum foil present.
- Collect PFAS samples first if your cooler contains other sample collection bottles!

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## Consideration of Supplies



- **Do NOT use chemical ice packs.**
- **Felt-tip pens and permanent markers should NOT be used. Use regular ball point pens.**
- **Avoid adhesive products like sticky notes.**
- **Avoid plastic clipboards, binders, hard covers, etc.**
- **Sampler must wash hands before wearing nitrile gloves in order to limit contamination during sampling.**

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## Container Requirements



- **ONLY use the containers that have been provided by the laboratory.**
- **These containers are plastic. They're either HDPE (High Density Polyethylene) or HDPP (High Density Polypropylene). All other plastics, including Nalgene, could contaminate the sample.**

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## Container Requirements



- **Ammonium Acetate is the only preservative used for method 533.**
- **Trizma is the only preservative used for method 537.1**
- **(Trizma Pre-set crystals are a trademarked chemical made for adjusting the pH of samples and the removal of any free chlorine.)**

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## Before Sampling



- **Read all lab specific instructions before sampling.**
- **Plan to have all samples collected the same day as the pick-up day, whether it's a lab or delivery service's courier (UPS/Fed Ex), to limit the potential of on-site environmental contamination.**
- **Please locate chain of custody (COC) that should have been included with the sample containers.**
- **If your sampling point has a faucet with an aerator, remove the aerator prior to collection of the samples.**

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## Sampling Protocol Steps



- **CAUTION: Containers contain chemical preservatives...avoid skin contact!**
- **Wash hands and put on Nitrile gloves (provided). They must be worn during the sample collection.**
- **Find the PFAS containers in your cooler: 2 – 250 ml plastic (HDPE/HDPP) containers pre-preserved with 1.25 g Trizma.**

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## Sampling Protocol Steps (continued)



- **Flush the cold water sampling line approximately 10-15 minutes immediately prior to sampling.**
- **Slow the water stream before collection to ensure no splashing of sample.**
- **Remove cap WITHOUT touching the inside of the cap or around the edge of the container.**
- **Fill the container to the neck, replace cap and tighten.**

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## Sampling Protocol Steps (continued)



- Do NOT overfill container.
- Allow a small amount of head space for mixing the sample with the preservative.
- Invert at least five times to mix the sample with the preservative.
- Indicate sampling date, time, and location on both the container label AND the chain of custody (COC). If there is no COC, please contact your lab as soon as possible.
- The info on both label and COC must match.

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## PFAS Quality Control (QC)



- EB (Equipment Blank) measures the contribution from equipment (WW's)
- FRB (Field Reagent Blank) measures contribution from environment / personnel (DW's & WW's)
- FD (Field Duplicate) measures precision in the field & lab (WW's)
- MS/MSD (Matrix Spike / MS Duplicate) measures matrix impact (WW's)

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## PFAS Field / Trip Blank



- Per EPA methods 537.1 and 533 methodology, a Field / Equipment Blank (FB) must be collected with all drinking water samples.
- Open the FB container and pour the PFAS-free field blank water (provided) into the empty container labeled Field Blank at the sampling location.
- The FB will only be analyzed if the targeted compounds for the sample are detected on the associated sample. (MRL = 2.0 ppt)

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## FB Analysis Example



- If PFNA / PFOS / PFOA is requested on the COC, and we detect any level of them above 2.0 ppt (ng/l), then...per the method requirements, we must analyze the FB for those three compounds.
- If 18 PFAS targets are requested using method 537.1 and any one of those compounds has a result above the reporting limit (MRL), then we must analyze the FB, even though the PFNA / PFOS / PFOA may not be detected.
- If the 25 PFAS targets are requested using method 533 and any one of those compounds has a result greater than the MRL, then we must analyze the FB.
- If all results are non-detect, then the FB is NOT analyzed.

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## Shipping Instructions



- Place a layer of ice on the bottom of the cooler. Preferably in one-gallon zip-lock bags.
- Place samples on the layer of ice. Fill in gaps between containers with ice or bubble wrap.
- Place a layer of ice, preferably in zip-lock bags, on top of the samples.
- Place completed COC in zip-lock bag and place on very top of the inside of the cooler.

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## Shipping Instructions (continued)



- If samples are being sent directly to the testing lab, make sure they are overnighted to the testing lab.
- Samples must arrive at testing laboratory within 48 hours of sampling.
- Maximum temperature of samples can be 10 degrees C...but not below 0 degrees C.
- Maximum hold time to start analysis is 14 days for method 537.1 and 28 days for method 533.

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## Any Questions?



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