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PROCEDURES FOR COLLECTING DRINKING WATER SAMPLES VOLATILE ORGANIC COMPOUNDS (VOC)

Contents of the Sampling Kit:

- 2 - 40 ml clear glass vials with ascorbic acid
- 1 - 40 ml clear glass vial filled with DI water, labeled “TRIP BLANK” (DO NOT OPEN)
- 1 - Vial of Hydrochloric Acid (HCL), disposable gloves, and dropper
- 2 - Bubble bags
- Plastic zip-close bags for Ice (optional)
- Chain of Custody (COC) form



Sampling Guidelines:

- The sampling containers are specially cleaned for organic analysis and should not be opened until ready for sample collection.
- These sample containers, used for chlorinated water sources, have been treated with a small amount of chemical preservative. Do not dump out the preservative or rinse the container. If skin comes in contact with the preservative, rinse skin thoroughly with water. If the source being sampled is not chlorinated, the preservative will not compromise the sample and should be left in the container.
- Samples that are not in the proper containers, contain inappropriate preservation, or are not received at 4°C or on ice (verified at log-in inspection) will be rejected as samples unsuitable to meet regulatory compliance.

Collecting Samples:

1. Open the sampling tap and allow the water to run until it is representative of the water at that location. Allow the water to run until it is as cold as it will get (approx. 5-10 minutes). Adjust to a very slow flow rate. DO NOT change the flow rate while collecting the sample.
2. Open the sample container and place under the open tap with the bottle slightly tilted. Allow the water to flow down the side of the bottle. Slowly bring the bottle to an upright position as it fills. Fill just to the point of overflowing. There should be a reversed meniscus or dome of water at the top. DO NOT OVERFLOW.
3. Sometimes air bubbles may be observed in the water as the vial is being filled. This “dissolved” air should be allowed to rise to the top of the bottle and dissipate before the entire vial is filled.
4. With the disposal gloves on, carefully add 3-4 drops of HCL to each vial filled.
5. Seal the bottle so that no air bubbles are trapped in it. Make sure that the Teflon side of the cap liner is in contact with the water. The Teflon side of the liner is more shiny and whiter than the back side.
6. Once the cap is secured, turn the vial upside down and tap gently on a hard surface. If any air bubbles are present, remove the cap and add a few additional drops of water. DO NOT OVERFLOW.
7. Affix the enclosed labels to the sample bottles, being sure to record the sample ID and date/time of collection. Fill out the chain of custody record. Return the samples to the laboratory within one day of collection. The samples MUST be kept cold at 4°C at all times, once they are collected. This can be accomplished by transporting them in a cooler with plenty of ice.
8. Discard the sample if it foams vigorously when it comes in contact with the HCL preservative. In these cases, a new set of samples will need to be collected, but DO NOT add the HCL. Such samples must “flagged” on the vial labels and the COC as “Not Acidified Due to Foaming” and be transported to the laboratory immediately for analysis within 24 hours of collections..

REFERENCES:

- USEPA Method 524.2 (EPA/600/R-92/129)
- USEPA Technical Notes on Drinking Water Methods (EPA-600/R-94-173)
- Illinois EPA Sample Collectors Handbook (IEPA/PWS/89-090abc)