

SAMPLE COLLECTION – GENERAL

- **Tap Water:** Allow the water to run for approximately 5 minutes (in that time all the standing water should be flushed out of the pipes and a representative sample of the source water can now be collected). If analyses are to be performed on standing water in pipes (i.e. to test possible pipe corrosion and leaching), the sample should be collected almost immediately.
- Sample containers supplied by CARO may contain preservatives (if applicable). *Use caution as the acid/caustic preservatives are corrosive.* Do NOT dump these preservatives (liquid or powder form) as they are necessary in ensuring accurate results.
- Fill all sampling containers completely, then store under refrigeration (4°C, do not freeze) until packing into cooler containing ice. Samples should be kept below 10°C during transport.

MICROBIOLOGICAL ANALYSIS

- It is recommended that the collection faucet be sterilized with bleach prior to sample collection (The screen or aerator should be removed from the tap before bleaching and not reinstalled until sampling is complete). When filling the bottle, take care not to cross contaminate cap and/or bottle threads. Fill bottle to the shoulder (not the rim) to allow proper mixing by the lab.
- Samples collected for microbiological analysis must be collected in sterile bottles (containing sodium thiosulfate) and received by CARO within **24 hours** – Samples should arrive at a temperature of **less than 8°C (NOT Frozen)**.

VOLATILE ANALYSIS (BTEX, THM, VOC, VH, VPH)

- **Water** samples should be collected in replicate (i.e. fill 2 amber glass vials per sample) in 40 mL septum-top glass vials. The procedure for filling and sealing sample vials is as follows:
 - Fill each vial to overflowing (positive meniscus)
 - Set vial on a level surface and screw on the cap
 - Check for air bubbles (invert the vial and tap lid). If air bubbles are present, open the bottle, add additional sample, and reseal in the same manner as stated above.
- **Soil** samples must be collected in 40 mL glass vials pre-charged with 10 mL methanol (in replicate). Use the supplied coring device which is designed to dispense approximately 5 g sample. Additionally, fill a 125 mL glass jar with Teflon-lined lid to allow for moisture analysis, as the results are reported on a dry weight basis.

SEMI-VOLATILE ANALYSIS (L/HEPH, EPH, PAH, PCP, PCB)

- **Water** samples should be collected in 1 L amber glass bottles with Teflon-lined lids. One bottle is adequate unless speciated phenols (PCP) are required, in which case a second container is required.
- **Soil** samples should be tightly packed into 125-250 mL glass jars with Teflon-lined lids

METALS ANALYSIS

- **Dissolved metals** (typically for groundwater): Filter (using a new 0.45 µm membrane filter) as soon as possible, and then fill one 125 mL acid-washed HDPE container preserved with HNO₃.
*If Hexavalent Chromium is required, filter and fill one 125 mL HDPE container containing NaOH.
- **Total metals** (typically for surface water): Fill one 125 mL acid-washed HDPE container preserved with HNO₃. (*Note: hexavalent chromium is not normally conducted on an unfiltered and preserved sample.*)
- **Soil** samples should be collected in glass containers or plastic bags.

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