
APPENDIX K TAP WATER COLLECTION PROTOCOL

Residential water samples will be collected to determine concentrations of lead in tap drinking water. Samples will be collected from the kitchen faucet. Three samples will be collected from each residence: 1) a flushed sample, 2) a stagnant sample capturing water standing within residential plumbing, and 3) a stagnant sample capturing water standing within the service line. During the tap water collection period (35-40 minutes), ask the residents not to use water in the home. Confirm that the dishwasher, washing machine, and any other appliances that use water are not in use.

Collection of Flushed Samples

- Label a laboratory supplied, sealed, pre-cleaned 250 mL plastic bottle (PET or high density polyethylene (HDPE)) with a unique identifier.
- Document the sample collection and field observations within a field notebook or sampling sheets. Documentation should include:
 - A unique sample identifier corresponding with the identifier labelled on the sample collection bag.
 - The name of the person(s) conducting the field investigation and the date.
 - The address of the property where the sample is collected.
 - General observations and any unusual features. Document the presence of brass fixtures or end of tap filtration systems.
 - Photograph the sampling area.
 - Record the GPS coordinates.
- Run the cold tap water for five (5) minutes, slow the volume, and fill a 1 litre beaker. Transfer a 250 mL sub-sample from the beaker to the plastic bottle, filling to shoulder height.
- Add laboratory supplied nitric acid preservative to the sample, cap, and invert to mix the sample. The sample should be left to equilibrate for two minutes. Nitric acid is not to be added to the bottle prior to sample collection.
- Dispose of remaining 750 mL down the sink and rinse the beaker with distilled water.
- Place samples in a cooler or other container to be stored at room temperature prior to shipment to the lab.

Collection of Stagnant Samples

- Label two laboratory supplied, sealed, pre-cleaned 250 mL plastic bottles (PET or high density polyethylene (HDPE)) with unique identifiers.
- After collection of flushed samples (*i.e.*, five (5) minute flush of cold water), turn off faucet and let water sit in the pipes for 30 minutes.
- During the stagnation period no water should be drawn from any outlet within the home (this includes flushing of toilets).
- At the end of 30 minutes of stagnation, collect 2 samples (250 mL each) of cold tap water. Samples should consist of 250 mL sub-samples of the first litre and the fourth litre of tap water after stagnation, collected as follows:
 - Fill the 1 litre beaker with the first post-stagnation sample and immediately transfer a 250 mL sub-sample from the beaker to the plastic bottle, filling to shoulder height. Dispose of the remaining 750 mL of water down the sink and rinse the beaker with distilled water.

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- Allow the second and third litres of water to be captured and disposed of down the sink.
 - Fill the 1 litre beaker with the fourth post-stagnation sample and immediately transfer a 250 mL sub-sample from the beaker to the plastic bottle, filling to shoulder height. Dispose of the remaining 750 mL of water down the sink and rinse the beaker with distilled water.
 - Add laboratory supplied nitric acid preservative to each 250 mL sample, cap, and invert to mix the sample. The samples should be left to equilibrate for two minutes. Nitric acid is not to be added to the bottles prior to sample collection.
 - Place samples in a cooler or other container to be stored at room temperature prior to shipment to the lab.

Field Blanks

- Provide one field blank for every 15 samples using de-ionized water and nitric acid preservative. Samples are to be labelled as a W9000 series (e.g., W9001, W9002, etc.).