

MARYLAND DEPARTMENT OF THE ENVIRONMENT

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LEAD SAMPLE COLLECTION INSTRUCTIONS

Lead in Drinking Water - Public and Nonpublic Schools

GENERAL REQUIREMENTS:

- The targeted sample tap location must be a drinking water outlet which is regularly used by school students and/or staff for drinking, food preparation, cooking, or making drinks (e.g. drinking water fountain bubbler or cooler style, kitchen sink, teachers' lounge sink, home economics room sink, nurse's office sink, hot drink machines, ice machines, etc.) and is connected to piped water.
- The sample bottle must be a precleaned, high-density polyethylene, wide-mouth, single use 250 milliliter (mL) labeled bottle.
- The sample must be collected from a **COLD** water tap (**NOTE:** For hot drink machines, the cold water line leading to the machine must be tested).
- If flush samples are to be collected on the same day as first-draw samples, <u>ALL first-draw samples</u> in a school building must be collected first, BEFORE any flush samples are collected.
- All samples must be analyzed by a certified laboratory within 14 days of collection unless the bottles are acidified.

FIRST-DRAW SAMPLE DIRECTIONS:

For faucets, drinking water fountains, water dispensers, drink machines connected to piped water:

Requirements:

The water must remain stagnant in the plumbing for a minimum of 8 hours and a maximum of 18 hours. This is referred to as a "first-draw" sample. This means that the water in the building **CANNOT** be used for any reason, including toilet flushing, hand washing, etc., prior to sample collection. Due to this requirement, early morning is the best time to collect samples. In addition, do not collect samples in the morning after vacations, weekends, or holidays because the water will have remained stagnant for too long and will not represent the water used for drinking during most of the days of the week.

- 1. After the water has been standing in the plumbing 8 to 18 hours, place the 250 mL bottle under the cold water. If needed, position the bottle at an angle to capture the flow.
 - If the outlet has an aerator, leave the aerator in place.
 - If the outlet has a filter, collect the sample without the filter.
 - If a post-filter sample is also desired, collect the post-filter sample on a different day than the pre-filter sample.
 - If a chiller serves multiple drinking water fountains, collect the sample from each outlet on a different day.
 - If more than one outlet/fixture is served by a water inlet, collect the sample from each outlet on a different day:
 - If both outlets in a combination sink are sampled, collect the sample from each outlet on a different day*.
 - If multiple drinking water fountains are clustered together (e.g., high/low, left/right, tall/short), collect the sample from each outlet on a different day*.
 - If a bottle filler has fountain(s) in close proximity (e.g., below and/or next to it), collect the sample from each outlet on a different day**.

^{*}Unless the school provides a statement confirming and/or documentation demonstrating that these outlets <u>do not</u> share a water inlet.

^{**}Unless the school provides documentation demonstrating that these outlets <u>do not</u> share a water inlet.

FIRST-DRAW SAMPLE DIRECTIONS (continued):

- 2. Gently open the cold water tap directly into the bottle and fill the bottle to the neck (or line marked 250 mL).
 - Do not allow the tap to flow prior to collection.
 - Do not rinse bottle prior to collection.
 - Do not overfill.
- 3. Tightly cap the sample bottle.
- 4. Review sample bottle label to ensure that all of the information contained on the label is correct.
- 5. Fill out the Sample Collection Form and return the form with the sample bottle to the laboratory within 14 days of sample collection.

For ice machines connected to piped water:

- 1. Fill the 250 mL sample bottle with ice from the ice machine.
- 2. Tightly cap the sample bottle.
- 3. Review sample bottle label to ensure that all of the information contained on the label is correct.
- 4. Fill out the Sample Collection Form and return the form with the sample bottle to the laboratory within 14 days of sample collection.

FLUSH SAMPLE DIRECTIONS:

Important Notes:

- A flush sample is only required to be collected from a drinking water outlet that has an elevated level of lead in the first-draw sample.
- The sample bottle must be 250 mL in volume.
- A flush sample must be collected within FIVE days of notification by the laboratory of an elevated level of lead in a first-draw sample.
- Flush samples may be collected on the same day as first-draw samples; however, all first-draw samples in the school building must be collected first. Laboratories only need to analyze the flush sample from a particular outlet if the result of the first-draw sample from that outlet shows an elevated level of lead.
- A flush sample is recommended to be collected on the same day as the first-draw sample for any "critical" outlet (i.e. outlet that is essential to a school's daily functions and is accessible only to the school staff) such as a kitchen sink.
- To collect a flush sample from an ice machine, disconnect the ice machine and locate the closest outlet for sampling.
- 1. Let the water run for a minimum of 30 seconds or until the water temperature changes, and fill the bottle to the neck (or line marked 250 mL). This is referred to as a "Flush" sample.
 - If the outlet has an aerator, leave the aerator in place.
 - If the outlet has a filter, collect the sample without the filter. (**NOTE:** A flush post-filter sample may also be collected if desired).
- 2. Tightly cap the sample bottle.
- 3. Review sample bottle label to ensure that all of the information contained on the label is correct.
- 4. Fill out the Sample Collection Form and return the form with the sample bottle to the laboratory within 14 days of sample collection.