Sampling to Screen for Lead in Drinking Water

At-a-glance guide for sampling in schools

How to sample for lead

Why is lead screening important

- Ingesting even low levels of lead can be harmful to children. Lead becomes present in water after coming in contact with plumbing materials containing lead. This means lead levels can vary between locations, and between water fixtures.

Who gets screened?

- The Ministry of Education and Child Care requires School Districts to conduct water sampling in all public and independent schools to ensure the water is safe to drink.

What gets screened?

- All water fixtures used for drinking or preparing food should be screened. These include kitchen taps, instant hot water dispensers, and drinking fountains (including seperate samples from water spigots and bottle fill nozzels).

How is screening done?

- Two sample bottles are required for each water fixture if using the recommended screening method itentified below.
  - A **First Draw** sample is the first water out of the tap.
  - A **Fully Flushed** sample is defined as the water taken after running the cold tap for 5 minutes.

What to do if lead is detected?

- Any water fixture that exceeds the maximum acceptable concentration for lead (0.005 mg/L) will require action. Contact your regional health authority to discuss options and next steps.

How often must screening be done?

- Lead screening must be completed once every 3 years. Additional testing may be required following remediation measures for measuring success.

BEFORE YOU SAMPLE

1. **TAKE INVENTORY**

- Conduct a walkthrough of the building(s) and identify all water fixtures used for drinking and/or food preparation. This includes specialty outlets such as instant hot water dispensers and soft drink machines. Speak with individuals who are familiar with the building to ensure no relevant water fixtures are being missed. Fixtures that are not included in the sampling program should be labelled as being unsuitable for drinking (non-potable water source).
- Use the Sampling Form to assign a Sample ID to each water fixture. Use this same Sample ID to label each of the sample bottles (see below). If possible, prepare labels for the sample bottles in advance of testing.

2. **CONTACT A LABORATORY**

- An analytical laboratory will provide you with the sample bottles you will need to collect your samples. Inform the laboratory that you will be screening for lead, and that you will require 2 (two) 250 ml sample bottles for each fixture. Use the number of fixtures identified during Step 1 to determine how many bottles are needed. If applicable, confirm whether there are any special instructions for certain water sources (e.g. hot water, ice machines).
- For assistance finding an appropriate laboratory contact your regional health authority.

3. **MAKE ARRANGEMENTS**

- To screen for lead, water must sit still (unused or stagnant) in a building for at least 8 hours. Ensure you will have access to the building at a time that follows such an 8-hour period, and that you will have adequate time to complete

the screening. For a description of the screening method see section 5, below. The day you sample can make a difference in your results. If possible, choose a morning between a Tuesday and Saturday before school is open to avoid prolonged stagnation periods.

4. **PREPARE**

- It is a good idea to ensure that staff are aware that sampling is taking place and understand the rationale for the sampling requirement.
- It is a good idea to develop a plan should one or more fixtures need to be decommissioned until remediation takes place. This could include developing signage or a communications plan to inform impacted students, staff, and parents. If lead concentrations in any fixtures exceed the maximum allowable concentration you should contact the regional health authority for further assistance.

ON THE DAY YOU SAMPLE

5. **CHECK AND CONFIRM THAT 8 HOURS OF STAGNATION TIME HAS PASSED**
   - If this is not possible for any of the fixtures, make a note on the Sampling Form of the last time the fixture was used or choose another day to sample.
6. **CHECK YOUR SUPPLIES**
   - Ensure you have a completed Sampling Form with Sample IDs. Your sample bottles should have a corresponding Sample ID. You will need to mark the time of each First Draw and each Fully Flushed sample on both the Sampling Form and on the bottle.
   - If applicable, **DO NOT remove the aerator** when conducting your sampling.
7. **TAKE A FIRST DRAW SAMPLE FROM EACH FIXTURE**
   - Take the First Draw sample. The first sample from each fixture must include the first water out of the tap.
   - Water must flow at a rate that is approximate to normal use.
   - Note the time of the sample on the Sampling Form and on the bottle.
   - Take the sample, turn off the water, and close the bottle lid.
8. **TAKE A FULLY FLUSHED (5 minute) SAMPLE FROM EACH FIXTURE**
   - Flush the fixture by turning on the cold water for 5 minutes and let the water flow at full volume. You should take the sample after 5 minutes, then repeat this step at each fixture. Make sure to note the time the sample was taken on both the Sampling Form and on the bottle.
9. **DOUBLE CHECK YOUR WORK**
   - Ensure you have clearly marked all information on the bottles and corresponding form.
10. **SEND BOTTLES AND SAMPLING FORM** to the laboratory.

INTERPRETING YOUR RESULTS

11. If the laboratory results show any fixtures having a concentration of lead over 0.005 milligrams per litre (mg/L) mitigation will be required. See the Mitigation Strategies sheet in the Reporting Workbook for guidance.
12. All results should be shared with your Health Authority, even if you are certain there are no lead exceedances.
13. Complete mitigation, as required.
14. Ensure the report required by the Ministry of Education and Child Care is completed and submitted.
15. Communicate the results and mitigation strategies (if applicable) to relevant audiences.