



## **SCHOOL SAMPLING IN SIX EASY STEPS**

Disclaimer: This is a convenient guide for the collection and analysis of drinking water samples in support of the protection of human health and is not intended to supersede any federal state or local law or regulation. Please refer to your specific state requirements before proceeding with sample collection.

### Background

Providing safe drinking water to our children is an important responsibility. Lead can cause a range of health issues including behavioral problems and learning disabilities, especially in young children. Unfortunately, routine testing of public drinking water only tells you if the water provided by the city is safe up to your door. However, lead can exist in old pipes and plumbing fixtures within the school or home. Some states such as Illinois have specific testing requirements but in the absence of any official requirement, we recommend schools, day care facilities, homes and apartment/condo buildings test their water for lead if they were built before January 1, 2000, and serve children under the age of 13.

Each facility should collect samples from every water source, including taps, faucets, drinking fountains and wash basins, that can potentially be used for drinking or preparation of food. These sources include all classrooms, science labs, halls, cafeterias, kitchens, lounges, offices, gyms, locker rooms, athletic fields, and so on. While bathroom sinks and janitorial wash basins may be excluded from some requirements, you should test bathroom sinks if they could potentially be used for drinking or filling water bottles.

Two samples should be collected from each water source. A “first-draw” sample should be taken from each source after the water system has been standing (unused) for a minimum of eight hours and a maximum of eighteen hours. A second “flush” sample is collected after running the water for 30 seconds after the first draw sample is collected. Water sources that may have multiple taps and a single drain should still have first draw samples taken from each tap, but only one flush sample is needed.

Samples must be analyzed by a certified drinking water lab using approved drinking water methods, and results of the tests reported by the lab to the applicable regulatory authority

within seven days of completion. Schools should communicate lead results at or above 5.00 ug/L (micrograms per liter) to parents or legal guardians of all enrolled students in writing or via email. Results below 5.00 ug/L can be reported via the school/facility website. The following 6 easy steps will help ensure your water is safe:

### STEP 1: Water Source Inventory

Start by taking an inventory of the potential drinking water sources. Suburban Laboratories has developed a helpful Water Source Inventory template to help make this process easy.

### STEP 2: Order Sampling Kits

If you have 1–25 water sources, order test kits from our website. Remember that you will need two samples (a first-draw and a flush sample) for each water source. Discounts codes for multiple samples are available. If you have more than 25 water sources (50 samples), call us at (800) 783-5227 to open a commercial account. The sampling kit will include bottles, labels, and a Field Data template to record sample information.

### STEP 3: Sample Collection Plan

Depending on the size of your facility, you may wish to have more than one person collecting samples, or you may want to spread out the sampling over multiple days. Samples should be collected during a normal school day. You should not collect samples during a period where school activity is minimal for several days, such as spring or summer breaks.

You should create a written Sample Collection Plan that details your collection activities and includes (1) the Water Source Inventory, (2) the map or floorplan identifying each water source to be tested, (3) the names and positions of personnel collecting samples, and (4) an acknowledgment that sample collection personnel are trained such as reading the USEPA's 3Ts Technical Guidance (downloadable from our website) or applicable State regulation.

### STEP 4: Preparing for Sampling

The water system must remain standing (unused) for a minimum of eight hours, and a maximum of eighteen hours before sampling can begin. This stipulation may require collection over a weekend or late evening/early morning before students or faculty arrives. We suggest you post signs and/or place tape across each water until sampling begins.

Preparation is the key to a successful sample collection process. Before sampling, you should fill out the Field Data template and the sample label with each unique sample ID. This system will allow you to move quickly through the sample collection process. Be careful to ensure that you place the sample ID label on the correct bottle. Transcribing

labels/bottles is a common error when collecting multiple samples. Before sampling, we recommend you place each labeled sample bottle near each water source.

#### STEP 5: Sample Collection

- a. Place the first-draw sample bottle under the tap at a 45-degree angle and turn on the cold water tap. The flow of water should be about the size of a pencil.
- b. Fill the first-draw sample to just below the neck of the opening, and do not overfill.
- c. When filled, remove the bottle but do NOT turn off the water.
- d. Allow the water to run for 30 seconds, and fill the flush sample bottle in the same manner.
- e. When finished filling both bottles, immediately turn off the tap and place the cap on the bottles.
- f. Record the date and time of collection in the Field Data Form, and move to the next water source.
- g. Before submitting the samples to the laboratory, make sure that all sample bottles are labeled, caps are tightened, and the Field Date Template is filled out completely.



#### STEP 6: Submitting Samples to the Laboratory

The samples must be analyzed by a certified/accredited drinking water laboratory using approved drinking water methods found in 40 CFR 141.23(k)(1). The most common of these methods are USEPA Methods 200.8, 200.9 and Standards Methods 3113 B.

If sample collection is set to last over two or more consecutive days, we recommend you wait until all samples are collected from the same school before delivering samples to the lab. If you are mailing the samples, ensure caps are securely tightened and packed with bubble wrap to prevent breakage during shipping. Samples do not require ice or refrigeration. Upon receipt at the lab, nitric acid is added to the samples as a preservative and the samples are held for a minimum of 16 hours prior to analysis as required by EPA. Routine turnaround time is about one to two weeks, and rush service is available for an additional charge. For more information contact us at (800) 783-5227.

**WATER SOURCE INVENTORY**

Page \_\_\_\_\_ of \_\_\_\_\_

School Name:	<input style="width: 95%;" type="text"/>	Site Code/ID:	<input style="width: 95%;" type="text"/>
Facility Address:	<input style="width: 95%;" type="text"/>		
Facility City:	<input style="width: 30%;" type="text"/>	State:	<input style="width: 10%;" type="text"/>
		Zip:	<input style="width: 15%;" type="text"/>

	Room #/Location	Room Use	Source Type	ID	Manufacturer/Model #	Age	Comments
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							

Room Use: C=Classroom, H=Hallway, LR=Lunchroom/Cafeteria, K=Kitchen, G=Gym, L=Lounge, OF=Office, E=Exterior, R=Rec area, S=Science lab, AR=Art room, LK=Locker room, BR=Bathroom, O=Other    
 Source Type: DF=Drinking Fountain, RDF=Refridgerated DF, S=Sink Faucet/Tap, C=Cooler, SK=Steam Kettle, SP=Sprayer, PF=Pot Filler, IM=Ice Maker, O=Other

**FIELD DATA FORM**

**This form must be filled out completely and returned to the lab with samples.**

School/Facility Name	Address	Sample Collector Name(s)

Water system last used date:  Time:

All samples must be collected in unpreserved 250 ml plastic bottles

Room/ Location ID	Source Type	Room Use	First Draw=1 Flush=2	Collection Date	Collection Time	ID A-Z	Comments
Kitchen	S	K	1	2/23/2017	8:00 AM	A	Example

Source Type: DF=Drinking Fountain, RDF=Refrigerated DF, S=Sink Faucet/Tap, C=Cooler, SK=Steam Kettle, SP=Sprayer, PF=Pot Filler, IM=Ice Maker, O=Other    Room Use: C=Classroom, H=Hallway, LR=Lunchroom/Cafeteria, K=Kitchen, L=Lounge. G=Gym, OF=Office, E=Exterior, R=Rec area, S=Science lab, AR=Art room, LK=Locker room, BR=Bathroom, O=Other    ID A-Z: Use this to differentiate multiple sources in the same room.

If you have questions please call us at (800) 783-5227