



#118, 339 – 50 Ave. SE  
Calgary AB T2G 2B3  
(403) 253-7026  
CServices@bio-chemconsulting.com

## **Potable Water Sampling Procedures**

### **Sampling for Chemical Analysis**

#### **A) Sampling from a distribution system**

Before collecting samples from a distribution system, flush lines sufficiently to ensure that the sample is representative of the supply, taking into account the diameter and length of the pipe to be flushed and the velocity of the flow.

#### **B) Sampling from a well**

Collect samples from a well only after the well has been pumped sufficiently in order to provide a sample that clearly represents the ground water source. If you intend on analyzing a new well, it would be best to pump until there is a minimal amount of suspended material in the water. Make sure that the sample is collected at a point upstream from any devices that may alter the water's chemical composition (filters, water softeners, etc.).

**In all cases**, rinse the one litre (1L) bottle a couple of times with the water to be analyzed, and then fill the bottle completely. While filling the bottle from a pressurized line, adjust the outlet flow until a smooth, uniform rate is achieved. Excessive turbulence while sampling can seriously compromise the analysis. Try to minimize the amount of air remaining in the bottle after filling. Keep the sample cool, but not frozen, avoid excessive agitation, and submit for analysis as soon as possible, preferably within twenty-four (24) hours.

To minimize the chance of sample leakage, please seal the lid onto the bottle using the electrical tape.

### **Sampling for Microbiological Analysis**

#### **A) Sampling from a distribution system**

Select an outlet that is supplying water from a service pipe directly connected to the main, and is not, for example, served from a cistern or storage tank (additional samples can be collected from these locations if desired and/or suspected as being a problem). Take samples upstream from any filters, and remove any tap screens or splash guards (if sampling from a faucet). Open tap fully and let run for two to three minutes or for a time sufficient to permit clearing of the service line. Reduce water flow to permit filling of the bottle without splashing.

#### **B) Sampling from a well**

Collect sample from the pump discharge, before any filters, after letting the water go to waste for about five (5) minutes. Make sure that any sampling lines and valves are adequately flushed prior to collection.

**In all cases**, be sure to use a bottle that has been prepared specifically for bacteriological analysis. Do not open the sterile microbiological (300ml) bottle until you are ready to sample. **Do not flush** out the bottle before taking your sample, and do not remove any powder found inside the bottle. Fill the bottle up to the line indicated on the label and cap tightly.

If samples cannot be returned to the laboratory within an hour, use a cooler for storage during transport. A chain of custody should be maintained at all times (complete the provided Chain-of-Custody Form). If the samples cannot be returned to the laboratory within 6 hours, keep the sample refrigerated (2-10 °C), and in no case should the time period between sampling and receipt exceed thirty (30) hours. Record the sampling time, location, and storage temperature and conditions (if possible). Total elapsed time will be taken into account during the final interpretation of the data.