

## How to Collect a Sample for Bacteriological Analysis from a Drinking Water Supply

Proper sample collection is important for ensuring samples are representative of the water quality being provided to the public. Accidental contamination of a bacteriological sample may indicate unsafe drinking water when the supply is actually safe, and will result in additional repeat sampling costs.

*Always have clean hands and a clean sampling location for collecting bacteriological samples.*

**1. Schedule your sample collection time.**

- Collecting samples early in the week and early in the month will help ensure sampling results are received in a timely manner for regulatory compliance purposes.
- Samples *must* be received by the lab within 30 hours of the sample collection time. Call your lab to confirm mail receipt times and operating hours. Plan accordingly.



**2. Complete the collection information on the sample bottle label, but DON'T open the sample bottle until you are ready to fill it.**

**3. Select a clean sample tap.** If possible, select a faucet that is not leaking, non-swivel, and non-mixing (i.e., has separate cold and hot handles). Due to the increased potential for contamination, sampling from outdoor taps or frost-free hydrants is strongly discouraged.

DO always sample from the cold water.  
DON'T sample from drinking fountains.



**4. Remove any faucet attachments** (aeration screens, hoses, etc.).

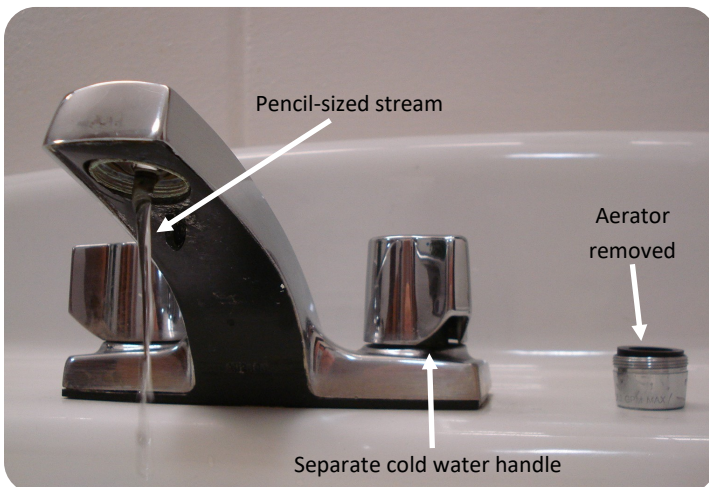
**5. Disinfect the outlet of the faucet** using one of the following methods:

- Using a spray bottle, spray the tap with either isopropyl alcohol or chlorine (standard, unscented liquid household bleach), OR
- Fill a small cup with isopropyl alcohol or chlorine and submerge the end of the sampling tap in the disinfectant.

DON'T wipe the faucet as this may disturb bacteria that are attached.

**6. Flush the tap:** Open the cold water tap fully and let it run to waste for 2 to 3 minutes (sufficient time to allow flushing of the service line). If a mixing faucet is the only available sampling location, flush it with hot water for 2 to 3 minutes, then flush it with cold water for another 2 to 3 minutes.

**7. Reduce the flow to about the diameter of a pencil.** The goal is to maintain a steady stream that does not contact the edges of the faucet. If the water dribbles to the faucet edge and contacts the metal before entering the bottle, bacteria from the faucet may contaminate the sample. If this occurs, readjust the flow or locate a different sampling tap.



### ...preparing to sample

**DO** wash your hands

**DO** select an indoor, non-swivel faucet with separate hot and cold handles

**DO** remove faucet attachments

**DO** disinfect the tap

**DO** adjust the flow to a pencil-sized stream after flushing

## 8. Fill the sample bottle:

- Grasping the bottle in one hand, remove the lid with the other hand and proceed to fill the bottle.
- Collect a 100mL sample by filling the bottle to the indicator line (if available) or the base of the neck. Do not overflow the bottle.

DON'T set the lid down during collection.

DON'T turn the lid upwards during collection.

DON'T touch the inner surface of the bottle or the lid with your fingers.

DON'T touch the bottle or the lid to the faucet.

DON'T rinse the bottle before filling it. The white powder inside is sodium thiosulfate to neutralize any chlorine in the water.

DON'T overflow the bottle.



### Tip: Keep several extra sample bottles on hand.

If you accidentally contaminate or overflow the bottle, discard it and use a new one. Also, if you need to collect repeat samples for compliance purposes, having extra bottles available will ensure they can be collected in a timely manner.



9. **Complete the lab report form** with the name of your water system, public water supply identification number (PWSID), sample location and other requested information.

10. **Transport water sample to the lab using the shortest transit time possible.** Maintain sample at a cold (not freezing) temperature. Samples *must* be received by the lab within 30 hours of the sample collection time.

## Montana Department of Environmental Quality

### Public Water Supply Bureau

Telephone: (406) 444-4400

Website: <http://deq.mt.gov/water/drinkingwater>

DEQ Contacts: <https://directory.mt.gov/govt/state-dir/agency/deq>



### ...collecting the sample

**DO** always sample from cold water

**DO** remove the lid only when ready to sample

**DO** keep the lid facing down

**DO** keep fingers away from inner surfaces of bottle & lid

**DO** replace the sample cap immediately