



How To Properly Take A Total Coliform Bacteria Sample

Sampling Instructions

Sometimes water samples fail a total coliform bacteria test because of sampling error, not because the water system is actually contaminated. To ensure this does not happen to you, follow these steps when taking a total coliform sample from your water system:

Step One



DO NOT RINSE OUT THE SAMPLE BOTTLE

The powder in the bottle is meant to be there and will not contaminate your sample.

Step Two



WASH YOUR HANDS AND REMOVE FAUCET SCREEN

Wash your hands. Remove all hoses, aerators, and/or screens from the faucet. If possible, avoid taking the sample from a faucet that swivels. Disinfect the faucet by dipping the end in a cap of bleach.

Step Three



RUN COLD WATER

Run cold water for at least 3 - 5 minutes to ensure the sampled water has not been sitting in the pipes or tanks for a long time.

Step Four



FILL THE SAMPLE BOTTLE

Carefully open the sample bottle. Remove the sterile strip from the bottle. Turn down the water so it does not splash and fill the bottle to at least the fill line (120 mL). Do not fill to the top or allow to overflow.

Step Five



SCREW CAP ON TIGHTLY

Screw the cap onto the bottle tightly. Take care not to touch the inside of the cap or the bottle. If this happens, start over with a new bottle.

Step Six



FILL OUT PAPERWORK AND SEND TO THE LAB

Fill out the Chain of Custody paperwork completely and keep a copy for your files. Mail the bottle to the laboratory in secure packaging such as a Styrofoam container or use bubble wrap, so the bottle does not break.

IMPORTANT! ARS Aleut Analytical must receive the sample at the lab when it is open and within 24 hours of the "Time Sampled."

Sampling protocol and photos adapted from Alaska Department of Environmental Conservation (ADEC) Drinking Water publication "Taking A Total Coliform Bacteria Sample Properly" at <http://dec.alaska.gov/eh/docs/dw/brochures/tcr4.pdf>. ADEC recommends using a cold water tap from a bathroom sink when sampling for Total Coliform Bacteria.

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In order to facilitate the generation of legally defensible data for State compliance samples and to reduce the possibility of a false positive result requiring a re-sampling, ARS Aleut Analytical (AAA) recommends the following sampling instructions:

- 1) Aseptic technique (sterile conditions) should be used when sampling. Hands should be recently washed or gloved.
- 2) Do not rinse out the sample bottle. The powder preservative is used to neutralize any residual chlorine in the water and must remain in the container.
- 3) For drinking water (DW), samples must be representative of the water distribution system. Remove all hoses, aerators, screens, mixing type faucets, and purification devices from the tap. Avoid taking the sample from a swivel faucet. **Cold water taps are preferred.**
- 4) Run cold water for 3-5 minutes until a constant temperature is achieved.
- 5) Carefully open the sample bottle. Do not touch the inside of the cap or bottle. Turn down the water so it does not splash and fill the bottle to between the 100 mL and 120 mL marks. Ensure one inch of headspace remains in the bottle. Do not fill to the top or allow the bottle to overflow. Tightly screw the cap onto the bottle. Gently mix the sample by inverting the container.
- 6) Immediately following sample collection, the sampler should complete all required paperwork including the Chain of Custody. Please include the following on the COC:
 - a) Water system name and client contact information
 - b) Public Water System (PWS) ID number
 - c) Sample identification, site location, sample type, State Sampling Point ID (if any)
 - d) Date and Time Sampled
 - e) Analysis requested
 - f) Name of sampler
- 7) Samplers are encouraged to hold Total Coliform samples at 0-10°C during transit. **Do not freeze.**
- 8) Compliance samples should be delivered to the laboratory as soon as possible following sample collection.

In accordance with State and Federal regulations, compliance samples must be rejected by the laboratory if any of the following occurs:

- A) The sample volume is less than 100 mL.
- B) There is insufficient headspace in the sample bottle. EPA requires one (1) inch of headspace.
- C) The sample is frozen.
- D) The amount of time between sample collection and analysis exceeds 30 hours (Method Specified Holding Time for Total Coliform).