

The Truman Lab

Quick Surface Water Collection Guide: Bacteria

Revised: 4/26/2024

1.0 SCOPE AND APPLICABILITY

This guide provides abbreviated instructions for the collection of surface water samples to be analyzed for total coliforms and *E. coli*. For more in-depth information, visit <https://www.hstcc.org/water-testing>.

1.1 GENERAL CONSIDERATIONS

- The Chain of Custody form must be completed and delivered with samples. Other required supplies include the sample bottle, permanent pen **and** marker, and safety equipment, as appropriate.
- All sample **bottles** must be labeled by the sample collector with the collection date and collection time **in 24-hour time**. Samplers must also initial bottle **caps**. All sample **bottles and caps** must be pre-labeled by laboratory staff with a unique sample number.
- Samples must not be taken on a Friday or the day preceding a federal holiday, as many require a 24-hour incubation time before analysis. Samples should be delivered before 4 p.m. to provide sufficient time for pre-analysis procedures.
- Ensure health and safety precautions are met before sampling.

2.0 PROCEDURE

2.1.1 Use sterile, non-fluorescent 120mL bottles that are to be filled with 100mL of sample. Bottles must be obtained from The Truman Lab. When collecting stream samples, try to select a point in the main flow to obtain a more accurate sample. Avoid backwater areas and the shoreline when possible. Do not disturb the water upstream of where the sample is being taken.

2.1.2 Remove the cap of the sample container. Do not allow the inside of the bottle, cap, or the bottle threads to come in contact with hands or surfaces.

2.1.3 Holding the bottle by the base, plunge it (neck down) below the water. Collect samples at a depth of six inches to one foot below the surface. Turn the bottle until the neck points slightly upward. If a current is present, point the mouth into the current. Bottles may contain sodium thiosulfate. Because surface waters are not suspected to be chlorinated, loss of any sodium is of no concern if the bottles contain it.

2.1.4 Fill the bottle to **slightly** above the 100mL line, taking care not to over or underfill the bottle. If the sample is over or under filled, carefully adjust the volume of water by pouring or filling until there is 100mL of sample. Replace the cap. If significantly more than 100mL is provided to the lab, it cannot be analyzed. Samples cannot be analyzed if there is less than 100mL of water.

2.1.5 Using a permanent marker, label the bottle with the collection date and collection time in 24-hour time. Initial the cap. Complete the Chain of Custody form and deliver with the sample or via email. Keep the sample refrigerated or in an ice chest until delivery to The Truman Lab. If the sample is kept in an ice chest, place the sample in a plastic bag first to avoid contact with melting water. Deliver samples within 5 hours from the time of collection and before 4:00 p.m.