

Drinking Water Sampling and Shipping Instructions

***Correct sample collection is essential to ensure accurate results and to avoid costly re-sampling.
If you have questions or problems, please call Colorado Analytical 303-659-2313.***

Color-coded guide to bottle preservatives:

White Cap – Orange Stripe = Non-preserved

Yellow Stripe = Sulfuric Acid (H₂SO₄)

Red Stripe = Nitric Acid (HNO₃)

Blue Stickers = Hydrochloric Acid (HCl)

Orange Stickers = Ammonium Chloride, Ascorbic Acid, Sodium Sulfite or Sodium Thiosulfate for dechlorination.

Before Sampling:

- Read all instructions to ensure proper sampling results.
- Check your sample kit for broken or leaking bottles.
- Be aware of the type of preservative contained in the bottle(s). Safety glasses and gloves are recommended.
- Sample early in the week, or in sufficient time for samples to be delivered to the lab and analyzed within holding time.

General Sampling Steps (Nitrate/Nitrite, Fluoride, Inorganics (metals), Nutrients, Herbicides by 515.4, Endothall by 548, HAA5s by 552.2 and Radionuclides)

- If your sampling point has a faucet with an aerator, it should be removed prior to sample collection.
- Flush the cold water sampling line approximately 10 minutes immediately prior to sampling.
- Do not touch the inside of the cap or around the edge of the bottle.
- Slow the water stream before collection.
- Fill the bottle with water to the line or just below the neck of the bottle if no line is indicated. The exception is for a ZERO HEADSPACE vial as described below.
- Securely replace the same bottle lid.
- Indicate sampling date, time, site and name of sampler on both the bottle and the Chain of Custody. Information on the COC and labels must match and be complete.

Additional Sampling Instructions

Method 525.2 – Semi Volatile (2 1-liter amber glass bottles).

- Do not let any plastic or rubber items come in contact with the water you are collecting as they might lead to phthalate or adipate contamination.
- Collect each sample as in General Sampling Steps.
- Bottles contain sodium sulfite, take care not to flush away this dechlorinating agent. Do not overfill.
- Add entire contents of one small clear vial labeled Hydrochloric Acid (HCl) to each 1-liter glass bottle.

Additional Sampling Instructions (cont.)

Method 549.2 – Diquat (500 mL amber plastic bottle).

- Collect the sample as in General Sampling Steps.
- Bottle contains sodium thiosulfate, take care not to flush away this dechlorinating agent.
- Add entire contents of one small clear vial labeled Sulfuric Acid (H₂SO₄).

Method 524.2 - Volatile Organic Analyses (VOC, TTHM)

- Remove the VOA vial cap.
- Slowly fill the vial with the water sample.
- To achieve ZERO HEADSPACE, the water sample must form a “dome” on top just before overflowing.
- Carefully add 2 - 4 drops of the HCl acid from the dropper provided to the vial filled with water.
- Replace the vial cap securely. Invert the vial to verify that no air bubbles are present. If air bubbles are present in the vial, open the cap and add more water sample until a “dome” has been established without overflowing.
- Rinse the HCl dropper and dispose of it in the trash, or return to the laboratory.

Methods 504.1, 505, 531.1 and 547 – Additional Organic Compounds in VOA vials

- These vials each have a specific dechlorinating agent. Fill as above for ZERO HEADSPACE ensuring that you do not overflow.
- Replace the vial cap securely. Invert the vial to verify that there are no air bubbles greater than pea-size.

Method 5310-B – TOC analysis – Red Cap VOA Vials

- These vials contain sulfuric acid. Do not come in contact with the acid.
- Slowly fill the vial - zero headspace is not required.
- Replace the cap securely.

Sample Shipment

- EPA preservative protocol requires that samples be received at 6° C or less. The best way to achieve correct temperature is to use ice cubes rather than “blue-ice”. Place sample containers and double-bagged ice into cooler.
- Add packing material to prevent shifting or breakage.
- Place the COC form in the Ziploc bag provided on top of all contents in the cooler.
- To keep shipping costs at a minimum, replace cooler in the box it was shipped in. The cooler is now ready for sealing and shipping.
- Return by overnight carrier.

Return samples to:

Colorado Analytical Laboratory
240 S Main St.
Brighton, CO 80601

or

Colorado Analytical Laboratory
12860 W Cedar Dr, Unit 100A
Lakewood, CO 80228