



Water Test Procedures

[How to use EMI's Water Test Kit]

Note: Use hand sanitizer or wash hands thoroughly before performing tests

Bacteria Test

Supplies Needed from kit

- Sealed, sterile sample bottle or bag (use *ONLY* with this bacteria test)
- Permanent marker
- Alcohol wipes
- Colitag presence/absence test pack
- Ultraviolet (UV) flashlight
- Dry chlorine bleach

Step A: Collect the Water Sample

1. If water source has any type of spigot, thoroughly **clean the spout** using alcohol wipes.
2. **Let tap run or pump the well** for 2 minutes to clear the line.
3. **Write DATE and LOCATION** (*not TIME*) on the bottle/bag using the permanent marker.
4. **Remove the seal and cap from the bottle/bag.** *Do not rinse the bottle/bag or touch the lip or inside of the bottle/bag, or inside the lid.*

Note: Each sample collection bottle/bag contains white powder (sodium thiosulfate), which will neutralize some residual chlorine in case the water source is chlorinated. This powder may liquefy in humid conditions, which will not affect the test.

5. **Fill the bottle/bag to the 100 ml line and immediately re-cap the bottle/seal the bag.**
6. Place bottle/bag inside test kit container for safekeeping.
7. **Proceed to Step B within 30 hours** after water sample is collected.

Step B: Test the Water Sample

To be performed immediately after returning to home base/overnight accommodations.

1.  **Snap open** the Colitag pack.
2.  **Pour Modified Colitag** into the 100 mL sample in bottle/bag.
3.  **Shake sample** (*media will not dissolve immediately*).
4. **Write TIME** on bottle/bag.
5. **Store in cool, shady area** (between 23-35° C / 77-95° F), avoiding direct sunlight and uncontrolled vibration (which can cause the sample to yellow, voiding results). If travel is required, reduce vibration in vehicle by separating samples with soft padding within the test kit container.
6. **24 hours after** the time recorded, **check the sample for yellow color**, indicating coliforms. A positive (failed) bacteria test color is anything darker than this color box:



7. **Check for fluorescence** with UV light, indicating *E. Coli*.
8. Add a bit of dry chlorine bleach to sample and **discard of the sample and bottle/bag.**



Chemical Test Strips

Supplies Needed from kit

- Sample cup
- Pencil
- Notepad
- Nitrate/Nitrite test strips
- 5-in-1 test strips
- Chloride test strips
- Total Iron test strips
- Iron test vial
- Iron-reducing powder pillows
- TDS Meter

5-in-1 Test (Free Chlorine, Total Chlorine, Total Hardness, Total Alkalinity, pH)



Preparation

- **Let tap run or pump the well** for 2 minutes to clear the line.
- **Rinse out and fill sample cup** with water.
- **Rinse out and fill iron test vial** with water.

Nitrate/Nitrite Test



Follow instructions on bottles for the following tests and record results:

Chloride Test



Total Iron Test



Total Dissolved Solids Test



1. Remove the protective cap.
2. Turn the TDS meter on. The ON/OFF switch is located on button panel.
3. Immerse the meter into the water sample up to the maximum immersion level (2 inches).
4. Wait until the display stabilizes. The TDS meter automatically compensates for temperature variations. Once the readout is stabilized (10-30 seconds), press HOLD button to view the reading out of water.
5. After usage, shake off water from your meter or wipe it with a tissue. Store dry. *Do not touch the metal probes.*