



RED RIVER AUTHORITY OF TEXAS
ENVIRONMENTAL SERVICES LABORATORY
INFORMATION FOR
PRIVATE WATER SUPPLY TESTING
October 1, 2022



The U.S. Environmental Protective Agency (EPA) highly recommends periodic testing of the drinking water originating from a private water supply, such as a well, cistern, rainwater harvesting system, or other sources. The Red River Authority of Texas Environmental Services Laboratory (RRA ESL) is certified by the Texas Commission on Environmental Quality (TCEQ) through the National Environmental Laboratory Accreditation Program (NELAP) for drinking water testing and offers the general public affordable testing of private water supplies for common contaminants identified by the EPA. Below is a list of the tests for potable water. Please refer to the ESD Analysis Price List for costs. For more information on private water supply testing and other recommendations by the EPA, please go to:

https://www.epa.gov/sites/production/files/2015-11/documents/2005_09_14_faq_fs_homewatertesting.pdf.

Total Coliform –

Coliforms are common bacteria found in the environment and are generally not harmful. However, their presence in drinking water may indicate contamination from disease-causing germs. Fecal coliform and *E. coli* are bacteria found in human and animal waste. These bacteria in drinking water can cause short term effects, such as diarrhea, nausea, headaches, or other symptoms. A result of 0 cfu/100mL, or 'absent' is acceptable. If you have had new plumbing, or if you suspect contamination, you should disinfect your supply prior to testing. *(See page 2 for instructions on Total Coliform sample collection.)*

Nitrate –

High levels of nitrate (10 mg/L or greater) may cause blood disorders, and is of special concern to infants and the elderly. High nitrate levels may also indicate contamination of the water from sewage, fertilizer, or other similar materials.

Lead – (Only if sample is collected from inside the house)

Lead is an element of primary concern because it can be toxic in very small amounts. The limit for safe drinking water is 0.015 mg/L. Any detectable amount of lead means it is possible for your water to exceed the limits depending on the length of time the water has been stagnant in the water line.

Total Dissolved Solids (TDS) –

TDS is a measurement of dissolved minerals and is a good general indicator of water quality. Results greater than 1,000 mg/L indicate a treatment system (reverse osmosis or distillation) may be required to reduce the TDS to an acceptable level.

Chloride –

Chloride values of 300 mg/L or greater can be very corrosive to pipes and cause an unpleasant, salty taste in the water.

Iron –

Iron causes rust stains on sinks and fixtures, and gives water a reddish color, as well as bad taste and smell. An iron result of less than 0.3 mg/L is considered acceptable for good water quality.

Sulfate –

This compound, along with Chloride, comprises the majority of dissolved salts. Sulfate values of 300 mg/L or greater can produce a laxative effect, bitter taste, and have a bad smell.

Total Hardness –

Waters containing appreciable amounts of calcium and magnesium are "hard" because it is hard to make the water lather with soap. Water hardness is classified as:

'Soft' 0-60 mg/L; 'Moderate' 61-120 mg/L; 'Hard' 121-180 mg/L; and 'Very Hard' >180 mg/L.



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COLLECTION PROCEDURES

IMPORTANT: Collect samples on the same day you deliver to RRA ESL

To Collect Samples for Total Coliform

- 1) Collect sample in 125 mL sterile sample container provided by the laboratory.
- 2) Remove the protective seal by pulling the red tab and discarding the clear plastic.
- 3) Find a proper location to take the sample, preferably an outside faucet that does not leak (avoid rubber hoses, fire hydrants, dirty areas, and areas with vegetation).
 - DO NOT take samples from kitchen or bathroom sinks.
 - Avoid sampling on extremely windy or rainy days.
 - Disinfect the collection point using a propane torch or 50/50 bleach/water. If using bleach allow the solution to remain for several minutes.
- 4) Open the faucet to full flow for three (3) minutes to clear the line and then reduce the flow to a slow stream about the size of a pencil.
- 5) Fill the container carefully to the neck of bottle without overfilling. Do not rinse out white powder prior to sampling.
 - DO NOT touch any portion of the inside of the bottle or cap (if possible, use latex gloves).
- 6) Recap the bottle tightly. Annotate on the container the time the sample was collected.

To Collect Samples for All Other Water Tests

- 1) Unscrew and remove the aerator screen on your faucet (if present).
- 2) Turn on the cold water faucet and let it run for about two minutes.
- 3) Remove the cap from the sterile sample container provided by the laboratory and slowly fill the bottle without overfilling. Some containers may have preservatives in them.
 - DO NOT rinse these out prior to sampling.
- 4) Recap the bottle tightly. Annotate on the container the time the sample was collected.

Sample Delivery

- 1) Keep samples refrigerated or on ice after collection. Place samples in a cooler with ice when delivering them to the laboratory.
- 2) Deliver samples to the laboratory Monday - Thursday 8:00 a.m. to 3:00 p.m.
- 3) For any questions or for holiday hours, call 940-723-1717 Monday - Friday 7:00 a.m. to 4:00 p.m.

Results obtained from the Red River Authority Environmental Services Laboratory does not guarantee the safety of the water for drinking, irrigation, swimming, cattle, or any other use. Analysis pricing is subject to change.