

Water Testing: Frequently Asked Questions (FAQs)

1. Why should I test my water?

Water is usually tested to determine if it is safe to drink, and testing includes bacteriological and chemical components. Bacteriological testing evaluates the drinkability of a water source by detecting soil or fecal contaminants in the water. There are three main bacteriological tests: 1) total coliforms and *Escherichia coli* (abbreviated *E. coli*), 2) *Enterococcus*, and 3) heterotrophic bacteria. Total coliforms is an umbrella term for bacteria that are found in soil and vegetation as well as the intestinal tract of warm-blooded animals. *E. coli* and *Enterococcus* are specific types of bacteria that commonly live in the intestinal tract of warm-blooded animals. These bacteria are used as indicators of fecal contamination since contaminated water can contain many different types of disease-causing bacteria, viruses, and protozoa. Heterotrophic bacteria are indicators of whether water conditions are ideal for bacterial growth. Testing for heterotrophic bacteria is a way to measure bacterial levels in swimming pools, spas and dialysis water, and evaluates the thoroughness of the water treatment and distribution process.

Nitrate testing, a type of chemical testing, is conducted because consuming water with high level of nitrates can cause methemoglobinemia, which is a condition where the oxygen-carrying capacity of blood is impaired. Exposure to high nitrate levels can also cause serious health problems in infants under 6 months-old as well as pregnant women. Nitrate levels must be below a maximum contaminant level (e.g., 45 mg/L or ppm) to confirm that your water system is properly removing contaminants from the water.

2. Which tests does the laboratory offer and how much are they?

The tests that we offer are as follows:

- 1) Presence/Absence (P/A): a test for the presence or absence of total coliforms and *E. coli*.
- 2) Quantitray
 - a. Colilert: a test that is similar to a presence/absence test but quantifies the amounts of total coliforms and *E. coli* in water.
 - b. Enterolert: a test that quantifies the amount of *Enterococcus* in water.
- 3) Heterotrophic plate count: a test for all culturable bacteria in water.
- 4) Nitrates/nitrites: a test that detects the level of nitrate/nitrite present in water

Although the water testing menu at the laboratory is limited, the laboratory also partners with a water testing reference laboratory. If you want your water tested for a specific analyte, please call the laboratory to discuss the possibility of testing, sample collection, and pricing for referred services.

The fee schedule for each type of water test is available on the laboratory's website at: https://www.solanocounty.com/depts/ph/bureaus/laboratory/fee_schedule.asp

3. Which water test should I request?

The most common and basic test is a presence/absence (P/A) test for total coliforms and *E. coli* in water. If you have been asked to test your water by a state agency, the presence/absence test is usually recommended. However, if your water previously tested positive for total coliforms or is known to be positive for any type of bacteria, then a Quantitray test may be more appropriate. The Quantitray test will quantify the amounts of total coliforms and *E. coli* that are present in your water.

Another option is to contact your local environmental health department to discuss regulations or potential contaminants in your area. Contact information for the environmental health departments in the Napa, Solano, Yolo, and Marin counties can be found at: https://www.solanocounty.com/depts/ph/bureaus/laboratory/environmental_health_contacts/default.asp. In addition, if the laboratory does not offer a test that you need, please feel free to call our laboratory. We are partnered with a specialized water testing laboratory that may have services that could be useful to you.

4. How do I collect a water sample?

Water testing must be collected on the same day as it is tested. Once you have picked up a sample collection bottle from one of our locations you may proceed to collect your water sample. Samples submitted in a container other than one provided by the laboratory or water monitoring agency will not be tested.

1. Collect the water sample from an inside cold-water, non-swiveling faucet, if possible.
2. Remove any attachments such as aerators, screens, filters or hoses, and run water at full stream for 1 to 2 minutes before collecting. For infrequently-used water faucets, do the same, but run water for 5 minutes. THEN REDUCE WATER FLOW.
3. Break the plastic seal on the sterile sample bottle provided and remove the lid, being careful not to touch the inside of the lid or the container. Leave the powder in the bottle.
4. Carefully fill the bottle up to the neck, to slightly above the 100 mL line, leaving a small air space. Samples with a volume of less than 100 mL will not be tested and will need to be resubmitted.
5. Carefully replace the cap and screw it on tightly.
6. Fill out the bottle label and laboratory form. Complete the laboratory form including the sample location (address), sample site, date and time of collection, collector's name, chlorine level (if applicable), water test requested, and any county departments you would like a copy of the results to be sent. Be sure to include a contact phone number so we can notify you of a positive result.
7. Ensure that water samples are submitted to the laboratory on the same day that they are collected. If a sample isn't submitted to a drop-off location immediately after collection, please store on ice or in a refrigerator until the sample is submitted.

5. Where can I pick-up collection bottles and drop them off?

Water collection kits that include instructions, requisitions, and a collection bottle can be picked up at any of any of our drop-off locations. These locations are:

1. Napa-Solano-Yolo-Marin County Public Health Laboratory (2201 Courage Dr, Fairfield CA 94533)
2. Solano County Department of Resource Management (675 Texas Street, Suite 5500, Fairfield CA 94533)
3. Napa County Environmental Health (2751 Napa Valley Corporate Drive, Napa CA 94558)
4. Yolo County Environmental Health (292 W. Beamer St, Woodland CA 95695)
5. Marin Health and Wellness Campus (3240 Kerner Boulevard, San Rafael CA 94901)

Drop-off times and phone numbers by location can be found at:

https://www.solanocounty.com/depts/ph/bureaus/laboratory/drop_off_locations.asp

Please note that waters for nitrate testing can only be submitted on Tuesdays.

6. What happens if my water tests positive?

If your water is positive for bacterial contamination, we will contact you immediately and the environmental health department in your district if your well is regulated. We advise you to talk to your environmental health department to discuss the process to clear the contamination or for any other questions you may have regarding your results.

7. When can I expect water testing results?

Presence/absence and Quantitray test results will be emailed or mailed the business day after sample submission. The heterotrophic plate count test has a 48-hour testing time, and results for this test will be sent 2 business days after sample submission. Nitrate results will be given within 4–6 days of sample submission.

8. How do I pay for water testing?

You can pay for water testing services in three ways:

1. By credit card via our online payment portal (include the confirmation number on the water testing form)
 - a. https://www.solanocounty.com/depts/ph/bureaus/laboratory/online_payments/default.asp
2. By check (attaching a check to the water testing form)
3. By credit card or check in person at the Napa-Solano-Yolo-Marin County Public Health Laboratory

Exceptions: If you are dropping off water samples to Yolo County Environmental Health, our fees do not apply. Yolo County Environmental Health has their own fee schedule, please contact them if you have any questions.

9. Are there any other helpful resources for water testing?

Monterey County, which is the location of our water testing reference laboratory, has helpful information posted on their website at:

<http://www.co.monterey.ca.us/government/departments-a-h/health/environmental-health/drinking-water-protection/faq-for-drinking-water>