



“Safe drinking water cannot be taken for granted. It does not happen by accident. Safe drinking water comes from safe wells. Safe wells result from thoughtful design, careful construction, meticulous management and annual maintenance.”

Just because water appears clear and tastes good does not mean it is safe to drink. Most contaminants that affect health are not detected by our senses. Safe wells are the best assurance for safe drinking water. Water testing is an essential part of annual well maintenance. Analytical results from the most meticulous laboratory are no better than sample collection and handling. Always follow sampling, care, and shipping instructions from the laboratory. Guidelines in this brochure will help insure good sample collection. If you have questions, contact the laboratory for clarification.

General Procedures

Procedures for taking a water sample differ, depending on what is being tested. However, contamination means the test results will be inaccurate. Timeliness in collecting the sample and delivering it to the laboratory for analysis is also important. Some contaminants deteriorate or change with time. Use only the proper laboratory sample container for the test desired. Complete the forms included with the sample container to assure accurate processing, recording, and reporting. For most water tests—including coliform bacteria, nitrate and other inorganics—**follow these guidelines when collecting a sample (no exceptions):**

Cleanliness and care are **always** important when collecting any water sample. Contaminants are easily introduced, so care must be taken to prevent anything but the water sample from contacting the container opening, the inside of the container, or the cap.

- Wash your hands with soap and water and dry with a clean paper towel.
 - Select a faucet that is used regularly and does not leak, preferably one inside the house. A swinging spout is not recommended because of possible contamination at the joint.
1. *Remove the aerator.*
 2. *Disinfect the faucet using heat or rubbing alcohol.*
 3. *Run the water at least 5 minutes.*
 4. *Fill the bottle without touching inside of the bottle or lid.*
- **Do not** use a garden, frost-free hydrant.
 - **Do not** sample from a source connected to any treatment device such as water softener or filter, as this may be the source of contamination.
 - **Do not** rinse the sample container as it may contain preservatives to protect sample.
 - Transport the sample as instructed by the laboratory (shipping in a cooler or insulated container may be required).
 - Protect sample from heat and freezing.

- Deliver or send the sample so that it arrives at the laboratory within 24 hours of collection. Avoid sending the day after a holiday because of possible shipping delays.

Our environmental department will gladly schedule an appointment with you to collect samples.

Sampling for Total or Fecal (*Ecoli*) Coliform Bacteria

Because bacteria are living organisms, accurate tests depend on preventing contamination during sample collection and protecting the sample after collection.

Guidelines:

- Remove faucet aerator, being careful not to touch the inside of the spout. If water drains from the faucet leaving it dry or the faucet is not used regularly, disinfect it using heat or alcohol.
 - Collect in bottle provided by laboratory or in sterile water bottle (for informational purposes only)
 - Contact Laboratory for rental property, closing/mortgages or Systems with ID numbers.

Sampling for Synthetic Organic Chemicals (SOCs)

Sampling SOC, including most pesticides, requires special procedures so samples will not deteriorate or become contaminated before reaching the laboratory.

- Collect the sample only in the bottle provided by laboratory (dark glass to prevent light from entering) or in large clean water bottle wrapped in foil. Light will degrade the sample.
- Keep the sample refrigerated, preferably 35° to 38°F, and deliver or mail so it arrives at the laboratory within 24 hours. When shipping the sample, pack it in ice and ship in an insulated container.

Sampling for Volatile Organic Chemicals (VOCs)

Sampling for VOCs or solvents requires these specific procedures so volatile contaminants are not lost in collection and transit:

- After clearing the line by running water for at least 5 minutes, reduce water flow to a clear stream with no bubbles and run at least 2 minutes more. Fill the bottle completely so there is no air space when lid is installed.
- With the water flowing, hold the sample container in one hand and remove the cap with the other hand. Then move the container into and out of the running stream without turning the faucet on and off. Fill to the neck of bottle or fill line.
- **Do not** touch the opening or any interior part of the sample container or cap.
- **Do not** set the cap down.
- Immediately replace cap and tighten securely.
- Immediately seal the container so the volatile material is not lost.
- Protect the sample from sunlight and keep it cool but **do not** freeze.
- Be sure sample arrives at the laboratory within 24 hours of collection.

Sampling for Lead or Copper

Because lead and copper may be leached from plumbing systems when water stands in the lines, it is important to follow these procedures:

- **Do not** run water for at least 8 hours before collecting this sample (large clean water bottle). Turn the faucet on and fill the sample container with the first flow from the faucet.
- **Do not** rinse sample container.
- Replace lid and tighten securely.

Interpreting Test Results

The laboratory will send a written copy of your water test results. When you receive the results, you will also receive a small booklet called *Commonly Found Substances in Drinking Water (and interpreting drinking water test results)*. This book is intended to help you understand your results. If your report shows an unacceptable contamination levels that can cause harm to you or family we have an obligation to report this information to our Environmentalist for review. The environmentalist will contact you with suggestions for further testing or resolutions to your specific problem. Confirmation testing is always recommended before taking expensive or drastic corrective measures. Establishing a record with several tests over at least a year is recommended before implementing treatment.

Please call the Laboratory before collection bacteriological samples for closings and FHA mortgage approvals. After collection you may bring your sample to the Chatham County Health Department Environmental Laboratory. Results in most cases will return in approximately 7- 10 business days.

Test Records

Compare new test results with previous results to identify a trend or an unknown problem. File test reports where you can find them. Water test records often are needed for property sales. Good records help support damage claims from chemical spills, leaks, or poor management.