NOVA BIOLOGICALS
A Tentamus Company

PRIVATE WELL WATER SAMPLING

WATER BACTERIOLOGY TEST

SINCE 1993, NOVA BIOLOGICALS, INC. has provided certified laboratory testing services. Nova is Texas' largest independent drinking water laboratory and was the first independent laboratory in the state of Texas to become certified by the Texas Commission on Environmental Quality **(TCEQ).** Recently, Nova has received accreditation by TCEQ under the EPA's National Environmental Laboratory Accreditation Program **(NELAP)** for Coliform Bacteria Testing. We hold similar certification in Pennsylvania, Maryland, Illinois, South Carolina, and Montana. To request a copy of our certification, please contact Nova at (936) 756-5333.

WHY TAKE WATER SAMPLES FOR BACTERIOLOGY TESTING?

Safe drinking water must not contain any organisms that could indicate the presence of disease causing bacteria. To prevent possible contamination, constant vigilance must be maintained to avoid the consequences of drinking contaminated water.

You do not want the water you drink, cook with, or wash dishes in to be contaminated with microorganisms that cause disease. Unsafe water can spread a number of diseases known as "waterborne" infections and include such illnesses as typhoid, cholera, and dysentery, to name a few. All of these illnesses are caused by microorganisms in the intestines of infected people or animals, which may not always appear to be sick. Water supply can be contaminated when the feces (bodily wastes) from infected people or animals seep into underground water or run off into surface water supplies. Unfortunately, disease producing microorganisms are difficult to detect in water samples, but fortunately, coliform bacteria are not hard to detect.

"COLIFORMS" are a group of microorganisms that do not cause disease, but which are found in the lower intestinal tract of human beings and other warm-blooded animals. Millions of coliforms are expelled each time a person or animal defecates. So when coliforms are found in a water sample, this is an indication that feces may have contaminated the water and that immediate action should be taken to stop the contamination. When well water shows coliforms, disinfection procedures should be followed. If a doctor suggests that gastric cramps or chronic diarrhea may have been caused by contaminated water, well disinfection should be performed immediately and water samples should be submitted for analysis. In addition, recently constructed or recently repaired wells must be disinfected to prevent bacterial growth in the well and in the plumbing system.

USEFUL WEBSITES

EPA Website: www.epa.gov/safewater/dwinfo/tx.htm
EPA's safe Drinking Water Hotline: 1-800-426-4791
TCEQ Website: www.tceq.state.tx.us
TCEQ's switch board: 1-800-CLEANUP or 512-239-1000

ACCREDITED IN ACCORDANCE WITH nelac

NOVA IS FULLY NELAC-CERTIFIED
AN IMPORTANT
CONSIDERATION WHEN
CHOOSING A LABORATORY.

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INSTRUCTIONS - HOW TO TAKE A WATER SAMPLE

FIRST *Sample carefully!*

You must use a sample container provided by an approved laboratory. This container has a line for **100 mL**. Please **fill** the **water slightly above** 100 mL line and do not rinse the powder out of the container. It is there to neutralize chlorine. Unless your sample is collected in a sterile container and every precaution taken to avoid contamination, the results of the analysis may be without value.

SECOND *Find the proper location!*

1. **Use an outside faucet** which does not leak, (avoid rubber hoses, fire hydrants, and dirty areas).
2. Remember to take only one sample per location per time.
3. Run the water 2-3 minutes to clear the line.
4. Turn off the water and flame the mouth of the tap with an alcohol burner, propane torch, or cigarette lighter.
5. Run the water again but in a slow, steady stream, take your sample, and seal container without touching the inside of the bottle.

CAUTION: Do not take sample from kitchen or bathroom sinks, and avoid taking samples on extremely windy days or when it is raining.

THIRD *Get it to the lab in a hurry!*

1. Sample **must** arrive at the lab within **30 hours** of collection.
2. Fill out your portion of the G19 form for each sample:
   - Enter your name and mailing address in the area designated as **"Send Results To"** and phone number.
   - Under **"Type of System"** indicate **"Individual".**
   - Complete as much information as possible under **"Sample Source".**
3. Read the bottom portion of the form and make sure that the lab has no reason to reject your sample before analysis.

FOURTH *Know what to expect!*

1. Sample results are available in 48 hours, (if negative), and could take as long as 96 hours for confirmation of a positive sample.
2. **"Total Coliforms/Fecal Coliforms Detected"** (positive), indicates that the water may be unsafe.
3. "**No Coliforms Detected"** (negative), indicate that the water is considered bacteriologically safe to drink at the time of sampling.

REASONS THE LAB MAY NOT ACCEPT YOUR SAMPLE:

- Sample received in an inappropriate container.
- Sample received beyond 30 hour hold time.
- Samples received damaged, broken, or leaking.
- Samples received with volumes less than 100 mL.
- Samples that are received improperly preserved.
- Samples received frozen.

Remember that other factors such as chemical composition may also affect water safety.

Your report will be e-mailed or mailed to your attention, depending on the method you request. If your sample is positive, you will be notified by telephone and a hard copy will be sent to your attention.

PRIVATE WELL DISINFECTION INSTRUCTIONS

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When a laboratory analysis report shows the presence of coliform organisms, use the following procedure for well disinfection:

FIRST Locate the well head and remove an access plug or bolt so that the area within the well casing is exposed.

SECOND Using a funnel, pour in an appropriate amount of liquid chlorine bleach (Clorox, Purex, etc.). See chlorine dosage below.

CHLORINE BLEACH DOSAGE TABLE FOR WELL DISINFECTION	
WELL DEPTH	**GALLONS OF BLEACH**
Less than 100 FT	½ to 1 Gallon
100 to 200 FT	1 to 1 ½ Gallon
200 to 300 FT	2 Gallons
300 and above	2 ½ Gallons or more

THIRD Using the nearest faucet and a garden hose, allow water to run through the funnel into the well for two or three hours. This will circulate the chlorinated well water and improve the germ killing action by allowing all fittings and equipment to be exposed to the chlorine solution.

FOURTH After the well water has circulated for a while, the garden hose and funnel may be removed and the access plug replaced. The disinfection process should be extended throughout the entire plumbing system.

FIFTH To disinfect the remainder of the plumbing system, turn on the next available faucet and allow it to run until the bleach odor can be detected, then turn it off. Repeat this step throughout the plumbing system at each faucet. Then, allow the chlorinated water to remain in the plumbing system over night or for 24 hours if possible. During this time, the water should not be used for drinking or cooking.

SIXTH After disinfecting the well and plumbing system, flush all faucets until the bleach odor disappears and the water is clear of any debris or color. Flush outside faucets first; you do not want to flood the septic system**.**

SEVENTH Then, submit another bacteriological sample to determine if the disinfection process was successful**.**

Keep in mind that a single disinfection may not be sufficient because certain well systems, particularly shallow wells, hand dug wells, wells in fissured areas and old wells, are more vulnerable to contamination. Water from these types of systems, should be checked by periodically submitting bacteriological samples for analysis.

EIGHTH Retrace the proper steps for sampling, carefully following guidelines. Most reasons for an unsuitable sample can be avoided.

NOTE When a laboratory analysis report indicates “Unsuitable for Analysis”, it means the laboratory was unable to conduct a valid test to draw a conclusion. In this case, a well owner should consider well disinfection before resubmitting a sample.