



STATE OF NEW HAMPSHIRE

DEPARTMENT OF HEALTH AND HUMAN SERVICES
PUBLIC HEALTH LABS - WATER ANALYSIS LAB
29 HAZEN DRIVE, CONCORD, NH 03301
603-271-3445 Fax: 603-271-2138



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Commissioner

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Director

WATER TESTING GUIDE

This packet of information is provided to help you choose the appropriate water test for your home and to assist you in taking a proper water sample. The document SUGGESTED WATER QUALITY TESTING FOR HOMEOWNER WELLS provides a general description and educational information to help you consider which test would be most useful. This page contains the WATER TESTING GUIDE providing descriptions of the common water tests available from the New Hampshire Public Health Laboratories (PHL) and a list of available FACT SHEETS. INSTRUCTIONS for collecting the sample and a WATER TEST SUBMITTAL FORM that must be completed and submitted with your sample are provided. If you have any questions on which test to choose or on how to complete the submittal form, please feel free to call the laboratory at 271-3445. If sampling for a home mortgage, call the lender to identify the specific water quality tests they require. If sampling to obtain a food, daycare, or other license, check with the program for water testing requirements.

STANDARD ANALYSIS- This is the primary analysis made on new wells in order to evaluate their water quality including some aesthetic related parameters. This test is also recommended if you observe any of the following: staining of sinks, tubs, or laundry; scaling or chalking residue on hot water pipes; salty or metallic taste. The STANDARD analysis includes the following tests: (\$85.00)

Table with 4 columns: Total Coliform Bacteria, Chloride, Iron, Lead (both stagnant and flushed); E. coli Bacteria, pH, Manganese, Copper (both stagnant and flushed); Nitrate, Hardness, Sodium, Uranium; Nitrite, Fluoride, Arsenic.

BASIC ANALYSIS (BCN) - This test is recommended as a periodic check of acute health related parameters after a Standard Analysis has been completed. This test includes: Total Coliform Bacteria, E. coli Bacteria, Nitrate, Nitrite, and Chloride. (\$30.00)

DRINKING WATER BACTERIA- This test should be chosen as a follow up to the Standard Analysis or BCN if bacteria were detected in your first test. This test includes: Total Coliform Bacteria and E. coli Bacteria. (\$15.00)

E. coli in Surface Water- Performed by a different method from the drinking water bacteria, this test gives an actual count of E. coli Bacteria in surface water. (\$20.00)

RADIOLOGICAL ANALYSIS- New Hampshire's bedrock geology contains naturally occurring radioactive elements. Examples include uranium, radium, thorium, and polonium as well as radon, a gas produced by the breakdown of radium. The radioactive elements dissolve easily in water and they emit alpha particles. Bedrock (Artesian) wells have more of a potential for encountering any or all of these elements than dug wells. The radiological analysis includes the following tests: "Analytical" gross alpha (consisting of the total gross alpha activity, i.e. the sum of uranium, radium, and other alpha emitting elements); radon gas; and uranium as mass (weight). Depending on the results of these analyses, additional testing may be recommended to determine the activity from radium and/or isotopic activity of uranium. Some mortgage lenders or towns require a radon analysis for loans or occupancy permits. (\$80.00 Radiological analysis, Radon alone is \$20.00)

FLUORIDE- Many dentists and pediatricians will ask you to test for fluoride in order to determine if, or how much fluoride supplement needs to be prescribed for your child to protect his or her teeth. (\$12.00)

VOLATILE ORGANIC CHEMICALS- This test is recommended if you suspect contamination by industrial solvents or petroleum products. Methyl tertiary butyl ether (MtBE) is included in the Volatile Organic Chemicals test. If you want to test for volatile organics, please request special glass vials and instructions. (\$120.00)

OTHER ANALYSES are available to meet your specific needs. Call the laboratory at 271-3445 to discuss your problem.

**State of New Hampshire**  
**Department of Health and Human Services**  
**Public Health Laboratories – Water Analysis Lab**

**INSTRUCTIONS FOR TAKING A WATER SAMPLE**  
**PLEASE READ CAREFULLY BEFORE COLLECTING YOUR WATER SAMPLE**

- ✓ If you recently disinfected the well, be sure all chlorine is gone; the lab will not accept samples with chlorine.
- ✓ Select an indoor faucet in a clean area (do not use an outdoor faucet); the sample should be taken from the cold water. Avoid leaky faucets that allow water to seep around the valve.
- ✓ It is important that you do not contaminate the sample containers or their caps; keep them closed until ready to use and do not touch the inside of the cap.
- ✓ If you are collecting a sample for a **STANDARD ANALYSIS**, you will have received four plastic bottles.
  1. Allow the water to sit undisturbed in the water pipes for at least 6 hours (overnight is best).
  2. Turn on the faucet and immediately fill the small plastic container labeled “First Draw for Lead/Copper”.
  3. Next, remove any aerator and wipe the faucet rim with a swab or tissue moistened with dilute bleach (1 capful bleach to 1 cup water) and then run the water for 5 minutes to clear the pipes.
  4. Reduce the water flow to a gentle stream and fill the plastic containers labeled “Sterile Bacteria Bottle”, “Nitrate/Nitrite”, and “Non-sterile”.
- ✓ If you are collecting for a **BASIC ANALYSIS**, you will have received two plastic bottles labeled “Sterile Bacteria Bottle” and “Nitrate/Nitrite”. Collect your sample by following steps 3 and 4 above.
- ✓ If you are collecting for **DRINKING WATER BACTERIA**, you will have received one “Sterile Bacteria Bottle”. Collect your sample by following steps 3 and 4 above.
- ✓ If you are collecting only for a **RADIOLOGICAL ANALYSIS**, you will have received two containers.
  1. Remove any aerator and then run the water for 20 minutes.
  2. Reduce the flow to a gentle stream and fill the plastic container labeled “Sterile Container”.
  3. Then slowly fill the glass vial labeled “Radon” to the top, creating a crown. Be sure no air bubbles are in the vial.
  4. After placing the cap on the vial, tip it upside down and watch for air bubbles rising to the top. If you see an air bubble or space at the top, empty the vial and try again.
- ✓ After filling the container(s), sample(s) should be kept **refrigerated or on ice in a cooler** (but not allowed to freeze) and delivered to the laboratory as soon as possible. The lab must analyze samples for bacteria within 30 hours of the time you take the sample; bacteria samples exceeding the **30 hour limit** will NOT be accepted. Samples received in improper containers, with insufficient volume or improperly preserved will not be accepted. Samples can be hand delivered to the lab Monday through Friday between 8am and 4pm. Bacteria samples cannot be accepted after 12:00 Fridays or the day before a holiday.
- ✓ If mailing sample(s), collect the sample(s) just prior to mail pick-up at your post office. Do not mail later than Wednesday, and place a ‘perishable water sample’ label on the box to minimize delay in postal handling. We highly recommend ‘next day delivery’ service. All shipping charges are to be paid by the sender of the sample.
- ✓ The sample submittal form (see backside of this sheet) must be completely filled out and returned with each sample submitted. Be sure the DATE and TIME the sample was taken are written on the form.
- ✓ A full report of the sample results will be sent to you upon completion of the analysis (allow 3-4 weeks for a full Standard Analysis Report). If bacteria are found, a separate letter and disinfection instructions will be sent earlier.
- ✓ If you received a small sample container for FLUORIDE from your dentist, you cannot request any additional testing (e.g. Standard Analysis) as there will not be enough water to complete the analysis. Call the lab to have a new container sent.



## SAMPLE ACCEPTANCE POLICY

NH Public Health Laboratories-Water Analysis Lab  
Effective July 30, 2015

The lab will not accept samples that do not meet the following acceptance criteria:

When submitting a sample, please do the following:

1. Completely fill out the sample submittal form, including homeowner name or PWS name and ID, the location where the sample was collected (street address or location ID), date and time of collection, collector's name, tests requested, and any special remarks about the sample.
2. Please use the lab-provided sample container.
3. Fill the sample container according to the instruction sheet for the tests requested.
4. Return the sample within the required holding time. Consult the lab's reception staff and the sample collection instruction sheet.
5. Place sample in a cooler with ice or a cold pack to begin cooling the sample during transport to the lab. Samples with a temperature above 35 °C measured at the lab without evidence of cooling will not be accepted.
6. Submit samples in good condition only – clean exterior of the container, not damaged, properly preserved.

Thank you for your cooperation.

## TIPS FOR MAILING WATER SAMPLES

Please be aware that "PRIORITY" shipping may result in expired samples being received at the lab. We highly recommend "**OVERNIGHT EXPRESS DELIVERY**" service for samples requiring bacteria testing.

Samples sent by "PRIORITY" mail may reach our post office downtown Concord the next day, but not be delivered to the lab until the second day. Only "OVERNIGHT EXPRESS DELIVERY" guarantees next day delivery (note-some rural areas do not offer this service). The lab must discard any samples for bacteria testing if it is not received within 30 hours of the time the sample was collected.

If you do choose to use "PRIORITY" mail, collect the sample just prior to mail pick-up at your post office. Do not mail later than Wednesday and attach a "PERISHABLE WATER SAMPLE" label on the box to minimize delay in postal handling, again keep in mind PRIORITY may result in expired samples.

Improperly packaged water samples can break or leak. We offer the following recommendations:

Pack sample (s) in a box with bubble wrap, packing peanuts or other packing material.

Place paperwork in a plastic bag.

Attach a "PERISHABLE" water sample label on box.

Address box to:

DHHS  
Public Health Laboratories  
29 Hazen Drive  
Concord NH 03301