Bacteria water analysis for homeowners

Bacteria in my water supply?

Do not assume that your water is safe to drink just because it has not made you sick in the past. If bacteria are present in your water, there is a risk that it could make you ill. If bacteria are found in your water, it is not safe for drinking, preparing infant formula, preparing juices and ice cubes, washing fruits and vegetables, cooking, or brushing your teeth.

Why test?

- To determine the bacteria quality of your water for drinking and cooking.
- To ensure your water is free from harmful bacteria that could possibly cause disease.

How often?

Nova Scotia Environment recommends that you have your water tested for bacterial quality every six months.

Test more often if you notice changes in physical qualities (taste, smell or color).

Testing your drinking water regularly alerts you to problems with you water.

Total Coliforms are a group of bacteria commonly found in the environment, for example, in soil, as well as in the intestines of mammals and humans. Total coliform bacteria are not likely to cause illness, but their presence indicates that the water supply may be vulnerable to contamination by more harmful microorganisms.

***Escherichia coli* (*E. coli*)** is the only member of the total coliform group of bacteria that is found *only* in the intestines of mammals, including humans. The presence of *E. coli* in water may indicate the presence of disease-causing pathogens (i.e. bacteria, viruses and parasites).

Sources of contamination?

The main source of pathogens in drinking water is through recent contamination from human or animal waste, from:

- Improperly treated septic and sewage discharge
- Leaching of animal manure
- Storm water runoff
- Domestic animals or wildlife

During and after precipitation, bacteria and other microorganisms from any of the above sources may be washed into rivers, lakes or groundwater. Poor well construction or poor maintenance can increase the risk of groundwater contamination.

Where should I collect the water sample?

The location for sampling should be the same location that you normally use to get your drinking water. In the majority of homes, this would be the kitchen cold water tap.

Interpreting test results

The Canadian drinking water quality guideline for both total coliform and *E. coli* is NONE detectable per 100 mL (results reported as 'ND' or "Absent').

If neither coliform nor *E. coli* bacteria are detected in your sample (result reported as 'ND' or 'Absent'), this means that the water is suitable for drinking, while the detection (results reported as a number, or 'present') of either indicates that it is unsuitable.

If ***E. coli*** is detected (reported as a number, or 'present') in your water sample, **the lab will contact you directly** with your result.

If your water tests do not detect (reported as 'ND' or 'Absent') *E. coli*, **you will receive notification by your specified report method only**. In this case, all precautionary measures need to continue until you receive your laboratory report indicating the status of total coliforms (which could be present or absent) in your report.

Testing for bacteria

How do I collect a sample of water?

A sterile laboratory issued bottle must be used to collect the sample. These can be obtained directly from the Lab at 176 College Road in Truro or NSDA Regional Offices located in Sydney, Antigonish, Kentville and Cornwallis and at Strathlorne Forest Nursery in Inverness.

These containers are sterile and contain a sodium thiosulfate pill or powder to neutralize chlorine.

Samples collected in unapproved bottles will be rejected by Laboratory Services. Sample containers should be kept clean and free from contamination before and after collecting the sample and should not be opened prior to sampling.

Instructions on how to properly take a water sample for bacteria testing are found on the second page of the water testing requisition form.

Read *all* submission requirements on Water Requisition Form. Ensure that all relevant sections of the form are completed. Submit the completed form with your sample for analysis.

Samples must be transported to the laboratory within 24 hours of sampling and received within the hours of acceptance. It is recommended that samples be kept at <10°C (in a refrigerator or cooler with ice packs) until delivered to the lab.

Bacteria-only water samples

Sample submission

Water samples will be received Monday to Wednesday from 8:30am to 3:00pm, and Thursday from 8:30am to 1:00pm.

Water samples for bacteria analysis, **that are colored**, will only be accepted **Monday to Wednesday** from 8:30am to 3:00pm

No water samples for bacteria analysis will be accepted on Fridays. Water samples will be rejected if older than 24 hours.

Sample drop-off location

176 College Road
Harlow Institute
Truro, Nova Scotia
B2N 2P3

Hours of Business

Monday to Friday from 8:30am to 4:30pm
Water bottles may be picked up anytime during regular business hours.

Submission forms can be found online or at Lab Services Sample Reception.

Payment Methods

We currently accept Visa, MasterCard, debit, cash, cheque or money order.

For samples submitted by mail, credit card payment can be made over the phone, or a cheque or money order made out to the Nova Scotia Department of Agriculture can be sent with the sample(s).

For more information on water sampling and analysis, please contact:

Nova Scotia Department of Agriculture

Agriculture & Food Operations
Animal & Plant Laboratory

Tel: 902-893-6565

Fax: 902-893-4193

Email: **LabServices.novascotia.ca**

novascotia.ca/agriculture-labs

For more information on interpreting Laboratory results or on water quality, please contact:

Nova Scotia Environment

Tel: 1-877-9ENVIRO (1-877-936-8476)

novascotia.ca/nse/

https://novascotia.ca/nse/water/thedroponwater.asp
(NSE water factsheets)