

Hardness: Incrustation and excessive soap consumption are the main concerns with hardness. Hard waters have a tendency to form scale deposits in pipes and heating coils. Water supplies with a hardness greater than 200 mg/L are considered poor but have been tolerated by consumers; those in excess of 500 mg/L are unacceptable for most domestic purposes. Refer to Canadian Water Quality Guidelines.

Quality Classification for Hardness mg/L (CaCO₃)

Very Good (Soft)	0 - 59
Good (Slightly Hard)	60-120
Fair (Hard)	121-180
Poor (Very Hard)	>180

A cheque or money order made out to the Nova Scotia Department of Agriculture must accompany your water sample. If you are mailing the sample, please address your package to the address below.

Sample drop-off location:
176 College Road, Harlow Institute
Truro, NS B2N 2P3

Hours of Business:
Monday to Friday from 8:30 am to 4:30 pm.

Samples can be dropped off Monday - Wednesday 8:30 am to 3:30 pm and Thursday from 8:30 am to 1:00 pm. Samples received after 3:30 pm will be logged into the system and

processed the next business day.
Submission forms can be found on the website

For more information, please contact:

**Nova Scotia Department of Agriculture
Quality Evaluation Division
Laboratory Services
P.O. Box 550
Truro, NS B2N 5E3**

**Tel: (902) 893-6565
Fax: (902) 893-4193
E-mail: powerjl@gov.ns.ca
URL: <http://www.gov.ns.ca/agri/qe/labserv/>**



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**Agriculture
Quality Evaluation Division
Laboratory Services**

Mineral Water Analysis Service for Homeowners

Some of the most common problems encountered in domestic water supplies in Nova Scotia are hardness and staining problems associated with iron and/or Manganese.

The Laboratory Services Section of Quality Evaluation Division will conduct an analysis of your water for these minerals as well as those listed below for a cost of \$45.90 + disposal fee + HST.

When submitting a sample please:

1. Ensure that the container is a laboratory issued bottle.
2. Empty detergent bottles, pickle bottles, etc., will not be accepted for analysis.
3. If taking the water from your tap, let the water run for at least 10 minutes before sampling.
4. Fill the bottle to the 200 mL fill-line and forward to the lab.
5. If the bottle does not contain at least 200 mL, the sample will be rejected.
6. Do not use sample bottles which are designed for bacterial analysis. They contain a preservative that will interfere with mineral analysis.

NOTE: The following information on water quality has been selected from the “*CANADIAN WATER QUALITY GUIDELINES*” prepared by the Task Force on Water Quality Guidelines of the Canadian Council of Ministers of the Environment.

Maximum Acceptable: Drinking water that contains substances in concentration greater than these limits is either capable of deleterious health effects or is aesthetically objectionable.

Calcium: Undesirable effects from the presence of calcium in water may result from its contribution to hardness. No maximum acceptable concentration has been specified.

Magnesium: High levels of magnesium in association with sulphate may cause a laxative effect and cause water to be hard. No maximum acceptable concentration has been specified.

Sodium: A maximum recommended level of 200 mg/L has been established. It is recommended that sodium be included in routine monitoring programs, as levels may need to be considered with certain health issues. Refer to *Canadian Water Quality Guidelines* (see note above).

Chloride: Chloride impacts undesirable tastes to water and beverages prepared from water. A maximum acceptable concentration for chloride of 250 mg/L has been established.

Sulphate: The maximum acceptable concentration for sulphate in drinking water is 500 mg/L. The major physiological effect from ingestion of water containing sulphate at concentrations in excess of this limit is diarrhea.

Iron: The maximum acceptable concentration of iron in drinking water is 0.3 mg/L which has been established on the basis of aesthetic considerations. At levels above 0.3 mg/L, iron stains laundry and plumbing fixtures, and causes undesirable tastes. The precipitation of excessive iron imparts an objectionable reddish-brown color to the water. The presence of iron may also promote the growth of certain microorganisms, leading to the deposition of a slimy coat in piping.

Manganese: The maximum acceptable concentration of manganese in drinking water is 0.05 mg/L, which has been established on the basis of aesthetic considerations. Manganese in water supplies is objectionable because it stains plumbing fixtures and laundry. At higher concentrations, causes undesirable tastes in beverages. As with iron, its presence in water may lead to the accumulation of microbial growths in the distribution system.

Copper: Copper levels above 1 mg/L may cause green staining, corrosion of galvanized products, and may give the water a bitter taste. Some copper occurs naturally, however, much of it may come from the plumbing system due to the corrosive tendencies of water with low pH and low alkalinity.

Zinc: High zinc levels can cause undesirable taste and a greasy film on boiling water. Much of the zinc in tap water may come from the plumbing system. The maximum acceptable concentration is 5 mg/L.

Nitrate: The maximum acceptable concentration of nitrate in drinking water is 10 mg/L as nitrogen. This limit is based on consideration of the relationship between the occurrence of infantile methemoglobinemia (blue baby) and the presence of nitrate in drinking water.

Waters containing in excess of 2 mg/L nitrate-N, having a disagreeable taste, odor or appearance, should be checked for coliform bacteria.

pH (Hydrogen Ion Concentration): An acceptable pH range for drinking water is from 6.5 to 8.5. Corrosion effects may become significant below 6.5, and the frequency of incrustation and scaling problems may be increased above pH 8.5. High pH levels decrease the efficiency of chlorine disinfection processes. pH is temperature dependent. The pH reported is at room temperature. Water at colder well temperatures may have a lower pH.

Conductance: Conductance is an indication of dissolved salts in the water.