

My Well Water

Test it for your health
and the health of your family!

Even if your well water is clear, tastes fine and does not smell bad, it could contain chemical substances that in the long run can impair health. Why take chances? Have the water tested!



Natural substances can contaminate your well water.

Some substances that are naturally found in soil and rocks can leach into and contaminate groundwater. Manganese and arsenic are two good examples.

Manganese

Our bodies need small amounts of manganese. But when its concentration is too high, it can impair brain development in children. Bottle-fed babies are especially sensitive to manganese.

You should have the level of manganese tested at least once during the time you withdraw water from the well.

Manganese is found in great abundance in the environment and, as such, nature is the main source of this element in groundwater. Groundwater with high levels of manganese is found throughout all regions of Québec.

Arsenic

Even small amounts of arsenic can have negative consequences for human health. People exposed to arsenic over the years have a higher likelihood of developing skin and cardiovascular diseases and even some types of cancer. Pregnant women and children can be especially impacted, given the potential effects of arsenic on child development.

You should have the level of manganese tested at least once during the time you withdraw water from the well.

Arsenic found in groundwater is mainly of natural origin. High concentrations of arsenic in groundwater are more often seen in the Abitibi-Témiscamingue, Estrie, Centre-du-Québec and Chaudière-Appalaches regions.

How can I have my well water tested?

A sample of cold water from your kitchen faucet can be analyzed to detect any contaminants in your well water. But first, do this:

- Contact your municipality to learn about any known groundwater contamination issues in your area.
- Contact an accredited laboratory to receive the right sampling containers and instructions. You can find the list of accredited laboratories on the MELCC website at www.ceaeq.gouv.qc.ca/accreditation/PALA/11a03.htm (French only).
- Laboratories are listed by region, and you need to ensure that the one you choose is accredited for testing the following chemical substances in drinking water:
 - Domain **23** for manganese
 - Domain **13** or **24** for arsenic

If you are not already in the habit of regularly testing for *E. coli* and/or enterococcus microorganisms in your well water, this should be done at least twice a year, in spring and fall (accreditation domains 1, 2 or 7). Microorganism contamination of water can cause health problems such as gastroenteritis.

If you live in an agricultural zone or in a residential area where homes have individual septic tanks, you should also test for nitrates and nitrites in your water every spring and fall (accreditation domain 15 and/or 21). Nitrate and/or nitrite contamination of water can cause respiratory problems in newborns. Drinking water that is contaminated by these substances can, over time, become a cancer risk factor.

What should you do if your well water is contaminated

Reduce your exposure

Boiling water to eliminate substances like manganese and arsenic accomplishes nothing, because they do not evaporate. In fact, boiling water can actually increase their concentration.

When the concentration of **manganese in water exceeds 0.12 mg/litre**, care is required with respect to young children and especially bottle-fed babies. A different source of water or bottled water should be used for the following:

- drinking
- preparing beverages for young children
- preparing bottles for babies

When the concentration of manganese **exceeds 0.02 mg/litre**, there can be undesirable effects on the aesthetic quality of your water, such as modified taste, smell and colour.

When the concentration of **arsenic in your well water exceeds 0.01 mg/litre**, everyone living in the home needs to be careful. A different source of water or bottled water should be used for the following:

- drinking
- preparing drinks and food
- preparing bottles and food for babies
- cooking meals

Because arsenic can impair your health, even in small doses, it is recommended that you reduce your exposure as much as possible.

Install a certified home water purifier

Commercially available water purifiers can effectively reduce the concentration of the contaminants in your well water. Whichever model you choose, the following guidance is important:

- Use a certified domestic drinking water expert who is listed on the MELCC website at www.environnement.gouv.qc.ca/eau/potable/installation/rbq.htm (French only);
- Ensure that your unit is NSF/ANSI-certified for the elimination of the undesirable substances. The following domestic water treatment efficacy norms apply:
 - NSF/ANSI **42** for manganese
 - NSF/ANSI **53** or **58** for arsenic
- Follow the manufacturer's installation, operation and maintenance instructions.

Learn more

Well water quality:

www.environnement.gouv.qc.ca/eau/souterraines/index-en.htm

www.quebec.ca/en/agriculture-environment-and-natural-resources/drinking-water/contaminants-in-drinking-water-wells/nitrates-and-nitrites/

Drinking water fact sheets:

www.inspq.qc.ca/eau-potable/arsenic (French only)

www.inspq.qc.ca/eau-potable/manganese (French only)