



# SELENIUM



## What is selenium?

Selenium has the symbol "Se" and is found naturally in small quantities in rocks and soils.

The presence of selenium in well water depends on the rock and soil type in the area. Weathering and erosion of certain rocks and soils can lead to the presence of selenium in groundwater.

## What is the guideline for selenium?

The maximum acceptable concentration of selenium in drinking water is 0.05 milligrams per litre (mg/L).

In water, selenium has no taste, smell, or colour. It can only be detected through chemical testing.

## Treatment

Selenium cannot be removed from water through boiling. Effective treatment methods include:

- distillation
- reverse osmosis

Look for devices that have been certified as meeting the appropriate NSF International (NSF)/American National Standards Institute (ANSI) standards for the removal of fluoride (Se).

## What are the effects of selenium in drinking water?

Selenium, at low levels, is an essential nutrient for human health.

Ingestion of high levels (above 9 mg/L) of selenium, over days or weeks can cause nausea, diarrhea, vomiting, fatigue and irritability.

Ingestion of high levels (above 0.05 mg/L) of selenium for long-periods of time can also cause damage to hair, finger nails, and liver tissue.

Water with selenium levels greater than 0.05 mg/L should not be used for drinking, cooking or brushing teeth. It may be used for bathing, handwashing, dish washing, and laundry.

If selenium is present above 0.05 mg/L in drinking water, a safe alternative source of drinking water or a certified water treatment system is required.

## Where can I find out more?

To find out more, please visit Environment and Climate Change's website at [www.gov.nl.ca/ecc/water](http://www.gov.nl.ca/ecc/water). You can also contact an Environmental Health Officer or Program Manager at the nearest Government Service Centre, NL Health Services, or a water resources official with ECC.

 (709) 729-2563       [water@gov.nl.ca](mailto:water@gov.nl.ca)

 <https://www.gov.nl.ca/ecc/waterres/quality/drinkingwater/>

