

Drinking Water Parameters Information Sheet

The following table identifies some of the more common drinking water parameters, the associated Guidelines for Canadian Drinking Water Quality health or aesthetic identifier, the allowable concentrations and some associated problems when concentrations **exceed** the recommended levels.

*Guidelines for Canadian Drinking Water Quality (GCDWQ)

Health Based Guidelines (HBG)

Aesthetic Quality (GCDWQ)

PARAMETER	GUIDELINE CONCENTRATION	COMMENTS
Microbiological Parameters		
Total Coliform Bacteria	HBG 0 organisms per 100mL	Coliform detection indicates that other potentially harmful microorganisms may be found in the water. Corrective action should be taken with the water supply if coliforms are confirmed to be present.
<i>E.coli</i> Bacteria (Also referred to as Fecal Coliforms)	HBG 0 organisms per 100mL	The presence of fecal coliforms at any level indicates that the water is contaminated and is unsafe to drink.
Inorganic Parameters		
Arsenic	HBG 0.010 mg/L	Arsenic is carcinogenic and has been correlated with a variety of clinical disorders in humans.
Barium	HBG 1.0 mg/L	High blood pressure and cardiovascular disease are risks associated with barium in drinking water.
Cadmium	HBG 0.005 mg/L	Cadmium intake can result in a range of symptoms, from vomiting and stomach cramps to bone softening and renal disease.
Calcium	Not regulated	Contributes to hardness.
Chloride	AQP 250 mg/L	Excessive chloride gives water a salty taste.
Chromium	HBG 0.05 mg/L	Liver, kidney and gastrointestinal tract problems are related to chromium consumption.
Copper	AQP 1.0 mg/L	High copper levels may result in bitter tasting water and blue-green staining of laundry and/or plumbing fixtures.
Fluoride	HBG 1.5 mg/L	Dental fluorosis (mottling of the teeth) can occur from drinking water containing fluoride levels above the guideline.
Iron	AQP 0.3 mg/L	Water colour is reddish-brown and may stain laundry and/or plumbing fixtures.
Lead	HBG 0.010 mg/L	Lead is a cumulative general poison, potentially causing damage to the brain, kidneys, nervous system, and red blood cells. Fetuses and young

		children are especially vulnerable.
Manganese	AQP 0.05 mg/L	May produce black stains on laundry and/or plumbing fixtures and cause beverages to have an objectionable taste.
Nitrate (as nitrogen)	HBG 10 mg/L	Nitrate in drinking water may cause “Blue baby syndrome,” a potentially life threatening condition in fetuses and infants, characterized by shortness of breath and bluish skin.
Nitrite (as nitrogen)	1 mg/L	Same effects as nitrate.
pH	Acceptable range is from 6.5 to 8.5	A pH below 6.5 may result in corrosion of plumbing; pH above 8.5 may facilitate incrustation and scaling of plumbing.
Selenium	HBG 0.01 mg/L	Hair and fingernail changes, circulatory problems, and jaundice can be attributed to consumption of large amounts of selenium.
Sodium	AQP 200 mg/L	Drinking water containing elevated sodium concentrations has an objectionable taste. Individuals on sodium-restricted diets may have to consider the sodium levels in their drinking water when determining their daily intake.
Sulphate	AQP 500 mg/L	Objectionable taste and a laxative effect can result from high sulphate concentrations.
Total Dissolved Solids (TDS)	AQP 500 mg/L	Refers mainly to the inorganic substances dissolved in water. Can result in objectionable taste.
Uranium	HBG 0.02 mg/L	Ingestion of uranium may cause kidney damage.
Zinc	HBG 5.0 mg/L	Water may have an astringent taste and develop a greasy film when boiled.
Physical Parameters		
Colour	AQP 15 total color units (TCU)	The appearance of water with color levels exceeding the aesthetic objective may be displeasing.
Turbidity	HBG 5 nephelometric turbidity units (NTU)	A measure of the optical properties of water, which are affected by suspended material. Particulate and biological matter can hinder effective disinfection. Turbidity also results in visually unappealing drinking water.

Table contents are based on the Regulation Status as outlined in the “Guidelines for Drinking Water Quality” Sixth edition, 1996, as published by the Canadian Minister for Health.

Table format has been adapted from “Fact Sheet #2 The Quality of Groundwater”, produced by the Canadian Groundwater Association in collaboration with the Geological Survey of Canada