

Drinking Water Regulations

Contaminant	Maximum Contaminant Level (MCL)	Common sources of contaminant in drinking water	Health effects from exposure above MCL
Arsenic (As)	< 10 ppb	Erosion or natural deposits; runoff from glass & electronics production	Skin damage; circulatory system problems; increased risk of cancer
Bacteria, Coliform	< 1 cfu/100 mL	Naturally present in the environment	Used as an indicator that other potentially harmful bacteria may be present
Bacteria, Fecal & E.coli	< 1 cfu/100 mL	Human & animal fecal waste	Used as an indicator that other potentially harmful bacteria may be present
Calcium (Ca)	< 50 ppm	Limestone deposits, gypsum & gypsiferous shale	None, but calcium in water can contribute to scale buildup in plumbing & on fixtures
Chloride (Cl)	< 250 ppm	Septic systems, road salt, fertilizers, animal waste, landfills or other waste	None, but high chloride in water can speed up corrosion in plumbing
Copper (Cu)	< 1.3 ppm	Corrosion of household plumbing systems; erosion of natural deposits	Short term exposure: gastrointestinal distress. Long term exposure: liver or kidney damage
Fluoride (F)	<4.0 ppm	Additive (for strong teeth); natural deposits; discharge from fertilizer & aluminum factories	Bone disease (pain & tenderness of bones); children may get mottling teeth
Hardness	150 ppm	Dissolved limestone or minerals	No health effects, but can contribute to scale buildup in plumbing
Iron (Fe)	< 0.3 ppm	Natural deposits & corrosion of iron pipes	No health effects, but contributes to cosmetic & aesthetic effects
Lead (Pb)	< 15 ppb	Corrosion of household plumbing systems; erosion of natural deposits	Children: delays in physical & mental development Adults: Kidneys, blood pressure, nerve damage
Magnesium (Mg)	< 80 ppm	Dissolved limestone or minerals	May have laxative effects. Can contribute to scale buildup in plumbing
Manganese (Mn)	< 0.05 ppm	Occurs in domestic wastewater, industrial effluents & receiving streams	Neurological disorders; cosmetic & aesthetic effects

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Nitrate (NO ₃)	<10 ppm	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits	"Blue Baby Syndrome" (looks blue/shortness of breath) infants under 6 months; life threatening w/o medical attention
Nitrite (NO ₂)	<1 ppm	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits	"Blue Baby Syndrome" (looks blue/shortness of breath) infants under 6 months; life threatening w/o medical attention
pH	6.5 - 8.5	Low values often from lack of carbonate minerals; some contaminants may lower pH	Low pH can lead to corrosion of plumbing, which can leach metals (copper, lead, etc) into water
Potassium (K)	< 20 ppm	Septic systems, road salt, fertilizers, animal waste, landfills, erosion of natural deposits	People affected with certain diseases require low concentrations. May have laxative affects.
Sodium (Na)	< 30 ppm	Septic systems, road salt, fertilizers, animal waste, landfills, erosion of natural deposits	People affected with certain diseases require low concentrations; can affect blood pressure
Sulfate (SO ₄)	< 250 ppm	Erosion of natural deposits; mine drainage waste	Can cause a laxative effect; no major health problems; can cause cosmetic & aesthetic effects
Total Dissolved Solids (TDS)	< 500 ppm	Comprised of minerals & salts present in the water	Cosmetic & aesthetic effects; can cause gastrointestinal irritation in some individuals
Zinc (Zn)	< 5 ppm	Deterioration of galvanized iron and dezincification of brass; industrial waste pollution	No major health problems; contribute to cosmetic & aesthetic effects in water

ppm is equal to mg/L
ppb is equal to ug/L

