

U.S. EPA WATER QUALITY GUIDELINES FOR HUMAN CONSUMPTION

Sodium (Na)	Less than 20 ppm: No adverse effects	20-80 ppm: Persons on restricted sodium diets should consult a physician concerning use.	More than 80 ppm: Should be used sparingly by persons on low-sodium diets.
Calcium (Ca)	Less than 80 ppm: No adverse effects	80-150 ppm: Hard water problems such as scale formation can be expected.	More than 150 ppm: May be associated with high levels of sulfate (see sulfate below). Extreme hardness is undesirable for household use.
Magnesium (Mg)	Less than 30 ppm: No adverse effects	30-80 ppm: Contributes to hardness when associated with high calcium levels.	More than 80 ppm: When associated with high sulfate, is likely to have a laxative effect (magnesium sulfate is Epsom Salts).
pH	Less than 6.5: Corrosive to metal	6.5-8.5: No adverse effects	Higher than 8.5: Possible bitter taste, and germicidal activity of chlorine is reduced, corrosive to pipes.
Nitrate Nitrogen (NO ₃ -N)	Less than 2 ppm: No adverse effects	2-10 ppm: No acute toxicity. Could have some negative health effects in young children.	More than 10 ppm: Increasing probability of health effect in children under 6 months of age due to reduced oxygen carrying capacity of the blood.
Sulfate (SO ₄)	Less than 250 ppm: No adverse effects	250-500 ppm: Likely to have a laxative effect, especially when first introduced. Diarrhea may or may not persist.	More than 500 ppm: Strongly laxative.
Conductivity	Less than 0.30: Extremely pure water can be corrosive to metal.	0.30-1.50: No adverse effects	Greater than 1.50: High levels of dissolved solids (see below).
Total Dissolved Solids (TDS)	Less than 200 ppm: No adverse health or nutritional effects. May be corrosive if extremely pure.	200-1000 ppm: No adverse effects	More than 1000 ppm: Increasingly adverse effects, especially diarrhea. Water loses esthetic effect.
Hardness	Less than 6 gr/gal: No adverse effects (17.1 mg/L CaCO ₃ = 1 gr/gal)	6-12 gr/gal: Some scale may form in pipes and water heaters. Softening may be desirable.	More than 12 gr/gal: Scale will form rapidly and laundry will not come clean. Softening for household use is desirable.
Total Coliform*	Negative: No coliform bacteria present in 100 mL of water.		Positive: Water is contaminated with coliforms (sewage) bacteria. Disease transmission is possible if unpurified water is used. EPA restrictions on coliforms is less than 1 colony forming unit (cfu) per 100 mL of water.
Iron (Fe)	Less than 0.3 ppm: No adverse effects	0.3-1.0 ppm: Some staining will occur	More than 1.0 ppm: Iron oxide (rust) will cause extensive staining and will precipitate out, forming a red sludge. Taste will be bitter.
Manganese (Mn)	Less than 0.05 ppm: No adverse effects	0.05-0.50 ppm: May cause black or brown staining of pipes, sinks, and laundry.	More than 0.50 ppm: Besides the staining effect, will cause a metallic taste.
Chloride (Cl)	Less than 200 ppm: No adverse effects	200-500 ppm: Increasingly salty taste.	More than 500 ppm: Very salty taste.

*Holding/Transit time between sampling and analysis cannot exceed 48 hours. If this time has been exceeded, the results might be invalid.
 N.D. = Not Detected
 EPA Guidelines suggest less than 0.015 ppm (mg/L) for Lead (Pb) and 1.30 ppm (mg/L) for Copper (Cu).