

U.S. EPA Water Quality Guidelines

Nitrate Nitrogen	Less than 2ppm: No adverse effects	2-10ppm: No acute toxicity. Could have negative effects in young children	More than 10ppm: Increasing probability of health effect in children under 6 months of age due to reduced oxygen carrying capacity of the blood.
Calcium (Ca)	Less than 80ppm: No adverse effects	80-150ppm: Hard water problems such as scale formation can be expected.	More than 150ppm: May be associated with high levels of sulfate. Extreme hardness is undesirable for household use.
Iron (Fe)	Less than 0.3ppm: No adverse effects	0.3-1.0ppm: Some staining will occur.	More than 1.0ppm: Iron oxide (rust) will cause extensive staining and will precipitate out, forming a red sludge. Taste will be bitter.
Manganese (Mn)	Less than 0.05ppm: No adverse effects	0.05-0.50ppm: May cause black or brown staining on pipes, sinks, and laundry	More than 0.50ppm: Besides the staining effect, will cause a metallic taste.
Magnesium (Mg)	Less than 30ppm: No adverse effects	30-80ppm: Contributes to hardness when associated with high calcium levels.	More than 80ppm: When associated with high sulfate, is likely to have a laxative effect.
Sodium (Na)	Less than 20ppm: No adverse effects	20-80ppm: Persons on restricted sodium diets should consult a physician.	More than 80ppm: Should be used sparingly by person on low-sodium diets.
Copper (Cu)	Less than 1.3ppm: No adverse effects		More than 1.3ppm: May cause vomiting, diarrhea, stomach cramps and nausea. Caution should be taken with children under the age of 1 and people with Wilson's Disease.
Chloride (Cl)	Less than 250ppm: No adverse effects	250-500ppm: Increasingly salty taste.	More than 500ppm: Very Salty taste.
Sulfate (SO₄)	Less than 250ppm: No adverse effects	250-500ppm: Likely to have a laxative effect, especially when first introduced. Diarrhea may or may not persist.	More than 500ppm: Strongly laxative.
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.
Hardness	Less than 6 gr/gal: No adverse effects (17.1mg/L CaCO ₃ = 1 gr/gal)	6-12 gr/gal: Some scale may form in pipes and water heaters.	More than 6 gr/gal: Scale will form rapidly and laundry will not come clean. Softening for household use is desirable.
Total Dissolved Solids (TDS)	Less than 500ppm: No adverse effects		More than 1000ppm: Increasingly adverse effects, especially diarrhea. Water loses esthetic effect.
Conductivity	Less than 0.30: Extremely pure water can be corrosive to metal.	0.30-1.50: No adverse effects	More than 1.50: High levels of dissolved solids (see above).
Coliform	Negative or <1 CFU/100mL: No coliform is present in sample.		Positive or >1 CFU/100mL : Water is contaminated with coliform bacteria. Disease transmission is possible if unpurified water is used.