

Test	Importance/Sources
Alkalinity	Alkalinity is the water's capacity to resist changes in pH that would make the water more acidic. It is also the protector of your health and household piping.
Bacteria (total coliform and E. coli)	May cause gastrointestinal illnesses and cause water to have bad taste or odor. Sources: surface water, septic systems and animal wastes. *Note: Can choose qualitative test (Presence/Absence; \$35) or quantitative test (Most Probable Number; \$40)
Chloride	Causes salty tasting water; corrosion and blackening of steel. Sources: some naturally occurring, but primarily from gas/oil well drilling brines or road salt.
Corrosivity	Causes metallic-tasting water, blue-green stains, leaky pipes in homes with copper plumbing. Sources: most is naturally occurring; some due to mining activities. (Calculation based on pH, Temperature, Alkalinity, Hardness, TDS).
Fluoride	May cause bone damage and discoloration of teeth. Sources: naturally occurring; present in some industrial wastes
Hardness	Causes whitish-gray residue when water is heated; decreased life of water heater elements; increased use of soap. Sources: naturally occurring in many areas, especially where limestone occurs.
Heavy Metals	Heavy metals include arsenic, barium, cadmium, chromium, nickel, zinc and many more. People that consume high levels of heavy metals risk acute and chronic toxicity, liver, kidney, and intestinal damage, anemia, and cancer. Sources: groundwater movement and surface water seepage and run-off; more rarely, found in pesticides, treated lumber, or industrial waste sites.
Iron	May cause orange, brown stains; metallic-tasting water. Source: naturally occurring or from mining activities.
Lead & Copper	Causes blue-green stains (Copper); bitter metallic-tasting water; Many serious health effects including gastrointestinal upset; liver and kidney damage. Sources: most from corrosion of plumbing; more rarely from industrial waste sites.
Manganese	Causes black stains; gives water metallic taste. Sources: naturally occurring or from mining activities.
Mercury	May cause kidney and central nervous system damage. Sources: naturally occurring; various industrial wastes.
Nitrate, Nitrite Nitrogen	High levels can cause methemoglobinemia or "blue baby syndrome". Infants below six months who drink water with high levels of nitrate can become seriously ill and die. Sources: fertilizers, animal wastes, septic systems.
pH	When low, causes bitter, metallic taste; corrosion and leaks in metal pipes. When high, causes slippery feeling water with soda taste and leads to scale deposits. Sources: naturally controlled but may be impacted by mining activities.
Sulfate	Causes bitter medicinal-tasting water; laxative effect. Sources: naturally occurring; mining activities.
Total Dissolved Solids	Causes cloudy and/or bad-tasting water. Sources: naturally occurring but may be caused by any land-use changes.