What's in Your Drinking Water?

EPA studies show that 45 million Americans drink water that violates U.S. safety standards; 642,000 of them are Oregonians. Disease-producing agents come in many forms. Exposure to nitrate/nitrite can cause fatal Blue Baby Syndrome, and ingested metals have been linked to Alzheimer's Disease, anemia, delayed or retarded mental and physical development, and cancer. Even trace quantities of metals consumed over time can cause organ failure, nervous system damage, fatigue, muscle ache, and high blood pressure. Fluoride, abundant in local groundwater, can lead to permanent staining of tooth enamel and brittle bones. Boron is also commonly found in water, and excessive amounts are deadly to plants when applied to vineyards, orchards, and gardens.

Don't drink toxic water! Let Neilson Research Corporation help protect the health of your family with these packages tailored to the contaminants found in our local water.

Introducing the NEW Top 35™

Best Value

TOP-35™

Trace Metals (26 Analytes)

- Aluminum
- Antimony
- Arsenic
- Barium
- Beryllium
- Boron
- Cadmium
- Calcium
- Chromium
- Copper
- Iron
- Lead
- Lithium
- Manganese
- Magnesium
- Molybdenum (new)
- Nickel
- Potassium
- Selenium
- Silica (new)
- Silver
- Sodium
- Thallium
- Vanadium (new)
- Uranium (new)
- Zinc

Nutrients (5 Analytes)

- Chloride
- Fluoride
- Nitrate
- Nitrite
- Sulfate

Physical Parameters (4 Analyses)

- Conductivity
- Hardness
- pH
- Turbidity (new)

$250.00

List Price $824.00 - Save $574.00

TOP-20™

Trace Metals (14 Analytes)

- Aluminum
- Arsenic
- Barium
- Boron
- Cadmium
- Calcium
- Copper
- Iron
- Lead
- Lithium
- Manganese
- Magnesium
- Sodium
- Zinc

Nutrients (4 Analytes)

- Chloride
- Fluoride
- Nitrate
- Sulfate

Physical Parameters (3 Analyses)

- Conductivity
- Hardness
- pH

$225.00

List Price $539.00 - Save $314.00

Drinking Water Specialists

With over 30 years of serving Oregon's public and private water systems Neilson Research Corporation is recognized as being one of the states' leading experts on the sampling and analysis of drinking water.

Service Is Our Science

NEILSON RESEARCH CORPORATION

Environmental Testing Laboratory

245 South Grape Street * Medford, OR 97501
(541) 770-5678 fax (541) 770-2901
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ACCREDITED IN ACCORDANCE WITH nelac

Neilson Research Corporation is proud to state that our laboratory is accredited according to the strict standards outlined by the National Environmental Laboratory Accreditation Conference (NELAC).

What's in Your Drinking Water?

Water, the Universal Solvent

All sources of drinking water contain some naturally occurring contaminants. Because water is the universal solvent, many materials are easily dissolved upon contact. There is no such thing as naturally pure water. In nature, all water contains some impurities. As water flows in streams, sits in lakes, and filters through layers of soil and rock, it dissolves or absorbs the substances that it comes in contact with.

Aluminum: Low level exposure is not thought to harm your health. Aluminum, however is not a necessary substance for our bodies and too much may be harmful. *(Federal Limit 0.05 - 0.2 mg/L)*

Antimony: Above the EPA limit antimony may potentially cause nausea, vomiting, and diarrhea. Antimony is a known/potential drinking water human carcinogen. *(Federal Limit 0.006 mg/L)*

Arsenic: Arsenic is a known human carcinogen. *(Federal Limit 0.010 mg/L)*

Barium: Symptoms of barium poisoning include increased blood pressure, changes in heart rhythm, stomach irritation, and muscle weakness. *(Federal Limit 2.0 mg/L)*

Beryllium: Beryllium is a probable human carcinogen. *(Federal Limit 0.004 mg/L)*

Boron: Exceptionally toxic to some plants. If you have problems with growing plants, it could be the water and not your green thumb! *(Toxic range for plants is 1.0-4.0 mg/L)*

Cadmium: Symptoms of cadmium poisoning include cramps, nausea, vomiting, and diarrhea. Long term exposure to lower levels of cadmium leads to kidney disease, lung damage and fragile bones. *(Federal Limit 0.005 mg/L)*

Calcium: Calcium is an important contributor to water hardness. *(No Limit)*

Conductivity: Conductivity gives an approximate determination of the amount of dissolved minerals in the water. *(No Limit)*

Chromium: Above the EPA limit chromium may potentially cause skin irritation or ulceration. Long term exposures to chromium may cause damage to liver, kidney, circulatory, and nerve tissues. *(Federal Limit 0.1 mg/L)*

Copper: Causes staining of fixtures, hair, and fabrics and can impart a bitter taste to water. It can cause stomach irritation and vomiting. *(Federal Limit 1.0 mg/L)*

Fluoride: Long term effects are a permanent brown staining of the teeth, destruction of tooth enamel, brittle and easily broken bones, painful and stiff joints. *(Federal Limit 4.0 mg/L, Oregon limit 2.0 mg/L)*

Hardness: Hardness is usually attributed to the calcium and magnesium ions. These ions combine with soap, forming an insoluble precipitate visible as scum and rings around fixtures. *(Federal Limit 250 mg/L)*

Iron: When iron comes in contact with oxygen, it oxidizes to a visible reddish compound that settles out as a rust-like material that stains clothing and fixtures. *(Federal Limit 0.3 mg/L)*

Lead: Symptoms of lead poisoning include tiredness and aching bones. *(Federal Limit 0.015 mg/L)*

Lithium: Occurs naturally in Southern Oregon and is currently being monitored by NRC. *(No Limit)*

Magnesium: Magnesium is an important contributor to water hardness. When water is heated, magnesium breaks down and precipitates out of solution, forming scale. Magnesium concentrations greater than 125 mg/L may have a laxative effect. *(No Limit)*

Manganese: Produces a brownish discoloration, which stains clothing and fixtures. High levels of manganese are toxic to expectant mothers and children. *(Federal Limit 0.05 mg/L)*

Molybdenum: Excessive molybdenum consumption can be associated with enlarged liver, gastrointestinal, and kidney disorders. *(USEPA Lifetime Health Advisory: 40 ug/L)*

Nickel: Relatively short exposures above the EPA Limit are not known to cause any health problems. Long term exposures can potentially cause decreased body weight, skin irritation, heart, and liver damage. *(Federal Limit 0.1 mg/L)*

Nitrate/Nitrite: Affects infants under the age of 6 months. In this age group nitrates reduce the blood's ability to carry oxygen and may cause death or permanent brain damage. *(Federal Limit Nitrate 10 mg/L, Nitrite 1 mg/L)*

pH: The ideal pH for drinking water is 7.5. When pH is below 7.0, the water is acidic and can cause corrosion of pipes and fixtures. When the pH is higher than 8.0, the water is alkaline. This can create mineral deposits on the interior surfaces of pipes.

Potassium: To lower blood pressure, blunt the effects of salt, and reduce the risk of kidney stones and bone loss, adults should consume 4.7 grams of potassium per day. *(No Limit)*

Selenium: Is an essential nutrient at low levels. However, levels above 0.05 ppm may cause: hair and fingernail changes; damage to the peripheral nervous system; fatigue and irritability. Long term exposures to selenium may cause hair and fingernail loss, damage to kidney and liver tissue and the nervous and circulatory systems. *(Federal Limit 0.05 mg/L)*

Silica: Silica analysis provides useful information for systems that may require water treatment. Not identified as a health hazard. *(No Limit)*

Silver: Silver poisoning causes a blue-gray discoloration of the skin, mucous membranes, and eyes. In high doses it is fatal to humans. *(Federal Limit 0.1 mg/L)*

Sodium & Chloride: If the sodium and chloride levels are near 100 mg/L, individuals may notice a salty taste. These levels also affect plant growth. (*Sodium: No Limit) (Chloride: Federal Limit is 250 mg/L)*

Sulfate: Sulfate is a substance that occurs naturally. It may be found in the form of hydrogen sulfide and is commonly identified by a "rotten egg odor." Diarrhea may be associated with the ingestion of high levels of sulfate. *(Federal Limit 250 mg/L)*

Turbidity: Turbidity is the lack of clarity or brilliance in water. This can affect water treatment systems such as UV lights for disinfection, reverse osmosis units, sediment removal systems, and ion exchange treatment systems. *(Federal Limit 1 NTU)*

Thallium: Above the EPA limit thallium may potentially cause gastrointestinal irritation and nerve damage. Long-term exposures to thallium may cause changes in blood chemistry, hair loss, damage to liver, kidney, intestinal, and testicular tissues. *(Federal Limit 0.002 mg/L)*

Vanadium: The health effects in humans has not been established. Studies in pregnant animals showed minor birth defects. Vanadium ingested over a long period of time also revealed minor kidney and liver changes. Vanadium is also used for arsenic removal in drinking water treatment systems. *(No Limit)*

Uranium: Naturally occurring substance that is mildly radioactive. Exposure to high levels of uranium can cause kidney disease. *(Federal Limit 0.03 mg/L)*

Zinc: High levels of zinc can cause stomach cramps, nausea, and vomiting. Over a long period of time it can cause anemia and pancreas damage. *(Federal Limit 5.0 mg/L)*

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