



A & L LABORATORY

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Passes - The result of this parameter is within the limits set by the Safe Drinking Water Act from the EPA. This applies to both Primary and Secondary Drinking Water Standards.



Fails EPA Primary - National Primary Drinking Water Regulations (primary standards) are legally enforceable standards that apply to public water systems. Primary standards protect public health by limiting the levels of contaminants in drinking water that effect human health. Failing a primary drinking water standard (e.Coli, Nitrate, Nitrite, Arsenic, Lead etc...) would make the water **unsatisfactory for drinking** until the problem is resolved.



Fails EPA Secondary - National Secondary Drinking Water Regulations (secondary standards) are non-enforceable guidelines regulating contaminants that may cause cosmetic effects (such as skin or tooth discoloration) or aesthetic effects (such as taste, odor, or color) in drinking water. EPA recommends secondary standards to water systems but does not require systems to comply. Failing a secondary drinking water standard (Iron, Manganese, Hardness, chloride etc...) would simply indicate a **notation** to the well owner so that they are aware of the elevated level.



Fails EPA Proposed Limit - EPA proposed new regulations to reduce the public health risks from radon on November 2, 1999 in the Federal Register (64 FR 59246). The proposed regulation has a Maximum Contaminant Level (MCL) of 4,000 pCi/L.



Attention - Total coliform bacteria contamination can be an indicator for the possible presence of illness causing contaminants in water systems, such as E. coli bacteria and viruses. Please see the Coliform section below for more information.



For More Information visit - <http://water.epa.gov/drink/contaminants/>

Contaminant Fact Sheet

pH - Recommended range is **6.5 to 8.5**. A pH of 7.0 is considered neutral. Below 7.0 the water is considered acidic and above 7.0 the water is considered basic. At a pH of less than 6.5, corrosive effects may transpire and the leaching of toxic metals such as copper and lead may occur. A pH greater than 8.5 may cause mineral incrustations and bitter tasting water. The pH of water can vary greatly with time and temperature changes. Therefore, pH measurements will be most accurate when conducted on site. *IMMEDIATE ANALYSIS: pH is considered an "immediate" analysis and should be analyzed within 15 minutes of sampling. Since we do not receive the sample in accordance with this timeframe all immediate analysis results are to be considered out of hold time and their results will be flagged.*

HARDNESS - Hardness in drinking water is defined as those minerals that dissolve in water having a positive electrical charge primarily calcium and magnesium. The presence of the hardness minerals in drinking water is not known to pose a health risk. At higher concentrations hardness can cause soap scum most noticeable on tubs and showers, white mineral deposits on dishes and glassware and can reduce the efficiency of devices that heat water. (**SOFT 0- 60mg/L**) (**MODERATELY HARD 61-120mg/L**) (**HARD 121 - 180 mg/L**) (**VERY HARD 180+mg/L**).

*To convert Hardness result from mg/L (milligrams per liter) to grains, divide result by 17.1.

CHLORIDE - Recommended range is less than **250 mg/L**. Chloride can cause corrosion above 250 mg/L and above 400 mg/L chloride causes an objectionable salty taste.

NITRATE-N - The maximum contaminant level is **10 mg/L**. Major sources of nitrate are fertilizer runoff, soil, organic matter, leaching from landfills, and municipal and industrial wastewaters. Excessive concentrations can indicate septic tank pollution. Under certain conditions nitrates can be chemically reduced in the body to form Nitrite-N.

NITRITE-N - The maximum contaminant level is **1.0 mg/L**. Water with high nitrite levels should not be used for infants under 6 months of age due to the potential risk of methemoglobinemia (blue baby syndrome). Water with high nitrite concentrations usually are heavily polluted and have unacceptable levels of bacteria.

Analytical methods for Nitrate & Nitrite require samples to be submitted on ice and received at the laboratory equal to or less than 6°C. The purpose of cooling these samples is to help stabilize the samples via reduced microbial activity and slower reaction times at lower temperatures. Nitrate and nitrite samples will be qualified for thermal preservation failure if not received on ice at equal to or less than 6°C. This will be indicated on the report by a "T" in the DQ (Data Qualifier) column and a note in the comments section of the cover page.

SODIUM – For people on low sodium diets the recommended maximum level is 20 mg/L. Excess salts in the water may be due to road salt, seawater intrusion or a malfunctioning water softener. *State of Maine MEG* = 20 mg/L*

IRON – The recommended level is less than **0.3 mg/L**. Iron can cause a yellow or orange discoloration in laundered goods and can cause a bitter or astringent taste in the water. A water softener is the primary form of treatment. *State of Maine MEG* = 5 mg/L*

MANGANESE –The recommended level is less than **0.05 mg/L**. Manganese can cause discoloration in laundered goods and impair taste in drinking water and beverages. At high concentrations it may cause brown spots in laundry items and leave unaesthetic black precipitates. *State of Maine MEG* = 0.5mg/L*

COLIFORM – Total Coliform is used as an indicator organism. Drinking water should be free of disease-causing organisms called pathogens. Pathogens can be viruses, protozoa or bacteria. EPA considers coliforms a useful indicator of these pathogens. The presence of any coliforms in drinking water suggests that there may be a pathway for pathogens to enter the drinking water distribution system. Even though there is no longer an EPA limit they still recommend drinking water contain zero coliform bacteria. If your water has tested positive for total coliforms it is important to examine your well system and take action to eliminate the coliform bacteria when possible. Please note that most lenders will not accept water results that are Positive for Total Coliform Bacteria. Please see the chlorination procedure for more information on treating your well and retesting your water.

E. Coli - E. coli is a type of fecal coliform bacteria commonly found in the intestines of animals and humans. The presence of E. coli in water is a strong indication of recent sewage or animal waste contamination. Sewage may contain many types of disease-causing organisms. E.coli can make some severely ill and should not be present in drinking water. Do not drink the water until you have followed the enclosed chlorination procedures and have retested your well.

COPPER – The maximum contaminant level is **1.3 mg/L**. Copper can cause adverse taste effects or stain porcelain. Some people who drink water containing copper in excess of the action level may, with short term exposure, experience gastrointestinal distress, and with long-term exposure may experience liver or kidney damage. It is typically introduced into the water from household plumbing systems. *The State of Maine MEG*= 0.5 mg/L*

ARSENIC – The maximum contaminant level is **0.010 mg/L**. Arsenic in water occurs naturally as well as from industrial activities. Studies have shown that chronic or repeated ingestion of water with arsenic over a person's lifetime is associated with increased risk of cancer (of the skin, bladder, lung, kidney, nasal passages, liver or prostate) and non-cancerous effects (diabetes, cardiovascular, immunological and neurological disorders).

LEAD – The maximum contaminant level is **0.015 mg/L**. Lead can occur due to corrosion of lead containing household plumbing and by industrial pollution. Major toxic effects include anemia, neurological dysfunction/damage and renal impairment. *State of Maine MEG* = 0.010 mg/L*

FLUORIDE – The maximum contaminant level is **4.0 mg/L**. Fluoride in drinking water is beneficial at low concentrations, but can pose health concerns at higher concentrations. Fluoride has been shown to reduce tooth decay in children's teeth if they receive an adequate level. The optimal concentration, as recommended by CDC is approximately 1.1 mg/L. In the range of 2.0-4.0 mg/L of fluoride, staining of tooth enamel is possible. Above 4.0 mg/L, studies have shown the possibility of skeletal fluorosis, as well as the staining of teeth. *State of Maine MEG * = 2.00 mg/L*

URANIUM – The maximum contaminant level is **30 µg/L**. Uranium is a naturally occurring radioactive element which is found in almost all forms of soil, rocks and water sources. Uranium is a tasteless, colorless, odorless contaminant. Drinking water with uranium amounts exceeding 30 µg/L can lead to increased cancer risk, liver damage, or both. If you have a high uranium result we recommend that you also test your water for radon and arsenic.

*MEG - The Maine Center for Disease Control and Prevention (MECDC) develops Maximum Exposure Guidelines (MEGs) to assist risk managers, homeowners and others in making decisions regarding the suitability for human consumption of drinking water contaminated by chemicals. MEGs are not promulgated by rule making and therefore are not issued as legally enforceable drinking water "standards." Rather, MEGs represent the MECDC's most recent recommendations for concentrations of chemical contaminants in drinking water below which there is minimal risk of a deleterious health effect resulting from long-term ingestion of contaminated water. The MEGs are intended to be solely health-based guidelines, and do not take into account analytical methods, treatment technology, or economic impacts. This is in contrast to the legally enforceable drinking water standards called Maximum Contaminant Levels (MCLs). MCLs are promulgated under the Safe Drinking Water Act for the purpose of regulating public drinking water supplies, and allow for consideration of the technical and economic feasibility of attaining a standard.

For more information please visit our website at: www.allaboratory.com