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## **Residential Water Testing Package - \$175**

**Total Coliform** / **e-coli bacteria** - This is the most common test for contamination. Coliform bacteria should not be found in drinking water. When present it indicates that the water supply has some connection with an unsanitary source. Septic waste and contaminated drinking water are common. Drinking contaminated water may have effects ranging from cramping and gastrointestinal illness to liver failure.

**Fluoride** – Studies have shown that fluoride is effective in reducing dental cavities when consumed in the right quantities. A level of approximately 1.0 ppm is considered ideal. When the level of fluoride is excessive (4.0 ppm), damage to the teeth can occur. It is added artificially to public water supplies and occurs naturally in many private water supplies, sometimes excessively.

**Nitrate** / **Nitrate** – Nitrate is one of the components of the nitrogen cycle. There are numerous sources of nitrates including natural deposits. High nitrate levels are often found in agricultural areas due to fertilization of the soil. Other sources of nitrates include decaying organic material like septic tanks. Excessive nitrates cause a serious and sometimes fatal blood disorder known as Methemoglobinemia, (in infants disorder known as "Blue Babies"). The maximum acceptable level is 10 ppm.

**Hardness** – Hardness is the total of the calcium and magnesium (expressed as calcium carbonate). While hardness minerals are generally considered to be beneficial to human health, excessive levels can cause damage to plumbing systems, especially where the water is heated. Very low levels can indicate that the water is corrosive. As a general guideline the levels are: 0-50 ppm = soft, 51-100 ppm = moderately hard, 101-170 ppm = hard, 171+ ppm = very hard.

**pH** - In household water, pH is used as an indicator of the corrosive tendencies of the water supply. Low pH numbers indicate that the water is acidic. Acidic water is typically corrosive and can cause damage to any metal part of a plumbing system. This often results in elevated levels of metals including lead, copper, and cadmium. High pH numbers indicate alkaline water. Alkaline water coupled with high hardness may cause scaling in the plumbing system. The acceptable pH range is 6.5 - 8.5. If your ph is 6.5 or less, we suggest that you perform a test for toxic corrosion by-products such as metals.

**Lead** - Lead has been linked to numerous health disorders including lead poisoning. The standards for lead in drinking water have been made more stringent over the years, leading to the current action level of 0.015 ppm. If lead results are over the action level it is recommended that you flush you line with water and test again. Also, consider testing water when the line is stagnant. If those samples are still over the limit, either bottled water or a treatment system are recommended.

**Iron** – Natural waters often contain iron. While it is generally considered a beneficial mineral, excessive levels of iron can cause a bad taste and severs staining of laundry and plumbing fixtures. The maximum acceptable level in drinking water is 0.3 ppm.

**Chloride** - Chloride occurs naturally in lakes and streams, and many organisms need it to carry out the basic functions of life. But elevated levels can cause cells to lose water and become deprived of nutrients. Excessive amounts of chloride can harm humans, pets, land, and household fixtures. Chloride in excess of 250 mg/L is not recommended and may be indicative of groundwater contamination.