

## Interpreting Test Results

### Hardness

The hardness of your water is reported in grains per gallon, milligrams per liter (mg/L) or parts per million (ppm). One grain of hardness equals 17.1 mg/L or ppm of hardness. The Environmental Protection Agency (EPA) establishes standards for drinking water which fall into two categories – Primary Standards and Secondary Standards. Primary Standards are based on health considerations and Secondary Standards are based on taste, odor, color, corrosivity, foaming, and staining properties of water. There is no Primary or Secondary standard for water hardness. Water hardness is classified by the U.S. Department of Interior and the Water Quality Association as follows:

<u>Classification</u>	<u>mg/L or ppm</u>	<u>grains/gal</u>
Soft	0 - 17.1	0 – 1.0
Slightly hard	17.1 - 60	1.0 -3.5
Moderately hard	60-120	3.5-7.0
Hard	120 – 180	7.0 - 10.5
Very Hard	180 & over	10.5 & over

### pH Specific Range

The pH level of your drinking water reflects how acidic it is. pH is measured on a scale that runs from 0 to 14. Seven is neutral, meaning that there is a balance between acid and alkalinity. A measurement below 7 means acid is present and a measurement above 7 is basic (for alkaline). Water with a low pH can be acidic, naturally soft and corrosive. Acidic water can leach metals from pipes and fixtures, such as copper, lead and zinc. It can also damage metal pipes and cause aesthetic problems, such as metallic or sour taste, laundry staining or blue-green stains in sinks and drains. Water with a low pH may contain metals in addition to the before-mentioned copper, lead and zinc. Drinking water with a pH level above 8.5 indicates that high levels of alkalinity minerals are present. High alkalinity does not pose a health risk, but can cause aesthetic problems, such as an alkali taste to the water that makes coffee taste bitter; scale build-up in plumbing; and lowered efficiency of electric water heaters.

### Alkalinity

Alkalinity refers to the capacity of water to neutralize acids. The presence of carbonates, bicarbonates and hydroxides of calcium, magnesium and sodium metals is the most common cause of alkalinity in natural waters. The levels and types of alkalinity are directly dependent on the source of the water. Natural surface and well waters usually contain less alkalinity than sewage or wastewater samples. High levels of alkalinity may indicate the presence of a strongly alkaline industrial waste.

NOTE: *Other organizations may use slightly different classifications*