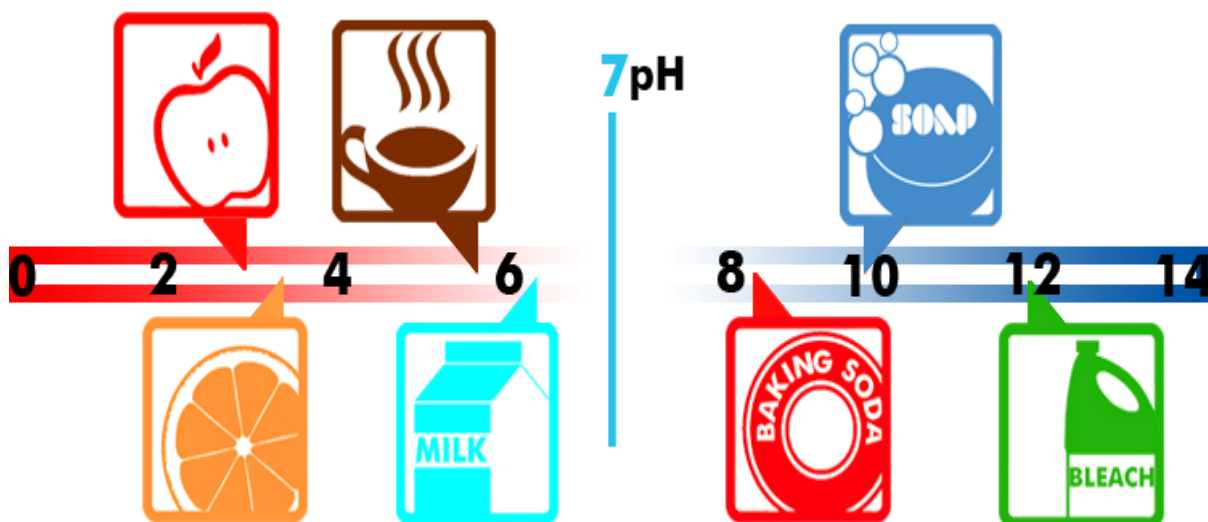


pH VALUES OF WATER EXPLAINED

Remember 4th grade science class? Yeah, the one where you did that experiment with litmus, the paper that turned red when you put it on a lemon and blue in soapy water.

The indicator for acidity or alkalinity, or basic, is known as the pH value. A pH value of 7 means a substance is neutral. The lower value indicates acidity, and a higher value is a sign of alkalinity. To display the range in pH, take a look at these examples:

- Apple Juice- 3
- Orange Juice- 3.5
- Coffee- 5.5
- Milk- 6.2
- Baking Soda- 8.5
- Soapy water- 10
- Bleach- 12



In addition, many of the foods we eat contain an acidic pH because of their bacteria killing functions.

pH and Water

So, what does pH mean for water? Basically, the pH value determines whether water is hard or soft. The pH of pure water is 7. In general, water with a pH lower than 7 is considered acidic, and with a pH greater than 7, basic. The normal range for pH in surface water systems is 6.5 to 8.5 and for groundwater systems 6 to 8.5. Alkalinity is a measure of the capacity of the water to resist a change in pH that would tend to make the water more acidic. The measurement of alkalinity and pH is needed to determine the corrosiveness of the water.

In general, water with a low pH (< 6.5) could be acidic, soft, and corrosive. Therefore, the water could contain metal ions such as iron, manganese, copper, lead, and zinc...or, on other words, elevated levels of toxic metals. This can cause premature damage to metal piping, and have associated aesthetic problems such as a metallic or sour taste, staining of laundry, and the characteristic "blue-green" staining of sinks and drains. More importantly, there are health risks associated with these toxins. The primary way to treat the problem of low pH water is with the use of a neutralizer. The neutralizer feeds a solution into the water to prevent the water from reacting with the household plumbing or contributing to electrolytic corrosion. A

typical neutralizing chemical is soda ash. Neutralizing with soda ash, however, increases the sodium content of the water.

Water with a pH > 8.5 could indicate that the water is hard. Hard water does not pose a health risk, but can cause aesthetic problems. These problems include an alkali taste to the water (making that morning coffee taste bitter!), formation of a deposit on dishes, utensils, and laundry basins, difficulty in getting soaps and detergents to lather, and formation of insoluble precipitates on clothing.

According to a Wilkes University study, because of the association of pH with atmospheric gases and temperature, it is strongly recommended that water samples be tested as soon as possible. The study says that the pH value of the water is not a measure of the strength of the acidic or basic solution, and alone cannot provide a full picture of the characteristics or limitations with the water supply.

While the ideal pH level of drinking water should be between 6-8.5, the human body maintains pH equilibrium on a constant basis and will not be affected by water consumption. For example our stomachs have a naturally low pH level of 2 which is beneficial acid that helps us with food digestion.

According to recent news and reports, most tap and well water in the U.S. are not safe for drinking due to heavy industrial and environmental pollution. Toxic bacteria, chemicals and heavy metals routinely penetrate and pollute our natural water sources making people sick while exposing them to long term health consequences such as liver damage, cancer and other serious conditions. We have reached the point where all sources of our drinking water, including municipal water systems, wells, lakes, rivers, and even glaciers, contain some level of contamination. Even some brands of bottled water have been found to contain high levels of contaminants in addition to plastics chemical leaching from the bottle.

A good water filtration system installed in your home is the only way to proactively monitor and ensure the quality and safety of your drinking water. Reverse osmosis water purification systems can remove 90-99% of all contaminants from city and well water to deliver healthy drinking water for you and your family.

