

Essential Water Information

by Alderin Ordell, KYK US Distributor

With our bodies being comprised of nearly 90% water, water is the most important substance you put in your body. In fact, if people simply drank enough water and kept their bodies hydrated, 60-80% of the chronic disease we find today would be seriously diminished if not eliminated! When your body is hydrated and alkaline, your toxins have been flushed and there's no acid in your system so there's no fuel for diseases to feed on. So, they die!

A KYK® Water Ionizer will micro-cluster the water molecules in your tap water to three to four times the concentration of tap or bottled water. That means your body will hydrate on three to four times less water than drinking non-ionized water. If you're an athlete, you will particularly notice the difference. But everyone can benefit as being hydrated makes you feel energetic, fluid, and clear.

Municipal Water

Drinking water is important however, putting poor quality water into your body can be worse than drinking no water at all. Chlorine, chloramine, pesticides, bacteria and other contaminants are common in water all across the United States. The biggest problem with municipal water is that it contains chlorine, which is an oxidant and a known carcinogen that can cause liver damage if consumed on a regular basis. Chlorine is a problem in your shower, too, because you are breathing chlorine gas as well as having it directly absorbed into your pores.

Most municipal companies also add fluoride to the water, especially in large cities. There are conflicting reports on fluoride. It's supposed to help your teeth but some people are allergic to it. Some doctors don't think it should be ingested at all. When it comes to chlorine, fluoride, and other contaminants in your water, our filters are the best on the market at filtration, removing everything to non-detectable levels. Within a few seconds poor quality water is turned into clean water stripped of everything but its minerals, which are then ionized.

Mineral Content

The strength of your ionized water is directly affected by the amount of minerals in your water. The more minerals, the stronger the ionization. Stronger ionization means higher pH and lower ORP (oxygen reduction potential – the number of antioxidants in your water). Of course, the more antioxidants, the better because they clean the toxins from your body and keep your body clean.

Well Water

OK, we've covered municipal and ionized water, now let's talk about well water. The two most common problems found in well water are hydrogen sulfide and high iron content. Hydrogen sulfide makes your water smell like rotten eggs, leading people to believe their water is undrinkable. It's still drinkable but still it's really nice to remove hydrogen sulfide just then same.

The iron is caused by the well casing and sometimes corroded pipes in your house. Both hydrogen sulfide and iron are filtered out by the Biostone filter. The hydrogen sulfide is removed by the activated carbon filter while the iron is filtered by the resin portion of our filter. If your well is deep, over 150', that is usually enough natural filtration not to be concerned about the water being contaminated. If your septic system is within 50' of your well, you should run a bacteria test.

Hard Water

Hard water is caused by too much calcium and magnesium in your water. To read our article about hard water, [click here](#). Just so you know, most people use salt based water softeners to decrease the calcium and magnesium in their water but there are magnetic water conditioners as well. They are salt and chemical free and de-gasify your water while also removing the scale. They are the ideal choice to go along with a water ionizer if you have hard water.

5 Gallon Bottle

Finally, a growing trend in using our ionizers is hooking them up to a five gallon bottle using a five gallon bottle pump like a Flojet. Best prices for these are on Ebay. The benefit of using a bottle and pump is that you can ask the company to put the exact amount of dissolved solids you want in the water. This isn't necessary since our ionizers control the flow of water to get the exact amount of minerals necessary to get the pH you want. However, if you want to bypass hooking your ionizer up to your faucet or installing it under your sink, perhaps using a five gallon bottle and pump is the right choice for you.

People often ask me about water softeners so I've prepared the following article to help people understand why most water softeners and water ionizers are compatible. First, here are some facts about water:

- **Water is a natural solvent.**
- **Water hardness is primarily calcium and magnesium.**
- **Calcium is limestone - common throughout Midwest. Acid water, H₂O and Co₂, dissolves limestone, iron, and other minerals in soil, thus all pure water has an affinity for metals.**
- **Surface water supplies are generally low in dissolved minerals.**
- **Well supplies vary in dissolved minerals with depth and location.**

- **pH is the measure of acidity of a water supply based on the hydrogen ion.**
- **Water with a pH below 7.0 is corrosive. Above is considered alkaline water.**

How a Water Ionizer Works:

When you think of ionized water, think of it as mineral water. Minerals dissolved in water are present as ions. Because the minerals or ions in your water have an electrical charge, either positive or negative, the electrolysis chamber in our water ionizer takes advantage of this.

An electrolysis chamber in the water ionizer is filled with positive and negative cations, or electrodes. The cations that produce a positive current of electricity, attract and microcluster anions, which are the minerals with a negative charge. These minerals are nitrates and sulfides and they contribute your water being acidic. The cations that produce the negative charge of electricity, attract cations, which are the positively charged ions such as calcium, magnesium, and potassium which makes your water alkaline and your body very happy.

About Alkalinity

Sometimes confused with pH, it actually has nothing to do with pH level. Alkalinity is due to the presence of bicarbonate, carbonate, and hydrate ions. For our purposes, alkalinity consists of calcium and magnesium bicarbonate.

How a Water Softener Works

Water Softeners are cation exchangers meaning they will exchange, or pick up all positive ions (cations). The anions (negative ions) are not exchanged, or removed, by a water softener. So what a water softener is doing is removing the calcium and magnesium from your water while leaving the nitrates, sulfides, and chlorides alone. It replaces the positive ions with salt, depending on the model, sometimes a lot of salt.

The removal of the calcium and magnesium makes your softened water acidic and salty, so it isn't good to drink. A water ionizer will filter the salt and alkalize the water at a hardness most beneficial to human consumption.

About the Hardness of Your Water

The minerals in your water are measured by grains per gallon (gpg) or parts per million (ppm). A grain is a unit of weight (7,000 grains = one pound). Parts per million is a finer measurement (17.1 ppm = one grain). More common minerals such as calcium and magnesium are measured in gpg. Minerals such as iron are present in lesser quantities and are measured in ppm.

Water hardness above 5 grains is considered for treatment. Hardness is calcium and magnesium, which tends to revert back to the solid state when water is heated. This solid material will form scale and will also combine with chemicals added to water such as detergents. The higher the hardness, the faster scale will form or the "harder" it is to produce suds for good cleaning action. High hardness (10 grains and above) will shorten the life of water heaters, electric heating elements, and water using appliances like our ionizers! So, the bottom line is that you need your water to be softer than 10 grains for it to work with our ionizers. Water softeners and water ionizers are thus very compatible. However, if you use an older salt water softener, your filter in your ionizer won't last as long. An ideal situation would be a reduced salt softener and one of our ionizers or a water softener hooked up to a whole house filter that prefilters the water prior to it going to our water ionizer.

About Reverse Osmosis

Reverse osmosis was originally designed to desalinate seawater. They create purified water by slamming water against an ultra-fine semi-permeable membrane that only allows a single molecule at a time to pass through, thus rejecting most contaminants. Unlike distillers, this process allows oxygen to pass through, so reverse osmosis water isn't dead tasting. Typical units produce water drop by drop so they need a pressurized tank to store the result for fast access. RO machines are inefficient; they may take up to five liter of tap water to produce one clean liter and the membranes must be replaced by a qualified tradesperson.

The big problem with reverse osmosis water, just like distillers, is that they take all the minerals out of the water, leaving the water acidic. Acidic water takes on the properties of whatever it comes in contact with so when you drink it, it begins to claim your nutrients and minerals that your body is using to balance its pH and regulate itself.

About Distilled Water

Another form of filtration is called distilling. A distiller works by heating the water until it evaporates. As the water vaporizes, minerals, bacteria, and other substances are left behind. When the steam cools, the water condenses into relatively pure water.

One big complaint about distilled water is that it tastes flat. The reason for this is that the dissolved oxygen as well as the minerals have been removed from it. With the minerals missing, the water also becomes very acidic. Minerals are nature's natural pH balancer. Our body uses them to regulate our pH and when you take them from water, it becomes acidic. Acidic water wants to take on the properties of whatever it comes in contact with so if you put it on metal, it begins to rust it. If you put it in your body, it begins to eat away at your natural minerals, eventually making your whole body acidic.

Distilling water is also not effective at removing chemicals which have a boiling point below that of water. Substances such as ammonia and trihalomethanes are carried over into the condensation chamber. If you remember from earlier, trihalomethanes are left over from chlorine and are reasonable for many cases of cancer, especially in the elderly.

Finally, distillers are slow and consume lots of energy. They produce about three liters of water per hour. A water ionizer and filter combination is a flow through unit with instant results.