

DEALER TRAINING

Part 1: Ionizer Basics

Understanding Alkaline, Hydrogen-Rich Water
& the Science Behind It



What is a Water Ionizer?

How an Ionizer Works

Understanding pH & the pH Scale

Why pH Matters

Understanding ORP

Molecular Hydrogen – What It Is and Why It Matters

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Common Customer Q&A



What is a Water Ionizer?

A water ionizer is a home appliance designed to both filter and transform ordinary tap water into alkaline, hydrogen-rich water through a process called electrolysis.

It serves two main purposes:

- **Filtration** – removing harmful contaminants from your drinking water.
- **Ionization** – restructuring the water at a molecular level to alter its pH, ORP (Oxidation Reduction Potential), and hydrogen content for optimal health benefits.



How does a water ionizer work?

Advanced Filtration

Water passes through dual UltraWater filtration technology to remove contaminants such as chlorine, chloramines, heavy metals, pesticides, and other impurities.

Electrolysis

Clean water enters a chamber and moves through a series of platinum-coated titanium plates.

A safe, low-voltage current splits the water into:

- **Alkaline, hydrogen-rich water** for drinking and cooking
- **Acidic water** for cleaning, skincare, and sanitizing

Separation of Ions

- Naturally occurring minerals (calcium, magnesium, potassium) separate into **alkaline and acidic minerals**.
- Alkaline minerals + OH^- → higher pH water
- Acidic minerals + H^+ → lower pH water

Hydrogen Enrichment

- The electrolysis process also produces **molecular hydrogen (H_2)** gas, which dissolves into the alkaline water.
- Hydrogen is a powerful antioxidant that can help neutralize free radicals in the body, offering benefits in over 170 different disease models.

Understanding pH and the pH Scale

What is pH?

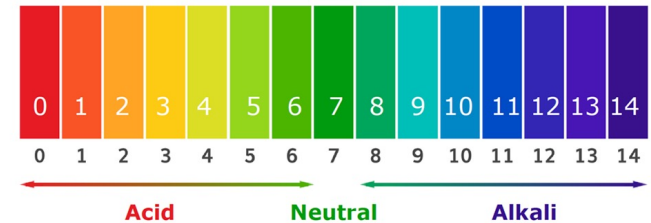
pH measures how acidic or alkaline a solution is.

Scale ranges from 0 to 14:

- 7 = Neutral (pure water)
- 6.9 or Less = Acidic (lemon juice, coffee)
- 7.1 or More = Alkaline (baking soda solution, bleach, alkaline water)

Why pH Matters:

- Affects the taste of water (smoother vs sharper).
- Determines water's suitability for health, cleaning, and beauty uses.
- pH measures how acidic or alkaline a solution is (0–14 scale).
- Alkaline water from ionizers usually ranges from pH 8–10.
- Acidic water can be used for cleaning, plants, skincare.
- pH can vary based on source water minerals.



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Why does pH Matter?

Taste

- Water with a slightly higher pH often tastes smoother and more “silky” than very acidic or very neutral water.
- Extremely high pH can give water a slightly bitter taste, which some people may not enjoy.
- Properly balanced alkaline water maximizes both taste and hydration experience.

pH and Your Body

- The body naturally maintains a very tight pH balance in the blood and tissues. Drinking alkaline water doesn’t drastically change blood pH, but it can help neutralize acidity in foods temporarily and support hydration.
- Extreme pH (too high or too low) is unnecessary and offers no additional benefit. Moderate, balanced alkaline water is optimal.

pH and Utility Uses

- Alkaline water is great for drinking, cooking, and even coffee/tea enhancement.
- Acidic water (lower pH) is ideal for cleaning, sanitizing, or skincare.
- Selecting the right pH for the right use is more important than chasing the highest number.

Always set realistic expectations with customers: it’s the overall balance of filtration, pH, ORP, and hydrogen content that creates the benefits, not a single extreme number.

Understanding ORP (Oxidation Reduction Potential)

What is ORP?

- ORP measures the ability of water to either accept or donate electrons.
- It's a scientific way of gauging the antioxidant or oxidative potential of water.
- Units are measured in millivolts (mV).

Why Negative ORP is "Good"

- Water with a negative ORP has excess electrons, which can help neutralize harmful free radicals in the body.
- This makes alkaline ionized water a potential antioxidant, supporting overall cellular health and hydration.

Positive ORP Has Its Use

- Water with a positive ORP is oxidizing, meaning it can kill bacteria and sanitize surfaces.
- Acidic water produced by an ionizer is often used for cleaning, plant care, and skincare because of its disinfecting properties.

Real World ORP Comparison

Water Type	ORP (mV)	Function/Effect
Tap water	+200 to +400	Slightly oxidative
Bottled water	+300	Slightly oxidative
Fresh Squeezed Orange Juice	-80 to -100	Antioxidant
Alkaline ionized water	-300 to -800	Antioxidant / electron donor
Acidic water (for cleaning)	+200 to +500	Oxidizing / disinfectant

Molecular Hydrogen (H₂)

What is Molecular Hydrogen (H₂)?

- H₂ is the smallest, most bioavailable antioxidant in water.
- Because it's so small, it can easily enter cells, tissues, and even cross the blood-brain barrier.
- It works at the cellular level to neutralize harmful free radicals.

Why It Matters

- Alkaline water alone is often thought to be the benefit, but the real power comes from dissolved hydrogen gas.
- H₂ has been studied for potential benefits, including:
 - Reducing inflammation
 - Supporting energy and vitality
 - Improving recovery after exercise
 - Promoting cellular health and antioxidant support

Considering Source Water

Consider Your Source Water

- The performance you get from your water ionizer is influenced by your local water source — mineral content, hardness, and contaminants all play a role. It's also important to consider any pre-filtration the customer may have.
- Some water sources may require stronger filtration or slightly lower/higher pH settings to achieve the best taste and performance.

Quiz

What is the main purpose of a water ionizer?

- A) Only to filter water
- B) To filter water and separate it into alkaline and acidic streams
- C) To boil water
- D) To carbonate water

What does ORP (Oxidation-Reduction Potential) measure?

- A) The temperature of water
- B) Water's ability to act as an antioxidant or oxidant
- C) The hardness of water
- D) The water's pH level

True or False:

Alkaline water with a higher pH is always "better" for your health.

Which part of the ionizer produces molecular hydrogen (H₂)?

- A) Pre-filter
- B) Electrolysis chamber
- C) Water faucet
- D) Acidic water stream

Quiz (cont'd)

What are common uses for acidic ionized water?

- A) Drinking and cooking
- B) Cleaning, skincare, and sanitizing
- C) Energy drinks
- D) Plant fertilization only

True or False:

Molecular hydrogen (H_2) is the smallest antioxidant and can help neutralize free radicals in the body.