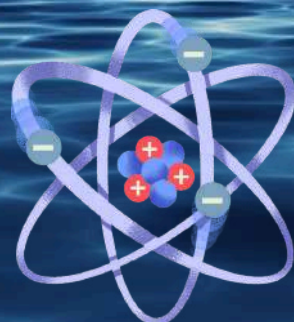


HYDROGEN WATER E-BOOK

**HYDROGEN RICH,
ALKALISED WATER**



NOT ALL WATER IS CREATED EQUAL

LEVELUK K8 HYDROGEN WATER IONISER

EXPERIENCE SUPERIOR QUALITY, MEDICAL GRADE HYDROGEN WATER



**DITCH THE
MICROPLASTICS
AND ACIDITY**

**8 PLATINUM DIPPED
TITANIUM PLATES FOR
IMPROVED WATER
IONIZATION & INCREASED
ANTIOXIDANT
PRODUCTION POTENTIAL**

**HYDROGEN RICH,
ALKALISED WATER**

**THE MIGHTY 8-PLATE
ANTI-OXIDIZER!**

NOT ALL WATER IS CREATED EQUAL

**YOU CAN OWN A NEW ALKALINE WATER IONISER FOR
LESS THAN THE WEEKLY COST OF BOTTLED WATER!**

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THE VERSATILITY OF KANGEN WATER

pH 11.5 strong kangen water

pH 9.5 – 8.5 kangen water

pH 7 clean water

pH 6 beauty water

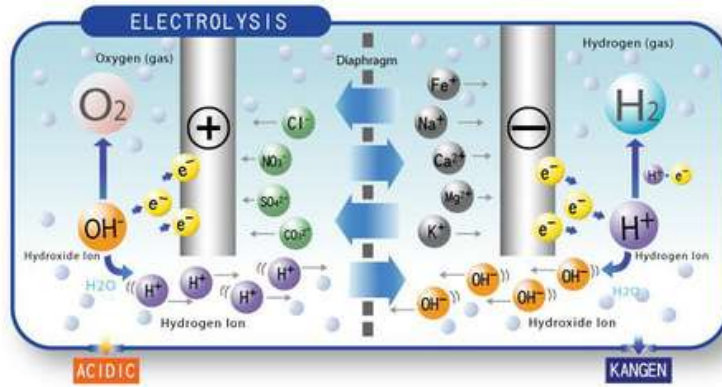
pH 2.5 strong acidic water



Each type of water produced by the Leveluk K8 machine serves a specific purpose, demonstrating the versatility and benefits of this advanced water ionization technology.

EXPERIENCE ADVANCED IONIZATION AT HOME

KANGEN WATER TYPES



The Leveluk range of hydrogen ionising machines are sophisticated water ionizers that produce five different types of water, each with unique properties and uses. These types are designed to cater to various needs, from drinking to cleaning and cooking, providing a versatile solution for households and businesses alike.

1 - KANGEN WATER

This type of water is alkaline and is considered ideal for drinking and cooking. It's believed to help balance the body's pH levels and promote overall health.



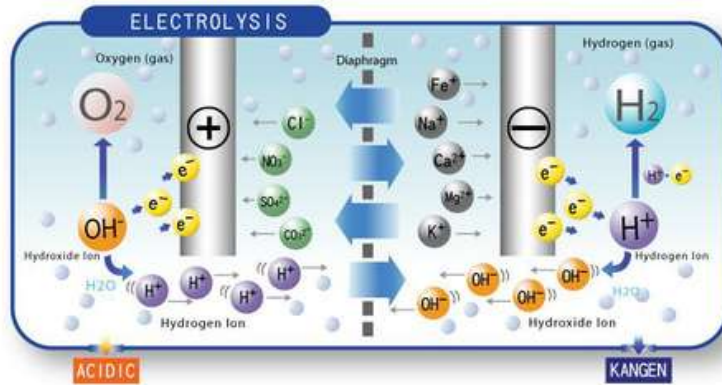
Many users appreciate its smooth taste and the way it enhances the flavours of food and beverages. Kangen Water® is also used for making coffee and tea, as it can extract flavours more efficiently.

2 - CLEAN WATER

This neutral water is free from chlorine, rust, and other impurities, making it perfect for preparing baby formula, taking medications, and other uses where pure, clean water is essential. It's the safest option for those who need water that is neither too acidic nor too alkaline.



KANGEN WATER TYPES



3 – BEAUTY WATER

Slightly acidic at a pH of 6.0, 'Beauty Water' is often used for skin care due to its astringent properties.

It's great for washing the face and hair, as it helps to tighten and tone the skin and leaves hair shiny. Beauty Water can also be used for pet care and as a natural, chemical-free cleaner for certain household tasks.



4 – STRONG KANGEN WATER

With a pH of 11.0, this highly alkaline water is not suitable for drinking but is excellent for cleaning and food preparation. Strong Kangen Water can effectively remove pesticides and residues from fruits and vegetables, ensuring a cleaner and safer consumption. It can also be used for various cleaning tasks around the house, such as removing stains and disinfecting surfaces.



5 – STRONG ACIDIC WATER

On the opposite end of the spectrum at a pH of 2.5. Strong Acidic Water is highly acidic and has potent disinfectant properties. It's effective for sanitizing kitchen utensils, countertops, and other surfaces, helping to eliminate bacteria and other pathogens. This type of water is invaluable for maintaining a hygienic environment in both home and professional settings.



THE IMPORTANCE OF HYDRATION

Given that the human body is composed of approximately 70% water, it is crucial to ensure that the water we consume is clean and safe.

Modern studies into hydration and dietary habits found that the average westerner characterises their water intake as low to minimal and report experiencing chronic dehydration. This finding is alarming, considering the important role that adequate hydration plays in maintaining optimal health.

Water is essential for numerous bodily functions, including temperature regulation, joint lubrication, and the transportation of nutrients and waste products. Chronic dehydration can lead to a myriad of health issues, such as kidney stones, urinary tract infections, and even impaired cognitive function.

HYDRATION IS CRUCIAL TO HEALTH & WELLBEING



The Ionisation process changes water's molecular structure, making it easier for cells to absorb. This enhanced hydration can lead to better skin health, improved digestion, and increased energy levels. Athletes and physically active individuals often find ionised water particularly beneficial, as the molecular changes help to maintain optimal hydration levels, aiding in recovery and performance.

BIO-AVAILABILITY FACTORS

Bioavailability refers to the extent and rate at which an active substance, such as a nutrient or medication, is absorbed and becomes available at the site of physiological activity.

Bioavailability is a crucial concept in pharmacology and nutrition, referring to the degree and rate at which an active substance is absorbed and becomes available at the site of physiological activity. In simpler terms, it measures how effectively a drug or nutrient reaches the bloodstream and, consequently, its target cells and tissues.



Bioavailability is significant because it determines the efficacy of a medication or nutritional supplement; if a substance has low bioavailability, it may not produce the desired therapeutic effect even if consumed in the correct dosage.

Several factors influence bioavailability, including the physical and chemical properties of the substance, the formulation of the product, and the physiological conditions of the individual. For instance, the solubility of a drug can greatly affect its absorption; highly soluble drugs are generally absorbed more readily. The route of administration also plays a critical role; substances administered intravenously have 100% bioavailability, while those taken orally often have reduced bioavailability due to factors like digestive enzymes and first-pass metabolism in the liver.

Improving bioavailability is a key focus in both drug development and nutritional science. Techniques such as the use of nanoparticles, liposomal delivery systems, and chemical modifications are employed to enhance the absorption and effectiveness of active substances. Additionally, understanding individual variations—such as age, gender, genetic factors, and overall health—can help tailor treatments and dietary recommendations to optimize bioavailability and achieve better health outcomes.

Further Research & Articles: [Bioavailability - an overview](#)

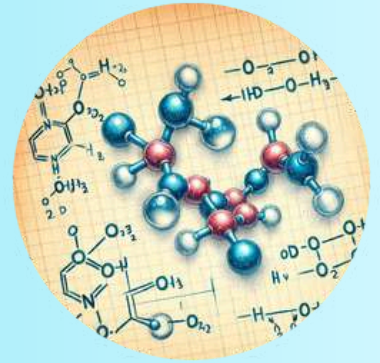
Ionised water increases bioavailability



WHAT IS IONISED WATER?

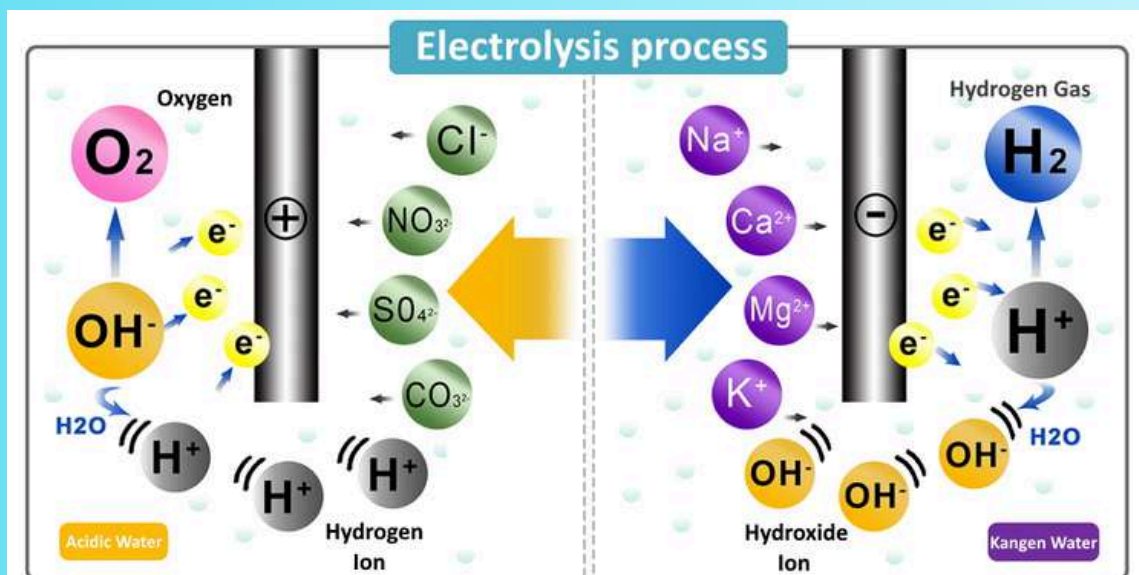
Hydrogen-rich ionised Kangen water has been gaining attention for its potential health benefits, stemming from its unique properties. One of the most notable advantages is its antioxidant capacity.

The molecular hydrogen ions present in Kangen water have a potent antioxidant potential, which can neutralise the effects of harmful free radicals in the body. Antioxidants help to reduce oxidative stress: which is linked to various chronic diseases and aging. By incorporating Kangen water into your daily routine, you can support your body's natural defence systems, which along with a balanced lifestyle, exercise and nutrition – all work together for overall health and vitality.



Another significant benefit of Kangen water is in potential hydration capabilities. Ionisation changes the water's molecular structure, making it easier for cells to absorb. This enhanced hydration can lead to better skin health, improved digestion, and increased energy levels. Athletes and physically active individuals often find Kangen water particularly beneficial, as it helps maintain optimal hydration levels, aiding in quicker recovery and better performance. Kangen water's alkalinity is also a key factor in its potential benefits.

Many people consume diets high in acidic foods, which can lead to an imbalance in the body's pH levels. Drinking alkaline Kangen water can help neutralise this acidity, promoting a more balanced internal environment. This may help alleviate issues such as acid reflux, improve bone health, and support the body's natural detoxification processes.



HOW DOES A WATER IONISER WORK?

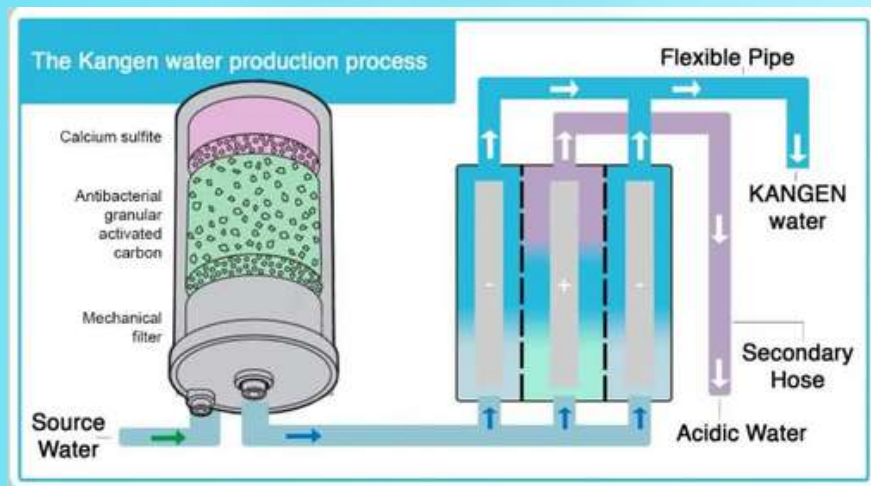
FILTRATION

The process of ionising water in a medical grade machine such as Enagic's flagship K8 Ioniser, transforms filtered, ordinary tap water into water with altered pH levels, reinvigorating the molecules and adding substantial levels of hydrogen, producing water with enhanced antioxidant properties.



When water enters the Kangen ioniser, it passes through a high-quality filter designed to remove impurities such as chlorine, heavy metals, and other contaminants. This filtration stage ensures that the water is clean and safe to drink before ionisation begins. Depending on the quality of source water, we recommend pre-filtration units to ensure the best possible water quality purified and being utilised by the ioniser machine.

ELECTROLYSIS



Next, the purified water undergoes electrolysis, the core process in the creation of ionised water. The water is channeled into an electrolysis chamber containing platinum-coated titanium plates that serve as electrodes.

When an electric current is applied to these electrodes, it causes the water molecules (H_2O) to split into hydrogen (H_2) and hydroxide ions (OH^-). This process not only separates the water into two streams—alkaline and acidic—but also infuses the water with molecular hydrogen, known for its antioxidant properties.

ALKALINE WATER VS ALKALISED WATER

Alkaline water refers to water that has a higher pH level than regular drinking water, typically above 7 on the pH scale. The term "alkaline" relates to the water's ability to neutralize acid in the body, thanks to its higher concentration of alkaline minerals like calcium, magnesium, and potassium. These minerals contribute to the water's increased pH and reduced concentration of hydrogen ions (H⁺). In essence, alkaline water has fewer free hydrogen ions, making it less acidic and more capable of balancing the body's pH levels.

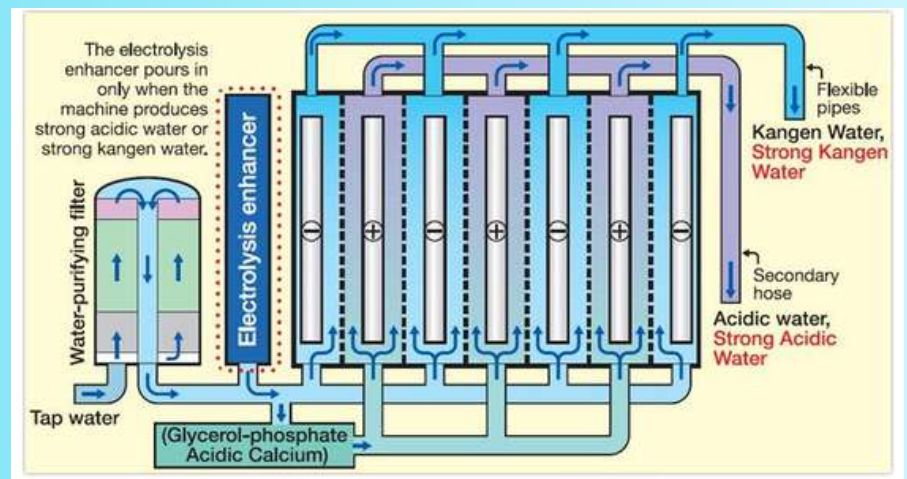
You can make effective alkaline water at home just by adding bicarb soda to your water to increase the pH. Bicarb soda will continue to make changes to the stomach biome even once it hits the acid in the stomach, which could negatively impact acidity regulation in the gut & is not commonly recommended.



STRUCTURED, ALKALISED WATER

Alkalised water, also known as ionised water, undergoes a process called electrolysis. During electrolysis, water is passed through an ionizer, which uses an electric current to separate the water into alkaline and acidic components.

'Electrolysis not only increases the pH but also alters the water's molecular structure.'



Alkaline & alkalised are two different qualities in terms of water

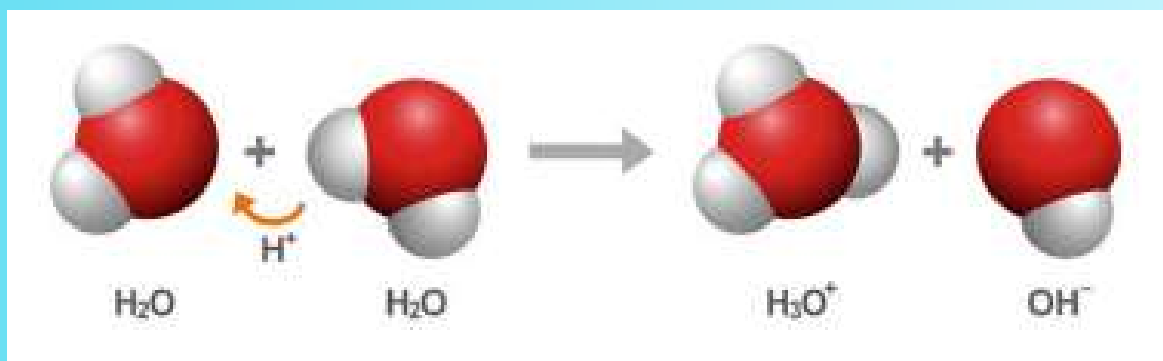
HYDROGEN BONDS IN WATER – EXPLAINED

Hydrogen bonds play a crucial role in the behaviour of water, and their significance becomes even more pronounced in ionized water.

In its natural state, water molecules (H_2O) are polar, meaning they have a positive and a negative side. This polarity allows them to form hydrogen bonds, where the positively charged hydrogen atoms of one water molecule are attracted to the negatively charged oxygen atoms of another. These hydrogen bonds are relatively weak individually but collectively they are responsible for many of water's unique properties, such as its high surface tension, boiling point, and solvent abilities.

Further Research: [The Hydronium Ion](#)

When water is ionized, it undergoes a process that results in the formation of hydroxide ions (OH^-) and hydronium ions (H_3O^+).



In ionised water, the presence of these additional ions alter the existing hydrogen bonding network and can lead to an enhanced structuring of water, often referred to as "structured water," which studies suggest may have unique properties. Moreover, the hydroxide ions also participate in hydrogen bonding, albeit differently. They can act as hydrogen bond acceptors, interacting with the hydrogen atoms of other water molecules.

The dynamic nature of these interactions in ionised water can alter its physical and chemical properties, such as its pH level. Acidic ionized water (rich in H_3O^+) tends to have a lower pH, while alkaline ionised water (rich in OH^-) has a higher pH. Understanding these interactions is essential for various scientific and industrial applications, ranging from biological systems to water purification and electrochemical processes.

ISSUES WITH WATER QUALITY

In today's modern world, the water that flows from our taps is often infused with harmful pollutants that can adversely affect our health. These contaminants include heavy metals, chemicals, and other toxins and dangerous 'forever chemicals' which are now infiltrating our water supply.



The long-term consumption of such polluted water can lead to serious biological health impacts. Given these risks, it's imperative to address the quality of our drinking water to maintain overall health and well-being.



PLASTIC CONTAMINATION & WASTE

Turning to plastic bottled water as an alternative, unfortunately, does not solve the problem and may even exacerbate it. Bottled water production, transportation, and disposal contribute significantly to pollution and environmental degradation. Plastic bottles, derived from crude mineral oil, can take hundreds of years to decompose, leaching harmful chemicals into the soil and water during that time.

Plastic water bottle pollution in the world's oceans has emerged as a significant environmental crisis that threatens marine life and ecosystems. Each year, millions of tons of plastic waste, including water bottles, find their way into the oceans. This pollution is largely driven by the global consumption of single-use plastics, which are often discarded improperly.

Once in the ocean, plastic water bottles can take hundreds of years to decompose, during which time they break down into smaller particles known as microplastics. These microplastics are ingested by marine organisms, leading to toxic accumulation through the food chain, which can affect fish, seabirds, and even humans who consume seafood.

The impact on marine life is profound. Countless marine animals, including sea turtles, whales, and fish, mistake plastic water bottles or their fragments for food. Ingesting plastic can cause physical harm, malnutrition, and even death.

THE DANGERS OF SINGLE USE PLASTICS

The presence of single use plastic debris disrupts sensitive environmental habitats. From coral reefs to open ocean ecosystems – harming our biodiversity. Beyond the immediate physical dangers, plastics also leach harmful chemicals, such as bisphenol A (BPA) and phthalates, which have long-term detrimental effects on the health of marine organisms and potentially humans.



On a personal level, reducing the use of single-use plastics, opting for reusable water bottles, and participating in beach clean-ups can make a difference. Systemically, stronger regulations on plastic production, improved waste management systems, and returning to reusable systems that create less single use plastic waste are crucial.



Your individual habits make a big difference. The decision not to consume plastic single use bottled water, multiplied by billions of people worldwide, can end this environmental tragedy.

THE PROBLEM WITH TAP WATER

Municipal water quality and its potential contamination is a pressing issue impacting communities worldwide. One of the primary concerns is the presence of aging pipework, especially in both older urban & rural areas. Over time, pipes made from materials such as lead, iron, and galvanized steel can corrode, leading to the accumulation of rust, sediment, and other contaminants. This not only compromises the water's taste and colour but also poses significant health risks.



Manganese, lead & other heavy metal exposures are known to cause severe neurological and developmental issues in children and can result in various health problems for adults, including kidney damage and high blood pressure as well as having potential links to Parkinson's disease and other neurological disorders in adults.

Cracks and leaks in old pipes can allow harmful contaminants, such as bacteria, viruses, and chemical pollutants, to enter the water supply. These breaches can occur from external factors like construction activities, natural ground movements, or simply the wear and tear of time.

'When microbiological contaminants infiltrate the water system, they can lead to outbreaks of waterborne diseases, which can lead to severe health consequences for both humans and animals.'



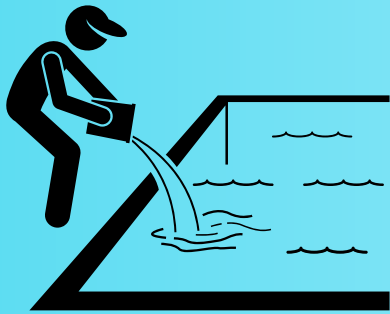
Giardia cysts are hardy and can survive in the environment for long periods, making water treatment and proper sanitation critical in preventing outbreaks.

E. coli is a type of bacteria commonly found in the intestines of humans and animals. Symptoms of an E. coli infection typically include stomach cramps, diarrhea (which can be bloody), and vomiting. In severe cases, it can lead to kidney failure, particularly in young children and the elderly.



THE NECESSITY OF CHLORINE

Chlorine is a widely used disinfectant in the treatment of municipal water supplies due to its effectiveness in killing harmful bacteria, viruses, and other pathogens that can cause waterborne diseases. Introduced in the early 20th century, chlorination has played a crucial role in improving public health by significantly reducing the incidence of diseases such as cholera, typhoid fever, and dysentery.



The process involves adding chlorine or chlorine compounds, like sodium hypochlorite, to the water, which then reacts with the microorganisms, effectively neutralizing them.

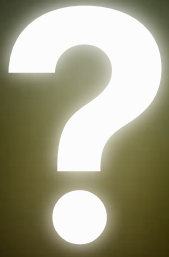
One of the primary advantages of using chlorine for water treatment is its ability to provide residual disinfection. This means that chlorine remains in the water as it travels through the distribution system, continuing to protect against potential contamination until it reaches the end user. This residual effect is particularly important in preventing the growth of bacteria within the water pipes and ensuring that the water remains safe to drink even after it leaves the treatment plant.

THE BENEFITS OF REMOVING CHLORINE BEFORE USE

While chlorine is effective at disinfecting water and eliminating harmful pathogens, it can react with organic matter in water to form compounds known as trihalomethanes (THMs) and haloacetic acids (HAAs), both of which have been linked to an increased risk of cancer and other health issues when consumed over long periods. Chlorine is known to be a strong oxidising agent.

Removing chlorine from drinking water can offer several significant benefits, enhancing both health and overall well-being. One of the primary advantages is the reduction of potential health risks associated with prolonged exposure to chlorine and its by-products.

PREMIUM WATER SYSTEMS



One of the most common questions we receive from consumers interested in one of our Japanese manufactured medical grade water Ionisers is –

“Isn’t it just a water filter?”



Well – kind of!

Just as a Ferrari is like a bicycle!



While both a water ioniser and a water filtration setup aim to provide pure, superior drinking water, there are significant differences between the two systems in terms of functionality, technology, and benefits.

A WATER IONISER IS A TECHNOLOGICALLY ADVANCED ELECTROLYSIS MACHINE



A WATER PRE-FILTER CLEANS THE SOURCE WATER SO THAT IT IS SAFE FOR USE IN AN IONISER

WATER IONISERS VS WATER FILTERS



A water filtration system is designed primarily to remove contaminants and impurities from water. These systems use various methods such as activated carbon, reverse osmosis, and UV light to eliminate harmful substances like chlorine, heavy metals, bacteria, and other pollutants. The primary goal is to provide clean, safe drinking water by physically filtering out unwanted particles.



A water ioniser is a device that alters the pH level of water through the process of electrolysis. Electrolysis not only increases the pH but also alters the water's molecular structure.

When water is ionised, it undergoes a process that results in the formation of hydroxide ions (OH^-) and hydronium ions (H_3O^+).

Ionised water is extremely rich in antioxidants.

Unlike reverse osmosis or distillation systems which lack minerals required by the body, ionised water does not strip minerals in the process of producing water and as such can benefit consumers in terms of mineral content & bioavailability.



THE ANESPA DX IS A MINERAL IONISING SHOWER SYSTEM

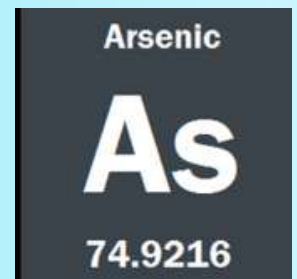
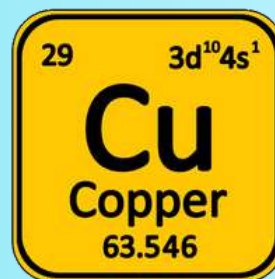
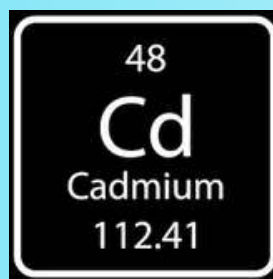
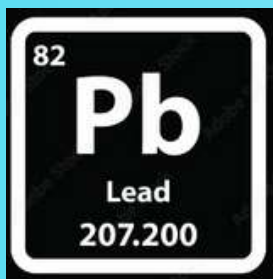
THE IMPORTANCE OF PREFILTRATION

Prefiltration of source water is a crucial step in the production of ionised water, ensuring both the efficiency of the ionisation process and the safety of the water for consumption.



Contaminants in unfiltered water can cause buildup and corrosion within the ioniser, leading to frequent maintenance issues and potentially costly repairs. By ensuring that only clean water enters the ioniser, prefiltration helps to maintain the integrity of the system, reducing wear and tear and saving on maintenance costs over time.

‘Prefiltration plays a vital role in prolonging the lifespan of ionisation equipment & ensuring the highest quality water is created in the ionisation process’



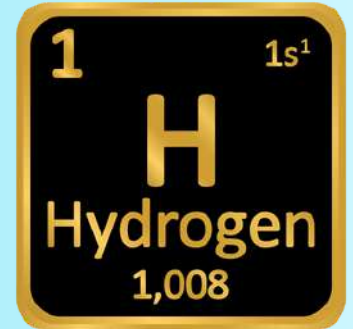
Source water often contains various contaminants, including sediments, chlorine, heavy metals, and organic compounds, which can significantly affect the performance of the ionisation equipment. By removing these impurities through prefiltration, the ionisation process can operate more effectively, ensuring that the water produced has the desired pH level and antioxidant properties.

Prefiltration ensures the health and safety of those consuming the ionised water. Contaminants such as bacteria, viruses, and chemicals like chlorine can pose significant health risks if ingested.

MOLECULAR HYDROGEN CLUSTERS

Ionized hydrogen water, often referred to as hydrogen-rich water or electrolyzed reduced water, contains molecular clusters that are pivotal in its proposed health benefits. These clusters primarily consist of hydrogen molecules (H₂) and water molecules (H₂O) that have undergone electrolysis, a process that splits water into hydrogen and oxygen gases.

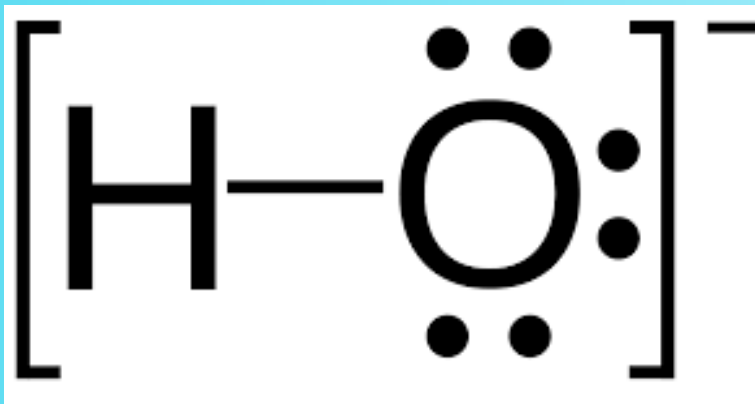
During electrolysis, the water molecules are subjected to an electric current, leading to the formation of ionized hydrogen (H⁺) and hydroxide ions (OH⁻).



FREE RADICAL SCAVENGERS

One of the most significant aspects of ionized hydrogen water is the presence of dissolved molecular hydrogen (H₂). Molecular hydrogen is known for its antioxidant properties. It selectively neutralizes harmful free radicals, which are unstable molecules that can cause oxidative stress and damage cells. The small size of hydrogen molecules allows them to penetrate cellular membranes easily, reaching and protecting various parts of the cell, including the nucleus and mitochondria. This ability to combat oxidative stress is one reason why ionized hydrogen water is touted for its potential health benefits.

Further Research & Articles: [Structure of small molecular hydrogen clusters](#); [Water clusters and density fluctuations in liquid water based on extended hierarchical clustering methods](#)



HYDROXIDE IONS

Depicted here in what's commonly referred to as the 'Lewis Dot Structure' – is the molecular structure of a hydroxide ion

Thanks to Enagic's innovative technology, you can utilise hydrogenated water in your own home!

WHAT ARE ANTIOXIDANTS?

Antioxidants are molecules that help protect cells from damage caused by free radicals. Free radicals are unstable atoms or molecules that can cause harm to cells, leading to oxidative stress. This stress is associated with various chronic diseases, including heart disease, cancer, and neurodegenerative disorders like Alzheimer's disease.



Antioxidants neutralize free radicals by donating an electron, thereby preventing the free radicals from stealing electrons from other molecules in the body, which would cause cellular damage.

There are several types of antioxidants, including vitamins, minerals, and other compounds. Some well-known antioxidants are vitamins C and E, selenium, and beta-carotene, which the body converts into vitamin A. These antioxidants can be found in a variety of foods, particularly fruits and vegetables. For instance, berries, nuts, dark leafy greens, and brightly colored vegetables like carrots and bell peppers are rich in antioxidants. Consuming a diet high in these foods can help maintain a balance between free radicals and antioxidants in the body, promoting overall health and wellness.

In addition to dietary sources, the body also produces its own antioxidants, such as glutathione. However, factors like aging, poor diet, pollution, and stress can deplete the body's natural antioxidant defenses. Therefore, it is crucial to support the body's antioxidant system through a combination of a nutrient-rich diet, a healthy lifestyle, and possibly, supplementation under the guidance of a healthcare professional. By doing so, individuals can reduce the risk of oxidative stress and its associated health issues.

Further Research & Articles: [Oxidative stress and DNA damage;](#)

Ionised water is extremely rich in antioxidants

QUALITIES OF STRUCTURED WATER

Structured water, sometimes known as "hexagonal water" or "clustered water," is a concept that suggests water molecules can form organized structures that differ from the random, disordered arrangement typically found in liquid water. This idea posits that structured water holds unique properties that may be beneficial to biological systems, particularly human health. Here are some key properties associated with structured water:

1. **Molecular Arrangement:** In structured water, the molecules are believed to form hexagonal clusters, a highly ordered pattern akin to the molecular structure of ice but in a liquid state. This arrangement is thought to enhance the water's ability to interact with cellular components more efficiently, potentially improving hydration and cellular communication.
2. **Energy Storage and Transfer:** Proponents of structured water claim it can store and transfer energy more effectively than regular water. This is based on the idea that the unique molecular arrangement allows structured water to hold more energy, which can be beneficial for metabolic processes and overall vitality.
3. **Enhanced Solubility and Detoxification:** Structured water is said to have improved solubility properties, meaning it can dissolve and transport nutrients and waste products more effectively. This can lead to better nutrient absorption and more efficient detoxification processes in the body, promoting better health and well-being.

While these properties of structured water sound promising, it's important to note that the scientific community remains divided on the validity of these claims. Much of the research supporting structured water is anecdotal or lacks rigorous scientific validation. As such, more empirical research is needed to conclusively determine whether structured water offers significant benefits beyond those of regular, well-filtered water. Regardless, staying hydrated with any clean water source is essential for maintaining good health.

Further Research & Articles: [Structured Water: Effects on Animals](#); [Structured Water is Changing Models](#); [What is Structured Water? Dr Axe](#)

LEVELUK K8 HYDROGEN WATER IONISER

**DITCH THE MICROPLASTICS
AND ACIDITY**



*Pure, filtered, alkalised water,
rich in antioxidants*



**REACH OUT TODAY & WE CAN
ARRANGE A TRIAL OR WATER SHARE**

**EXPERIENCE SUPERIOR QUALITY,
MEDICAL GRADE HYDROGEN WATER**