

Osmio Genesis Hydrogen Water Bottle

User Manual



What is Hydrogen?

Your body is 62% Hydrogen by volume. Hydrogen is the atomic 'stem cell' of our universe. All matter and thus the world in which we live, and ultimately we ourselves, were created from hydrogen! At lowest level in a human cell, hydrogen enables the healthy biological process, and deuterium is the waste product which destroys the biological process. Think of it a bit like a human cell being a car. The fuel is hydrogen and the exhaust product is deuterium.

Molecular hydrogen (H₂) or diatomic hydrogen is a tasteless, odourless, flammable gas. H₂ studies have focused on its role in reduction of oxidative stress and redox homeostasis partly mediated via the Nrf2 pathway, which regulates levels of glutathione, superoxide dismutase, catalase, etc. H₂, like other gaseous-signalling molecules (e.g. NO*, CO, H₂S), modulates signal transduction, protein phosphorylation, and gene expression, which provides its anti-inflammatory, anti-allergy, and anti-apoptotic protective effects.

Is Hydrogen an antioxidant?

Not in the strict definition of an antioxidant, but instead plays a significant role in signalling. Hydrogen is the first element in the periodic table which is also extremely reactive, bonding with another hydrogen molecule as soon as one is available to form hydrogen gas (H₂). Being the small element means that it can get everywhere in your body when ingested including through the cell membrane, the blood brain barrier, mitochondria cells and even into a cell's nucleus.

How does hydrogen differ to other antioxidants?

Hydrogen has a natural property which enables it to dissolve into and move across cell membranes, so it can get into any compartment of our body. Hydrogen is different to other antioxidants which cannot do this. A good example is the central nervous system, which has a barrier called the blood brain barrier to prevent molecules from getting into the brain, and hydrogen can do this which shows how effective it is as getting through the cell nucleus.

Some antioxidants are so strong that they can suppress all oxidants within the cell and research show that is not good for cell signalling and gene regulation, so those processes should not be affected. Hydrogen does not affect these processes and instead targets the oxidation of the cell.

Understand Hydrogen-rich Water

○ Hydrogen-rich water and DNA

The expression of our DNA is a function of the water in our cells. DNA directs the production of proteins. In humans, the DNA has 23000 genes and these are making 200,000 proteins. The genes are being told what to make and it's the water telling the DNA what to make (expression).

○ So how do I take Hydrogen?

- 1) Drinking Hydrogen Rich Water - Using electrolysis (i.e. in a water bottle). This produces H₂ gas with solubility in the water. It is by far the best way to get a daily dose without consuming anything other than hydrogen.
- 2) Inhalation of Hydrogen Gas - For inhalation, a 2-4% hydrogen gas mixture is common because it is below the flammability level; however, some studies use 66.7% H₂ and 33.3% O₂, which is nontoxic and effective, but flammable. Inhalation of hydrogen reaches a peak plasma level (i.e. equilibrium based on Henry's Law) in about 30 min, and upon cessation of inhalation the return to baseline occurs in about 60 min.

The pharmacokinetics of each method are still under investigation, but are dependent on dosage, route, and timing. The methods that we provide below are designed to solely produce hydrogen h₂ without the user consuming any other product i.e. magnesium levels and pH effect from the hydrogen tablets, or by-products that are created during the electrolysis process of generating h₂.

How to not take H₂!

Using hydrogen generating tablets containing elemental pure magnesium and malic acid. We do not currently endorse this method as it also provides a large dosage of magnesium which raises a concern about long term use because of its bioavailability (it's bonding with calcium from the bones). There are also questionable ingredients including sweeteners and binding agents.

2 Years Return to Base Warranty

If you purchase this product directly from Osmio, then you are automatically warranty registered and don't need to do anything.

- Osmio provide a return to base repair warranty for 2 years from your date of purchase.
- During the warranty period, failures caused by product quality problems will be repaired free of charge. Normal battery capacity drainage and any damage is not covered by the warranty.

- Repairs will be possible after the warranty period expires, but repair materials and return delivery costs may be charged.

Notice:

- * If you purchased this product from an authorised retailer, you must present your original sales invoice with your repair enquiry.
- * This warranty page is for information only, please keep this manual in a safe place for future reference and ensure all users of the product read and understand the manual. If you have any questions please contact our Customer Service Team on info@osmiowater.co.uk
- * Return to base warranty is only available for UK based customers. For customers in EU, we are able to send parts for repair and can do the repair too, but you must send the item to us and bare the cost of postage. Our repair and redelivery are free of charge within the warranty period, but may be chargeable after it expires.

Your Notes

This section is for you to complete if you wish to make a note of any details:

Purchase date:

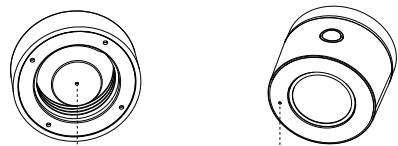
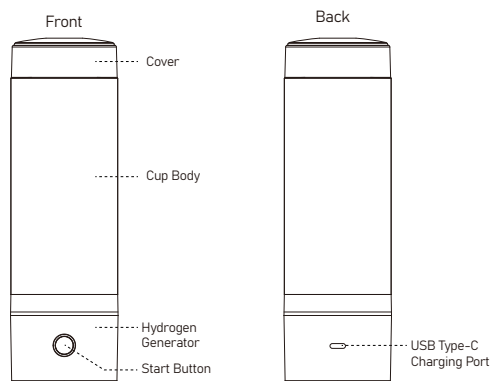
Purchased from:

Address:

Telephone:

Notes:

Product Introduction



Cover: Pressure Relief Vent

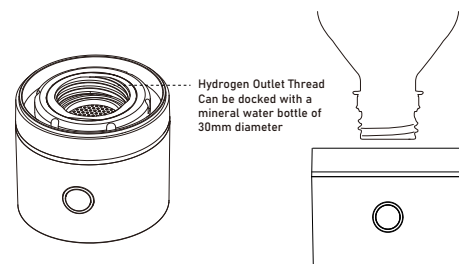
⚠ Do not block this vent!
Ensure you do not fill the bottle too much such that it will block this vent.

Base: Exhaust Vent

⚠ 1. Do not block this vent!
2. It is normal to see water coming out of here

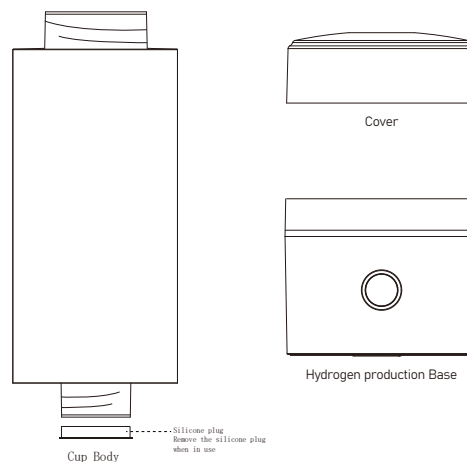
⚠ **Notice:** Do not wash, flush or soak the hydrogen production base with water. This will cause damage to the generator and invalidate warranty.

Notice: Please wipe with clean cloth to clean the outside hydrogen production base.



Hydrogen Outlet Thread
Can be docked with a mineral water bottle of 30mm diameter

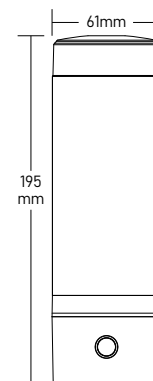
⚠ **Notice:** when making hydrogen with a mineral water bottle, water level cannot be too low. Please keep the water level at least 10cm above the bottle mouth, and the working time must be within 10 minutes, otherwise the device will be damaged.



This water cup adopts a segmented design, which is the cup cover, cup body and the hydrogen production base, which can be disassembled for independent cleaning.

⚠ **Notice:** It is normal that there is water in the hydrogen production base of the new water cup. Keeping the generator part wet is important to protect the PEM ion membrane from being damaged, so it is necessary to ensure that you never let the bottle dry out, always keep the lid on and always leave a bit of water in there.

Parameter



Product Name: Osmio Genesis Hydrogen Water Bottle

SKU: I10001909

Product Size: D61mm*H195mm

Cup Capacity: 240ml

Power: DC 5V/ 2A

Battery Capacity: 750mAh / 7.4V

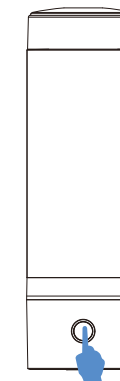
Charging Cable: Type-c Cable

H2 content: Up to 3000ppb

Precaution

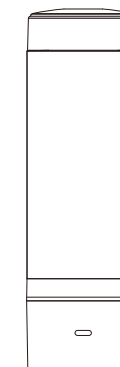
- ⚠ Do not use hot water hotter than 60°C for hydrogen production or cleaning, otherwise the electrolyser will be damaged.
- ⚠ It is recommended to use RO purified water or distilled water.
- ⚠ Avoid dropping the device to prevent damage and affecting normal use.
- ⚠ Ensure the cup body and the hydrogen production base are tightened before filling drinking water to avoid leakage.
- ⚠ The water level must not submerge the cup cover when filling water to prevent blocking the pressure relief vent.
- ⚠ Tighten the cup cover when producing hydrogen to prevent rapid hydrogen leakage.
- ⚠ Please fill water to keep the cup soaked in water when not used for a long time to prevent the PEM membrane drying out which causes damage. (It is recommended to plug the original silicone plug back into the cup to keep the ion membrane soaked in water.)

Operation



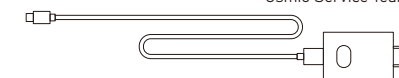
Hydrogen Production Operation Step

- Long press the START button for 3 seconds, and the light will come on.
- A BEEP sound indicates that the device is turned on and generating, the water in the cup will be bubbling. (Do not turn it on when there is no water in the cup to prevent damage.)
- Default working time is 5 minutes.
- After finishing hydrogen production, the device will automatically turn off and the light will go off.
- When producing hydrogen, long press START button for 3 seconds to turn off.



Charging Light

- A flashing red light indicates low power. Please plug in charging cable and charge. Please reuse after charging.
- A long red light indicates charging.
- A long green light indicates full charge. Do not leave the bottle on the lead when the bottle is fully charged as this will shorten the battery life. Once it is fully charged, take it off the USB cable. The battery is 7.4V 750mAh, it can be used for 10-15 times if full charged. Battery capacity does wear out over time and can be replaced by Osmio Service Team.



⚠ **Notice:** Do not use while charging to prevent affecting the service life of the battery.