



NEW

Hydrogen gas
neutralizes radicals

Enrichment of drinking water with hydrogen gas



bluebalance[®] hydrogen generator

The **bluebalance[®] hydrogen generator** is a handy, mobile device which you can **enrich your water with hydrogen gas** at home or underway. Ideal for all those who already have a **reverse osmosis system** at home, which removes all harmful substances from the water but is not able to transform it into an **effective antioxidant** by adding hydrogen gas.

On the inside pages of this brochure you can read in detail about the advantages of **enriching water with hydrogen gas**. Learn what it means when the water shows a negative redox potential and can therefore **neutralize free radicals**. The water becomes antioxidatively effective and reduces oxidative stress.

The bluebalance[®] device at a glance:

-  flexible use everywhere
-  produces 100% pure hydrogen water by electrolysis, without oxidizing agents
-  most suitable for water purified by reverse osmosis, but can also be used with tap water or still bottled water
-  hydrogen enrichment in 3 or 5 minutes (for 330 or 500 ml water)
-  two screw adapters for different common bottle tops
-  extra screw adapter for 500 ml glass bottle free of charge

Hydrogen - an important element for our health

Despite its small size, hydrogen has a special importance for our health. In 2007, a so far unique study was published in the renowned scientific journal „nature medicine“, which showed that **hydrogen converts harmful hydroxyl radicals into water** and can therefore be used as a **therapeutic antioxidant**.*

Hydrogen is probably the **most effective antioxidant** in our body and can be used to help **prevent and treat a variety of conditions** including inflammation, metabolic disorders, skin problems, neurological disorders, rheumatism, diabetes and many more. In the meantime, the number of studies on the effect of hydrogen has increased exponentially. Over a thousand studies, reviews and scientific reports show that hydrogen has potential as a medical substance.

Further studies have shown that the **electrosmog** surrounding us is also responsible for **oxidative stress**. Nowadays it is almost impossible to keep away from the disturbing oscillations caused by wireless LAN, mobile internet, mobile phones, computers and other sources of electrosmog.

Water enriched with hydrogen helps your body to reduce oxidative stress.

*Ikuroh Ohwawa, et al.: Study „Hydrogen acts as a therapeutic antioxidant by selectively reducing cytotoxic oxygen radicals“, published in 2007 in „nature medicine“.



Enrichment of water with hydrogen gas

enrichment
with →
hydrogen

The handy **bluebalance®** hydrogen generator allows you to easily add hydrogen gas to your drinking water. Whether **filtered water, tap water or still bottled water** - it is quickly and effectively enriched with hydrogen gas. Simply screw your filled water bottle onto the **bluebalance®** device, press the start button and after 3-5 minutes the water is ready to drink.

antioxidant
effect →

By enrichment with **hydrogen gas**, the water changes its **redox potential** and gets an **antioxidant effect**. This means that a **negative redox potential** gives the water the ability to **neutralize free radicals**. Free radicals are atoms or molecules with a free, unpaired electron. They are therefore **extremely reactive**. This high reactivity can lead to harmful reactions in the organism.

free radicals
and oxidative
stress →

Free radicals are naturally caused by processes such as breathing, physical exertion and exercise. For the amount of naturally occurring free radicals, the body is able to restore a healthy balance (oxidative homeostasis) through redox regulation. On the other hand, **external factors** such as UV radiation, pollution, negative eating habits, smoking and alcohol also lead to an **increase of free radicals**. Additionally the **exponentially increased exposure to electrosmog** contributes to the formation of free radicals. If there are not enough **antioxidant protective mechanisms** to eliminate them, **oxidative stress** results. Inflammatory reactions, infections and chronic diseases can also cause oxidative stress. This in itself can affect the immune defence and lead to the development of acute and chronic diseases and premature aging. Thus it can become a kind of vicious cycle, in which oxidative stress and the associated stresses are interdependent and mutually reinforcing.

Drinking water as
antioxidant →

To work **against oxidative stress**, it is important to help the body neutralize free radicals with **antioxidant substances**. A **balanced nutrition** with a sufficient supply of micronutrients and macronutrients is essential. **Vitamins** in fruit and vegetables are of particular importance in this context. **Enriching the drinking water with hydrogen gas** means that the water is also able to act as an antioxidant and to neutralize free radicals due to the resulting **negative redox potential**. For this purpose, the previously neutral hydrogen changes its oxidation state to +1 and thus has a reducing effect. This can help your body to avoid oxidative stress.

Studies have provided explicit evidence that hydrogen reacts specifically with the particularly aggressive **hydroxyl radicals**. This reaction only produces water for neutralization. A major advantage is that hydrogen molecules are extremely small and therefore have a particularly **high penetration and diffusion capacity**. This allows them to penetrate the **intracellular space** and even the **mitochondria**. As a comparison: the antioxidant vitamin C is 176 times heavier than a hydrogen atom and the coenzyme Q10 is even 863 times heavier.

Studies →

Until 2007, there were only 50 studies investigating the physiological influence of hydrogen. This has changed fundamentally in the meantime. The most intensive research on hydrogen is being carried out mainly in China and Korea. Unfortunately, not much research is being done in other countries. In Korea, 10% of the available (mineral) water is now hydrogenated. There are currently over one thousand studies that all prove the positive effects of hydrogen - also by **randomized double-blind studies**. So far, these are mainly animal studies, but the first human studies have already been published. If you would like to find out more about this, please visit our website:

www.magnetotherapy.de → Our products → Water Treatment → Studies



H₂ extraction by electrolysis

Electrolysis means that by applying an electrical voltage between two platinum electrodes, **water is split** into its individual parts. The simplified sum formula for this process is:

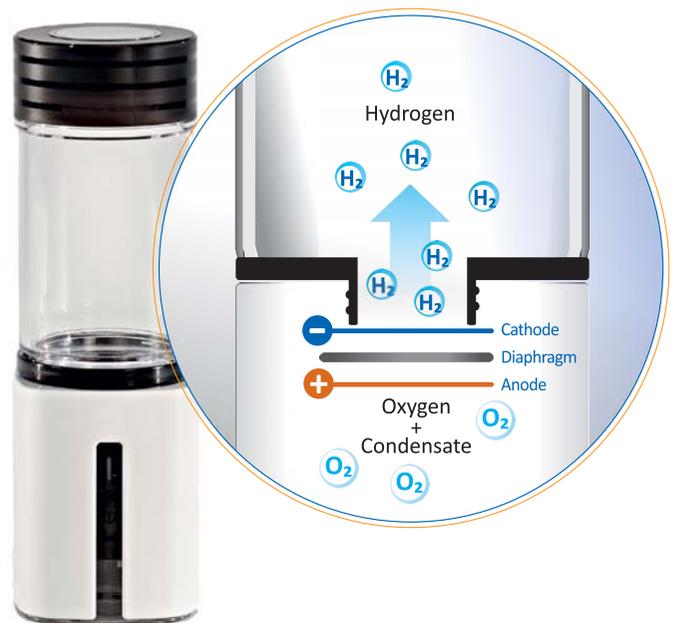


For the enrichment it is not the amount of hydrogen gas that is primarily important, but its **dispersion**. In the **bluebalance®** device, the hydrogen is distributed extremely finely in the water and thus ensures a **negative redox potential** that can be measured over several hours.

For use, fill the water to be enriched into the provided 330 ml jar or into another suitable bottle. Fitting adapters for different bottle sizes are included. Screw the base part of the **bluebalance®** device onto the bottle and put it down so that the bottle is upside down in the device. Now start the process by simply pressing the button. The water hits the built-in **electrolysis unit** through the bottle opening. The negatively charged electrode (cathode) produces the molecular **hydrogen gas**, which is finely dispersed in the water. **Oxygen gas** is produced at the positively charged electrode (anode), and is released into the lower part of the base part with a little condensate.

After the process, simply unscrew the water bottle again and enjoy your hydrogen water.

Production of hydrogen gas in the bluebalance® device by electrolysis



Redox potential in mVolt

The initial amount of dissolved hydrogen gas immediately after enrichment is approximately **800 ppb (parts per billion)**. The measured **redox potential is then approx. -240 mVolt**. After three hours, approx. **-120 mVolt** are still measurable. **Untreated tap water** usually has approx. **+500 to +800 mVolt**.

The redox potential is a parameter that indicates how easily a compound absorbs or releases electrons. **The lower the mVolt value, the easier it is to neutralize free radicals**. For example, breast milk has a redox potential of -33 mVolt, amniotic fluid even has a value of -69 mVolt.

Hydrogen gas is needed for numerous processes in our body:

- as an element in our cells for **energy generation**
- as a protective and **repairing antioxidant**

Beta-carotene is said to have particularly good antioxidant effects. Drinking 1.5 litres of **hydrogen water** (starting from 500 ppb) is comparable in its antioxidative power with the consumption of approx. 35 carrots.

negative redox potential

protection by hydrogen



bluebalance®

Technical data:

Size:	7.2 x 7.2 x 10.4 cm (2.8 x 2.8 x 4.1 inches), base part without bottle
Weight:	274 g (9.7 ounces), base part without bottle
Duration of the hydrogen generation:	3 minutes (330 ml) / 5 minutes (500 ml)
Dissolved hydrogen:	approx. 800 ppb (parts per billion)
Redox potential:	approx. - 240 mVolt directly after enrichment
Energy consumption:	10 Watt
Battery Duration:	8 - 10 runs with fully charged battery
Charging time:	approx. 90 minutes
Charger:	Input: AC 100-240 V Output: DC 8.4 V
Scope of delivery:	bluebalance® hydrogen generator, drinking cup (330 ml), three bottle adapters (2.8 cm (1.1 inches), 3 cm (1.2 inches), free-of-charge for the glass bottle with 4 cm (1.6 inches) thread), charger cable, citric acid for cleaning, manual
Available colors:	white, pink gold, black (please indicate when ordering)
Available as accessory:	pressure-resistant glass drinking bottle with protective coating in various colors.
Warranty:	2 years

Accessories

500 ml glass drinking bottle:

Instead of the included plastic cup with 330 ml capacity, you can also use our 500 ml glass water bottle with the **bluebalance®** device. It is made of **pressure-resistant glass** for safe use. The bottle has a non-spill cap and a protective cover available in **pink, dark blue, grey, light green, turquoise and black.**



Please indicate your desired colour when ordering.

Adapter for screwing on the glass bottle:

To screw the above-mentioned **glass water bottle** onto the **bluebalance®** device, an adapter with a diameter of 4 cm (1.6 inches) is required. If you purchase the **bluebalance®** device from the AMS, you will receive the adapter **free of charge as a gift.**

FREE



Our bundle offer:

When purchasing a **bluebalance®** hydrogen generator, we grant you a **special discount of 10%** when purchasing one of our small devices **MEDISEND®**, **METRONOM solar** or **METRONOM C** at the same time. So you can energize your drinking water additionally by a pulsated electromagnetic magnetic field.

-10%



The all-in-one package:

If you do not yet have a reverse osmosis device with which to purify your drinking water, we recommend our **spring-time® premium pro**. It combines **purification by reverse osmosis, energization by pulsating magnetic field and enrichment with hydrogen gas.** Contact us, have any questions and ask for the special brochure for the **spring-time® premium pro.**



Order number: 535

To see the current USD price and place your order please check our website and online shop:
www.magnetotherapy.de

Please order...

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Thank you