



(水素水: Hydrogen Water)

The water that is including a molecular Hydrogen (H2). Hydrogen is tasteless, colorless and odorless. Hydrogen molecule does not affect pH directly because it does not turn to Hydrogen Ion in the water. Molecular Hydrogen is dissolvable approximately 1.6mg per liter in water at normal temperature and 1atm (Maximum 1.6 ppm).

## Hydrogen characteristics

- It has a strong antioxidant effect. Hydrogen(H2) + Oxygen Free Radical(2 · OH) = Water(2H2O)
- The rate of diffusion of H<sub>2</sub> in a living body is by far faster than other substances and H<sub>2</sub> easily passes through a cell membrane and reaches the subcellular organelle.
- It is registered at FDA as food additives and safe.
- The antioxidant of hydrogen was released in 2007 for papers. Hydrogen and hydrogen water using research is being conducted and were presented more than 300 papers.

## Free Radical

Unlike Oxygen we breathe, Free Radical is unstable Oxygen. Overproduced Free Radicals due to environmental pollutions, chemical substances, ultraviolet rays and radiation induce Oxidation reaction in human body. By Oxidation, cell membrane, DNA and other living organisms are damaged and cell is losing their functions or changed.

## Diseases caused by Free Radical (Oxidative stress)

Free Radicals in a living body remove bacteria and virus and also detoxify a defense mechanism of body when it is generated a proper amount at right time and area. If Oxidative stress is accumulated continuously by overproduced Free Radicals, Oxidative stress induces cancer, various lifestyle-related diseases, aging, and the like because it affects or damage gens of a cell.



Overproduction of oxygen

active
oxygen



