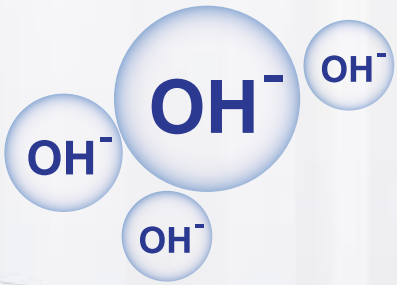
Platinum Ion Hydrogen Negative Generator

氢分子呼吸机



JAPAN
Technology

Hydrogen purity H2 purity: more than 99.999%
99.999%up の高純度水素生成

The only medical grade component in the market
市面唯一採用醫療等級之部件

The only high-purity platinum titanium collector plate on the market
市面上唯一採用高純度鈦鉑金集電板

Lung function
肺呼吸功能

Insomnia
失眠

Cancer
癌症

IMPROVE
改善

Depression
忧郁症

Stroke
中风

Anxiety
焦虑症

Dark circles
黑眼圈

Liver
护肝

Younger
更加年轻


UL


CB

EMC

TUV


CE


EAC


PSE

Titanium Platinum Plate Inspection
鈦鉑板檢驗


NSF certified built-in dedicated filter
內置專用濾心NSF認證

NSF certified Configure connector
配置接頭NSF認證


NSF certified Internal joints & fittings
內部接頭 & 管件NSF認證

The rise of Hydrogen Medicine can be traced

氫氣醫學的崛起是有脈絡可尋的

The predecessor of hydrogen medicine:
In the 1970s, Edol et al. found that divers using hydrogen could effectively prevent hypertensive neurological syndrome

In 1975, Dole et al. studied Hyperbaric Hydrogen against skin malignancies and found that the tumors became smaller. The study was published in the well-known scientific journal (Science). In 2001, Ghaeib et al. also used high pressure hydrogen to treat liver fibrosis and inflammation induced by schistosomiasis infection

氫氣醫學的前身:
1970年代愛德爾氏(Edol)等發現使用氫氣之潛水員能有效地防止高壓神經綜合症

在1975年，杜爾氏(Dole)等人研究過高壓氫(Hyperbaric Hydrogen)對抗皮膚惡性腫瘤，結果發現腫瘤變小了。這個研究發表在知名的科學雜誌(Science)上。2001年, 嘉力普氏(Ghaeib)等人亦利用高壓氫治療血吸蟲感染誘導之肝臟纖維化及發炎現象

References :
1. Dole M, Wilson FR, Fife WP. Hyperbaric hydrogen therapy; a possible treatment for cancer. Science, 190:152-154, 1975.
2. Gharib B, Hanna S, Abdallahi OMS, er al. Anti-inflammatory properties of molecular hydrogen: investigation on parasite-induced liver inflammation. Comptes Rendus de 1' Academie des Sciences III, 324:719-724, 2001

The Great Discovery of the Ota Naruo Research Group in Japan

日本太田成男(S.Ohto)教授)研究群的大發現

In 2003, the Institute of Geriatrics of Japan Medical University established the Hydrogen Research Center under the leadership of Professor S. Ohto. In July 2007, a breakthrough academic paper was published in the well-known academic journal "Nature Medicine":

(1) Hydrogen molecules have the strongest free radicals to scavenge humans or animals

(2) Research on breathing hydrogen (2% can indeed protect brain cells from necrosis caused by a large number of free radicals in ischemia) (Necrosis)

在2003年, 日本醫科大學老人病研究所在太田成男(S.Ohto)教授領導下成立氫氣研究中心。在2007年7月發表一篇突破性的學術論文, 刊登在知名的學術期刊“自然醫學(Nature Medcine)”上:

(1)氫分子具有清除人體或動物最強的自由基

(2)研究呼吸氫氣 (2%的確可以保護腦細胞不會被缺血之大量自由基所促成的壞死現象(Necrosis)

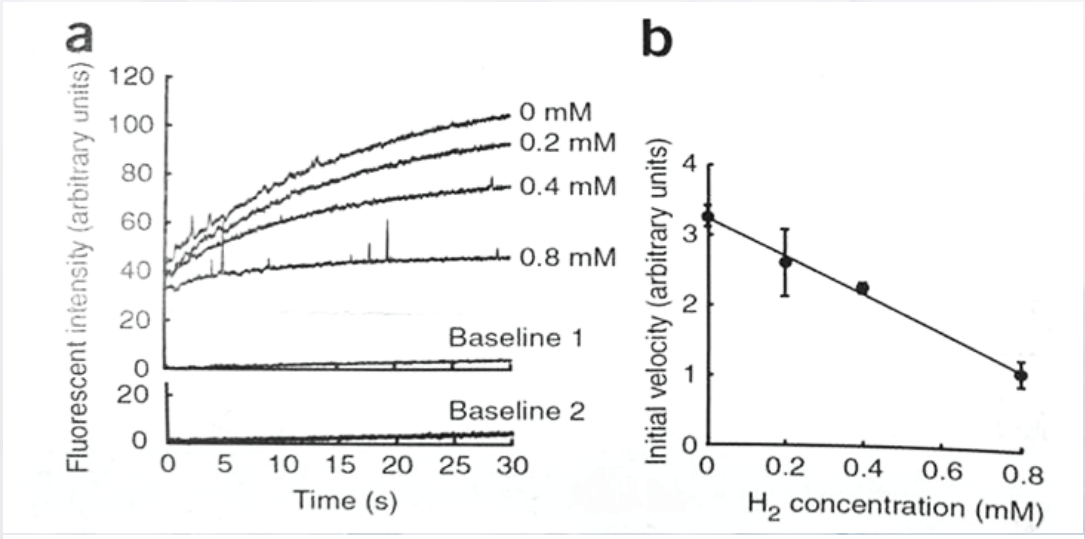
Hydrogen Molecule: Natural Antioxidant
氫分子:天然的抗氧化剂

Professor S. Ohta of the Japan Hydrogen Research Center made two major discoveries in 2007

日本氫氣研究中心的太田成男教授(Professor S. Ohta),在2007有兩項重大的發現

Hydrogen molecules can selectively scavenge the most toxic free radicals in the body

氫分子能选择性清除身体最毒的自由基



(a) and (b) show that the strength of hydrogen molecules inhibiting hydroxyl radicals (OH) is directly related to the concentration of hydrogen molecules

(a)及(b)显示氢分子抑羟自由基(OH)强弱是氢分子浓度成正相关

Properties of Molecular Hydrogen
氫分子的特性

Physical properties of hydrogen molecule: Hydrogen gas is a colorless, tasteless and odorless diatomic gas molecule. Its density is very small, and it is the gas with the smallest relative molecular mass in nature (about 1/14 of air mass).

Hydrogen has a strong permeability, and can pass through rubber and latex tubes at room temperature, and can pass through metal films such as tin, nickel, and steel at high temperatures.

The diffusion speed of hydrogen is fast. In liquid or human tissue, the diffusion speed of hydrogen is 3.74 times that of nitrogen and 1.41 times that of helium.

Hydrogen can only burn when the temperature exceeds 527°C; at the same time, its concentration is 4-75% (v/v) before it can mix with oxygen and cause an explosion. Only <4% hydrogen can be dissolved in water, so hydrogen is safe.

氫分子的物理性質： 氫氣是無色無味及無臭的雙原子氣體分子。它的密度非常小，是自然界相對分子質量最小的氣體（約空氣質量1/14)。

氫氣的滲透性很強，在常溫下可透過橡皮及乳膠管， 而在高溫下可透過鈿、鎳、鋼等金屬薄膜。

氫氣的擴散速度快， 在液體或人體組織中，氫的擴散速度為氮的3.74倍， 氦的1.41倍。

氢气只能在溫度超過527°C才會燃燒;同時它的濃度在4-75%(v/v)才會跟氧氣混合,產生爆炸。水中只能溶氫<4%，因此氢是安全的。

Demonstration of Application of Hydrogen Molecules to Prevent Liver Disease

氫分子预防肝病之应用实证

Studies have also confirmed that absorbing 1-4% hydrogen can also effectively reduce oxidative damage caused by ischemia-reperfusion, and reduce liver cell apoptosis and liver injury indicators.

研究亦证实,吸取1-4%氢气亦能有效降低因缺血再灌所引起的氧化损伤，减少肝细胞凋亡以及肝损伤指标。

References :
1. Liu Q, Shen WF, Sun HY, et al. Hydrogen-rich saline protects against liver injury in rats with obstructive jaundice. Liver International, 30 : 958-68. 2010.
2. Sun H, Chen L, Zhou W, et al. The protective role of hydrogen-rich saline in experimental liver injury in mice. Journal of Hepatology, 54 : 471-80, 2011.

International Critical Study
国际临床试验

Demonstration of the application of hydrogen molecules to relieve bone diseases and arthritis

Demonstration of application of hydrogen molecule to relieve metabolic syndrome and cardiovascular disease

Demonstration on the application of hydrogen molecules to prevent chronic brain diseases

Demonstration of Application of Hydrogen Molecule in Preventing Parkinson's Disease

Demonstration of Application of Hydrogen Molecule in Preventing Dementia

Demonstration of Application of Hydrogen Molecule in Relieving Inflammation of Intestines and Stomach

氢分子舒缓骨骼疾病及关节炎之应用实证

氢分子舒缓代谢症候群及心血管疾病之应用实证

氢分子预防脑部慢性疾病的应用实证

氢分子预防巴金森氏症之应用实证

氢分子预防失智症之应用实证

氢分子舒缓肠胃炎症之应用实证

Reference :
Kato S. Saitoh Y. Iwai K. et al. Hydrogen-rich electrolyzed warm water represses wrinkle formation against UVA ray together with type-I collagen production and oxidative-stress diminishment in fibroblasts and cell-injury prevention in keratinocytes. Journal of Photochemistry and Photobiology B. 106: 24-33, 2012

Li DZ, Zhang QX, Dong XX, et al. Treatment with hydrogen molecules prevents RANKL-induced osteoclast differentiation associated with inhibition of ROSformation and inactivation of MAPK, AKT and NF-kappa B pathways in curiae RAW264.7 cells. Journal of Bone and Mineral Metabolism, 32 : 494-504, 2014.

Lenaz G. Role of mitochondria in oxidative stress and ageing. Biochimica et biophysica acta. 1366 : 53-67, 1998.

Ohta S. Molecular hydrogen is a novel antioxidant to efficiently reduce oxidative stress with potential for the improvement of mitochondrial diseases. Biochimi. et Biophysica Acta, 1820 586-94, 2012

Feng Y. Wang R. Xu J, et al. Hydrogen-rich saline prevents early neurovascular dysfunction resulting from inhibT of oxidative stress in STZ-diabetic rats. Current Eye Reisle: och, 38 : 396-404, 2013.

Wu F, Qiu Y, Ye G, et al. Treatment with hydrogen molecule attenuates cardiac dysfunction in streptozotocin-induced diabetic mice. Cardiovascular Pathology, 24 : 294-303, 2015.

Wang C, Li J, Liu Q, et al. Hydrogen-rich saline reduces oxidative stress and inflammation by inhibit of INK and NF-kappaB activation in a rat model of amyloid-beta-induced Alzheimer's disease. Neuroscience Letters, 491 : 127-132. 2011.

Sun Q, Cai J, Liu S. et al. Hydrogen-rich saline provides protection against hyperoxic lung injury. The Journal of Surgical Research, 165 e43-9, 2011.

Zhang JY, Wu QF, Wan Y, et al. Protective role of hydrogen-rich water on aspirin-induced gastric mucosal damage in rats. World Journal of Gastroenterology, 20 : 1614-22, 2014.

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