STANDARD H2, INC.

A Delaware C Corp established in 2019
785 N. Freedom St., Unit B, Ravenna, OH 44266

What Makes Us Special?

We are a team of specialists dedicated to:

- Improving the quality-of-life using green chemistry to clean our air, water, and earth for healthful living by providing the technology needed for the H2 Economy.

- Promoting the installation of remote H2 Fueling Stations using Solar Panels, Wind Turbines, Hydroelectric Generators, etc. to electrolyze water and produce H2 on-site anywhere water and power are available.

- Convert the vast reserves of American methane into H2 to supply the USA and the world with ultra-clean fuel that is inexpensive by including the HC refining industry using DOE approved steam methane reforming.

Learn more here:
https://www.energy.gov/eere/fuelcells/hydrogen-production-natural-gas-reforming

EU Standards for H2 Fuel Cells

Table 1. Internation standard for hydrogen fuel quality for fuel cell electrical vehicles. The threshold for the contaminants are reported with notes.

Contaminant	ISO 14687-2: 2012 [11] SAE J2719:2011 [19]		ISOF/DIS 14687 [18] EN 17124:2018 [12]	
	Max. admissible value [µmol/mol]	notes	Max. admissible value [µmol/mol]	notes
Water	5	-	5	-
Total hydrocarbons	2	Due to CH4, TC > 2 µmol/mol	2 except CH_4	including oxygenated organic species
Methane	-	-	100	-
Oxygen	5	-	5	-
Helium	300	-	300	-
Nitrogen	100	N2+Ar<100	300	-
Argon	100	N2+Ar<100	300	-
carbon dioxide	2	-	2	-
Carbon monoxide	0.2	-	0.2	CO+HCHO+HCOOH < 0.2µmol/mol
Total sulphur compounds	0.004	H2S, COS, CS2, mercaptans (NG)	0.004	H2S, COS, CS2, mercaptans (NG)
Formaldehyde	0.01	-	0.2	CO+HCHO+HCOOH < 0.2µmol/mol
Formic acid	0.2	-	0.2	CO+HCHO+HCOOH < 0.2µmol/mol
Ammonia	0.1	-	0.1	-
Halogenated compounds	0.05 (total)	i.e. HBr, HCl Cl2, organic R-X	0.05	HCl, organic R-Cl
Max. particulate conc.	1 mg/kg	-	1 mg/kg	-

We Created the SULFUR MAGNET™

The most tenacious inexpensive sorbent for cleaning

- Hydrogen, methane, and other fuel gases by removing H2S and other contaminants to produce hydrogen that is many times more pure than current World standards. This ultra-pure hydrogen would amplify the lifetime and efficiency of H2 Fuel Cells to magnify the Return On Investment of ownership.

- Air and other gases by removing volatile sulfur compounds, nitrogen oxides and many other odors down to low ppb, or even sub ppb concentrations.

- Water, both potable & waste, by removing sulfides and other pollutants such as reduction of PFAS forever chemicals.

Primary Sources of Hydrogen

Part 1: Electrolysis of Water

Fast, Convenient & No CO2
Pop-up Filling Stations: Electrolysis of Water

Powered by:

- Solar
- Wind
- Hydroelectric
- Nuclear

Advantages:

- Fast and easy to install where water and power are available
- Zero CO2 production

Disadvantages:

- Capacity limited by available water and power

Primary Sources of Hydrogen

Part 2: Steam Methane Reforming

Large Current Capacity
Steam Methane Reforming at Petroleum Refineries

Powered by:
- Natural Gas (Methane)

Advantages:
- Years of use with a large capacity

Disadvantages:
- Transport of hydrogen is required
- CO2 may be produced during the process

Source:
DOE Hydrogen Production: Natural Gas Reforming

Primary Sources of Hydrogen

Part 3: Note about H2 Fuel Cells

Hydrogen from either source requires the H2 FINAL FILTER®

Our filter is packed with the SULFUR MAGNET™ and ensures the sulfur content is below 1 ppb for optimal fuel cell efficiency and longevity as verified by an independent third party expert company that manufactures the standards used by automotive testing facilities.

The SULFUR MAGNET™

- Is a family of patented inorganic compositions that can be freely transported as virgin or spent media with no DOT restrictions since impurities are trapped within the highly porous matrix of the odorless media and are chemically bound, not held like a sponge. The media can generally be reused after a low temperature regeneration process, or it can be recycled, or landfilled.

- is odor free.
- not water soluble.
- is highly concentrated with an unmatched capacity.
- functions over a very wide range of temperatures and pressures.
- available as powdered or granular media.

Volume of H2S That 1 Kg of SULFUR MAGNET™ Will Absorb at a Concentration of:

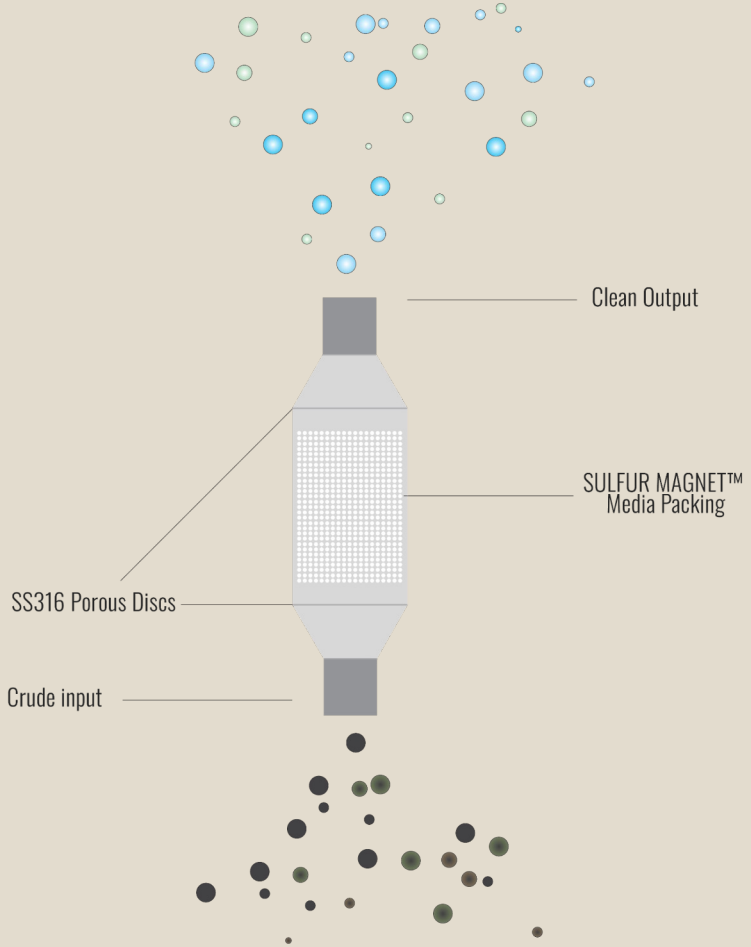
Concentration	Liters	Cubic meters	Cubic feet
1,000 ppm	282,000	282	9,959
100 ppm	2,820,000	2,820	99,587
10 ppm	28,200,000	28,200	995,874
Typical natural gas 4 ppm	70,500,000	70,500	2,489,684
1 ppm	282,000,000	282,000	9,958,736
100 ppb	2,820,000,000	2,820,000	99,587,360
10 ppb	28,200,000,000	28,200,000	995,873,601
Current standard 4 ppb	70,500,000,000	70,500,000	2,489,684,002
1 ppb	282,000,000,000	282,000,000	9,958,736,009

H2 FINAL FILTER, INC.

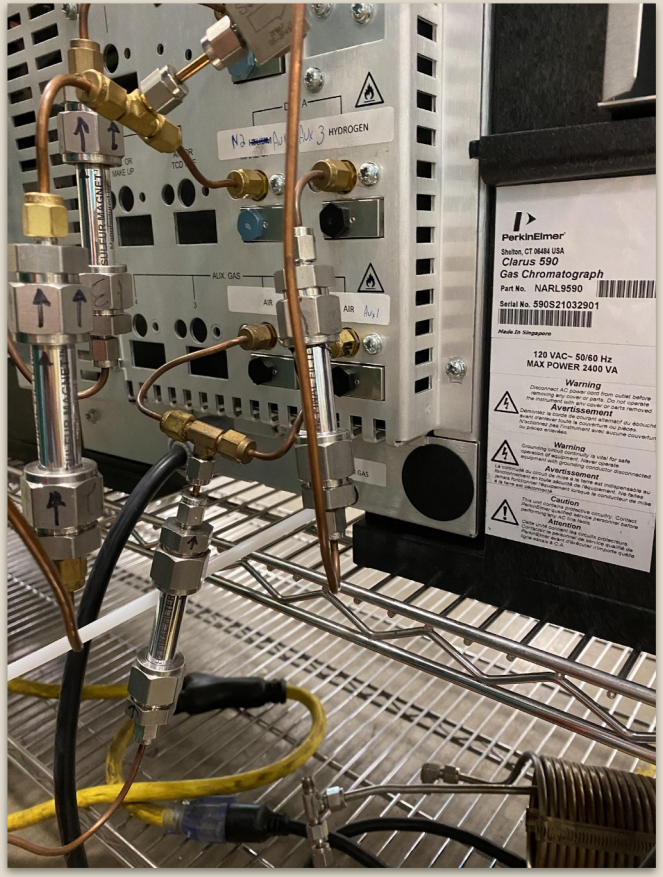
A Delaware C Corp and wholly owned subsidiary of Standard H2, Inc.
785 N. Freedom St., Unit B, Ravenna OH 44266

H2 FINAL FILTER®

Stainless steel 316 housing



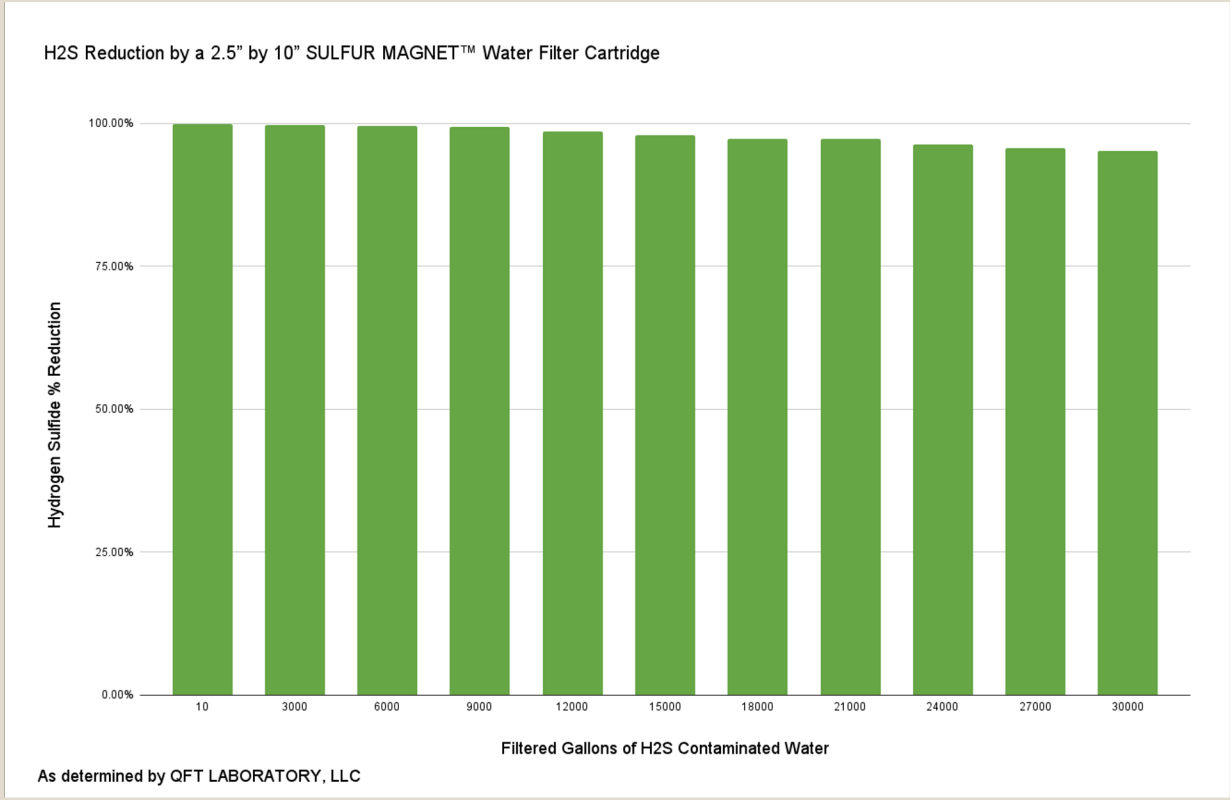
Filtering the 4 Gases of a Gas Chromatograph



Filter Data Full Summary

Sample Point	Accumulated Volume	Influent Concentration in mg/L	Effluent Concentration in mg/L	Hydrogen Sulfide % Reduction
10 UV	10 UV	1.121	0.002	99.87%
20%	3000 gallons	1.053	0.002	99.78%
40%	6000 gallons	1.134	0.005	99.55%
60%	9000 gallons	1.107	0.007	99.34%
80%	12000 gallons	1.093	0.015	98.60%
100%	15000 gallons	1.014	0.020	98.00%
120%	18,000 gallons	1.036	0.028	97.34%
140%	21,000 gallons	1.108	0.031	97.23%
160%	24,000 gallons	1.057	0.039	96.30%
180%	27,000 gallons	1.083	0.047	95.65%
200%	30,000 gallons	1.157	0.055	95.24%

SULFUR MAGNET™ H2S Reduction Visualized

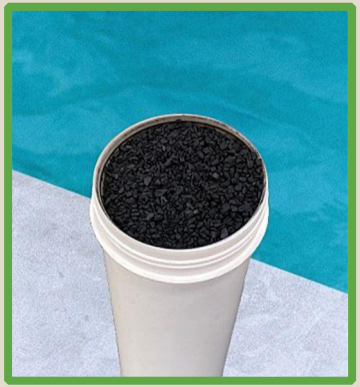


Protect the heat exchanger and the heating equipment

Agriculture and the SULFUR MAGNET™

Eliminates Harmful Contaminants:

- Removes unpleasant odors like skunk spray, urine, feces, hydrogen sulfide (H_2S), ammonia, and many others.



Application Methods:

- Powder Form: Apply with a rose duster for immediate odor elimination in areas like equestrian training arenas and garbage containers.
- Fine Granular Form: Use for long-term odor control.

Additional Features:

- 100% organic compound free
- Anti-microbial and Anti-Fungal
- Not affected by freezing temperatures
- Unaffected by high heat to over 500°F
- Not affected by humidity
- Odor free and insoluble in water
- Suitable for landfill disposal
- Approximately 80X more effective than the best activated carbon for H_2S removal
- Effective for reducing chlorine
- Effective for reducing bromine
- Effective for reducing fluorine
- Effective for reducing iodine
- Recyclable & Regenerable for reuse