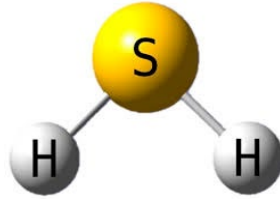


Hydrogen Sulphide



What is Hydrogen Sulphide?

Hydrogen Sulphide is a colourless gas that smells like rotten eggs. At very high levels, it can be flammable.

Sources of Hydrogen Sulphide

Hydrogen sulphide often occurs naturally in some environments including abandoned water wells, gas wells, sulfur springs, and swamps. It is also produced by the breakdown of organic matter and can be associated with animal farms, industrial plants, sewers or sewage treatment plants.

Exposure to Hydrogen Sulphide

Hydrogen sulphide is part of the natural environment, but you can only be exposed to the gas when you come into direct contact with it by breathing it in, eating or drinking something contaminated with it, or when it touches your skin. Absorbed hydrogen sulphide does not accumulate in the body as it is rapidly metabolized in the liver and excreted in the urine. Hydrogen sulphide usually breaks down in the air and therefore exposure is only likely to continue if there is an ongoing source. The presence of hydrogen Sulphide in confined spaces is of particular concern because high levels of the gas may accumulate.

How is Hydrogen Sulphide Detected?

People usually smell hydrogen sulphide even at very low concentrations in the air, ranging from 0.0005 to 0.3 parts per million (ppm). These levels in the air are not dangerous and will not cause negative health effects. Hydrogen sulphide levels can change based on a number of factors such as fluctuations from the source (i.e., a gas well), or from changes in weather patterns (i.e., wind direction).

It should be noted that there is no way to tell by smell alone if you are detecting low or high concentrations of hydrogen sulphide; in fact, concentrations around 100 ppm will temporarily hinder your ability to smell the gas. You cannot rely on your nose to tell you how much hydrogen sulphide gas is present.

Health Effects of Hydrogen Sulphide

Exposure to low concentrations of hydrogen sulphide may cause irritation to the eyes, nose, or throat. It may also cause difficulty in breathing for some people with asthma. Other symptoms may include headaches, poor memory, tiredness, and balance problems.

Exposures to high concentrations of hydrogen sulphide (750-1000 PPM) can cause a loss of consciousness, lung and breathing passage damage and death.

What if I smell Hydrogen Sulphide in my Well Water?

The 'rotten egg' smell of hydrogen sulphide and its accompanying 'sulfur water' taste will appear in water at low concentrations. Even at these low levels, water will become aesthetically unpleasant, and most users will avoid drinking the water at that time.

The odor may be more noticeable when hot water is run as heat forces the gas into the air, which may cause the odor to be especially offensive when showering. If there is an ongoing issue with hydrogen sulphide in your water supply, there are a variety of water treatment devices capable of removing it. Consult a licensed plumber or a water treatment company to determine what water treatment device will best suit your needs. **Do not enter a well where hydrogen sulphide gas is suspected.**



What if I smell a Gas Leak?

If you notice a rotten egg scent near your home and suspect hydrogen sulfide, call the Spills Action Centre of the Ministry of the Environment, Conservation and Parks at 416-325-3000, 1-800-268-6060 (toll-free), or 1-855-889-5775 (TTY).

Testing for Hydrogen Sulphide:

The Brant County Health Unit does **not** offer testing for hydrogen sulfide or any other chemical. Chemical testing can be done for a fee through a licensed private laboratory. A list of licensed labs can be found online at www.ontario.ca/page/list-licensed-laboratories.

Please note that **hydrogen sulphide testing is not available through the Public Health Labs listed in this link**. The Brant County Health Unit does offer free bacteriological testing for private well owners. For more information about private well water testing services and other drinking water resources, please visit the Brant County Health Unit's Safe Water webpage (www.bchu.org/water) or contact Environmental Health at 519-753-4937 ext. 470, or by email at EnvironmentalHealth@bchu.org.