

H2S Alive Burlington

H₂S Alive Burlington - H₂S is the formula for a chemical compound referred to as hydrogen sulfide. Hydrogen sulfide has the characteristic foul odor of rotten eggs and is a colorless, flammable and really poisonous gas. This smell is due to the bacterial breakdown of organic matter that is in the absence of oxygen, for example, as in swamps and sewer. This process is called anaerobic digestion. This procedure with hydrogen sulfide happens in volcanic gases, in natural gas and some well water. The human body utilizes H₂S as a signaling molecule and generates small amounts.

Hydrogen sulfide is slightly heavier compared to air. Therefore, a mixture of air and H₂S could be explosive. Hydrogen sulfide and oxygen burns with a blue flame and becomes SO₂ or sulfur dioxide and water. Normally, within chemical reactions, H₂S acts as a reducing agent.

At high temperature or with the presence of water, sulfur dioxide can be made to react with hydrogen sulfide to form elemental sulfur and water. This specific process is defined in the most common way to convert H₂S into elemental sulfur, the Claus process.

In water, hydrogen sulfide is a bit soluble. It acts as a weak acid and therefore gives the hydrosulfide ion "HS⁻." Sulfhydic acid or Hydrosulfuric acid is a solution of hydrogen sulfide in water. Initially, this solution is initially clear but turns cloudy as time passes. This is a result of the slow reaction of hydrogen sulfide with the oxygen dissolved in water. This reaction produces elemental sulfur that precipitates out. The sulfide dianion S²⁻ only exists in strong alkaline aqueous solutions. Typically this type of substance is basic with a pK_a>14.

Hydrogen sulfide reacts with metal ions. When this occurs, metal sulfides are formed and these can be considered the salts of hydrogen sulfide. For example, some ores are sulfides. Often, metal sulfides have a dark color. In the detection of hydrogen sulfide, Lead II acetate paper is used. In the presence of the gas it turns grey when lead II sulfide is made. Hydrogen sulfide is released by reacting strong acid with metal sulfides.

It is essential to know that if gaseous hydrogen sulfide comes into contact with concentrated nitric acid, an explosion occurs. What's more, when alcohols reacts with hydrogen sulfide, it forms thiols.