

## H2S Course Vancouver

H2S Course Kelowna - Hydrogen sulfide is a kind of gas that is both very poisonous and extremely flammable. It has a flammable range of 4.3 to 46 percent. H<sub>2</sub>S or hydrogen sulfide is a bit heavier compared to air and hence, tends to accumulate in the bottom of poorly ventilated areas. Although the smell is really strong at first, it quickly deadens the sense of smell. Unfortunately, this means possible victims might be unaware of its presence until it's already too late. A MSDS sheet should be consulted for safe handling procedures of H<sub>2</sub>S or hydrogen sulfide.

Denver City is located within Yoakum and Gaines counties, Texas. Here, an H<sub>2</sub>S explosion occurred in 1975. This made the state's legislature to concentrate more on H<sub>2</sub>S and its deadly hazards. A State Representative, E.L. Short of Tahoka within Lynn County, urged that residents be warned by knocking on doors if necessary to warn them of the imminent danger stemming from the gas. He took the lead in supporting a Texas Railroad Commission investigation. It is possible for anyone to die from the second inhalation of the gas and a warning on its own could be already too late.

The truth is, H<sub>2</sub>S or hydrogen sulfide is really poisonous. This means that H<sub>2</sub>S can poison numerous body systems. Normally, the most affected is the nervous system. The toxicity of hydrogen sulfide is similar to that of hydrogen cyanide. As it forms a complex bond with iron in the mitochondrial cytochrome enzymes, it prevents cellular respiration.

Hydrogen sulfide occurs naturally within the body. It is found inside of the gut and is also abundant in the surroundings. The enzymes that exist inside the body can detoxify it by oxidation into sulfate, which is a type of substance that is harmless. Therefore, low levels of H<sub>2</sub>S or hydrogen sulfide may be tolerated indefinitely by the human body.

The threshold level is believed to average about three hundred to three hundred fifty ppm, and around this level, the oxidative enzymes become overwhelmed. There are personal safety gas detectors which should be worn by sewage, utility and petrochemical workers. These are set to go into high alarm at 15 ppm and to alarm as low as 5 to 10 ppm.

Among the diagnostic clues found in instances of extreme H<sub>2</sub>S poisoning is the discoloration of copper coins found in the pockets of the victim. Therapy includes injections of sodium nitrite, inhalation of amyl nitrite, inhalation of pure oxygen, in some situations hyperbaric oxygen therapy or HBO and administration of bronchodilators to be able to overcome eventual bronchospasm. HBO or also referred to as hyperbaric oxygen therapy remains controversial since this therapy has anecdotal support.

Less concentrations of H<sub>2</sub>S exposure can result in eye irritation, fluid in the lungs, soar throat, a cough, vomiting and shortness of breath. These effects are believed to be the result of the fact that alkali present in moist surface tissues combines with hydrogen sulfide to form a caustic sodium sulfide. Normally, these symptoms dissipate within a few weeks' time. Low-level, long-term exposure could lead to headaches, fatigue, irritability, poor memory and dizziness. Exposure around 2 ppm or chronic exposure to low-level hydrogen sulfide has been implicated in reproductive health issues and increased miscarriage among Russian and Finnish wood pulp workers, however, these findings have not been replicated.