

C. Toxic Effects of H₂S Poisoning

Hydrogen sulfide (H₂S), or poison gas, is extremely dangerous because of its toxicity effects on all living creatures even in very small concentrations. The toxicity effects are generally described in terms of parts per million (ppm) concentration and exposure time. The following table gives a quick reference for the effects of hydrogen sulfide.

EFFECTS OF HYDROGEN SULFIDE

<u>Percent Concentration</u>	<u>PPM</u>	<u>Effects</u>
1/1000 of 1%	10	Can smell, safe for 8 hours.
1/100 of 1%	100	Kills smell in 3-15 minutes, may burn eyes and throat.
2/100 of 1%	200	Kills smell quickly, stings eyes and throat.
5/100 of 1%	500	Loss of balance, respiratory difficulties in 30-45 minutes.
7/100 of 1%	700	Unconscious in less than 15 minutes, death will occur if not rescued promptly, immediate artificial resuscitation.
1/10 of 1%	1000	Permanent brain damage if not rescued immediately.

Caution: Hydrogen sulfide is a colorless and transparent gas and is flammable (ignites @ 500° F). It forms an explosive mixture with air between 4.3 and 46% by volume. The gas burns with a blue flame and produces sulfur dioxide which is also toxic (Tolerance Limit Value = 5 ppm). It is heavier than air and may accumulate in low places. It is also soluble in water, a rule of thumb being 4 volumes of gas will dissolve in 1 volume of water.