

Laboratory

HYDROGEN SULFIDE

I. Protocol Overview

Hydrogen Sulfide is a highly flammable and explosive gas and is a mucous membrane and respiratory tract irritant. Pulmonary edema, which may be immediate or delayed, can occur after exposure to high concentrations. Symptoms of acute exposure include nausea, headaches, delirium, and disturbed equilibrium, tremors, convulsions, and skin and eye irritation. Inhalation of high concentrations can produce extremely rapid unconsciousness and death. Exposure to the liquefied gas can cause frostbite injury.

Hydrogen sulfide often results from the breakdown of organic matter by bacteria in the absence of oxygen, such as in sewers or swamps. Volcanic gases, well waters, and natural gas may contain some hydrogen sulfide. Commercially, hydrogen sulfide is used to separate heavy water from normal water and for qualitative identification of metals. Decontamination of patients may be needed prior to sample collection.

For all suspected chemical exposures, consult the Poison Control Center (800-222-1222) located at Children's Hospital of Philadelphia. Information and treatment advice is available to the public and healthcare professionals at no charge.

Hydrogen sulfide exposure may be determined indirectly through blood, gas, and urinary measurements. Hydrogen sulfide can be indirectly determined in environmental and food samples through ion chromatography (IC), ion selective electrodes (ISE), and gas chromatography (GC) detection.

The Delaware Public Health Laboratory does not perform this testing. Contact the CDC or the Poison Control Center.

II. Contact Information

24/7 CDC Emergency Contact Number: 1-888-295-5156

Poison Control Center: 215-386-2100

III. CDC Website

http://www.atsdr.cdc.gov/toxfaqs/TF.asp?id=388&tid=67

24/7 Emergency Contact Number: 302-223-1520