PHOSPHINE

I. Protocol Overview

Phosphine is a colorless, flammable, and explosive gas at ambient temperature that has the odor of garlic or decaying fish and is slightly soluble in water. Small amounts occur naturally from the breakdown of organic matter. Phosphine is used as an insecticide for the fumigation of grains, animal feed, and leaf-stored tobacco. It is also used as a semiconductor and in plastics industries, as well as in the production of a flame retardant.

Inhalation exposure to phosphine can result in headaches, dizziness, fatigue, drowsiness, respiratory (burning substernal pain, cough, dyspnea, chest tightness, pulmonary irritation, pulmonary edema), neurological (tremors, post-recovery convulsions, numbness and paraesthesia), and gastrointestinal effects (nausea, vomiting). Chronic exposure may cause nasal cavity and throat inflammation, weakness, dizziness, nausea, gastrointestinal, cardio respiratory, and central nervous system symptomology, jaundice, liver effects, and increased bone density.

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.

Chemical sensors can detect phosphine in the environment. There are no known clinical biomarkers for detection of phosphine in clinical samples. Rapid toxicological screening may rule out other exposures. Gas chromatography with nitrogen phosphorous detection (GC-NFD) or electron capture detection (GC-ECD) methods is used to detect phosphine contamination in environmental and food samples.

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://emergency.cdc.gov/agent/phosphine/casedef.asp