



METHYL ISOCYANATE (MIC)

I. Protocol Overview

Methyl isocyanate, classified as a choking/pulmonary agent, is a water reactive liquid at room temperature. Methyl isocyanate is irritating and corrosive to the eyes, skin, and respiratory tract, including asthma-like allergy. Exposure to methyl isocyanate can result in cough, difficulty breathing, chest pain, excessive tearing (lacrimation), swelling of the eyes, and unconsciousness. Late stage exposure (next 24 to 72 hours) can include acute lung injury, cardiac arrest, and death. Decontamination of patients is absolutely critical.

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.

Methyl isocyanate is an intermediate chemical in the production of carbamate pesticides (such as carbaryl, carbofuran, methomyl, and aldicarb). It has been used in the production of rubbers and adhesives. The Bhopal India Disaster of 1984 was caused by the accidental release of 40 tons of methyl isocyanate (MIC) gas from a Union Carbide pesticide plant. Greenpeace cites 20,000 total deaths from related illnesses as its conservative estimate with nearly 3,000 people dead initially. Bhopal is frequently cited as the world's worst industrial disaster.

There are no clinical biomarkers known for methyl isocyanate exposure. Routine laboratory studies include chest radiography and pulse oximetry (or ABG measurements). Rapid toxicological screening may rule out other exposures. Air samples may be analyzed using XAD-7 adsorption tubes followed analysis by high performance liquid chromatography (HPLC) using a fluorescence or ultraviolet (UV) detector.

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/methylisocyanate/casedef.asp>

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

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