

PHENOL

Phenol is widely used in our laboratories here at NCI-Frederick. Several past incidents, in which phenol was in use without adequate regard of its hazard potential, have led to dangerous chemical skin burns. All personnel who work with phenol should review this Safetygram and modify procedures accordingly.

Phenol is strongly corrosive to the skin and is systemically toxic if absorbed through the human body. Phenol solutions can penetrate even intact skin quite rapidly and can cause severe, potentially even lethal, neurotoxic effects. Because of its local anesthetic action, a large amount of phenol may be absorbed through the skin with little immediate pain. Chronic phenol exposure can lead to kidney and liver damage. Phenol burns can result in permanent discoloration of the skin.

Suspected skin or eye contact with phenol calls for immediate action. IMMEDIATELY flush the area with the largest amount of clean water available. The safety shower is recommended for large areas of exposure. While flushing the exposed area, REMOVE ALL ITEMS of contaminated clothing, especially socks and shoes. Keep the exposed area under running water for AT LEAST FIFTEEN MINUTES. (It helps to have a co-worker stay close by to make sure that you do stay in the shower for the full 15 minutes. 15 minutes can seem like a long time).

Do not wash the area with alcohol or other organic solvents as this will accelerate the absorption of phenol.

Contact Occupational Health Services (x1096) during working hours as soon as possible after employee exposure to phenol. For cleanup of phenol spills during working hours call EHS (x1451). For after-hours phenol exposures or spills, call Protective Services (x1091).

Proper personal protective equipment for working with phenol includes a fully fastened lab coat, appropriate gloves, safety goggles and/or full face shield where splashing of solutions is possible. A system of local and/or general exhaust such as a chemical fume hood is recommended to keep employee exposures below the airborne exposure limits. If the exposure limit is exceeded and engineering controls are not feasible, then a NIOSH approved respirator may be worn.

For further information or if you have any questions, please call EHS at x1451.