

	Safe Use of Phenol	Effective:	2/24/06
		Originator	Dr. James Q. Robinson
		Last Updated:	2/24/06
		Updated by:	Dr. James Q. Robinson

1. Purpose:

The purpose of this policy is to regulate the use of phenolic products at Ross University, given the volatile nature of the compound and the safety concerns related to its use.

2. Scope:

All Ross University faculty and staff, courses, laboratories and projects.

3. Policy

3.1. Use of phenol on the campus of Ross University is subject to the approval of the Ross University Safety and Security Dept., pending the submission of usage protocols by Ross University departments desiring to use phenolic products.

3.2. Ross University Safety and Security Dept. is responsible to the Administrator to see that phenols are used on campus in accordance with this policy

3.2.1. that departments have given notice to the Ross University Safety and Security Dept., of their desire to use phenol

3.2.2. that departments have filed a use protocol, use training protocol and safety procedures with the Ross University Safety and Security Dept.

3.2.3. that departments are equipped with the appropriate usage and safety equipment prior to instituting their use of phenol

4. Discussion of Phenol Hazards and Special Precautions

Phenol (carbolic acid) is a colorless or pink crystalline solid or viscous liquid with a characteristic sweet, tarry odor. It can affect the body if it is inhaled, ingested, or contacts eyes or skin. Exposure to vapors may cause eye, nose and throat irritation. The OSHA Permissible Exposure Limit is 5 ppm (19 mg/m³).

Synonyms: Carbolic acid, hydroxybenzene, monohydroxybenzene, phenyl alcohol, phenol hydroxide.

Hazards With Acute Exposure

- Contact with eyes may cause severe damage and blindness.
- Contact with skin may cause severe burns or systemic poisoning.

- Systemic effects may occur from any route of exposure, especially after skin absorption.

Hazards With Chronic Exposure

- Repeated or prolonged skin exposure to phenol or vapors from heated phenol may cause headache, nausea, dizziness, muscle ache, difficulty swallowing, diarrhea, vomiting, shock, convulsions, and death.
- Phenol affects the central nervous system, liver, and kidneys.

Special Safety Precautions

- Phenol should be used with adequate ventilation to minimize inhalation. When heating phenol, use a water bath inside a chemical fume hood. Never heat or melt phenol in an incubator, microwave, drying oven, or similar appliance.
- Prevent contact with skin by wearing neoprene gloves, lab coat, and chemical resistant apron.
- Wear safety glasses or a face shield if splashing may occur.
- Store phenol in a cool, dry, well-ventilated area, away from heated surfaces or ignition sources. Do not store with acids, strong oxidizers, calcium hypochlorite, and aluminum chloride.
- Skin contact requires immediate washing of the affected area with soap and water. Remove contaminated clothing and launder before wearing again.
- When phenol is heated, it can react vigorously with oxidizing agents.
- Phenol waste should be placed in a properly labeled glass bottle with a securely sealed lid. See SafetyWeb, "Guidelines for Disposal of Chemical Waste" for more information.
- Spills of undiluted phenol should be considered serious and cleaned up immediately. Small liquid spills of 50 ml or less may be absorbed using paper towels, or commercially available absorbent and placed in a sealed container or double plastic bags. If the spill is larger than 50 ml, remove ignition sources, provide adequate ventilation, evacuate the laboratory, close the doors, and call the Ross University Safety & Security Dept. at Ext 191.

Prior to use of phenol or any chemical, it is important to review the manufacturer-specific Material Safety Data Sheet (MSDS).