

Principal Investigator: _____

Date Approved: _____

This document covers basic chemical safety protocols (CSP) for phenol and supplements the laboratory Chemical Hygiene Plan as appropriate. Additional lab-specific safety operating procedures for phenol may also be required. The use of any phenol is subject to pre-approval by the Principal Investigator (PI) and/or the designated Laboratory Responsible Safety Person. DO NOT USE ANY PHENOL UNTIL YOU HAVE OBTAINED THE NECESSARY PRE-APPROVAL AND TRAINING.

Phenol

Phenol is often a component of the commercial product Trizol, mixed with chloroform. Refer to the Halogenated Solvents SOP for information on chloroform. Phenol itself is acutely toxic and corrosive.

As a corrosive, phenol can cause serious eye damage and skin burns if exposure occurs. Skin exposures may go undetected for some time as it has some anesthetic properties. Therefore, careful attention should be paid to gloves to ensure that penetration or tearing have not occurred.

Phenol also has some significant toxicity properties, and can be fatal in small doses. Long-term exposure may damage the liver or kidneys.



Personal Protective Equipment & Personnel Monitoring

**Lab Coat**

Traditional white lab coat or flame resistant lab coat with a chemical-resistant lab apron when working with flammable materials.

**Gloves**

Nitrile gloves.

Do not wear latex gloves.

**Eye Protection**

ANSI Z87.1-compliant safety glasses or safety goggles, or face shield if a splash hazard is present.

**Face Shield**

Labeling & Storage

Store away from strong oxidizers and any other materials that may be chemically incompatible. Containers must be stored below eye level. Each container's label must include a skull-and-crossbones pictogram, the word "Danger", and identify the material as both acutely toxic and corrosive. Containers of phenol must be stored in leak-proof secondary containment within a Designated Area. The secondary container's label must include a skull-and-crossbones pictogram, the word "Danger", and identify the material as both acutely toxic and corrosive. Also, if not plainly visible (e.g. through a cabinet window), labelling must be applied to storage locations where these are stored to avoid an inadvertent encounter.

Engineering Controls, Equipment & Materials

Fume Hood

It is advisable to use a fume hood when working with materials which are toxic by inhalation. If your protocol does not permit the handling of such materials in a fume hood, contact EHSS to determine whether additional respiratory protection is warranted.

Housekeeping

Spills

Notify others in the area of the spill, including your PI/Responsible Safety Person. If it is a small spill that you can easily handle, use the contents of your lab spill kit to clean it up. If it is a large spill, then evacuate the area where the spill occurred. Call Vanderbilt University Public Safety (VUPS) at 615-421-1911 or use the Vandysafe app on your smart phone. Report any exposure through Risk and Insurance Management's Origami portal and mark that it occurred in research when prompted. Both VUPS and the Origami system will notify EHS of the incident. Remain on-site at a safe distance to provide detailed information to first responders.

Decontamination

Decontaminate equipment and work surfaces which may have come into contact with phenol using soap and water.

Waste

Refer to the laboratory *Chemical Hygiene Plan* (Section 6.7) for information on proper chemical waste disposal procedures.

First Aid & Emergencies

Skin Contact

Immediately remove contaminated clothing and shoes; flush skin with water for at least 15 minutes. Get medical attention immediately.

Eye Contact

Check for and remove contact lenses. **Immediately** flush eyes with water for at least 15 minutes. Get medical attention immediately.

Inhalation

Without putting yourself at risk, move person into fresh air. Get medical attention immediately.

Ingestion

Get medical attention immediately.

