**Standard Operating Procedure**



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|  | **Chemical name/class:** | **Phenol** | **CAS #:** |  | **108-95-2** |
| **PI:** |  | **Date:** |  |  |
| **Building:** |  | **Room #:** |  |  |
| 1. | **Circumstances of Use:** |  |  |  |  |

***This SOP must be customized for each lab using Phenol. Use this section to describe the circumstances of use, including concentration and quantity as well as identification of a designated work area.***

2. **Potential Hazards:**

 May be fatal if inhaled.

 Damaging to the skin, respiratory tract, eyes, and central nervous system.

 May cause blindness.

 Potential Carcinogen.

 Phenol has an OSHA Permissible Exposure Limit of 5 ppm in air (8 hour workday).

 For more information, refer to *Prudent Practices in the Laboratory* (National Academies Press):

[http://www.nap.edu/openbook.php?record\_id=4911&page=376](http://www.nap.edu/openbook.php?record_id=4911&amp;amp%3Bpage=376)

3. **Engineering Controls:**

 An eyewash and safety shower must be available in the immediate work area for any work with phenol.

 When working with phenol, always work in a clean fume hood.

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| 4. | **W** | **ork Practice Controls:** |
|  |  | Work should be done in a way that avoids hand/glove contact. |
|  |  | If gloves come in contact through a splash (or otherwise), they should be removed and changed. |
|  |  | Use in the smallest practical quantities for the experiment being performed. |
|  |    | Avoid contact with heat, flames and ignition sources. Hot liquid phenol will attack aluminum, magnesium, lead and zinc metals.  Never heat phenol in an incubator or similar appliance, as the fumes are highly toxic in very small amounts and |
|  |  | explosive at 3%-10% in air. |

5. **Personal protective equipment (PPE):**

 The minimum PPE for work with phenol is doubled nitrile laboratory gloves, lab coat, and safety glasses. If a splash may occur, wear chemical splash goggles and/or a face shield.

6. **Transportation and Storage:**

 **Group II, Volatile Toxin**

 Store in a cool, dry, well-ventilated area.

 Store separately from strong oxidizing agents, strong bases, strong acids, halogens and other incompatible materials.

 Store below eye level, but not on the floor.

 Transport in secondary containment, preferably a polyethylene or other non-reactive acid/solvent bottle carrier.

7. **Waste Disposal:**

Handle and store wastes following the guidelines above while accumulating wastes and awaiting chemical waste pickup. Waste must be disposed of following your laboratory specific procedures and the requirements of UNC Charlotte’s Hazardous Waste Management Practices <https://safety.uncc.edu/services/laboratory-research-safety/hazardous-universal-waste>

[materialswaste](http://safety.uncc.edu/laboratory-safety/hazardous-materialswaste) .

8. **Exposures/Unintended contact:**

 If skin contact occurs, immediately remove contaminated clothing and rinse with soap and water for 15 minutes.

If irritation persists, seek medical attention.

 For eye exposures, immediately rinse eyes with copious amounts of water for at least 15 minutes, while occasionally lifting upper and lower lids, then promptly seek medical attention.

 If inhaled, can have narcotic-like effects along with dizziness and disorientation. Move person to fresh air immediately and if necessary, seek medical attention.

 If is ingested, DO NOT induce vomiting and drink copious amounts of water.

Contact the Student Health Center at 704-687-7400 for medical advice on occupational chemical exposures. For an actual chemical exposure, complete the work-related injury or illness report found at:

<https://safety.uncc.edu/services/workers-compensation>

9. **Spill Procedure:**

In the case of a small spill (<500 ml) wear nitrile gloves and splash goggles and absorb spill of material with a spill pad, absorbant material (ground up corn cobs/slickwick) or lab wipes. (Bag spill materials in plastic bag for waste pickup.) Ventilate area and wash spill site with detergent and water

On the UNC Charlotte campus, “large” spills of hazardous materials must be referred to the Campus Police by calling

911 from a campus phone or 704-687-2200 from any phone.

10.  **Training of personnel:**

All personnel are required to complete the UNC Charlotte EHS Laboratory Environment Training Checklist. This checklist includes an introduction to general chemical safety as well as review of the laboratory specific safety plan. Furthermore, all personnel shall read and fully adhere to this SOP when handling the chemical.

**“I have read and understand this SOP. I agree to fully adhere to its requirements.”**

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| **Last** | **First** | **UNC Charlotte ID** | **Signature** |
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