

SOP Toxic Chemicals

Purdue University
Applicable rooms:

Physics Department
All PRIME Lab areas

PRIME Lab

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INTRODUCTION

All toxic materials should be treated in a similar manner. Highly toxic materials must be handled in a designated area. The area may be a fume hood, a section of a lab, or the whole lab. Designated areas must be placarded with appropriate warning signs. A list of chemicals requiring a designated area can be accessed from the resources page of the safety website..

HAZARDS

May be fatal if inhaled or ingested

Can cause damage to skin and eyes

May be absorbed through unprotected or under protected skin, which can cause acute or chronic symptoms to occur.

Some toxic materials damage specific organs, others do not.

PROCEDURES

- 1 Read and understand the MSDS or SDS for any chemicals to be used before starting work.
- 2 Containers and equipment used for storage and processing of toxic materials should be resistant to the material being used.
- 3 Cover work surfaces with removable, absorbent, plastic backed paper, aluminum foil, or other secondary confinement means.
- 4 If a major spill occurs outside the hood, evacuate the area and call for assistance
When working in a designated area, decontaminate contaminated equipment, including glassware,
5 before removing them from the designated area. Decontaminate the designated area before normal work is resumed there.
- 6 Appropriate PPE and engineering controls must be used
On leaving the designated area, remove potentially contaminated protective apparel (gloves, etc) and
7 place it in an appropriate, labeled container for disposal by REM. Thoroughly wash hands, forearms, face, and neck.
- 8 If using toxicologically significant quantities of a substance on a regular basis (in quantities above a few milligrams to a few grams, depending on the substance, 3 or more times per week), contact REM. REM will arrange for a medical consultation, if appropriate
- 9 Ensure that contingency plans, equipment, and materials to minimize exposures of people and property in case of accident are available.
- 10 Thoroughly decontaminate or dispose of contaminated clothing or shoes. If possible, chemically decontaminate by chemical conversion to a less toxic product.

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MINIMUM PPE REQUIREMENTS

- 1 Skin cover to throat/wrists/ankles including required lab coat
- 2 Closed shoes
- 3 Chemical resistant gloves appropriate for the material used
- 4 Eye protection
 - If there is no splash hazard - Safety glasses with side shields
 - If there is a splash hazard - Splash goggles or safety glasses with side shields and face shield
- 5 Use a hood or other containment device for procedures which may result in the generation of aerosols or vapors
- 6 Any additional requirements of hazard certification in room where work is done

STORAGE

- 1 Chemicals should be segregated by hazard class
- 2 Segregation may be achieved by distance or secondary containment
- 3 Chemicals requiring a designated area must be stored in the designated area
- 4 Store breakable containers in chemically resistant trays

DISPOSAL

- 1 All chemical waste must be handled as specified in chapter 7 of the CHP
- 2 All hazardous chemical waste must be placed in appropriate closed containers
- 3 Containers must be properly labeled immediately
- 4 Toxic chemicals may not be disposed of in the sink or the trash.
- 5 REM will provide for disposal of all waste chemicals

EMERGENCY PROCEDURES

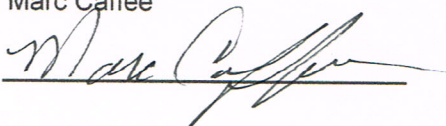
- 1 Spills should be handled as specified in chapter 8 of the CHP and the MSDS of SDS
- 2 Skin or eye contact should be washed with water immediately using an emergency shower or eye wash for at least 15 minutes unless otherwise indicated in MSDS or SDS.
- 3 Skin or eye contact should continue to be treated as specified in the MSDS or SDS
- 4 For any eye injury or significant other injuries Purdue EMS should be called immediately.
- 5 All injuries must be treated as specified in section 6.7 of the CHP
- 6 If a major spill occurs outside the hood, evacuate the area and call for assistance (911)

APPROVAL

PI

Marc Caffee

Signature:



Date:

6/10/19