

**This document covers basic chemical safety information for acutely toxic carcinogens and reproductive toxicants and supplements the laboratory Chemical Hygiene Plan as appropriate. The use of any acutely toxic carcinogen or reproductive toxicant is subject to pre-approval by the Principal Investigator (PI) and/or designated Laboratory Responsible Safety Person. DO NOT USE ACUTELY TOXIC CARCINOGENS OR REPRODUCTIVE TOXICANTS UNTIL YOU HAVE OBTAINED THE NECESSARY PRE-APPROVAL.**

## Acutely Toxic Carcinogens and Reproductive Toxicants

**Acutely toxic carcinogens** are materials that can be fatal in small doses and have the potential to cause cancer as the result of prolonged exposure.

**Acutely toxic reproductive toxicants** are materials that can be fatal in small doses and have the potential to interfere with fertility, fetal development, and/or lactation as the result of prolonged exposures.

**Acutely toxic mutagens** are materials that can be fatal in small doses and can cause genetic mutations as the result of sub-lethal exposures. Such mutations can often lead to cancer or reproductive toxicity.



## Personal Protective Equipment & Personnel Monitoring



**Lab Coat**

Traditional lab coat or flame-resistant lab coat when working with flammable materials.



**Gloves**

Nitrile or neoprene gloves typically provide adequate protection against minor splashes. Consult with your PI or supervisor to determine whether any materials involved in your process require alternative hand protection.



**Eye Protection**

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

## Labeling & Storage

Have a methodology to distinguish these, or store in secondary containment, apart from other materials that are not particularly hazardous, or which may be chemically incompatible. Each container's label must include appropriate pictograms and identify the material as acutely toxic and a reproductive toxicant, carcinogen, or mutagen. Containers of these materials must be stored in leak-proof secondary containment within a Designated Area. The secondary container's label must include appropriate pictograms and identify the material as acutely toxic and a reproductive toxicant, carcinogen, or mutagen. 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 these materials. If your protocol does not permit the handling of such materials in a fume hood, contact the Department of Environmental Health, Safety and Sustainability (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 (625) 421-1911 from your cell phone 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 EHSS of the incident. Remain on site at a safe distance to provide detailed information to first responders.

### Decontamination

Decontamination methods will vary based on the materials handled and equipment being used. Please review the chemical Safety Data Sheet for guidance on cleaning materials. Dispose of the used chemical and contaminated disposables as hazardous waste following the guidelines in the CHP.

### Waste

Refer to the laboratory *Chemical Hygiene Plan* (Section 6.7) for information on proper chemical waste disposal procedures. Please note that some carcinogens and acute toxicants may be considered Extremely Hazardous when disposed of as waste.

## 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

Move person into fresh air. Get medical attention immediately.

### Ingestion

Get medical attention immediately.

