



Principal Investigator: _____

Date Approved: _____

This document covers basic chemical safety information for carcinogens and reproductive toxicants. The use of any carcinogen or reproductive toxicant is subject to pre-approval by the Toxic Substances Committee. DO NOT USE CARCINOGENS OR REPRODUCTIVE TOXICANTS UNTIL YOU HAVE OBTAINED THE NECESSARY APPROVAL.

Carcinogens and Reproductive Toxicants

Refer to the University of Arkansas Chemical Hygiene Plan for a description of chemicals that will be considered as a Particularly Hazardous Substance (PHS) carcinogen or reproductive toxicant.

Chemicals that meet the definition of a PHS carcinogen or reproductive toxicant must be used only in a designated area where limited access, special procedures, knowledge, and work skills are required. A designated area can be the entire laboratory, a specific laboratory workbench, or a laboratory hood. Designated areas must be clearly marked with signs that identify the chemical hazard and include an appropriate warning; for example: WARNING! CARCINOGEN/ REPRODUCTIVE TOXICANT WORK AREA



Carcinogens are materials that have the potential to cause cancer.

Reproductive toxicants are materials that have the potential to interfere with fertility, fetal development, and/or lactation.

Mutagens are materials that can cause genetic mutations. Such mutations can often lead to cancer or reproductive toxicity.

Please note that the use of Listed Carcinogens, halogenated liquids, ethidium bromide, and formaldehyde is not covered by this general SOP.

Exposure, Signs and Symptoms and Chemical Properties

Review the appropriate sections of the chemical specific Safety Data Sheet (SDS) for information on ways to detect exposure, appropriate exposure limits, signs and symptoms of exposures and chemical properties. If data is lacking in any area, refer to the following sites for additional information:

<https://pubchem.ncbi.nlm.nih.gov/>

<https://druginfo.nlm.nih.gov/drugportal/>

<https://toxnet.nlm.nih.gov/index.html>

<http://web.doh.state.nj.us/rtkhsfs/indexfs.aspx>

Always use the smallest amount of chemical that is consistent with the requirements of the work performed.

Understand the chemical properties and what are the likely routes of exposure based on those properties and the

procedures to be performed. Use containment devices (e.g., fume hood, glove box) when substance can volatilize, when the substance is manipulated, whenever aerosols or particulates may be produced, or when an action may result in an uncontrolled release.

Contact Environmental Health and Safety (EHS) if there are any questions (479-575-5448).

Personal Protective Equipment (PPE) & Personnel Monitoring



Lab Coat

Chemical/Flame resistant



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

Store away from other materials that are chemically incompatible. Each container's label must include an appropriate pictogram and identify the material as a carcinogen, reproductive toxin, 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 an appropriate pictogram and identify the material as a reproductive toxicant, carcinogen, or mutagen. Also, if not plainly visible (e.g. through a cabinet window), labeling must be applied to storage locations where these are stored to avoid an inadvertent encounter.

Engineering Controls, Equipment & Materials

Fume Hood

Use a fume hood (or equivalent) to keep exposure to carcinogens/reproductive toxins as low as possible. If your protocol does not permit the handling of such materials in a fume hood, contact EH&S (479-575-5448) to perform an exposure assessment to determine whether alternative engineering controls or additional respiratory protection is required.

Housekeeping

Spills

Notify others in the area of the spill, including your supervisor. Evacuate the location where the spill occurred. Call 911 and report any exposure to EHS (479-575-5448). Remain on-site (at a safe distance) to provide detailed information to first responders.

Decontamination

After each use (or day), wipe down the immediate work area and equipment to prevent accumulation of chemical residue. Decontaminate workspace with appropriate materials (refer to the SDS). When finished wash hands and arms with soap and water and properly dispose of all wastes. Contaminated items (e.g., solid and liquid materials and PPE) should be discarded as hazardous waste.

Waste

Refer to the UA Chemical Hygiene Plan for details and contact EHS (479-575-5448) for specific disposal instructions.

First Aid & Emergencies

Skin or Eye Contact	Remove contaminated clothing and accessories; flush affected area for at least 15 minutes with water. If symptoms persist, get medical attention/call 911.
Inhalation	Move person into fresh air. If symptoms persist, get medical attention/call 911.
Ingestion	Rinse mouth with water. If symptoms persist, get medical attention/call 911.

Attachments: Chemical Specific Safety Data Sheet (SDS)

Note: If there is more than one chemical that classifies as a PHS based on carcinogenicity/reproductive toxicity/mutagenicity; include all appropriate SDSs with this SOP.

Authorized and Trained Personal

Name	Signature	Date