

Principal Investigator: _____

Date Approved: _____

This Chemical Safety Protocol (CSP) covers basic chemical safety information for oxidizing carcinogens and reproductive toxicants and supplements the laboratory Chemical Hygiene Plan as appropriate. Additional lab-specific safety operating procedures for oxidizing carcinogens and reproductive toxicants may also be required. The use of any oxidizing carcinogen and reproductive toxicant is subject to pre-approval by the Principal Investigator (PI) and/or the designated Laboratory Responsible Safety Person. DO NOT USE OXIDIZING CARCINOGENS OR REPRODUCTIVE TOXICANTS UNTIL YOU HAVE OBTAINED THE NECESSARY PRE-APPROVAL AND TRAINING.

Oxidizing Carcinogens and Reproductive Toxicants

Oxidizing carcinogens are materials that can contribute to combustion by acting as an oxygen source, may spontaneously give off oxygen at room temperature or with slight heating, or are capable of forming explosive mixtures when mixed with combustible, organic or easily oxidized materials, and which have the potential to cause cancer as the result of prolonged or repeated exposures.



Oxidizing reproductive toxicants are materials that can contribute to combustion by acting as an oxygen source, may spontaneously give off oxygen at room temperature or with slight heating, or are capable of forming explosive mixtures when mixed with combustible, organic or easily oxidized materials, and which have the potential to interfere with fertility, fetal development, and/or lactation as the result of prolonged or repeated exposures.



Oxidizing mutagens are materials that can contribute to combustion by acting as an oxygen source, may spontaneously give off oxygen at room temperature or with slight heating, or are capable of forming explosive mixtures when mixed with combustible, organic or easily oxidized materials, and which can cause genetic mutations as the result of exposures. Such mutations can often lead to cancer or reproductive toxicity.

Personal Protective Equipment & Personnel Monitoring



Lab Coat

Flame resistant lab coat



Gloves

Neoprene or butyl rubber gloves typically provide adequate protection against minor splashes.



Eye Protection

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

Labeling & Storage

Store in secondary containment away from organics, flammables, reducing agents and any other materials that may be chemically incompatible. **Do not** store oxidizers in untreated wooden cabinets. Each container's label must include appropriate pictograms and identify the material as both oxidizing 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 both oxidizing and 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

It is advisable to use a fume hood when working with materials which are carcinogenic or reproductive toxicants. If your protocol does not permit the handling of such materials in a fume hood, contact the Office of Environment, Health, Safety, and Sustainability (EHSS) to determine whether additional respiratory protection is warranted.

Housekeeping

Releases

Immediately notify others in the area of the release and evacuate the location where the release occurred. Notify your PI/Responsible Safety Person and 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

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.

Waste

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

First Aid & Emergencies

Skin or Eye Contact

Remove contaminated clothing and accessories; flush affected area with water. If symptoms persist, get medical attention.

Inhalation

Move person into fresh air. If symptoms persist, get medical attention.

Ingestion

Rinse mouth with water. If symptoms persist, get medical attention.

