

Principal Investigator: _____

Date Approved: _____

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

Halogenated Solvents

Halogenated solvents are liquids containing halogen atoms: fluorine, chlorine, bromine, or iodine. The halogenated solvents covered by this SOP are volatile and carcinogenic. Unlike many other carcinogens, they have the ability to penetrate disposable latex and nitrile gloves. Examples include dichloromethane (methylene chloride), chloroform, carbon tetrachloride, bromoethane, etc.



Personal Protective Equipment & Personnel Monitoring



Lab Coat

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



Gloves

Two pairs of neoprene gloves. If the glove is chemically exposed, the outer glove must be removed and replaced immediately.



Eye Protection

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

Labeling & Storage

Store in secondary containment away any materials that may be chemically incompatible. Labels identifying the materials as carcinogen must appear on the bottles and secondary containers. 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 materials which are toxic by inhalation. If your protocol does not permit the handling of such materials in a fume hood, contact 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

Work areas where halogenated solvents are used must be decontaminated on a routine basis to limit exposure. Soap and water is typically effective. Please review the chemical Safety Data Sheet for guidance on cleaning specific 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.

