Stanford | Environmental Health & Safety

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General Use SOP

Sensitizers

Process or Experiment Description

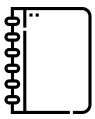
This standard operating procedure (SOP) provides general guidance on working safely with lab-scale quantities of sensitizers. In some cases, multiple SOPs may apply to a single chemical (e.g., for paraformaldehyde, both General Use SOPs for carcinogens and sensitizers would apply). For questions about the applicability of any item in this SOP, contact your Principal Investigator/Supervisor or EH&S at 650-723-0448.

For work with large quantities of sensitizers, complex procedures, or otherwise particularly hazardous procedures involving sensitizers, EH&S recommends completing a risk assessment, reviewing other EH&S guidance (such as guidance on scale-up), looking for SOPs on similar procedures in the SOP Library, and/or writing a dedicated SOP and submitting it for EH&S review.

Hazards

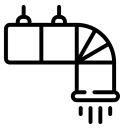
A sensitizer is a substance that can cause an allergic reaction after repeated exposure. Examples of common sensitizers include some peptide coupling reagents like HATU and HBTU, various isocyanates, formaldehyde, glutaraldehyde, acrylonitrile, and nickel.

Control of Hazards



General

- Minimize the potential for splash, splatter, or other likely scenarios for accidental contact.
- Be diligent about lab hygiene - avoid touching your face or items that you will handle with ungloved hands (e.g., a smartphone). Change gloves regularly and thoroughly wash your hands immediately after completing work with the material.



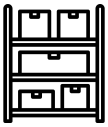
Engineering/Ventilation Controls

Use a properly functioning lab chemical fume hood when handling sensitizers that can be inhaled. If the process doesn't allow working in a fume hood, contact Environmental Health and Safety at 650-723-0448.

Personal Protective Equipment

In addition to proper street clothing (long pants or equivalent that covers legs and ankles, and close-toed non-perforated shoes that completely cover the feet), wear the following Personal Protective Equipment (PPE):

- Safety glasses (if splash potential exists, wear goggles and a face shield instead)
- Lab coat
- Appropriate chemical-resistant gloves



Special Handling Procedures and Storage Requirements

Containers should be closed when not in use. Segregate incompatible chemicals and use secondary containment. Follow any substance-specific storage guidance provided in SDS.

Emergency Procedures

All incidents should be reported to EH&S with an incident report form.

Spill

Refer to EH&S' guidance on hazardous materials incidents for general procedures for incident response, and call 650-725-9999 for assistance with spill cleanup.

If you are trained in spill cleanup and the spill is not health-threatening, proceed with spill cleanup. There may be variations in procedure based on the specific spill, but the general steps are:

1. Don the appropriate PPE (See Personal Protective Equipment section, above).
2. Locate the nearest spill kit and bring it to the spill.
3. Use the absorbent pads in the spill kit to wipe up the spill.
4. Place the used absorbent pad and gloves inside the spill kit jar.
5. Place a waste tag on the spill kit and request waste pickup.

Exposure

If immediate medical attention is required, call 911. Remove any contaminated clothing, and IMMEDIATELY flush contaminated skin with water for at least 15 minutes. Use a safety shower for any skin exposures to the trunk, legs, or feet.

For eye exposures, IMMEDIATELY flush eyes with water for at least 15 minutes using an eyewash station.

If medical attention is needed, provide the SDS(s) of the chemical(s) to aid medical staff in proper diagnosis and treatment.

For minor exposures, personnel can contact the Stanford University Occupational Health Center at 650-725-5308. For serious exposures, personnel should go to the Stanford Hospital Emergency Department.

Those who work with hazardous chemicals are entitled to receive medical attention/consultation when:

- A spill, leak, explosion or other occurrence results in a hazardous exposure (potential overexposure).
- Symptoms or signs of exposure to a hazardous chemical develop.

Waste Disposal

Dispose of sensitizing chemicals as hazardous waste. All hazardous waste containers should have a waste tag attached before any waste is added. Before combining materials in waste containers, review the SDSs and Stanford's Incompatibility Guide. For general guidance regarding waste disposal, refer to the guide for handling and storing waste and the chemical waste poster.

Minimum Training Requirements

- General Safety & Emergency Preparedness (EHS-4200)
- Chemical Safety for Laboratories (EHS-1900)
- Laboratory-specific training

Approval Required

Consult with your PI regarding the need for prior approval. Laboratory personnel shall seek and the PI must provide prior approval of any chemical usage involving Restricted Chemicals or High Risk Procedures.

Designated Area

For sensitizers that are also considered particularly hazardous substances (i.e., select carcinogens, reproductive toxins, and highly acutely toxic materials), a designated area shall be established per the other applicable SOP(s).