

Standard Operating Procedure
for work with

Chemical name/class: Epoxy Resin Systems

CAS #: various

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Building: Fitzpatrick CIEMAS

Room #: Sample Prep

Designated Work: Chemical processing with Acids and Bases

1. **Circumstances of Use:**

Epoxy Resin systems are to be mixed and used in the Sample Prep lab of SMIF. They are primarily used for sample preparation prior to imaging or analysis.

2. **Potential Hazards:**

Consult the Safety Data Sheet (SDS) for the particular epoxy resin components you are using

Specific hazards may include:

- Skin and eye irritation or burns
- Allergic sensitization from skin contact
- Respiratory irritation and other respiratory responses
- Central nervous system depression
- Epichlorohydrin, contained in trace amounts in many epoxy resins, is a suspect carcinogen.

3. **Engineering Controls:**

- Always work with epoxy resin systems in the designated "Vitrobot Hood" in the Sample Preparation Lab.
- An eyewash and safety shower are available in the immediate area.

4. **Work Practice Controls:**

- Use only in a designated Vitrobot Hood" in the Sample Preparation Lab
- Keep containers closed as much as possible. Only open a container when it is inside the designated Vitrobot chemical hood and you are wearing the proper PPE (section 5).
- Contaminated items are to be disposed of properly as hazardous waste, following SMIF's hazardous waste policy (see section 7).

5. **Personal protective equipment (PPE):**

- Fastened lab coat
- Nitrile gloves
- Safety glasses or goggles.

6. **Transportation and Storage:**

- Epoxy resin solutions must be in sealed shatter-resistant containers and stored in the exhausted chemical cabinet designated for acids in the sample Prep lab.
- Wear the designated PPE (section 5) when transporting a container to the vitrobot hood.

7. **Waste Disposal:**

Epoxy waste should be sealed in a shatter-resistant container and then packed into a zip lock bag and properly labeled with the type of waste, your name, and date. The waste bag should be completely sealed.

- The Bagged, sealed, and labeled epoxy waste should be placed in the acid waste container in the Sample Prep lab for pick-up by SMIF staff.

8. **Exposures/Unintended contact:**

Contact Employee Occupational Health and Wellness (EOHW) at 919-684-3136 for medical advice on occupational chemical exposures. For an actual chemical exposure

- Flush exposed eyes or skin with water for at least 15 minutes.
- If there is respiratory irritation associated with exposure, remove all persons from the contaminated area and contact the OESO spill team.
- Exposed persons should seek immediate medical attention at the nearest emergency department/
- Call 911 from a campus phone or 919-684-2444 from any phone to request assistance if needed. Contact Employee Occupational Health and Wellness at 919-684-8115 for exposure-related advice.

The work-related injury or illness report found at: <http://www.hr.duke.edu/benefits/medical/workcomp/report.php> should be completed within 24 hours. Follow-up medical attention should be sought through Duke Employee Occupational Health and Wellness (919-684-3136).

9. **Spill Procedure:**

In the event of a spill, follow SMIF spill procedures and immediately contact SMIF staff. Only SMIF staff and/or appropriate OESO personnel should clean up spills

Spills Contained Inside a Chemical Hood

- Avoid breathing vapors from the spill and leave the immediate area of the chemical hood
- Alert people in the immediate area of the spill
- Notify SMIF immediately by calling emergency numbers posted near the phone
- Wait for instructions from SMIF or for SMIF personnel to arrive to complete the clean-up of the affected area.

Spills Outside of a Chemical Hood

- Attend to injured or contaminated persons and remove them from exposure
- Press the closest manual alarm button (blue box) and evacuate the lab
- Make yourself available to the SMIF staff and/or emergency responders and be prepared to tell the following: What chemical(s) are involved, how much was spilled, where the spill is located, nature of any injuries

10. **Training of personnel:**

- All personnel are required to complete the SMIF General Lab Safety session and the SMIF Chemical Safety and Wet Hood training session.
- All personnel shall read and fully adhere to the *Wet Hood Operating Procedure* and the *SMIF Lab Safety and Procedures Manual*