

Hazardous Materials

Description

Workplaces which utilize hazardous materials or chemicals of any kind must have procedures in place to deal with dangerous situations such as spills or chemical exposures. Developing these procedures in advance can greatly reduce the risk of personnel injury while ensuring maximum safety for all laboratory workers.

Chemical and Radioactive Waste Disposal personnel are trained to assist in the event of a spill and should be contacted immediately in the event of any major spill or in any case where chemicals may be released to the environment. Additionally, chemical spill kits are available for all UF labs by calling the main EH&S office at 352-392-1591 and placing an order for one.

[su_spoiler style="fancy" icon="chevron" title=" Chemical Spill with Injury or Contamination "]
[_su_spoiler icon="chevron" title=" Small Spill "] For a small spill of a chemical which does not threaten the safety of the workers present, individuals at the scene should do the following.

- Notify all nearby personnel that a spill has occurred and request assistance as necessary
- Don appropriate personal protective equipment for the situation. At a minimum, spill responders should don eye protection and gloves; shoe covers should be considered if the spill is located on the floor.
- Take action to stop the spill (upright bottles, recap or contain leaking containers, etc.)
- Cover the spill with absorbent materials to stop it from spreading. Small acid spills may be covered with soda ash, which will neutralize the acid and make the spill easier and safer to clean up.
- Clean up the spill and any absorbents used. Decontaminate the spill area and bag all cleanup material. Label all contaminated cleanup materials as Hazardous Waste
- Dispose of spill cleanup materials through EH&S by submitting a [Chemical Waste Pickup Request](#)

[/_su_spoiler] [_su_spoiler icon="chevron" title=" Large Spill "] In the event that either the size or the danger level of a chemical spill presents a hazard to those individuals present, or threatens a fire or explosion, workers must immediately:

- **ACTIVATE THE BUILDING'S FIRE ALARM SYSTEM IF THE SPILL REPRESENTS A THREAT TO HUMAN LIFE OR MAY CAUSE A FIRE OR EXPLOSION.**
- Notify all workers in the work space that a spill has occurred, and evacuate all personnel from the work space to a safe location.
- Isolate the work space to prevent inadvertent entry: lock any access doors, place signs on doors reading "DO NOT ENTER-CHEMICAL SPILL"
- Call EH&S Chemical and Radioactive Waste Disposal group at 392-8400 for clean-up assistance. If the emergency occurs outside of normal work hours, contact the University Police Department at 392-1111.

[/_su_spoiler] [/su_spoiler] [su_spoiler style="fancy" icon="chevron" title=" Mercury Spill "] [_su_spoiler icon="chevron" title=" Small Mercury Spill (i.e. broken Mercury thermometer) "]

- The preferred way to collect mercury is to dust the area of the spill with a mercury absorbing powder. This powder is available from several different manufacturers; the “PIG” brand product may be ordered [here](#). When used according to instructions, this powder will form a solid mercury-metal amalgam that is much safer and easier to handle than elemental mercury.
- Begin clean up at the outer perimeter of the spill and work towards the origin. Work carefully making sure not to miss any mercury, and note which areas have already been cleaned.
- Use an index card or rubber squeegee to gently collect the smaller beads and form a large bead that can be sucked up with a disposable pipette or amalgamated with mercury absorbing powder. Take care and use small careful strokes so as to maintain control of the mercury beads.
- Use a pipette to suck up the large mercury bead and place the pipette in a sealed rigid container. If using a mercury absorbing powder follow the manufacturer’s instructions for application and use. After the amalgam has hardened, it can be collected with a squeegee or stiff card and placed into the rigid container for disposal.
- Sulfur powder can be used to cover mercury and limit the movement of beads on smooth surfaces. Lightly apply a coating of sulfur to the spill area and use the same index card method to collect all mercury and excess sulfur. Do not breathe sulfur dust.
- Thoroughly inspect the spill area using a flashlight to help illuminate the smaller beads. Mercury beads will often be pinhead size, or smaller. Duct or masking tape can be used to pick up very small beads of mercury that you may find.
- Re-clean the spill site and perimeter if necessary. Pay close attention to cracks and crevices that may hide small beads of mercury.
- In the event that a vertical or overhead surface is contaminated it may be necessary to use mercury decontamination wipes or sponges
- When the area has been thoroughly decontaminated, place any sponges, used powder, rags, shoe covers, gloves, and anything used for the clean-up into a plastic bag for disposal. Do not mix these items with any free mercury you may have collected. Label the bag as hazardous waste indicating the solids are contaminated with mercury.
- Any portion of a broken thermometer collected as part of clean up should be placed into a plastic bag and the bag placed in a rigid unbreakable container such as a Nalgene bottle.
- Submit a [hazardous waste pick-up request](#) to EH&S’s Chemical and Radioactive Waste Disposal group to arrange for disposal.

[/_su_spoiler] [_su_spoiler icon=“chevron” title=“ Large Mercury Spill (i.e. manometer or larger device) “]

- In the event that the size or the complexity of the spill precludes laboratory workers from using this procedure, evacuate and isolate the immediate area and contact Environmental Health and Safety’s Chemical and Radioactive Waste Disposal group at 392-8400.

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