



## **STANDARD OPERATING PROCEDURE MERCURY SPILL CLEAN-UP**

### **Definitions**

Mercury is a silver liquid metal that vaporizes at temperatures as low as 10°F/-12°C. Mercury vapor is colorless, odorless, and may be toxic when inhaled. Most health effects result from chronic exposure. Symptoms of chronic exposure include fatigue, anorexia, weight loss, inflammation of gums, and tremors. The symptoms of acute overexposure are bronchitis, cough, chest pain, excessive salivation, and a metallic taste. Short-term exposures to low-level mercury vapors present little hazard.

A large mercury spill is > 25 mL, such as a broken manometer. For a large spill immediately call EH&S at 817-272-2185, or the University Police at 817-272-3003. Prevent people from walking through the spill area. Notify others to leave the immediate area. Close all doors to the room and wait outside the area for EH&S responders.

A small spill of mercury, such as a broken thermometer, can be cleaned up immediately by laboratory personnel.

### **Spill Clean-Up**

1. If your lab work requires you to work with mercury you should obtain a mercury spill kit containing supplies for a mercury cleanup. Mercury spill kits are commercially available and convenient. Refer to Safe Operating Procedure for Laboratory Chemical Spills. At a minimum, you should wear a lab coat, mercury compatible gloves (latex gloves won't protect you from the hazards of Mercury- see glove guide below), and disposable shoe covers during cleanup of mercury spills to prevent skin absorption or contamination of clothing.
2. When possible clean up all mercury spills with a specially designed high efficiency particulate air (HEPA)-filtered vacuum with a charcoal filter. EH&S will respond with this equipment when necessary.
3. Under no circumstances should you sweep mercury with a broom or vacuum with an ordinary vacuum cleaner. These procedures will disperse mercury vapors and droplets quickly into the air and spread the contamination.
4. Clean up very small amounts of mercury using an index card or rubber squeegee to form a larger bead that you can vacuum with a HEPA device or amalgamate.
5. You can also collect beads of mercury with a disposable pipette, a water-trapped vacuum line attached to a disposable pipette, or a hand-operated vacuum pump.



6. You can use mercury-absorbing powders, if available, to amalgamate mercury in non-accessible locations.
7. Place mercury waste and all materials used in spill cleanup in a sealed bottle or in a double layer of plastic bags. Label for disposal by EH&S through the hazardous waste program.
8. After you have collected all visible mercury, wash the area with a detergent solution, rinse, and allow drying before use.
9. In areas that you cannot completely clean of mercury, you can apply a sulfur slurry to oxidize the mercury and reduce the possibility for airborne vapors. Vacuum or wet-clean excess sulfur powder during final clean-up after it has had time to react with the mercury.
10. Carpets heavily contaminated during a mercury spill may have to be removed if EH&S monitoring of mercury vapor levels after vacuum cleaning determines this need.

## **Disposal**

All mercury and mercury-containing wastes must be packaged, labeled and disposed via the EH&S hazardous waste program and according to the University's Guidelines for Disposal of Hazardous Waste. **DO NOT MIX MERCURY COMPOUNDS WITH OTHER SOLVENT WASTE.**

## **References**

[Ansell 7th Edition Chemical Resistance Guide.pdf](#)

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