

How to Clean Up Elemental Mercury Spills

Mercury spills are common in lab settings and can often be avoided by selecting supplies and equipment that do not contain mercury. Alcohol thermometers are a readily available and economically sound solution to mercury thermometers. *Most* elemental mercury spills do not pose a high risk, however, mercury vapors are toxic so appropriate procedures should be followed. Mercury is dense, has a high surface tension and low viscosity, therefore, spills tend to break up into small droplets. Droplets easily break up into smaller and smaller pieces and can become too small to see. Extremely small droplets often collect in cracks on common surfaces (ex. bench tops, vinyl floor tiles). Use caution when collecting spilled mercury to avoid further disturbance of the material.

Small spills: Less than or equal to a single thermometer

1. Isolate the spill area
2. Wear nitrile gloves. Covering shoes with disposable covers is advised.
3. Pick up any broken pieces of glass or sharp materials. Place on a paper towel. Fold the towel and place in a sealable bag. Secure the bag and label accordingly.
4. Begin the mercury clean up by consolidating large droplets using an index card or firm piece of paper. To maintain control, use slow sweeping motions. The larger globules can be carefully collected into a dustpan or stiff piece of paper.
5. A capillary or transfer pipette can be used to aid in the collection of smaller droplets.
6. Place collected droplets onto a damp paper towel. Fold up and place in a sealable bag. Secure the bag and label accordingly.
7. Mercury spill kits include powder and sponges that can aid in clean up. These materials can be used to amalgamate the mercury – and are good to use in hard to reach places, surfaces and in cracks. Central Research Stores sells kits for \$23.45 (catalog # 931765).
8. If you use a mercury spill kit, sprinkle the control powder on the mercury and add a small amount of water. The resulting amalgam should make it easier to collect. Dispose the collected material as mercury containing hazardous waste.
9. Once you have collected all visible material, turn off the lights and scan the floor (parallel to the floor) with a flashlight. Look for any glistening material and use pipettes or spill kit sponges to collect any additional mercury.
10. Linoleum, solid floors, slate or other solid countertop surfaces are fairly easy to clean. Spills on carpet or upholstery **can not** be cleaned and should be properly disposed of once contaminated. The effected portion can be cut out for hazardous material disposal.
11. All “clean up” materials should be collected in a plastic bag or container and disposed of as hazardous waste. Contact 3-3535 for disposal questions. “Clean up” materials should include disposable foot covers and gloves.

Larger spills: Greater than a thermometer

1. Isolate the area and eliminate any traffic in the spill area
2. Post a sign at the entrance to keep staff out
3. Lower the room temperature and open windows if possible
4. Contact ORI at 404-413-3551 or 404-413-3540 to report the spill

NEVER do the following when cleaning up a mercury spill:

- **DO NOT** use a common vacuum cleaner because it will blow mercury vapor into the air. Any contaminated vacuum cleaner must be disposed as hazardous waste.
- **DO NOT** use a broom. It will cause beads to break up and will spread them over a greater area.
- **DO NOT** pour mercury down any drain. Mercury can damage plumbing and is a water pollutant.
- **DO NOT** place mercury contaminated items in a washing machine. It can contaminate the machine and pollute sewage.
- **DO NOT** walk around areas where mercury has spilled. Shoes may become contaminated and then can be spread throughout areas from those shoes.