



Guidance Note

Broken Mercury Thermometers

March 2007

HSD - HWG - 005

This information is for your use and as a way of providing consistent information. There is no response required.

Broken Mercury Thermometers

The following information should be considered in the event that a mercury thermometer or other mercury containing device breaks and releases mercury into the work area:

1. If the mercury thermometer breaks on the floor inside a laboratory, make every attempt to keep people out of the spill site. Allowing personnel to walk on a metallic mercury spill site will scatter the mercury beads over a wider area and make the cleanup more difficult and time consuming. Contact EH&S (303 724-0345) to get someone to clean up mercury spills. If a mercury thermometer breaks inside a hallway or other high traffic public area it may also be necessary to call the University Police Office (911) to control access to the area.
2. Whenever a mercury thermometer breaks inside a heating block at elevated temperatures (above 100 degrees Fahrenheit), request that all personnel in the immediate area evacuate the room to prevent potential exposures to airborne mercury vapors and turn off the heating block if this can be done safely. EH&S will use a Jerome mercury detector to measure the airborne mercury vapor concentration.
3. A broken mercury thermometer inside a water bath at room temperatures does not present a significant inhalation health hazard because the water will trap most of the mercury vapor (heated water baths release more mercury vapors). Bail most of the water out of the water bath and collect the mercury beads into a corner of the bath. Remove the mercury beads with a disposable pipette. Collect the mercury beads in a sealed plastic container and dispose them as hazardous waste through EH&S.
4. Compact high intensity mercury (HIM) tubes may release significant amounts of mercury vapors if they break while being used inside electronic equipment. If an HIM tube breaks while in use, evacuate the laboratory and contact EH&S to monitor mercury vapor concentrations inside the room with the Jerome mercury detector. The amount of metallic mercury vapors released from a standard four foot fluorescent light tube is insignificant (20 - 50 milligrams).
5. Spills of compounds of mercury (i.e., mercuric chloride, dimethyl mercury, etc.) will require the standard chemical spill response (EH&S will evaluate spill site for cleanup).



University of Colorado at Denver and Health Sciences Center

Environmental Health and Safety Department

6. EH&S has a program in place that will exchange your mercury containing thermometers for alcohol based ones free of charge. For additional information contact EH&S.