Guidelines for Mercury Spill Control

SafetyNet #: 16

Mercury and Its Hazards

Mercury is a silvery metallic liquid that vaporizes at temperatures as low as 10°F. Mercury vapor is colorless and odorless and may cause toxic effects when inhaled. Mercury vapor poisoning can be acute or chronic. Most health effects result from chronic exposure. Symptoms of chronic overexposure are inflammation of gums and mouth, excessive salivation or metallic taste, and tremors, particularly of the hands. The symptoms of acute exposure are bronchitis, cough, chest pain, and irritability. Short-term exposures to low level mercury vapors present little hazard and respirators are usually not required.

Safety Procedures for Handling Mercury Spills

Evaluate the Spill

- For large spills of mercury such as broken manometers, immediately call the UC Davis Fire Department at 9-1-1. Eliminate the potential spread of mercury vapor by preventing people from walking through the spill area. Notify others and ask everyone to leave the area. Close all doors to the area and wait outside the area for Hazardous Materials responders. Warn others not to enter. UC Davis Fire Department will respond with trained Hazardous Materials personnel, personal protective equipment and a specially designed mercury vacuum.

- Small spills of mercury, such as broken thermometers, must be cleaned up immediately by laboratory personnel.

Clean-Up

- A lab coat, disposable gloves, and shoe covers should be worn during cleanup of mercury spills to prevent skin absorption or contamination of clothing.

- The best way to collect mercury is to use an index card or rubber squeegee to form a pile or globule that can be sucked up or amalgamated.

- Beads of mercury can be sucked up with a disposable pipette, a water-trapped vacuum line attached to a disposable pipette or a hand-operated vacuum.
Mercury-absorbing powders, if available, can be used to amalgamate mercury. Mercury waste and materials used in spill cleanup must be promptly placed in a sealed bottle or in a double layer of plastic bags and labeled for disposal as hazardous waste.

Under no circumstances should mercury be swept with a broom or vacuumed with an ordinary vacuum cleaner. These procedures will disperse mercury more quickly into the air and spread the contamination.

After all visible mercury has been collected; the area should be washed with a detergent solution, rinsed, and allowed to dry before use. This treatment should remove most remaining mercury residue.

All mercury wastes must be managed and disposed as hazardous waste. See SafetyNet #8 [1], “Guidelines for Disposal of Chemical Waste” for more information.

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More information

Related content

1. Chemical Waste Disposal Guidelines