

STANDARD OPERATING PROCEDURE



MERCURY SPILL

PURPOSE: Staff may be at risk of accidental exposure to mercury spills. Mercury is a silver liquid metal that vaporizes at temperatures as low as 10 degrees / -12 degrees 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 small spill of mercury, such as a broken thermometer, can be cleaned up immediately. A large mercury spill is greater than 25 mL.

SCOPE AND APPLICABILITY: The following protocol should be used when there is a mercury spill.

WHAT **NEVER** TO DO AFTER A MERCURY SPILL

- **Never** use a vacuum cleaner to clean up mercury. The vacuum will put mercury into the air and increase exposure.
- **Never** use a broom to clean up mercury. It will break the mercury into smaller droplets and spread them.
- **Never** pour mercury down a drain. It may lodge in the plumbing and cause future problems during plumbing repairs.
- **Never** walk around if your shoes might be contaminated with mercury. Contaminated clothing can also spread mercury around.

SMALL SPILL CLEAN-UP (amount in a thermometer)

- Have everyone leave the area. Don't let anyone walk through the mercury on their way out.
- Open all windows and doors to the outside. Shut all doors to other parts of the building.
- DO NOT allow students to help you clean up the spill.
- Mercury can be cleaned easily from the following surfaces: wood, linoleum, tile and any similarly smooth surfaces.
- If a spill occurs on carpet, curtains, upholstery or other absorbent surfaces, these contaminated items should be thrown away in accordance with the disposal means outlined below. Only cut and remove the affected portion of the contaminated carpet for disposal.

ITEMS NEEDED TO CLEAN UP A SMALL MERCURY SPILL

1. 4-5 zip lock type bags
2. Trash bags (2 to 6 mils thick)
3. Rubber, nitrile or latex gloves
4. Paper towels
5. Cardboard or squeegee
6. Eyedropper

7. Duct tape or shaving cream and small paint brush
8. Flashlight
9. Powdered sulfur (optional)

MERCURY SPILL CLEANUP INSTRUCTIONS

- Put on rubber, nitrile or latex gloves.
- If there are any broken pieces of glass or sharp objects, pick them up with care. Place all broken objects on a paper towel. Fold the paper towel and place in a zip lock bag. Secure the bag and label it.
- Locate visible mercury beads. Use a squeegee or cardboard to gather mercury beads. Use slow sweeping motions to keep mercury from becoming uncontrollable. Take a flashlight, hold it at a low angle close to the floor in a darkened room and look for additional glistening beads of mercury that may be sticking to the surface or in small cracked areas of the surface. Note: Mercury can move surprising distances on hard, flat surfaces, so be sure to inspect the entire room when searching.
- Use the eyedropper to collect or draw up the mercury beads. Slowly and carefully squeeze mercury onto a damp paper towel. Place the paper towel in a zip lock bag and secure. Make sure to label the bag.
- After you remove larger beads, put shaving cream on top of small paint brush and gently “dot” the affected area to pick up small hard to see beads. Alternatively, use sticky tape, such as duct tape to pick up any remaining small glass fragments. Place the paint brush or duct tape in a zip lock bag and secure. Make sure to label the bag.
- OPTIONAL STEP: It is OPTIONAL, to use commercially available powdered sulfur to absorb the beads that are too small to see. The sulfur does two things:
 - It makes the mercury easier to see since there may be a color change from yellow to brown, and
 - It binds the mercury so that it can be easily removed and suppresses the vapor of any missing mercury.
- Commercialized sulfur may be supplied as mercury vapor absorbent in mercury spill kits, which can be purchased from laboratory, chemical supply and hazardous materials response supply manufacturers.
Note: Powdered sulfur may stain fabrics a dark color. When using powdered sulfur, do not breathe in the powder as it can be moderately toxic. Additionally, read and understand product information before use.
- If you choose not to use this option, you may want to request the services of a contractor who has monitoring equipment to screen for mercury vapors.
- All mercury and mercury-containing wastes must be packaged, labeled and disposed via EH&S hazardous waste program. Do not mix mercury compounds with other solvent waste.
- Place all materials used with the cleanup, including gloves, shoes if contaminated, in a trash bag. Place all mercury beads and objects into the trash bag. Place all items in a recovery drum.
- Remember to keep the area well ventilated to the outside (i.e. windows open and fans in exterior windows running) for at least 24 hours after your successful cleanup. Continue to keep children out of cleanup area. If sickness occurs, seek medical attention immediately.

Poison Control Center – 1-800-222-1222

SPILLS OF MORE THAN THE AMOUNT IN A THERMOMETER, BUT LESS THAN OR EQUAL TO TWO TABLESPOONS

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CLEAN UP INSTRUCTIONS

1. Have everyone else leave the area.
2. Don't let anyone walk through the mercury on their way out.
3. Open all windows and doors to the outside.
4. Turn down the temperature.
5. Shut all doors to other parts of the building and leave the area.
6. Do not vacuum.
7. Call the fire department.

SPILLS OF ONE POUND OR MORE (MORE THAN TWO TABLESPOONS)

Any time one pound or more of mercury is released to the environment, it is mandatory to call the National Response Center (NRC). The NRC hotline operates 24 hours a day, 7 days a week. Call 1-800-424-8802.

Note: Because mercury is heavy, only two tablespoons of mercury weighs about one pound.

How to Ventilate the Mercury Spill Location

