

# **Mercury Spill Control**

## **STANDARD OPERATING PROCEDURE (SOP)**

**Type of SOP:**  $\square$  Process  $\square$  H

🗌 Hazardous Chemical 🛛 🗌 Hazardous Class

All personnel who are subject to these SOP requirements must review a completed SOP and sign the associated training record. Completed SOPs must be readily accessible to laboratory personnel. Electronic access is acceptable. SOPs must be reviewed, and revised where needed, as described in the <u>CSUS Chemical Hygiene Plan</u>. Note that not all hazardous chemicals are appropriately addressed in a single control-banded SOP, and some chemicals are subject to several control-banded SOPs. Unique properties of each chemical must be considered before including it into a control band.

Date SOP Written:	7/23/19	Approval Date:					
	Tyler Harris						
SOP Prepared by:	Chemical Hygiene Officer						
SOP Reviewed and Approved by (name/signature):							
Department:	EH&S						
Laboratory Supervisor:		Phone:					
Lab Manager/ Safety Coordinator:		Phone:					
Emergency Contact(s):		Phone:					
Location(s) Build	ing:	Lab					
covered by SOP: Room	n #(s):	Phone:					

#### 1. HAZARD OVERVIEW

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.

#### 2. Safety Procedures for Mercury Spill

#### a. Evaluation of the Spill

- i. The following UC Berkeley video provides appropriate guidance for cleaning up a mercury spill, <u>https://www.youtube.com/watch?v=JL6HHPCWAEU</u>
- ii. The following discusses how to handle Complex vs. Simple spills. For further details of the definitions of each, please refer to the Sacramento State Chemical Hygiene Plan.
- iii. For COMPLEX spills of mercury such as broken manometers, immediately call the CSU Sacramento Campus Police (911 from campus phone) or (916) 278-6000. 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. Sacramento Fire Department will respond with trained Hazardous Materials personnel, personal protective equipment and a specially designed mercury vacuum.
- iv. SIMPLE spills of mercury, such as broken thermometers, must be cleaned up immediately. These spills can be cleaned up by the user, following the procedure listed in section 3 of this document. 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. Contact EH&S Department at (916) 278-2020 (during normal business hours) immediately for assistance.

#### 3. Clean Up Procedures and Personal Protective Equipment for Simple Spill

- a. A lab coat, disposable gloves, and shoe covers should be worn during cleanup of mercury spills to prevent skin absorption or contamination of clothing.
- b. 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.
- c. 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 (designed for mercury spills).
- d. 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.
- e. 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.
- **f.** 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.

#### 4. WASTE MANAGEMENT AND DECONTAMINATION

Hazardous waste must be managed according to the CSUS Chemical Hygiene Plan and must be properly labeled. In general, hazardous waste must be removed from your laboratory within 9 months of the accumulation start date. Hazardous waste pick up requests must be completed through the RSS WASTe application or EH&S at (916) 278-5165 or (916) 278-2020.

Upon completion of cleaning the simple Mercury Spill, remove gloves and/or PPE to wash hands and arms with soap and water.

### TEMPLATE REVISION HISTORY

Version	Date Approved	Author	Revision Notes:
		Sacramento	
1.0	04/15/2020	State Chemical	
		Hygiene Officer	

#### LAB-SPECIFIC REVISION HISTORY

Version	Date Approved	Author	Revision Notes:

#### **Documentation of Standard Operating Procedure Training**

(Signature of all users is required)

- ✓ Prior to using **Corrosives**, laboratory personnel must be trained on the hazards described in this SOP, how to protect themselves from these hazards, and emergency procedures.
- ✓ Ready access to this SOP and to a Safety Data Sheet for each hazardous material described in the SOP must be made available.
- ✓ The Laboratory Supervisor must ensure that their laboratory personnel have attended appropriate laboratory safety training or refresher training within the last three years.
- ✓ Training must be repeated following any revision to the content of this SOP.

#### **Designated Trainer:** (signature is required)

I have read and acknowledge the contents, requirements, and responsibilities outlined in this SOP:

Name	Signature	Trainer Initials	Date