

## Mercury Spill Clean up

### 1. SCOPE

Laboratory-specific safe work procedures must be written, trained and adhered to for hazardous operations, including chemicals usage, storage and spill response. This procedure is to be followed by any employees involved in an acidic or basic spill clean-up.

If the chemical spilled is not mercury, follow one of the other spill clean-up procedures posted on the SRS website at [www.srs.ubc.ca](http://www.srs.ubc.ca).

If the spill happened at an off-campus location (e.g. hospital sites) follow the site-specific procedures.

This document describes the cleanup procedure in the case of a mercury spill of less than 10 milliliters on a non-porous surface. A hazardous materials removal contractor should be retained if the spill is greater than 10 ml, on a porous surface, in cracks or crevices, or carpeting or upholstery that cannot be discarded.

### 2. PURPOSE

Accidental release or spills of chemicals must be immediately contained, reported and cleaned up by persons knowledgeable in the hazards involved and the precautions to be taken during the cleanup operations. ([WorkSafe BC Regulations](#)).

The purpose of this procedure is to ensure any mercury spills are cleaned up appropriately. There are various actions that laboratory personnel can take in response to a mercury spill. Laboratory workers should never put themselves in at risk during an emergency or cleanup operation. If there is any doubt about the safety of the individual in the lab, immediately call 911. Vancouver Fire and Rescue Services will notify the Hazmat Team. A trained laboratory worker may be able to respond to a small mercury spill if a specific spill kit is available.

### 3. RESPONSIBILITY

Employer

- Provide personal protective equipment (PPE) required for spill clean-up
- Provide written safe work procedures, material and equipment necessary for the clean-up and disposal of the hazardous substance

Employee

- In the event of a spill follow the instructions in the safe work procedure
- Report all spills on the online reporting system [UBC CAIRS](#)

### 4. TRAINING REQUIRED

Chemical safety education (e.g. WHMIS, Chemical Safety Course) **and** site-specific training

If appropriate equipment and trained personnel are not available on site, the area must be evacuated and emergency services called. Contact the Vancouver Fire and Rescue Services (at 911) and UBC Campus Security (at 604-822-2222) for support.

## 5. MATERIALS/EQUIPMENT

The basic items to be included in the mercury spill kit are:

- Personal Protective Equipment (PPE): gloves, safety goggles
- Flashlight
- Large plastic trash bags and sealable plastic bags (e.g., zip-lock)
- Paper towels, rags
- Duct tape or packing tape
- Barrier tape (caution yellow) and warning sign
- Plastic dustpan
- Eyedropper
- Sheets of letter-sized stiff paper or cardboard
- Containers (glass, metal, or plastic) with tight-fitting lids
- Neutralizer (chemically converts mercury into a less hazardous form) – must be bought from a commercially available supplier

## **DO NOT**

- Do not use a vacuum cleaner to clean up mercury – the mercury will pass through the vacuum and contaminate the air and the apparatus.
- Do not use a broom or brush to sweep mercury – it will break up the mercury in even smaller droplets and spread them around.
- Do not wash mercury-contaminated items in a washing machine – it will contaminate the washing machine and pollute the sewage system.
- Do not pour mercury down the drain or put contaminated items into ordinary garbage.

## 6. PERSONAL EXPOSURE

In the case of a chemical spill, first priority is the safety of the lab occupants.

If contaminated, discard any clothing contaminated with mercury. Place contaminated items into a large plastic bag for disposal as hazardous waste. Wash affected skin immediately with soap and water.

## 7. PROCEDURE

### 7.1. Area Control

- Evacuate the room and block off access; close the door and put up a warning sign indicating the presence of spilled mercury.
- Use caution tape to barricade open areas.
- If possible, provide fresh air by opening any exterior windows and shut off the room's ventilation system to avoid the spread of mercury vapor to the rest of the building.
- Turn down the thermostat to slow the release of mercury vapor into the air.

### 7.2. Spill clean-up steps

- 1) Don PPE - gloves, and eyewear. Avoid stepping on any contaminated surfaces. An approved and fit-tested respirator must be worn if the spill is old (i.e., it has been present for more than a few days). For more information on respirator use and fit testing contact [Safety & Risk Services – Respiratory Safety](#).
- 2) Stop the spill from spreading by blocking the mercury with rags.
- 3) If mercury neutralizer is available, spray the neutralizer on the spilled mercury and any mercury contaminated surfaces. Neutralized can be re-applied at the end of the clean-up procedure.
- 4) Carefully pick up any broken glass and place the glass in a container with a tight-fitting lid.
- 5) Use stiff paper or cardboard to move the droplets of mercury into a plastic dustpan. Avoid pushing the mercury into any cracks or crevices. A flashlight will help illuminate any small droplets. Use an eyedropper or sticky tape to pick them up. Carefully put the mercury into a container and seal the lid.
- 6) If the mercury has spilled on any small, porous items (e.g., clothing or a small rug), these items should be put in doubled plastic bags for disposal. If mercury has spilled on carpet, the affected section can be cut out and placed in doubled plastic bags; however, it might be easier to replace the carpet.
- 7) Put all of the mercury-contaminated waste (clothing, rags, paper, gloves, containers used for glass and mercury, etc.) into doubled plastic bags. Label the bags *Elemental Mercury: Hazardous Waste*.
- 8) Material from cleanup of mercury spills must be disposed of as hazardous waste. The UBC procedures for hazardous waste disposal can be found on the SRS webpage at [www.srs.ubc.ca](http://www.srs.ubc.ca).
- 9) After the spill has been cleaned up, continue to ventilate the room with fresh air for at least one day before re-occupancy.
- 10) A mercury vapor analyzer can be used to test the contaminated room and any adjacent area after the cleanup has been completed.

### 7.3. After clean-up

- 1) All waste collected is considered hazardous and must be disposed as hazardous waste. The UBC procedures for hazardous waste disposal can be found on the SRS webpage at [www.srs.ubc.ca](http://www.srs.ubc.ca)
- 2) Report the incident on the online reporting system [UBC CAIRS](#).
- 3) If the mercury spill is not entirely contained and some was released into drains, notify Safety & Risk Services by phoning the Main Office at 604-822-2029. UBC specific spill reporting forms can be found on the [Environment page](#) of the Safety & Risk Services webpage.
- 4) Restock the spill kit with any items that have been used.

## 8. DOCUMENT INFORMATION

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