



Mercury Waste Disposal



It is the responsibility of **Principal Investigators (PI)** to ensure all lab personnel have been appropriately trained and follow the proper procedure.

Purpose

This procedure specifies the requirements for the safe disposal of elemental mercury waste through the UBC Environmental Services Facility (ESF) to ensure compliance with all current legislation.

Scope

Waste Application & Regulations

This procedure applies to the safe and proper disposal of **elemental mercury waste** generated from research facilities and laboratories at UBC Point Grey campus and off-campus research facilities.

Devices containing mercury include: thermometers, barometers, manometers, blood pressure monitors, microscope lamps, fluorescent lamps/light bulbs, thermostats, electric switches, etc.

The most common elemental (liquid) mercury containing laboratory devices are glass tube thermometers and manometers, which can be disposed of via ESF.

Waste (elemental) mercury or mercury contained in manufactured articles is regulated as class 8 (corrosive), as defined by the current Transportation of Dangerous Goods (TDG) Regulations.

Does Not Apply

This disposal procedure does NOT apply to the following wastes that ESF **cannot accept, does not manage, and/or** are covered by different procedures:

- Inorganic or organic chemicals that include mercury – disposed as chemical waste via HWIS
- Fluorescent lamps, light bulbs, microscope lamps (very small amounts of mercury in vapour form), are not considered hazardous waste –recycled by Building Operations via Light Recycling BC
- Thermostats and electric switches – disposed via Building Operations

Background

The BC Hazardous Waste Regulation, 2009 and Metro Vancouver's Sewer Use Bylaw No. 299 prohibit the discharge of waste mercury into landfills and sewers.

The Canadian Environmental Protection Act Products Containing Mercury Regulations, 2014 prohibit the import and manufacture of products containing mercury or its compounds, with a few exemptions for essential products. This aims to reduce the risks to the environment and human health from mercury found in imported and manufactured products. The regulations also implement Canada's international obligations with respect to mercury-containing products under the Minamata Convention on Mercury.

Elemental mercury waste is not accepted for disposal in Canada, and it is limited to 1-2 special sites in the United States, resulting in extremely high disposal costs, which increase annually.

We strongly recommend switching to **non-mercury thermometers or other devices!**



Procedure



Contact our **ESF Technicians** for any questions related to elemental mercury waste disposal.



NOTE: Disposal of elemental mercury is very expensive! ESF will assess disposal requests on a case-by-case basis. Approval for elemental mercury waste is subject to ESF budget availability.

A. Mercury Thermometers, Manometers or Blood Pressure Monitors (Intact/Unbroken)

- ✓ Exercise caution when handling to prevent spills and injuries! These are fragile glass tubes containing elemental (liquid) mercury.
- ✓ If glass thermometers (or other devices) are intact, pack carefully and safely into an appropriate secondary container (e.g. plastic box).
 - Do NOT include metal jackets & other attachments that can be easily removed, as this will increase the weight/cost.
- ✓ Label the secondary container “Mercury Thermometers/Manometers/Devices for Disposal”.
- ✓ Dispose of elemental mercury as chemical waste via the online Hazardous Waste Inventory System (HWIS). [*Refer to the chemical waste procedure for details*]
 - List as “**Mercury (elemental)**” under the chemical name, when entering the information in the HWIS, and add details under comments.

B. Broken Mercury Thermometers or Manometers & Other Elemental Mercury Waste

- ✓ Report the elemental (liquid) mercury spill to a supervisor, then to SRS via the UBC Centralized Accident Incident Reporting System (CAIRS). If necessary, contact HAZMAT (911) for immediate assistance.
- ✓ Review and follow your local spill clean-up procedures, the SRS Spill Response guidelines, or the SRS Mercury Spill Clean-up Procedure for details on how to clean up a mercury spill.
- ✓ Ensure liquid mercury **does not enter into any drains**.
- ✓ Collect all elemental (liquid) mercury and clean-up materials in separate containers.
 - Segregate liquid mercury from clean-up materials (wipes/gloves).
 - Use empty, clean, leak-proof glass/plastic containers (vials or jars) with screw-top caps.
 - **Do NOT dispose of liquid mercury waste in organic solvents jerry cans!**
 - Note that ESF does not supply empty waste containers.
- ✓ Properly seal your waste containers to ensure no leaks.
- ✓ Label the containers as “Mercury Waste” or “Mercury Debris”.
- ✓ Dispose as chemical waste via the online Hazardous Waste Inventory System (HWIS)
 - List segregated liquid mercury as “**Mercury (elemental)**” under the chemical name, when entering the information in the HWIS.
 - List clean-up materials as “**Mercury Debris**”, since this is not Mercury (elemental), under the chemical name, when entering the information in the HWIS.