



Organic Solvent Waste Disposal



It is the responsibility of **Principal Investigators (PI)** to ensure waste has been correctly segregated and lab personnel follow the proper procedure.

Purpose

This procedure ensures that organic solvent waste is disposed of safely and appropriately, in compliance with all applicable legislation.

Scope

Waste Application & Regulations

This procedure applies to spent organic solvent or solvent mixtures generated from research facilities and academic laboratories. It specifies their safe handling and disposal through the Environmental Services Facility (ESF). Examples includes:

- Non-halogenated solvents – organic solvents without halogens.
- Halogenated solvents – organic solvents containing halogens (F, Cl, Br, or I).

Spent organic solvents may be classified for disposal as either class 3 (flammable liquids) or class 3(6.1) (flammable and toxic), as defined by the current Transportation of Dangerous Goods (TDG) Regulations and the BC Hazardous Waste Regulation, 2009.

The disposal of organic solvents is prohibited in landfills and in the sanitary or storm sewer, per BC Hazardous Waste Regulations, 2009, Metro Vancouver Sewer Use Bylaw No. 299, 2007, and Metro Vancouver Tipping Fee and Solid Waste Disposal Regulation Bylaw No. 263, 2012.

Does Not Apply

This procedure does NOT apply to other **liquid wastes** that ESF **does not** manage or handle, and/or are covered by different procedures:

- Non-flammable/non-combustible liquids (e.g. aqueous waste, organic chemicals, etc.)
- Inorganic chemicals (e.g. elemental mercury, acids, bases)
- Biomedical waste (blood and body fluids) or Biohazardous waste (TDG class 6.2)
- Liquid waste contaminated with radioactive chemicals (TDG class 7)

Background

Waste solvents must be contained and segregated properly for disposal such that they do not pose a safety hazard during transportation and storage.

Halogenated and non-halogenated solvents are treated differently in terms of disposal. Non-halogenated solvents are used as fuel additives in cement kilns (essentially recycled), while halogenated solvents are incinerated and their cost of disposal is 2-3 times higher (they require more extensive treatment to minimize environmental pollution). Solvent mixtures are considered contaminated even at very low (1,000 ppm) halogen concentrations.



Procedure



Contact our **ESF Technicians** for any questions related to solid contaminated waste or supplies (blue tags and generator barcodes).



- ✓ Collect organic solvents safely in appropriate leak proof containers with screw-top caps.
 - Use **only UN approved** containers provided by ESF (5L or 20L containers).
 - Ensure all containers have securely tightened caps!
 - Containers with loose caps or w/out caps are NOT acceptable and **will be refused** for pick up.
- ✓ Segregate properly – **do not mix** halogenated and non-halogenated solvents.
- ✓ Do NOT contaminate organic solvent waste with the following: *mercury, excess water, acids, bases, glass vials, grit, inorganic chemicals, magnetic stir bars, oil, paper, plastic, sand, sharps (needles), sludge, spatulas, etc.*
- ✓ Attach the **Flammable Liquid Disposal Tag (Blue)** shown below.
- ✓ Check the Non-halogenated or Halogenated box – **one box only!**
- ✓ Identify major components of solvent mixtures (if possible), including water content (%).
- ✓ Affix your generator barcode sticker w/out covering the tag barcode.
- ✓ Store full containers in the building's designated area for pick-up by ESF.



Organic Solvent Waste Disposal Tag

FLAMMABLE LIQUID DISPOSAL TAG

The University of British Columbia, Environmental Services Facility

Parcel Identification No: S042100001



FLAMMABLE LIQUID DISPOSAL TAG



Parcel Identification No: S042100001



GENERATOR TO COMPLETE THIS SECTION ONLY

AFFIX IDENTIFICATION BARCODE LABEL HERE

WASTE CONTENT (Please ✓ and quantify components >10%)

Do NOT include acidic, basic or aqueous solutions, or solids such as sludge, grit, glass, plastic, paper, or inorganic chemicals, mercury, spatulas, sharps, etc.

NON-HALOGENATED

- Alcohols _____%
- Aldehydes _____%
- Aliphatics _____%
- Aromatics _____%
- Amines _____%
- Scintillation Cocktail _____%
- Esters _____%
- Ethers _____%
- Ketones _____%
- Thinners _____%
- Oil (non-PCB) _____%

HALOGENATED

- Carbon Tet. _____%
- Chloroform _____%
- TCE _____%
- Freons _____%

Other _____%

NOTE: Contents in this container may be recycled or reused.

Office use only:

Quantity _____ 5L _____ 20L _____ 205L



Environmental Services Facility (ESF) Phone 604.822.1285