

Solvent Waste Disposal

1. Each lab has been given a red, polyethylene safety can equipped with a flame arrestor for the collection of liquid organic wastes ONLY. Acids, bases, reactives, oxidizers, molecular sieves, silica gel, and highly toxic compounds should NOT be disposed of in the red safety cans; see below for the disposition of those types of wastes. Small amounts of solid organic waste that are freely soluble can go into the safety cans; large amounts should be collected separately. Water can also go into the cans if it is contaminated with organics. Record the amount of water. Keep in mind that it is very expensive to incinerate water; try to use as little as possible.
2. IT IS VERY IMPORTANT to record on the yellow, hazardous waste tag all of the necessary information. This includes: building and room numbers, person or persons responsible for the safety can and solvent waste disposal, date of each entry, quantity and name of each compound, and initials of the person making each entry. PLEASE DO NOT USE ABBREVIATIONS, FORMULAE, OR STRUCTURES when filling out the tag; try to use IUPAC rules whenever possible. The total should be near 18,000mL or 18L.
3. Full safety cans (leave extra head space in the summer time) must be taken down to the yellow, flammable safety cabinet located outside Evans-Newman/Wolfrom and Celeste prior to the first working day of the week. Your building (MUA44) key will open the lock on the cabinets. Those in CBEC can take their cans to the cabinets inside 162A in the loading dock (using your ID card to open the lock). The safety cans are picked up, emptied (bulked), and returned by EHS on the same day. **PLEASE RETRIEVE YOUR EMPTY CANS BY THE FOLLOWING DAY.** Cans that are not in compliance with the above rules WILL NOT BE EMPTIED. If the safety can is defective or broken, EHS will tag it and notify you. Please see the Safety Coordinator or call EHS at 292-1284 for replacing parts or defective cans.

Other Wastes

Pump Oil

Used pump oil that is NOT contaminated with heavy metals or other materials that would make it hazardous waste can go to the Safety Office (480 Celeste). Please call the Safety Office to make an appointment.

Spill Kits

Refer to the Spill Kits for instructions on spill cleanup. The spill should be contained in the 5 gallon pail and disposed of as hazardous waste. See the Safety Office for a replacement Spill Kit.

Non-Toxic Solid Waste (Silica Gel, Molecular Sieves, etc.) Silica gels and other non-toxic solid wastes should be placed in a galvanized solid chemical disposal can (available from the Safety Office). DO NOT put: glass, paper, plastic, free liquids, or hazardous wastes into the can. Free or standing liquids automatically turn the non-hazardous waste into hazardous wastes and must be dealt with separately. When the can is nearly full, place it in front of the Cylinders Cage by the yellow safety cabinets behind Evans (or the designated cabinet in 162A CBEC).

Empty Solvent Containers (Metal)

Before they are discarded, ALL empty chemical containers must be rinsed. Rinse containers of organic reagents first with a compatible solvent and then with water AND COLLECT ANY WASHINGS (rinsate) THAT MAY BE CONTAMINATED WITH HAZARDOUS WASTE. Triple rinse the containers, allow to dry, and dispose of them WITH THE CAPS REMOVED. Apply a "Triple Rinsed" label (available from the Safety Office) before disposal. Refer to "Glass Disposal" for solvents in glass containers.

Glass Disposal and Syringe Disposal

Clean (triple rinsed), dry glassware (broken or not) should be placed into rigid boxes for disposal. The boxes are available in three locations: 1) The Safety Office (outside of 470 Celeste Lab), 2) 162A CBEC and 3) near Rooms 0013/15 of the Evans Basement. The boxes must be taped for support.

The tape is available from the Safety Office. When the box is full, tape the top lid closed and write "Glassware Trash" on the box to indicate that it is ready to be picked up by the custodians. Place the full box in the hallway outside of your lab. Please do not crush the glassware in the box. These boxes will be disposed of in the open dumpster outside of Evans Lab or in CBEC. Boxes that are open, compromised, wet, or suspected of containing chemicals WILL NOT BE PICKED UP. Sharp objects or objects that look "medical" in nature such as blades, syringes, syringe needles, etc., must be boxed separately before being placed into the glass disposal boxes. Sharps that are biohazardous (have been in contact with human pathogens or human fluids) CANNOT go into the glass boxes...see the Safety Office for more information. Contaminated glassware such as phosphomolybdic acid, vanillin, KMnO₄, etc., TLC plates must be disposed of as hazardous waste and cannot go into the disposal boxes.

Uncontaminated Acids and Bases

Acids and bases that are free of other types of waste (such as heavy metals), can be neutralized to a pH of 7 and poured down the drain. WARNING! Mixing acids and bases can be extremely dangerous for many reasons including spattering and the generation of heat. Take proper precautions by wearing personal protective equipment, using buffering solutions, and adding small quantities of dilute solutions.

Unknown or Unlabeled Materials

The Safety Office (or EHS) DOES NOT ACCEPT unlabeled chemicals. Refer to the "[Disposal of Materials of Unknown Composition](#)" policy on the [Safety Webpage](#). For each "Unknown," an Unknown Profile Form must be completed. See the Safety Office for details.

Toxic Waste Disposal (Reagent Waste)

Those wastes such as unwanted or outdated reagent waste, heavy metal waste, highly toxic or carcinogenic materials and contaminated items must be LABELED properly (no formulae,

structures, or abbreviations). If not in their original containers, use sturdy, closed containers. These wastes are to be given to the Hazardous Waste Specialist or the Safety Coordinator; call to make arrangements. See the Hazardous Waste Specialist if you need the self-adhesive labels or over-pack containers. It is NOT acceptable to label waste as "Chromium Salts" or "Tin Waste"; ALL salts and components MUST be listed.

Metallic Mercury and Mercury Compounds

Used metallic mercury should be given to the Safety Office in capped, labeled bottles. Small mercury spills should be cleaned up with a hand-pump or a mercury vacuum. The mercury vacuum can be obtained from the Safety Office during normal working hours (bring your OSU ID with you). MERCURY WASTE is now VERY DIFFICULT to dispose of in this country and it is very expensive...avoid generating it if at all possible. ALL MERCURY WASTE MUST BE PACKAGED AND LABELED SEPARATELY FROM ALL OTHER WASTE. Broken thermometers and contaminated glassware can be sent to a reprocessor; package it separately as well. Non-mercury thermometers can be treated as contaminated glassware (see above).

Batteries and Bulbs

The Safety Office collects all types of batteries and bulbs (universal waste). Just make an appointment for drop-off/collection.

Any Questions? Call John at (9)-597-3569 or Don at (9)-597-3298. Or email Tong.2@osu.edu or Herrington.5@osu.edu