

The four major waste categories from university operations (e.g., research labs, medical clinics, and construction) are: chemical; biohazardous; radioactive; and universal. Strict regulations govern waste management and its disposal, and failure to comply may result in steep fines levied from local, state, and federal levels.

CHEMICAL WASTE

US EPA defines hazardous waste as: ignitable; corrosive; reactive; and toxic. Commingling of incompatible waste streams may lead to unintended chemical reactions with disastrous outcomes. To start the collection process:



1. Segregate chemical waste into appropriate waste streams. Do not mix solid waste with liquid waste.
2. Select the appropriate chemical containers¹ for disposal (see chart on next page).
3. Fill out an adhesive hazardous waste label or tag (supplied by EH&S) and apply to each container (see [Hazardous Waste Labeling Guide Sheet](#) for details).
4. Stage the containers per instructions in the [Hazardous Waste Prep and Staging Guide Sheet](#).
5. Request a hazardous waste pick-up via [EHSA](#).

BIOHAZARDOUS (INFECTIOUS) WASTE

Biohazardous waste has potentially infectious pathogens that reside in cultures, fluids, sharps, pathological waste, and contaminated glassware. To start the collection process:



1. Select the appropriate bio containers² for disposal (see chart on next page).
2. Keep 33-gallon containers clean at all times. DO NOT remove the inner red bag.
3. DO NOT exceed the “fill line” of sharps and pharmaceutical/chemotherapy containers.
4. Request a hazardous waste pick-up via [EHSA](#).

RADIOACTIVE WASTE

Radioactive waste contains aqueous liquid, dry/solid, scintillation vials, organic liquid, sharps, and animal carcasses, and is segregated by each radioisotope.



Refer to the [Radioactive Waste Disposal Guide Sheet](#) for information on appropriate container(s) to collect waste and instructions for disposal.

WHAT I NEED TO KNOW

- Chemical waste must NOT be poured down the sink for disposal. **Remember: “Dilution is NOT the Solution.”**
- Keep waste containers capped/covered when not actively being used.
- Keep all glass waste containers in secondary containment. Do not store on the floor.
- Always wear appropriate personal protective equipment when handling hazardous waste.
- Questions? Contact hazmat@usc.edu.

Remember:

- **DO NOT** fill liquid containers completely. Leave enough head space to allow for expansion.
- **DO NOT** use structural formulas or abbreviations on the hazardous waste labels or disposal records.
- **DO NOT** store filled waste containers awaiting pick-up on the lab floor. Store in suitable cabinets.



UNIVERSAL WASTE

Universal waste applies to consumer products and business equipment that are near or at the end of their useful life. This includes: computer equipment, old lab equipment, batteries, aerosol cans, toner cartridges, light bulbs, and old office equipment to name a few. Refer to the [Universal Waste Management Fact Sheet](#) for more information.



To request a waste pick-up, complete the [on-line form](#) and submit. In the spirit of sustainability, EH&S always strives to recycle waste streams wherever possible.

¹ EH&S provides safety cans to recycle halogenated and non-halogenated solvents.

² EH&S supplies red bags and the following containers: sharps, pharmaceutical/chemotherapy, and 33-gallon.



CHEMICAL WASTE

Liquid

- Aqueous solutions containing toxic metals
- Concentrated acidic solutions (place in thick glass or plastic containers)
- Concentrated alkaline solutions (place in plastic containers)
- Mercury
- Silver salts (recycled)
- Used vacuum pump oil



Gross Solid

- Silica and alumina gels



Solid

- Contaminated PPE
- Kimwipes
- Chemicals no longer needed or wanted may remain in their original containers



Recycle

- Organic solvents
- Halogenated organic solvents



PHARMACEUTICAL

- Outdated/empty vials, broken ampules, etc.

CHEMOTHERAPY

- Outdated/empty vials, broken ampules, etc.



CLEAN GLASS

- Intact or broken glass NOT contaminated with chemical or biological agents
- Rinse three times and deface label before disposal
- Use heavy, puncture-resistant cardboard lined with plastic bag



CONTAMINATED GLASS

- Glass contaminated with chemicals only
- Use HDPE container or heavy, puncture-resistant cardboard lined with plastic bag
- Label box "Contaminated Glass"
- No microscope slides



BIOMEDICAL WASTE

Solid Material

- Contaminated with human/animal fluids/blood or other biohazards e.g. gauze, paper towels, plastic-backed absorbents or bench coat, etc.
- Petri dishes
- Plastic pipettes
- Plastic pipette tips
- Plastic Vacutainer tubes
- Culture vials
- Live or attenuated vaccines in non-glass container
- Gloves and other personal protective equipment worn while working with biohazardous material or animals



Tabletop Container

- All items may be placed in small tabletop container, EXCEPT serological pipets.
- Place smaller waste bags into larger biohazardous waste can
- Do not overfill! NO SHARPS!



Liquid

- Decontaminate by approved method (e.g., in 10% bleach for 20 minutes); dispose down sink followed by water

PATHOLOGICAL WASTE

- Organs, tissues, and body parts removed by trauma, surgery, autopsy, or other medical procedure
- Animal carcasses with infectious materials
- Place materials in leak-proof bag



SHARPS

- Needles
- Razor blades, scalpels
- Microscope slides
- Glass pipettes
- Dental wires
- Glass Pasteur pipettes
- Blood vials (glass Vacutainer tubes)
- Any contaminated material that can puncture/penetrate the skin or Red Bag



RADIOACTIVE WASTE: Refer to Page 2 of the [Radioactive Waste Disposal Guide Sheet](#) to select appropriate rad containers.