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 appropriate containers (see chart on next page. **NOTE:** EH&S provides safety cans to recycle halogenated and non-halogenated solvents).
3. Apply an adhesive hazardous waste label or tag (supplied by EH&S) to each container.
4. Complete a Chemical Waste Disposal Form for each container.

**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 appropriate containers (see chart on next page. **NOTE:** EH&S provides these containers: sharps, pharmaceutical/chemotherapy, 33-gallon, and red bags).
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.

**Radioactive Waste**

Radioactive waste contains aqueous liquid; dry/solid; scintillation vials; organic liquid; sharps; and animal carcasses, and grouped according to short, mid, and long term half-lives of the radioisotopes. Containers illustrated on the next page may be appropriate for certain radioisotopes. Contact hazmat@usc.edu or (213) 740-7215 for more information.

**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.
- Contact EH&S for proper waste management and disposal or requesting supplies. hazmat@usc.edu or (213) 740-7215.
- Always wear appropriate personal protective equipment when handling hazardous waste.

**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.

To request a waste pick-up, complete the **on-line form** and submit. In the spirit of sustainability, EH&S strives to recycle waste streams where possible.
CONTAINERS FOR HAZARDOUS WASTE DISPOSAL

CHEMICAL
NOTE: A Chemical Waste Disposal Form must accompany all waste containers

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

CLEAN GLASS
• Intact or broken glass NOT contaminated with chemical or biological agents
• Rinse 3 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

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!

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

PATHOLOGICAL
• Organs, tissues, and body parts removed by trauma, surgery, autopsy, or other medical procedure
• Animal carcasses contaminated 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

PHARMACEUTICAL
Outdated and/or empty vials, broken ampules, etc.

CHEMOTHERAPY
Outdated and/or empty vials, broken ampules, etc.

Request a Hazardous Waste Pick-up on-line:
http://adminopsnet.usc.edu/node/322