# GuideSheet Hazardous Waste Disposal



he 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:



- Segregate chemical waste into appropriate waste streams.
  Do not mix solid waste with liquid waste.
- 2. Select the appropriate chemical containers<sup>1</sup> 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 <a href="Hazardous"><u>Hazardous</u></a> Waste Labeling Guide Sheet for details).
- 4. Stage the containers per instructions in the <u>Hazardous</u> <u>Waste Prep and Staging Guide Sheet</u>.
- 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 containers<sup>2</sup> 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.

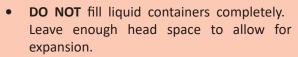


Refer to the <u>Radioactive Waste Disposal Guide Sheet</u> for information on appropriate container(s) to collect waste and instructions for disposal.

#### 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** 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 <u>Universal Waste Management Fact Sheet for more information</u>.

To request a waste pick-up, complete the <u>on-line form</u> and submit. In the spirit of sustainability, EH&S always strives to recycle waste streams wherever possible.

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



<sup>&</sup>lt;sup>1</sup> EH&S provides safety cans to recycle halogenated and non-halogenated solvents.

#### CHEMICAL WASTE

#### Liauid

- · 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, punctureresistant 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.







