GuideSheet Chemical Waste Disposal

Waste exhibiting any of the following characteristics (outlined by category) - Ignitable/flammable, Corrosive, Reactive, and Toxic - is considered hazardous according to the Environmental Protection Agency (EPA) and California Code of Regulation 22CCR Chapter 11 Section 66261.21 to 66261.24. For additional information on waste categories, go to the EH&S Chemical Waste web page.

Refer to the guide below to collect liquid and solid chemical waste streams according to the categories listed above. Note: All chemicals (e.g., solvents, acids, bases, and toxics) must be disposed of when they are no longer needed or wanted by the user.

Type	Category	Examples	Suggested Waste Container(s)/Comment(s)
Solid Chemical Waste[1]	Gels	• Acrylamide • Ethidium Bromide	HDPE[2] drum or containers
	Contaminated Debris	• Gloves • Paper towels, Kimwipes	Poly bags or HDPE containers
	Unwanted Chemicals[3]	• Sodium Cyanide	Original container
	Empty Chemical Containers		Refer to the Chemical Hygiene Plan (CHP), Table 9.3, for more detailed information on disposal.
Liquid Chemical Waste[4]	Non-Halogenated Organic Solvent	• Acetone • Hexanes • Alcohols	Poly safety can, 4-L amber bottles, HDPE containers
	Halogenated Organic Solvent	• Chloroform[5] • Dichloromethane • Chlorobenzene	Poly safety can, 4-L amber bottles, HDPE containers
	Sulfur-containing Organic Solvent	• Dimethyl Sulfoxide (DMSO) • Sulfolane	4-L amber bottles or HDPE containers
	Aqueous Acid (or oxidizers)	• Hydrochloric Acid • Nitric Acid[6] • Sulfuric Acid	2.5-L thick-walled acid bottle or HDPE containers
	Organic Acid	• Acetic Acid • Trichloroacetic Acid • Acetic Anhydride	4-L amber bottles or HDPE containers
	Aqueous Base	• Alkali Hydroxides or Carbonates • Ammonia	HDPE containers
	High hazardous liquid chemical wastes requiring special caution	• Piranha solution • Hydrogen Peroxide • Aqua Regia	Refer to the Chemical Hygiene Plan, Section 9 for more information.
	Old/Expired Chemicals[3]	• Peroxide-forming Chemicals • Picric Acid	Notify labsafety@usc.edu or hazmat@usc.edu to dispose of expired peroxide-forming chemicals
	Miscellaneous/Other	• Paints • Pump oil • Silicone oil	4-L amber bottles or HDPE containers

1 Refer to the Sharps & Broken Glass Disposal Guide Sheet for disposal of chemically-contaminated sharps. **2** High density polyethylene. **3** Unwanted chemicals in good condition may be donated to other labs. **4** Sink disposal of liquid chemical hazardous waste is NOT permitted. **5** Maximum 10% chloroform in mixed halogenated solvents. Higher percentages of chloroform (e.g., phenol chloroform) should be aggregated separately. **6** Oxidizer - DO NOT mix with flammables and/or combustibles.

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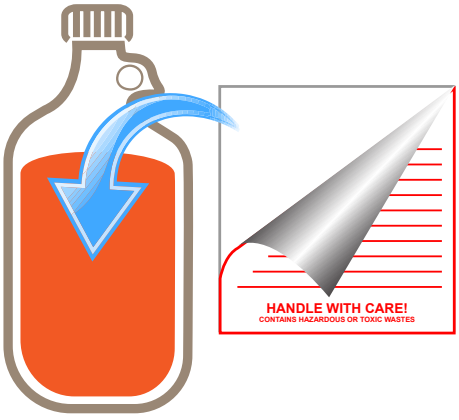
Hazardous Waste Labeling

Follow steps outlined in the Hazardous Waste Labeling Guide Sheet for complete information on hazardous waste labels and how to fill them out properly.

Hazardous Waste Prep and Staging

Follow steps outlined in the Hazardous Waste Prep and Staging Guide Sheet to prepare hazardous chemical waste for pick-up by the Hazardous Materials Division. Note that unusual waste streams may require further segregation.Examples include: phenol-chloroform, highly toxic elements (Cr(VI), Cd, Hg, As, Sb, Pb, Tl, Se, Te), cyanide, and azide waste. Mercury-containing waste should be segregated by itself. Refer to the Chemical Hygiene Plan (CHP) for more detailed information.



Hazardous Waste Storage

1. Ensure all hazardous waste containers are sealed/capped when not in use.
   - Top and sides of waste containers must be clean and uncontaminated.
2. Place all labeled, glass or plastic waste bottles in plastic secondary containment (e.g., HDPE tub).
   - NOTE: Ensure that the volume of the secondary containment exceeds the combined capacity of waste bottles to capture contents in the event that one or more bottles break (e.g., during an earthquake).
3. DO NOT colocate containers with incompatible waste types (e.g., acids and bases). Store separately.
4. DO NOT store on floor or egress paths.
5. Submit a chemical waste pickup via EHSA within 270 days/ nine (9) months of the waste's accumulation start date.

Hazardous Waste Pick-up Request

- Request a Hazmat pick-up through EHSA.
- Reference the EHSA SOP Waste Pickup + Supplies for more detailed information.
  - Additional hazardous waste supplies (e.g., hazardous waste labels, solid chemical waste bags/containers, chemically contaminated sharps, and bulk liquid chemical waste containers) may be requested through EHSA.

Questions? Contact Lab Safety labsafety@usc.edu or (323) 442-2200.

References

Chemical Hygiene Plan Section 9, Chemical Waste Disposal
Hazardous Materials Division - Hazardous Waste Management