

CHEMICAL WASTE MANAGEMENT GUIDELINES

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Chemical Waste Collection Program

All chemical waste generated by UAH MUST be managed by OEHS. In general, laboratories are not directly charged for this service so long as the guidelines in this document are followed.

Chemical Waste Pick up

- All chemical waste will be picked up by OEHS per specific building schedule (Appendix 1) or by request.
- The Chemical Disposal Inventory Form (Appendix 2) must accompany all waste and surplus chemicals.
- Chemicals must never be transported in personal vehicles. Only OEHS may transport chemical waste in approved University vehicles.
- Chemicals must NOT be disposed of by evaporation. This includes evaporation in fume hoods or biosafety cabinets. Remember, chemical waste containers must be kept closed at all times except when actually adding chemical waste.

Chemical Waste Containers

- Chemical waste must be stored in containers (including lids) composed of materials that are compatible with the waste.

- Chemical waste containers must be in good condition and free of leaks and residue on the outside of the container.
- For liquids, fill containers to about 90% of container volume. Do NOT fill containers to the top. Leave at least 2 inches of space in liquid waste containers to allow for liquid expansion and decanting.

Sealing Chemical Waste Containers

- Chemical waste containers must be tightly closed to prevent leakage or spillage.
- Containers should be closed with a screw-type lid or other appropriate device.
- Plastic wrap, aluminum foil, parafilm and other temporary lids are unacceptable.
- A container holding chemical waste must ALWAYS be closed, except when waste is actually being added.
- If a waste container is used to collect waste from a continuous process (i.e., drainage from a process collected with tubing inserted into a bottle such as HPLC), the container must still be sealed using rubber stoppers with tubing inserts or other appropriate means. It is not acceptable to leave funnels in chemical waste containers.

Labeling Chemical Waste Containers

- All chemical waste containers must be labeled with the chemical waste label affixed on the bottle
- These label are available with Department Office and OEHS web site
- The following information must be provided on the label:
 - PI Name or Generator name
 - Building
 - Room number
 - Telephone number
 - Exact contents of the container

It is important to include as much information as is known about the contents of the chemical waste container, including percentages and water content, to facilitate disposal

Mixing Chemical Waste

- Mixing a hazardous waste with a non-hazardous waste may increase the volume of hazardous waste for disposal or increase disposal costs due to differences in disposal options for certain hazardous wastes.
- Mixing incompatible materials may be dangerous. Refer to “Incompatibility of Common Laboratory Chemicals” before mixing wastes
- DO NOT mix incompatible materials in the same container.

- Consult with OEHS prior to mixing different chemical wastes.

Chemical Waste Container Storage

- A specific area should be designated in the laboratory as a chemical waste storage area. The area must be marked with “Waste Storage Area” signage (available with OEHS and Department Office)
- Waste must be stored in the room it was generated in and cannot be transferred to any area that requires passage through a door.
- Chemical waste must be stored with secondary containment so that spills cannot reach sinks, or floor drains.
- Incompatible chemical wastes must be segregated to prevent reaction.
- Segregation methods include storing in separate cabinets or separate secondary containment containers such as 5-gallon buckets or tubs.
- You must not store chemical waste in quantities that prevent proper storage practices.

Chemical Container Disposal

Empty plastic and brown glass chemical containers may be rinsed with water and recycled or disposed of. Caps must be removed and labels must defaced and marked “EMPTY or MT”. Containers that held EPA Registered Pesticides or “P-listed” chemicals must be disposed of through OEHS and may not be rinsed and/or recycled.

Expired Ethyl Ether

Expired ethyl ether is one of the most common highly hazardous chemicals found in laboratories. Ethyl ether is extremely flammable and can form explosive peroxides after exposure to air and light. Since it is packaged in an air atmosphere, peroxides can form even in unopened containers. Therefore, it is very important to write the date received and the date opened on all ether containers. Opened containers should be disposed of through the OEHS within 6 months of opening. Unopened containers should be disposed of through the EHSO within 12 months of receipt.

Ethers should be purchased in the smallest container practical and be stored away from heat, sunlight and any source of ignition in a flammable storage cabinet or refrigerator/freezer certified for storing flammable materials.

SUMMARY

- **Containers must be in good condition.**
- **The waste placed in the container must be compatible with the container.**

- Containers must be clearly and legibly labeled with the “Chemical Waste Label” The chemical name (no abbreviations or chemical formulas) and quantity (percentage) of the contents must be listed.
- The label must be firmly attached to the container.
- Containers must be placed next to or near the process that generates the waste.
- Containers must be kept closed at all times except when adding or removing waste. Do not leave a funnel in the hazardous waste container.
- Containers must be segregated by hazard class (e.g. acids from bases and flammables).
- Containers and area must be inspected at least weekly for leakage.

Appendix1 – Chemical Waste Disposal Schedule by Building

Building Name	Department	Months	Completion Date
Engineering	Engineering	June	
	Engineering	October	
Wilson Hall	Art	July	
	Art	November	
	Art		
Roberts Hall	Art	July and November	
Optics	NMDC	August and December	
	Physics		
	Physics		
	Physics		
Materials Science	Chem/Eng/Bio	October and January	
	Chem/Eng/Bio		
	Chem/Eng/Bio		
	Engineering		
Johnson Research Center	Propulsion Research	November and March	
Von Braun Research Hall	Various Centers	November and March	
Technology Hall	Engineering	February and June	
	Engineering		
	Engineering		
Cramer Hall Phase II	NASA/UAH	April and August	
	NASA/UAH		
	NASA/UAH		
	NASA/UAH		
Notes:			