UNIVERSITY OF TEXAS ARLINGTON | ENVIRONMENTAL HEALTH & SAFETY

SAFE OPERATING PROCEDURE
HAZARDOUS WASTE DISPOSAL

Note: This SOP is for chemical waste only. If you have biohazardous waste, refer to the UT Arlington Laboratory Safety Manual. If you have radioactive waste, refer to the UT Arlington Radiation Safety Manual.

Introduction

UT Arlington hazardous waste policy is not to dispose of any reagents down the drain or sanitary sewer. Direct questions regarding disposal of any waste other than normal "household" trash to the Hazardous Materials Section of EH&S at 817-272-2185.

Disposal of Empty Reagent Containers

UT Arlington considers a container “empty” if no significant amount of the contents remains. Pour remaining solutions of liquid reagents. Scrape or drain containers of thick or solidified materials until no more than one inch (2.54 cm) of material remains in the bottom of the container or no more than 3% of the original weight of the contents remains. Deface or remove the container’s original label. You can then dispose of empty container using normal trash collection.

Note: dispose of empty containers for acutely toxic substances via EH&S hazardous waste pickup (see below.)

Use of Hazardous Waste Containers

EH&S distributes 6-liter or 10-liter Nalgene carboys for storage and collection of Halogenated, Non-Halogenated and Aqueous Heavy Metal hazardous liquid waste. These are free of charge and the Chemistry Department can obtain them from the chemistry stockroom. Sharps containers and five-gallon plastic buckets for disposal of solids are available free from EH&S directly (817-272-2185.) **EH&S does not provide containers for acids and bases (concentrated corrosives). C**ontainers other than Nalgenes used to accumulate hazardous waste must be in good condition. If the container being used to accumulate hazardous waste is not in good condition, or if it begins to leak, you must transfer the contents to a container that is in good condition.

Hazardous waste containers must be:

- Marked with the words “hazardous waste” and their contents indicated. You must use an EH&S Hazardous Waste Inventory Tag to list the contents. Deface or remove any old labels. Complete this tag before EH&S can pick up the hazardous waste.
- Kept at or near (immediate vicinity) the site of generation and under control of the generator.
- Compatible with contents (for example, acids should not be stored in metal cans).

- Closed at all times except when waste is added to container.

- Properly identified with completed waste tags before you request pickup.
- Safe for transport with non-leaking screw-on caps.
- Not filled beyond the bottom of the container's neck.
- Stored with secondary containment.

Do not overfill waste containers! Over-filled bottles are hard to pour safely, inclined to burst, likely to leak, and capable of endangering the operator through splashing or shooting up into one's face upon opening. On the EH&S provided containers, " Fill up to the Fill Line -marked on containers."

Hazardous Waste Accumulation

Except when single chemicals are accumulated for recycling or recovery, waste accumulation generally involves bulking several materials into one container. However, keep the following wastes separate (in other words, in separate waste containers):

- non-halogenated materials,
- halogenated materials, and
- heavy metals.

EH&S has waste containers labeled for the first three categories. For example, compatible solvents such as acetone, ethanol, acetonitrile, and water can be combined into a single container labeled for non-halogenated materials. If you have chloroform as well, you need to put it into a separate container labeled for halogenated materials. In addition, do not combine chemically incompatible materials into a single waste container. Refer to the chemical compatibility chart. Keep toxic materials, explosive materials, peroxide-formers, pyrophoric materials, corrosives, and pesticides in separate containers.

Safely accumulate hazardous wastes by:

- Clearly marking containers and dating them when accumulation starts.
- Labeling containers with words that clearly identify the contents the FIRST time you put waste into them. Generic names like "waste organics" are acceptable, but keep in mind that you must complete the Hazardous Waste Chemical Inventory Tag listing ALL of the chemical components before EH&S can accept the waste for off-site disposal.
- Separating incompatible wastes streams.
- Keeping waste collection containers closed at ALL times during storage except when adding or removing waste. This is true for solids as well as liquids. Many containers, like beakers or flasks, are not acceptable accumulation containers.
- Designating an area in your lab as a chemical waste accumulation area. Using a hood for this purpose is acceptable as long as there are no experiments in the hood.
- Contacting EH&S for removal of full waste containers from the laboratory. Do not allow large quantities of waste to accumulate in your lab.

Note: Keep waste oil from pumps or other equipment as uncontaminated as possible in order to recycle it. You should keep oils separate from other chemicals, particularly solvents.

Labeling Hazardous Waste Containers

Before EH&S can pick up any chemical waste, you must complete a hazardous chemical inventory tag. Fill it out and attach it to each waste container. Use the information on the tag to categorize and treat the waste. This applies to both liquid and solid wastes, but sharps containers do not require chemical inventory tags. Please fill the tag out legibly, accurately, and completely.

Include the following information:

- Date - Date waste was generated.
- Principal investigator (PI) - Name of the individual responsible for supervising the process generating the waste.
- Building, room number, and phone number.
- Indicate overall volume or weight - Write in the *total* volume or weight of material in the container.
- Specify chemical contents – List the specific, full chemical name (no formulas or abbreviations) for *each* chemical constituent in this container. Product names or trade names are acceptable if you can supply the manufacturer's name and address or an MSDS with the material. Vague statements such as "hydrocarbons," "organic waste," or "various salts of _____" make it impossible to comply with EPA treatment standards and will delay the pickup until you submit sufficiently detailed information to EH&S.
- Amount - Total volume or weight of each chemical constituent in the container.
- Volume % - Percentage of the total volume to which each chemical amount is equal (should add up to 100%) or the actual weight or volume of each constituent.

Request for Disposal

When your container is ready for disposal and is properly tagged, contact EH&S Hazardous Materials Section by sending a request for disposal via:

- Chemical Environmental Management System (CEMS).

EH&S makes pickups regularly and will come to your site within three working days of receiving your request. The information for each container listed on the request form must be identical to the information on the hazardous chemical inventory tag on the container.

EH&S cannot accept the waste if the you have not completely and correctly filled out both the hazardous chemical inventory tag and CEMS request for disposal.

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