

The Waste-Paper

The Hazardous Waste Disposal Monthly Update

Volume 18 Issue 4

April 2015

Leaving So Soon?

Planning to graduate or leave Princeton for greener pastures (not that we know of any)? Before you go, be sure that all of the chemicals that you have been using are either disposed of or formally assigned to another person in your lab. Do not leave your samples and chemical reagents behind for someone else to manage – that is how unknown chemicals and excessive chemical storage often begins.

Before you leave...

- Go through your lab with your PI or other senior lab member. Look at every chemical container and be sure each is labeled in a manner that allows anyone in the lab to identify the contents.
- Determine chemicals likely needed for future projects and those that may be sent for disposal.
- Ensure that someone has taken responsibility for each of the chemicals left behind, including gas cylinders.
- Check and clear out samples in refrigerators and freezers
- Dispose of unneeded/surplus chemicals.
- If there are materials for disposal, be sure to make arrangements for someone else to manage disposal at the next chemical waste collection.

If you are looking to dispose of an entire stock of chemicals, EHS may be able to arrange for help from our waste contractor. Contact EHS at 609-258-5294 if you have any questions or concern.

<i>EHS HAZARDOUS WASTE CONTACTS</i>	
Main Office	8-5294
Kyle Angelo (Chemical Waste)	8-2711
Steve Elwood (Radioactive Waste)	8-6271
Jackie Wagner (Biohazardous Waste)	8-1427
Tom Drexel (Waste Paper)	8-6255
EHS Web Page http://www.princeton.edu/ehs	

Secondary Containment

Secondary containers help prevent the spread of chemical spills, including spills involving chemical wastes. Spilled chemicals may present a hazard to those occupying the lab or work area and may result in a release to the environment (drains, onto soil, etc.).

Secondary containment is highly recommended when moving chemicals through buildings or outdoors. It is also recommended for most hazardous waste containers, particularly those stored near sinks, drains, or on the floor.

There are a number of products available for this purpose, including, but not limited to:

- **Trays** for under vacuum pumps or oil-containing equipment.



- **Polypropylene tubs** available free from EHS.

Polypropylene is resistant to a wide variety of acids, bases and solvents. The tubs hold 10.8 liters of liquid – two standard 4-liter bottles and two half-liter bottles each. Contact EHS at x8-5294 to request secondary containment tubs.

- **Bottle carriers** or tubs when transporting chemicals. These are available through chemical stockrooms.



- **“Party buckets”** made of polypropylene for 5-gallon carboys or large containers.



Secondary containment may also be used to ensure incompatible chemicals are kept separate during storage. Solvent, corrosive, and oxidizer waste containers should all be separated by secondary containment to avoid

unintended reactions.

Storage of Chemicals and Chemical Waste

Chemical Segregation

Incompatible chemicals should not be stored together. Storing chemicals alphabetically, without regard to compatibility, can increase the risk of a hazardous reaction, especially in the event of container breakage.

Use common sense when setting up chemical storage. There are several possible storage plans for segregation. In general, dry reagents, liquids and compressed gases should be stored separately, then by hazard class, then alphabetically (if desired).

Segregate dry reagents as follows:

- Oxidizing salts
- Flammable solids
- Water-reactive solids
- All other solids

Segregate liquids as follows:

- Acids - separate mineral acids from organic acids
- Bases
- Oxidizers
- Perchlorates
- Flammable or combustible liquids
- All other liquids

Segregate compressed gases as follows:

- Toxic gases
- Flammable gases
- Oxidizing and inert gases

Containers of hazardous waste may be stored in an area of a laboratory or facilities operation near the point of generation. This area must be controlled by the principal investigator or workers generating the waste. State and federal regulations stipulate how waste generators store chemical waste and require the following:

- Any container used to store hazardous waste must be labeled with the words "hazardous waste" (regardless of its location) as soon as accumulation begins. Labels for this purpose are available from EHS by calling 609-258-5294.
- Be sure that the container is compatible with the chemical waste. Use containers that are made of or lined with materials which will not react with, and are otherwise compatible with, the hazardous waste to be stored.
- Waste containers must be closed at all times, except when being filled.
- Be sure that containers in the waste storage area do not leak. Consider the use of secondary containment, such as a tray, larger container or basin. If a leaking container is found, immediately clean up any spilled material according to established spill cleanup procedures and transfer the waste into another container.
- No more than one quart of an acutely hazardous waste ([P-listed wastes](#)) or 55-gallons of other hazardous wastes may be stored (per waste stream) in the waste storage area. If this threshold quantity is reached, the worker must transfer the waste to a 90-day storage area within 3 business days.
- Like any chemical storage in the laboratory or work area, be sure to segregate the containers according to the type of waste.
- Waste stored near drains (floor, sink, cup sink) should have secondary containment. If you have a sink or drain that is not in use, contact maintenance to explore possibilities for plugging or sealing the drain. Secondary containers must be compatible with the waste. Contact EHS for more information.



*Please bring waste down to your
Collection site on
Wednesday, April 29rd
Waste Pickup will be Thursday,
April 30, 2015*