
The Waste-Paper

The Hazardous Waste Disposal Monthly Update

Volume 10 Issue 1

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Just Arriving?

Welcome to Princeton! If you are new to the University or are just staying for the spring, here are a few items we hope will be helpful to you. Environmental Health & Safety manages the hazardous waste program on campus. Chemical wastes are collected from Frick, E-Quad and Lewis Thomas Labs on the last Thursday of each month. However, waste should be brought down to the designated collection point the day before according to your [department schedule](#).

Until that time, waste is managed in the lab or work area. Here's a summary of the requirements:

- Waste containers must be labeled as soon as waste collection begins. EHS provides labels, which you should complete and affix to the container right away, or else you must write the words *Hazardous Waste* and the waste contents on the container.



Remember: White carboys are for **SOLVENTS ONLY**. Use **blue** carboys for all other compatible liquid hazardous wastes (corrosive, toxic, etc.)

- Waste containers must always be kept closed except during filling. Do not leave funnels should not be left in waste containers in anticipation of future fillings.
- Store away from floor drains or sinks or else use secondary containment to contain any spillage.
- Disposal of most chemical waste down the sink is prohibited. Evaporation of solvents is also a prohibited means of disposal.

If you would like more information about waste disposal, please visit the [Waste section](#) of the [EHS web site](#). Don't forget – everyone working in a lab **MUST** attend Laboratory Safety Training provided by EHS. See the [Lab Safety](#) section of the EHS web site for more information.

Leaving so soon...?

Are you forgetting something? How about that bottle of epichlorohydrin you left under the lab bench? Or, that distillation apparatus in the hood with the strange, pasty yellow liquid in the round-bottom flask?

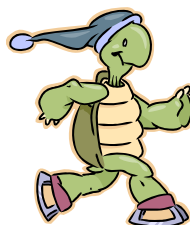
The point is that you're not completely free until you've addressed the disposition of all of your leftover chemicals, whether you entrust them to another lab worker or you dispose of them as hazardous waste. Don't just leave a chemical behind, thinking that someone else knows what it is, how old it is, what it's used for, etc.

Call EHS at 8-5294 if you have any questions.

Before you go...

- Go through your lab with your PI or another lab worker. Look at every chemical container and be sure that each is labeled with the names of the chemical constituents. **Pay particular attention to chemicals in fume hoods, refrigerators and freezers.**
- Determine which chemicals are no longer needed and which will be used for future projects.
- Dispose of all unneeded chemicals. If the materials are for disposal after the January 26th pickup, make arrangements for someone else to bring them to the designated collection point for the next pickup.

If you have a whole lab's worth of chemicals to dispose, call EHS at 8-5294 to discuss the possibility of a special pickup for a time other than the regular monthly waste pickup.



**Next Waste Pickup:
Thursday,
January 25, 2007**

*Bring wastes to designated
collection point on
Wednesday, January 24*

Neutralized Means Not Hazardous. Right?

A lab worker decides to be a good environmentalist and reduce waste by yielding a post-reaction acid solution non-hazardous. Careful neutralization of the acid is performed until reaching a pH of 7. The researcher disposes of the waste down the drain, not thinking of the toxic barium salts that were formed from the reaction.

This is a hypothetical, but realistic scenario that can happen without careful consideration of byproducts formed from neutralizing hazardous chemicals. Even though it is no longer corrosive, other hazards such as ignitability, reactivity and toxicity may persist. The Environmental Protection Agency (EPA) defines hazardous wastes by specific compounds but also within specific material parameters or “characteristics.” Improperly disposing of materials that meet any of the EPA definitions is illegal and can result in regulatory action and fines to the University.

“Dilution is not the solution to pollution” is a common catch-phrase that is associated with drain disposal. In addition to working within the regulations of the EPA, there are limits imposed on the discharge of organics, toxins and corrosive materials by the NJ Department of Environmental Protection (NJDEP). Keep in mind that anything disposed down the drain is combined with building waste water discharge that is later processed at the local municipal water treatment facility ultimately discharged to the environment.

Personal safety is also a major concern when neutralizing, specifically corrosive or reactive materials. Strong corrosives can react violently, generating copious amounts of heat and gas during neutralization. The same holds true for air or water reactive materials. It is wiser to dispose of these materials untreated as hazardous waste rather than risk the safety of yourself and others in the lab. A neutralization that progresses out of control can result in fire or an explosion.

Careful thought and common sense play critical roles in deciding whether neutralizing a hazardous material is a beneficial practice overall. You must determine if the reaction can be carried to completion safely and if the resulting material is truly non-hazardous. EHS can assist labs with this determination. If you are unsure of your current or anticipated practices of neutralizing waste, contact Jim Boehlert or Steve Elwood. For more

information, see *Elementary Neutralization* at <http://web.princeton.edu/sites/ehs/chemwaste/elementaryneutralization.htm>.

Training Requirements

Just a reminder to those who are new to the University or who might be veterans, but have not received safety training:

All faculty, staff, students, and visiting researchers who work in laboratories are required by University Policy to attend Laboratory Safety training. Laboratory workers must attend a general session given by EHS and receive additional, more specific training from their department and/or supervisor.

Regardless of previous training and experience, anyone planning to use radioactive materials, must complete initial radiation safety training before using radioactive materials. Initial radiation safety training is divided into two segments: A set of web-based Radiation Basics modules with an accompanying test (<http://web.princeton.edu/sites/ehs/osradtraining/coverpage.htm>) and a Radioactive Materials Safety Class

Participants must successfully pass the Radiation Basics Test before attending the Radioactive Materials Safety Class.

Check the EHS online training calendar <http://web.princeton.edu/sites/ehs/Training/calendar.htm> for dates and locations of upcoming training sessions.

<i>EHS HAZARDOUS WASTE CONTACTS</i>	
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EHS Web Page http://www.princeton.edu/ehs	