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# The Waste-Paper

*Waste is a Terrible Thing to Mind*

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## Are You New Here?

If Eating Clubs and black squirrels have you scratching your head, chances are you're new to the Princeton Community. If so, there are a few things you should know about the hazardous waste program here at Princeton.

### What is Hazardous Waste?

Unwanted chemicals are considered hazardous waste if they are:

- **Ignitable** (flammable liquid or solid, oxidizer, etc.)
- **Reactive** (unstable under normal conditions)
- **Corrosive** (pH < 2 or > 12.5)
- **Contain certain metals or organics** toxic to humans or that adversely impact the environment (see web page for more information and chemical lists <http://web.princeton.edu/sites/ehs>)

HAZARDOUS WASTE		
Federal & New Jersey Laws Prohibit Improper Disposal		
Department _____	Phone _____	
Lab Group _____		
Responsible Individual _____		
Date Placed in 90 Day Storage _____		
Contents _____	Approximate % _____	
Use IUPAC _____		
Nomenclature _____		
Hazard Class (if known)		
1. Poison	4. Oxidizer	7. Sensitive to Shock, Friction, Air or Water
2. Flammable Liquid	5. Corrosive	
3. Flammable Solid	6. Peroxide Former	
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### Packaging Chemical Wastes

Place chemical waste in sealed containers that are compatible with the chemical being stored (e.g. no hydrofluoric acid in glass containers). Fill containers completely, but always leave headspace to allow for expansion.

Containers must be stored securely closed except when adding material. Do not leave open funnels in hazardous waste accumulation containers. This not only constitutes a violation of State and Federal law, but also affects the comfort level of the lab due to chemical vapors, etc.

Similar wastes may be combined into "bulk" containers so long as they are chemically compatible (e.g. acetone and methanol).

If you routinely generate significant quantities of compatible chemicals, bulking of waste in five-gallon carboys is encouraged. Carboys are available at no cost at the E-Quad, Frick and LTL stockrooms and through EHS.

### Labeling of Chemical Waste Containers

Waste containers must be labeled with the words "HAZARDOUS WASTE" along with the names and approximate percentages of the principal chemical constituents, preferably using the hazardous waste labels (see graphic above) available at no cost through your departmental stock room or EHS (8-5294).

Use common chemical names not symbols, structural diagrams or product trade names (e.g., water not H<sub>2</sub>O).

Labeling should be accurate and legible (to all) and must include the name of the responsible person or lab contact and an extension where a person knowledgeable about that specific waste can be reached on the day of the waste pickup.

### Storing Chemical Wastes

Appropriately labeled and sealed containers of waste are to be stored in your laboratory until the scheduled waste pickup. By law, you must keep the waste containers at or near the area where the waste is generated. You may not store wastes in a room other than the room where the waste is generated.

Separate incompatible wastes by isolating those materials in separate areas or by using secondary containment. Use secondary containment for chemicals and wastes stored near sinks or drains (including cup sinks). Upon request, EHS provides small polyethylene tubs for this purpose.

### Disposal Procedure

Waste pickups are held on the last Thursday of each month (a combined pickup is held for November/December to accommodate the holidays). Bring your containerized waste to your designated collection area the day before that month's scheduled pick-up.

There are four main waste collection sites:

- *Frick loading dock (Chemistry, Psychology and Visual Arts)*: Drop off wastes between 1:00 and 2:00pm on the day prior to the pickup or make arrangements with Phil Fairall (8-3913) in the Chemistry stockroom.
- *E-Quad and Bowen*: Bring wastes to Room 7 – E-Quad loading dock between 2:00 and 3:00pm the day prior to the pickup. For special arrangements, see Joe Laskow (8-4563) or Joe Palmer (8-4706).
- *LTL Loading Dock (Molecular Biology, Geosciences, LSI and EEB)*: Bring wastes to room 033 between noon and 4:30pm on Wednesday and 8:00 – 9:00am on Thursday. For special arrangements, see Michael Fredericks (8-1351).
- *Jadwin Hall (Physics)*: contact [Jim Boehlert](mailto:Jim.Boehlert@princeton.edu) (8-7882)



**This Month's Waste pickup**

**will be held**

**Thursday, September 25**

**(Bring waste Wednesday 9/24)**



### Waste Disposal Costs

Environmental Health and Safety (EHS) coordinates and pays for routine chemical waste disposal. Departments or laboratories may be expected to share costs for specialized services, such as characterization of unknown/unidentified chemicals, remediation of contaminated equipment, or large-scale chemical cleanouts that involve labor provided by our waste contractors.

### Special Problems

Unidentified or unlabeled chemical wastes cannot be legally transported or disposed. The responsibility for correctly identifying waste rests with the person generating the waste. Do not bring unidentified wastes to the pickup site. Contact EHS for guidance. The department or laboratory will be charged for any testing/analysis required related to unknown chemicals.

### General Recommendations

Don't purchase more of a chemical than you expect to use in the foreseeable future; researchers should strive to practice "just in time" purchasing of reagents. Remember, disposal of large surpluses of unused chemicals will certainly outweigh any savings associated with bulk purchases.

Scale down experiments to a practical minimum to reduce the total amount of waste generated. Where possible, substitute with less hazardous materials

Dispose of your wastes at the completion of a project - don't abandon them for someone else to handle.

### Training

All faculty, staff, students, and visiting researchers who work in laboratories must attend Laboratory Safety training provided by EHS, regardless of previous training and experience elsewhere.

Any individual working with hazardous chemicals in workplaces on campus other than laboratories must attend Hazard Communication Training offered by EHS.

See the [EHS Training web page](#) or contact [Jim Boehlert](#) for dates and locations of this training.

### For More Information

See the [EHS Chemical Waste Disposal](#) web pages for more information on the following:

- Ethidium bromide
- Batteries
- Computers and equipment
- Compressed gases
- Empty chemical containers
- Biological and medical wastes
- Sharps disposal
- Radioactive wastes

- Drain disposal policy
- List of non-hazardous wastes
- Lists of hazardous wastes
- Pollution prevention opportunities

For consultation or additional questions, contact EHS at 8-5294.

### Spill Kits

Do you know where the nearest spill kit is located? Each lab or work area should have access to sufficient personal protective equipment, absorbents, and other types of materials to control a spill.

EHS provides general use spill kits in all laboratory buildings and most other buildings where chemicals are stored or used. The EHS spill kit includes all of the materials needed to clean up spills of most any material **except hydrofluoric acid and mercury**. Most are located near the elevator on the 100 level. After using the spill control materials in the EHS kits, please contact EHS at 258-5294 to request that the materials be replenished.



If you use hydrofluoric acid, be sure your lab has HF compatible spill control materials, such as PowerSorb, available. Before working with HF or responding to an HF spill, always have calcium gluconate gel available in event of an exposure. Contact EHS or see the website for more information. <http://web.princeton.edu/sites/ehs/labsafetymanual/cheminfo/hf.htm>

If you use mercury, consider replacing with non-mercury alternatives. Otherwise, keep a supply of mercury spill materials (HgX, Mercury-Absorb, etc.) on hand. Mercury sponges and amalgam powders are not very effective unless used properly. For more information on cleaning up mercury spills, please see <http://web.princeton.edu/sites/ehs/chemwaste/mercury.htm>.

For locations of spill kits in buildings please see, <http://web.princeton.edu/sites/ehs/emergency/CSKlocations.htm>

*The Waste-Paper is distributed to departmental contact persons in hard copy or e-mail approximately one week in advance. If you would like to be added to the distribution, contact Tonya Gruchacz at [gruchacz@princeton.edu](mailto:gruchacz@princeton.edu) or 8-6255.*

<b>EHS HAZARDOUS WASTE CONTACTS</b>	
Main Office	8-5294
Jim Boehlert (Chemical Waste)	8-7882
Tonya Gruchacz (Waste-Paper)	8-6255
Don Robasser (Biohazardous Waste)	8-6256
EHS Web Page <a href="http://www.princeton.edu/ehs">http://www.princeton.edu/ehs</a>	