



LABORATORIES

Health, Safety & the Environment

at Carnegie Mellon University

A Newsletter from Carnegie Mellon University's Chemical Hygiene Officer

January 2007

Lab Safety Review

All new laboratory employees must receive Laboratory Safety training from EH&S as a requirement of the OSHA Laboratory Standard. While there is no OSHA requirement for regular refresher training in lab safety, we feel the regular review of lab safety topics is essential to a safe work place. Monthly reading of this newsletter will provide such a review. This month's topic is "**Proper Storage and Purchasing of Chemicals**".

1. Compatibility issues are at the heart of proper storage procedures for laboratory chemicals. Too many laboratories store their chemicals alphabetically, which often leads to incompatible materials placed together. Proper chemical storage segregates the following classes of chemicals from each other:
 - **Oxidizers** (such as nitrates, peroxides, potassium permanganate, for example)
 - **Flammables** (such as acetone, methanol, isopropyl alcohol, etc.) More than five gallons of flammable materials in a room should be stored in a flammable cabinet.
 - **Corrosives** (such as acids, bases, phenol); separate acids and bases from each other as well.
 - **Poisons** and **high hazard** materials (these may need special security)
 - **General chemicals**, of no particular hazard classIf your storage capacity is limited, please contact us for assistance at 8-1493. We may be able to provide advice for ensuring proper storage within the limitations of your lab.
2. Periodically inspect your chemical inventory to ensure that the containers (and their labels) are in good condition. Containers that leak, have damaged caps, have crystals growing on them or have deteriorated labels indicate poor storage practices and **nearly always** lead to safety or environmental problems if left unchecked.
3. When you need a new chemical for a "test case" to see if it will work in your new project or experiment, contact EH&S (8-8182) to see if we can find some for you already on campus. You save money and we have fewer hazardous materials on campus to dispose of later!
4. Only order the amount of chemical you expect to use. Although purchasing larger quantities costs less per unit, this savings is almost always lost when the costs of disposal of unneeded chemicals are considered. A good rule of thumb is that disposal of a chemical costs more than three times what it cost to purchase it!
5. Flammable compressed gases and oxygen (and other oxidizers) **MUST** be separated in storage by at least 15 feet or by a fire wall of at least a ½ inch thick steel plate. Contact us for assistance in meeting this Fire Code Requirement.
6. The **Carnegie Mellon Purchasing Policy** has two requirements that affect laboratory chemical purchases. Did you know that you must have permission from EH&S to purchase a Particularly Hazardous Substance (PHS) not already present in your lab? Did you know that ALL compressed gas purchases on campus **MUST** be done through Mellon Stores?

Hazardous Materials Shipping

We would like to update you on some improvements in the hazardous materials shipping program. We have arranged with a packaging supplier and Mellon Stores to stock the most common hazardous materials shipping packaging supplies. This will reduce the delay shipping, due to having to wait for the proper materials. Upcoming very soon will be a web-based request system for you to request handling of hazardous materials shipments.

We would also like to remind you that **ALL** hazardous materials being shipped from campus, whether by ground transportation or air, by any carrier, and whether the package is going to a domestic or international location, **MUST** go through EH&S for proper packaging and paperwork. Also note that you are **NEVER** permitted to return a hazardous material shipment in the same packaging you may have received it in! Please contact EH&S at 8-8182 for any questions regarding hazardous materials shipping.

Fifteen minute lab fix

Please look through your stock of ethyl ether and turn in (as hazardous waste) any expired material. One of the major costs to the university is that associated with "detonating" expired ethyl ether containers before they can be removed as waste. Simply checking your inventory and turning in old containers before they expire can save us thousands each year!

Upcoming Training—January 2007

The next Hazardous Waste and Lab safety training will be held **January 17** in MI 348, **January 25** in DH 1209 and **February 22** at a place to be determined. To enroll, please sign up at:

http://ehs-alert.fms.bap.cmu.edu/Training/training_files/training_laboratory_safety.htm

January is traditionally a busy training time, due to the influx of new people for the semester. If you have any special training needs or a particularly large group of people needing training, please contact us at 8-1493 and we may be able to schedule a separate training session for you.

Upcoming Waste Pick-ups

The following waste pick-ups are scheduled for January and February:

From Mellon Institute, 9:30 - 11:30 AM: **Jan 2, 16, 30, Feb 13, 27**

From Wean and Doherty Halls, 12:30 - 3:00 PM: **Jan 2, 16, 30, Feb 13, 27**

From Porter, Roberts, Hammerschlag and other main campus locations, 9:30 - 11:30 AM: **Jan 3, Feb 14**

From PTC: **Jan 3** and **Feb 14** in the afternoon

From Penn Avenue and Robotics Engineering Consortium: Next pick-up is **Feb 28**

Computers will be picked up **Jan 4** and **Feb 15**

Remember, you need to be present in the lab for the pick-up--if you cannot, make prior arrangements with EH&S to ensure access to the waste.

Do you need hazardous waste supplies such as bottle labels, waste tags or secondary containment? If so, go to

http://www.cmu.edu/ehs/Waste_and_Recycling_Programs/Haz_Waste/hazardouswaste.htm#HWCertTags to make an on-line request

Please print out this newsletter and post or circulate it in your lab!!