

LAB

NOTES

Safety Newsletter for Lab Workers

UCSD Environment, Health & Safety Office

Professor Murray Goodman in memoriam



When Dr. Murray Goodman passed away on June 1st, UCSD not only lost an outstanding teacher and scientist, we lost a champion for safety in the research environment.

As chair of UCSD's Health & Safety Coordinating Council, Dr. Goodman was instrumental in shaping safety and environmental policies for the UCSD research community for many years. While chair of the (then) Department of Chemistry, he was the first to hire a full-time safety officer to ensure occupational safety in Chemistry laboratories was a high priority, a practice other large research departments ultimately followed.

The EH&S staff will greatly miss Dr. Goodman's pragmatic approach toward problem solving, as well as his warm and gracious demeanor.

Using Compressed Gas Cylinders

UCSD has standard operating procedures (SOPs) for work involving compressed gases. Lab and shop workers must review "**Compressed Gas Overview**" on Blink at <http://blink.ucsd.edu/go/cg> before beginning work with any compressed gas. Procedures include purchasing information, classification of gases, storage, labeling, handling, requirements for use, transport of cylinders, and emergency management of leaking cylinders.



An unrestrained CG cylinder can become ...

How to use the Compressed Gas SOPs on Blink:

- Consult the "**Compressed Gas Overview**" page to determine the hazard classification of a gas.
- continued on back page ... see Compressed Gas**

Annual Hazardous Materials Training for Laboratory Personnel

San Diego County requires UCSD laboratory employees who work with hazardous materials to receive annual refresher training in hazardous materials handling, waste disposal, and emergency response.

How to get the training: EH&S is administering the annual hazardous materials refresher training to research departments with a gradual rollout of a convenient online tutorial.

How it will be administered: Principal investigators will receive a notice from EH&S requesting they direct their employees to complete the online refresher training. The notice will include instructions for using the tutorial and printing out a certificate of completion.

Training notices will be sent to departments in this order:

- School of Medicine
- School of Engineering

- Psychology
- Cognitive Science
- Biology
- Chemistry/ Biochemistry
- Physics
- Scripps Institution of Oceanography

Expiration dates: Annual Haz Mat Training certificates issued in 2003 have an expiration date of one year from completion. County regulations require training annually — not 12 months from date of completion. Your annual training can be completed **anytime this year**, regardless of last years expiration date.

Keep training certificates where you can easily retrieve them upon request by inspectors. County inspectors audit UCSD training compliance during their annual inspections.

Questions? E-mail the EH&S safety training manager at ehs-training@ucsd.edu, or call (858) 822-5974.

Go to Enrollment Central for Safety Training

Register for safety training on Enrollment Central at <http://enrollmentcentral.ucsd.edu>. Browse “EH&S–Safety” under Course Topics for schedules.

Find required and recommended research safety training at:

- **General Lab Safety & Chemical Safety Training**
<http://blink.ucsd.edu/go/labchemtrain>
- **Radiation Safety Training**
<http://blink.ucsd.edu/go/radtrain>
- **Biosafety Training**
<http://blink.ucsd.edu/go/biotrain>
- **Hazardous Waste Training**
<http://blink.ucsd.edu/go/hazwastrain>



Material Safety Data Sheets

A material safety data sheet (MSDS) is a comprehensive fact sheet explaining the chemical properties, toxicity, and safe handling procedures for a given material, and is required with any chemical you purchase.

Every UCSD researcher must know how to access material safety data sheets from the UC MSDS Management System called **ChemQuick, the main source of MSDSs at UCSD**. ChemQuick is the preferred method of obtaining hazard evaluation information for the large and frequently changing inventory of chemicals at UCSD.

Supplement ChemQuick with the Micromedex Tomes database. Micromedex Tomes provides detailed descriptions of hazardous materials, and are frequently used by health and safety professionals for analysis.

- **Access** both resources from UCSD Internet-connected computers by pointing your browser at <http://blink.ucsd.edu/go/msds>.
- To access them from a non-UCSD computer, ask for assistance by e-mailing Doug Harvey, chemical safety officer, at daharvey@ucsd.edu.

Always review the MSDS before beginning work with a chemical. To learn more about the information an MSDS provides, read “Material Safety Data Sheets Explained” on Blink.

Compressed Gas ... continued

All of the links below are on the “Compressed Gas Overview” page.

- **Consult “Requirements for Compressed Gas Use”** to learn UCSD’S requirements for each classification.
- **Read** and follow procedures from “**Compressed Gas Guidelines,**” in combination with general “**Chemical Storage Guidelines.**”

The gas classification method and precautions used at UCSD increases safety measures based on the lethal concentration to 50% of test animals (rats) of each gas (LC50). Cylinder contents range from housing inert materials such as argon and nitrogen to highly toxic phosphine or arsine. Cylinder volumes range from 300 cubic feet to lecture bottles containing as little as 2 cubic feet.

Note: Avoid using lecture bottles whenever possible. Lecture bottles use universal threads and valves, and some of them are interchangeable. This increases the risk of accidentally mixing incompatible materials.

Use restraints: Research Assistance Program (RAP) specialists check use and storage of compressed gases during laboratory inspections. Inadequate cylinder restraint is a common problem.



... a torpedo

Follow these best practices:

- **Store cylinders in an upright position**, secured to a substantial fixed surface with **both upper and lower chains** (or other non-combustible materials).
- **If bench clamps are used:**
 - Select non-combustible material. Do not use clamps with nylon straps.
 - Clip them onto a surface that makes it nearly impossible to be pulled off. For example, clamp them over a bench lip or into drilled depressions on the underside of the surface. (Cylinders clamped onto a regular bench surface without being adequately secured can easily shake loose during an earthquake.)

Your RAP specialist will ask you to modify or replace unreliable restraints. Secure restraints are available from UCSD Storehouse (<https://storehouse.ucsd.edu/labsafety.asp>), or contact Physical Plant Services for restraint installation.

Ask your RAP specialist (<http://blink.ucsd.edu/go/rap>) for further guidance.