

# LabNotes



No. 84

SAFETY NEWS FOR UC SAN DIEGO RESEARCHERS

WINTER 2009

## Introducing the New, Improved ChemCycle!

<http://www-ehs.ucsd.edu/chemcycle/>



ChemCycle, UC San Diego's free chemical recycling program, has a **new Web address**, a new look, and new features to make ordering easier.

UC San Diego researchers can obtain free chemicals and donate usable, unwanted surplus chemicals through the ChemCycle reuse program at <http://www-ehs.ucsd.edu/chemcycle/>. It's good for the pocketbook and the environment.

## Pyrophoric Materials Accident at UCLA

The UC system-wide community was stunned recently by the tragic death of a young researcher who was seriously burned in a laboratory accident involving pyrophoric materials.

The accident occurred while the researcher was working with t-butyl lithium, a highly flammable compound that spontaneously burns upon exposure to air. Events leading to the compound igniting are still under investigation.

The UC San Diego campus community is deeply grieved by this incident and sends our sympathies to the family, friends, colleagues, and staff at UCLA.

Research work at UC San Diego involves inherent risk. UCSD's inventory includes 800,000 chemical containers and hundreds of unique chemical agents. Each one deserves respect for its properties and ability to do work for our researchers. As we reflect on this incident, let's review our own research projects and practices.

Are we using the safest methodology to achieve good scientific results? Have we diligently ensured safe work practices both for ourselves and for our colleagues?

### Ask these questions before beginning work:

#### Planning your procedure.

- Do you fully **understand the risks** of materials and equipment involved in the procedure?
- Did you receive **training** to perform your work safely?
- Do you have **approval** to perform this procedure?
- Have you written a **safety protocol** into your research protocol?
- Did you perform a "dry run" to **identify and resolve possible hazards** before conducting the actual procedure?

**continued on back...see Pyrophoric Materials**

## Access Your Online BUA



<http://bua.ucsd.edu>

Did you know you can look at your lab's online Biohazard Use Authorization (BUA) if you are listed as *Authorized Personnel* on the BUA? (Note: You must have a Single Sign-on account to access the online BUA.)

Go to <http://bua.ucsd.edu>. Select the *My BUA* tab and click on your BUA number to review:

- **Biohazardous materials approved for your lab.**
- **Exposure Control Plans (ECP):** Click on #9. *Exposure Control Plans* to read ECPs for the appropriate use of biohazardous agents used in your lab and what to do in case of an exposure.
- **Training records:** Click on #8 *Authorized Personnel*. Make sure your training record dates are current. Principal investigators and most Lab Contacts can enter or update safety training dates anytime by selecting an individual's name and typing in training dates. **It's important to keep training dates current** in the online BUA to comply with internal and external requirements.

**continued on back...see BUA Online**

## EH&S Is Point of Contact for Radiation Regulatory Issues

The California Department of Public Health, Radiologic Health Branch strictly regulates acquisition, fabrication, use, transfer, disposal, sale, purchase, and safety of all sources of radiation including radiation producing machines, radioactive materials in quantities of concern. Environment, Health & Safety's Radiation Safety division is UC San Diego's liaison for regulatory compliance.

**Please conduct all regulatory compliance activities through EH&S Radiation Safety,** UCSD's point-of-contact for radiologic reporting, registration, and audit requirements and payment of annual fees. Individual UCSD departments and laboratories should not send any type of fee directly to the State.

### Avoid Project Delays

Contact EH&S Radiation Safety early in the planning stages when you intend to acquire radiation producing machines, radioactive materials in quantities of concern, or electron microscopes (see definitions below). EH&S will initiate compliance procedures on your behalf to ensure the sometimes complex process of meeting State requirements concurs within your project time line.

**cont. on back...see Radiation Regulatory Issues**

## Safety Training: Enrollment Central

<http://enrollmentcentral.ucsd.edu>

Browse "EH&S—Safety" under Course Topics for schedules and registration. Learn more about safety training resources at <http://blink.ucsd.edu/menu/safetytraining>.



Please post or circulate

## Access Online BUA

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- **NIH Guidelines that apply to the lab's work:** Use the *NIH Guidelines* link (on the left, bottom screen) to see which sections of the *National Institutes of Health (NIH) Guidelines for Research Involving Recombinant DNA Molecules* apply to your work. This is a federal requirement for most uses of rDNA.

**Questions?** Contact EH&S Biosafety, [ehsbio@ucsd.edu](mailto:ehsbio@ucsd.edu).



## Do You Need a Radiation Dosimeter?

**Most researchers don't need a radiation monitoring dosimeter.** Radiation dosimeters can't detect some lower energy isotopes, such as H-3, C-14, P-33, or S-35, and aren't required for work with relatively small amounts of other isotopes.

Work with greater than 1 mCi of P-32, I-125, Cr-51, or Mn-54 does require a dosimetry badge and/or ring.

When they are assigned, make sure used dosimeters are promptly returned to EH&S (Mail Code 0035) when you receive your shipment of new dosimeters.

Find complete information about UCSD's radiation safety program, including dosimeter user guidelines, on Blink at <http://blink.ucsd.edu/menu/rad/>.



**Questions?** Contact EH&S Radiation Safety: [ehsrad@ucsd.edu](mailto:ehsrad@ucsd.edu) or (858) 822-2494.

## Radiation Regulatory Issues

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### Definitions

**Radiation Producing Machines:** Any machine capable of generating radiation/x-rays. Examples: X-ray diffraction (XRD), X-ray spectrographic (fluorescence)(XRF) equipment, faxitron, fluoroscopic equipment, radiographic equipment, industrial radiography equipment.

**Radioactive Materials in Quantities of Concern:** Sealed sources containing quantities of radioactive material in large enough amounts must be tracked by the National Source Tracking System. Blood Irradiators containing large activity sources.

**Electron Microscopes:** The State of California, as of last year, now requires UCSD to keep an inventory of electron microscopes, perform safety audits on them, and pay registration fees.

**Questions?** Contact EH&S Radiation Safety: [ehsrad@ucsd.edu](mailto:ehsrad@ucsd.edu), (858) 822-2494.



## Win a Free Ergo Chair!

January's Winner is  
**Lynn Laumann, B&FS**

Complete Web-based ergonomics training and you could win a free Steelcase chair or lab stool for your workplace\*.

How it works: Log in to Enrollment Central at <http://enrollmentcentral.ucsd.edu> and complete the Evaluating Your Computer Workstation for Comfort and Productivity Web-based training program. A winner is randomly drawn each month from a list of employees who have successfully completed the training during that month.

\* Chairs awarded through this program are the property of the winner's UC San Diego department.

## Pyrophoric Materials

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- Do you know what to do if something goes wrong? What are your **emergency procedures?**

### Understand the chemicals and equipment.

- Have you reviewed **Material Safety Data Sheets (MSDS)** for your chemicals?
- Do you clearly **understand the potential hazards** of your chemicals and how to safely handle them?
- Can you **use a safer, more stable chemical** to accomplish your scientific protocol?
- Does your process require **engineering controls** (fume hood, glove box, etc.)?
- Do you have appropriate **personal protective equipment?**
  - Will you need a fire resistant lab coat?
  - Do you need a face shield and goggles?
  - What kind of gloves should you wear?
- Do you know how to safely store and dispose of the chemicals involved?

### Consider your work environment.

- Does your procedure require **special atmospheric conditions** (dry or inert atmospheres)?
- Does your procedure need a **"designated area"** established?
- Do you know where the **nearest eye wash/safety shower** is located, and can you get to it easily?

### Make sure your colleagues know what's going on.

- Did you **inform colleagues** in your area about the hazards of your project?
- Have you made sure that you **never work alone** when hazardous procedures are performed?

EH&S is dedicated to reducing risks and promoting safety as a value in our university culture. We're pleased to provide health, safety, and environmental services to help everyone at UCSD make the best safety decisions possible.

Make every day at UC San Diego safe and productive. If you have any questions or concerns, **contact the EH&S Chemical Safety Officer: [ehschem@ucsd.edu](mailto:ehschem@ucsd.edu)**.