

LABORATORY & RADIATION SAFETY

Cornell University Department of Environmental Health & Safety

125 Humphreys Service Building, Ithaca, NY (Phone: 255-8200)

201 Palm Road, Ithaca, NY (Phone: 255-8200)

Web site <http://www.ehs.cornell.edu>

NEWS

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THE CONSULTANTS' COLUMN*



OXIDIZERS --- WHAT THEY ARE AND HOW THEY CAN HURT US

Oxidizers are chemicals that promote combustion – or – make it easier for a fire to start and spread. Chemically speaking, these compounds “give up” or “release” oxygen to the substance being oxidized, or accept electrons from the substance undergoing oxidation (chlorine is a strong oxidizer, for example).

Examples of oxidizers found in laboratories are: nitric acid, perchloric acid, chromic acid, Nochromix®, nitrates, nitrites, periodates, iodates, perchlorates, chlorates, bromates, permanganates, dichromates, and persulfates.

Some oxidizers can become unstable, shock sensitive, and/or explosive when they become dry or when heated. This is especially true for oxidizers containing heavy metals.

Oxidizing chemicals can also exhibit other hazards, such as the health hazard of corrosivity when in contact with the skin or the eyes, while their toxicity depends on the metal ions that make up the compound.

Prudent practices for chemical segregation include keeping oxidizers away from flammables and combustibles due to the fire hazard. A common mistake is to store nitric acid or perchloric acid, both strong oxidizing acids, with acetic or formic acid (combustible organic acids). Storing an oxidizer and a fuel source together completes two legs of the fire triangle:

Fuel Source + Oxygen Source + Ignition Source = FIRE

A subclass of oxidizers is organic peroxides, which will be discussed in a future article.

If you have any questions concerning oxidizers, please contact your Laboratory Safety Group at 255-8200.

* This is the first column in a new series being written by the team of EH&S Laboratory Safety Consultants, Nathan Clark, Allan Dye, and Andy Schreckengost.



SUPER EAGLE AWARD



The Laboratory and Radiation Safety section is pleased to announce the second group of recipients of the new positive incentive/recognition program, the Super Eagle Award. To achieve this award the lab group must maintain a spotless record for eight consecutive radioactive materials permit inspections. That translates to four years with no violations or recommended improvements to the lab group's internal management of their regulatory and permitted obligations. Living up to this high standard for such an extended period of time is truly a remarkable accomplishment and requires the participation of everyone within the lab group.

It is our pleasure to announce the second group of Super Eagle Award recipients. You should all be applauded and consider yourselves as very elite members of our community.

G. Blissard, Boyce Thompson Institute
C. Parrish, Baker Institute for Animal Health
A. Bensadoun, Nutritional Sciences, Kinzelberg Hall
M. Stipanuk, Nutritional Sciences, Kinzelberg Hall

LABORATORY INSPECTION TRAINING

The 2-hour training presentation “Laboratory Inspections” is designed to assist Department Safety Representatives, safety committee members, faculty, staff, and graduate assistants conduct their own laboratory inspections by providing information on what issues to look for, what corrective actions to take, and identifying best management practices to prevent future problems. The program covers inspection areas related to EPA, OSHA, Fire Safety, and NYS building code regulations. The program is also designed to assist laboratories prepare for the voluntary workplace consultations being offered through EH&S. Any DSR, faculty, staff, or lab group who would like to schedule one or more sessions of this training presentation at their building should contact Jerry Gordon, Manager For Laboratory Safety Programs, at jpg29@cornell.edu. The next program is scheduled for: **Tuesday, November 11 from 9:30 - 11:30 am, in Morrison Hall, Room 334.**

*** Please share with your graduate students ***



RADIATION SAFETY TRAINING

Individuals must receive radiation safety training **prior** to starting work with radioactive materials. This training is required by law. The course is given in two separate presentations; both sessions must be attended. There is a short exam, which can be taken either at the end of the second day, or later at our office during normal business hours. *Prior registration for this course is necessary, as seating is assigned on a first come first served basis.* The next Radiation Safety training programs are scheduled for:

November 11 & 13 from 9:00 a.m. to 12 noon
December 8 & 10 from 1:00 to 4:00 p.m.
January 13 & 15, 2004 from 9:00 a.m. to 12 noon

To register please use the online form available on our EH&S Web site, or call the EH&S main desk, at 5-8200. For the online form go to <http://www.ehs.cornell.edu>, select "Training", then select the course under "Class Times & Registration". Please fill in all fields before you submit your registration.

ADVANCED RECORD KEEPER TRAINING

This special radiation safety training is held monthly, on the last Friday of every month. It is geared just for those who perform and record the monthly lab meter/wipe test surveys and for those who do monthly reports to reconcile the individual stock vial inventory sheets. The survey class, taught by Chris Bell, is from 1:00 to 2:00 p.m., and the inventory class, taught by Marlene Larson, is from 2:15 to 3:15 p.m. The next classes are scheduled for Friday, November 21 (register by November 14). **Use our website to register or call Agnes Morris at 5-5600.**

CHEMICAL SAFETY TRAINING

The next ***new employee*** laboratory worker OSHA Laboratory Standard training program, "Chemical Safety for Laboratory Workers", will be held in 118 Humphreys Service Building on **Wednesday, Dec. 3, 9 – 11 a.m., followed by the EPA-Chemical Waste Disposal Program from 11:15 a.m. to 12:15 p.m.**

The next laboratory worker program for **undergraduate students** who are working in laboratories will be held in 118 Humphreys Service Building on **Friday, Nov. 14 from 1:30 to 3:30 pm.**

Please contact Czora Pagsolingan by e-mail at cpp5@cornell.edu or by phone at 254-4693 to register, or register online: go to <http://www.ehs.cornell.edu>, select "Training", then select the course under "Class Times & Registration". Please fill in all fields before you submit your registration.



Radiation Safety Eagle Awards



We are pleased to recognize the following laboratories for receiving radiation safety awards:

July

- J. Lis, Molec. Biol. & Genetics, Biotech. Bldg.
- G. Blissard, Boyce Thompson Institute
- D. Klessig, Boyce Thompson Institute
- G. Martin, Boyce Thompson Institute
- * R. Oswald, Molecular Medicine, Vet Medical Center
- G. Sharp, Molecular Medicine, Vet Medical Center
- C. Parrish, Baker Institute for Animal Health

August

- D. Stern, Boyce Thompson Institute
- E. Dubovi, Pop. Med. & Diagnostic Sci., Diagnostic Lab.
- A. Bensadoun, Nutritional Sciences, Kinzelberg Hall
- M. Stipanuk, Nutritional Sciences, Kinzelberg Hall
- * A. Lemley, Textiles & Apparel, MVR Hall
- M. Shuler, Chemical and Biomolecular Engr., Olin Hall
- J. Gavalchin, Microbiology, Stocking Hall
- J. Guan, Molecular Medicine, Vet Medical Center
- A. Quaroni, Biomedical Sciences, Vet Research Tower

September

- E. Alani, Molecular Biology & Genetics, Biotech Bldg.
- K. Kempfues, Molecular Biology & Genetics, Biotech
- M. Jahn, Plant Breeding, Bradfield Hall
- W. De Jong, Plant Breeding, Bradfield Hall
- M. Milgroom, Plant Pathology, Bradfield Hall
- * M. Mutschler, Plant Breeding, Bradfield Hall
- T. Setter, Crop & Soil Sciences, Bradfield Hall
- M. Sorrells, Plant Breeding, Bradfield Hall
- R. Spanswick, Biol. & Environ. Engr., Bradfield Hall
- J. Scott, Entomology, Comstock Hall
- R. Harrison, Ecology & Evol. Biol., Corson Hall
- F. Kallfelz, Vet. Clinical Sciences, Vet Medical Center

* Winner of Meal Deal from Pizza Hut

CENTRIFUGE ROTOR SAFETY TRAINING

Since the occurrence of a serious centrifuge accident on campus a few years ago, EH&S developed an ongoing series of programs on centrifuge rotor safety. If you are a laboratory worker who operates centrifuges and have not yet attended this program, we encourage you to attend.

This course describes a centrifuge accident, and discusses the basic safety practices that all centrifuge users should follow. The next program will be offered on **Thursday, November 13 - 2:00 pm, in A 106 Corson Hall. Please register for this program (about one hour long) by contacting Czora Pagsolingan by e-mail at cpp5@cornell.edu or by phone at 254-4693.**

*** Please share with your graduate students ***