EMORY UNIVERSITY
Environmental Health and Safety Office
1762 Clifton Road
Suite 1200
Atlanta, GA 30322

RESEARCH LABS MONTHLY UPDATES

Lab Rat News

August 2010

this issue

Training

Most of EHSOs Trainings are available online in Blackboard. Visit www.ehso.emory.edu for registration information.

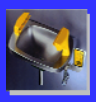
Shipping Training

October 20th from 12:00 - 4:00 pm

Radiation Safety Training

2nd Tuesdays at 1:00 pm

Laboratory Safety Training



3rd Thursdays at 10:00 am

Eye Wash Testing

Someone in your lab should test the eyewash station once a month.

Biosafety Cabinets / Chemical Fume Hoods Certifications are required annually.

PPE

Personal Protective Equipment Choice to be based on potential exposures involved:

- **Eye: Glasses, goggles & face shields**
- **Gloves: Appropriate for the type of procedure**
- **Clothing: Gowns, lab coats, aprons, coveralls**
- **Respirators: Appropriate for the type of procedure**

Fire Extinguishers

Check fire extinguishers in your lab:

A. Is it present and mounted in its proper location?

B. Is it readily accessible?

If it appears to need servicing contact the Maintenance HELP line at 7-7463.

Visit http://www.epcs.emory.edu/fire/ for more information

Contact Employee Health Services /Emory Healthcare Corporate regarding immunization information (404-728-6437)

Radioactive Decontamination of Equipment

By Christopher Vanderpool

Before moving lab equipment to a new location / surplus or returning it to the manufacturer for maintenance / repair, it must be decontaminated for radioactive material. Testing equipment for contamination is a straightforward task but should only be completed by lab personnel who have completed Emory's Radiation Safety Training.

How to Test for Contamination:

What you Need:

- Radiation survey Geiger counter meter (calibrated within the past year)
- Liquid scintillation counter
- Scintillation vials
- Scintillation fluid
- Filter paper
- Personal protective equipment

Contamination Test #1:

- Turn on the radiation survey meter and obtain a background reading.
- Scan the equipment 1" from the surface at a slow rate with the probe.
- If no readings are above 0.1 mR/hr move on to test #2.

Contamination Test #2:

Isotopes such as ^{3}H, ^{14}C, and ^{35}S cannot be efficiently detected with the radiation survey meter so liquid scintillation should be used.

- Make a background sample by placing a clean piece of filter paper into a vial with scintillation fluid.
- Using filter paper, take 2-3 swipes of the equipment surface and place each swipe in a vial with scintillation fluid.
- Count the background vial and swipes using a liquid scintillation counter.

Is the Equipment Contaminated?

If readings from test #1 are less than 0.1 mR/hr and readings from test #2 are less than 200 dpm/100cm^2, the equipment is considered free of radioactive contamination.

How to Decontaminate:

If the limits of test 1 or 2 are exceeded, efforts must be made to decontaminate the equipment.

What you Need:

- Paper towels
- All purpose cleaner (Fantastic, 409, generic brand)
  - Special purpose cleaners (Radiac Wash, RAD CON, No Count, Count Off) may be used.
  - Solvents like Ethanol, Acetone should never be used to decontaminate radioactive contamination.

Steps for Decontamination:

- Moisten paper towels with cleaning product and wipe down equipment surfaces multiple times.
- Place all waste in dry radioactive waste containers.
- Repeat contamination tests #1 and #2.
- If readings from test #1 are less than 0.1 mR/hr and readings from test #2 are less than 200 dpm/100cm^2, the equipment is considered free of radioactive contamination.
- If contamination is still present contact Radiation Safety:
  - 404-727-5922

How to Register an IAQ Complaint

If you notice an odd or strange odor in your work area, follow these steps:

1. Notify your supervisor of the odor.
2. Collect the following information about the odor:
   a. Identify the odor
   b. The time the odor occurred
   c. Whether the odor occurs regularly or randomly
   d. The duration of the odor
   e. The location of the odor
   f. Have there been any changes in your work area that may have caused the odor
3. The supervisor should contact the EHSO at 7-5922 as well as the site-specific facilities manager or Emory Campus Services at 404-727-7465.
4. The information gathered regarding the odor should be relayed to Facilities/Campus Services and EHSO at the time of the call.

www.ehso.emory.edu

Waste Disposal

Chemical and Radiation drop-off locations are:

Woodruff Labs – WMRB L302, Thursdays 1PM – 4PM

Whitehead & Rollins labs – Whitehead G44 Thursdays 9Am –noon

Chemistry Department, chemicals only – Emerson 133

Other Buildings - Request chemical pickup by calling 7-7091 Or send an email to chemwaste@emory.edu

Request Radiation pickup via EHS assist from website by Tuesday 5 PM for Wednesday pickup

Complete and sign your chemical disposal form or EHS assist radiation disposal form for both pickups and drop-offs.

Volunteers & Minors

Contact Research Safety at 404-727-8863 for assistance with volunteers and minors working in your lab.

Lab Rat Augutst 2010

Preventing Rockets: The Basics of Safe Gas Cylinder Use

By Meagan Parrott

Compressed gas cylinders can be found all over Emory laboratories and should be used in a way that prevents contamination, explosions, and leaks. This article lines outlines fundamental concepts of compressed gas cylinder safety and may be used as a basic reference for safe cylinder use. Misuse can weaken the cylinder, possibly transforming it into a "**rocket**" capable of thrusting through masonry walls.

Types of Compressed Gases: Flammable, combustible, explosive, poisonous, inert, and combinations of hazards.

Identification: Compressed gases need to be labeled with the name of the gas and the hazard associated with the gas. If you find a gas that is not labeled, mark it as "contents unknown" and return it to the manufacturer. Gas lines leading from gas cylinders should also be labeled with the name of the gas.

Storage: Gas cylinders must be secured at all times to prevent tipping. They may be attached to a wall or bench with a bracket and strap or chain, placed in a holding cage or placed in a non-tip base. Never store flammable gasses near open flames or spark producing equipment. Oxygen cylinders must be stored at least 22 feet away from flammable gases or separated by a fire wall with a fire rating of 0.5 hours and at least 5 feet high.

Examples of storage mechanisms

Handling: Be sure to always use gas-specific valves and connections. Never use oil or grease on a cylinder valve or try to fix a broken valve. Only use tools provided by the valve manufacture to open or close valves. Close valves when not using the cylinder to prevent corrosion, contamination and cylinder safety. When the cylinder is empty, close the valve, bleed the system, remove the regulator, replace with a cap, and mark as empty.

Leaking Cylinders: If you notice that a cylinder is leaking, contact EHSO immediately. Do not use flame tests to check for leaks.

Transportation: To transport gas cylinders, hand-tighten the cap and strap to a cylinder transportation cart. Never carry more than one cylinder at

Notice

- This newsletter is a tool to help fulfill a legal requirement for ongoing safety training.
- Supervisors are responsible for ensuring that individuals in their area have read and understood the information that applies to their area.
- The signed newsletter should be placed into the PIs EHSO Binder.

Signature indicates: I have read and I understand the information in this issue of Lab Rat Newsletter. Use an additional sheet of paper for more signatures, if needed and attach to this document.

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Building Liaisons

Each building has been assigned an EHS Specialist to assist with any questions/concerns you may have.

- **Dionna Thomas 404-727-4673**
  Woodruff, Woodruff Extension, Winship & Rollins–Biology
- **Meagan Parrott 404-712-9480**
  Dental, Clinic B, Pediatrics, North Decatur, Carlos Museum, Yerkes, Hope Clinic, Medical Office Tower, Crawford Long, RSPH, Oxford College & Rollins– Microbiology and Immunology & Pharmacology
- **Rodrick Esaw 404-727-1348**
  Whitehead, Math & Science, Anthropology, Wesley Woods, Emerson, Briarcliff Campus, Atwood & Rollins – Biochemistry, Chemistry, and Psychology

Visit www.ehso.emory.edu for updated forms and information.

We want to hear from you!

Now that the Lab Rat is a year old, we want to find out how we can make it better for you! Feel free to send your answers to **biosafe@emory.edu**. We look forward to reading your ideas and comments!

What do you like most about the Lab Rat?
What do you like least about the Lab Rat?
Which article was most helpful to you?
What topics would you like to be featured in upcoming issues?
Do you have an article you would like to contribute? If yes, send to biosafe@emory.edu