EHS ENVIRONMENTAL HEALTH AND SAFETY

Lab Chatter

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UNE UNIVERSITY OF NEW ENGLAND

Contents:

Lab attire in warm weather
-Page 1
Electrical safety
-Page 2
Lab respirator use
-Page 3
Safety Spotlight: lab coats
-Page 4
University Wide Safety Committee
-Page 5
Chemical clean outs
-Page 6
Marine Science safety considerations
-Page 6
UNE chemical sharing
-Page 7
Contact EHS
-Page 7

Lab attire in warm weather **By Jessica Tyre**

As temperatures begin to warm up outside (finally!) students, faculty and staff start to bring out the skirts, shorts, and sandals. EHS would like to remind all lab users that the following attire is required in all laboratory settings (unless you are doing Marine Science field work, in which case your Chemical Hygiene Officer will go over proper attire):

- Long pants are required (no shorts, skirts, or capri/crop pants).
- Closed shoes are required (no sandals, ballet flats, or any other type of shoe that exposes skin).
- Lab coats should be worn when working with research animals, hazardous chemicals, or biological agents.
- Protective gloves should be worn whenever working with chemicals, research animals or biological agents (see SDSs for proper selection).
- Eye protection such as safety glasses or goggles should be used whenever there is a splash hazard present.
- Respiratory protection should be worn when you are working with substances that have an inhalation hazard or are known to be irritants. (Contact EHS before using respiratory protection).

Course instructors and lab managers are responsible for making sure that anyone working in their lab is outfitted in the proper lab attire and must be more aware as temperatures outside begin to increase.

Thank you for working together to keep everyone safe, and have a happy spring!

Look for
"Safety Tid Bits"
throughout the newsletter
for fun safety facts and suggestions!

Electrical safety: power strips and extension cords By Peter Nagle

During the bi-annual lab inspections, we have noticed that the use of extension cords continues in several labs. Extension cords cannot be used as a substitute for fixed wiring of a structure (29 CFR 1910.305(g)(1)(iv)(A)). They may only be used temporarily for up to 90 days, for one time jobs, or to power equipment in transition. Long term use of extension cords is an OSHA violation. If you need an electrical outlet installed, submit a Work Order Request to Facilities.

We have also noticed an extensive use of power strips. This is permissible; however, only power strips equipped with internal fuses (surge protectors) are acceptable. Those lacking these fuses are equivalent to extension cords, and therefore may not be used. Power strips are not intended to be series connected (ie. daisy chained) as that could potentially overload a circuit. They also do not provide additional power to a location, just more access to the same limited capacity of the circuit to which it is connected. It is important that only equipment with a low draw such as computers or computer peripherals be connected to power strips. Equipment with a heating element should not be connected to a power strip, including:

- Hot plate
- Water bath
- Heat gun
- Refrigerators
- Microwave ovens
- Any single load exceeding 600 watts

Keep the following in mind when utilizing power strips:

- Do not put undue stress on the connecting cable by suspending it from an outlet.
- Know the capacity of the circuit and the power requirements of all connecting equipment.
- Surge protectors protect equipment, but do not protect from the hazards of an overloaded circuit.

A heavy reliance on power strips is an indication that you have too few outlets to meet your electrical needs. If you need more outlets installed, submit a Work Order Request to Facilities for small jobs. Plan ahead for larger jobs requiring additional electrical outlets when

SAFETY TID BIT: If a piece of glassware is dropped on the floor and does not break on impact, it still has been weakened to the point where it might easily break in a future use. Be sure to dispose of glassware that has been dropped, rather than continue to use it and risk an accident.

Respirator use in laboratories By Ronnie Souza

During recent laboratory inspections, the Environmental Health & Safety Department (EHS) has been finding laboratory areas where respirators are present (without Human Resources and EHS oversight) and which have been purchased by lab workers for their own use. This is in violation of the OSHA Respiratory Protection Standard, which addresses even VOLUNTARY use of respirators.

First, it is critical that a medical evaluation be performed on any person wearing a respirator to determine whether they are physically fit to wear one. People with asthma, lung or heart problems or a number of other medical issues may find respirator use problematic. The UNE Human Resources (HR) Department can arrange for these examinations with a qualified physician.

Secondly, it is critical that the respirator be properly fitted to the person wearing it by trained personel. EHS can perform the fit testing (on medically-approved personnel).

Thirdly, it is critical that proper cartridges be selected for the contaminants present and that the respirator and the cartridges are properly maintained. EHS will provide the necessary training, the respirators and the proper cartridges.

It is important to understand that, provided that other laboratory controls are in place and properly working (specifically fume hoods and ventilation) there should be NO NEED for a lab worker to wear a respirator in the first place. EHS will be happy to evaluate the work activities of any person who feels they need a respirator. If it is determined that one is needed, EHS will provide all the necessary activities for the respirator use to be OSHA-compliant.

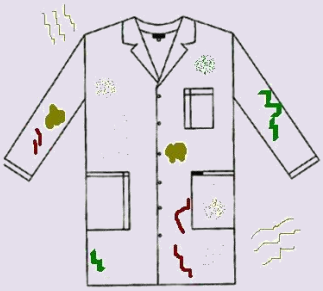
Respirator use that is not coordinated by Human Resources and EHS is NOT PERMITTED in laboratories, or for that matter, in any university work areas.

Please contact Cat Martins, Benefits Administration Coordinator, at # 2394 or Ron Souza, Director of EHS at # 2488 for assistance with this critical issue.

SAFETY TID BIT: Gas cylinders have a time limitation for safely holding compressed gas. This pressure rating lasts between 5 and 10 years. If you have had a gas cylinder in your lab for over 5 years, have a look to see the expiration date, which should be stamped into the cylinder itself. Get rid of cylinders over or approaching their time limitation!

Safety Spotlight

Our April/May Safety Spotlight is on lab coats. You can find more information on this topic by going to Chapter 16-Laboratory Safety in the UNE Safety Manual on the EHS portion of the UNE website: http://www.une.edu/campus/ehs



Why should I wear a lab coat?

- If something splashes onto your lab coat or your coat catches on fire – you can easily take the coat off. It is more difficult to remove contaminated clothing.
- Many clothing items made with synthetic fabrics will melt with heat or fire, causing severe burns. Lab coats are generally made of cotton or specialized fabrics that will not melt. Many lab coats are fire-resistant.
- Lab coats protect your skin from spills and splashes that occur in the laboratory.
- Keeping your lab coat in the lab prevents spreading contamination from the laboratory to your home.
- Lab coats protect your regular clothing from dirt and nonobvious contamination in the lab.
- Lab coats with sleeves rolled down and all the buttons buttoned make you look like a serious scientist (if you're also wearing safety goggles, you look like a smart scientist)!

Lab coats should never be taken home or laundered in your personal laundry machines or a laundromat. There are three options for cleaning laboratory coats:

- Clean in departmental washer/dryer system dedicated for laboratory coat washing, located at a UNE facility strictly for this purpose. Whether contaminated or not, cloth laboratory coats should not be taken home or to a public laundromat for washing.
- Use a contracted outside vending service provided by your department for lab coat cleaning such as Cintas or Pratt Abbott, etc. EHS can help to coordinate with a vendor.
- Dispose of the lab coat in appropriate manner (such as biohazard or hazardous waste) if it is heavily contaminated or damaged through a chemical or biological spill or exposure.

Remember….

- Lab coats should not leave the lab unless they are sent out to be laundered appropriately.
- Lab coats should not be worn in restrooms.
- Lab coats should not be worn in eating areas, break rooms, offices or public areas.
- If the lab coat is contaminated, it should be taken off immediately, bagged and labeled, and a clean lab coat should be donned.

If you have any questions or concerns regarding lab coats please email: rsouza@une.edu, pnagle@une.edu, or jtyre@une.edu.

University Wide Safety Committee

By: Ronnie Souza

At the University of New England, we have a University-wide Safety Committee (UWSC) that consists of representatives from all of UNE's colleges and support departments. The UWSC meets 9 times per year to discuss safety concerns as well as to act as a vanguard to establish proper safety practices and routines on our campuses. If you have a lab safety, employee safety or environmental question or problem, you can contact your departmental representative. They are:

Jeff Bennett	Facilities Manager, Portland Campus
Ivy Bergquist	Research Technician
Maureen Lombard (Interim contact)	Associate Director of Dental Clinical Affairs
Alethea Cariddi	Sustainability/Insurance Claims
Angela Cicia	Lab Coordinator/CHO, Marine Science Center
Tom Clow	Director of Facilities Management
Ruth Collard	Dental Hygiene
Kim Cripps	College of Pharmacy Safety Committee Chair
Eileen Dunfey	Dental Hygiene
Douglas Eppler	Laboratory Assistant, Chemistry and Physics
Jessica Fortin	Assistant Director, Residential Education and Housing
Shaun Gill	Assistant Director, Marine Science Center
Lisa Harding	CHO, College of Pharmacy
John Harnois	Housekeeping Supervisor
Skip Magaw	Assistant Director, Safety and Security
David Manyan	COM Basic Sciences
Cat Martins	Human Resources, Benefits Coordinator
Anthony Montalbano	Associate Director, Residential Education and Housing
Peter Nagle	Environmental Health and Safety Specialist
Leah Robichaud	Director of Campus Center and Student Involvement
Ronnie Souza	Director, Environmental Health and Safety
John Tumiel	Sr. Advisor to President, Chief Compliance Officer
Jessica Tyre	Environmental Health and Safety Specialist
Ian Wallin	CHO, College of Pharmacy
Scott Wintle	Facilities Manager, Biddeford Campus

Chemical Clean Outs

By Peter Nagle

With the end of the semester near, it is a good time to re-evaluate your chemical inventory. It is recommended that labs review their chemical inventory at least once a year and dispose of old, outdated or unwanted chemicals in order to keep their chemical inventory under control. Good inventory control is essential in avoiding a build-up of dated chemicals that could lead to housekeeping and storage issues. Some chemicals can become unstable over time, creating hazardous conditions in storage.

UNE's chemical waste vendor is scheduled to do our quarterly pick-up in mid-May. If you plan to dispose of any old chemicals, contact either Peter Nagle or Jessica Tyre in the Environmental Health & Safety Office **prior to May 15th**, so we can coordinate a pick up. Keep in mind that any virgin or usable chemicals qualify for our Chemical Sharing Program; you can submit a list of chemicals to EHS to offer to other users.

Safety considerations in Marine Science Labs **By Jessica Tyre**

1. **Wet working conditions:** Whether you are working in the marine science labs or just visiting the building, you must remember that many of the walking surfaces in the building could be wet at any time. Remember to wear proper footwear and be careful with your footing. Also be cautious when using electrical equipment in a wet area.
2. **Handling live animals:** Ethical treatment of living, breathing, animals must be taken into account when working in or visiting the Marine Science Center as well. There are many tanks and viewing areas with live sea creatures that should be treated cautiously and respectfully. Also beware of bites and stings from various animals. Please do not reach into any tank or handle the animals unless instructed to do so.
3. **Be cautious with chemicals**: Chemicals are used in some marine science labs and should be used with discretion. Avoid bringing chemicals into labs with open floor drains if possible, and use secondary containment bins for chemicals if they need to be in a room with open floor drains. Avoid exposing live animals to chemicals. Decontaminate work surfaces/benches with a gentle cleaner before handling live specimens on benches. Always wear the appropriate protective equipment when handling chemicals.
4. **Field work precautions:** There are many factors to consider when doing field work. Always wear appropriate attire such as footwear, boots, waders, rain gear, protective gloves, and temperature appropriate clothing. Do not forget to put on sunscreen or hat to protect yourself from heat related illnesses and always stay hydrated. Beware of lifting heavy items or animals and always ask for help when necessary. Most importantly, always have a partner or team with you. Make sure someone outside the group always knows your location, what you will be doing, and when you will return.
5. **Before leaving the lab:** Return animals to water tables or aquariums and make sure all water/air supplies are on and flowing at an appropriate rate in water tables and aquariums. Be sure to tighten lids on all chemical containers and SAA containers. Clean up your work area, dispose of PPE, and wash your hands. When you leave, turn off the lights and close the door.

www.une.edu/campus/ehs

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UNE Chemical Sharing Listing

The UNE Chemical Sharing Program is a great way to reduce hazardous waste, reduce costs for your department, and have a positive environmental impact on campus. If you have any commonly used lab chemicals you are thinking of disposing, please contact EHS so they can be listed in the next issues of EHS Lab Chatter as available for the UNE Chemical Sharing Program.

The following chemicals are now available from the Marine Science Center:

Chemical Name	Volume
Iodine-Potassium iodide solution	1000ml
Lithium ocalate crystals	~500g
Magnanous chloride crystals	~500g
Sodium hexafluorosilicate, 99 + %	500g
L – (+) – Ascorbic acid powder	100g
Oxalic acid dihydrate	500g
Sodium molybdate dehydrate	500g
Potassium antimony (III) – tartrate hydrate ≥ 99%	100g
Magnesium sulfate 7-hydrate, Crystal, U.S.P	500g
Sodium bicarbonate	500g
SDS (Sodium dodecylsulfate)	100g
Potassium phosphate monobasic	50g
Cupric sulfate pentahydrate	500g
Imidazole	100g
Ammonium chloride	500g
Sulfanilamide	100g
N-1 Naphthylethylenediamine dihyrochloride	25g
Potassium nitrate, ACS, 99%	100g

Please email jtyre@une.edu if you are interested in any of the above chemicals.
EHS will handle the transfer from one department to the other.
Thank you!!

Thank you for reading EHS Lab Chatter! We will not be producing this publication through the summer months. Distribution of EHS Lab Chatter will resume in August 2015. If you would like to contribute articles to EHS Lab Chatter for the 2015-2016 academic year, please contact: jtyre@une.edu.

Have a safe summer!!