

EHS Laboratory Safety Unit Newsletter

March 2019



Inside this Issue

- New Webpage Announcement
- Slip/Trip/Ice Removal
- Chematix Reminder
- Policy Updates
- Isopropyl Alcohol in Chematix and Glove Selection
- Mass Spectrometer and Laser Incidents

New Web Pages Announcement:

With the many changes that have taken place within the past few years in regards to laboratory safety, the Laboratory Safety Unit is in the process of reconfiguring its webpage to better serve our laboratories. Our new, streamlined webpages will provide easier navigating to our policy and program documents. Some of the biggest changes will include new sections for new Principal Investigators, a material request form, and a streamlined Chematix section to get your questions answered. Other changes will include a clear listing of the EH&S Departmental Safety Specialists informing PI's and lab members of who to contact for inspections and general safety questions. We anticipate our webpages will go live in April. Any feedback to these new pages will be appreciated.

Slip/Trip/Ice Removal:

Even with winter officially over it is still a good reminder to be aware of the University of Rochester's Snow Removal Hotline. You can call to report hazardous conditions 24 hours a day, 7 days a week at (585) 275-5000.

Chematix Reminder:

If you need help with Chematix, the EH&S Laboratory Safety Unit and Environmental Compliance Unit are hosting "office-hours" on both the River Campus and in the Medical Center once a month to answer any and all questions you may have about hazardous waste and chemical inventories. Office hours on River Campus will be held on the 2nd Thursday of the month from 3:00-4:00 PM in Wegmans Hall, room 1009. In the Medical Center, it will be held on the 3rd Tuesday of the month from 3:00-4:00 PM in KMRB, room 3-9654.

Can't wait? Contact Abby Davis: (585) 448-9586 or abby.davis@rochester.edu.

Our Upcoming Dates:

River Campus:
Wegmans Hall 1009
April 11th
May 9th
June 13th
July 11th

Medical Center:
KMRB 3-9654
April 16th
May 21st
June 18th
July 16th

Spread the news about our Newsletter to the Research Community! Join through this listserv e-mail <http://www.safety.rochester.edu/labsafety/newsletterindex.html>, and message "Subscribe to URLaboratorySafety" and listing your first/last name.

Laboratory Safety Unit

Carolyn Place (LSU Manager) 402-4676
Gidion Beyene (LSU Safety Specialist) 448-9400
Julie Conyer (LSU Safety Specialist) 233-4013

Sonia Rosenberger (BSO) x5-3014 Donna Douglass (AA) x5-2402
Abby Davis (LSU Safety Specialist) 448-9856

EHS Laboratory Safety Unit Newsletter

The latest University updates for your laboratory.

Policy Updates:

Biological Safety Policies and Procedures Updates:

- [Shipping Biologicals and Dry Ice](#) – to access the policy you will need your NetID and password. Updated training available on [MyPath](#).
- [Emergency Procedures for Biohazards](#) – please review.

Perchloric Acid Policy:

Environmental Health and Safety has implemented a new policy regarding the storage and usage of perchloric acid. Perchloric acid is a strong mineral acid, an oxidizer, and under certain conditions has explosive properties. Classified as corrosive, oxidizer, and specific target organ toxicant (thyroid) it should be handled with extreme caution. Principal Investigators and Laboratory Supervisors are responsible for verifying their laboratory spaces do not possess more than 50 mL of perchloric acid, with a maximum concentration of 40% by volume (v/v) or by weight (v/w). These limitations are being put into place due to the lack of specialized fume hoods required for the safe handling of perchloric acid. Any lab that wishes to purchase perchloric acid must notify the Laboratory Safety Unit for an evaluation and assessment of use before purchasing. The University's purchasing system has flagged this chemical as hazardous, requiring the approval of EH&S prior to purchase. Periodic University-wide inventory checks, along with annual safety inspections will be used

Isopropyl Alcohol will No Longer be Classified as a PEC in Chematix:

Recently, the Laboratory and Occupational Safety Units met to discuss the status of isopropyl alcohol (isopropanol) in Chematix. According to the Safety Data Sheet, isopropanol can produce potentially explosive peroxides over time. This required Chematix users to assign an expiration date for each container every year. Isopropanol is currently the most common Potentially Explosive Chemical (PEC) listed in Chematix and many users have been struggling to remain ahead of the frequent "Expiry Notification" e-mails automatically generated by Chematix. Due to its slow-forming nature, EHS has determined that isopropanol will no longer be denoted in Chematix as a PEC to better selectively identify high hazard PECs within the system. This means that users will no longer be required to enter or update expiration dates for these containers. The greatest potential of peroxide formation occurs during distillation. Therefore, you must check for peroxides before performing any distillations using a peroxide indicating method (strips/chemical reactions).

All other PECs (picric acid, ethyl ether, etc.) expiry dates will still be required to be updated annually by lab users. For information on how to extend expiry dates click [here](#).

Glove Selection:

Principal Investigators and Laboratory Supervisors are responsible for ensuring the proper glove selections have been made for the nature of the materials found in their laboratories. There are many types of gloves and glove materials specific to the certain types of materials that are handled. Before performing a new task or procedure, or handling a new agent, an assessment must be performed. Certain chemicals can easily penetrate gloves that work well for other chemicals. Chemical types, pH, Toxicity, Temperature extremes, and physical/biological hazards are all important factors to consider. Consult the Safety Data Sheet (SDS) of the material that you are handling. EH&S recommends reviewing several glove selection charts from different manufacturers to ensure you have accurate information. The [glove selection chart from Ansell](#) is a good place to start. If you are unsure if the gloves has correct thickness, or dexterity desired, order a sample from the manufacturer for functionality.

Laboratory Safety Unit

Carolyn Place (LSU Manager) 402-4676
Gidion Beyene (LSU Safety Specialist) 448-9400
Julie Conyer (LSU Safety Specialist) 233-4013

Sonia Rosenberger (BSO) x5-3014 Donna Douglass (AA) x5-2402
Abby Davis (LSU Safety Specialist) 448-9856

EHS Laboratory Safety Unit Newsletter

Mass Spec Incident:

Earlier this month, a lab member was injured while attempting to pack mass spectrometer columns utilizing a pressure injection cell. While compressed helium gas was pressurizing the injection cell the pressure exceeded the tolerance of the thumb screws used to secure the top of the injection cell. Two of the three thumb screws were torn off and the broken vial containing the packing material exited the chemical fume hood as shrapnel and struck the lab member in the face. No safety glasses were worn and their face was below the sash of the chemical hood at the exact moment of over pressurization. They were treated and released with minor injuries. There are three primary root causes for this incident:

1. The pressure regulator on the Helium tank was recently replaced with a unit that was capable of providing 2500 PSI, a 1000 PSI more than the previous regulator, potentially over pressurizing the system by two-thirds.
2. Since the pressure injection cell was over 11 years old, the threads on the thumb screws had become stretched from repeated pressurization and potential over tightening.
3. Although the device was being used within a chemical fume hood, the sash was left open at a level that didn't provide adequate blast protection from the injection cell.

Lessons learned:

It is important to read and verify all specifications of equipment, ensuring replacement equipment is compatible with existing equipment. Ensure proper safety tools/devices are available. If there are pressurized components in your lab that do not have a clearly indicated pressure rating they need to be replaced. If you have any questions regarding equipment compatibility or the setup of your experiment, please call EH&S.

Laser Incident:

A UR grad student recently sustained an eye injury after exposure to a Class 4 laser beam. As part of the follow-up investigation, it was learned that the student was not wearing laser protective eyewear and was aligning the beam using high power. (The student initially was aligning with lower power, but another person wanted to use the other part of the beam off the beam splitter so it was moved up to high power with the grad student's knowledge). The lab PI is taking immediate corrective action to help prevent this from happening again.

Please share a few important reminders with lab personnel using Class 3B and 4 lasers:

1. Wear laser protective eyewear. Be sure the eyewear label matches the wavelength of the laser beam in use. Laser eyewear must be inspected every 6 months to be sure they are not pitted, cracked, or damaged in any way.
2. Align laser beam using a low power visible beam. Any exception to this must have additional exposure controls in place.
3. Be sure all laser users have taken the EHS Laser Safety Training on MyPath within the past 3 years. Students (those without an Employee ID) must now access the training on MyPath through a specialized [portal](#).
4. Be sure the written Laser Standard Operating Procedures includes alignment procedures, start up and shutdown procedures, and emergency contact information. Also, include a signature page with the SOP so each laser user signs off that they have read and understood the contents of the SOP.
5. Enclose laser beams as much as possible.
6. If a beam splitter is used, consider installing an attenuator for each path.
7. Use non-reflective tools.
8. Class 4 lasers with open beam require use of flame-resistant lab coats.
9. If you have not already done so, register [here](#) for all Class 3B and 4 lasers with EHS.

Laboratory Safety Unit

Carolyn Place (LSU Manager) 402-4676
Gidion Beyene (LSU Safety Specialist) 448-9400
Julie Conyer (LSU Safety Specialist) 233-4013

Sonia Rosenberger (BSO) x5-3014 Donna Douglass (AA) x5-2402
Abby Davis (LSU Safety Specialist) 448-9856