

Laboratory Safety

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Everyone has a Role:

- Principal Investigators
- Laboratory Employees and Staff
- Students
- Environmental Health and Safety
- Deans and Chairs of the Department



Why Safety Matters:

- **You matter**

- To yourself
 - To your family
 - To your friends
 - To this University
- Individuals need to protect themselves, and watch out for others.
 - Federal, State, and Local Laws mandate and control hazards in the workplace, including Laboratories.



Common Dangers in the Laboratory

Chemicals

- Flammables
- Toxics
- Corrosives
- Carcinogens/Mutagens
- Pyrophoric



Physical Hazards

- Compressed Gasses
- Sharps (razor blades, needles, broken glass)
- Cryogenics
- Pressurized/vacuum systems
- Electrical wires/cords
- Hot or Cold Environments



How do **You** intend to stay safe in the laboratory?

- By asking questions
- Wearing PPE at all times
- Being dressed properly
- Not working alone
- Working in a fume hood or glovebox
- Asking for help
- Knowing what other people/experiments are also occurring in the laboratory



Training

- **Laboratory Safety Training is required annually.**
- As graduate students you will complete it as employees.
- <https://www.safety.rochester.edu/labsafety/labsafetraining.html>
- A copy of the training transcript should be sent to any PI before any work is done in the lab.
 - Includes performing a site-specific compliance checklist
- Five available EH&S trainings (Consult your Principal Investigator {PI})
 - **EHS Laboratory Safety Training Standard Chemical 2026**
 - EHS Laboratory Safety Training Chemical and Biological 2026
 - EHS Laboratory Safety Training Chemical and Animal 2026
 - EHS Laboratory Safety Training Chemical/Biological/Animal 2026
 - EHS Laser Safety Training (Class 3B or 4 Lasers) 2026



Training

- Additional training may be required by your lab, consult your PI.
 - EHS Hydrofluoric Acid Awareness 2026
 - EHS Fire Extinguisher Training 2026
 - EHS Electrical Safety 2026
 - EHS Fundamentals of Radiation Safety for RAM Labs 2026
 - EHS Formaldehyde Safety Training



Best Practices with PPE



- Wear your Personal Protective Equipment (PPE).
- All PPE has limitations: be sure you know the limitations of the safety equipment you are wearing.
- Do not touch personal property with gloves on:
 - Cell phones, water bottles, computers, headphones, etc.
- Do not touch public surfaces with gloves.
 - Door knobs/handles, elevator buttons, drinking fountains, etc.
 - Minimize gloves in the hallway, single glove if necessary



Fume Hoods

Ensure fume hood sash is at or below the working height (around 18 inches) at all times.

- Never stick any part of your body, other than your hands, within the fume hood.
- Work at least 6 inches back from the front of the hood to ensure complete capture of vapors.
- Keep your fume hoods clean and tidy.
- Do not ignore fume hood alarms.
 - Notify your PI, call Facilities x3-4567

Working Height
→
Approved For:
☐ Storage Only
☐ General Chemistry
☐ Radioisotopes
☐ Carcinogen/Toxins
Face Velocity
fpm
Date of Inspection:
Inspected by:
Expiration date:



Fume Hood or Utility Problems

- Call Facilities at (585) 273-4567
- Give the Location, Building, Floor, Room Number
 - Ex: River Campus, Gavett Hall, 1st Floor, Gavett 119
- Give a concise description of the problem.
- Provide your name, phone number, and confirm the email they can send the work request to.



In Case of Emergency

First Call Public Safety:

(585) 275-3333

x5-3333 from a
University Landline
Phone



In Case of Emergency (cont.)

- Contact your PI
- An employee incident/injury form must be completed within 24 hours of sustaining an injury or having an emergency within the laboratory.
 - <http://www.safety.rochester.edu/SMH115.html>
 - Can complete over phone 585-275-3241
- Evacuate, if necessary



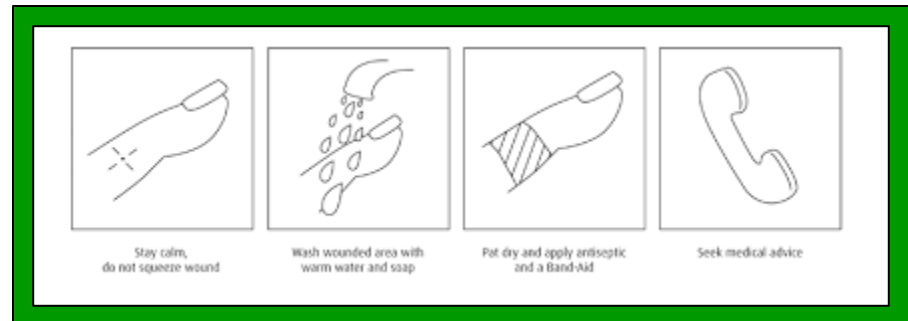
Evacuation of Laboratory

Evaluate the situation. Know your laboratory's emergency procedures and how to shut down your experiment or surrounding experiments so that the situation does not escalate.



Lacerations or Cuts

- If you are hurt or injured with a sharp:
 - Flush the affected area for 15 minutes with water
 - Notify your supervisor of your injury
 - Seek medical attention if necessary, through University Health Service or Strong Memorial Hospital Emergency Department
 - Fill out an [Employee Incident Form](#) within 24 Hours of your injury



University Health Service

Phone: 585-275-2662

2nd Floor, UHS Building

738 Library Road, River Campus

Hours during the academic year:

- Monday - Thursday - 8am to 8 pm
- Friday - 8am to 5pm
- Saturday, Sunday - CLOSED

Summer Hours:

- Monday, Wednesday, Thursday and Friday – 8am to 4:30pm
- Tuesday – 9am to 5pm



Strong Memorial Emergency Room

- For any injury requiring more than simple first aid of cuts or injuries:
 - Stiches
 - Burns
 - Serious sprains or broken bones (X-Rays)
- Depending on severity, transportation can be provided by personal vehicle, Public Safety, or Ambulance.



Spills

Spills are classified as either **Minor** spills or **Major** spills depending upon the following evaluations:

- The amount, location, volatility, flammability, and overall hazard classification of the material.
- The number of trained people available to help in the clean up.

In dealing with spills:

- Seek technical support from the SDS, your supervisor, and/or EH&S's Laboratory Safety Unit.
- Inform your fellow lab workers.
- If it's a dry chemical, keep it dry (sweep up).
- If wet, use an absorbent or spill kit.
- All spill cleanup should be properly wasted.



Spills

- If a spill poses a health or safety threat, or it can't be cleaned up quickly by trained personnel, call Public Safety from any phone at **(585) 275-3333** or **x13** on any landline.
- Public Safety will contact EH&S's Spill Response Team.



Fires



R Rescue / Relocate

- Anyone in immediate danger

A Alarm / Alert:

- Activate pull station, call Public Safety x13

C Close door/Confine fire

- Keeps smoke in the location, helps prevent the spread of fire

E Evacuate / Extinguish

- Follow the exit signs and leave the building. Do not reenter until cleared to do so.
- Extinguish only if you have been trained, are willing, able, the fire is small and in the initial stage



Pull Station



Fires



- In addition to using **R.A.C.E.**:
 - Know how to shut-down or control your experiments.
 - Know what other experiments or materials are in the area.

Note: Housekeeping and minimizing clutter and materials on laboratory benches, fume hoods, and floors greatly reduces the chance of escalation in the event of an accident or injury.



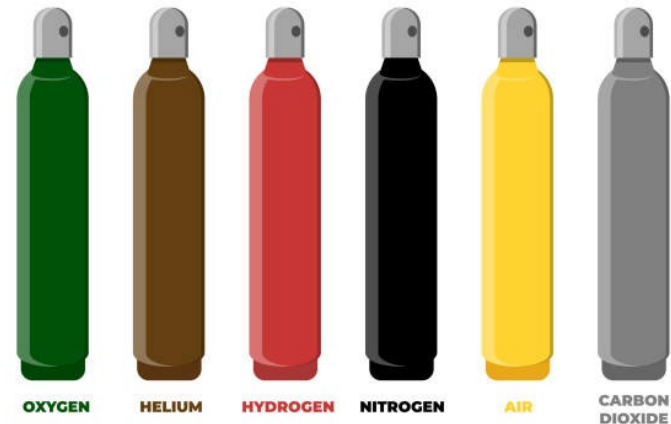
Hazardous Waste

- All containers must be labeled with Hazardous Waste and in secondary containment. The concentrations and the amount must be listed on the bottle. Acceptable nomenclature:
 - Chemical Names only
 - Ex.:
 - 500 mL Acetonitrile
 - 20 mg Arsenic
 - 100 mL Water
 - 500 mL 50% Methanol 50% Water
- Labels need to be readable and each item listed will need to be entered into CampusOptics for waste pickup.
- Waste Pickup available every Thursday.



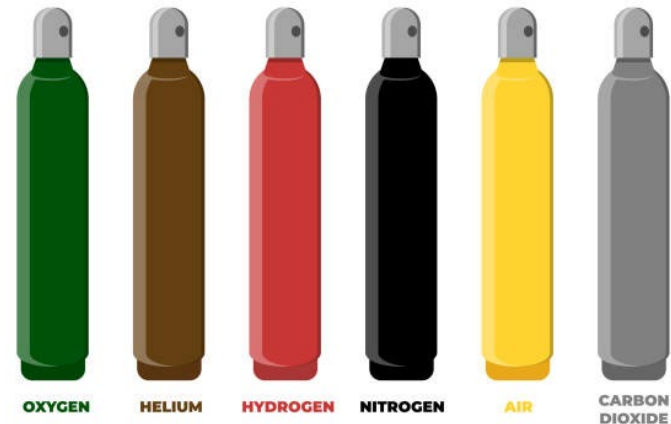
Gas and Liquid Cylinders

- Transport all gas cylinders and liquid cylinders using the appropriate cart
- Gas cylinders should be capped when not in use, during transport, and or before removing straps/chains



Gas and Liquid Cylinders (cont.)

- See your PI for lab specific procedures about moving cylinders.
- **All cylinders** should be secured when they are in use, not in use, or transported.



Lab Cleanliness/Housekeeping

- All disposable items should be disposed of into their proper containers whenever work has finished.
 - Paper towels, sharps, etc.
 - Gloves should be disposed of after each use and never worn outside of the lab or taken off and reused. Refer to EH&S safety training for details and exceptions.
- Keep the area in front of electrical cabinets clear.
- Don't store things on top of flammable cabinets.
- Do not block walkways, chairs should be stored out of the way.
- Eyewash stations should be accessible and the area kept clean.
- Don't store objects in the hallway.



Campus Optics

- For access, please make sure your UofR account is active.
- The PI or lab manager can add new members once their account is active.
- All members can enter chemicals in the system.
- All material safety data sheets are available after login
- https://rochester.campusoptics.com/users/sign_in
- Annual CampusOptics inventory reconciliation is required, emails will be sent out to remind PI's.



CampusOptics Training and Help

- EH&S offers CampusOptics help sessions every Wednesday. The link is available on the website.
 - <https://secure1.rochester.edu/safety/restricted/labsafety/campusoptics/pdf/TrainingCampusOpticsPoster.pdf>
 - If errors or problems occur, email: campusoptics@safety.rochester.edu



Best Practices



- Do not work alone.
- Know your surroundings.
 - Be aware of what others are doing around you!
- Keep your cell phone at your desk, in your bag.
- No food or drinks in the lab.
- Ask questions:
 - If you are unsure about a chemical, procedure, or equipment, ask somebody!
- Only conduct research and experiments that you have been trained on and feel comfortable performing.



Contacts for Help with Lab Safety

- The PI
- The lab members
- EH&S
 - Laboratory Safety (585) 275-3241
 - Carolyn Place (Laboratory Safety Manager)
 - James Stair (Laboratory Safety Specialist)
 - Sonia Rosenberger (Institutional Biosafety Officer)
 - CampusOptics Help – Abby Davis
- Jeffrey Lefler
 - (585) 275-4047
- Clair Cunningham
 - (585) 273-4921



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Resources



Campus Optics Help:

<https://secure1.rochester.edu/safety/restricted/labsafety/campusoptics/campusoptics.html>

Safety Data Sheets:

<https://rochester.campusoptics.com/sds>

Safety Resources:

<http://www.safety.rochester.edu/labsafety/subjectindex.html>

Site-Specific Compliance Checklist

<https://www.safety.rochester.edu/labsafety/training/SiteSpecificComplianceChecklist.pdf>

