

P.U.R.P.L.E. Safety Quarterly Newsletter

Northwestern
RESEARCH SAFETY**Promoting University Research Practices and Laboratory Excellence in Safety**

From the Executive Director's Desk: Safety in Full Swing!

Welcome back! As summer winds down, it is time to slip on those lab coats, refresh our safety practices, and dive back into discovery. The start of a new season is always a good reminder to give our safety habits a tune up. Take a moment to double check your spaces, refresh your training, and make sure your gloves, goggles, and good practices are all in working order.

Think of it like focusing a microscope before making observations. The small adjustments allow us to see the bigger picture with clarity. Whether you are starting a new project or picking up where you left off, a little extra attention to safety now helps us all keep the momentum going strong.

Here is to a safe, productive, and energizing return. Let us swing into it together!

Safe Practices for Weekend and Overnight Experiments

Working outside of normal business hours—during nights, weekends, or holidays—requires extra attention to safety. Keep the following guidelines in mind when conducting research during these times:

- Avoid working alone when carrying out dangerous experiments or multi-person protocols
- If you are working alone, ensure that another lab member knows when you will be working in the lab
- Check that engineering controls (such as fume hoods and biosafety cabinets) and safety equipment (such as fire extinguishers and eyewash stations) are present and working properly
- Make sure the appropriate PPE and equipment are accessible in the lab to conduct research safely
- Follow the guidelines outlined in the [Experiment Overnight Notice](#) and post on your lab door
- Have the NUPD phone number readily available in the event of an emergency (**847-491-3456**)

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Respiratory Protection Program

Research Safety has updated our Respiratory Protection Program process. Specifically, we need to be informed about who is currently wearing a respirator (even on a voluntary basis) and who desires to wear a respirator for the first time (new respirator request) based on inhalation exposures in the lab. There is a [Respirator Request Form](#) on our Research Safety website available that will notify our team upon submission.

If a researcher in your lab is currently wearing a respirator or desires to wear a new respirator, including a N95 filtering facepiece respirator, please ask them to fill out the form at the link provided above.

NOTE: If a respirator user in your lab has already filled out the Respirator Request Form at the above link, they do not have to resubmit the form.

Fire Extinguishers: Don't Guess—Suppress! Know the Classes of Fires

Before selecting a fire extinguisher, identify the class of fire likely to be present in your work area:

- **Class A:** ordinary combustibles (usually solids) such as wood, cloth, rubber, etc.
- **Class B:** flammable liquids and gases such as gasoline, propane, etc.
- **Class C:** energized electrical equipment, such as appliances, safety switches etc.
- **Class D:** combustible metals, such as magnesium, titanium, potassium, etc. These may react violently with water or other chemicals and must be handled with caution.

Which type of Fire Extinguisher should you have? We've made a printable [job aid](#) to help you out!

Extinguisher Type	Effective Against	Notes
Water	Class A only	Not suitable for electrical or flammable liquid fires
Dry Chemical (ABC)	Class A, B, and C	Most common multi-purpose extinguisher
Carbon Dioxide	Class B and C	Leaves no residue; ideal for electronics
Dry Powder (yellow)	Class D	Specialized agent for metal fires; required where combustible metals are present

Best Practices in Labs

- Labs should have at least one ABC-rated fire extinguisher unless a specific hazard (e.g., metal fire) requires a specialized type.
- Fire extinguishers should always be readily available and unobstructed
- Make sure fire extinguishers are up to date with their annual inspection.
- For class C fires, de-energize first the equipment if possible then treat as Class A or B
- Train lab members in the PASS technique

Fire extinguisher training is available and is offered in two parts. Part 1 is completed online and Part 2 is a hands-on in-person training where users will practice fighting a digital fire using a laser-driven infrared extinguisher. Register in [myLearn](#) or contact safety-training@northwestern.edu for more information.

Working Safely with Unfixed Macaque Source Material: What's Required

Research Safety is pleased to announce a new training course and an updated exposure kit for labs working with unfixed macaque source material. This training covers associated risks and post-exposure procedures. If your lab is currently handling this material or planning to use it in the near future, all of the steps below must be properly completed

- **eIBC:** Submit a new biological registration or amend an existing one to include this work and obtain IBC approval.
- **IACUC:** Log in to IACUC to complete the [Tissue Sharing Form](#) and receive IACUC approval.
- **LUMEN:** Add the job activity "Works with Unfixed Macaque Source Materials" in LUMEN. Pls or Safety Designates can assign this training to lab members.
- **Training:** All researchers must complete the "Works with Unfixed Macaque Source Materials" course via myHR Learn before beginning work. Annual retraining is required.
- **Exposure Kit:** Request a free kit by emailing animalresearchsafety@northwestern.edu. Research Safety personnel inspect the Exposure Kits every 6 months and replace any expired materials.

For questions, please contact the Research Safety Office.

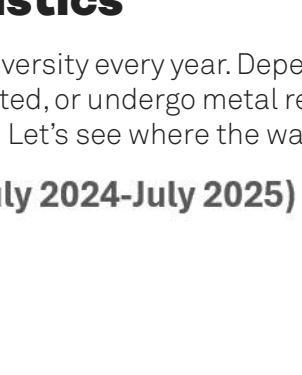
Proper Glove Hygiene

Gloves are a critical component of personal protective equipment (PPE) in the laboratory, but they can also become a significant source of contamination if not used properly. Handling personal items—such as your phone—while wearing gloves can transfer hazardous materials to those items and, in turn, contaminate specimens, equipment, and clean surfaces.

Disposable gloves should not be reused; once they have been worn, they must be properly discarded. When transporting samples outside the lab, always use a cart or a secondary container. This eliminates the need to wear gloves in public areas.

Before leaving the lab, it is essential to remove your gloves and thoroughly wash your hands with soap and water. Additionally, on the Chicago Campus, gloves must not be disposed of in regular trash bins. They should be discarded in the appropriate waste container(s).

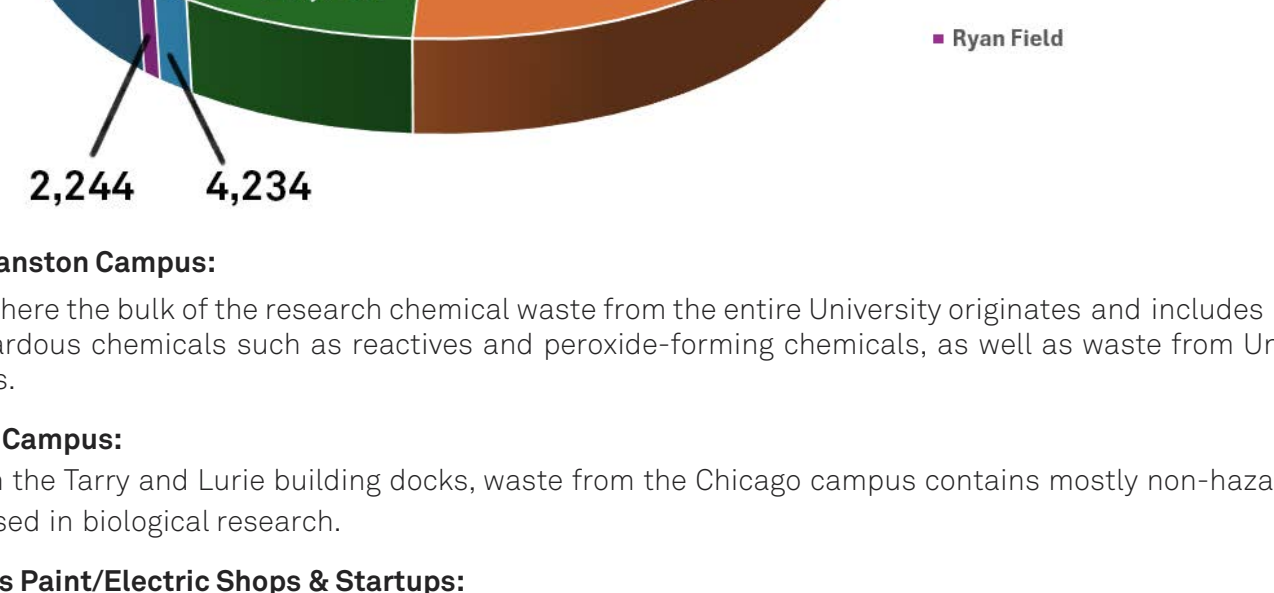
Proper glove hygiene protects you, your work, and those around you. Always be aware of when and where glove use is appropriate.



Hazardous Waste Statistics

Arcwood disposes of (literal) tons of chemical waste for Northwestern University every year. Depending on the type of material, these chemicals can be fuel-blended, water-treated, incinerated, or undergo metal reclamation. In the last year, Arcwood disposed of nearly 300,000 pounds of chemical waste! Let's see where the waste comes from:

Pounds of Chemical Waste Per Location (July 2024-July 2025)



Main Evanston Campus:

This is where the bulk of the research chemical waste from the entire University originates and includes most of the hazardous chemicals such as reactives and peroxide-forming chemicals, as well as waste from University Facilities.

Chicago Campus:

Based in the Tarry and Lurie building docks, waste from the Chicago campus contains mostly non-hazardous waste used in biological research.

Facilities Paint/Electric Shops & Startups:

Waste from this location is a mix of research waste from the start-up labs in the building and from the University Facilities Paint Shop and Electric Shop.

Facilities Auto Shop:

Waste from this location consists mostly of lead acid batteries, used oil filters, and solvent rags.

Ryan Field:

Waste collection from Ryan Field primarily contains flammable paint aerosols used by the grounds crews and occasional pesticides or lawn treatment chemicals.

Lab Closeout Process

When research groups vacate a lab space for any reason, following the appropriate closeout process is very important. A proper lab closeout helps to ensure that hazards are not left behind in unoccupied spaces and allows for the transition of the lab space(s) to be more seamless. Research Safety has created a [lab closeout and move checklist](#) that is useful for this process.

Transporting Liquid Nitrogen

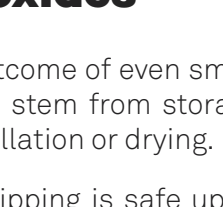
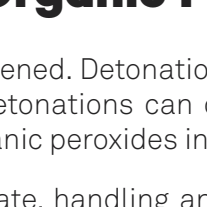
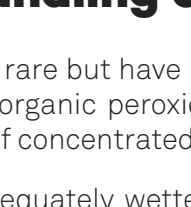
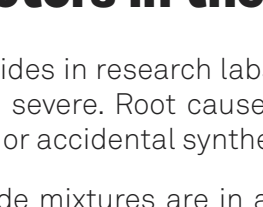
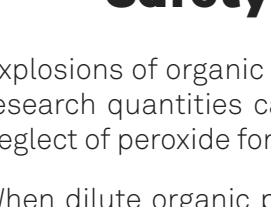
When moving liquid nitrogen or other hazardous materials/waste, please use only the designated freight elevators shown on this [map](#). Never ride in an elevator with liquid nitrogen, as leaks or venting can displace oxygen and create a serious risk of asphyxiation. Passenger elevators and unauthorized freight elevators may not be used for these substances. If you have any questions or need clarification, please contact Research Safety before proceeding.

Transitioning to eShipGlobal for all Shipments

Beginning January 1, 2026, any shipment leaving the university will need to utilize eShipGlobal for shipping services. This will also include all biological shipments and any chemical shipments where it is determined the lab can ship the package themselves. More information regarding the transition to eShipGlobal can be found [here](#).

Chemical and Biological Shipping

All outgoing chemical shipments must be cleared through Research Safety. If you need to ship out chemicals, be sure to fill out an intent to ship form first. If chemical shipments are international, Research Safety will coordinate with Export Controls and International Compliance on the shippers behalf. If you need to ship out biological samples, you will need to complete biological shipping training through Research Safety. More information regarding chemical and biological shipments can be found [here](#).



Have you found a package with one of the above radioactive material labels mistakenly delivered to your lab? Don't worry! Reach out to [Radiation Safety](#) or Arcwood Environmental (Chicago: hesnuchicagoonsite@arcwoodenviro.com) Evanston: hesnuevanstononsite@arcwoodenviro.com) and someone will come to retrieve the package and get it to its proper destination. Please do not move these packages throughout the university yourself.

Any questions? Reach out to our Radiation Safety Officer, [Emma Ross](#).

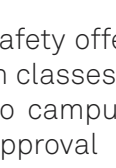
Safety Factors in the Handling of Organic Peroxides

Explosions of organic peroxides in research labs are rare but have happened. Detonation outcome of even small research quantities can be severe. Root causes of organic peroxide detonations can often stem from storage neglect of peroxide formers or accidental synthesis of concentrated organic peroxides in distillation or drying.

When dilute organic peroxide mixtures are in an adequately wetted state, handling and shipping is safe up to certain threshold concentrations. The Department of Transportation (DOT) set threshold concentrations for shipping of wetted acetyl acetone peroxide at <9% and acetyl peroxide at <25%, for example. Organic peroxides at higher concentrations than the DOT thresholds or suspected to be highly explosive are forbidden to be shipped.

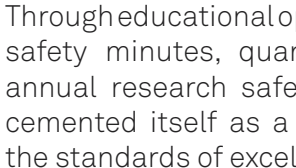
Research Safety advises lab workers to periodically test peroxide concentrations of certain peroxide forming solvents before distillation or synthesis activities. When a peroxide forming solvent has accumulated a threshold concentration of 10ppm, Research Safety advises disposal of the solvent as hazardous waste. This approach may add a safety factor of ~10,000 to the DOT safe-to-ship thresholds for organic peroxides. Peroxide testing strips are available at the Research Safety offices free of charge.

For a comparison of safety factors in other contexts, suspension bridge cables may be designed with a safety factor of 2.5, aircraft wings may be designed with a safety factor of 3, and elevator hoisting cables may be designed with a maximum safety factor of 12.

**American
Red Cross**

Adult First Aid, CPR, and AED Certification

Research Safety offers Adult First Aid, CPR and AED certification classes for researchers on the Evanston and Chicago campuses. The fee is \$50 per person; Manager approval and chart string are required. Contact safety-training@northwestern.edu to register or visit our [website](#) for additional information.

**Northwestern**
RESEARCH SAFETY
STUDENT INITIATIVE.

Get Involved with RSSI!

The Northwestern [Research Safety Student Initiative](#) (RSSI) is a student-led organization focused on promoting and prioritizing safety in laboratory research. Through educational opportunities such as colloquium safety minutes, quarterly safety socials, and the annual research safety awareness week, RSSI has cemented itself as a lasting influence in upholding the standards of excellence in research safety.

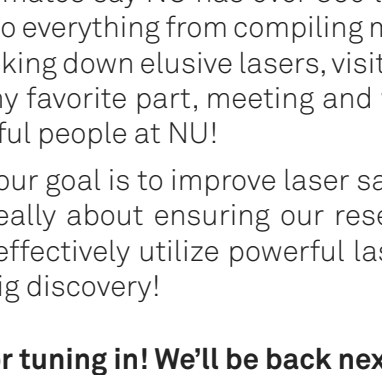
As part of our fall initiatives, we are preparing a manuscript for ACS Chemical Health & Safety on base bath awareness. To support this effort, we are hosting an event in mid-September to encourage broader participation in our base bath awareness survey (linked [here](#)). Join us as we kick off the 25–26 academic year and set the stage for an engaging and productive year ahead!

PPE Vending Machine in Tech

Have you visited the new location of the PPE vending machine? Located next to the Aromark offices in Tech MG67, the vending machine offers various PPE including safety glasses and a variety of glove types. Save yourself a trip to Hogan and pick up your safety PPE needs in Tech! Meet our Laser Intern

Meet our Laser Intern

This summer, Research Safety embarked on a journey to update our Class 3B/4 laser inventory and journey specifications in LUMEN with the help of an ambitious undergraduate in LUMEN with the help of an ambitious undergraduate. Check out Jack's bio below and make sure to say hello if you see him around!



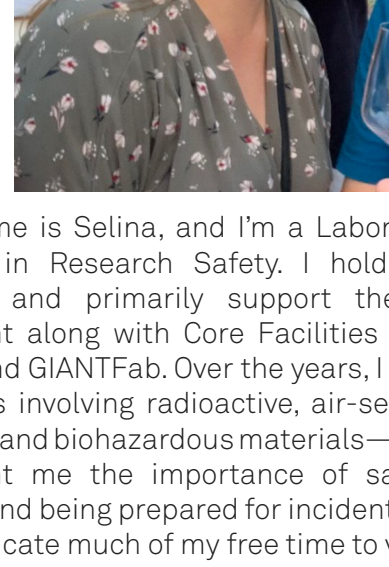
I'm Jack Shimon, a current McCormick student and the Laser Intern for Research Safety! I've been tasked in spearheading Northwestern's laser safety and inventory project.

Despite seeming simple, it's quite a diverse project involving a lot of different moving parts and people. Our current estimates say NU has over 850 lasers across 200 labs. I do everything from compiling massive excel sheets, tracking down elusive lasers, visiting labs, and of course my favorite part, meeting and working with the wonderful people at NU!

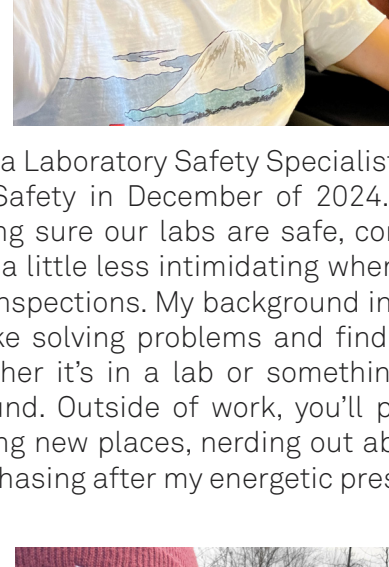
Ultimately, our goal is to improve laser safety, but this project is really about ensuring our researchers can safely and effectively utilize powerful lasers to make their next big discovery!

Meet our Newest Evanston Research Safety Team Members

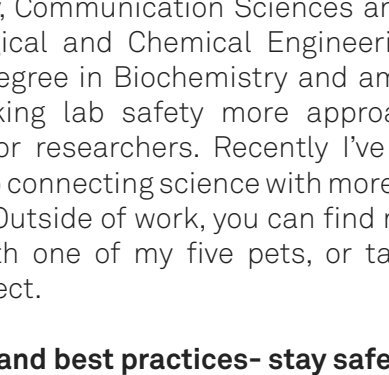
We're excited to welcome three new faces to the Research Safety Team! Get to know our new Lab Safety Specialists who are here to keep your lab safe, compliant, and running smoothly.



Hi! My name is Selina, and I'm a Laboratory Safety Specialist in Research Safety. I hold a Ph.D. in Chemistry and primarily support the Chemistry Department along with Core Facilities such as the Flex Lab and GIANTFab. Over the years, I have worked on projects involving radioactive, air-sensitive, toxic chemicals, and biohazardous materials—experiences that taught me the importance of safe handling practices and being prepared for incidents. Outside of work, I dedicate much of my free time to volunteering, whether assisting in medical tents at major events or serving as a decoy for the K9 unit throughout the city



Hi, I'm Jeff, a Laboratory Safety Specialist and I joined Research Safety in December of 2024. I spend my days making sure our labs are safe, compliant, and (hopefully) a little less intimidating when it comes to rules and inspections. My background in engineering means I like solving problems and finding practical fixes, whether it's in a lab or something that's just laying around. Outside of work, you'll probably find me exploring new places, nerding out about unusual things, or chasing after my energetic preschooler.



Hi, I'm Cassy, a lab safety specialist supporting the Evanston Campus. I work with a wide range of research labs—from Earth and Planetary Sciences to Psychology, Communication Sciences and Disorders, and Biological and Chemical Engineering. I hold a Master's degree in Biochemistry and am passionate about making lab safety more approachable and practical for researchers. Recently I've been diving deeper into connecting science with more sustainable practices. Outside of work, you can find me outdoors, playing with one of my five pets, or tackling a DIY house project.

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