

Lab Safety Contacts Meeting

October 23, 2025

Incidents/Near Misses

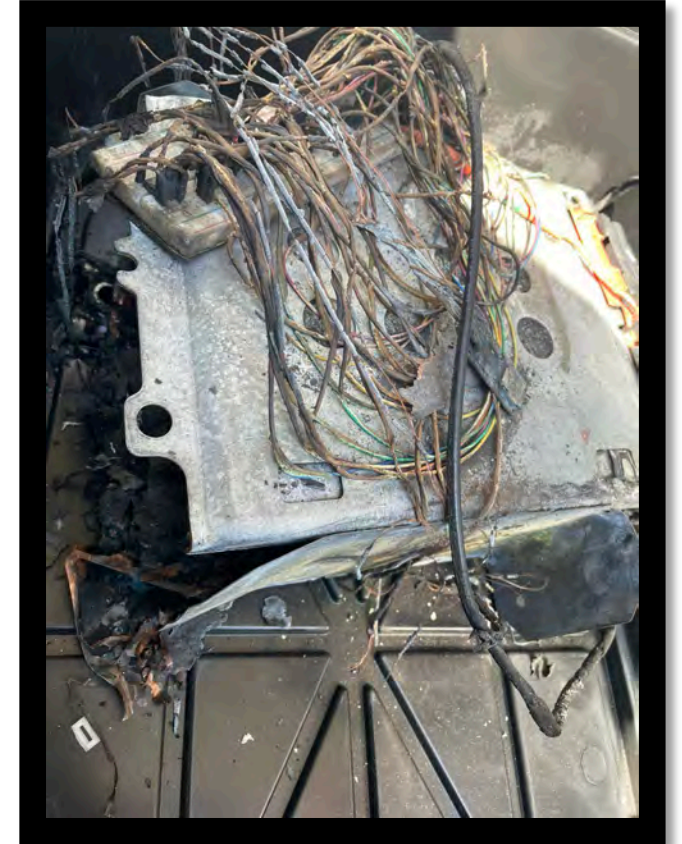


Recent Incidents

- Battery Fire
- Four-liter bottle pressure rupture
- HF Soup
- Glove box near miss
- Unauthorized lab modification

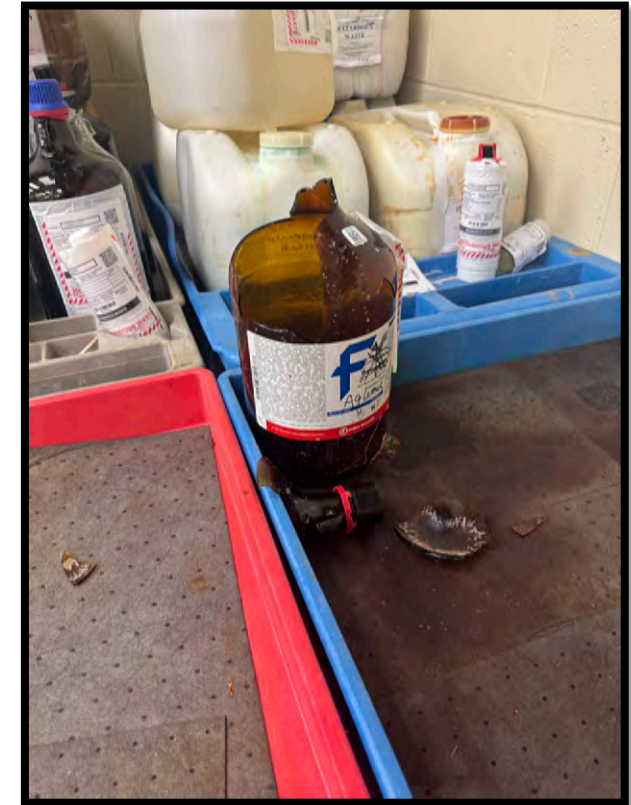
Battery Fire

- What happened?
 - Runaway battery fire overnight
 - Hot enough to activate sprinklers and alarm
- What went right?
 - Work was done in a room designed for it
 - Sprinklers put out the fire and alarm alerted emergency services
 - Lab had thorough SOPs and testing data to review what happened
- What should you do?
 - Do hazardous work in designated areas (labs)
 - Review any process that run unattended to ensure safety and that they **fail safe**



Hazardous Waste Container Rupture

- What happened?
 - A chemical reaction caused over-pressurization and rupture of a waste container.
 - Incompatible chemicals (nitric acid, acetic acid, acetone) were mixed.
 - Acids were not fully neutralized or properly labeled.
 - Failure to follow correct hazardous waste procedures.
- What went right?
 - The bottle was stored in secondary containment, at EH&S facility limiting spill impact.
 - PI was helpful, event is being used to improve safety awareness and procedures.
- What should you do?
 - Ensure all lab users are trained in waste handling
 - Waste: Label, Segregate, dispose according to safety protocols

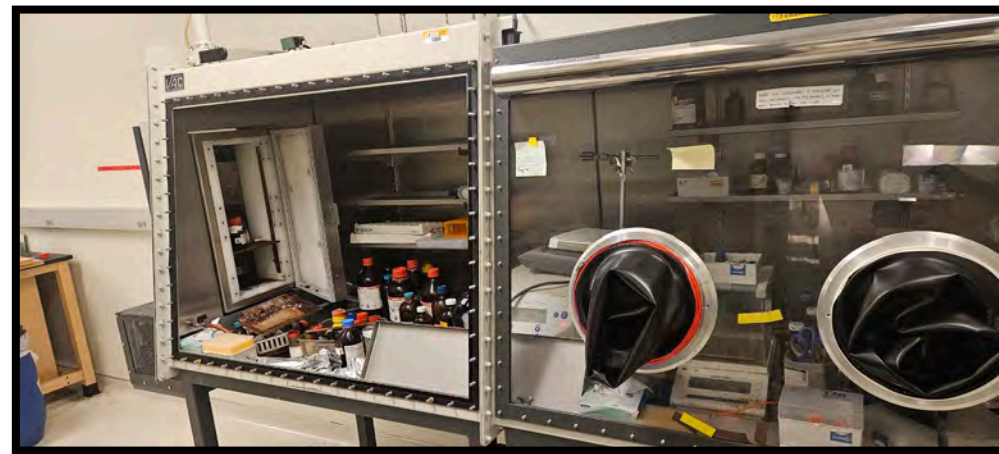


HF in Soup Container

- What happened?
 - During a lab clean-out, hydrofluoric acid (HF) was found in an unlabeled, repurposed food container that was chemically incompatible and improperly stored.
- What went right?
 - No injuries, discovered by EH&S
 - HF was not in a glass container
- What should you do?
 - Label all containers with chemical name, concentration, and hazard details.
 - Store HF only in compatible containers (e.g., polyethylene, Teflon).
 - Keep calcium gluconate gel accessible when handling HF.
 - Report unsafe storage or labeling to EH&S or your Chemical Hygiene Officer immediately.

Inactive glove box potential exposure

- What happened?
 - students with limited hazmat training accessed a glove box to remove chemicals
 - Amine odor suggested possible vapor release.
 - No injuries, but high exposure risk.
- What went right?
 - Odor reported promptly.
 - No exposures occurred.
 - Access and training reviewed.
- What should you do?
 - Contact EH&S before transferring or removing chemicals from unwanted inventory



Fire Wall Puncture

- What happened?
 - Lab was installing new equipment and piped between rooms
 - Two fire walls were punctured, reducing building fire protection
- What went right?
 - After notification of concern, lab put in a Facilities WO to correct piping and fire protection
- What should you do?
 - Any modifications to infrastructure should be done through Facilities



Incidents and Near Misses poll

☐ Live Poll: In the last year, which of these have occurred in your lab space?

Options	Response
Fume hood alarmed and we muted it	40%
Found an unlabeled container left by a previous lab member	38%
Small spill that we took care of	38%
Small injury that only required minor first aid (band-aid or similar)	33%
Release of smelly chemical fumes	10%
Small fire that didn't require a fire extinguisher	2%

☐ Live Poll: Did you tell EH&S?

Options	Response
Yes	27%
No	73%

How to report

- ❑ We want to hear about all these types of incidents!
- ❑ Help us to understand emerging hazards and improve guidance and practices
- ❑ Can be anonymous, but being able to follow up and discuss can help a lot
- ❑ ehs.ucr.edu/report
 - ❑ Linked in two places on all EH&S websites

The screenshot displays the UCR Environmental Health & Safety (EHS) website. The browser address bar shows the URL ehs.ucr.edu/report, which is highlighted with a red box. The website header includes the UCR logo, the text "Environmental Health & Safety", and a navigation menu with links: "ABOUT EH&S", "HOW CAN WE HELP?", "PROGRAMS & SERVICES", "TRAINING", and "DOWNLOAD THE UCRSAFE APP". A prominent blue button labeled "REPORT A INCIDENT, INJURY OR SAFETY CONCERN" is highlighted with a red box. Below the header, a blue navigation bar contains a "REPORT" button, also highlighted with a red box. The main content area features the heading "Report an Injury, Incident or Safety Concern to Campus" and a red button labeled "REPORT AN INJURY, INCIDENT OR SAFETY CONCERN TO EH&S". Below this button, the text "You can report safety concerns anonymously" is displayed. The footer of the website includes a search bar and the UCR logo.

How to share incidents

- ❑ Make sure you talk in your lab and with your peers about accidents and incidents
- ❑ Publishing 12 Months of Research Safety email this month on two of these incidents
 - Talk to your lab mates!
- ❑ Lessons Learned on the EH&S website
 - <https://ehs.ucr.edu/lessons-learned>
 - Includes links to other university lessons learned



12 MONTHS OF RESEARCH SAFETY OCTOBER 2025 PROPER LABELING

Labeling containers is a critical part of laboratory safety. Labels communicate hazards to yourself and others, to ensure that they know how to safely work in the area. Two recent incidents on campus show the importance of proper label use.

Properly Label Chemicals

During a lab cleanout, the hazardous waste team found an unlabeled soup container of concentrated hydrofluoric acid (HF). Because HF requires specialized handling and treatment, the lack of labeling created a serious exposure risk to lab personnel, facilities, custodial staff, and first responders, who would not have known how to respond properly to an exposure.



Properly Label Waste



A waste container labeled as an inert aqueous mixture with acetone ruptured after EH&S hazardous waste team picked up the container from the lab. The lab later identified that nitric and acetic acids had been added, reacting with the acetone to generate heat and pressure. The incident highlights the importance of reading waste labels and adding only listed, compatible materials.

What we can do

Chemical container labels provide essential safety information required by law. Once chemicals are transferred or mixed, that information is lost unless properly relabeled. Clear labeling helps protect everyone and prevent accidents. Refer to the Chemical Hygiene Plan for details on hazard communication and labeling.

CONTACT US

Phone: 951-827-5528
Email: ehslaboratory@ucr.edu
Website: <https://ehs.ucr.edu/laboratory>
Report an Incident, Injury or Safety Concern [Here](#)



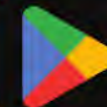
Questions?

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Your Campus Safety Companion



Available on the
App Store



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Google Play



Lab Cleanout process



Concerns

- Several of the recent incidents involve materials or lab spaces that are left vacant
- When groups leave a space, safety is no longer managed
 - Any poor lab practices are compounded
 - Unstable containers are left
 - Unlabeled containers remain unknown
 - Unfamiliarity with remaining hazards
- Other workers enter the lab to work
 - Facilities workers doing routine work or updates
 - EH&S staff picking up waste and checking fume hoods
 - Grad students or other dept/college employees salvaging materials or identifying new lab spaces
- Lab cleanouts get expensive and take time
 - An injury is even worse

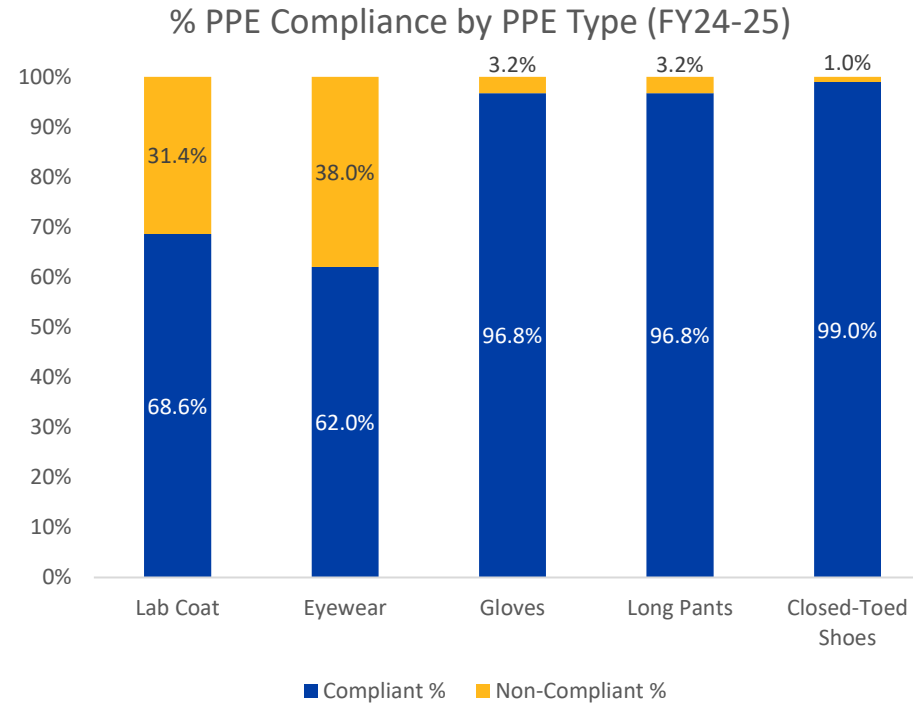
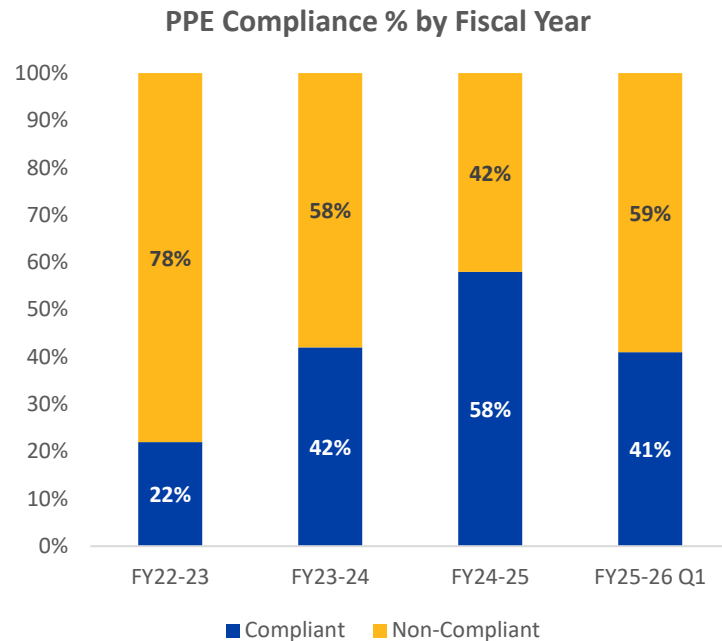


Recommendations

- Bring EH&S into your labs earlier in the cleanup process
 - We can assess and reduce risk
 - Identify materials that should not be distributed
 - EH&S is developing additional guidance to support space clearance
- Hazardous materials should not remain without direct supervision
- Use near miss reporting to identify and fix risks before harm occurs
- Reinforce lab SOPs and require adherence to Chemical Hygiene Plans

PPE Spot Checks

PPE Compliance



- ❑ Drop in PPE use this year
 - After a few years of improvement
- ❑ Safety eyewear remains our lowest category
- ❑ What can the university do, and how can EH&S support?
 - EH&S will start providing spot check data with PIs and LSCs

Safety Eyewear poll

- ❑ Live poll: Which of these excuses for not wearing eye protection have you heard (or used) in your lab?
- ❑ Results:

Option	Responses
"I'm only in here for a minute."	45%
"My eyewear fogs up."	49%
"Safety glasses don't fit over my prescription glasses."	35%
"I'm wearing safety glasses. Why do I need splash goggles?"	16%
"I'm working in the biosafety cabinet / fume hood / glove box so I already have the sash / window in front of me."	31%
"They are uncomfortable to wear."	37%
"The activity I'm doing isn't hazardous. / Hazardous activities are 'far enough' away."	47%
"We've never had an accident."	8%
None/we are always compliant	12%

Common Objections to safety eyewear use

Objection	Response
"I'm only in here for a minute"	PPE should be readily available and easy to put on and take off. Serious injuries have occurred in brief, incidental moments.
"My eyewear fogs up"	Ensure proper fit, wash with soap and water. Many options are anti-fogging, if degraded contact EH&S for replacement.
"Safety glasses don't fit over my prescription glasses."	EH&S has many over the glasses options, contact for a fitting. If staff, you may be able to get prescription safety glasses.
"I'm wearing safety glasses. Why do I need splash goggles?"	Splash goggles form a seal against the face to protect against harmful spray coming from any angle, including behind you.

Common Objections to safety eyewear use

Objection	Response
"I'm working in the biosafety cabinet / fume hood / glove box so I already have the sash / window in front of me."	Accidents have occurred when the sash was raised for only a brief moment. PPE protects against fires, explosions, hood malfunction and dangers behind you.
"They are uncomfortable to wear."	Let EH&S help you find something with a better fit.
"The activity I'm doing isn't hazardous/ Hazardous activities are 'far enough' away."	Let's do an assessment of your work and the space. There are often hazards around you even if you aren't working directly with them. "Hazard free" spaces can be defined that are exempt from policy if no hazardous work occurs there.
"We've never had an accident."	Great! Let's keep it that way by protecting ourselves.

Chemical Hygiene Plan



Chemical Hygiene Plan

- 2025 updates are being finalized
 - Currently in review by Research Integrated Safety Committee (RISC)
- 2025 changes:
 - Methylene chloride guidance
 - Exposure Control Plan with accepted work practices as addendum to CHP
 - Generally standard lab practices, but EPA requires DCM specific language and content
 - Maximum Allowable Quantities (MAQ)
 - Provide brief context for what an MAQ is
 - Future updates will expand content and guidance
- Will be shared with the campus in November
- Lab members will need to review and sign off

Questions/Open Discussion



Thank you!

THINK SAFETY

What could go wrong?

How can I prevent it?

How can I prepare for the unexpected?

EH&S can help, just ask