



▶ LESSONS LEARNED..... 2

ISSUE 14 ○



▶ PPE REMINDERS ..... 4



▶ DEPARTMENTAL  
CONTACTS ..... 4

# Safety *first*

BRINGING A SAFETY WORKPLACE TO ALL MEMBERS OF  
THE CHEMISTRY BUILDING

## Why Your Inventory is Important

Using the Chemistry Department's Vertère chemical inventory system is imperative to ensure lab safety. It helps Lab Managers, EH&S Professionals, and Emergency Responders to minimize response time to find out what chemicals are in the area if a mishap should occur, which could reduce overall damages and injuries to all personnel. Making sure your labs Vertère management system is up to date could potentially SAVE LIVES.

The University of Michigan is required by the Federal and State government to track and manage all chemicals coming in and out of our facilities. This is why it is extremely important to ensure everything in your inventory is up to date and listed in the correct location. If you have any questions regarding this information or are missing any barcodes please contact [Chrisblu@umich.edu](mailto:Chrisblu@umich.edu).



Additionally please remember to remove any barcodes off of empty chemical bottles and put them in the "Used Barcodes" mailbox so they can be removed from your inventory and remind everyone in your lab to regularly check their mailboxes to ensure chemicals can be barcoded when they come in.

# Lessons Learned

## Waste Bottle Explosion

In September 2024 we had one of the most serious incidents in the building in over a decade.

A student partially filled a waste bottle with solutions of anisaldehyde which is a stain that is primarily made of ethanol. The next day a different person had excess 6M nitric acid which they mistakenly poured into the same waste bottle. This unknowingly created a nital solution and although there was no noticeable immediate reaction, after several hours the reaction started and a student in the room heard a loud hissing noise before the glass waste bottle ruptured so fast and violently that it caused the bottle to shatter and tiny pieces of glass including drops of acid were thrown in every direction over 20 feet.

Thankfully the only person in the room at the time was far enough away that they did not get hit with anything but this could have been much worse.

There are a few major takeaways from this incident. First and foremost, please keep close track of what goes into the bottles. Some highly reactive materials like piranha waste and nitric acid should be kept by themselves in separate waste containers.

Additionally, liquid bottles should not be filled past 3/4 full when collecting volatile liquids to give enough headspace for vapor expansion. As a rule of thumb, NEVER fill a bottle above the shoulder of that bottle. Although doing this would not have helped much with this specific incident, in nearly all other situations it would have minimized the impact.





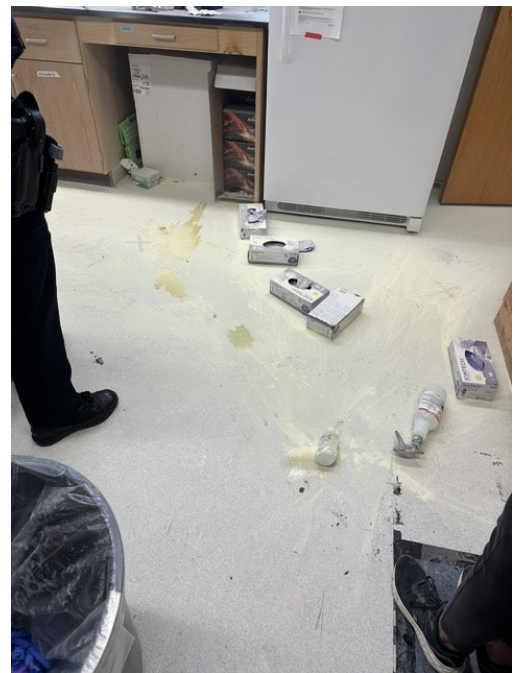
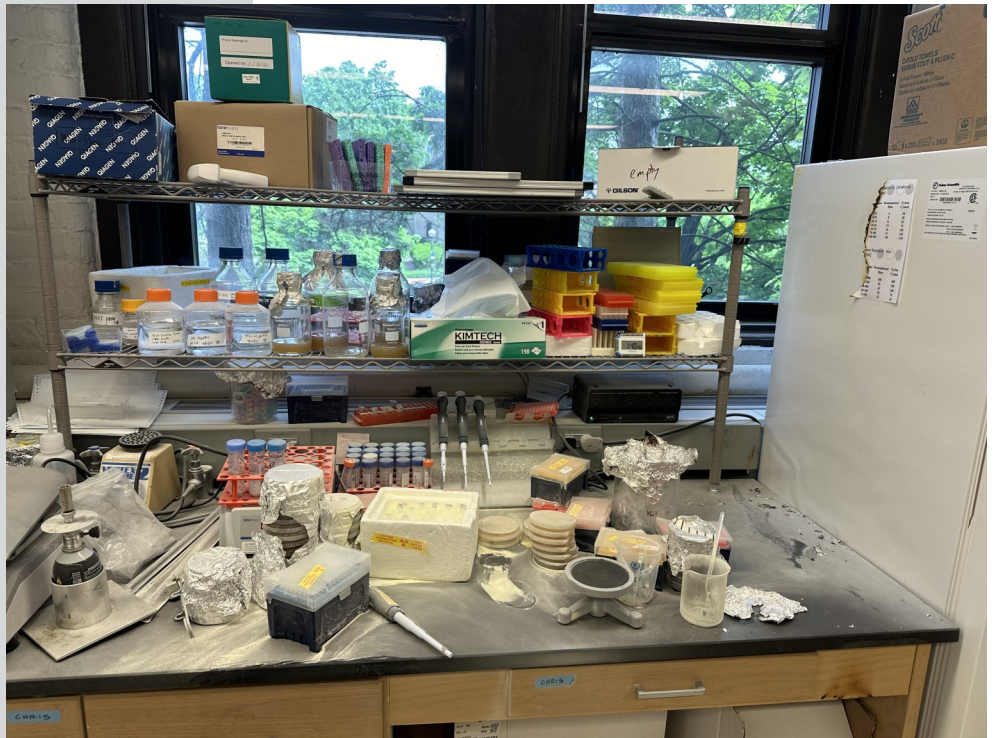
# Lessons Learned

## Small Fire

A small fire occurred when a post doctoral researcher was preparing media plates. The procedure involved spreading antibiotics on plates then sterilizing the spreader by dipping it in an ethanol bath followed by passing the spreader with a butane burner. During this procedure the researcher used an open beaker with roughly 200-300 ml ethanol for sterilizing the spreader. The researcher accidentally knocked over the ethanol beaker and the ethanol spilled over the lab bench. The ethanol caught on fire from the open flame, affecting the various materials on the bench and burning the researcher's hand. A lab member used a fire extinguisher to put out the fire and then called 911. The researcher was taken to the hospital for treatment of their burns. Some lab supplies on the bench were damaged in the process.

One of the main causes of this incident was the work area being extremely cluttered. This made it easier for the beaker to get knocked over as well as the large amount of papers and items around the area to catch fire.

Please remember that there is an SOP for bunsen burners. Prior to the start of working the entire work area work area should be cleared of unnecessary flammable materials.



As a reminder, **all fires, even minor ones that self extinguish need to be reported to DPSS immediately** for state reporting. An officer or fire marshal may come out to take a look and get a statement but there is no punitive action for accidents. You can contact DPSS by calling 911 or their nonemergency number: (734) 763-1131.

# Proper PPE

The recent Nital explosion (see page 2) showed us why it is so important to wear proper PPE **ANYTIME** you are in a wetlab. Incidents can happen anytime, even if you are just walking through the lab

- A minimum of safety glass and proper lab attire should be worn any time you are in a lab, even when just walking through
- All hoods should be kept fully closed whenever possible both to protect everyone in the room in case of an incident and to save on our energy costs
- When conducting experiments, a blue Flame Resistant lab coat should be worn at all times

## UPCOMING INSPECTION

Always Be Ready!



Campus recently had another EGLE (formerly DEQ) Inspection looking at waste. We were not part of the inspection this time but we are due for another one in the near future. We also have many other agencies (DEA, MiOSHA, EPA, etc) that may inspect our labs with little or no notice. Always keep your lab clean and safe.

### UNIVERSITY OF MICHIGAN Academic Calendar FALL TERM, 2024 ANN ARBOR CAMPUS

Classes begin ..... Aug 26,  
Mon

Labor Day (Holiday) ..... Sept 2,  
Mon

Fall Study Break ..... Oct. 14-15,  
Mon-Tues

Thanksgiving recess ..... Nov  
27-29, Wed-Fri  
Classes end ..... Dec 9, Mon

Study Days ..... Dec 10 Tues &  
Dec 14-15, Sat-Sun

Examinations ..... Dec 11-  
13, Wed-Fri & Dec 16-18, Mon-Wed

Commencement ..... Dec 15, Sun

## Dry Ice/LN2

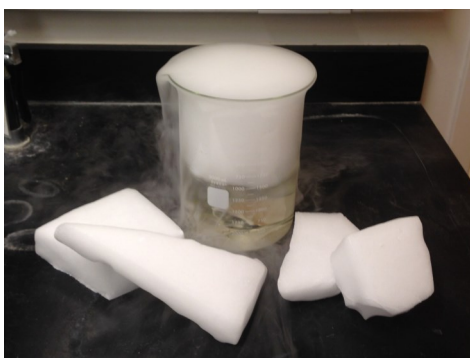
### Dry Ice

Dry ice is available everyday from the cooler outside of room A602 in the basement.

### Liquid Nitrogen

Department dewars are accessible 24 hours a day outside of room A602 for small (under 10L) liquid nitrogen quantities.

Large dewars of liquid nitrogen can be ordered by emailing [chrpeter@umich.edu](mailto:chrpeter@umich.edu) AND [chrisblu@umich.edu](mailto:chrisblu@umich.edu) by noon one business day before its needed.



## Contact Information

### **Package Shipping**

Ronald Farnstrom — [romafa@umich.edu](mailto:romafa@umich.edu)  
Phone—615-5034

### **Waste Issues**

Kacey Vaughn — [vkacey@umich.edu](mailto:vkacey@umich.edu)  
Phone 764-7325

### **Safety Issues/Concerns**

Christopher Peters — [chrpeter@umich.edu](mailto:chrpeter@umich.edu)  
Phone—763-4527

Tracy Stevenson — [steventi@umich.edu](mailto:steventi@umich.edu)  
Phone—764-7316

### **Chemical Inventory Questions**

Christopher Bluteau — [chrisblu@umich.edu](mailto:chrisblu@umich.edu)  
Phone—647-8932

### **Maintenance Requests**

Routine Work Request Form on Chemistry Intranet

Baby Henry Wants You  
To Be Safe

