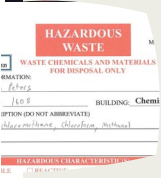




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ISSUE 10 ○

# Safety *first*

BRINGING A SAFETY WORKPLACE TO ALL MEMBERS OF THE CHEMISTRY BUILDING

## Welcome Kacey Vaughn

Please welcome our new Hazardous Waste Coordinator, Kacey Vaughn to the Chemistry Department. Kacey has a Masters of Public Health in Environmental Health Sciences from the University of Michigan. She also has nine years of experience working with hazardous wastes. In her spare time she enjoys video games, disc golf, and drawing.

Kacey will be taking over all of the waste pickups and waste related questions in the building. You can contact Kacey by emailing her at [vkacey@umich.edu](mailto:vkacey@umich.edu) or calling her at 764-7325.



**ATTIRE REQUIRED TO ATTEND LAB**

**NOTICE**  
You will not be allowed to attend without proper attire!

- Hair Secured Back**  
Long hair must be pinned or tied back.
- Covered Torso**  
Shirts must cover shoulders, back, and stomach.  
Avoid baggy clothing, including loose sleeves.  
Avoid synthetic clothing such as nylon or polyester.
- Long Pants or Full-length Skirt**  
Must cover ankles. No holes or mesh.
- Close-Toed Shoes**  
Must cover the entire foot (toes, heels, tops, and sides).

Examples of clothing items not permitted in lab:

Exposed Feet   Bare Ankles   Midriffs   Holes in Pants   Shorts

Please visit Chemstands (A601) for questions regarding attire policies or to report compliance/enforcement concerns.

## Proper Lab Attire

Please remember that appropriate lab attire is required whenever entering a lab space. Two of the most important requirements are that legs must be fully covered at all times (no shorts or skirts) and that there should be no open toed shoes (no flipflops or sandals).

To see more about the lab attire requirements please see the University of Michigan Chemical Hygiene Plan. <https://ehs.umich.edu/wp-content/uploads/2016/03/>

# Lessons Learned

## Oven Fire

A lab was attempting to dry three boxes of Kimwipes to use them in a glovebox. The boxes were prepared by putting holes in the sides of the boxes and opening the perforated portions on the top and bottom and then they were placed on the bottom shelf of an oven. A digital thermometer was used to check the oven temperature and the oven was set to 140 °C (paper catches fire at approximately 220°C). The oven was then left to be run overnight.

Approximately two hours later a lab member noticed smoke in the lab. Two lab members then discovered the source of the smoke and one opened the door while the other sprayed it with a fire extinguisher and put the fire out. 911 was called as well all proper reporting took place for this incident.

It is not fully known what the cause of this fire was and there are several possibilities. The most likely of these are that the incident was caused by a malfunction in the thermostat of the oven which caused the oven to heat beyond the setpoint. It is also possible one of the boxes was set too close to one of the heating elements. This issue was compounded by no one being in the room for most of the process allowing it to become a full scale fire before being noticed.

Although this procedure had been done multiple times without incident there was always a risk of a fire occurring. The best and safest way to perform procedures that involve drying combustible materials is doing so in a specialty vacuum oven that will heat the items in the absence of oxygen which will prevent the possibility of fire.



# Lessons Learned

## Eyeshashes

We have noticed that over the last few months there has been a significant increase in chemical exposures to the eye. Luckily all of these injuries have been minor with no permanent damage but it raises some concerns.

Normal safety glasses are not adequate to protect against liquid splashes. For items that may cause splashes the best options are tight fitting goggles and face shield depending on what chemicals are being used. These items will prevent liquid from getting in the eyes.

One of the most important pieces of safety equipment in the lab and the best way to prevent splashes are the horizontal sashes on your fume hoods. When used correctly it create a barrier between you and your experiment and prevent you from being splashed or otherwise exposed to chemicals.



## Proper Hood Sash Usage

Most hoods in the Chemistry Building have both vertical and horizontal sashes. The horizontal sash panels are designed to be moved to be a shield between you and the experiment while still allowing you to move your hands and arms inside of the hood on the sides of the panel to work on the experiment.

It is important to remember that the vertical sash and the horizontal sash panels should never be fully opened at the same time. Doing this will cause a cavitation in the airflow that may expose the user to whatever chemicals are being used in the hood.

Due to some of the chemicals used in the hoods the horizontal sash panels may be hard to move on its track from their wheels being deteriorated. If you are having issues with the panels please contact Anson Pesek at [ahpesek@umich.edu](mailto:ahpesek@umich.edu) to request a repair.

# Inspection Results



On June 5th, 2021, Central Campus and the Chemistry Building received a visit from an EGLE inspector. EGLE stands for Environment, Great Lakes, and Energy Department and is Michigan's version of the EPA. This inspection was focused on solely hazardous waste and did not inspect general or chemical safety.

No deficiencies or violations were found during this inspection at the Chemistry Building. The inspector was even very happy to see that waste containers were fully closed when not in use and that containers were properly labeled which are two of the biggest issues they look for during inspections.

One item of concern was brought up during the inspection which will cause a major change to our waste labeling. Currently EHS's policy is that labs put an accumulation start date and put the items out for pickup within 90 days to prevent waste from sitting around too long. However, from a regulatory perspective the 90 days does not start until it enters the Chemistry Waste Room which is known as a "Central Accumulation Area". This discrepancy has caused some confusion with the new inspector and EHS is implementing changes to remedy this issue.

From the aftermath of this inspection, labs are no longer required to fill out an "Accumulation Start Date" (Item C on the label below), the rest of the label should be filled out as normal including the new "Hazardous Characteristics" checkboxes. Future versions of this label will remove the start date part of the form entirely. The rest of the form is Labs are still expected to keep track of and remove waste in a timely manner.

The University of Michigan  
DEPT. OF EHS  
1655 Dean Rd.  
Ann Arbor, MI 48109-2159  
(734) 763-4568

**HAZARDOUS WASTE**

EPA ID No. MIR000001735  
MANIFEST TRACKING # \_\_\_\_\_

**WASTE CHEMICALS AND MATERIALS FOR DISPOSAL ONLY**

**IN CASE OF EMERGENCY CONTACT**  
U-M PUBLIC SAFETY (24 HOURS): (734) 763-1131

GENERATOR INFORMATION:  
(A)—Name NAME: Chris Peters

(B)—Room Number ROOM NUMBER: 1608 BUILDING: Chemistry

(D)—Chemical Description CHEMICAL DESCRIPTION (DO NOT ABBREVIATE) Acetone, dichloromethane, chloroform, methanol

MI Act 451/  
RCRA Waste Code

(E)—Hazardous Characteristics **HAZARDOUS CHARACTERISTIC(S)**  
 IGNITABLE  REACTIVE  CORROSIVE  
 TOXIC  OTHER: \_\_\_\_\_

Accumulation Start Date 10/14/2020

(C)—Accumulation Start Date

Rev 7/20

# Chemical Inventory Overview

The University of Michigan Chemistry Department uses a unique inventory system due to the sheer number of chemicals in the building. The department does the bulk of the work but the labs need to help us to make sure that we have an accurate inventory of chemicals in your lab.

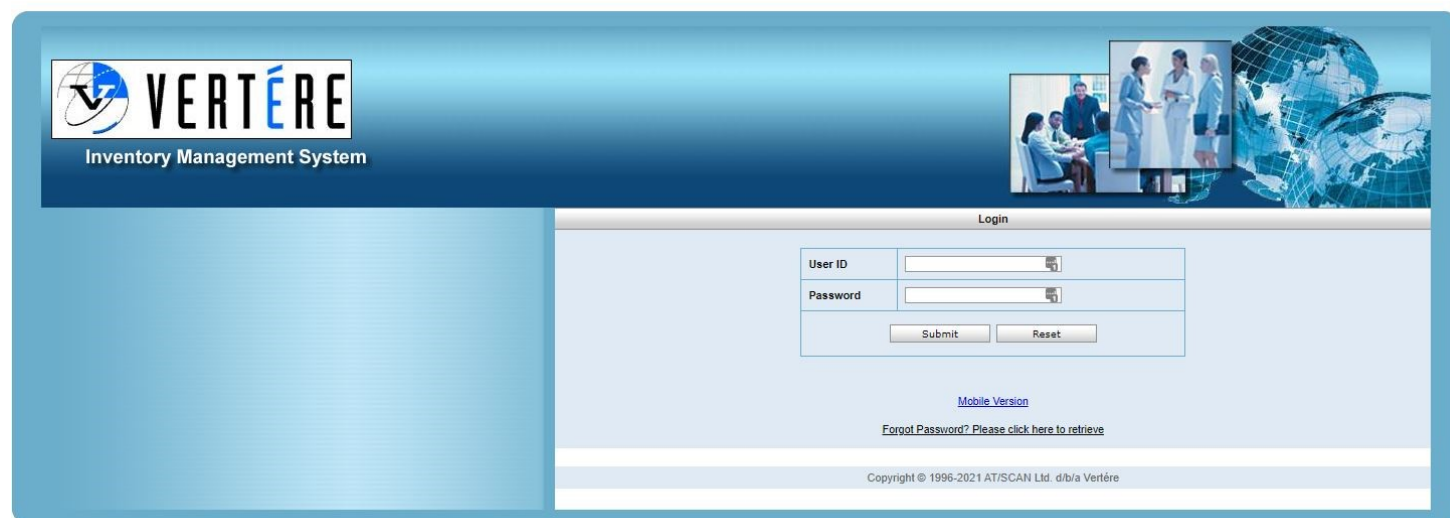
## How The Inventory System Works:

- When a lab in the Chemistry building puts in a chemical order a copy of that order form automatically gets sent to the facilities staff from the Business Office.
- A staff member enters all of the data for the chemicals on that form into our inventory system and prints out a barcode for each chemical which will be placed in the mailbox of whoever orders the chemicals.
- When facilities staff receives sheets of old barcodes from empty bottles they will process them and remove them from your inventory
- Chemicals will be listed in the inventory by the room listed on the order form.

## What Labs need to Do To Ensure the Inventory is Accurate:

- A few days after making a chemical order look in your mailbox for the barcodes
  - When you receive them, take those barcodes and put them on the matching chemical bottle
- When a chemical bottle is empty remove the barcode and put them on a sheet of paper
  - When enough empty barcodes have been gathered put the sheet in the mailbox marked "Used Barcodes" and we will remove them from your inventory.

To get access to the Vertere Inventory System or if you have any questions about the program please contact Anson Pesek at [ahpesek@umich.edu](mailto:ahpesek@umich.edu)



**VERTÈRE**  
Inventory Management System

Login

User ID	<input type="text"/>
Password	<input type="password"/>
<input type="button" value="Submit"/> <input type="button" value="Reset"/>	

[Mobile Version](#)

[Forgot Password? Please click here to retrieve](#)

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## Undergraduates and Temps in the Lab

Many labs in the building have undergraduates, temporary employees and volunteers helping them with experiments. Although this is allowed and beneficial for both parties it is important to note that they have requirements that differ from other groups. Most importantly these groups are not allowed to work in a lab by themselves and they are not allowed to have keys to the lab. This is a University-Wide policy because these groups are not covered by insurance unless they

***these groups are not allowed to work in a lab by themselves and they are not allowed to have keys to the lab.***

are supervised at all times. Because of this, although these groups can perform many of the same tasks and experiments as graduate students they are not allowed to perform anything without the direct supervision of a PI, Postdoc, or graduate student and every experiment they do must be signed off on by the PI prior to work.

These groups also do not get departmental mailboxes so please have any packages they need sent to a permanent member of the lab.

## UPCOMING INSPECTION

Always Be Ready!



The Chemistry Building recently had a EGLE (formerly DEQ) inspection looking at waste. However we 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.

## Events

Classes begin ..... Aug 30, Mon  
Labor Day.....Sept 6, Mon  
Thanksgiving Recess.....Nov 23, Tues  
Classes Resume..... Nov 29, Mon  
Classes End..... Dec 10, Fri  
Study Days..... Dec 11-12 Sat-Sun  
Examinations ..... Dec 13-17, Mon-Fri, Dec 20, Mon  
Commencement Activities.....Dec 19, Sun

## Dry Ice/LN2

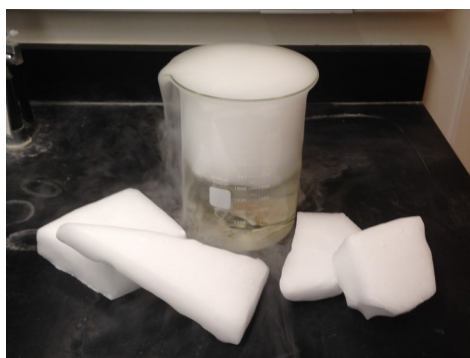
### Dry Ice

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 15L) liquid nitrogen quantities.

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



## Contact Information

### Package Shipping

Christopher Bluteau — [chrisblu@umich.edu](mailto:chrisblu@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

Anson Pesek—[ahpesek@umich.edu](mailto:ahpesek@umich.edu)  
Phone—647-8932

Baby Henry Wants You To Be Safe

