Yale Environmental Health & Safety

Laboratory Safety Newsletter
Fall 2023

October is International Biosafety Month

Sponsored by the American Biological Safety Association (ABSA) International, October 2023 celebrates the 10th anniversary of the International Biosafety Month initiative. There was no specific theme this year, but

institutions were reminded to focus on biosafety and biosecurity topics pertinent to their locations. This year, the Yale EHS Biosafety group is focusing on making sure that individuals working with biohazards and regulated biological materials have the core information they need for minimizing or preventing exposure and complying with the various associated regulations, standards, and guidelines.

This year, our areas of focus include:

- Information for Principal Investigators and Lab Managers
- Laboratory Inspection Help Guides and Checklists
- Safe Sharps Guidance
- Grant Applications
- Biosecurity

See EHS's International Biosafety Month webpage for more information.





Spotlight on Good Laboratory Safety Practices

A researcher called their safety advisor as their cell culture incubator was failing. They were requesting permission to move their infected cell cultures from their BSL-2 laboratory to a colleague's cell culture room. The safety advisor checked with the Biosafety Office to identify if the proposed location was registered for work with human

pathogens with the State of Connecticut Department of Public Health. It was not and could not be used. The safety advisor asked for a list of labs registered with the State of Connecticut and provided this to the researcher. The researcher's principal investigator contacted one of the registered labs and was given permission to use their cell culture room to keep their experiments going. Yale EHS updated the State to add this pathogen to that lab's state registration.

The communication between the lab and the Yale EHS safety advisor helped prevent a violation of the State of Connecticut Department of Public Health laboratory regulations.

Cryostat/Microtome Safety Guidelines

EHS recently developed <u>Cryostat/Microtome Safety Guidelines</u>. Please note that new personnel must be trained in the proper use and maintenance of the equipment and demonstrate proficiency prior to use. If using human tissue, microtome/cryostat users are required to attend BSL-2 Enhanced Work Practices and Bloodborne Pathogen training provided by Yale University EHS. Users shall also attend Laboratory Chemical Safety training due to the fixatives and dyes used in histology. If you have any questions, please contact your <u>safety advisor</u>.



Research Materials Shipping

Streamlined Process for eShipGlobal

Effective September 1st, 2023, eShipGlobal streamlined the process that collaborators outside of the university can use for inbound and outbound eShipGlobal shipments to university employees. Please note the key changes:

- When responding to an invitation from Yale to use eShipGlobal for shipments, the collaborator no longer needs to establish an eShipGlobal user ID and password. They can simply register the full address from which they will send or receive shipments from Yale.
- When a Yale user creates an eShipGlobal order, the collaborator will receive an email with all of their labels and will not need to log in to obtain them.
- If a frequent collaborator would like an eShipGlobal account to track shipments or review their history, they can contact support@eshipglobal.com for login access.

If you need assistance with the new streamlined process for generating a collaborator shipment, please contact your <u>safety advisor</u>.

Common Shipping Troubles

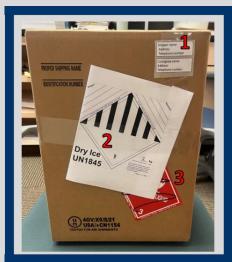
Shipping carriers have frequently returned packages to Yale researchers for the following errors:

- Inappropriate packaging for dry ice shipments (outer fibreboard box is required for dry ice)
- Labels not properly adhered to the box (labels must be completely covered in tape)
- Re-used packaging had old labels still adhered (all old labels must be removed)
- Labels overlapped on multiple sides of box (labels cannot overlap or be on more than one side of the box)

Can you identify all 10 things wrong with these research materials shipments? Check your answers on page 3.

Research Materials Shipping Resources

For questions regarding shipping research materials, please contact your lab's <u>safety</u> <u>advisor</u> for assistance.







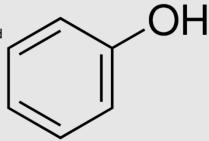


Lessons Learned: Asphyxiation Hazard Associated with Dry Ice

The American Chemical Society recently released a case study of a graduate student researcher (not at Yale University) who lost consciousness while retrieving 180 pounds of dry ice from a deep dry ice container. They share the details of the incident and the lessons learned from it to promote safer handling of dry ice in these situations. Please review the Lessons Learned.

Lessons Learned: Phenol

A researcher handling phenol in a laboratory fume hood created droplets that touched their forearm. Their lab coat was folded upward, leaving exposed skin between their lab coat and gloves. They did not feel anything so continued to complete the experiment. Twenty minutes later, they felt a burning sensation on their forearm. They removed their lab coat and saw red burn marks on their forearm. They rinsed the area with water and emailed a safety inspector. The safety inspector was on vacation, but their



out of office email indicated to call the company's emergency line. Once they called this number, they were provided with emergency response instructions, polyethylene glycol for treatment of the exposed skin, and referred to a healthcare professional for evaluation.

Lessons Learned

- The researcher should have read the Safety Data Sheet for phenol prior to working. This would have given information about the delayed effects due to the anesthetic properties.
- The researcher should have worn a lab coat with a banded cuff to protect their skin. The lab coat should not have been folded up to expose their skin.
- Pertinent safety information for chemical exposures should have been posted and access to polyethylene glycol should have been available, if working with phenol.
- Emergency phone numbers should have been posted, shared with all lab staff and known by all staff working with hazardous materials. Emailing a safety inspector is not ideal in an emergency.

Phenol Resources

- Phenol Safety Poster
- Phenol Standard Operating Procedure
- <u>Safety Data Sheets</u>

Answers to Common Shipping Troubles (from pg. 2)

- 1. Address labels are not fully covered in clear plastic tape.
- 2. Dry ice label is not fully covered in clear plastic tape.
- 3. Overlapping labels and an old label still adhered to a re-used box. All old and irrelevant labels must be removed for new shipments.
- 4. Dry ice label is not fully covered in clear plastic tape.
- 5. Label is overlapped onto multiple surfaces/sides of the box.
- 6. Inappropriate placement of up arrows label on the top side of the box.
- 7. Inappropriate packaging for dry ice shipments (missing the outer fibreboard box that is required for dry ice).
- 8. Old label is still adhered from a re-used box that is inappropriate for the shipment. All old and irrelevant labels must be removed for new shipments.
- 9. Old label is still adhered from a re-used box that is inappropriate for the shipment. All old and irrelevant labels must be removed for new shipments.
- 10. Re-used box has a crushed edge and is not in good condition for re-use.