Lab Chatter

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Lab Spill Kit for Incidental Chemical Release

By Ronnie Souza

What is a laboratory spill kit?

A laboratory spill kit is a collection of items to be used in the immediate response and clean-up of incidental spills, leaks or other discharges of hazardous wastes or other hazardous materials (chemical spills). Spill kits must be maintained in close proximity to areas where chemicals are managed or stored to enable prompt response and clean-up of incidental spills.

What is an "incidental" release?

An incidental release is a release of a hazardous substance which does not pose a significant safety or health hazard to employees in the immediate vicinity or to the employee cleaning it up, nor does it have the potential to become an emergency within a short time-frame. Incidental releases are limited in quantity, exposure potential, or toxicity and present minor safety or health hazards to employees in the immediate work area or those assigned to clean them up. An incidental spill may be safely cleaned up by employees who are familiar with the hazards of the chemicals with which they are working. If the spill exceeds the scope of the lab workers' experience, spill kit supplies, training and willingness to respond, the workers must not attempt to clean. Contact UNE Security (X-366) immediately and warn others in the immediate area.

What does your spill kit contain?

-Absorbent Sock (1)
-Absorbent Pillow (1)
-Absorbent Mats (3-5)
-Safety Goggles (1 pair)
-Gloves (2 pair)
-Super Sorbent (loose absorbent; 1 ½ gal)
-Disposal Bags (1)
-Bucket with lid (1)

****All kits should remain sealed unless needed for incidental spill clean-up****

How do you dispose of used spill cleanup materials?

Report all spills to EHS immediately. We will replace the used spill kit supplies with new ones and help you determine the best method of disposal for the cleanup materials used in the response to an incidental release. In most situations the cleanup materials will be managed as hazardous waste.

It is important that you keep all cleanup materials separate from regular trash!

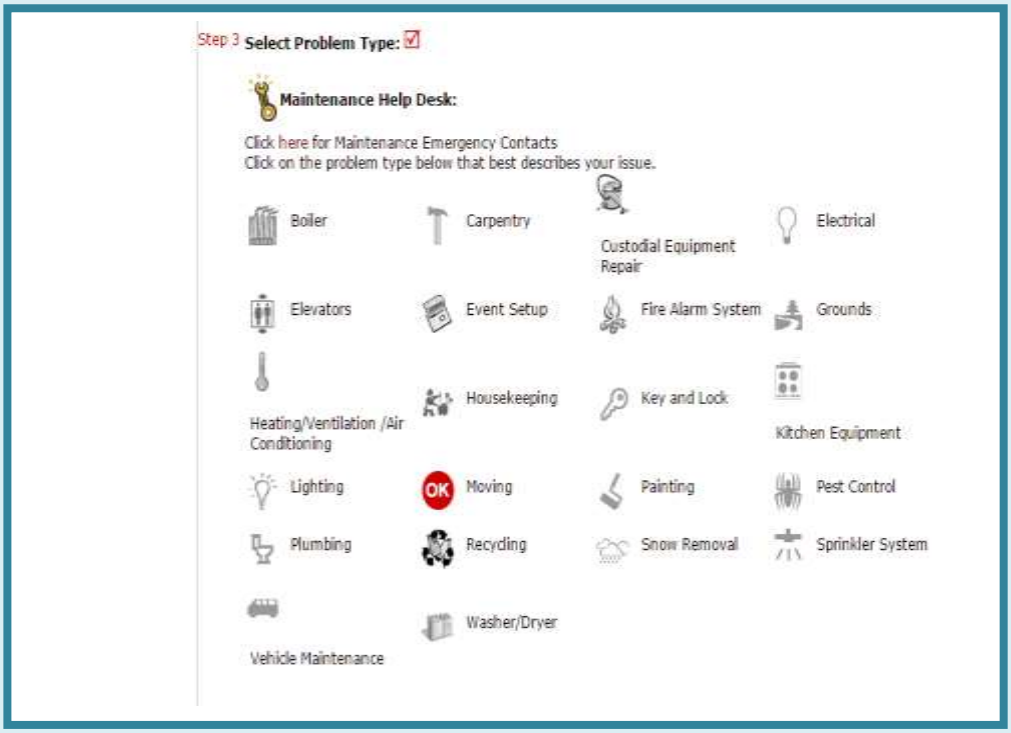
Broken glass vs. sharps containers **By Peter Nagle and Jessica Tyre**

Broken Glass Containers are a common sight in labs throughout both campuses. The purpose of these containers is to collect not only broken glass, but anything capable of puncturing bags and causing injury to anyone who handles trash. The presence of broken glass containers is a safety precaution to prevent cuts to our housekeeping staff. The following items should be discarded in the broken glass containers:

- Non infectious slides
- Vials
- Pasteur pipettes
- Empty chemical bottles
- Broken or fragile glass or plastic
- Pipettes
- Pipette tips

Disposal

When broken glass containers are full, seal the container with tape and put aside for Facilities. Facilities will not pick up any bins that are not sealed shut. Submit a work order to Facilities making sure to click the "moving" icon so the work order is given to the right personnel.



In the UNE Work Order System found at: http://www.une.edu/campus/facilities-management select "Moving" in "Step 3: Problem Type" when putting in a work order request to have your sealed broken glass box picked up by the UNE Facilities Department.

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Sharps Containers: The broken glass container should not be confused with the sharps containers, which are for items that have been in contact with infectious material or items that are designed for cutting or scraping, such as razor blades and scalpels. Any tool meant for cutting or scraping must be discarded in the sharps container, regardless of whether or not it has come in contact with infectious material. The following items must be discarded in sharps containers:

- Hypodermic needles
- Syringes
- IV tubing with needles attached
- Lancets
- Scalpel blades
- Razor blades

Any items listed in the broken glass list that have come into contact with **infectious material** must also be discarded in the **sharps container**.

Disposal

Sharps containers can be placed in a Bio-hazard box if one is readily available. If not, contact EHS for disposal (contact information on page 8).

Waste specific sharps disposal procedures By Ronnie Souza

"Sharps waste" means any device having acute rigid corners, edges, or protuberances capable of cutting or piercing, including, but not limited to, all of the following: hypodermic needles, syringes, razor blades and scalpel blades. Glass and plastic items contaminated with biohazards, such as pipettes, microscope slides and capillary tubes are also considered a "sharps waste."

Under no circumstances should "sharps waste" be disposed of in the normal trash. Sharps must be disposed of in approved sharps containers.

Sharps Contaminated with Hazardous Chemical Waste

1. Place in a rigid, puncture-resistant container which, when sealed, is leak proof.
2. Deface any biohazard symbol, if present.
3. Label the container with a hazardous waste label and include the chemical constituents.
4. Request waste collection by contacting the EHS department. Please note on the request that the material is not biologically contaminated.

Sharps Contaminated with Radioactive Materials

1. Place in a rigid, puncture-resistant container which, when sealed, is leak proof. Examples below.
2. Deface any biohazard symbols, if present.
3. Label the container with a radioactive waste label and include the radioactive isotope.
4. Request waste collection by contacting the EHS department. Please note on the request that the material is not biologically contaminated.

Sharps Contaminated with Medical or Biohazardous Waste

1. Place in an approved biohazardous sharps container that is red, rigid, puncture-resistant and which, when sealed, is leak proof and cannot be opened without great difficulty (pictured below).
2. Autoclave your sharps container for a minimum of 30 minutes at 121°C and 15 psi.
3. Label the sharps container with the words "autoclaved".
4. Request waste collection by the EHS department. Please note on the request that the material has been autoclaved.

Or

1. Place in an approved biohazardous sharps container that is red, rigid, puncture-resistant and which, when sealed, is leak proof and cannot be opened without great difficulty.
2. Request waste collection by the EHS department.

Unused or Non-Contaminated Hypodermic Needles

1. Place in an approved biohazardous sharps container that is rigid, puncture-resistant and which, when sealed, is leak proof and cannot be opened without great difficulty.
2. Deface any biohazard symbols, if present.
3. Request a sharps (non-contaminated) waste collection by the EHS department. Please note on the request that the material is not biologically contaminated.

Never leave used sharps on bench-tops or carts!
Always store these items in appropriate, safe locations!

Safety Spotlight

Our March Safety Spotlight is on Emergency Muster Points. The following is a list of muster points for buildings on both campuses that you should use in the case of an emergency evacuation. You can find more information on this topic by going to the *Safety and Security* portion of the UNE Website and accessing the *Annual Security Report and Annual Fire Safety Report*.

Biddeford Campus Evacuation Plan	
588 Pool Street	Go to Sea Star Market Parking Lot
Alfond Health Sciences Building	
*First floor door facing Campus Center	Go to sand volleyball court
*First floor exit nearest Hills Beach Road	Go to end of the brick retaining wall
*Lower level main entrance (by Alfond Café)	Go to center of large lawn.
*Main entrance and Embalming Room entrance	Go to front lawn of Stella Maris.
Alfond Forum	All exits cross Nor'Easter Way to parking lots. Do not block access road
Assisi Hall	Go to volleyball court or the lawn between Assisi and Alfond Science Bldg
Avila Hall	Go to the lawn between Avila and the Campus Center (chiller plant) or the lawn by Padua
Campus Center	
*Double doors outside Fitness Center	Go through parking lot, turn right to lawn by Hills Beach Road
*Gym exit by Equipment Room	Turn left, proceed to area between Campus Center and Avila
*Main entrance	Go to either sidewalk that runs along Alfond lawn or to Alfond lawn – DO NOT REMAIN ON THE FRONT PLAZA AREA
*Pool side doors	Go to center of lawn by Hills Beach Road
*Simard, Pettipiece and Wescott Rooms	Go to volleyball court
Champlain Hall	Go to the Freddy Hall Parking Lot -- Do not impede emergency response vehicles
Decary	
*Computer Lab, lower level	Go to lawn between Decary and Stella Maris
*Entrance closest to Residence Hall Access Rd	Go to center of lawn between Hills Beach Road and the Residence Hall Access Road
*Entrance facing Stella Maris	Go at least halfway onto lawn between Stella Maris and Decary
*Exits from Cafeteria/Kitchen	Go to either Library or Stella Maris lawn
*Main entrance	Go to the front lawn by the park bench
East Hall	Exit along the rear of the building (toward Frederick Hall). Assemble in parking area between Frederick Hall and the back parking lot of the Campus Center
Facilities Building	Service road towards Student Academic Success Center Lot
Featherman Hall	Go to parking area between Avila and Featherman Hall
Fine Arts Building	Go to the rear of the parking lot
Frederick Hall	Cross the parking lot to the lawn between Campus Center and Hills Beach Road. During winter follow sidewalk to front of Campus Center
Gregory	Go to parking lot behind Gregory

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Biddeford Continued…	
Ketchum Library	
*Main entrance	Go to lawn between Stella Maris and Decary
*Saint Francis Garden entrance	Go to Claude Dubois Athletic Field
*Windward Café entrance	Go to the parking lot and move closer to the Waste Water Treatment plant
Student Academic Success Center	Go to the Student Academic Success Center Parking Lot
Marcil	
*First level	Go to parking lot area across from lower level entrance
*Second level	Go to lot across parking lot access road nearest Route 9
Marine Science Center	Go to the entrance to the walkway to Champlain Hall
Morgane Hall	
*First floor	Gregory Parking Lot
*Second and third floors	Go to Parking Lot #14
Padua Hall	Go the Avila Parking Lot
Petts Health Center	Go to Welcome Cottage lawn or parking lot
*Lower level	Cross Hills Beach Road and go to the Admissions Cottage lawn
*Upper level	Walk out to middle of parking lot (at least past the third parking space)
Pickus	Go to Gregory Parking Lot
Siena Hall	Go to walkway to Library
Sokokis Hall	Exit all doors, go across street to parking lot
Stella Maris	Go either to lawn in front of Stella Maris or to lawn between Decary and Stella Maris
Welcome Cottage	Go to the parking lot at Petts Health Center
West Hall	Exit along the rear of the building (toward quad), follow sidewalk leading to the quad area. Assemble on long sidewalk that points directly at the center of the quad, behind Avila

Portland Campus Evacuation Plan	
30 College Street	Go across College Street to the lawn area between Hersey Circle and College Street
Abplanalp Library	Lawn area between Hersey Circle and College Street
Alexander Hall	Lawn between Hersey Circle and College Street
Alumni Hall	Lawn area between Hersey Circle and College Street
Art Gallery	Go to the Proctor Hall Parking Lot
Blewett Hall	Lawn by Ludcke Hall
Coleman Hall	Lawn by Ludcke Hall
College of Pharmacy	Go to center of parking lot for Finley Recreation Center
Facilities Shop	Go to the parking lot, group near Alexander Hall
Finley Recreation Center	Center of parking lot for Finley Recreation Center
Goddard Hall	Lawn area between Hersey Circle and College Street
Hersey Hall	Lawn area between Hersey Circle and College Street
Linnell Hall	Cross College Street and group on the lawn
Ludcke Auditorium	Go to lawn between Ludcke and College Street.
McDougall/Ginn	Cross College Street and group on the lawn in front of Abplanalp Library
Parker Pavilion	Group on the lawn by Ludcke
Proctor	Lawn area between Hersey Circle and College Street

Laboratory safety working with small animals

Contributed By: Jessica Tyre

All procedures on animals should be performed by properly trained personnel. By using safe work practices and appropriate personal protective equipment (29 CFR Part 1910 Subpart I), workers can minimize the likelihood that they will be bitten, scratched, and/or exposed to animal body fluids and tissues.

Use Safe Work Practices:

- Avoid eating, drinking, smoking, handling contact lenses, applying cosmetics, or taking or applying medicine.
- Avoid touching your mouth, nose and eyes.
- Avoid using sharps whenever possible. Be extremely careful when using a needle and syringe or when using sharps during necropsy (autopsy) procedures. Never remove, recap, bend, break, or clip used needles from disposable syringes. Use safe needles whenever possible.
- Never use your mouth to pipette liquids; only use mechanical pipetting devices.
- Keep doors to rooms holding research animals closed.
- Perform procedures carefully to reduce the possibility of creating splashes or aerosols.
- Restrict operations that generate hazardous aerosols to biological safety cabinets or other ventilated enclosures, such as animal bedding dump stations.
- Clean up all spills immediately.
- Promptly decontaminate work surfaces when procedures are completed and after surfaces are soiled by spills of animal material or waste.
- Properly dispose of animal waste and bedding.
- Remove gloves and wash your hands after handling animals or animal tissues and before leaving areas where animals are kept.
- Report all incidents and equipment malfunctions to your supervisor.

Wear Appropriate Personal Protective Equipment (PPE)

- Wear all required PPE identified by your employer based on the activity performed.
- Wear gloves designed to resist puncture from animal bites.
- Wear eye protection. This will not only protect your eyes from potential scratches, but also will protect them from direct contamination by animal secretions or indirect contamination from materials contaminated with animal secretions.
- Wear head/hair covering to protect against accidental sprays or splashes.
- Wear respiratory protection, if required. NIOSH-certified respirators that are properly selected and fitted will protect you from small particle aerosols. (Contact UNE EHS for more information on respiratory protection, see page 8 for contact information).

Source: www.osha.gov; OSHA Fact Sheet: Laboratory Safety Working with Small Animals

Transporting chemicals between labs and buildings

By Peter Nagle

Occasionally it is necessary to transport chemicals between buildings, whether through a lab relocation, borrowing, or simply moving them between labs. When doing so, there are guidelines that must be followed.

First, if carrying a chemical, it is important to place it in a secondary container such as a pail or bottle carrier. Doing so provides the container with "bump protection" and helps contain any potential leaks or spills that could occur in high profile areas at inopportune moments.

Second, if moving several chemicals at once, it is essential to use a sturdy cart with a substantial lip to prevent slippage from the cart. This is crucial when transporting chemicals outdoors on uneven surfaces where a cart can unexpectedly come to a sudden stop, subsequently causing the chemicals to slip off the cart and create a spill. Many of the lab carts seen on campus do not have a sufficient rim on them to prevent slippage and therefore are inadequate for transporting chemicals outdoors. The Rubbermaid carts with the 3 inch rims are best for conveyance.

Third, under no circumstances should a personal or university vehicle be used to transport chemicals between campuses or on public roads without EHS approval. The US Department of Transportation (USDOT) has specific regulations regarding the "Materials of Trade" exemption in which only limited amounts of chemicals or products are allowed to be transported over public roads without associated paperwork. Furthermore, not all chemicals are covered under this exemption. If you need to transport chemicals between campuses, consult EHS beforehand (see contact information on page 8).

Examples of bottle carriers and carts:

www.une.edu/campus/ehs

Ronnie Souza,
Director of EHS
UNE Extension: 2488
Cell: 207-391-3491
Email: rsouza@une.edu

Peter Nagle,
EHS Specialist
UNE Extension: 2791
Cell: 207-468-3599
Email: pnagle@une.edu

Jessica Tyre,
EHS Specialist
UNE Extension: 2046
Cell: 603-244-0081
Email: jtyre@une.edu

Alethea Cariddi,
Sustainability Coordinator
UNE Extension: 2507
Email:
acariddi@une.edu

UNE Chemical Sharing Listing

The UNE Chemical Sharing Program is a great way to reduce hazardous waste, reduce costs for your department, and have a positive environmental impact on campus. If you have any commonly used lab chemicals you are thinking of disposing of, please contact EHS so they can be listed in the next issues of EHS Lab Chatter as available for the UNE Chemical Sharing Program.

The following chemicals are now available from the Marine Science Center:

Chemical Name	Volume
Iodine-Potassium iodide solution	1000ml
Lithium ocalate crystals	~500g
Magnanous chloride crystals	~500g
Sodium hexafluorosilicate, 99 + %	500g
L – (+) – Ascorbic acid Powder	100g
Oxalic acid dihydrate	500g
Sodium molybdate dehydrate	500g
Potassium antimony (III) – tartrate hydrate ≥ 99%	100g
Magnesium sulfate 7-hydrate, Crystal, U.S.P	500g
Sodium bicarbonate	500g
SDS (Sodium dodecylsulfate)	100g
Potassium phosphate monobasic	50g
Cupric sulfate pentahydrate	500g
Imidazole	100g
Ammonium chloride	500g
Sulfanilamide	100g
N-1 Naphthylethylenediamine dihyrochloride	25g
Potassium nitrate, ACS, 99%	100g

Please email jtyre@une.edu if you are interested in any of the above chemicals.

EHS will handle the transfer from one department to the other.

Thank you!!