



# Hot Topics in Biosafety for All MSU Labs

*A periodical resource prepared by the ORCBS  
Biosafety Team to assist all MSU labs with  
Biosafety-related compliance issues*

## “Biohazards” in the Trash? X Marks the Spot

A number of lab-related items and supplies are marked or labeled with the biohazard label such as specimen bags and shipping cartons. These items may or may not require treatment and disposal as biohazardous waste, depending on their level of contamination and the processes underway. However, these items will raise public perception concerns if not managed properly for disposal.

As a public institution, addressing these concerns is equal in importance to complying with applicable waste disposal regulations.

**Use the following prudent practices for disposal of waste items that are marked or labeled with the biohazard symbol:**

- **If the item is NOT contaminated with any biological materials or fluids, the biohazard label MUST be defaced before disposal in the regular lab trash.** Use a black marker to “X” out the biohazard symbol. If this practice is not feasible for your needs, contact the ORCBS Biosafety Team at 355-0153 for further assistance.
- **If the item is contaminated with any biological materials or fluids, the item must be managed as biohazardous waste.** Sharp items (those sharp enough to puncture the skin) must be placed in sharps containers for disposal through the ORCBS Waste Management System. Non-sharp items must be placed in a biohazardous waste container lined with a biohazard bag. Biohazard bags must be sterilized in an MSU autoclave approved for that purpose by the ORCBS. Treated biohazardous waste bags must be placed in a black, non-see-through bag for disposal as trash. (Don’t forget to tie the bag shut!)



**Remember to deface biohazard symbols of waste items that are NOT biologically contaminated before disposal as trash!**

# It's a Touchy Subject: Gloves in Common Areas



Whenever possible, gloves must not be worn outside the laboratory. Wearing potentially contaminated gloves outside the designated laboratory space can result in exposures to items and surfaces in public and common areas. By wearing gloves into these common areas, you put other PIs, custodial staff members, students and visitors at risk. Even if your gloves are not contaminated, recognize that other people in your building or research facility do not know this. Put yourself in the shoes of someone you share a hallway or elevator with and realize the trepidation or concern they may be feeling.

When transporting samples to another part of the building, implement the use of a secondary container with disinfected outer surfaces to carry the primary sample containers. If gloves must be worn, remember to use the one glove method. Use the gloved hand to carry the biological materials and the ungloved hand to open doors, push elevator buttons, etc.

Develop and enforce proper glove practices in all aspects of your research. Remember that gloves must be worn in all designated Biosafety Level 2 spaces when hands have the potential, no matter how small, to come into contact with potentially infectious materials, contaminated surfaces or equipment. The following tips will help you develop proper glove practices:



- Prior to use, always inspect gloves for flaws or defects.
- Gloves must be removed and disposed of when they are grossly contaminated, when work with potentially infectious materials is finished and when glove integrity is compromised.
- When removing gloves, limit contact with the outer surfaces and always remember to wash hands after glove removal.
- Do not reuse or wash disposable gloves or use them to touch “clean” surfaces such as computer keyboards or telephones.
- If latex gloves are used, powder-free should be the only available option.

## **Reminder:**

Keep in mind that if you share lab equipment, you are likely to share contamination as well. Always assume that equipment is contaminated unless you know otherwise and take actions to minimize your exposure risk (i.e., wear gloves)!

## **Biosafety Resources at MSU**

### **Robin Mecklem**

Biological Safety Officer/  
Select Agents Responsible  
Official

Office: 355-1283

E-mail: mecklem@msu.edu

### **Patti Pawski**

Biosafety Industrial  
Hygienist

Office: 432-8044

E-mail: pawski@msu.edu

### **Jamie Willard**

Biosafety Industrial  
Hygienist

Office: 353-1877

E-mail: cherryme@msu.edu

### **Amber Bitters**

Biosafety Graduate  
Assistant

Office: 432-5019

E-mail: bitters1@msu.edu

## Bunsen Burners in Biosafety Cabinets: Things Can Really Heat Up



The ORCBS strongly recommends that open flames are NOT used in biological safety cabinets (BSC) and at no time should flammable liquids be present in the cabinet at the same time as a Bunsen burner or other open flame.

Open flames not only present a fire hazard, especially when used in conjunction with alcohol and other flammable liquids, but also disrupt the airflow and damage the HEPA filter inside of the cabinet creating the potential for contamination of work product and personnel. BSCs are designed and intended to recirculate a portion of their air. If flammable vapors or gases are allowed to recirculate and/or build-up in a cabinet, a fire or explosion hazard is created.

### It's time to rethink our practices...

Disposable alternatives should be used whenever possible in place of glass spreaders, reusable inoculating loops and needles, etc. Some of these disposable alternatives, such as 10 $\mu$ l inoculating loops, are currently available at Biochemistry Stores and University Stores (10 loops/tube- #15444 BMB Stores, #14543550 UNV Stores; 50 loops/tube- #15446 BMB Stores, #14543540 UNV Stores), while others are available through various laboratory equipment vendors.

In lieu of an open flame, a Bacti-cinerator or Tough-O-Matic Bunsen Burner should be considered. Both of these are available through VWR at <http://www.vwrsp.com> (VWR #82017-252 and VWR #18110-009 consecutively).

## Biological Materials Shipping Training & Resources

The ORCBS Biosafety Team provides the following courses for campus personnel to help assure that all researchers are transporting biological materials in a manner that meets the applicable regulatory requirements. We are also happy to answer your questions regarding the latest regulations that may affect your ability to transport biological materials.

### Biological Materials & Diagnostic Specimens Shipping

This course is required for anyone who will be shipping biological materials including animal or human tissues or body fluids, DNA, cells, etc. especially if these materials must be shipped on dry ice. (Note: Completion of this course is required before attending Infectious Substance Shipping.)

#### Training Dates & Locations

6/17 1:00 PM 164 Giltner

7/9 8:30 AM 164 Giltner

### Infectious Substance Shipping

Infectious substances include all cultures of organisms that are infectious to humans or animals. This course is required for anyone who plans to ship these materials.

#### Training Dates & Locations

7/9 1:00 PM 164 Giltner

### Other Campus Resources

Please note that many lab reagents may be classified as hazardous materials for transportation purposes. For assistance with shipping hazardous materials other than biologicals, contact the MSU Stores shipping department at 355-1700.

#### Biochemistry Stores- Joyce Robinson

Proper shipping materials must be used for shipment of diagnostic specimens and infectious substances. For assistance in locating the proper materials for your needs, please contact Joyce Robinson at 353-0813.

# Sharps: Getting the Point

## Protect Yourself & Others through Proper Disposal

Whenever a sharp device is thrown in the trash, left in a lab coat pocket, or left unattended on the lab bench, others are put at risk for injury and lab-acquired infections. At MSU, all sharps must be disposed of in approved sharps containers.

Sharps include the following items, regardless of their use or contamination status:

- Needles
- Syringes
- Scalpels
- Intravenous tubing with needles attached

Sharps also include any item that is:

- Sharp enough to puncture the skin, and
- Contaminated with biological materials or fluids

A variety of approved sharps containers are available for purchase through Biochemistry Stores and University Stores. If you need assistance in identifying a sharps container for your needs, please contact any member of the ORCBS Biosafety Team.

### Disposal Reminders:

Sharps containers must be labeled with a completed sharps label or hazardous waste pickup tag at the time of first use. Sharps containers must be closed and disposed of within 90 days of first use or when  $\frac{3}{4}$  full, whichever comes first.

## Sharps & MSU Surplus

Whenever labs move or projects conclude, lab equipment and supplies may be sent to MSU Surplus for resale. Please note that sharp devices such as those previously described, as well as any reusable surgical scalpels must NOT be submitted to MSU Salvage for resale. Other reusable surgical or lab items that are sharp enough to puncture the skin and whose contamination status is unknown also meet the regulatory definition of a sharp and therefore should not be submitted for resale.

## Sharps = Biohazardous Waste

If you generate or handle sharps waste, you are a biohazardous waste generator. Biohazardous waste generators at MSU must complete biohazardous waste training. This is a one-time training requirement that can be met by downloading, printing and reviewing the biohazardous waste training brochure from the ORCBS website ([www.orcbs.msu.edu](http://www.orcbs.msu.edu)). The brochure can be found on the biological safety link or the training link of this website. There is a training record included with the brochure that outlines site-specific requirements and record keeping information.

(Note: Please do not confuse this training requirement with the hazardous waste training that is an annual on-line training and covers primarily chemical wastes. These trainings are NOT interchangeable.)



**Where do sharp devices go when they leave your lab?**

**Use sharps containers to protect others as well as yourself.**



**Do NOT store needles and syringes in lab coat pockets!**

**This practice increases your risk for injury and infection as well as MSU Laundry staff who process these items!**