

# INTRODUCTION

The Microbiology Prep Room is located in 531A Life Sciences Building. The telephone number is 372-8609. It is open from 7:30 a.m. to 4:30 p.m. during the fall and spring semesters. Summer hours vary according to the university's schedule. The Prep Room staff includes a full-time Microbiology Laboratory Facilities Technician as well as a part-time Work-study employee.

The Prep Room is equipped to provide a variety of support services to the Biology Department. Its major function is media preparation along with the preparation and maintenance of stock cultures for undergraduate laboratory use.

Its secondary function is to provide support for the department's research labs. However, the Prep Room is not responsible for preparing media, maintaining cultures, or washing dishes for research labs or faculty. Equipment such as the autoclaves and Millipore Water System are available for use by researchers.

## Prep Room Policies

The Microbiology Preparation Facility's prime function is to prepare media and cultures for the Biology Department's teaching labs. Its secondary function is to provide support for the department's research labs. These policies and procedures listed below have been established so that the prep room can provide maximum service to all concerned.

### Hours

- Monday through Friday, 7:30 am to 4:30 pm with 1 hour at lunch
- Except for holidays, vacation, summer, and emergencies

### Facilities and Equipment

- Keep facilities locked with lights and equipment turned off when not physically present.
- Teaching labs have priority use of equipment.
- Training is required before operation of equipment.
- Damage should be reported to the Prep Room Tech when it occurs.

### Researcher's Responsibility

Researchers are responsible for understanding the materials and equipment they are using. If they are working with bio-hazardous material they should be aware of the regulations about working with these types of materials. If they are using equipment they should understand the hazards and take any safety precautions. The onus is on them.

## Autoclaves

- Training will be done by the Prep Room Tech.
- Use will be restricted to only those that have been properly trained.
- During Prep Room hours all autoclaving will be done by Prep Room personnel.
- The autoclaves will not be run for a single item unless it makes a full load.
- Items will be combined to make a full load to efficiently utilize the autoclaves.
- Materials will be autoclaved in the order in which they are received.
- Items brought to the Prep Room after 3:30 p.m. will be autoclaved the following work day.
- Researchers should bring in all of their items for sterilization at the same time.
- There is a 24-hour turn around time for items to be sterilized.
- All items should be claimed promptly.

## Policies

### Dishwasher

- Remove all tape, labels, and any agar before using dishwashers.
- Rinse all glassware before placing in dishwasher.
- At the end of the cycle clean the traps.
- Researchers are responsible for providing their own soap.
- Dishwasher racks stay in the prep room.

### Microscopes

The microscopes in the facility are reserved on a first come first served basis. Teaching labs have the highest priority.

#### Teaching Labs

- Requests should be made before the start of the semester.
- Students should be assigned a scope for the semester.
- Students should read the microscope use handout.
- Instructors are responsible for the scopes used in their classes.

#### Research Labs

- Use is contingent upon undergraduate course load assignments.
- Scopes must be signed out and the requester is responsible for any damage to the scope while it is in their possession.

- The prep room has the right to retrieve the scope at any time.

## Millipore Water System

When there is no distilled water there is no Millipore Water.

To run the system:

- The person obtaining water must be present at all times.
- Turn on the pump.
- Wait until resistance reading stabilizes.
- Lift white handle until it is parallel with floor.

When done:

- Lower white handle until it is parallel with wall.
- Turn off pump and hang up hose.
- Mop up any spills.

## Policies

### Supplies

The prep room is not the stockroom. Graduate students, 401 students, and faculty should obtain all of their supplies from the stockroom on the second floor.

### Requisitioning Cultures and Media

- The prep room will provide teaching labs media and cultures it has in stock if there is at least two weeks notice.
- Researchers are responsible for purchasing and making their own media.
- Researchers are responsible for maintaining their own cultures.

### Infectious Waste Regulations

All infectious waste must be handled and treated in accordance with Ohio EPA Regulations. The Ohio EPA Regulations state:

- All waste must be segregated at the point of origin.
  - Segregate animal tissues from bacterial cultures.
  - Segregate bacterial cultures from hazardous waste.
  - Segregate sharps from other infectious waste.

- Biohazard bags must be used for packaging biohazard materials only.
- Place only disposable plastics, paper, and petri dishes in the biohazard bags.
  - Do not place any hazardous materials in biohazard bags.
  - Do not place any radioactive materials in biohazard bags.
  - Do not place liquids in biohazard bags.
  - Do not place glass in biohazard bags.
- Contaminated sharps must be placed in puncture and leak resistant containers.
- Putrescent waste should be stored in biohazard bags for no more than two weeks.
- Infectious waste can only be treated by trained personnel.

## Policies

### Packaging Infectious Waste for Treatment

- Bags should be no more than 2/3 full to prevent breakage in the autoclaves.
- Secure bags with either a twist tie or bands supplied with bags.
- Bring all infectious waste to the prep room.
- Place biohazard bag in a pan in the designated biohazard waste area.
- Fill out a “Contaminated Materials” form for each biohazard bag.
- The prep room will not accept:
  - Overfilled bags.
  - Unlabeled bags or bags that are not accompanied by a filled out form.
  - Bags that are not secured in the proper manner.
  - Contaminated items that are not properly contained.
  - Contaminated materials that are radioactive.
  - Contaminated materials that are hazardous.
  - Animal tissues or carcasses.
  - Contaminated sharps that are not properly contained.

### Contaminated Sharps

Contaminated Sharps are objects such as needles, lancets, pipettes, pipette tips, or broken glassware that has been in contact with infectious agents or blood.

- Each lab should have its own Contaminated Sharps container.
- Contaminated Sharps containers must be brought to the Prep Room for treatment
- Place contaminated sharps container in a pan in the designated biohazard waste area.
- Fill out a “Contaminated Materials” form for each contaminated sharps container.

## **Non-Contaminated Sharps**

Non-contaminated sharps materials are objects such as broken glassware or any item that is capable of puncturing a plastic trash bag. These are sharp materials have not come in contact with infectious agents or blood.

- Each lab should have its own sharps container. A sturdy cardboard box is an appropriate sharps container.
- Do not bring your sharps to the prep room.
- Place sharps in container and seal shut before disposing of in the regular trash.

## **Biohazard Materials Safety**

### **Biohazard Materials Safety**

Protection of personnel and the immediate laboratory environment from exposure to infectious agents is provided by both good microbiological technique and the use of appropriate safety equipment. The most important element is strict adherence to standard microbiological practices and techniques. Persons working with infectious agents or potentially infected materials must be aware of potential hazards, and must be trained and proficient in the practices and techniques required for handling such material safely.

Most of the undergraduate labs in the Biology Department would fall under Biosafety Level 1. In this level work is done with defined and characterized strains of viable microorganisms not known to cause disease in healthy adult humans.

Biosafety Level 1 represents a basic level of containment that relies on standard microbiological practices with no special primary or secondary barriers recommended, other than a sink for hand washing. The laboratory is not necessarily separated from the general traffic patterns in the building. Work is generally conducted on open bench tops using standard microbiological practices. Special containment equipment or facility design is not required nor generally used. Laboratory personnel have specific training in the procedures conducted in the laboratory and are supervised by a scientist with general training in microbiology or a related science.

For further information consult the “Biosafety in Microbiological and Biomedical Laboratories” published by the CDC.

Any lab working with Biosafety Level 2 or above must get approval from the Biosafety Committee.

## Biological Spill Clean up Procedures

### Biological Spill Cleanup Procedures

The procedures outlined below shall be followed in the event of a biological spill or accident (unless the quantity of such spills are less than one cubic foot of waste or less than one half the contents of a container with a maximum capacity of two cubic feet).

Call for emergency help as needed from the Environmental Health and Safety office on campus, the fire department, the police department, the Wood County Health Department, or the Ohio EPA.

#### Cleanup Kit

The following materials are necessary for containment and cleanup.

- HAZORB SPILL ABSORBENT
- DISINFECTANT (10% v/v household bleach solution)
- ORANGE BIOHAZARD BAGS
- PROTECTIVE BODY EQUIPMENT
  - Disposable overalls
  - Gloves
  - Disposable boots
  - Disposable caps
  - Protective eye ware
  - Duct tape
  - Boundary tape
- FIRST AID KIT and FIRE EXTINGUISHER

#### Cleanup Crew

Shall wear and utilize the protective equipment listed above.

#### Limit Access to Spill Area

Access to spill area is limited to authorized personnel. Authorized personnel will be limited to the cleanup crew and personnel from Environmental Health and Safety. Area should be sealed off with boundary tape.

#### Broken Containers

Place broken containers in the appropriate infectious waste containers, minimizing risk of exposure to the cleanup personnel.

## **Biological Spill Clean up Procedures**

### **Absorb Spill**

Gently toss absorbent on spill area. Leave area untouched just long enough for the spilled liquid to be absorbed. Clean up with disposable paper towels. Place all materials in a biohazard bag for treatment as infectious waste.

### **Decontaminate Area**

Decontaminate area by adequately applying a 10% v/v bleach solution. Allow the bleach solution to be in contact with the affected area for a minimum of ten minutes.

### **Cleaning the Area**

Wipe up the disinfectant with disposable paper towels. Place towels in biohazard bag.

### **Discard Protective Equipment as Infectious Waste**

Place disposable protective equipment in biohazard bags to be autoclaved as infectious waste.

### **Disinfect and Clean All Non-Disposable Equipment**

Disinfect all materials that cannot be autoclaved, then clean.

### **Autoclave All Cleanup Materials**

Once the cleanup is complete and all infectious materials are contained in biohazard bags the prep room shall autoclave it as infectious waste.

### **Report All Infectious Waste Spills**

Report the spill to the infectious waste manager within 48 hours using the accident/spill form.

### **Record Spill in the Spill Log**

Record accounts of all spills or accidents in the spill log located in the OEPA manual. Maintain records for a minimum of three years.

### **Replenish Containment and Cleanup Kit**

**INFECTIOUS WASTE SPILL / ACCIDENT FORM**

FACILITY: Bowling Green State University Biology Department

PERSON(S) INVOLVED: \_\_\_\_\_  
\_\_\_\_\_

ADDRESS OF SPILL: \_\_\_\_\_

DATE OF SPILL/ACCIDENT: \_\_\_\_\_

DATE OF REPORT: \_\_\_\_\_

SUMMARY OF EVENTS:

PROCEDURE USED TO CLEAN AND DISINFECT SPILL/ACCIDENT:



### **Treatment of Infectious Waste**

The Microbiology Preparations Facility is one of the University's two Infectious Waste Treatment Facilities. (The other is located in the Health Center.) The Microbiology Preparations Facility maintains a license to treat the Biology Department's infectious waste. Because we are a large generator of infectious waste we have to follow all regulations and rules stated in the Administrative Code and the Revised Code regarding the treatment and handling of infectious waste.

As a general rule of thumb, we should consider all bacterial wastes as infectious waste. All infectious waste should be brought to the Microbiology Preparations Facility for treatment by personnel who have been certified for the proper treatment and disposal of infectious waste.

Hazardous infectious wastes cannot be autoclaved. They must be incinerated. Contact the director of the animal facility to arrange shipment of this type of waste.

Radioactive infectious waste falls under guidelines established by the US Nuclear Regulatory Commission and the Ohio EPA. Do not autoclave this waste. Contact the Biology Department Radiation Safety Officer.

For more information see the "BGSU Facility Management Plan."