



Working in a Rodent Barrier Room



Definitions of Barrier/Quarantined Rooms

- Barrier Room –
 - A rodent housing room with entry restrictions with regard to personal protective equipment (PPE) and order of entry. All clean housing equipment is processed through an autoclave.
- Quarantined Room –
 - A rodent housing room with entry restrictions that may or may not have a suspected pathogen that may cause a health problem with the animal population. An example would be fur mites, pinworms or systemic or infectious condition such as mouse parvovirus. Additional PPE is required.
- Shower-In Restricted Barrier-
 - A rodent housing room with special entry restrictions such as showering into the facility, dedicated, sanitized clothing, and the use of sterile equipment throughout.

Working in a Barrier or a Rodent Room Under Quarantine

- **ALL rodent work or opening of rodent caging MUST be done in a change station or BSL2 hood.**
- **In a quarantined room, do not remove the animals or caging from the room unless authorized to do so by a DLAR veterinarian.**
- **If you have animals in non-barrier rooms that you must visit, ALWAYS enter barrier room first before any other rodent room. If you go into a non-barrier or rooms that may be under quarantine prior to entering a barrier room you will be jeopardizing not only your animals but the animals of all of the other investigators in the barrier room. Remember that you go into non-barrier or quarantine rooms, will need to change your clothes or put on a clean set of personal protective equipment if accessing other rooms not under quarantine.**

Work at Sanders Brown Facility

If you will be working at the Sanders Brown Shower-In Barrier facility please remember that you will need a special training session with the facility supervisor, Sharon Giles, **PRIOR** to entry. Sanders Brown is a full shower in facility.

Putting On Personal Protective Equipment (PPE)

Depending on the area you will be working with, there are some basic rules to follow when putting on personnel protective equipment. And while there may be circumstances where you would want to put gloves on first, the general rule of thumb is to start at the top and work your way down.

Required Personal Protective Equipment when Entering a Barrier or quarantined Rodent Room



N95/surgical mask - **optional but strongly recommended for barrier rooms and quarantined**

Tyvek Sleeves - **required**

If you will be wearing an N95 respirator, you **MUST** be participating in the EHS respiratory protection program which requires fit testing. Information can be found at the following website:

http://ehs.uky.edu/classes/classes_ohs_0001.php



Bouffant cap - **required**

Disposable gown - **required**

Latex or Nitrile Gloves pulled over the cuffs of the Tyvek sleeves - **required**

Shoe covers – **required** (*double shoe covers may be recommended in some areas*)

First on is the head cover, (be sure all of your hair is tucked into your bonnet)

Followed by the disposable gown, remember the tie goes in the back.

Do NOT wear the gown with the opening in the front.



After you have put on your disposable gown, and then your mask, the Tyvek sleeves come next. Followed by your gloves. Be sure that you have pulled the cuffs of your gloves up over the edges of your sleeves.



Then last, but not least, put on your shoe covers. You may want to spray the bottoms of the shoe covers before you put them on with a disinfecting solution such as MB 10. If you are wearing double shoe covers, spray the soles of both pair.



Who IS That Masked Person?

- ▶ Next comes your mask and/or face shield
- ▶ While surgeons masks may look “cool” they do not offer much allergen protection for the wearer.
- ▶ The more efficient mask to wear is the N95. Fit testing is required and participation in the EHS Respiratory Protection Program.

http://ehs.uky.edu/classes/classes_ohs_0001.php



Practice Good Micro-Isolator Technique

DLAR has several types of hoods within the various facilities

- Laminar air flow change stations
- Class II Biological safety cabinets
- Fume hoods



Initial Preparation

Turn on laminar air flow change station or BSL2 hood fan and light

Allow to run for several minutes (about 4-5 at least)

Make sure that the sash is at the correct working height. If working with a flip-up guard, make sure that the guard is returned to its' flipped-down position.



SASH TOO HIGH



DO NOT disable the alarm



Correct Height



Laminar Airflow Change Stations



Sash Too High



Correct Height

Disinfectants and Sanitizing Agents

▶ MB-10

- Chlorine dioxide High level disinfectant
- Tuberculocidal
- Bactericidal
- Virucidal (MHV, Sendai, PVM, LCMV, etc.)
- Fungicidal

Alternate disinfectants such as Clidox® (not currently used in DLAR)

- High level disinfectant
 - Tuberculocidal
 - Bactericidal
 - Virucidal (MHV, Sendai, PVM, LCMV, etc.)
 - Fungicidal
- Contact time is important

Work Surface Preparation and Sanitization

Spray the work surface of the hood with disinfectant

Wipe any debris from the work surface



Work Surface Preparation and Sanitization

Spray and wipe down the internal sides of the hood

Do **NOT** spray the HEPA filter area of hood



Work Surface Preparation and Sanitization

- Fill forceps dip tray with disinfectant from the spray bottle
- Spray sleeves, gloves, and forceps tray
- Rub hands together to distribute disinfectant



Additional Preparations

- Using a dip tray, dip fingers (not just the tip of your fingers) and forceps (if used) in disinfectant solution between different boxes of mice. Be sure to rub your hands together to distribute the disinfectant before you handle the boxes and animals.
- It is important, especially when handling mice and equipment that may present a possible contamination that hands, work surfaces, caging, cage card holders, and instruments used for handling the mice, be kept continually wet with disinfectant, to help prevent the spread of possible contaminants such as fur mites.



[Click here for work surface preparation video](#)



[Click here for forceps tray video](#)

Micro-Isolator Technique



[Click here for micro-isolator technique video](#)

Handling the Micro-Isolator



- An acceptable alternative is to rest the lid against the back of the box or placed on its' side.
- The floor of the hood should be sprayed periodically to prevent contamination between filter tops.



Using Forceps to Pickup the Mouse



[Click here for using forceps to transfer mice](#)

Handling IVC caging

- ▶ All Micro-Isolator caging and IVC caging regardless of style or manufacturer should be worked with under Laminar flow workbenches or Bio-Safety cabinets.
- ▶ This includes All Static Micro-Isolators and All ICV caging including the large and small Tecniplast cages, the Red and Green lines and the Allentown IVC's (individually ventilated caging). This cage handling procedure also applies to all of the IVC Rat caging as well.



Placing Items in the Hood



When placing items in the hood, it is important to make sure that they do NOT block the air flow and they have been sprayed with appropriate disinfectant.

Do not overload the work surface and be certain that all items are completely INSIDE the hood and not blocking the air flow.



◆ Proper Placement

Exiting The Room

- ▶ In general, just as there is an order for dressing to go into a room, there is an order to remove the PPE when exiting.
- ▶ There are two ways to leave an animal room as far as PPE is concerned.
- ▶ Many rooms require that all PPE is changed between them. This would be the case with a barrier room or a rodent room under quarantine.
- ▶ Some rooms require only shoe covers and gloves be changed.
- ▶ Always check the entry requirements or find out from a supervisor or DLAR Veterinarian.

- ▶ When exiting from a rodent housing room, (or any room requiring PPE) always remove your gown by turning it inside out to reduce the possibility of contamination. If you have sleeves on they can and do in most cases come off with the gown. Do not take your gloves off yet.



- ▶ Next comes the shoe covers, again turning them inside out, to help control contamination.



- ▶ NOW come the gloves, again inside out,
- ▶ Followed by the mask, and then
- ▶ The head cover.



In a quarantined or Barrier Room

- ▶ The order is slightly different.
- ▶ Again, the gown comes off first. But then
- ▶ THE GLOVES COME OFF, turned inside out of course, and discarded. This is where double gloving can be indicated since the next thing that you will remove will be your face mask and head cover
- ▶ Then you will deal with your shoe covers

- ▶ If you are wearing double shoe covers, remove the first pair inside the room at the threshold of the door.
- ▶ Then as you exit, remove the shoe cover from one foot, step over the threshold into the hall and discard the shoe cover into the room trash receptacle.



Note: Foot with
on is INSIDE

shoe cover
the room



- ▶ After you have stepped over the threshold and into the hallway, remove the other shoe cover and discard it into the room trash. Be sure that the trash can is accessible from your position at the door so you do not have to step into or re-enter the room to throw it away.



Additional Information and Training Is Available

- ▶ If you wish additional information or training in any procedure regarding working with the rodents in a barrier or quarantined room, please contact any of the following individuals:
 - Dr. Jeanie Kincer, DLAR Veterinarian
 - Dr. Jeff Smiley, DLAR Veterinarian
 - Peggy Hanks–Peña, Supervisor, Central Animal Facility
 - Sharon Giles, Supervisor, Shower–In Restricted Barrier at Sanders Brown
 - Carolyn Bratcher, Supervisor, Combs
 - Cheryl Carmichael, Supervisor, Bio–Pharm
 - Kim Tomaschko, Supervisor, BBSRB
 - JoeAnn Croxford, Training Coordinator