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Distribution	<i>RAR/ACUC/OAR</i>	

HM – 7: Procedures for Working with Microisolator Rodent Cages Using Aseptic Techniques

Purpose: To outline the proper procedures for working with microisolator rodent cages using aseptic techniques

Personnel Responsibilities:

Animal Caretaker: To follow these instructions when working with microisolator rodent cages.

Lead Caretaker: To ensure that they oversee carestaff and that they are following these procedures. Correct any deviations in procedures by retraining the carestaff or reporting deviations to your supervisor.

RAR Training Supervisor: To train all carestaff on these procedures and notify Director of deviations or corrections for SOP.

Director, Laboratory Animal Management: Will review all deviations in this process and implement corrective action or SOP revision accordingly.

Materials and Information Required:

Uniform or disposable lab coat/ isolation gown

Sleeves

Gloves

Disinfectant tablet

32-ounce spray bottles

Forceps (2)

Forceps Holder Apparatus with containers 2/3 filled with fresh chlorine dioxide disinfectant

Biosafety Cabinet or Portable Changing Station

Sterile Microisolator Cage

Procedure:

I. Personal Protective Equipment

1. You will need to put on disposable lab coat or isolation gown and sleeves. Pull sleeves, so they are halfway down the palms of your hands. Punch holes in them with thumb and insert thumb through hole.
2. Put gloves on *over* sleeves and pull them down on your wrist, as far as they will go. This is to minimize the shedding of skin onto the sterile hood area and to protect hands and arms from contamination.
3. Wearing a hair bonnet and mask is optional.

II. Preparing the Disinfectant

1. If the disinfectant bottle is empty, is out of date (beyond 7 days), or has no date, you must make up a fresh solution. Mix one tablet of disinfectant in the bottle filled with *cold* water. **DO NOT USE HOT WATER** as it will create hazardous fumes. Always empty all of remaining contents of the spray bottle and rinse with water, before mixing a new batch of disinfectant.
2. This solution is good for seven days. Use a piece of tape to write the new date of when the mixture was made and place on bottle.
3. The cold sterilant must remain under the hood.

III. Working in The Biosafety Cabinet or Animal Transfer Station

1. The unit must be turned on for at least five minutes before you start working in it and then wiped down with disinfectant and paper towels prior to opening a cage.
2. Make sure to remove everything from the inside of the bio-safety cabinet.
3. Don't obstruct front or back grilles.
4. Start by spraying the sides and the back of the unit. Then move to the front glass and finally the bottom working surface. The disinfectant solution needs to sit for 10 minutes before wiping down the hood.
5. Wiping should be done from the longest point using horizontal one-wipe motions to keep the inside of hood sterile.
6. Once all surfaces have been wiped down, immediately re-spray and soak the bottom working surface with disinfectant.

IV. Handling the Micro Isolator Cage

1. Once the cage is placed inside the hood spray both gloved hands with disinfectant thoroughly.
2. Spray the outside of the cage, remembering the inside of the cages is sterile, but the outside is dirty.
3. Open the cage by removing the plastic top and place it upside down on the work surface so that the inside of the lid is not touched or touching the work surface.
4. **SPRAY GLOVED HANDS AGAIN BEFORE TOUCHING ANYTHING INSIDE THE CAGE.**
5. All work should be performed using minimal movements to avoid disturbing the air currents.
6. Do not block grilles with equipment of any kind.
7. You must work with one cage at a time and disinfect the work surface between each cage.
8. Working with mice
 - a. If cage contains a water bottle, turn the bottle spout end up and place it in the wire-bar lid.
 - b. Turn the wire-bar lid side ways across the cage or place it in the inverted plastic cage top. Never place it on the working surface!
 - c. Remove the animals from the cage by either using sterile forceps (mice only) or by hand. Gently grasp the mouse by the scruff of the neck or at one third of the base of the tail.
 - d. If you are working with forceps, you will need two forceps, a reservoir cup for each and a stand to hold the cups. While you are working with one pair, the other pair is being disinfected in the opposing reservoir. Continue to alternate between pairs of forceps. **Do not leave forceps in disinfectant when not using them because they will deteriorate or corrode.**
9. Working with rats

- a. Remove the filter top and wire bar as above for mice.
 - b. Transfer animals by lifting gently by the base of the tail. Do not keep animal suspended for any length of time. Transfer them to the clean cage as smoothly and quickly as possible.
10. Make sure to transfer the cage card and holder to new cage.
 11. Always wipe the water valve with disinfectant and check to make sure water is being released from the water valve. Report any defective water valves to supervisor. Replace cage to the same location from which it came.
 12. Once the cage is back on the rack, make sure the red handle or clasp is in the proper locking position across the cage or that the cage is securely docked in its locking mechanism and the red button on latch is not visible.
 13. IMPORTANT: Change gloves in between racks. Change sleeve covers as needed.

V. Special Instructions/Key Points:

The Purpose of a Micro isolator Caging

To keep the animals and facility clean requires that all work be performed in a biosafety cabinet or portable changing station because everything inside cages is considered sterile (the cage having been autoclaved) and everything that dusted the cage is considered dirty including the outside of the cage itself.

Basic Principles

1. Never open a micro-isolator cage unless it is under the hood.
2. Keep the hood uncluttered; but, have everything needed for the procedures under the hood so that hands and arms remain under the hood and sterile. No paper products should be placed in hood.
3. Keep clean materials distinctly separated from dirty materials.
4. Have a clean and dirty side when changing cages under the hood.
5. Always finish working with clean cages before disposing of dirty changed cages.
6. Never set clean cages on the floor.
7. Never touch anything outside of the cage without first decontaminating gloved hands with the disinfectant.
8. Gloves and work area should be wet with disinfectant at all times.

I acknowledge that I have read and understand the JHU Animal Care and Use Program document “**SOP on Procedures for Working with Microisolator Rodent Cages Using Aseptic Techniques**” and I will follow this procedure. I agree to bring any deviations in this procedure to the attention of my supervisor/GPS Working Group.

Name (Print)

Date

Signature