

Marquette University Institutional Animal Care and Use Committee Guidelines for Working with ABSL-2 Materials in Animals



Working with Animals Quarantined Under ABSL-2 Safety Requirements

Micro-isolator Technique

Best Practice while animals are in holding/containment room:

Animals should be given adequate water (often double bottle) and food when animals are in the holding/containment room for three days. Animals will be placed into their home cages with a micro-isolator top. At all possible do not remove the micro-isolator top for health checks. Health checks should be conducted visually by the PI or PIs staff. ARC will not conduct health checks on animals in the holding/containment room unless there is an emergency. If cages are flooded and need to be changed follow the below procedures for cage changes.

- Microisolator training is required before working in or with animals labeled as ABSL-2.
- Animals must ALWAYS be handled prior to conventional animals.
- ABSL-2 animal work (cage changes) must always be done in a biosafety cabinet (BSC) certified as a BSL2 cabinet.

Preparation

The user will want to prepare all equipment and supplies ahead of time and have it in place prior to working with the animals.

- Freshly made Virkon-S solution must be made and kept with the user at all times.
- Prepare new (fresh cages, tops, and cage card holders) that will be used for clean caging and place on a cart to be brought to the biosafety cabinet. Water bottles and food will be placed when animals are brought to their home room.
- Prepare personal protective equipment (PPE) that will be used.
- Prepare large clear autoclave bags and ties to use for securing and sealing the bags for autoclaving.
- Make sure that all appropriate Biohazard signs are posted where you will be working.

Procedures:

1. Before entering the holding/containment room the user will put on appropriate PPE located outside the room.
 - a. Disposable lab coat or gown
 - b. Face mask
 - c. Hair bonnet
 - d. Gloves
 - e. Shoe covers
2. The user will then enter the room with the cart used for animal transportation and with the bottle of Virkon S.
3. The user will load the cages onto the cart and then will spray the outside of the cages with the Virkon S solution. The user will also cover the cages for transport.
4. Before leaving the room the user will remove and discard the PPE into the red biohazard bin located within the room. All used PPE and trash must be placed into the red biohazard bin before the user leaves the room.
5. The user will then transport the dirty cages to the biosafety cabinet.

Working in/at the Biosafety Cabinet

1. Before work begins the user will need to make sure that they have an appropriate number of large clear autoclave bags at the station. The user will also put on appropriate PPE that was prepared beforehand.
 - a. Disposable lab coat or gown
 - b. Face mask
 - c. Hair bonnet
 - d. Gloves
 - e. Close toed shoes
2. Working with one dirty and one clean cage at a time the user will place the cages onto the working station of the biosafety cabinet.
3. Remove the micro-isolator top and place on the BSC surface so the inside of the lid is facing up.
4. The user will spray gloved hands with Virkon S solution.
5. Remove the wire bar lid and place on the surface of the inverted micro-isolator lid.
6. Remove the animals from the dirty cage and place into the clean cage. Immediately, place new (clean) wire bar lid onto clean cage and secure the wire bar lid. Also, secure new cage card holder.
7. Spray gloved hands with Virkon S solution.

8. Place clean cage (with animal) onto the cart with the clean supplies.
9. With dirty cages/supplies: with dirty bedding still inside the cage
 - a. Place the wire bar lid back onto the cage.
 - b. Discard uneaten food into a biohazard bag.
 - c. Place used/dirty water bottle back into the slot.
 - d. Place miro-isolator lid back on the cage.
 - e. Place the cage into a large clear autoclave bag and secure the bag closed (inside the BSC).
 - f. Spray the outside of the bag with Virkon S solution (inside the BSC).
 - g. Please the sprayed bag onto the dirty cart.
10. Spray gloved hands with Virkon S solution before starting a new cage.
11. Repeat steps 2-10 for each cage that must be changed

Cleaning up

1. Spray your work surfaces of the BSC with the Virkon S solution and wipe with paper towels. Discard all towels into a red biosafety bag.
2. Throw away all your PPE gear into a red biosafety bag.
3. Bring all secured bags to the Animal Resource Center for autoclaving. Please make sure you coordinate with the Animal Facility Director or Supervisor on the day you do cage changes. The autoclave room is located in SC-537.

I have read the above guidelines and will adhere to the procedures stated above	
_____	_____
Name	Date
_____	_____
Name	Date
_____	_____
Name	Date
_____	_____
Name	Date
_____	_____
Name	Date