

STANDARD OPERATING PROCEDURES
DIVISION OF COMPARATIVE MEDICINE
UNIVERSITY OF SOUTH FLORIDA

SOP#: 1127.5

Date Issued: 10/01

Date Revised: 12/16

Page 1 of 3

TITLE:	Biological Safety Cabinets
SCOPE:	Research and Animal Care Personnel
RESPONSIBILITY:	Facility Manager, Professional and Administrative Staff
PURPOSE:	To Outline the Proper Procedures for Use and Maintenance of a Biological Safety Cabinet (BSC)

I. PURPOSE

1. This procedure outlines the use and maintenance of a laminar flow BSC used to obtain the optimum control over product quality while reducing the potential for exposure of both product and personnel to airborne biological or particulate chemical agents in low to moderate risk-hazard research and product operations.

II. RESPONSIBILITY

1. The Facility Manager ensures that all equipment is appropriately cleaned, maintained in good working order, and available for research personnel as requested.
2. It is responsibility of the veterinary professional, administrative, and managerial staff to ensure that all research and technical staff using this equipment are adequately trained and experienced in the use of the BSC.
3. It is the responsibility of the technical staff using a BSC to read, understand, and follow the procedures outlined below.

III. EQUIPMENT APPLICATION

1. The laminar flow BSC is a product resulting from the development of the "laminar flow" principle and the application of environmental control as required in the field of biological research and chemical containment.

IV. EQUIPMENT USE

1. Turn on cabinet blower and lights, check air intake and exhaust portals of the cabinet to make sure they are unobstructed.
2. Allow blower to operate for a minimum of 15 minutes before aseptic manipulations are begun in the cabinet.
3. Disinfect all interior work surfaces by wiping down with Oxivir or Sporicidin. This practice eliminates the need for UV lights, whose primary purpose is to inactivate surface contamination.
4. Place only the necessary materials onto the cabinet work surface.

5. Do not place any items over front to rear intake grills. Ensure that all activities are conducted at least 4 inches within the air curtain of the biosafety cabinet (i.e., greater than the height of a cage card holder).
6. Make sure the viewing window is set to the recommended working height before initiating any procedures. Audible and visual alarms are present on some models to warn the user of inappropriate window height.
7. Separate contaminated materials on cabinet work surface to minimize movement.
8. Allow 2-3 minutes after apparatus and materials are placed into cabinet.
9. Minimize movement within the BSC and within the room to reduce air flow and use proper aseptic technique.
10. Recommended minimum attire includes gown, Tyvek sleeves, and gloves. Additional PPE and procedures may be required for Isolation (see **SOP 413** entitled ***Isolation Rodent Husbandry and Use***) or ABSL-2 containment (see **SOP 408** entitled ***Biosafety Level-2 Rodent Husbandry***).
11. Allow 2-3 minutes before removing materials from cabinet.
12. Do not use constant flame gas burners or any flammable substances whose flash point is point is below 25⁰ C.
13. Disinfect all interior work surfaces by spraying and wiping down with Oxivir or Clidox 1:5:1. If Clidox is used it is followed by rinsing with 70% isopropyl alcohol.

Note: Specific disinfectants may be required for decontamination of specific biological agents. Refer to biohazard signage or MSDS to determine which chemical disinfectant to use. Chlorinated disinfectants (i.e., Clidox-S, bleach) use can cause corrosion of equipment and must be followed with a final rinse/wipe with 70% alcohol.
14. Turn off blowers and lights.

V. MAINTENANCE

1. Inspect condition of unit and electrical cord/plug to ensure safe operation. Equipment determined to be unsafe will be removed from service immediately.
2. BSCs used to isolate animal use activities (e.g., rodent surgeries, administrations) or contain animal activities involving recombinant DNA or Risk Group I or II infectious agents (i.e., ABSL-2) **must be disassembled and thoroughly cleaned and disinfected, weekly.** Disassembly includes removing the front and rear grills, raising the floor of the BSC to access the spill pan. Grills, floor, and spill pan are cleaned and then disinfected using Oxivir or Clidox (1:5:1). Clidox (1:5:1) use should be followed by an isopropyl alcohol rinse/wipe to remove surface residue after the **required five minute contact time.**
3. The weekly disassembly, cleaning, and disinfection of the BSC shall be recorded on the **Room Status Sheet** by annotating "**BSC**" in the Housekeeping column.

4. Yearly, schedule certification and routine maintenance with vendor (since actual time of hood is use is so low, yearly filter checks by the vendor should cover all recommended service intervals).
5. Any additional maintenance/service should be performed by authorized personnel and unit re-certified in writing.
6. Certification is documented by labeling the equipment with the date of certification and the date when certification is due.
7. Facility Managers are responsible for maintaining current records of Division-owned equipment inspections, calibrations, maintenance, non-routine repairs, and current inventory for their facility on the Division's ***Equipment Maintenance Log (CMD#192)***.

VI. REFERENCES

Refer to the manufacturer's manual for additional information.

Approved:

Date: