



Biological Safety Cabinet User Requirements

I. Acquisition of a Biological Safety Cabinet (BSC)

A. Selecting the appropriate BSC

1. Selection of the appropriate Class and Type of BSC is dependent upon the biological materials to be used within it.
2. The *Biosafety in Microbiological and Biomedical Laboratories (BMBL)*, issued by the Centers for Disease Control and Prevention (CDC) and the National Institutes of Health (NIH), provides guidance for selecting the appropriate BSC.
3. The BSC must be manufactured in compliance with the current ANSI/NSF 49 standard.
4. UV lamps are not an acceptable or reliable method of disinfection and are not recommended for use in a BSC.
5. Contact [Biological Safety](#) for guidance.

B. Notification of acquisition

1. Contact [Biological Safety](#) to register a newly acquired BSC.

II. Use of a BSC

A. Placement requirements for a BSC in the laboratory (refer to *BMBL* for guidance)

1. Must be placed away from entryways (i.e., in the rear of the lab away from traffic), as walking parallel to the face of a BSC can disrupt the air curtain.
2. The air curtain created at the front of the cabinet is fragile, amounting to a nominal inward and downward velocity of 1 mph.
3. BSCs should not be located near opened windows, air supply registers, portable fans or laboratory equipment which creates air movement (e.g., centrifuges, vacuum pumps).
4. Similarly, chemical fume hoods must not be located near a BSC.

B. Prior to initial use the BSC must be certified to meet NSF 49 Annex F standard by an EHS-approved vendor. Contact [Biological Safety](#) for list of approved vendors.

C. Manufacturer's instructions, best practices as defined in the current edition of the *BMBL*, as well as recommendations from the Institutional Biosafety Committee (IBC) and/or Biological Safety must be followed.

1. It is recommended that the BSC blower be operated for at least 10 minutes before and after use to allow the cabinet to purge.

D. All personnel must use the BSC for any aerosol-producing procedures involving recombinant or synthetic nucleic acids, infectious agents, human blood or bodily fluids, or human cell lines/tissue cultures (primary or immortalized).

- E. All research personnel must be thoroughly trained and competent in the proper procedures and techniques for working in the BSC. Training can be scheduled with [Biological Safety](#).

III. Moving a BSC

For all situations below, BSC must be certified by an [approved vendor](#) before it can be used.

A. For repair of BSC

1. If a BSC has failed certification, signage must be posted taking the BSC out of use until repairs are recertification are completed.
2. If contaminated areas of the BSC must be accessed for repairs or filter replacement:
 - a. The certifying vendor providing service must perform a gaseous or vapor decontamination of the entire BSC, sealing it and attaching appropriate notification signage.
 - b. "Out of Service" signage must be removed only after repairs are completed and the unit is recertified.

B. For lab renovation

1. If a BSC will be out of use during construction or renovation work of the facility in which it is housed, it must be sealed to protect it from dust and debris.
2. The BSC must be thoroughly cleaned of dust before the blower is turned on for the first time following completion of the work noted above.

C. Relocation onto or off of campus, or transfer to new PI

1. [Biological Safety](#) must be notified before any move/transfer of the BSC.
2. Appropriate cleaning and disinfection procedures (thorough wipe down with an efficacious chemical disinfectant) must be performed before and following each use of the BSC.
3. If the BSC is moved to a new location on the same floor, a surface disinfection is sufficient.
4. If the BSC is to be taken off the stand to be moved to another part of the campus, or off campus, a decontamination with a gaseous or vapor fumigant must be performed by an [approved vendor](#) before an approved Green Tag can be issued.
5. The EHS [Green Tag Form](#) must be completed, appropriate signatures obtained, and a hard copy attached to the BSC to inform the movers that the equipment is safe to move.
6. Prior to initial use at the new location, the BSC must be certified to meet NSF 49 Annex F standard by an [approved vendor](#).

IV. Decommissioning and disposal

A. For storing between PI use

1. [Biological Safety](#) must be notified of this change.
2. Appropriate cleaning and disinfection procedures must be performed, using an efficacious chemical disinfectant, before and after each use of the BSC.
3. The BSC should be closed, if possible.
4. Signage must be placed on the BSC indicating its functional status (i.e., Out of Use Until __/__/__), and include ownership information.

B. Terminal disposal

1. [Biological Safety](#) must be notified of this change.
2. Appropriate cleaning and disinfection procedures must be performed, using an efficacious chemical disinfectant, before and after each use of the BSC.
3. **BSC must be decontaminated (i.e., fumigated by gaseous or vapor methods) by an [approved vendor](#), and a copy of the decontamination documentation must be attached to the BSC, with a copy submitted to [Biological Safety](#).**
4. The EHS [Green Tag Form](#) must be completed and attached to the BSC to indicate the unit is safe to move.