

## SOP for Safe Use of Biological Safety Cabinets

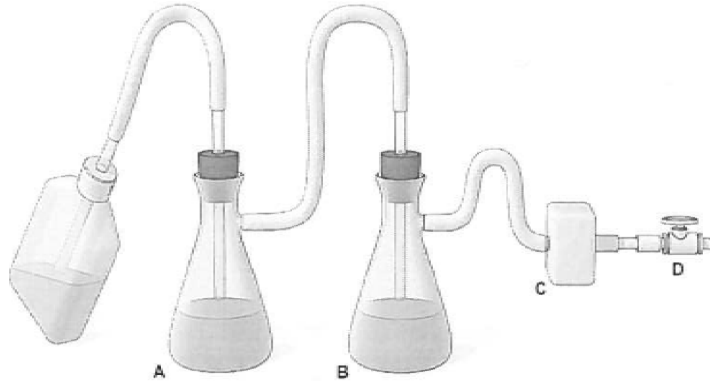
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### Preparing for Work in a BSC:

- Put on PPE according to your laboratory SOP.
- Turn UV light **OFF** (if used).
- Turn the cabinet **ON**, allow it to run for 4 minutes (or Manufacturer's recommended time) to purge the BSC of particulates. Some cabinets may alarm until purge is complete.
- Verify proper sash height and that sash alarm is **ON**.
- Check cabinet's certification sticker expiration date is within 1 year.
- Schedule uninterrupted work time, if possible.
- Decontaminate all surfaces of the cabinet, according to your laboratory SOP.
- Collect all materials needed for the work.

### Safe Use of a BSC:

- **Do not use open flame without approval from the Safety Office.**
- Place absorbent plastic-backed material to protect the work surface, if required by your lab SOP.
- Wipe down the external surfaces of any equipment or supplies that you will need to place in the BSC with disinfectant.
- Place materials as far back in the cabinet as practical without blocking front and rear grilles.
- Separate clean/sterile items from dirty/potential contaminated items inside the BSC.
- Work from clean to dirty to minimize cross-contamination.
- One person at a time should work in a cabinet.
  - If two people need to work in a BSC, use a 6' cabinet and document the protocol-driven need in a risk assessment completed by the Lab Supervisor prior to starting work.
- Move your arms slowly in and out of the BSC. Do not move arms in sweeping, sideways movements.
- If using the vacuum system, protect the vacuum line with an inline HEPA filter and use double-trap flasks with a disinfectant solution:



*The left suction flask (A) is used to collect the contaminated fluids into a suitable decontamination solution (such as 20% v/v bleach); the right flask (B) serves for fluid overflow collection. An inline HEPA filter (C) protects the vacuum system (D) from aerosolized biohazards*

- Adjust the stool/bench height so your face is above the bottom of the sash and your arms enter the cabinet with elbows at 90° angles, armpits level with the bottom of the sash. Use a foot rest if your feet do not touch the floor.
- Discard all waste in a small biohazard bag **inside** of the BSC.

#### **After Completing Work in a BSC:**

- Do **NOT** turn the cabinet **OFF** while removing items and decontaminating the cabinet.
- Close and surface decontaminate **ALL** containers and lab materials before removal with disinfectant.
- Surface decontaminate the exterior of the biohazard waste bag/container before removal and disposal.
- Decontaminate cabinet interior, including sidewalls, back wall, inside of sash and work surface.
- Remove the gloves you were using in the BSC and dispose of them according to your laboratory SOP.
- Turn fluorescent light and blower motor switches **OFF**.
- If required by your lab SOP, turn UV light **ON**. Keep the sash closed while the UV light is on. *If installed, UV lamps should be cleaned regularly to remove any film that may block the output of the lamp. The lamps should be evaluated regularly and checked with a UV meter to ensure that the appropriate intensity of UV light is being emitted. Replace the bulb when the fluence rate is below 40 uW/cm<sup>2</sup>. UV lights must be turned off whenever the room is occupied. Post a warning sign on the front of the BSC indicating the presence of UV light hazards. The sign must say CAUTION: Turn off UV light before working. Turn the UV light off after 15 minutes. If UV lights will be used overnight or for extended periods of time while staff are not present, the sign should be posted on the outside of the closed door of the room. Always abide by any of the manufacturer's recommendations/procedures.*
- Wash your hands.



See Appendix A of 6<sup>th</sup> BMBL:

*Primary Containment for Biohazards: Selection, Installation and Use of Biological Safety Cabinets*

<https://www.cdc.gov/labs/BMBL.html>