

## Biosafety Cabinet Usage Guidelines

- Before initial use of the Biosafety Cabinet (BSC), all users must complete the **BSC training. Please contact the Office of Laboratory Safety (OLS) to receive access to this training.**
- Before working in the BSC, make sure it has been certified and the certification is current.
- Do not use the BSC if any alarms are activated.
- Use of hazardous chemicals or open flames are **STRICTLY** prohibited inside the BSC.
- Do not use the BSC as a storage area. Overcrowding the BSC with unnecessary items can affect airflow and containment.
- When working in the BSC, proper PPE is required. At minimum a lab coat and gloves should be worn.
- Decontaminate BSC interior before and after each use with an approved disinfectant.
- Always open sash to correct working height.
- Always use proper aseptic technique.
- At least daily, or each time the cabinet is operated, the operator or user should observe the magnehelic gauge and note its relative position. Magnehelic gauges measure the pressure drop across the outlet HEPA filter and are important indicators of filter integrity and loading. The gauge will typically indicate the same measurement over a long period of time. A significant change in the reading over a short period of time may indicate clogging or a leaking filter. In such cases, the hood should not be used until the problem is identified and resolved. **If the BSC located within a laboratory does not have a magnehelic gauge, users must understand the operation of the airflow monitor, controls, and alarm settings.**
- For additional guidelines please use the [BSC Checklist](#) for daily BSC operation.

# Checklist for Safe Use of Biological Safety Cabinets

*This checklist is a TEMPLATE, you may edit/modify as necessary to incorporate your laboratory-specific standard operating procedures (SOPs). Use this checklist as a daily reminder of the activities/tasks needed for safely working in a Biological Safety Cabinet (BSC), a training tool, or for an annual audit of operational protocols.*

## Preparing for Work in a BSC:

- Put on PPE according to your laboratory SOP.
- Turn UV light OFF (if used).
- Turn fluorescent light ON.
- 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.
- Verify drain valve underneath the cabinet is closed (valve handle is perpendicular to valve body).
- Check cabinet's certification sticker expiration date is within 1 year.
- Verify inward airflow according to your laboratory SOP (e.g., tissue test, smoke test).
- 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:

- Place absorbent plastic-backed material to protect the work surface, if required by your lab SOP.
- Wipe the external surfaces of any equipment or supplies that you will need to place in the BSC.
- 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.
- Only one person at a time should work in a 4' 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 a filter.
- Do not** use open flame inside the BSC.
- 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 biohazard bag **inside** of the BSC.

## After Completing Work in a BSC:

- Do NOT turn cabinet OFF while removing items and decontaminating the cabinet.
- Close and surface decontaminate ALL containers and lab materials before removal.
- Surface decontaminate the exterior of the biohazard waste bag/container before removal and disposal. Do not spray directly on the BSC surface. Spray on disinfectant onto a paper towel.
- 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.
- Turn UV light ON for 5 minutes. Keep the sash closed while the UV light is on.
- Wash your hands.