Practice Reminders for Safe & Effective Use of a Biological Safety Cabinet (BSC)

The following graphics explain the importance of operational practices for those who use a BSC for working with biological materials. When such practices are consistently followed, the BSC can protect the worker, research materials and the lab environment from potentially harmful contamination.

**DOs when working with your Biological Safety Cabinet**

- Minimize disturbances to airflow barrier. Avoid rapid movements. Move in a controlled and steady manner.
- Observe correct sash opening height. Always set the sash to correct opening height when working in your cabinet.
- Observe proper aseptic technique. Always work “clean to dirty”, segregate sterile zone on 1 side, work area on middle, and waste bin on opposite side.
- Proper waste and pipette disposal. Dispose pipette tips and waste into a biohazard bag placed inside the cabinet, not outside, to prevent spreading contaminants.
- Work within the “Safe Area”. Work as deep into the work zone as possible to avoid blocking of the front or back grille.
- Annual BSC Certification. This ensures cabinet airflow and containment factors are within safe limits.
- Be careful when using vaporizing toxic chemicals. This requires the cabinet to be exhaust ducted.
- Work ergonomically to reduce fatigue. Use BSCs with raised arm rests. Utilize ergonomic lab chairs and foot rests.

**DON’Ts when working with your Biological Safety Cabinet**

- Do NOT confine laminar flow with a biosafety cabinet.
- Do NOT operate if any of the alarms are activated.
- Do NOT block the front intake grille. When the grille is blocked, a localized containment failure can happen that may affect the operator or contaminate the product.
- Do NOT place unnecessary items inside the cabinet. Always disinfest items put into the cabinet before taking it out.
- Do NOT put waste basket outside the cabinet.
- Do NOT use bleach when cleaning the BSC. Bleach can cause rust. If it is required, wipe the residue with DIWPA.
- Do NOT plug high current equipment on the GFCI outlets inside the BSC.
- Do NOT use the cabinet as storage area. Overloading the cabinet with unnecessary items can affect cabinet airflow and containment.
- Do NOT use for flammable or explosive materials.
- The combustible vapor can enter the生物学机 and spark can cause explosion.
- Do NOT work in the cabinet when the UV light is on.
- Before turning on the UV light, always make sure that the sash is fully closed to protect the user from UV radiation.
- Do NOT open flame inside the cabinet.
- The hot air can disrupt the airflow causing contamination, filter damage, and even explosion.
- Do NOT run tubes underneath the sash window.
- Use cable ports when available.
- Do NOT place large or multiple magnets on the BSC body.
- Strong magnets must not be attached to the BSC because it can disrupt the sash window sensor.


Are you acquiring, moving or servicing a BSC?

Specific considerations apply to these activities to ensure that a BSC is installed, moved or maintained in a way that doesn’t create additional hazards during these activities. Review the guidance document at this link or contact VU Biosafety at VUBiosafety@vanderbilt.edu for assistance.