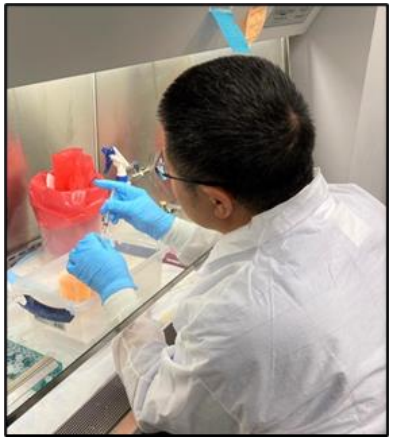
Practice Pointers for Safe & Effective Use of a Biological Safety Cabinet (BSC)

What to DO when using a BSC



- Locate your BSC away from sources of air turbulence. Doors, high traffic areas, fans, etc. can disrupt the BSC's air curtain and personnel and product protection.
- Limit airflow disturbances. Move hands and other objects in and out of the BSC carefully and slowly.
- Ensure the BSC has been certified in the past year. Certification demonstrates that the BSC is functioning properly. VU Biosafety can provide a list of certifiers.
- Surface disinfect the BSC before and after each use. This helps to avoid cross contamination of research materials and minimizes indirect exposure risk. Avoid spraying contaminated surfaces directly with disinfectant by using absorbent wipes wetted with disinfectant to treat and disinfect work surfaces.
- Wear appropriate personal protective equipment (PPE). Wear a lab coat and gloves that cover the wrists (including arm jewelry) and pants/shoes that cover all exposed skin.
- Work from "clean" to "dirty". This workflow helps avoid cross contamination and helps to manage wastes.
- Collect and contain wastes inside the BSC. Stage waste receptacles inside the BSC. Close waste bags and install lids on liquid waste containers before surface disinfecting these for removal from BSC.
- Work at least 4-6" inside the BSC sash. Working away from the front air grille helps to keep potentially infectious aerosols away from the person working in front of the BSC.
- Contact VU Biosafety if you plan to move and/or gas decontaminate a BSC. These activities involve special considerations and logistics that VU Biosafety can assist with.

What NOT to do when using a BSC

- Don't use hazardous or volatile chemicals in the BSC. Consult with VU Biosafety to ensure that your BSC is suitable for this work.
- Don't use a laminar flow clean bench or chemical fume hood instead of a BSC. These devices do not provide the same levels of protection against biomaterials as BSCs.
- Don't use the BSC if it is in alarm. Red lights or audible alarms indicate the BSC is not functioning properly. Notify your supervisor so that a service call can be scheduled.
- Don't use the BSC with the UV light on. UV lights can be damaging to the skin and eyes.
- Don't permit 2 people to work in the BSC at the same time. Even 6-foot cabinets are not designed to protect products and personnel under these conditions. Contact VU Biosafety to conduct a risk assessment before planning to use it for 2-person activities.
- Don't block the BSC's air return grilles. The BSC's airflow patterns are dependent on it having proper airflow in these grilles.
- Don't leave corrosive disinfectants on the BSC work surfaces. If you use a corrosive disinfectant (bleach, etc.) on the BSC, follow-up by wiping down the treated surfaces with sterile water or 70% ethanol/isopropanol.
- Don't store items inside the BSC. Large items (or a lot of small items) can impact the BSC's internal airflow and potentially compromise personnel or product protection.
- Don't use open flames in the BSC. Flames impact the BSC's airflow and a spark in a BSC can cause an explosion, especially if volatile chemicals are used and recirculated.

Need assistance with BSC or other biosafety matters? Contact us VUBiosafety@vanderbilt.edu