

*Insert Facility/Institute Logo Here*

**STANDARD OPERATING PROCEDURE (SOP) *TEMPLATE***

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| Facility: | |
| SOP Title: *Biological Safety Cabinet: Operation and Maintenance SOP* | |
| Document Number: *3-02-001* | Version Number: *00* |
| Process Leader: | Effective Date: *MM-DD-YYYY* |
| Other documents cross-referenced in this SOP (i.e., manuals, SOPs, forms, records):   * Biorisk Management Manual (Chapter V, Biorisk Assessment; Chapter XII, Equipment) (*4-00-001*) * *Attachment B, Protocol Risk Assessment Form* | |

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| Revision Number | Sections Changed | Description of Change | Date | Approved By |
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INSTRUCTIONS: The Biorisk Management Manual and supporting Standard Operating Procedure (SOP) templates provide a general overview of common considerations and information that should be addressed within a biorisk management system and program. These templates are not exhaustive and facilities must customize each document to ensure it is locally applicable and relevant.

* **Black text** can be considered generic text which may be appropriate for inclusion in a facility’s biorisk management manual and SOPs.
* ***Red text*** should be considered guidance or examples and must be reviewed and replaced with facility-specific information.

1. Purpose

The purpose of this document is to establish procedures for proper selection, use and maintenance of biological safety cabinets (BSCs) used by *[Insert Facility Name].* Adherence to this procedure allows the BSC to function as designed in order to provide personnel, product, and environmental protection during biological work.

1. Scope

This document applies to all facility personnel and specific visitors who are approved to use BSCs within *[Insert Facility Name]* and is used when determined necessary by risk assessment to provide personnel, product and environmental protection from potentially infectious aerosols (refer to Biorisk Management Manual and Primary Containment for Biohazards: Selection, Installation and Use of Biological Safety Cabinets).

1. Responsibilities

* **Process Leader** ensures that:
  + This SOP is established and implemented effectively
  + BSCs are properly selected, located, operated and maintained
  + BSC users are trained on this procedure and competent prior to independent use
* **Facility personnel** who use BSCs:
  + Follow the procedures outlined in this SOP
  + Report any problems to the Process Leader
* ***Facilities Management Office*** ensures that:
  + All BSCs are installed, serviced and certified properly

1. Preparation
   1. Materials

* Disinfectant *(such as 5.25% sodium hypochlorite solution based on agent-specific risk assessment)*
* Rinse *(such as 70% Isopropyl alcohol or water, based on selected disinfectant)*
* Spray or squirt bottles
* Paper towels
* “Out of Service” sign
* Biohazard waste bags and container
* Liquid waste container
* Sharps container
  1. Equipment
* Biological Safety Cabinet (BSC), *size, class and type*
* Laboratory chair
  1. Records and Forms
* Biological Safety Cabinet Test Report
* Equipment Use Log

1. Procedure *(refer to Attachment A, BSC: Operation and Maintenance SOP Template Flow Chart)*
   1. BSC Selection, Procurement, Installation
      1. Selection
         1. *Describe steps to be taken based on questions from flow chart steps 1-3*
      2. Procurement
         1. *Describe steps to be taken based on questions from flow chart step 4*
      3. Installation
         1. *Describe steps to be taken based on questions from flow chart step 4*
   2. Routine Operations
      1. Performance verification and set up
         1. *Describe steps to be taken based on questions from flow chart step 6A*
      2. Safety considerations and work practices
         1. *Describe steps to be taken based on questions from flow chart step 7A*
      3. Removal of materials and decontamination

*[Consider minimizing reliance on ultraviolet light as a sole method of decontamination. Available evidence suggest that it alone is insufficient to provide adequate decontamination in many situations. If the bulbs will continue to be used, verifying that the bulbs maintain a fluence rate of at least 40 uW/cm2, maximizing the areas which receive full penetration of the light, closing the sash before using, turning off the ultraviolet lights when not in use, keeping a record of usage and replacing per the manufacturer’s recommendations, as well as protecting personnel from the adverse effects of ultraviolet exposure are good practices.]*

* + - 1. *Describe steps to be taken based on questions from flow chart step 8A*
  1. Scheduled Maintenance
     1. *Describe steps to be taken based on questions from flow chart step 6B*
  2. Unscheduled Maintenance
     1. *Describe steps to be taken based on questions from flow chart step 7B*

1. References
   1. Centers for Disease Control and Prevention (CDC)/National Institutes of Health (NIH), Biosafety in Microbiological and Biomedical Laboratories (BMBL), 6th Edition, <https://www.cdc.gov/labs/BMBL.html>
   2. *Manufacturer's Instructions*
2. Attachments
   1. BSC: Operation and Maintenance SOP Template Flow Chart

