Decontamination and Certification of BSCs

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# Purpose

<<<< This SOP is left in DOCX format so that you may edit it for your own laboratory>>>

The purpose of this SOP is to lay out the responsibilities, equipment and procedures required for preparing a biological safety cabinet or custom enclosure for certification under NSF49 standards or manufacturer’s instructions.

The purpose of this SOP is to lay out the responsibilities required for Contractor decontamination and certification of biological safety cabinets or custom enclosures.

# Scope

This SOP applies to all laboratories using biological safety cabinets and HEPA filter containing custom enclosures.

# Responsibilities

## Supervisors

Supervisors are responsible for:

* **Reviewing this SOP on a regular basis. Review is to consider and mitigate the risks of spill, loss of containment and exposure or other harm. Refer to Performing Risk Assessments SOP.**
* Ensuring that all workers under their supervision are trained on and are proficient in performing the steps of this SOP.
* Ensuring all required personal protective equipment is available and in good repair.
* Providing for the regular certification of BSC’s and other primary containment devices.
* Ensuring primary containment devices are decontaminated commensurate with the service activities requested from the contractor.

## Workers

Workers are responsible for:

* Completing all training required for safe operation prior to first use.
* Review appropriate documentation (PSDS, SDS and manufacturer’s guidelines) prior to working with biohazardous materials, chemicals and equipment.
* Following this SOP as approved by their supervisor.
* Select and wear the appropriate PPE for the materials handled or tasks conducted (lab coat, puncture resistant gloves, eye protection, foot protection, respiratory protection, etc.).
* Take proper care of equipment per specified use and guidelines as set out by the manufacturer.
* Reporting any broken equipment immediately to their supervisor.
* Reporting any paper or other items sucked up into the BSC fans immediately to their supervisor.
* Reporting any paraformaldehyde contaminated surfaces or wastes immediately to their supervisor.

## Certification Contractors

Certification contractors are responsible for:

* Completing certifications per NSF49 or manufacturer’s instructions as requested.
* Provide, select and wear the appropriate PPE for the materials handled or tasks conducted (lab coat, puncture resistant gloves, eye protection, foot protection, respiratory protection, etc) for the requested services.
* Contractors ensure their workers have appropriate training, their required certifications are up to date and are proficient in their tasks and the proper use of PPE for the requested services.
* Removal and appropriate chemical disposal of all plastic and other wastes used for any paraformaldehyde decontaminations performed.
* Ensures all adjacent surfaces are free of paraformaldehyde contamination before leaving the site.
* Reporting any hazardous situations to their own supervisors immediately.
* Reporting any hazardous situations to the on-site supervisors immediately.
* Perform the service in accordance with the agreed upon tasks.

# McMaster Users: Materials for User Preparation of BSC

* Decontamination solution appropriate for the materials being used
* Paper towels
* Always wear the appropriate PPE for the materials you are handling (lab coat, gloves, eye protection etc.).
* Soap and water

# McMaster Users: General Safety Measures

* Decontamination solutions are hazardous chemicals. Users must be trained in Chemical Handling and Spills and WHMIS.
* Safety data sheets for the decontamination solutions should be available, read and understood.
* Plans for disposal of spent decontamination solution should be in in place.
* If cleaning the catch basin, two people need to be present to lift and hold the work surface if no secure mechanism to do so is present.

# McMaster Users: Clearing the Immediate Work Area

* All unnecessary items should be removed from the immediate work area; the contractors may have bulky equipment and need space to set up.
* Trip hazards identified and removed.
* Aspirator traps emptied and cleaned.
* Sinks cleaned, debris from drains removed.
* Counters where contractors will put writing tools or place equipment to be cleaned.
* Extra chairs removed or moved if they pose a hazard.
* Remove any items underneath the BSC that are not necessary.
* There should be no items stored on top of the BSC.

# McMaster Users: Cleaning the Outside of the BSC

* Remove any paper taped to the sash or BSC.
* Using 70% ethanol, mist the outside surfaces of the BSC.
* Follow with soap and water if necessary.
* Pull the sash down as far as it will go and spray with ethanol and wipe clean; use soap and water afterwards if necessary.

# McMaster Users: Cleaning the Work Area of the BSC

* Using decontamination solution appropriate for the materials in use, spray the entire interior surface of the BSC, ensuring to saturate the back, sides, bottom, top diffuser screen, grille and sash for the minimum contact time required.
* Ensure all surfaces remain wet for the entire contact time, applying more solution as necessary.
* Wipe up wet solution with paper towels and discard in regular garbage.
* Wash surfaces with soap and water if necessary.

# McMaster Users: Cleaning the Catchbasin

* Cleaning the catchbasin is not required for NSF49 certification.
* If required by the supervisor for other reasons, follow the SOP ‘Cleaning the BSC Catchbasin’ provided on the biosafety website.
* <https://biosafety.mcmaster.ca/documents/biosafety_sop_0010_cleaning_bsc_catchbasin.docx>