Cleaning a BSC Catchbasin

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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 cleaning the catchbasin of a biological safety cabinet.

# Scope

This SOP applies to all persons prescribing and requiring using a biological safety cabinet.

# 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 the biological safety cabinet is in good repair.
* Ensuring the biological safety cabinet is NSF49 certified after installation, movement or repair.
* Ensuring the biological safety cabinet is NSF49 certified annual if used for BSL2 work.
* Ensuring that all workers under their supervision are trained on and are proficient in performing the steps of this SOP.

## Workers

Workers are responsible for:

* Following this SOP as approved by their supervisor.
* Reporting any broken equipment immediately to their supervisor.

# Equipment Needed

* A partner for help
* Decontamination solution effective against the biologicals in use. Note that the ‘**minimum contact time**’ is the time the surface must remain wet, which may require you to attend the wait time and re-spray or re-apply as needed.
* Dish Soap
* Waste bags
* Sharps container
* Paper towels
* Drain tubing
* Bucket with a handle
* Appropriate tool to prop-up worksurface, such as: Empty sharps containers, large plastic flask, large Bleach bottles, do not use Styrofoam or any light material that may get sucked up into the blower unit
* Appropriate tool to remove solid material, such as: tongs, plastic scraper, mini dustpan, toilet brush or long handled scrub brush
* Appropriate tool to remove liquid if no drain port is present, such as: squeegee, absorbent pads
* Flashlight
* Extendable mirror

# Before You Begin

1. Read the user manual for your biological safety cabinet. Identify if possible:
	1. Drain valve.
	2. Method to remove grille.
	3. Method to lift work surface.
	4. Method to secure lifted work surface.
2. Ensure BSC is running and remains running for the entire cleaning procedure.
3. Don proper PPE to work at a BSC.
4. Using decontamination solution appropriate for the materials in use, spray all contents of the BSC and wait the minimum contact time and then remove from the BSC.
5. 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. Ensure all surfaces remain wet for the entire contact time, applying more solution as necessary.
6. Wipe up wet solution with paper towels and discard in regular garbage.
7. Rinse surfaces with water if necessary.
8. If a drain port is present: close drain port, attach drain tubing to port and place tubing into bucket with handle. Position a bucket with a handle under the drain and place the tubing into the bucket.
9. Ready paper towels pre-soaked in 10% bleach and a small amount of dish soap or other decontamination solution effective against the pathogens in use. Dish soap helps loosen debris and lift away from surfaces.
10. Place waste bag inside the BSC.

# Clean and Remove Front Grille

1. Wet wipe the top surface of the outside edge of the BSC and front grille a total of 3 times with the pre-soaked paper towels. Place used paper towels into waste bag.
2. Remove the grille, turn upside down and place onto the work surface.
3. Wet-wipe the underside of the grille for a total of 3 times with pre-soaked paper towels. Place used paper towels into waste bag.
4. Scrub any gross contamination remaining on the grille with appropriate scrubbing tool. Remove all loosened debris by wet-wiping another three times.
5. Spray top of grille and underside of grille thoroughly with 70% ethanol. Let sit for 5 minutes.
6. Remove front grille from BSC.
7. Rinse front grille in sink.

# Prop Up Work Surface

1. This procedure must be performed with a partner. This procedure must be listed in your ‘working alone policy/procedure’ for your laboratory or area.
2. With a partner, lift up the work surface and prop it up securely.
3. The prop should be something that is strong enough to hold up the metal surface and wide enough that it will not slide and let the surface fall.
4. Thoroughly spray the underside of the work surface with 70% ethanol. Let sit for 5 minutes.
5. Assess the underside of the work surface and clean any gross contamination present by wet-wiping 3x the entire surface with paper towels pre-soaked with decontamination solution. Rinse by wet-wiping with paper towels pre-soaked with tap water if necessary.
	1. Tongs or another long reaching tool is recommended to clean hard to reach surfaces.
6. Collect all paper towels into a bag.

# Clean Catch Basin

1. Using a flashlight and an extendible mirror, examine the extent of cleaning required. Note any sharps or broken glass.

Note: You want to remove as much loose solid material as possible before flooding. Too much solid material will get caught in the drainage tube and you will not be able to flood and drain.

1. Saturate the entire surface of the catch basin by misting with decontamination solution to prevent fly away debris. You want to capture as much solid material and not let it get sucked up into the HEPA filters.
2. Let sit for 5 minutes, keep spraying, do not let it dry out.
3. Using an appropriate tool (such as: tongs, plastic scraper, mini dustpan, toilet brush or long handled scrub brush) remove as much loose solid material, sharps or broken glass. Place sharps or broken class into a sharps container.
4. Collect debris into a plastic bag inside the BSC if you are positive no sharps are present. If the debris contains sharps that you cannot pick out, place the wet, sharps-containing muck into a wide mouth sharps container.
5. Flood catchbasin with decontamination solution. Note, measure the capacity of the bucket to gauge how much you can flood the catchbasin, first.
	1. If there is no drain port present be aware of the amount of decontamination solution used. There must be enough decontamination solution to cover the entire bottom portion of the catch basin, but not so much that it is impossible to get out.
6. Let sit for 15 minutes or the recommended contact time for the decontamination solution.
7. For dried on gross contamination, scrub catchbasin with a plastic scrub brush. A toilet brush is ideal because of the long handle.
8. If the decontamination solution contains a high concentration of debris it will not drain properly from the drain valve. Absorb liquid into paper towels or absorbent pads and deposit into waste bag inside BSC.
9. If the decontamination solution is clear, open drain valve and drain liquid into the bucket below. Scrape liquids towards the drain valve using a squeegee.
10. Empty bucket into sink.
11. Repeat steps 7 to 12 to ensure all debris is removed.
12. Close the drain valve and flood the catchbasin a second time with tap water to remove chemicals from the decontamination solution. Failure to thoroughly rinse corrosive chemicals will result in damage to the entire catchbasin.
13. Open drain valve and drain water into the bucket.
14. Empty bucket into sink.
15. Close drain valve and remove drain tubing.
16. Dry the catchbasin with paper towels ensuring that you HOLD ON to the dry paper towels as they may get sucked up into the fans.
17. Replace work surface.
18. Replace front grille.

# If There is No Drain Valve

1. If there is no drain valve, you must absorb the liquids with paper towel or absorbent pads.
2. Flooding the catchbasin a second time with tap water to remove chemicals from the decontamination solution is required.
3. Take care when handling paper towel when the BSC is on. They can get sucked up into the HEPA filter and you will have to have it removed ($$$).

# Training

1. Ensure all lab members have read and understood this SOP.
2. Record dates and signatures of training.
3. Follow your lab protocol for in-house training i.e. what signatures are required.
4. If this SOP is updated, all persons require to be re-trained and re-sign.