

SOP BIO-008 CLEANING AND DECONTAMINATION AFTER SMALL SPILLS IN THE LAB OR INSIDE THE BSC

SCOPE

This SOP applies to all laboratories that are using biohazard materials including infectious agent, recombinant microorganisms, and materials like blood or any body fluid of human origin. It applies to the cleaning and disinfection of small liquid spills (20 ml or less) in the lab and the cleaning inside the biological safety cabinet (BSC).

DEFINITIONS

Cleaning for the purpose of this SOP is the removal of any visible material from surfaces as bench work, floor or the interior work-surface of the biosafety cabinet.

Disinfection is a process that eliminates or kills many or all pathogenic microorganisms, except bacterial spores that can be present in the material spilled. It requires the use of a disinfectant like house bleach freshly prepared. In some cases a CDC approved disinfectant with sporicidal properties will be needed.

Decontamination removes pathogenic microorganisms from objects rendering them safe to handle, use, or discard.

Biosafety Cabinet (BSC) Is a piece of equipment designed to protect the operator, the laboratory environment, and work materials from exposure to infectious aerosols and splashes that may be generated when manipulating substances containing infectious agents, such as viruses, bacteria, and primary tissue

SMALL SPILL IN THE LABORATORY

Initial Response

1. Notify ALL people and restrict access to the area as appropriate;
2. Notify your Supervisor;
3. Confine the area as appropriate to prevent spread of the spill. Do not put yourself at risk;
4. If the clean-up is out of your control, **CALL Extension 44-911** from a landline or **978-934-4911** from a cellphone;

5. Have on hand all information (MSDS of the pathogen or a copy of the IBC registration) about the organism or bio-hazard spilled: bacteria, cell, cultured material etc.

Spill Clean-up Materials

All laboratories using biohazard materials should have the following materials available, located in a designated space.

1. Personal protective equipment (PPE): safety glasses, goggles, or face shield, utility gloves, wrap-around lab coat, shoe covers (optional);
2. Forceps, tongs, broom, dust pan;
3. Sharps container;
4. Disinfectant solution;
5. Paper towels or other absorbent;
6. Red/Orange Biohazardous Waste Bag.

Spill Clean-Up Procedure

1. Wear appropriate PPE: gloves, lab-coat and glasses;
2. Allow aerosol to settle for 20-30 minutes;
3. Remove sharp objects mechanically using forceps, tongs, or any other available method. Dispose of sharps in a sharps container;
4. Disinfect perimeter with 10% bleach or any other EPA approved disinfectant. EPA recommended disinfectants and CDC disinfection can be found at EPA¹ and CDC² websites
5. Cover the spill with absorbent material;
6. Apply disinfectant on top of the absorbent material;
7. Wait for 20-30 minutes;
8. Blot up material until no sign of material is present;
9. Dispose clean-up material into a Red/Orange Biohazardous Waste Bag;
10. Fill out an incident report

SMALL SPILL INSIDE A BIOSAFETY CABINET

Additional information is found in SOP Bio-010 Use and cleaning of the BSC.

When cleaning any spill inside the BSC, gather the materials mentioned above and follow the next steps:

1. The blower of the cabinet should be switched on always;
2. Clean-up as per directions above, making sure to wipe down back and side walls of cabinet;

¹ <https://www.epa.gov/pesticide-registration/list-e-epas-registered-antimicrobial-products-effective-against-mycobacterium>

² http://www.cdc.gov/hicpac/Disinfection_Sterilization/17_00Recommendations.html

3. If material has spilled into the catch basin beneath the work surface, add a volume of disinfectant equal to the quantity in the basin, wait 20 minutes, and absorb with paper towels and dispose;
4. After completion, allow cabinet to run for ten minutes before resuming work.

For additional information on any biosafety issues; contact EEM-EHS at Ext. 4-2618.