


# Managing Biological Spills in a BSC

Environmental Health & Safety

## SOP No. 8.1

	Print Name	Initial	Title	Date
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### PURPOSE

This SOP describes appropriate procedures for addressing spills that occur WITHIN a biological safety cabinet (BSC). Each laboratory processes have unique combinations of hazards and thus requires laboratory-specific procedures for controlling spills. Spills that occur within a BSC are considered "contained." Keep the cabinet on while addressing the spill.

### NOTES

Materials to address a spill need to be within the cabinet while in use. Additional paper towels and disinfectant should be in the immediate area of the cabinet. Keep the cabinet ON while cleaning the spill.

If for some reason, the spill overflows into the interior of the cabinet, more extensive decontamination (e.g., fumigation by a third party) may be necessary. Contact EHS.

### PROTECTIVE EQUIPMENT

Personal protective equipment (PPE) varies with the task and laboratory biosafety level. At minimum, the following shall be worn while working in the biological safety cabinet:

- a laboratory coat (barrier style is best)
- safety glasses, and
- disposable gloves

A barrier-style coat snaps to the neck and has knit cuffs at the bottom of the sleeves. Gloves should be worn over the cuffs. Additional PPE such as double gloves, surgical mask or respirator (fit-testing required) may be utilized when it is warranted by procedures, materials or operational biosafety level. Contact EHS if you have questions regarding appropriate PPE.

Remove contaminated PPE prior to addressing a spill. If you need to remove your lab coat be sure to disinfect/remove your gloves before exiting the cabinet.

### MATERIALS

**PLAN** for a spill. Extra gloves, paper towels, disinfectant and forceps if you are working with glass.

## **PROCEDURE**

### **KEEP THE CABINET RUNNING AND THE SASH AT THE WORKING HEIGHT DURING CLEAN UP**

#### **First, address contamination to yourself.**

1. Alert others working of the spill. Recover any “clean” items to avoid contamination.
2. If your lab coat and gloves were contaminated in the spill, promptly remove them. Sanitize your gloves, and aseptically remove them. If you coat sleeves are contaminated, apply clean gloves, remove your coat turning the exposed surface to the inside, place in a biohazard bag and thoroughly wash the affected area(s) with soap and water.
3. Don clean PPE and resume addressing the spill.

#### **Second, address the spill.**

1. Remove any broken glass with forceps. Cover spilled material with paper towels.
2. Starting at the perimeter, cover paper towels with fresh disinfectant in sufficient quantity to ensure effective microbial inactivation. Be sure to use an appropriate disinfectant for the spilled material.
3. For larger spills it may be necessary to flood the work surface, as well as drain pans and catch basins below the work surface, with disinfectant – not ethanol/isopropanol as it will evaporate. Allow 20 minutes contact time. Disinfect all interior walls and all materials within the hood with disinfectant during your wait.
4. Allow proper contact time for disinfection. If bleach is used, allow a minimum of 10 minutes; an extended contact time may be necessary if the spill involves material with a high organic content. Disinfect/dispose of gloves before exiting the cabinet. Safely remove PPE and wash hands before leaving the laboratory.
5. Don fresh gloves. The same lab coat may be worn if not contaminated in the previous step. Dispose of absorbent materials as biowaste. Disinfect the container and remove from the cabinet.
6. Disinfect all surfaces within the cabinet (work surface, all 3 internal walls and inside of sash). If the basin was involved, drain catch basin into a container. Lift front exhaust grille and tray, and wipe all surfaces. Ensure that no paper towels or solid debris are blown into area below the grille.
7. Discard all clean-up materials into biohazard waste container, decontaminate the outside of the container and your gloves and remove from the cabinet. Dispose of biowaste, remove your gloves and wash your hands.
8. Submit a SCAN report using the Quick Link on the EHS website:  
<http://www.depts.ttu.edu/ehs/about/scan.php>

### **EMERGENCY PRE-PLANNING**

Contact EHS at 742-3876 during business hours or 742-3328 during non-business hours if you are not confident managing a spill.

Submit a SCAN report detailing the incident.

### **REFERENCES**

Section B6.2 from the University Laboratory Safety Manual.

**AKNOWLEDGEMENT OF PROFICIENCY**

The individuals below have been trained and are competent in completing the above procedure.

Worker Name	Worker Signature	Date	Supervisor Initial	Date