

Institutional Biosafety Committee (IBC)

SOP: General Biological Spill Procedures

NOTE: Significant spill incidents (with potential to affect human health or the environment) should be reported to the Biosafety Officer or Environmental Health and Safety

I. Spill Kit:

- A. A spill kit should be kept in each laboratory (BSL1 and BSL2) where work with micro-organisms is conducted. Materials include:
1. Concentrated disinfectant appropriate for the micro-organisms in use and surfaces being treated ^{i, ii}
 2. Absorbent material
 3. Household rubber gloves
 4. Autoclave bags (even if available nearby, keep in the lab)
 5. Sharps container (even if you don't normally use one)
 6. Forceps to pick up broken glass

II. General Spill Cleanup Guidelines:

- A. Notify others in the immediate area so they will not unknowingly spread contamination.
- B. Cover any personal protective equipment that has been contaminated with another layer (e.g. add a pair of gloves or a second lab coat).
- C. Wear lab coat, gloves, safety glasses or goggles.
- D. Use forceps to pick up potentially contaminated broken glass that has NOT contacted biological material and discard into a sharps container
- E. Use forceps to pick up clean glass and dispose as "normal" broken glass
- F. Cover spilled material with paper towels
- G. Add diluted disinfectant (appropriate for the micro-organisms in use and surfaces being treated) in sufficient quantity to ensure effective microbial inactivation ^{i, ii}
- H. Dispose of towels in biohazard waste container
- I. Wipe spill area with diluted disinfectant (appropriate for the micro-organisms in use and surfaces being treated) ^{i, ii}
- J. Wash hands thoroughly with soap and water when finished

III. In the Event of Personal Exposure:

- A. Remove contaminated clothing, place in a plastic bag and seal.
- B. Vigorously wash exposed area with soap and water for 1 minute.
- C. Use eyewash for eye exposure. Rinse eye for 15 minutes.
- D. Call Public Safety (610.519.4444).
- E. Report Incident to Biosafety Officer.

IV. Specific Spill Cleanup Guidelines:

A. Spill of BSL 1 or BSL 2 Material

1. Wearing gloves and a lab coat, pick up broken glass with forceps and place in sharps container.
2. Absorb the spill with paper towels or other absorbent material.
3. Carefully pour fresh disinfectant (appropriate for the micro-organisms in use and surfaces being treated) onto around the absorbent material. Allow 30 minutes contact time. ^{i, ii}
4. Remove absorbent materials using forceps, tongs, dustpan, etc.
5. Discard these contaminated materials into biohazard waste container.
6. Wipe the spill area with the appropriate dilution of a disinfectant effective against the organism.
7. Autoclave all non-disposable materials worn or used to clean up the spill.
8. Wash hands thoroughly with soap and water.
9. Decontaminate any equipment (e.g. centrifuge, shaker) involved using disinfectant (appropriate for the micro-organisms in use and surfaces being treated) ^{i, ii}

B. Spill in a Biological Safety Cabinet

1. Leave the cabinet fan running.
2. Wearing gloves and lab coat, spray or wipe cabinet walls, work surfaces, and equipment with disinfectant such as 70% ethanol. If necessary, flood work surface, as well as drain pans and catch basins below the work surface with disinfectant. Allow at least 20 minutes contact time.
3. Soak up the disinfectant and spill with paper towels and drain catch basin into a container.
4. Lift front exhaust grille and tray and wipe all surfaces with paper towels.
5. Ensure that no paper towels or solid debris are blown into the area below the grille.
6. Surface disinfect all items that may have been splattered before removing them from the cabinet.
7. Discard all clean up materials into biohazard waste container.
8. Wash hands and exposed skin areas thoroughly with soap and water.
9. If the spill overflows into the interior of the cabinet, notify Public Safety (610.519.4444) to contact EHS and Biosafety Officer. A more extensive decontamination may be needed.

C. Fires Involving Biological Materials

1. Without placing yourself in danger, put biological materials in a secure location, such as incubator or freezer.
2. Activate the building fire alarm as you immediately exit the building.
3. Call Public Safety (610.519.4444)

ⁱ Refrain from using bleach on metal/stainless steel surfaces if a non-bleach disinfectant will suffice. Substitute a chemical disinfectant such as Clidox and rinse with water.

ⁱⁱ Autoclaves can be damaged if liquid bleach or materials soaked in bleach are introduced. DO NOT AUTOCLAVE ANY CLEANUP MATERIALS CONTAINING BLEACH or place these materials in red bags which can then be later autoclaved