

Biological Spill Clean-up Procedures



Biohazard Spill Clean-Up Materials:

Laboratories conducting experiments involving biological hazards such as microorganisms, human-derived materials, and recombinant/synthetic acid molecules must have plans for handling accidental spills. The following items should be conveniently accessible in any lab using potentially infectious materials, and all lab personnel must know the location of these materials:

- 1) Gloves (latex or nitrile)
- 2) Lab coat or disposable gown
- 3) Safety glasses or goggles
- 4) Disinfectant solution*
- 5) Tongs, forceps, dust pan, broom
 - A mechanical device must be used to remove sharps without using gloved hands
- 6) Absorbent materials (e.g. paper towels)
- 7) Signage to post at lab entrance for controlling access (“Biohazard Spill – Do Not Enter”)
- 8) Biohazard bags for collecting all contaminated materials generated during the cleanup, and a puncture-resistant biohazard sharps container if spill involves contaminated sharps
- 9) A copy of all applicable biological spill procedures

* A freshly prepared 10% bleach solution is effective for the decontamination of most biological spills. Some laboratories have the potential for spills involving agents or materials that may be resistant to a 10% bleach disinfectant. In these cases, it is important for the lab to use an effective disinfectant. A list of selected EPA-registered disinfectants is available online at <https://www.epa.gov/pesticide-registration/selected-epa-registered-disinfectants>.

If an exposure occurs it must receive immediate attention before cleaning up the spill, and personnel must follow the approved procedures for post-exposure evaluation and follow-up.

Procedures for Spills of Biological Materials Requiring BSL-1 or BSL-2 Containment:

- 1) Alert people in the immediate area that a spill occurred (avoid spreading spilled material)
- 2) Put on appropriate personal protective equipment (e.g. gloves, lab coat, safety glasses)
- 3) Cover the spill with absorbent material (e.g. paper towels)
- 4) Carefully soak the paper towels and spilled material with disinfectant (avoid splashing)
- 5) Allow a 20 minute disinfectant contact time
- 6) Wipe down any contaminated equipment with disinfectant
- 7) Remove broken glass or other sharps with a brush and dustpan, tongs, or forceps
 - Place contaminated sharps in a puncture-resistant biohazard sharps container
- 8) Use absorbent material to wipe up the spill
- 9) Clean the area once more with absorbent material and disinfectant solution
- 10) Place contaminated disposable materials in a leak-proof biohazard bag for autoclaving, and properly decontaminate any non-disposable materials prior to reuse
- 11) Remove gloves and thoroughly wash hands
- 12) Notify lab personnel when the clean-up has been completed

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Procedures for Spills Inside a Biological Safety Cabinet (BSC):

- 1) Follow above procedures for spills of materials requiring BSL-1 or BSL-2 containment
- 2) If material has spilled into the catch basin below the work surface: a) close the drain valve; b) flood the drain with disinfectant (volume equal to quantity in basin; c) wait 20 minutes (disinfectant contact time); d) absorb remaining liquid with paper towels
- 3) After the completion of clean-up, the cabinet should run for 10 minutes before use

Procedures for Spills Inside a Centrifuge

- 1) Turn off the centrifuge & wait 20 minutes before opening lid to allow aerosols to settle
- 2) Follow above procedures for spills of materials requiring BSL-1 or BSL-2 containment
- 3) Remove buckets and rotors and move them to closest biosafety cabinet before opening
- 4) Disinfect interior of centrifuge & disinfect buckets/rotor per manufacturer's instructions

When centrifuging high concentrations or large volumes of infectious agents, these materials may be centrifuged in the open laboratory using sealed rotor heads or centrifuge safety cups.