

SOP BIO-005 FOR THE DECONTAMINATION OF REUSABLE LABWARE, WORK-SURFACES AND EQUIPMENT

SCOPE

This SOP applies to the decontamination, cleaning, and disinfection of reusable labware, equipment, and all work-surfaces (benches, BSC work-surface) before and after using any biohazard or potential infectious material.

DEFINITIONS

Cleaning is the removal of visible soil (e.g. organic and inorganic material) from objects and surfaces. It is accomplished mechanically using water with detergents or enzymatic products. Cleaning is essential before disinfection and sterilization, because inorganic and organic materials that remain on the surfaces of instruments can interfere with the effectiveness of these processes.

Disinfection is a process that eliminates or kills many or all-pathogenic microorganisms, except bacterial spores, that are present on surfaces or inanimate objects like equipment. Specific chemical agents called sporicides can eliminate bacterial spores.

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

PROCEDURES FOR DECONTAMINATION AND CLEANING

Reusable Labware

1. All reusable plasticware or glass labware such as cylinders, flasks, beakers, and others that cannot be autoclaved for practical reasons, can be decontaminated by soaking the labware in 10% fresh bleach solution or as recommended by the manufacturer;

2. Immerse completely all labware in a pail with a 10% fresh bleach solution and soak the material for at least one hour;
3. Rinse with abundant water and a final rinse with distilled water;
4. The equipment can be air-dried.

Work-Surface or Bench Work

1. **Before Work** clean the bench- work surface with soap and water if it is soiled or wipe the surface with 10% fresh bleach solution followed with a water wipe down to remove all bleach residual.
2. **After Work** clean, decontaminate and remove all equipment and supplies from the work area. Work surfaces should be wiped with a disinfectant that would kill the infectious agent that has been used.

Equipment

1. All equipment shall be cleaned and decontaminated before and after working with any biologically potential infectious material or blood;
2. The use of 10% bleach can be corrosive for some equipment that has metal surfaces;
3. Several commercial EPA approved disinfectants, which are not corrosive to metals, can be used on equipment with metal parts;
4. Clean and decontaminate the equipment by following the instructions of the equipment-manufacturer or vendor;
5. Plastic parts can be submerged in 10% bleach solution for 30 minutes, rinsed with abundant water and a final rinse with distilled water;
6. Dry plastic parts with paper towels;
7. Choose the appropriate disinfectant for the agent(s) that you are working with;

Biosafety Cabinet (See SOP Bio-010)

1. The BSC's work surface should be kept in pristine condition;
2. Disinfect by spraying the surface with 70% ethanol or isopropanol before and after each use;
3. Corrosive chemicals such as 10% bleach should be avoided. In case of small spill, bleach 5-10% should be used and followed with a wipe down of abundant sterile water and 70% ethanol. See SOP Bio-010 for cleaning spills inside BSC;
4. To avoid cross-contamination it is recommended to keep a cleaning/ decontamination log after disinfection of the BSC.

For any advice in choosing a germicide agent or sporicides, contact EEM-EHS at biosafety@uml.edu or Ext. 4-2618.