
Safety in laboratories

Microbes transmitted through the blood

They are the microbes that are found in human blood, tissues, or fluids, which may cause disease to humans, and these disease-causing bodies include "but are not limited to" hepatitis virus type (B) and hepatitis virus type (C)), And human immunodeficiency virus (AIDS).

Containment

It means using safe methods to deal with the pathogens of infection in the vicinity of the laboratory, where they are received and kept. **The purpose of containment** is to reduce or eliminate the exposure of workers within the laboratory, other people, and the environment to potentially hazardous agents. An example of containment is a centrifugal safety vessel, a closed container that prevents the escape of airborne spray during the centrifugation process.

Initial containment

Well-maintained biological safety cabinets are used and prefer the second category as well as other appropriate personal protective equipment and physical control devices in the **following cases:**

A. When performing laboratory procedures that may result in types of infectious aerosols, this includes the operations of concentrated expulsion, grinding, mixing, shaking operations, strong mixing, the opening of containers containing infectious substances whose pressure may differ from the surrounding pressure, and the operations of removing infected tissues taken from animals The embryo-forming eggs.

B. When infectious substances are used in large quantities or high concentrations. These materials can be introduced into centrifugation processes, and it is required to open these covers or safety containers that this be inside the biological safety cabinets

Remove pollutants

The removal of pollutants is a step that needs to be done regularly. It involves eliminating bacterial agents in microbiological laboratories and stopping their influence to protect workers in the laboratory and prevent contamination of laboratory procedures.

Cleansing

It is the use of antimicrobial agents on inanimate objects such as work surfaces, equipment ... etc., to eliminate all microbes that represent a potential danger to humans or threaten the experiment's safety.

Laboratory Biological Safety Plan (Lab)

It is a written document in which the risks that may be exposed to and all procedures, equipment, and constructions required to limit or reduce the exposure of laboratory workers to infection-causing agents or dangerous biological materials are recorded.

Dealing with sharp instruments and how to get rid of them

- Sharps such as scalpels, needles, and syringes (syringes) must be placed in the containers designated for this. It is forbidden to bend single-use needles after use, and it is not permissible to pull them out, break them, re-cover them or separate them from syringes (syringes) that are disposed of after use. It is also not permissible to handle it with your hands before disposal.

  However, the best way to get rid of them is by placing them in non-porous containers placed in appropriate places, used specifically for the purpose of disposing of sharp instruments.

- The syringes should be completely disposed of after use.
- The greatest measure of precautionary measures must be taken when dealing with contaminated sharps such as needles, syringes, glass slides, droppers, capillaries, and scalpels. Plastic or coated capillary tubes should be used.
- It is forbidden to handle broken glassware directly by hand. Rather, it should be disposed of by mechanical means.

Waste disposal

- The waste (non-sharp) contaminated with materials produced by the human body is disposed of by placing it in penetration-resistant garbage bags.
- Labels of all types of waste must be attached.
- Liquid samples such as blood and urine should be sterilized and disposed of. And when necessary, bacterial cultures and infectious agents can be disinfected by adding chlorine at a concentration of 0.5% for a period of ten minutes before they are finally disposed of.
- You must follow the instructions issued by the Ministry of Health regarding how to dispose of medical wastes.

- The wastes that have been sterilized by steam can be disposed of along with other ordinary wastes.
- Human excreta, such as urine and stool samples, can be disposed of via sewage or toilet.
- Labeling materials used to grow samples, additives (reagents), and samples must be labeled. In addition, the waste must be placed in special containers that indicate its quality and the potential risk of infection.
- Cultures, tissues, and samples were taken from body fluids and placed in a container with a lid that prevents leakage during collecting, treating, storing, or transporting these materials.

Disinfection and sterilization operations

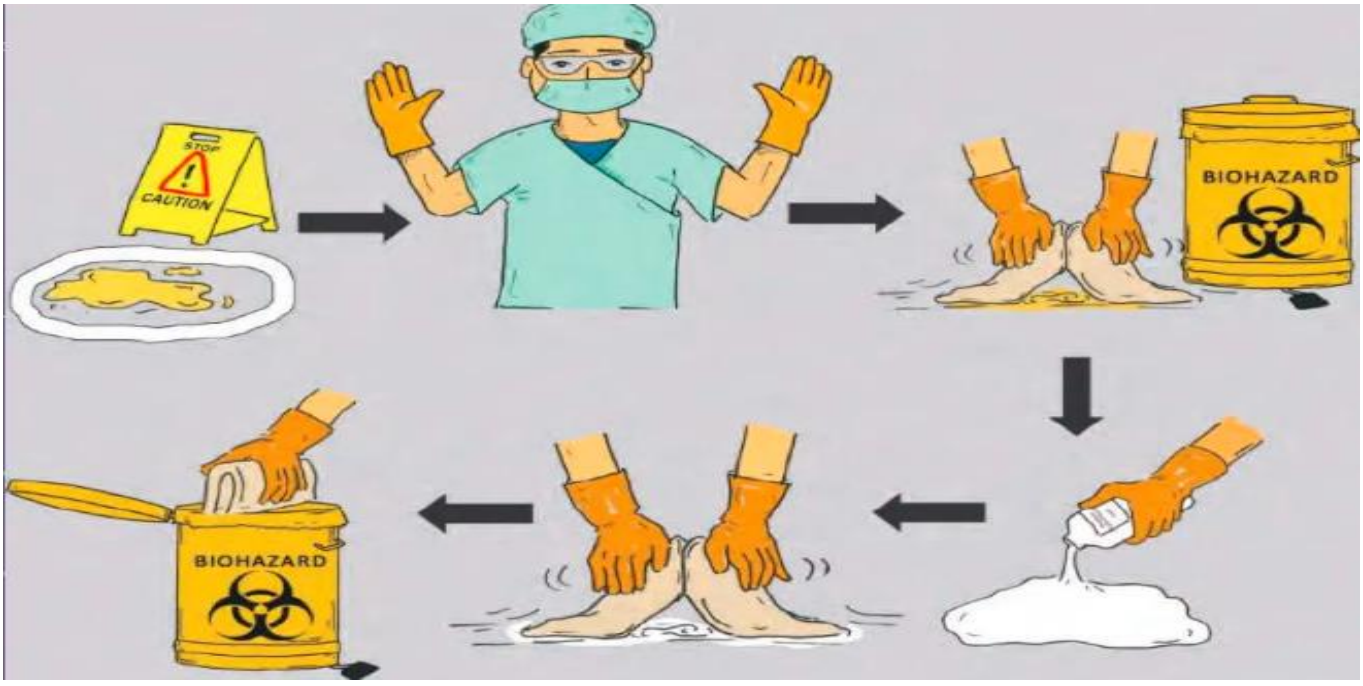
- Work surfaces should be disinfected with a dilute chlorine solution, and this is done routinely upon completion of work or spillage of any potentially infectious substance.
- Medium level disinfectants are used to disinfect surfaces in laboratory (laboratory) areas. Examples of these antiseptics are: dilute bleach solution, ethyl alcohol, isopropyl alcohol, phenol, or iodophor, which are used for sterilization purposes and are not intended for skin disinfection.
- Labels must be placed on containers containing hazardous materials

Procedures for cleaning up spilled materials in the laboratory

The laboratories must follow advanced procedures to deal with spills in the laboratory, and the laboratory should have a bag (or any container) containing the materials needed to cope with spills in the laboratory, which are: concentrated disinfectant (such as bleach or iodophor), a box of drying papers, pieces of sponge, gloves, Household rubber, tweezers to capture broken glass, and sterilization container.


SPILLAGE
الإنسكابات الدموية
Blood & Body Fluid Safety
DONE BY:AYA FAWZY


BLEACH
Bio-spill kit


STOP
CAUTION
BIOHAZARD
BIOHAZARD