

Laboratory Protocols and Biosecurity Guidelines in a Microbiological Laboratory

- 1- A clean white laboratory coat, mask, gloves, cap, and shoe covers must be worn before entering the laboratory.
- 2- After completing laboratory work, the lab coat must be removed, hung in the designated locker, and not used outside the laboratory. Additionally, used masks, gloves, caps, and shoe covers must be disposed of in the appropriate waste bins.
- 3- Hands must be washed thoroughly with plenty of water and soap before entering and after completing laboratory work, followed by disinfection with an antiseptic solution.
- 4- General hygiene and cleanliness rules must be strictly observed while working in the laboratory.
- 5- In case of chemical contamination on the hands, face, or eyes, or injury with contaminated instruments, the affected area must be washed immediately with plenty of water, necessary first aid must be administered, and medical assistance must be sought promptly.
- 6- The surfaces of the workbenches must be wiped with a disinfectant solution both before starting and after completing work.
- 7- Used tubes or Petri dishes must not be left open on the workbench.
- 8- Materials used during work (e.g., scissors, forceps) must be sterilized and subsequently washed after the completion of work.
- 9- During inoculation and media preparation, airflows caused by air conditioners or open windows must be avoided.
- 10- If the workspace becomes contaminated with a material containing microorganisms or if culture tubes break, the area must be covered with cotton soaked in a disinfectant solution. After allowing an appropriate contact time, the contaminated materials must be properly collected and removed. In such cases, laboratory supervisors must be notified immediately.
- 11- Used slides and cover slips must be placed into special containers or jars filled with disinfectant.
- 12- When grinding infectious materials in a mortar, a cap, safety goggles, a face mask, and gloves must be worn.
- 13- Laboratory equipment must be used following the manufacturer's instructions and appropriately cleaned afterward.
- 14- A work plan must be prepared one day in advance or before entering the laboratory.
- 15- Records of all laboratory activities must be kept accurately and on time.
- 16- A biosafety cabinet must be used depending on the specific characteristics or requirements of the work.
- 17- Food and beverages must not be kept in the laboratory, and eating or drinking is strictly prohibited.