

General Rules and Regulations

SLB 260 - GENERAL MICROBIOLOGY

A rewarding laboratory experience demands strict adherence to prescribed rules for personal and environmental safety. The former reflects concern for your personal safety in terms of avoiding laboratory accidents. The latter requires that you maintain a scrupulously clean laboratory setting to prevent contamination of experimental procedures by microorganisms from exogenous sources.

Because most microbiological laboratory procedures require the use of living organisms, an integral part of all laboratory sessions is the use of aseptic techniques. Although the virulence of microorganisms used in the academic laboratory environment has been greatly diminished because of their long-term maintenance on artificial media, all microorganisms should be treated as potential pathogens (organisms capable of producing disease). Thus, microbiology students must develop aseptic techniques (free of contaminating organisms) in the preparation of pure cultures that are essential in the industrial and clinical marketplaces.

The following basic steps should be observed at all times to reduce the ever-present microbial flora of the laboratory environment.

1. Upon entering the laboratory, place coats, books, and other paraphernalia in specified locations—never on bench tops.
2. Keep doors and windows closed during the laboratory session to prevent contamination from air currents.
3. At the beginning and termination of each laboratory session, wipe bench tops with a disinfectant solution provided by the instructor.
4. Do not place contaminated instruments, such as inoculating loops, needles, and pipettes, on bench tops. Loops and needles should be sterilized by incineration, and pipettes should be disposed of in designated receptacles.
5. On completion of the laboratory session, place all cultures and materials in the disposal area as designated by the instructor.
6. Rapid and efficient manipulation of fungal cultures is required to prevent the dissemination of their reproductive spores in the laboratory environment.

To prevent accidental injury and infection of yourself and others, observe the following regulations at all times:
 1. Wash your hands with liquid detergent, rinse with 95% ethyl alcohol, and dry them with paper towels upon entering and prior to leaving the laboratory.
 2. Wear a paper cap or tie back long hair to minimize its exposure to open flames.
 3. Wear a laboratory coat or apron while working in the laboratory to protect clothing from contamination or accidental discoloration by staining solutions.
 4. Wear closed shoes at all times in the laboratory setting.
 5. Never apply cosmetics or insert contact lenses in the laboratory.
 6. Do not smoke, eat, or drink in the laboratory. These activities are absolutely prohibited.
 7. Carry cultures in a test tube rack when moving around the laboratory. Likewise, keep cultures in a test tube rack on the bench tops when not in use. This serves a dual purpose: to prevent accidents and to avoid contamination of yourself and the environment.
 8. Never remove media, equipment, or especially, *bacterial cultures* from the laboratory. Doing so is absolutely prohibited.
 9. Immediately cover spilled cultures or broken culture tubes with paper towels and then saturate them with disinfectant solution. After 15 minutes of reaction time,

a manner indicated by the instructor.

transmission of the HIV and hepatitis B viruses in these test specimens.

10. Report accidental cuts or burns to the instructor immediately.
11. Never pipette by mouth any broth cultures or chemical reagents. Doing so is strictly prohibited. Pipetting is to be carried out with the aid of a mechanical pipetting device only.
12. Do not lick labels. Use only self-stick labels for the identification of experimental cultures.
13. Speak quietly and avoid unnecessary movement around the laboratory to prevent distractions that may cause accidents.
14. Always wear gloves when irradiating cultures.

1. Wear disposable gloves during the manipulation of test materials such as blood, serum, and other body fluids.
2. Immediately wash hands if contact with any of these fluids occurs and also upon removal of the gloves.
3. Wear masks, safety goggles, and laboratory coats if an aerosol might be formed or splattering of these fluids is likely to occur.
4. Decontaminate spilled body fluids with a 1:10 dilution of household bleach, covered with paper toweling, and allowed to react for 10 minutes before removal.
5. Place test specimens and supplies in contact with these fluids into a container of disinfectant prior to autoclaving.

The following specific precautions must be observed when handling body fluids of

I have read the above laboratory safety rules and regulations and agree to abide by them.

Name _____

Date _____

SEAT NUMBER _____

FROM: MICROBIOLOGY - A LABORATORY MANUAL; CAPPUCINO + SHERMAN