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General Laboratory Directions

. **Before entering the laboratory, remove coats, jackets, and other outerwear**

1- these should be left outside the laboratory, together with any backpacks, books, papers,
or other items not needed for the work.

2. To be admitted to the laboratory, each student should **wear laboratory coat**

3. Any student with a fresh, unhealed cut, scratch, burn, or other injury on either hand should notify the instructor before beginning or continuing with the laboratory work.

4. **Tie back long hair**.

5. Experiments are performed by each GROUP of students individually.

6. Do not perform activities in the lab until you are given instructions by your laboratory instructor.

7. If you are in doubt as to the correct procedure, double-check the instruction. If doubt continues, consult
your instructor. Avoid asking your neighbor for procedural help.

8. Keep working areas clear of all unnecessary items.

9. **Never remove specimens, cultures, or equipment from the laboratory under any circumstances !!!**

10. If you spill or drop a culture or if any type of accident occurs, *call the instructor immediately*

- place a paper towel over any spill and pour disinfectant over the towel
- let the disinfectant stand for 15 minutes, then clean the spill with fresh paper towels.

11. If you cut or burn yourself while working, *call the instructor immediately.*

12. Report all broken glassware to the instructor

- broken glass should be placed in a special sharps container for disposal and not in the trash container.

13. **Before leaving the lab, make sure all items have been returned to their appropriate location.**

14. **Wash your hands thoroughly with antibacterial soap before leaving the laboratory !!!**

Good Laboratory Practices

1**. *Tie back long hair neatly****,*** *away from the shoulders.*

2. Do not wear jewelry to laboratory sessions.

3. ***Keep fingers, pencils, and such objects out of your mouth****.*

4. Avoid unnecessary movements in the lab
- unnecessary activity can cause accidents, distract others, and promote contamination.

5. ***Do not EAT, DRINK, smoke or apply makeup in the lab !!!***

6. Keep doors and windows closed during the lab session to prevent contamination from air currents.

7. ***Never place contaminated pipettes, loops, or articles on the bench top.***

8. Never discard contaminated cultures, glassware, pipettes, tubes, or slides in the trash container.

9. ***Never discard contaminated liquids or liquid cultures in the sink !!!***

Discard all unnecessary slides, used glassware and pipets into the biohazard (red) containers !!!

10. Mouth pipetting is strictly prohibited
- mechanical pipetting devices are required.

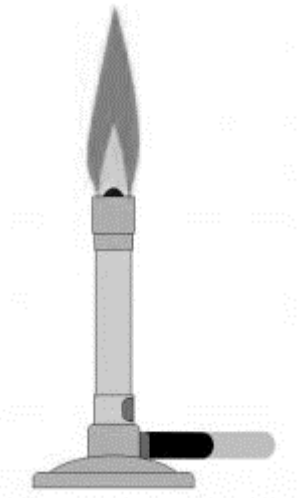
11. Always use racks to hold tubes so that they can't fall over and contaminates the outside containers,the lab bench, or floor.

12. All procedures are conducted carefully to minimize the creation of splashes or aerosols e.g., don't shake cultures or material containing microorganisms unless the cap is very tight.

13. Use a safety cabinet when working with hazardous pathogens.

14. **If using a Bunsen burner:**

•	**tie back long hair**
•	**do not lean over the countertop** always be aware of the flame
•	keep flammable items away from the flame
•	turn off the burner when not in use
•	let burner cool down before touching them



Hand Hygiene:

Hand washing is the most effective method for preventing transfer of microorganisms and infections.

The microbial flora (microbiota) of the skin consists of resident and transient microorganisms:

- **Resident microbial flora:**
- **the resident flora is the normal flora of the skin (e.g. cogulase negative staphylococci and diphtheroids)**
- **its pathogenicity is low**

- **transient microbial flora:**
- **represent recent contamination of the skin**
- **pathogenic, and may cause disease e.g. Escherichia coli and *Staphylococcus aureus***

Types of hand washing in the laboratory:

1. **Social** (Routine) **hand washing**

The purpose is to remove soil and transient flora.

Procedure:

a. Watches and rings should be removed.

b. The hands are washed with plain soap and running water.

c. Enough soap **is used to produce a visible lather, which is rubbed.**

over all surfaces of hands (palm, back, the thumb, and between fingers) for >10-15 seconds

d. The hand is rinsed under a stream of water and dried in with disposable paper towel.

e. If the sink does not have foot controls or an automatic shut off, a paper towel may be used to shut off the faucet to avoid re-contamination of the hands.

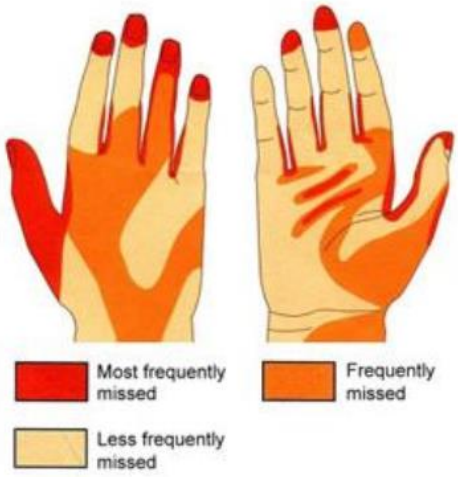
2. **Hygienic hand washing**

The purpose to remove and kill transient and some resident flora.

Procedure (please see the pictures below):

- **Watches and rings should be removed.**

Handwashing:



Areas missed during handwashing.

The hands are washed with:

- **antimicrobial soap (antiseptic detergent) + water for 40-60 sec.**

(e.g. Povidone – iodine/detergent solution)

Hand rubbing:

- **alcohol based preparation** (effective than aqueous preparation)

e.g. 70% ethanol or isopropanol:

- 0.5% chlorhexidine in 70% ethanol

- **3-5 ml of the alcoholic preparation should be applied to hand and rub to dryness for 20-30 sec.**

Wash your hands:
– **after handling infectious materials**
– **after contact with blood, body fluids, secretions, or excretions**
– **after removing gloves, and before leaving the lab**
– **before and after performing any personal body function**
e.g..eating, blowing and wiping nose