



Ministry of Higher Education and Scientific
Research
AL-Mustaqbal University College of Science
Department of Biochemistry



biology

Lab 1

Scholar year 2024-2025

second semester

By
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((Laboratory safety roles))

General safety rules

- 1. Eating and drinking are not permitted in the laboratory.**
- 2. All bags or belongings must be kept at the designated places.**
- 3. Perform experiments as directed. Do not try any unauthorized experimental procedure. Follow all verbal and written instructions given by lecturer/lab officers.**
- 4. Be prepared for every practical session. Read the procedure in advance and understand your tasks. Know the hazards before you conduct the experiment.**
- 5. Do not enter any laboratory without permission. Never work alone unsupervised.**
- 6. Always check the location and operation of emergency equipment. This includes eyewash, safety shower, fire extinguisher, fire blanket and first aid kit.**

7. No horseplay or fooling around in the laboratory.

8. Keep noise level to minimum in laboratory. Use of mobile phone is strictly prohibited.

9. Smoking, eating or drinking in the laboratory are strictly FORBIDDEN.

10. Handle all living organisms or specimens used in a laboratory activity in a humane manner. Preserved biological materials are to be treated with respect.

11. Clean your lab bench, put away all equipment and reagents, and wash your hands at the end of each work session.

LAB SAFETY PROTOCOLS

Use Protective Gear



Safety Goggles

Lab Coat

Gloves

Long Pants

Closed Shoes

Clean Up

After completing the lab, carefully clean your workspace and the equipment. Don't forget to wash your hands.



Proper Supervision

Don't perform lab experiments without instructor supervision.



ID Hazards

Always read labels before using any chemicals.



Safety First

Known location of safety equipment and emergency numbers.



No Food

Don't eat or drink in the lab and never taste chemicals.



Be Attentive

Be attentive while in the lab. Don't leave an experiment in progress.



Handle Glassware Carefully

Properly dispose of anything that breaks.

■ Personal safety

1. Contact lenses should never be worn in the laboratory because they cannot be removed rapidly if reagents accidentally splash in the eyes.
2. Tie back long hair to keep it away from flames and chemicals.
3. Wear shoes which cover the entire foot. No sandals or canvas shoes. Clothing should not to be loose or floppy. Arms and legs should be covered.
4. Wear appropriate protective equipment (PPE). A lab coat and goggles should be worn at all times. In addition, gloves should be used as appropriate.

LAB SAFETY RULES

WEAR LAB COAT
AT ALL TIMES



KEEP HANDS
CLEAN AT ALL
TIMES



WEAR SAFETY
GOGGLES AT ALL
TIMES



HANDLE ALL
EQUIPMENT WITH
CARE

■ **Laboratory safety**

- 1. Obtain permission from PI/lab officer for work extension after office hour or during weekends. There should be a minimum of two users in the laboratory after 6 pm or during weekends.**
- 2. Read all chemical labels carefully. Read them 3 times: when you pick it up; just before you use it; and after you are finished. Many mistakes resulted from mixing the wrong chemicals. Review Material Safety Data Sheet (MSDS) if needed.**
- 3. Never taste a chemical. Checks Oduors only if instructed to do so, by gently wafting.**
- 4. Avoid the inhalation of organic vapours, particularly aromatic and chlorinated solvents. Avoid contact with skin and clothing.**
- 5. Take great care while transporting chemicals or specimens from one part of the laboratory to another. Hold them securely and walk carefully.**
- 6. Never take chemicals, specimens, supplies or equipment out of the laboratory without the consent of lecturers/lab officers.**

7. Always work in a well-ventilated area. Use the fume hood when working with volatile substances or poisonous vapours. Never place your head into the fume hood.

8. Replace caps on containers immediately after use. Never return unused reagent to the reagent bottle as this will contaminate the reagent. Label your bottles accordingly.

9. Dispose of chemicals properly. Nothing goes down the drain. Container should be available for waste chemicals. Broken glass goes in special receptacles/containers.

10. Clean up spills immediately. This Includes water.

Lab Safety

It is our joint responsibility
to keep the lab clean and safe!



Authorised
persons only in
the laboratory



Lab coats
must be worn



Sensible footwear
must be worn –no
open shoes



All accidents and
dangerous events must be
reported and recorded



No smoking,
of any kind



Do not store or consume
food or drink in the lab



All work must be carried
out in accordance with
risk assessment



Dispose of
waste properly,
in line with policy



Keep the lab tidy, and
emergency routes
accessible

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■ **Prevention of fire and accidents**

- 1. While heating chemicals in test tube, never direct the mouth of tubes to yourself or others around you. Do not directly observe the mouth of the test tube or lift up the lid while reaction/heating is taking place.**
- 2. If fire happens during the experiment, stay calm. Inform the lecturer/lab officers and call the fire brigade. Move to the assemble points in an orderly manner. Do not use the elevator.**
- 3. Water is not suitable to extinguish fire cause by organic solvents. Use fire blanket to put off small fire or fire on clothing. For larger fire, use fire extinguisher (Read the manual carefully before operate it).**
- 4. Wash off chemicals splashed or spilled on your skin or body immediately and for 15 minutes. Remove contaminated clothing immediately. Notify your lecturer/lab officers.**
- 5. Treat burns immediately by putting the burned area under cold water for at least 15 minutes. Report all accidents and injuries to lecturer/lab staffs immediately.**



THANK YOU