

DEPARTMENT OF CHEMISTRY EDUCATION

LABORATORY SAFETY & RULES

GENERAL OPERATING GUIDELINES

This document outlines the essential safety regulations, standard operating procedures, and emergency response guidelines required for all students and research personnel working within the Chemistry Laboratories. Strict adherence to these protocols is mandatory.

1. WORKING WITH CHEMICALS

Guidelines covering chemical handling, storage, labeling, fume hood usage, and proper disposal procedures to prevent exposure and contamination.

2. HANDLING GLASSWARE

Precautions for safe usage of laboratory glass items, thermal shock prevention, and mandatory steps for damaged or broken equipment.

3. PERSONAL PROTECTION

Mandatory personal protective equipment (PPE) requirements including safety coats, goggles, proper footwear, and hair management.

4. EMERGENCY RESPONSE

Immediate action protocols for accidents, acid spills, high-temperature operations, and direct supervisor notification chains.

CHEMISTRY LABORATORIES

Department of Chemistry Education

GENERAL RULES TO BE FOLLOWED IN CHEMISTRY EDUCATION LABORATORIES

1. Students are strictly required to arrive at the laboratory wearing lab coats.
2. Students must study and prepare all necessary preliminary background information for the experiments prior to coming to the lab.
3. Before commencing the experiment, students will be briefed by the laboratory supervisor regarding potential hazards, and must listen attentively.
4. During and after the experiment, students must work carefully and meticulously, adhering closely to all warnings issued by the supervisor.
5. In the event of any danger or accident, no action should be taken without the knowledge of the supervisor, who will initiate necessary intervention.
6. Students are strictly forbidden from smelling or tasting any chemical substances or solutions.
7. Caution must be exercised when operating drying ovens or muffle furnaces, as high temperatures are involved.
8. To mitigate potential risks such as chemical spills on benches, students with long hair must keep their hair tied back.
9. All chemical experiments must be performed inside designated fume hoods.
10. Ventilation fans must be kept running continuously or intermittently during experimental work.
11. Students must wear protective laboratory safety goggles throughout the duration of the experiment.
12. Students must wear protective gloves during all experimental operations.
13. No personal items (jackets, coats, bags, etc.) other than essential laboratory materials may be placed on the lab benches.
14. Students must act with extreme caution when preparing acid solutions and strictly adhere to the rule of **never adding water to acid**.
15. In case of an acid spill on fume hoods or benches, the laboratory supervisor must be informed immediately for proper cleanup.
16. Liquid solutions must be prepared with care; a pipette pump or rubber bulb (propipette) must always be used.
17. Precision balances, centrifuges, heaters, ovens, and other technical equipment must be handled with care.
18. Caps and lids of chemical reagent and solvent containers must be closed immediately after use.
19. Spatulas and tweezers must be completely clean; a dedicated, clean spatula must be used for each distinct chemical.
20. Washing solutions such as chromic acid must never be poured down the drain; they must be collected in designated waste containers. Use with caution due to severe corrosive effects on clothing.
21. After sealing flammable solvent containers, they must be wrapped with Parafilm under supervisor control and stored in the refrigerator.
22. Torn or damaged labels on chemical storage bottles must be reported to the laboratory supervisor for immediate renewal.

GENERAL RULES TO BE FOLLOWED (CONTINUED)

23. If a chemical storage bottle is damaged, notify the laboratory supervisor immediately; transfer chemicals into appropriate containers inside a fume hood.
24. Glassware must be handled with care. In the event of breakage, procurement of replacement glassware is the direct responsibility of the student involved.
25. All chemical waste generated during experiments must be transferred into designated waste storage containers under supervisor guidance.
26. After completing the experiment, all used chemicals and glassware must be handed over in full to the laboratory supervisor.
27. Workbenches, sinks, fume hoods, and precision balances must be thoroughly cleaned by students under supervision before leaving.
28. All electrical equipment and devices must be switched off, unplugged from power outlets, and reported to the laboratory supervisor.

RULE 29 (STRICTLY ENFORCED): Taking photos, recording audio, or filming videos using smart devices (phones, tablets, computers, etc.) during experiment preparation, commencement, or execution is strictly prohibited. Disciplinary action will be taken against violators.

Acknowledgment & Compliance

By entering the laboratory premises, all students certify that they have read, understood, and agreed to adhere to all the safety regulations outlined in this document.