

Safety Regulations and Guidelines in Chemistry Laboratories



Laboratories and Safety Committee

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Safety Regulations and Guidelines in Chemistry Laboratories

Introduction to Laboratory Safety

We are pleased to welcome you to the laboratories of the Department of Chemistry.	We wish you an academic year filled with success and exploration.	The laboratories provide an inspiring environment for learning and creativity.
Strict adherence to safety protocols is essential at all times.	Safety is a shared responsibility among all laboratory members.	Your cooperation ensures a safe and productive working environment.

Safety Regulations and Guidelines in Chemistry Laboratories

Required Personal Protective Equipment in Chemistry Laboratories

							
Wear the lab coat	Wear gloves	Wear safety goggles	Read the guidelines and instructions	Handle chemicals with care	No eating or drinking	Do not enter the laboratory without supervision	No running or crowding

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Chemical Handling Safety

Chemical Verification	Protective Equipment	Vapor Hazards	Ingestion Risks
Always check labels carefully before using any chemical.	Wear suitable gloves at all times and avoid direct skin contact.	Never inhale vapors; they may be toxic, irritant, or carcinogenic.	Do not taste or ingest chemicals under any circumstances.
Heating Procedures	Acid Dilution	Safe Handling	Mixing of Solutions
Flammable liquids must only be heated in a controlled water bath.	Always add concentrated acid slowly to water, never the reverse.	Never place test tubes near your nose, add concentrated chemicals slowly along the walls of the container.	Do not mix reagents or solutions unless specifically required.


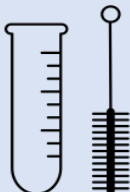
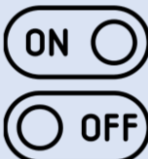

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General Laboratory Safety Requirements

Familiarization with Safety Equipment	Emergency Procedures	Shut-off Points	Use of Emergency Facilities	Emergency Contact Information
All laboratory personnel must be familiar with the location and proper use of emergency and safety equipment before engaging in any laboratory activity.	Clear safety procedures must be established and followed in the event of an incident or emergency.	Personnel must know the location and operation of gas, water, and electricity shut-off valves within the laboratory.	Personnel must be trained in the use of all emergency and safety facilities, including the safety shower, eye wash station, first-aid kit, fire blanket, and fire extinguishers.	Emergency phone numbers must be posted and clearly visible in an accessible location within the laboratory.

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Required Procedures After Completing an Experiment






Return of Chemicals	Cleaning and Organization	Shut-off Protocols	Personal Safety
All chemicals used must be returned to their designated storage areas.	Laboratory equipment must be cleaned, returned to its proper place, and the work area left in a clean and orderly condition.	Ensure that all water, gas, and electrical devices are properly turned off after completion of the experiment.	Gloves must be removed and hands thoroughly washed before leaving the laboratory.
			

First Aid Procedures for Chemical Spills

Concentrated Acids	Concentrated Bases
In the event of exposure to concentrated acids, the affected area must be flushed immediately with running water for no less than 10 minutes. Pressurized water should not be used, as it may cause further injury to the affected tissue.	Chemical burns caused by concentrated bases must be flushed immediately with running water for no less than 10 minutes.

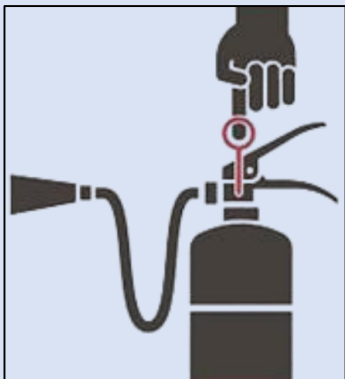
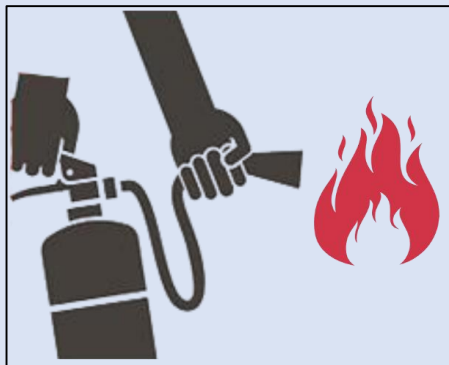


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Types of Fire Extinguishers

Fire Type						
		Powder	Foam	CO ₂	Water	Wet Chemical
Class A	Solid Combustible Materials (e.g., wood, paper, plastics)	Used	Used	Not Used	Used	Not Used
Class B	Flammable Liquids (e.g., gasoline, alcohols, paints)	Used	Used	Used	Not Used	Not Used
Class C	Flammable Gases	Used	Not Used	Not Used	Not Used	Not Used
Class D	Combustible Metals (e.g., aluminum, lithium)	Used	Not Used	Not Used	Not Used	Not Used
Class E	Electrical Equipment Fires	Used	Not Used	Used	Not Used	Not Used
Class F	Cooking Oils and Fats	Not Used	Not Used	Not Used	Not Used	Used










UsedNot Used

Procedure for Using a Fire Extinguisher (PASS Method)

Step 1	Step 2	Step 3	Step 4
P	A	S	S
			
Pull the pin	Aim the nozzle	Squeeze the lever	Sweep from side to side

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Hazard and Safety Warning Signs

		
Corrosive Substance	Explosive Substance	Oxidizing Substance
		
Health Hazard	Irritant Substance	Flammable Substance
		
Environmental Hazard	Toxic Substance	Compressed Gas





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Emergency Contact Numbers

General Administration of Safety and University Security
950

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Contact Us

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From The Laboratories and Safety Committee
STAY safe, and best wishes for your academic success!