

Lect.1.

Safety in the Laboratory:

Safety is of utmost importance in the labs Your actions can and should minimize the danger of injury, illness, irradiation, fire, explosion.



or contamination through accident, neglect, ignorance, vandalism, lack of planning or foresight, and the unexpected.

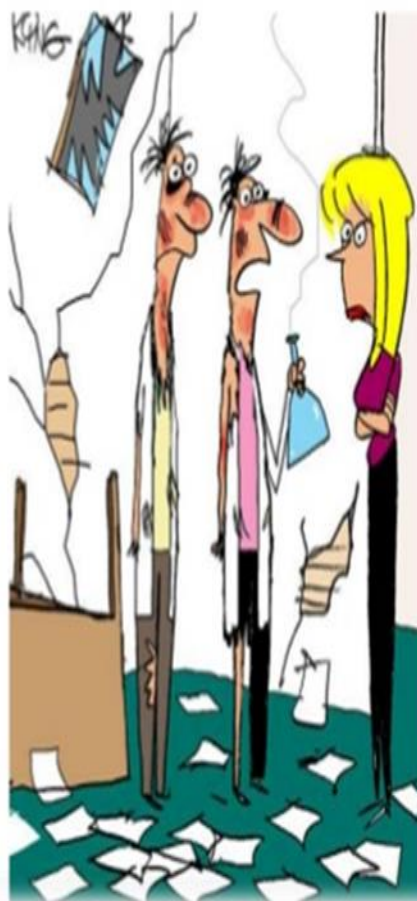
Everyone should feel secure for his/her physical well-being, as should the other students in the lab. You must know the hazards associated with the lab you are doing, and you must follow the safety rules. If you feel you or others are not learning safe habits or if you feel unsafe for any reason, tell the TA and/or the instructor.



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Why is Lab Safety Important?

- Lab safety rules and symbols are needed so that students do not injure themselves or their classmates.





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Safety RULES(Personal Safety):

Please note — if you are not appropriately attired or you behave in an unsafe manner, you will be asked to leave.

You will lose points. Serious offenses may result in disciplinary action, with might include a failing grade.

1-Safety goggles must be worn at all times .

2-Closed shoes must be worn . Sandals, ballet slippers, and open shoes are not allowed.

3-To protect the legs, wear long pants or skirt or lab coat, not shorts or short skirts. Long shorts are not allowed.

Additionally, midriffs must be covered.

4-Long hair must be tied back or pinned up.

5-Put backpacks, coats, etc., on the table in front of the room, not on the lab benches or the area above your work station.

The area around the safety eyewash and emergency shower must be kept clear.

There must be clear aisles and exit paths.

6-No eating, drinking, or smoking in the lab. If you need to eat/drink, please do so outside the lab.

7-Before you leave the lab, wash your hand.

8-Know the location/use of the eye wash, safety shower, fire blanket, first aid kit, and evacuation area

9-In the event of a fire or an accident notify the INSTRUCTOR IMMEDIATELY Follow instructions.



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10-If corrosive liquids touches your skin, wash thoroughly with water and notify the TA.

11-If a chemical gets into your eye, have someone help you.

Hold your eye open and wash your eye for at least 15 minutes.

Be sure the TA/instructor knows.

12-When using heat of any kind, clear the area around your apparatus and be careful. Hot things burn.

13-Pipet with a bulb only. If you pipet by mouth, you will be asked to leave and you will fail the course.

14- NO UNAUTHORIZED EXPERIMENTS ARE ALLOWED !

15-Before inserting a glass tube into a cork or rubber stopper, make sure the cork/stopper is split.

Do not try to jam the tube through the hole — you will break the tube and potentially injure yourself gravely.

16-most organic solvents are flammable , keep these liquid away from open flames.



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Safe Use of Chemicals:.

1-Federal, State, and local laws, as well as common decency, demand that all waste be disposed of safely and legally.

Dispose of waste as instructed, Use your head. If in doubt, ask your TA.

2-Clean up all chemical spills as soon as they happen. Make sure you ask your TA about the proper procedure.

And, to anyone who comes to the spill after you, even the most dangerous chemicals might look like something innocuous, like water.

3-If you break a mercury thermometer, tell your instructor.

4-Mercury is toxic and must be cleaned up promptly and in the correct way.

Do not clean it up by yourself.

5-Do not waste gas, water, chemicals, or other materials.

6-Read the lab closely and only take what you need.

7-Read labels carefully and label everything you take. Contamination and/or mislabeling should be reported to your TA immediately.

8-To avoid contamination, NEVER put your pipet or spatula into a reagent bottle and NEVER return unused chemicals to their bottles. If possible, give extra reagents to someone else to use in the experiment.



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9-Always add acid to water, not the reverse. Never add water to acid — the mixing can produce a lot of heat and dangerous spattering.

10-Do not taste chemicals. If told to smell a chemical, do so by carefully fanning the top of the test tube or bottle so that a little of the vapor is directed towards your nose.

10-For reactions involving toxic gases or volatile liquids, use the fume hoods.

11-Do not store acids and alkalis together.

12-Do not store strong acids and organic substances together.

13-Chemical containers must be stored with closed lids when they are not being used.