بِسۡمِ ٱللَّهِ ٱلرَّحۡمَٰنِ ٱلرَّحِيمِ

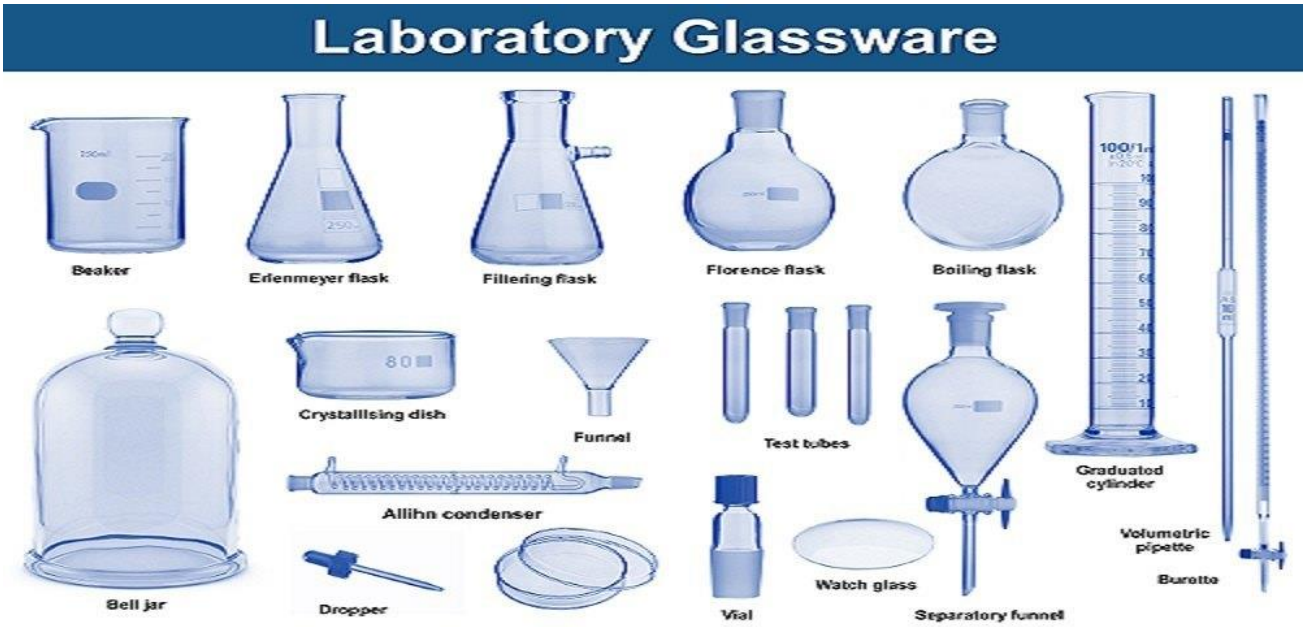
Practical of General Chemistry

Department :- Radiology Techniques

Class:1st year

Assist. Lect. :- AHMED IBRAHIM ALYASIRY

- Exp:. 1
- Name of experiment :.Lab Safety
- Purpose of experiment: Learn how to safety from glassware in the laboratory



1- Glassware safety :-



Laboratory glassware is specifically designed for scientific work. However, by design it is also fragile and can easily break and cause injuries in the process.

A. Do not use chipped or cracked glassware and show it to the teacher.



B. If a piece of glassware gets broken, do not try to clean it up by yourself. Notify the teacher.
C. Do not place hot glassware in water. Rapid cooling may make it shatter
D. When pouring liquids into glassware, make sure the container is not at the edge of the table.
E. Broken glassware should be disposed in a special glass disposal container.

2- Chemical safety :-



A. Always it must be know the chemicals that you are working with and the hazards may be causing. Material Safety Data Sheets (MSDS) must be on file and available for each chemical in the lab.

MSDS lists:

- ✓ Product Identity
- ✓ Hazardous Ingredients
- ✓ Physical Data Fire & Explosion Hazard Data
- ✓ Reactivity Data
- ✓ Health Hazard Data

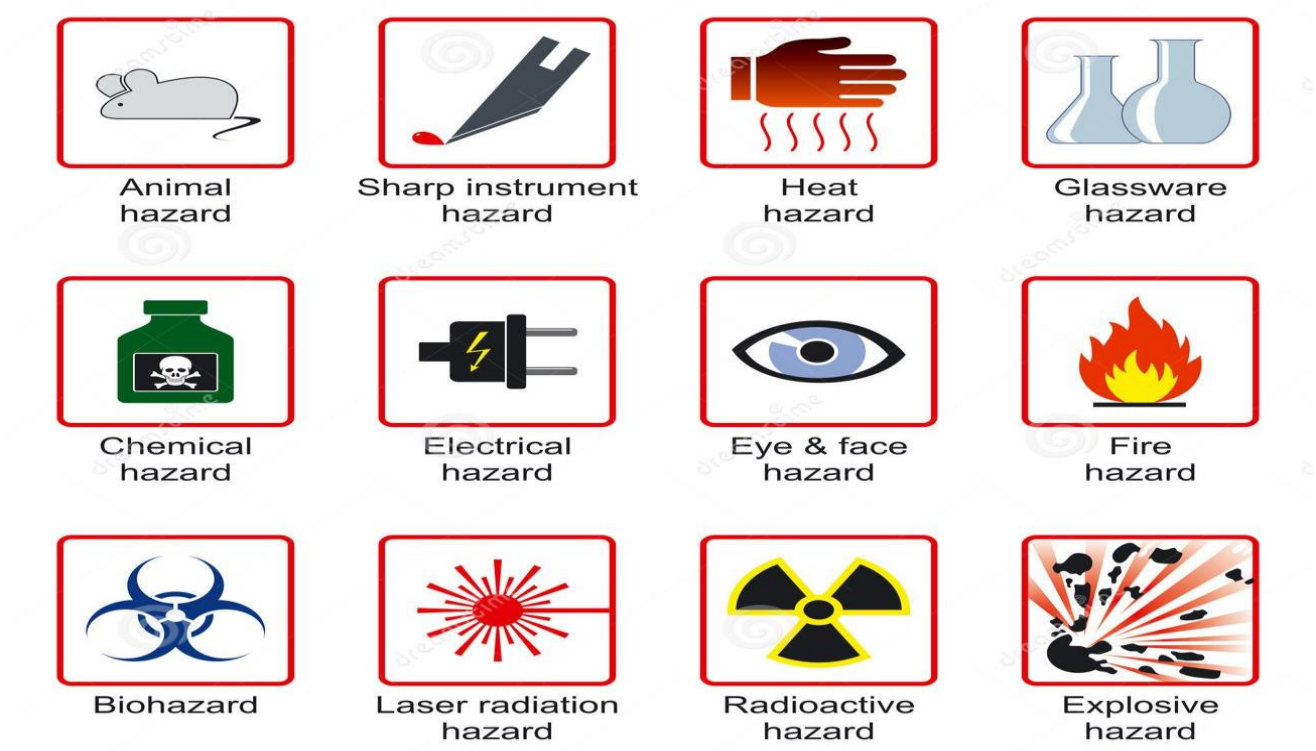
- ✓ Precautions for Safe Handling & Use
- ✓ Control Measures

B. Follow your teacher directions when using chemicals.

C. During lab work, keep your hands away from your face.

D. Never mix chemicals without your teacher telling to do.

E. Never put anything into your mouth during a lab experiment. (Never taste any chemicals).



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F. Never use mouth pipetting.

G. If you need to smell the odor of chemicals, do not put your nose over the container and inhale the fumes.

H. When diluting acids avoid adding the water to the concentrated acid (causing an explosion, which can splash

acid on you). Therefore, you must add acid slowly to water.

I. Notify your teacher if any spills or accidents happen. 10. Store chemicals on shelves with labeling the chemicals and solutions

J. Storage of flammable should not be open. They must be in the container labeled with warning.

K. Storage of corrosives like strong acids and bases should not be open.

L. After handling chemicals, always wash your hands with soap and water.

M. All chemical waste must be collected properly labeled and sent for appropriate disposal.

3- Heating safety :-

- ☒ When heated the solution in a test tube it is very important to tilt it away from you to avoid inhaling fumes that coming from the solution.
- ☒ Use tongs or protective gloves to handle hot objects.
- ☒ When heating a test tube, move it around slowly over the flame to distribute the heat evenly.
- ☒ Only glassware that is thoroughly dry should be heated.
- ☒ Make sure no flammable solvents in the surrounding area when lighting a flame.
- ☒ Turn off all heating apparatus, gas valves, and water faucets when not in use.

• It is important to know the correct way to act if an emergency does occur.



4- Type of injures :-

❖ Burns:

To Do: immediately flush with cold water until burning sensation is lessened.



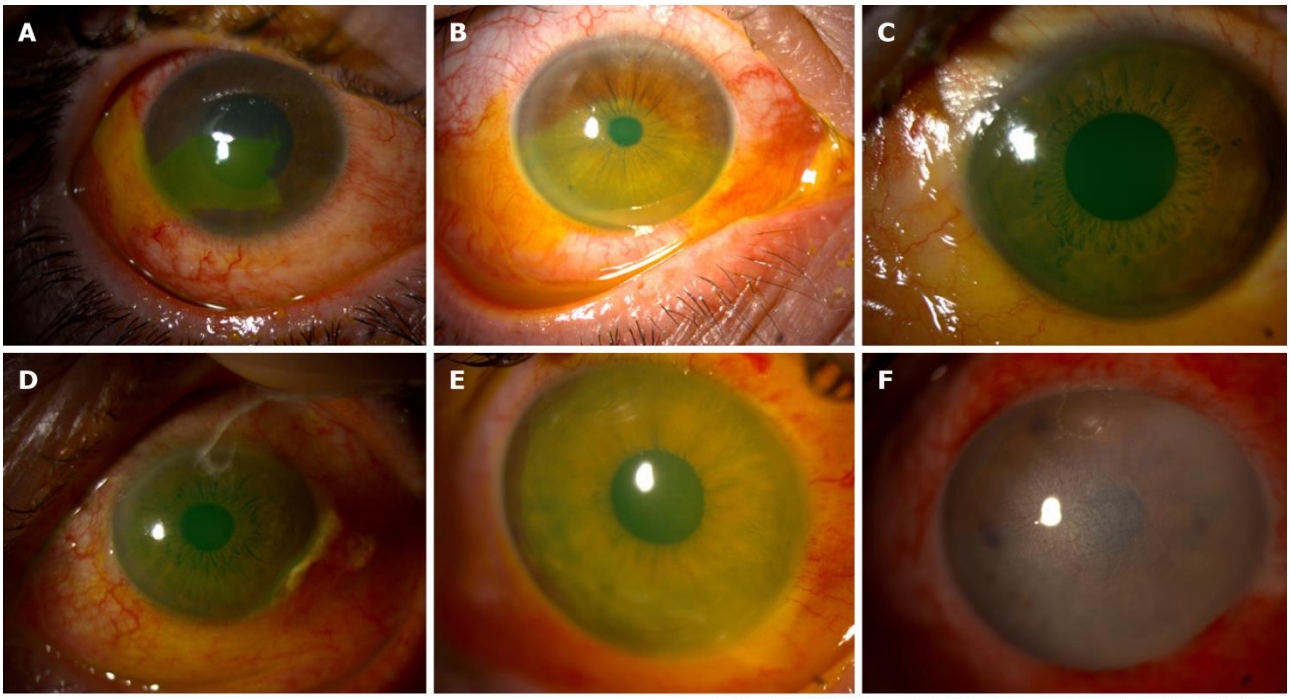
❖ Cuts, bruises To Do:

do not touch an open wound without safety gloves. Pressing directly on minor cuts will stop bleeding in a few minutes. Apply a coldcompress to bruises to reduce swelling.



❖ The Eyes To Do:

flush eyes immediately with plenty of water for several minutes. If a foreign object entered into the eye, do not allow the eye to be rubbed



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