

CHAPTER-2

COMMON LABORATORY APPARATUS AND EQUIPMENTS

INTRODUCTION

The knowledge of chemistry would be incomplete if we do not utilize our ability to observe a natural phenomenon, then put in to an experiment and finally, draw our own conclusions to verify the facts.

LABORATORY

A chemical laboratory is a place to perform experiments, observe chemical processes and to analyse results.

The following facilities should be provided to perform experiments in a chemical laboratory.

- ❖ **WORKING TABLE:** It is a special type of table, fitted with a gas burner, a sink with a tap, a reagent shelf and a waste paper basket. There is also a side shelf for keeping glassware apparatus and a fume closet.
- ❖ **REAGENT SHELF:** This Shelf is meant for keeping all reagents with labels on every bottle to certainly avoid confusion.
- ❖ **EXHAUST FAN:** These fans are fitted near the roof of the walls to expel poisonous gases and fumes so that one can comfortably work for a longer time in the laboratory.
- ❖ **BALANCE ROOM:** A Chemical Laboratory has a separate room where a number of physical, chemical and electronic balances are kept for weighing chemicals.



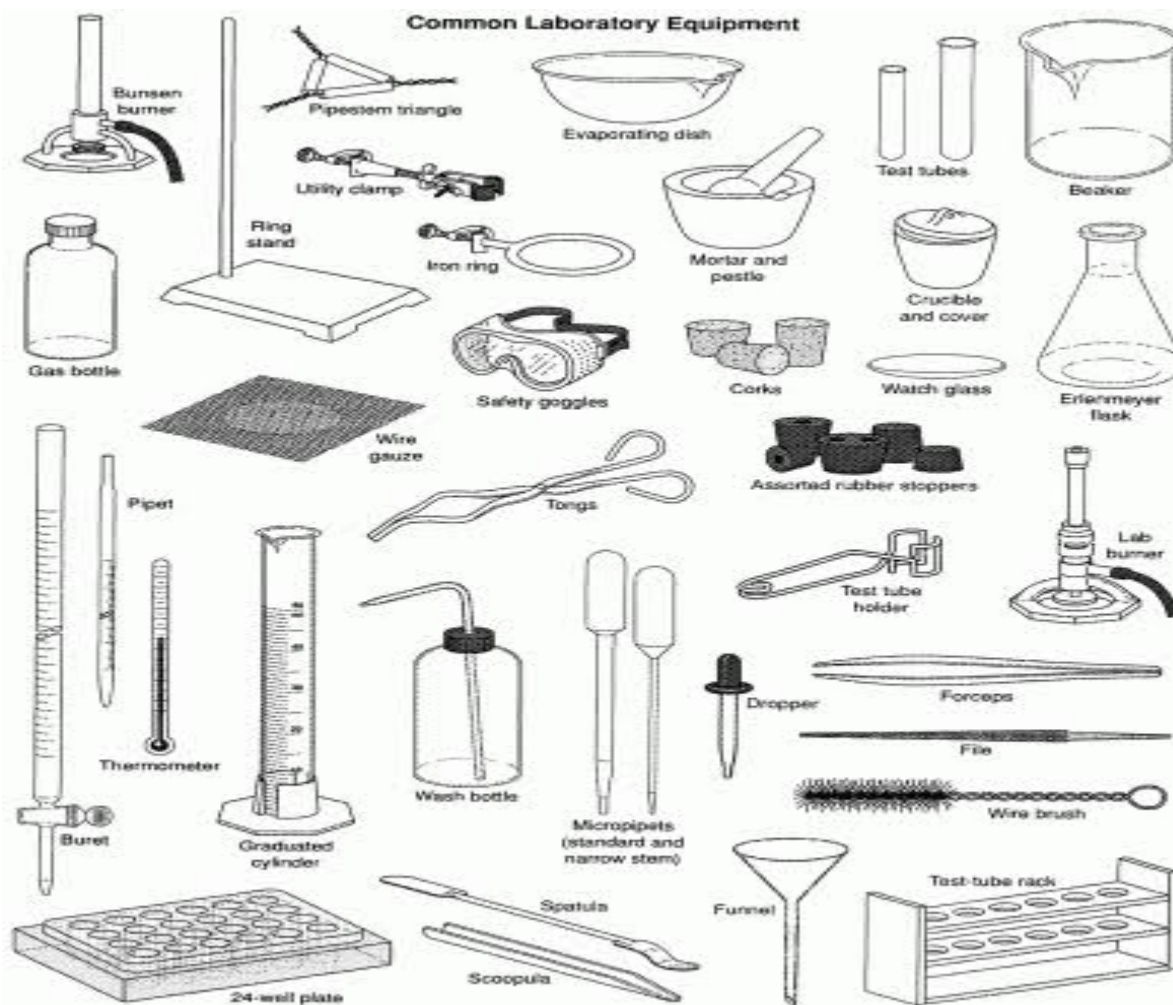
A good Chemical Laboratory must have the apparatus and equipment shown below.

SPECIAL NOTE: Most of the Laboratory apparatus are made of glass because of the following factors -

- Glass is transparent.
- Glass can withstand high temperatures
- Glass is easy to clean.
- Glass do not react with chemicals
- Pyrex glass or Borosil glass is used for making laboratory equipment.

DIAGRAMS OF SOME COMMON LABORATORY APPARATUS





PRECAUTIONS TO BE TAKEN IN A CHEMISTRY LABORATORY

- Do not work alone in the laboratory.
- Always wear a lab coat.
- Follow your teacher's instructions.
- Do not touch or taste any unknown substances.

- Do not inhale any unknown gases.
- Do not throw hot concentrated acids directly into the sink.
- Do not throw broken glass apparatus or used filter paper in the sink.

- In case of accidental burns, immediately wash affected part with running water.
- Maintain silence and discipline in the Laboratory.

