Date 24/11/2021

Expt. No. 1 Page No. 01

Aim :- To study the glasswares used in Pharmaceutical Analysis (Laboratory).

Requirement :- Glasswares.

(i) Beaker
(ii) Conical flask
(iii) Funnel
(iv) Stirring Rod
(v) Pippette
(vi) Measuring cylinder
(vii) Volumetric flask
(viii) Analytical weight machine
(ix) Burette.
(x) Spatulas and scoopulas.

Theory :-

Beaker. : In laboratory equipment a beaker is generally a cylindrical container with a flat bottom. Most also have a small spot to aid pouring beaker are available in a wide range of size. From 1mm to several mililitre.

A beaker is a distinguished from a flask by having straight rather than slopping sites.

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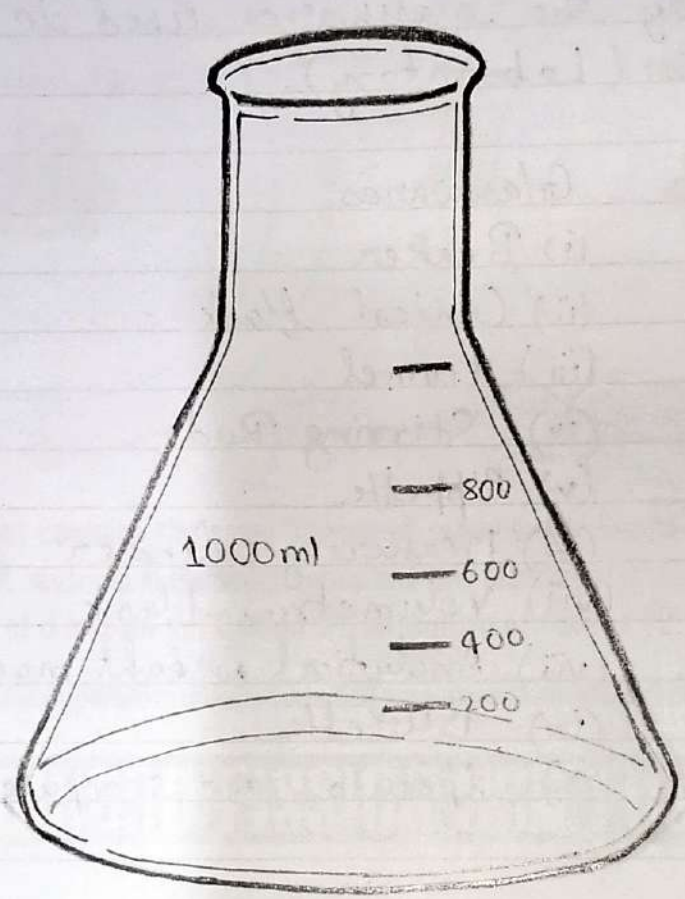

Fig → Conical flask

Fig - Funnel

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Conical flask:

A conical flask is a cone shaped flask with a flat round bottom and cylinder neck.

It was first invented by a german chemist in the year 1860.

A conical flask is the most used laboratory equipment in scientific research. It is used to hold and measure chemical liquid sample. Further these chemicals can be heated, mixed and boiled in a conical flask depending on the research. These flask is widely used for the preparation of Microbiology lab.

Funnel

A funnel is a tube or pipe that is wide at top and narrow at the bottom. used for guiding liquid or powder into a small opening.

There are many different types/kind of funnel that have been adopted for specialized application in the laboratory.

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Fig → Stirring rod

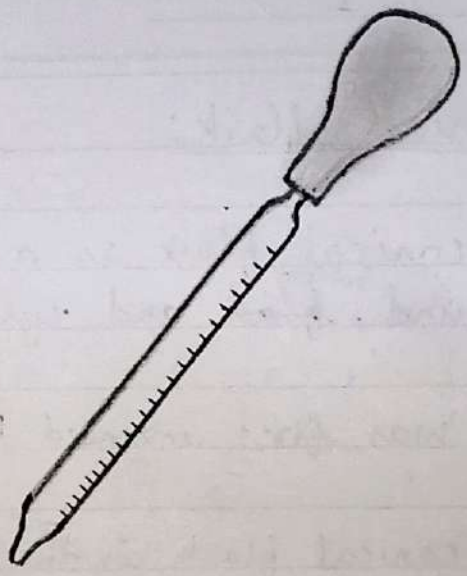

Fig → Pipette

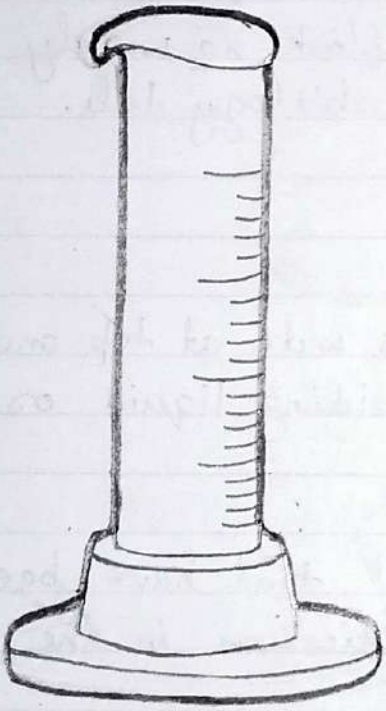

Fig → Measuring Cylinder

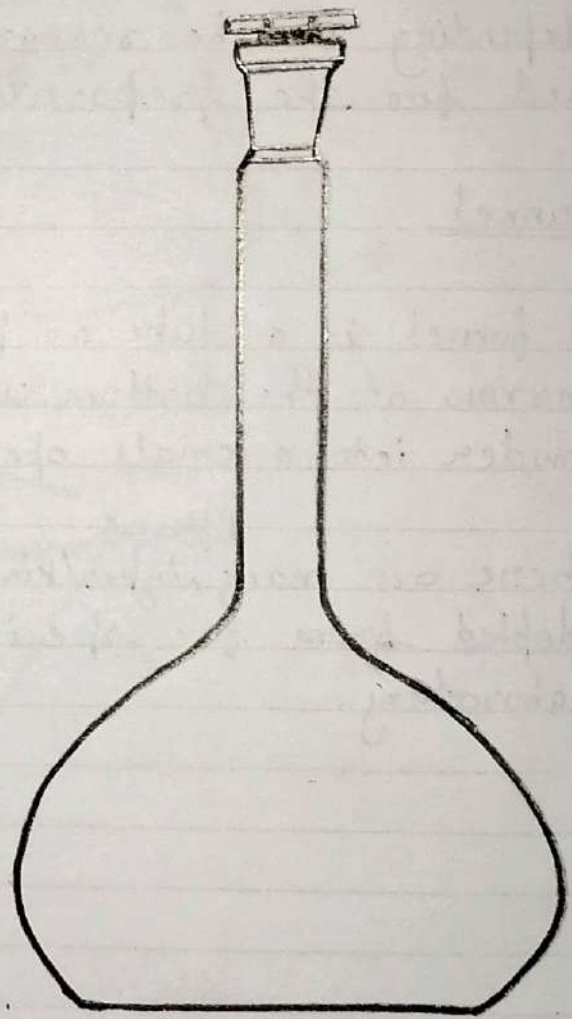

Fig → Volumetric Flask

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Stirring Rod:

A glass stirring rod is a piece of laboratory equipment used to mixed chemicals, they are usually made of solid glass. About the thickness and slightly longer than a drinking straw with rounded end.

Pipette:

It is used for measuring an exact but smaller volume of liquid and placing it into another container.

Measuring Cylinder

It is a measuring tool for determining the volume of a liquid. There are several marking up and down the legth of the container. with specific increasement.

Volumetric flask:

It is used to measure exact volume of liquid or to prepare standard solution. The small line on the neck indicates how far to fill the bottle (use the bottom of the meniscus)

They come with special caps that will not let anything in or out.

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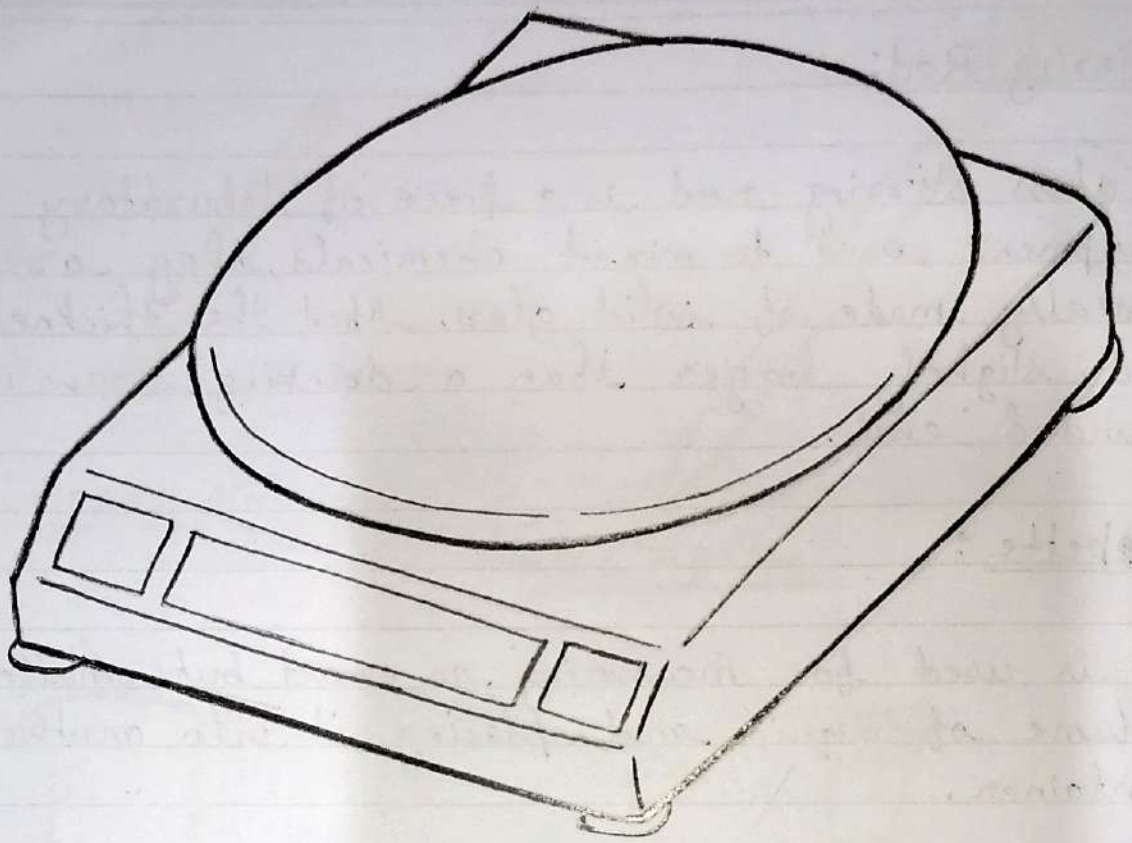

Fig → Analytical Weight Machine

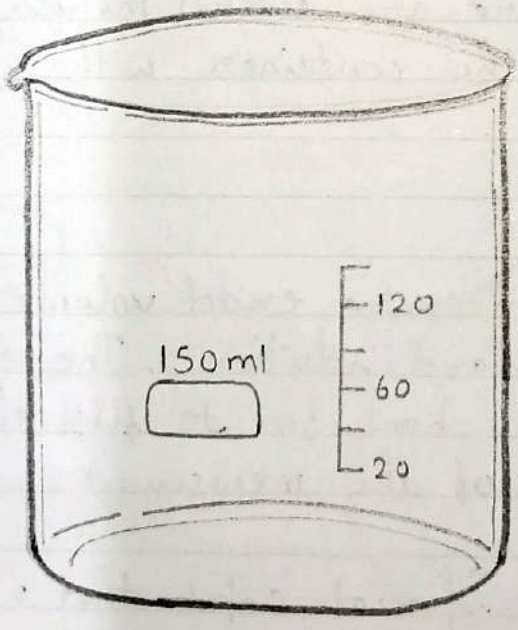

Fig - Beaker

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Analytical weight machine:

An analytical weight balance is a class of bt balance designed to measure small mass in the sub-milligram. range.

The measuring of an analytical balance 0.1mg or better in inside a transparent enclosure.

The use of a mechanical balance safety enclosure. which has uniquely design allows a smooth air flow that prevents balance fluctuation and the measure of mass down, to without fluctuation or loss of production.

Burette:

Burette are one of the most accurate tool in the lab. It is used for extremely accurate addition of liquid.

By adjusting the stop cock, the amount of liquid to be released can be swallowed to a drop every few second.

Generally it is used for titrimetric analysis

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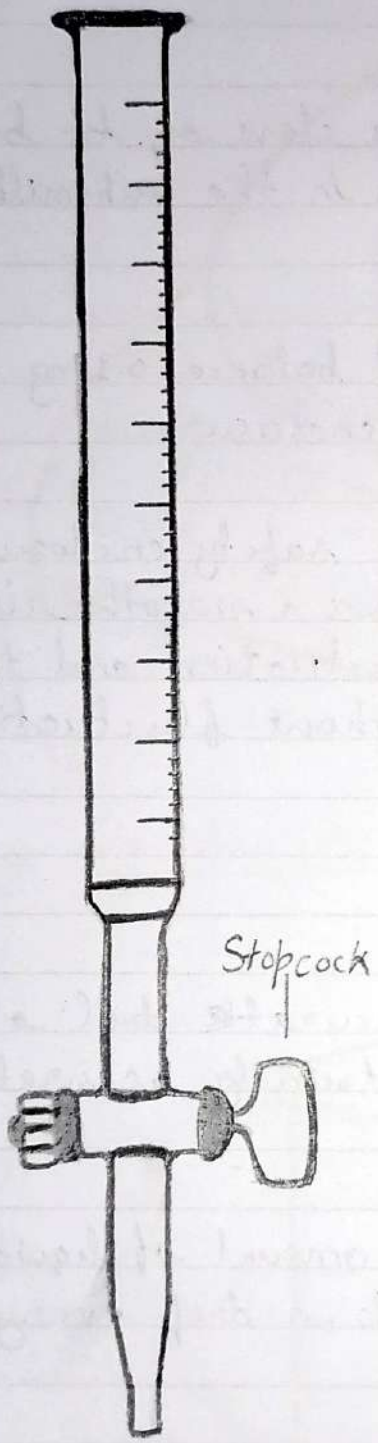

Fig → Burette

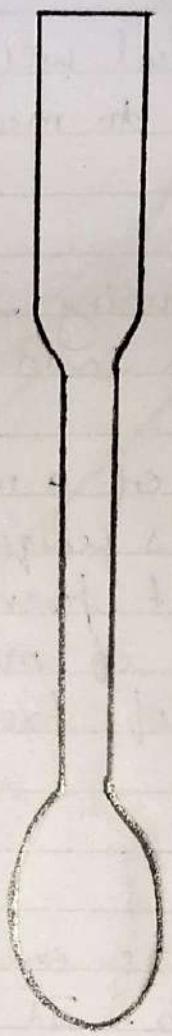

Fig → Spatula

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Spatulas and Scoopulas:

They are typically used to scoop a solid chemical out of its original container onto a weight so that it can be weight on a balance.

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