

Ministry of Higher Education and Scientific Research
Al-Mustaqbal University
Faculty of Pharmacy



Lab 1

Glass wares used in pharmaceutical calculation

1-mortar and pestle

used for crushing big size particles in order to decrease their size , in order to increase their surface area ,made of inert substance



2-Beakers

- Beaker is a common container in most laboratories, it used for mixing ,stirring and heating chemicals materials
- Beaker used in weight and volume measurements



3-glass rods (stirrers)

used for mixing and stirring chemical ingredients, made of glass so it doesn't react with the solution.



4-Conical flasks

Used for volume measurements which consider more accurate than beakers, also used for heating and mixing liquid chemicals .They can plugged with stoppers and catch the vapor and liquid materials



5- Graduated Cylinders

used for more accurate volume measurements than beakers and conical flask.



6-Conical graduated cylinders

Same as graduated cylinder but the diameter is wide than graduated cylinder this makes it to use for viscous liquids.



7-volumetric flasks

used to most accurately volumes and concentration measurements of liquid



8-Graduated pippetes

used for accurately volume measurement of liquid ,graduated pippete add varying amount of liquids .



9-Volumetric pipette(bulb pipette)

Used to add specified volume of liquids (very accurate).



10-Burrete

used in titration holding solution of known concentration to add a specific volume of it to conical flask ,controlled by a valve



11-tests tube

used for observe chemical reactions ,mix solutions ,heat solutions ,melt or burn solids and perform chemical analysis smaller quantities than beaker and flask .



12-wide mouth reagent bottles
used for storage of chemical solution or solid.



13-Balances

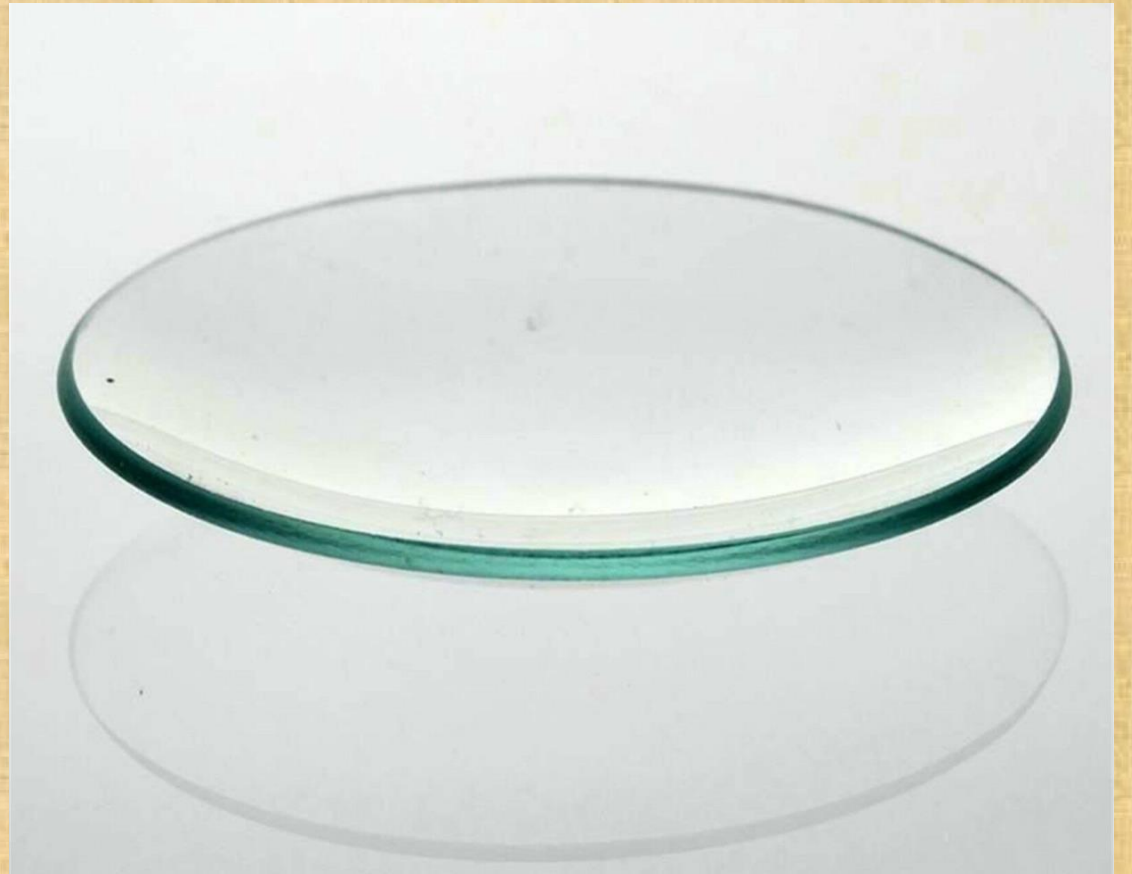
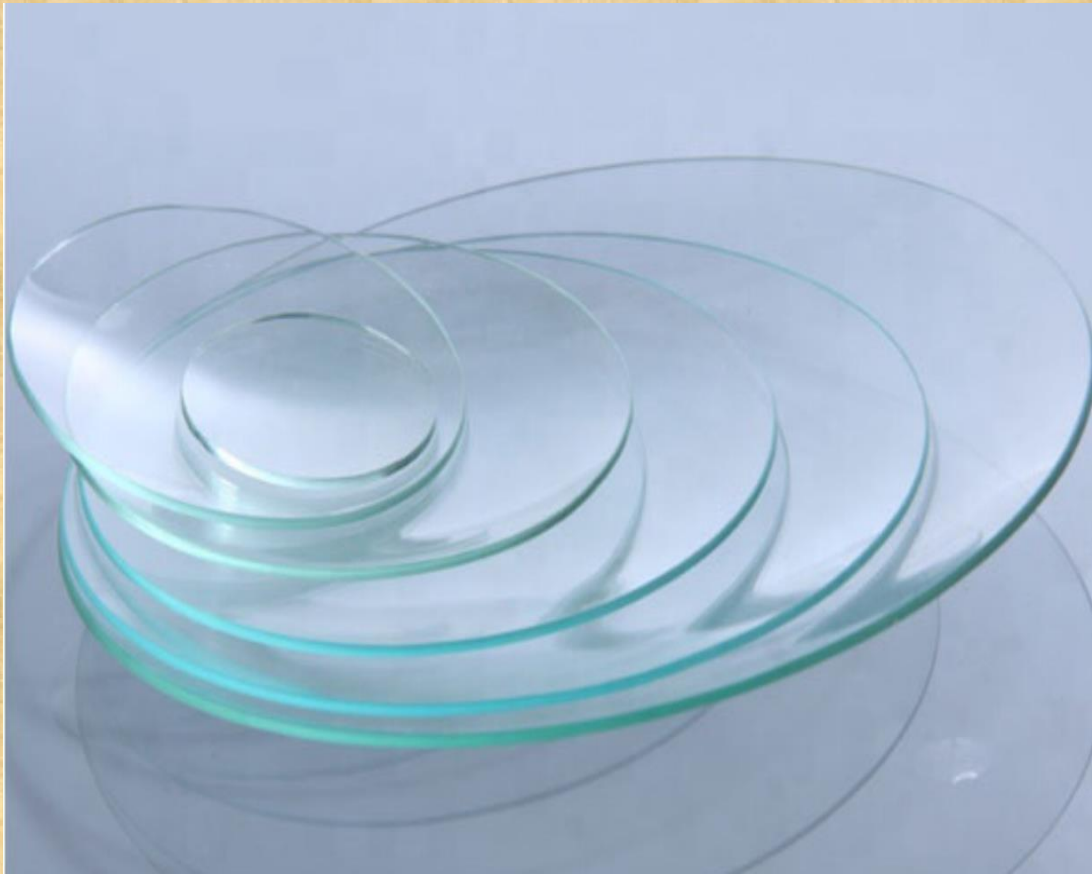
a-manual balance

b-electronic balance: accurately measured weights of materials



14-watch glass

used for holding chemicals ,covering beakers during heating.



15-spatulas

used for scooping solid material. Spatula typically used to scoop materials out of it's original container onto a weigh boat so that it can be weighed on balance (weight measurement).



16-funnels

used for filtering and pour liquids materials into narrow mouth containers such as flask and bottles



17-Slab and spatulas

used for mixing ingredients for preparation of cream and ointment.



Thank you for listening

