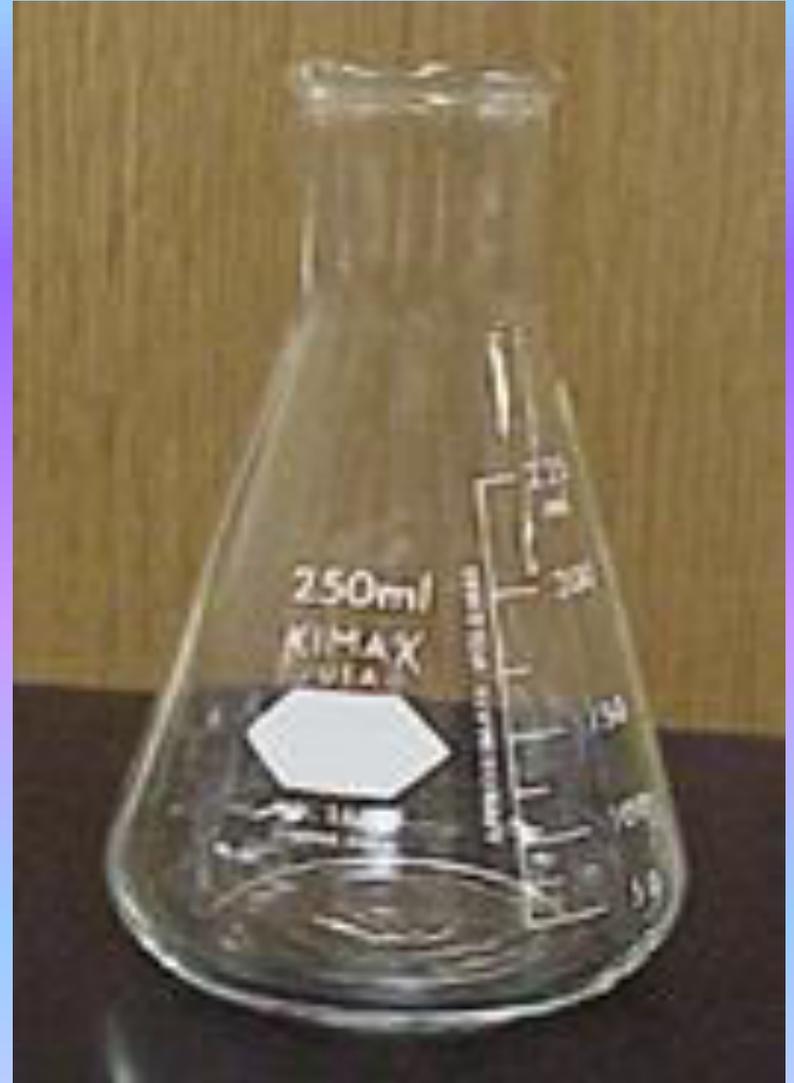


Glassware + Other Instruments

Erlenmeyer Flask

- Used to measure large volumes of liquid
- 10mL – 2000mL



Other kinds of flasks

Florence Flask



Volumetric Flask

Other kinds of flasks

- The **round bottom flask** is used as:
- reaction flask
- distilling flask
- collection flask



Reading an Erlenmeyer Flask



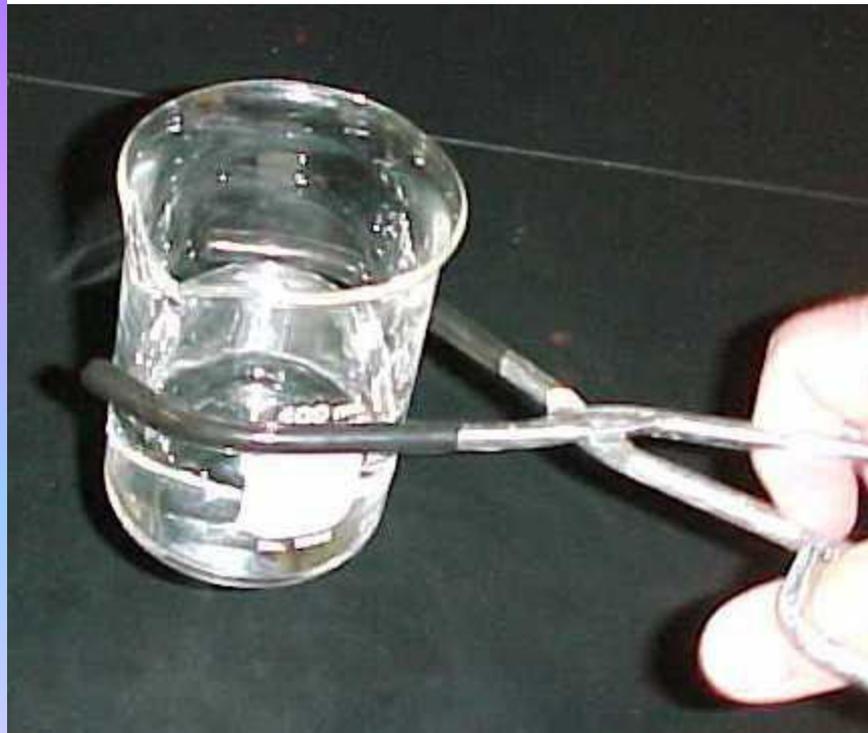
Beaker & Beaker Tong

- A general purpose item of glassware
- Used to measure volume of liquid
- 50 mL – 2000 mL

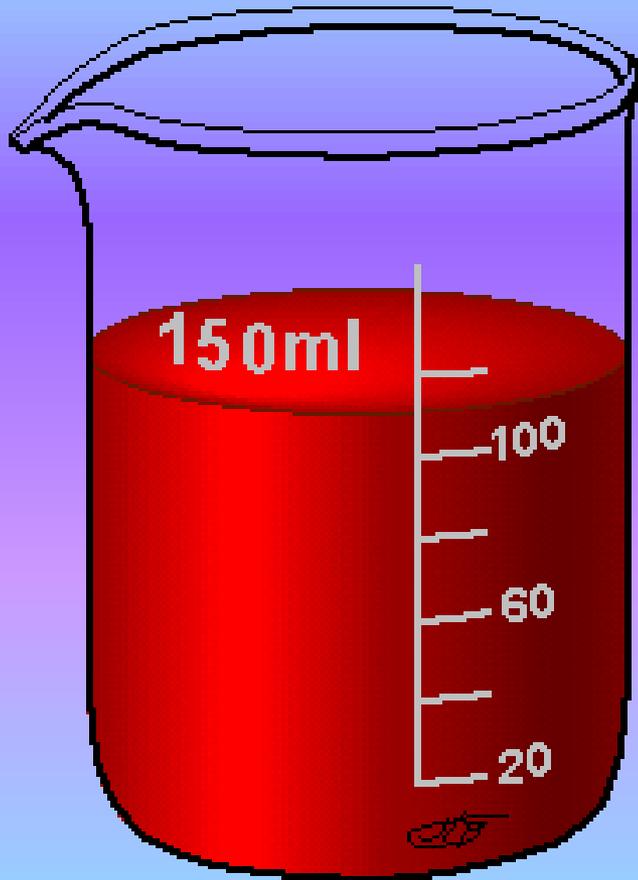


Beaker & Beaker Tongs

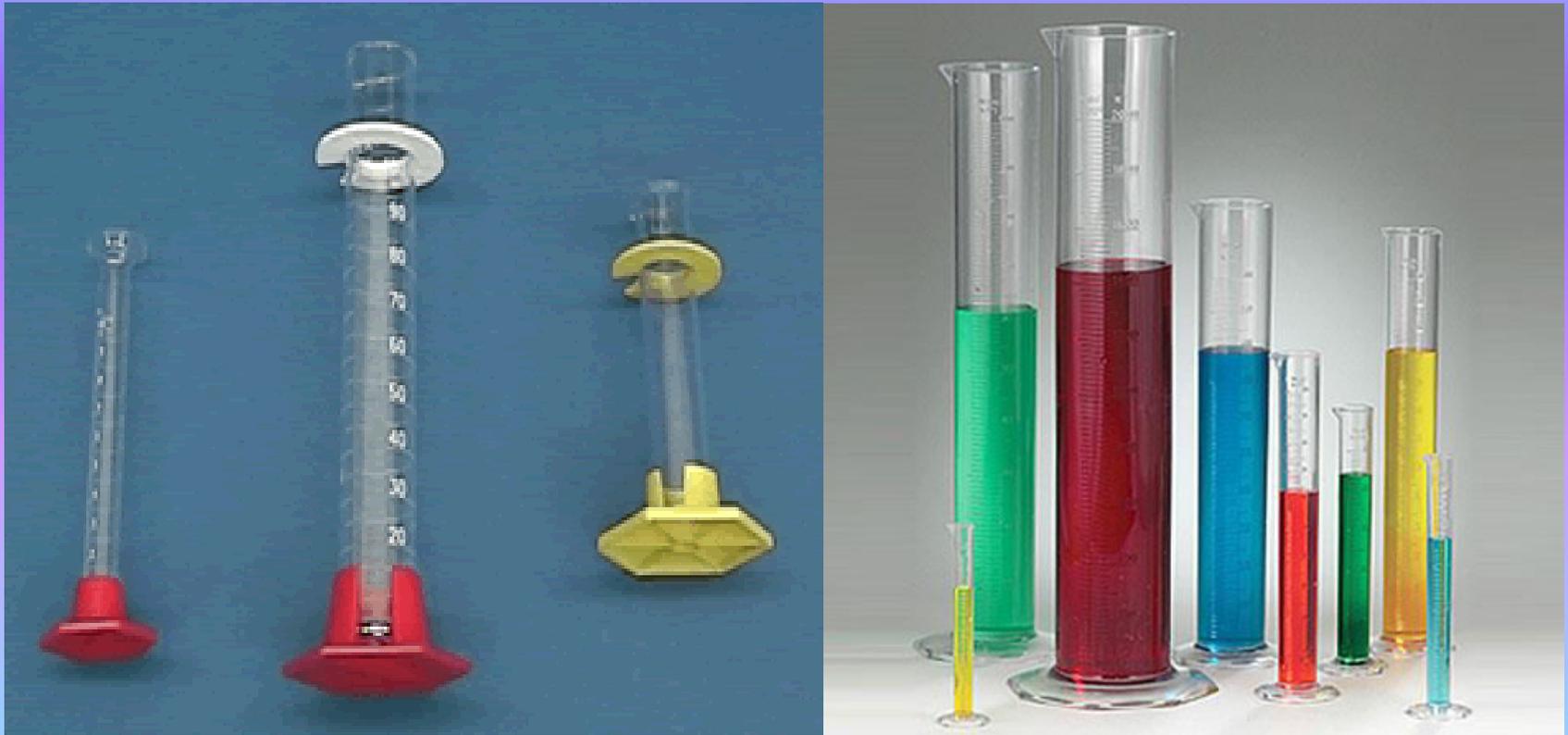
- Used to handle hot beakers
- Do not work well for very small beakers or very large beakers.



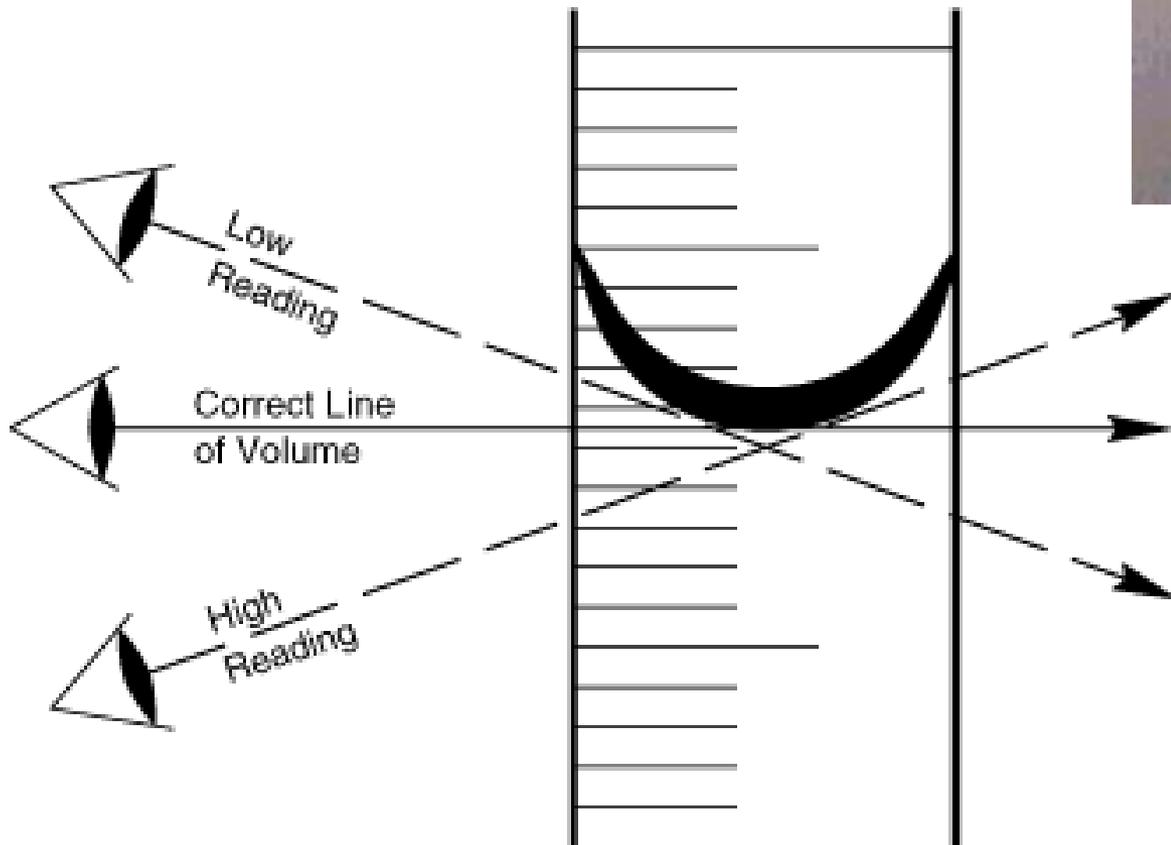
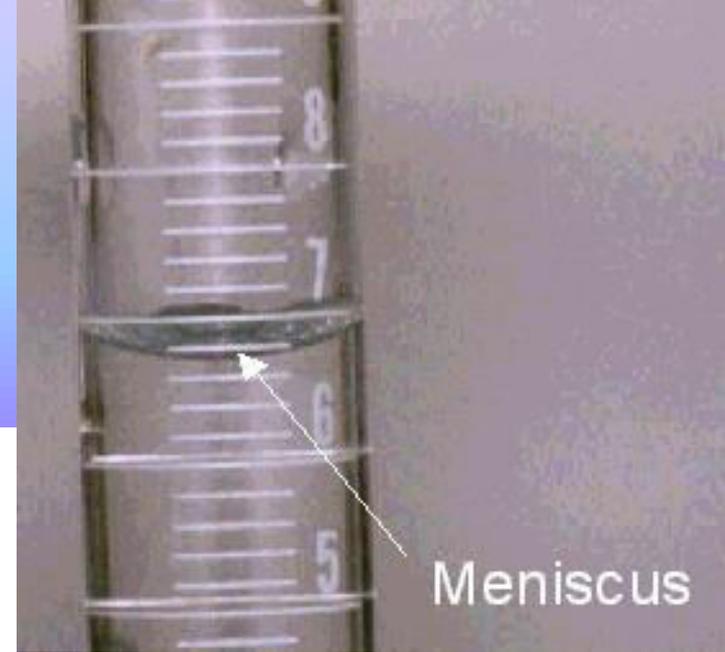
Reading a Beaker



Graduated Cylinders



Volume of Liquids Reading a Meniscus

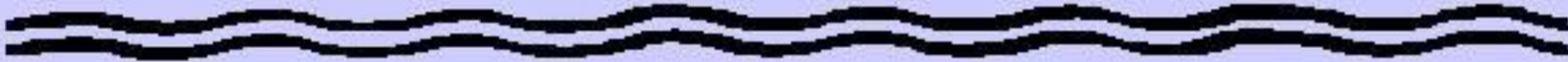


Parafilm

- Flexible, thermoplastic, rolled, waterproof sheet interwound with paper to prevent adhering.
- Adheres quickly and firmly to itself, covering culture tube or flask mouths and sealing Petri dish edges.



WHAT ARE PIPETTES?

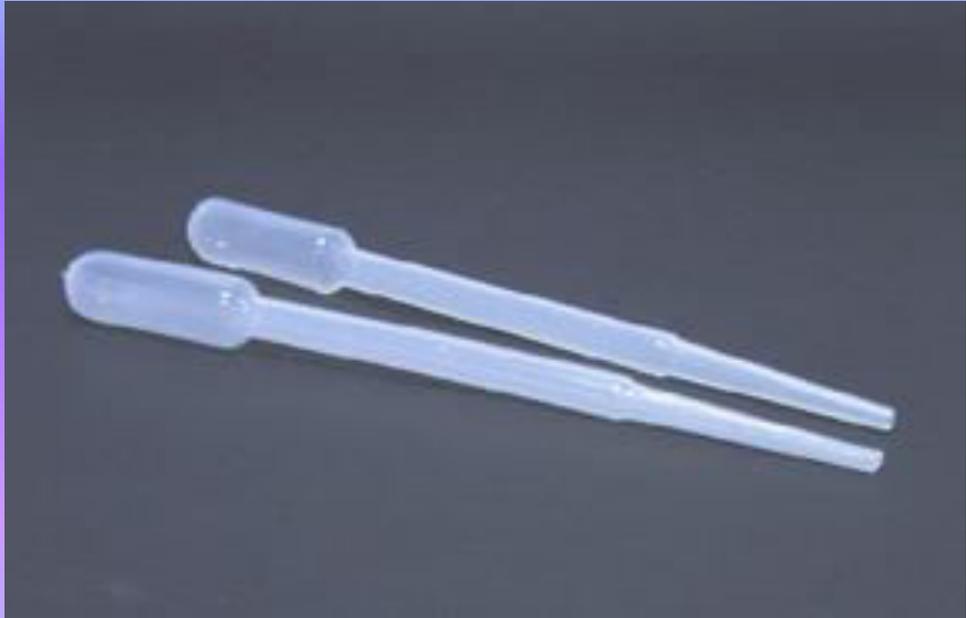


Pipettes are glass or plastic tubes, usually open at both ends, which are used to transfer specific amounts of liquid from one container to another.

They are usually used for volumes between 1 and 100 milliliters.

Plastic Pipettes

- Disposable



Graduated Pipettes



Volumetric Pipette

- Has a single graduation that allows it to deliver one specific volume accurately.
- There are many different sizes of volumetric pipette (1-, 5-, 10-, 25-, 50- and 100-ml volumetric pipette are common).



Test Tubes

- Used for holding small amounts of liquids and solids
- Sometimes reactions are done in test tubes



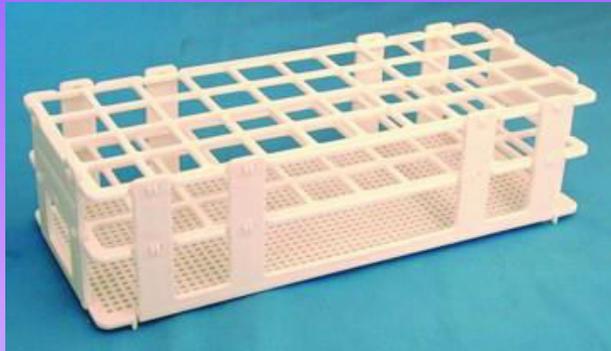
Culture Tubes

- Screw cap test tube
- Snap on lids



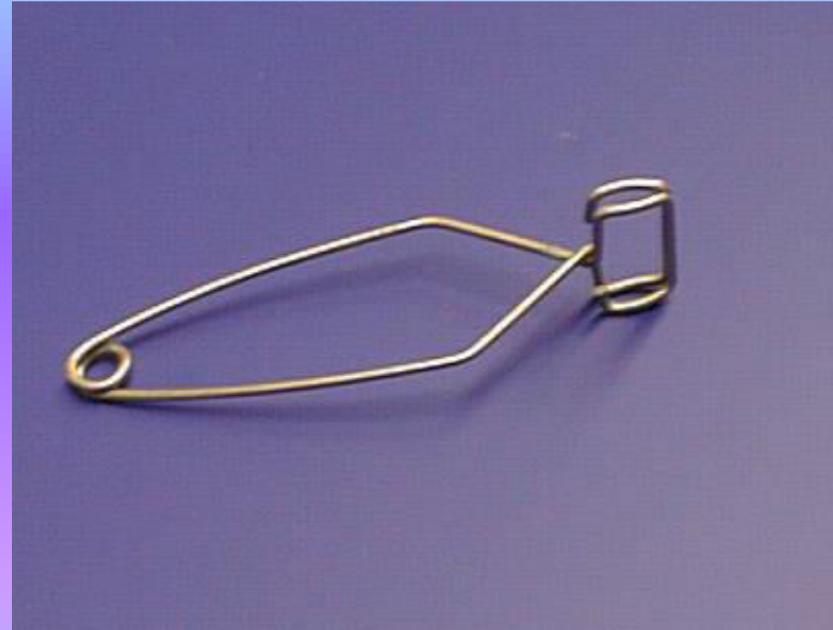
Test Tube Racks

- Test tube racks come in many styles



Test Tube Holder

- Test tube holder is the holder made out of wire.
- This small piece of equipment does nothing except hold test tubes .
- The holder is used to hold test tubes when they are hot and untouchable.

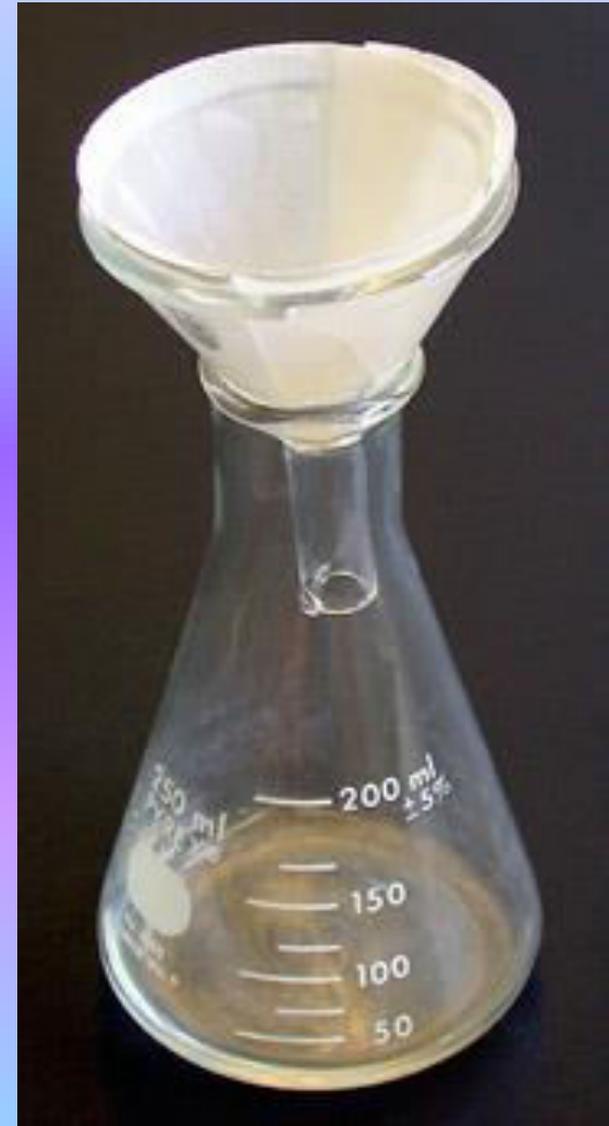
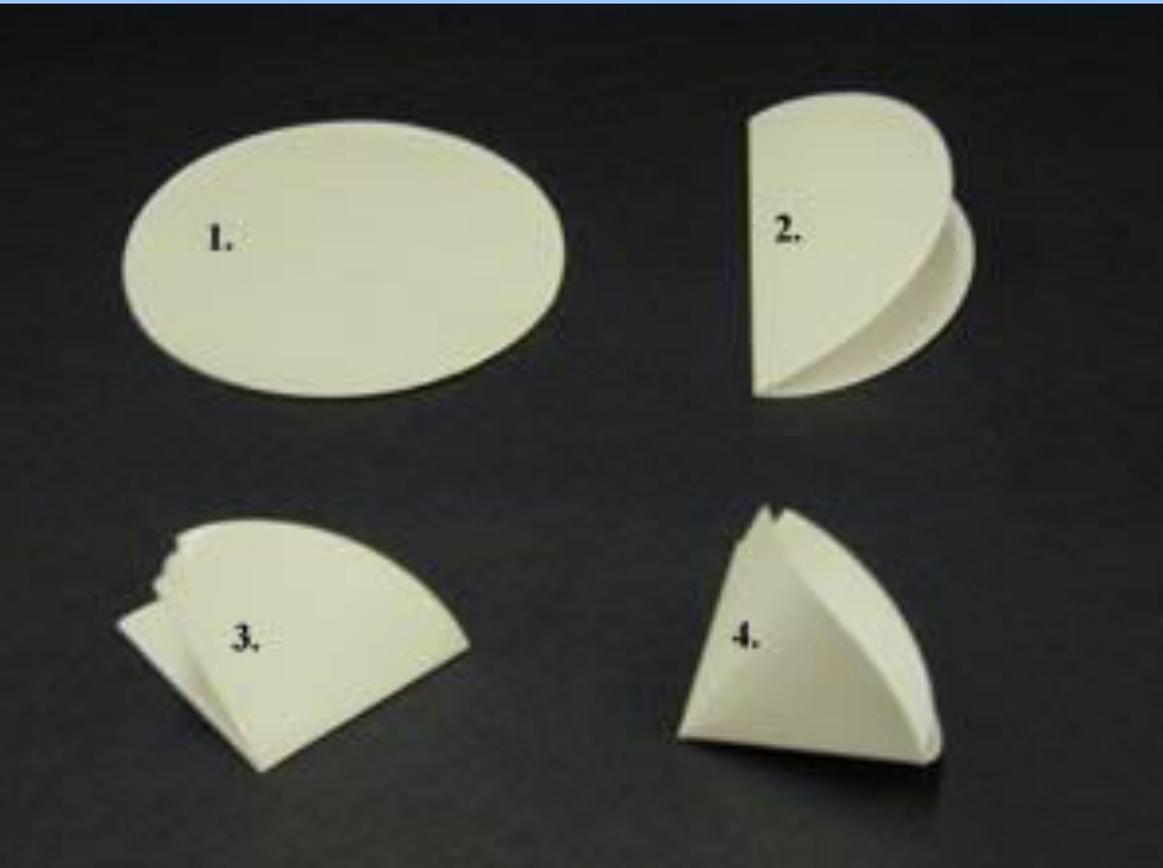


Funnels



Three types of filtering funnels used in chemistry labs. From left to right: Buchner funnel and the grey rubber adaptor for it, stemmed funnel, and stemless funnel.

Filter Paper



Watch Glass

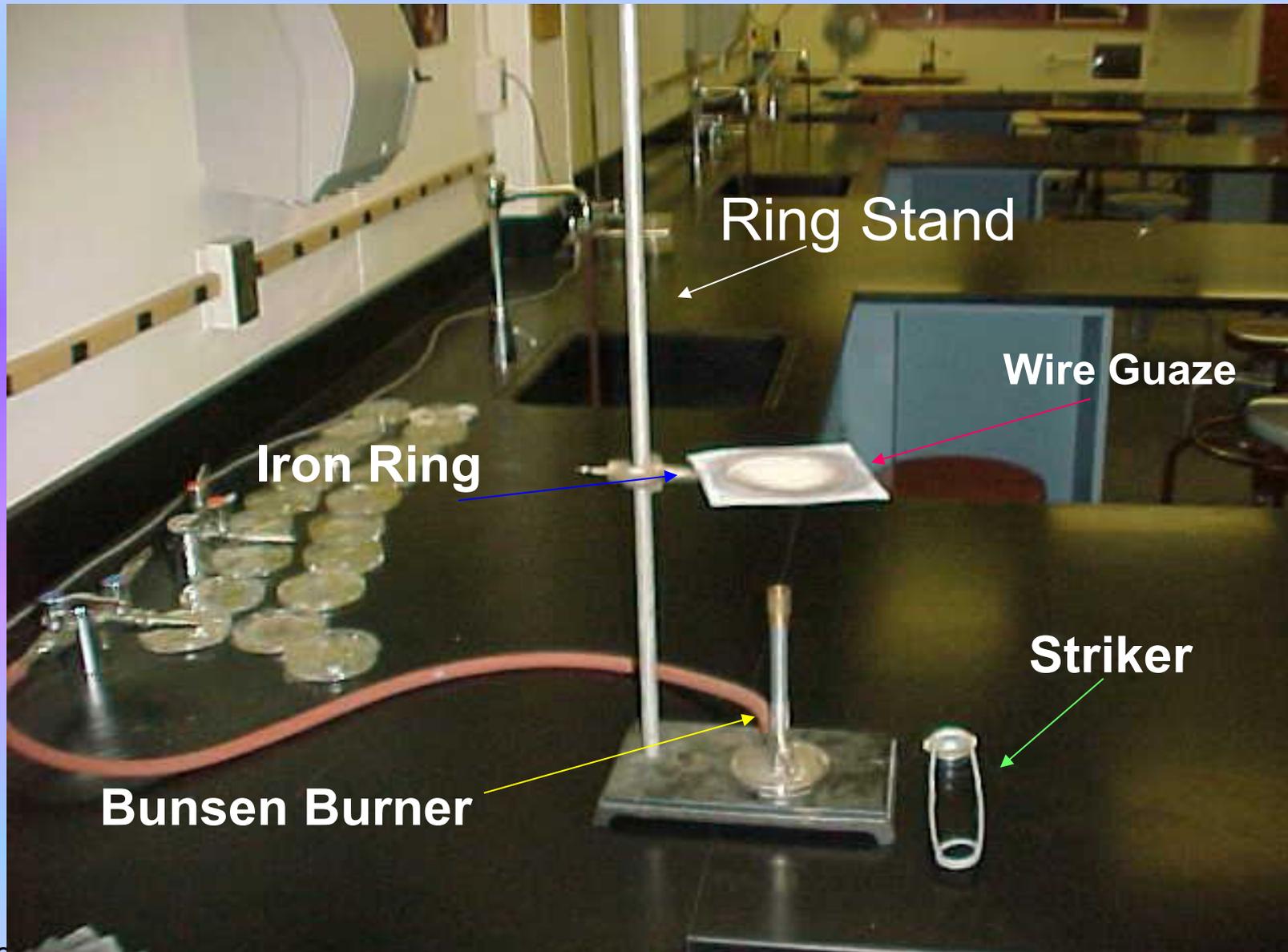
- Watch glasses are small, flat, round pieces of glassware.
- They are mainly used to dry and weigh solid compounds and to cover containers



Ring Stand and Iron Ring

- Iron rings attach to a ring stand
- Have several uses





Ring Stand

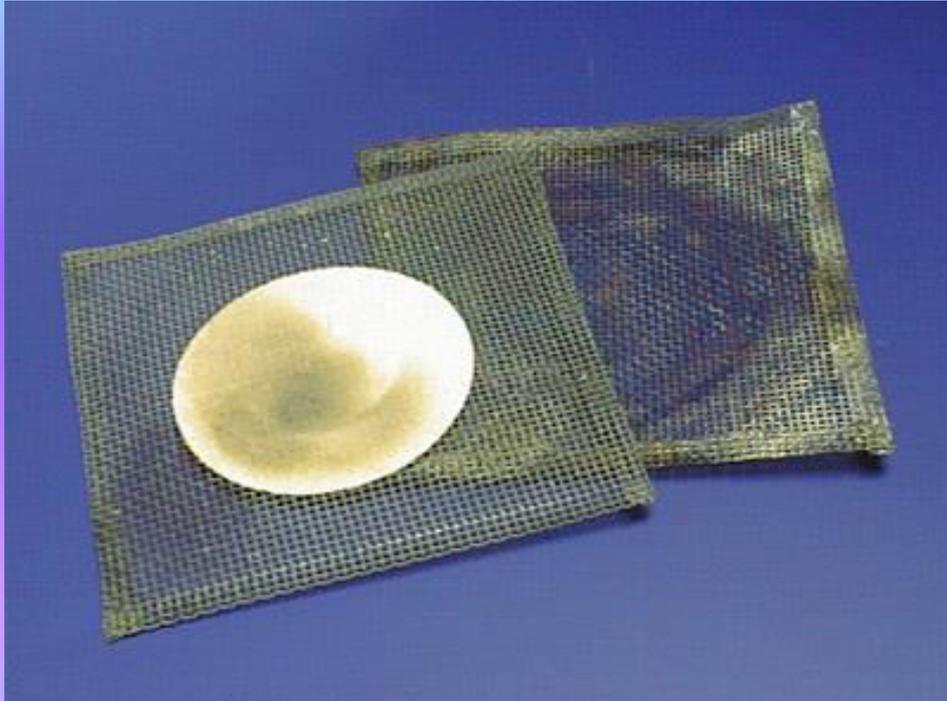
Wire Gauze

Iron Ring

Striker

Bunsen Burner

Wire Mesh (gauze)



- Gauzes are the square-shaped pieces of mesh or screen
- When placed on top of a ring, they are good, flat supports for Erlenmeyer flasks and beakers in a variety of situations.

Bunsen Burner

- common piece of laboratory equipment used for heating, sterilization, and combustion.
- safely burns a continuous stream of a flammable gas such as natural gas



Striker

- The striker has an advantage that it's longer than a match (avoid burning your fingers), and produces sparks, as opposed to an open flame, to light the burner.

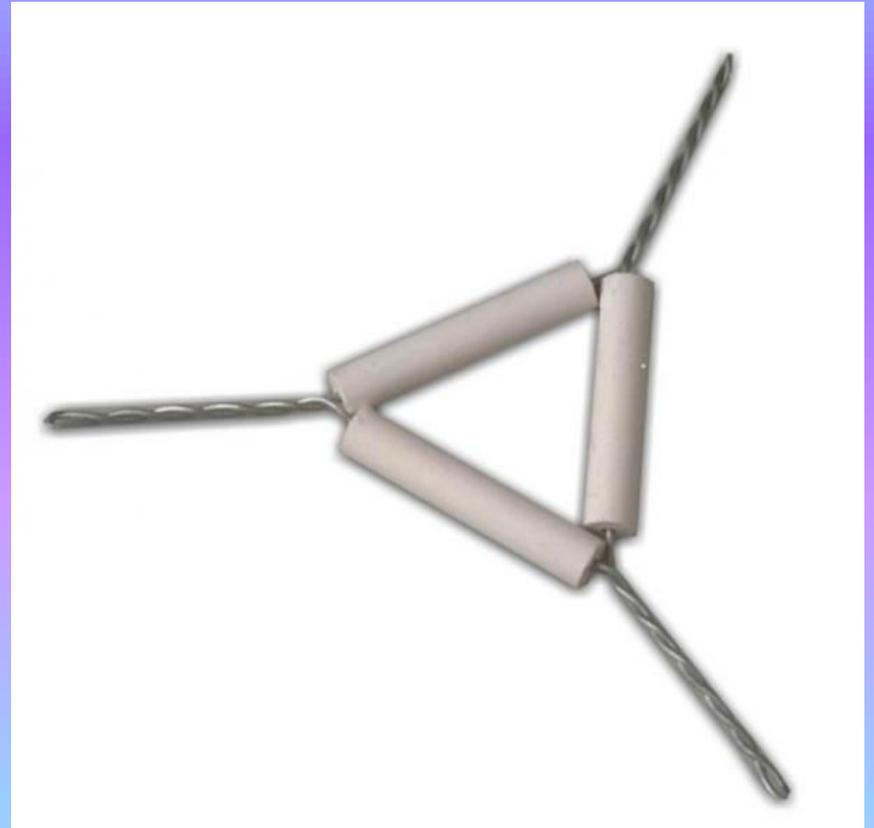


Crucible & Crucible Tongs



Clay Triangle

- The triangle is used to hold crucibles when they are being heated.
- They usually sit on a ring stand



Evaporating Dish

- used to heat and evaporate liquids.



Spot Plate



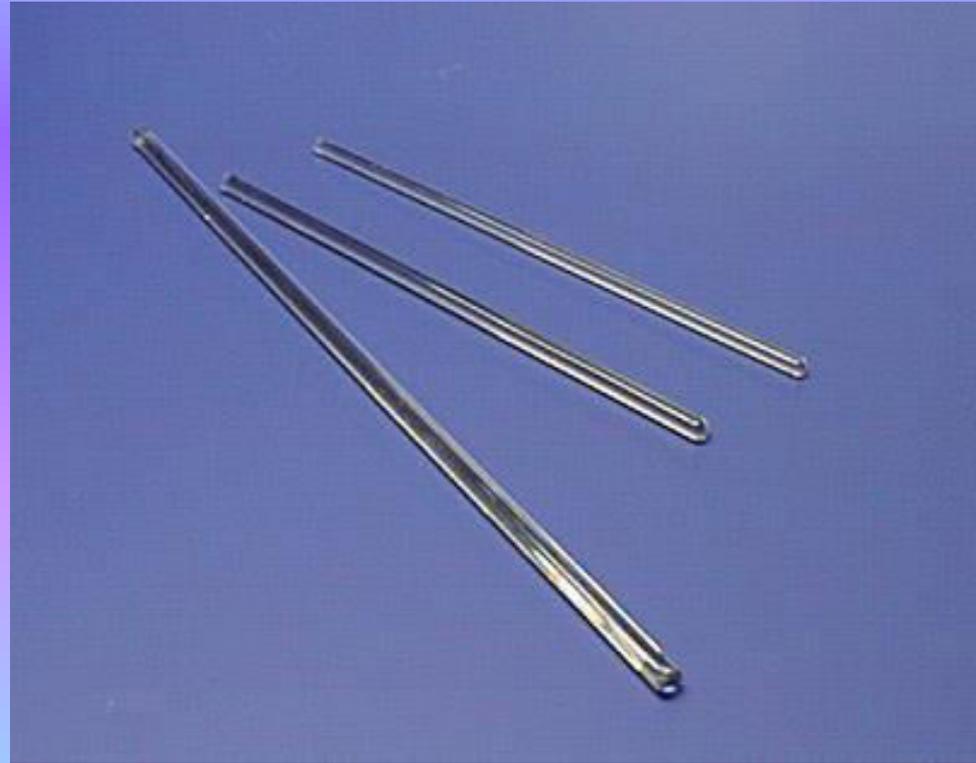
Mortar and Pestle

Used to crush solids into powders for experiments, usually to better dissolve the solids.



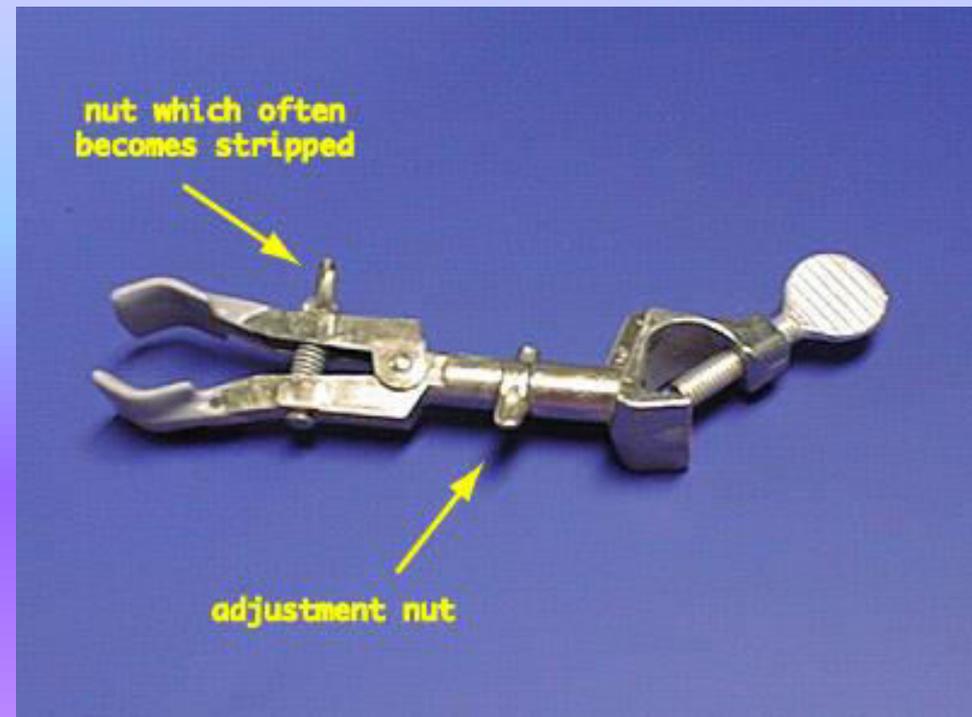
Glass Stir Rods

- Stir rods are long cylinders made of glass.
- They come in many sizes



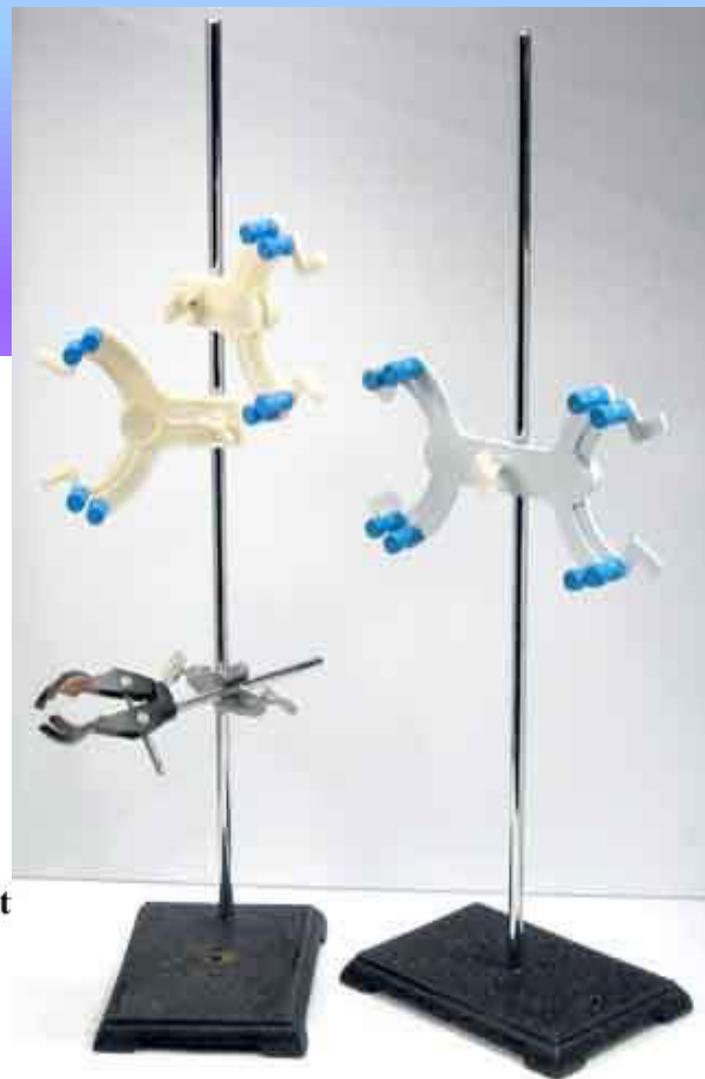
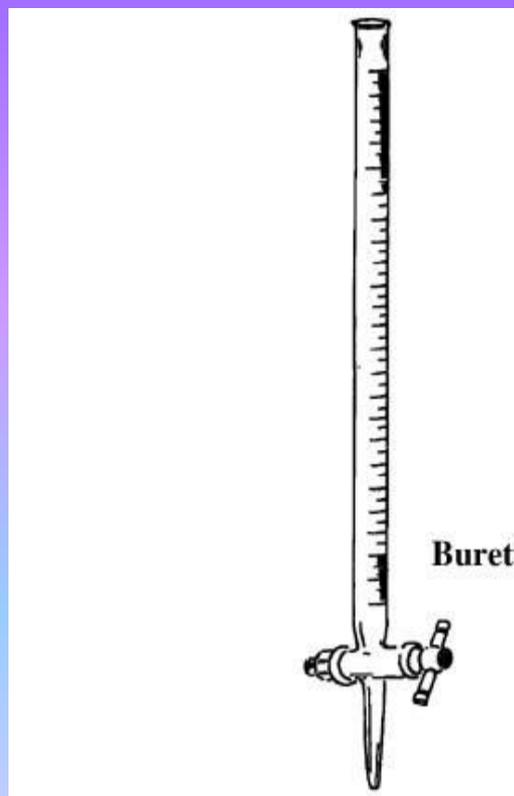
Clamps

- Connect to a ring stand at one end and to glassware at the other end.
- They are designed for clamping cylindrical shaped objects.



Buret & Buret Clamp

Very specialized piece of glassware used to accurately measure the volume of liquid that is dispensed.



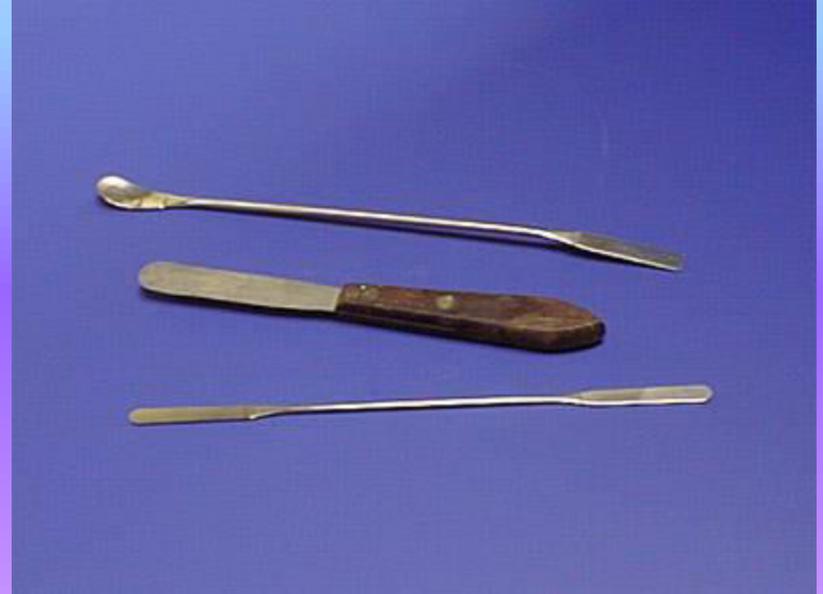
Forceps (“tweezers”)

- Forceps are used for any situation where you have to grab a small item and cannot do it with your fingers



Spatulas

- Spatulas come in many sizes and shapes
- Spatulas are used for transferring solids



Scoopula

Dissecting tools

- Needle



- Scalpel

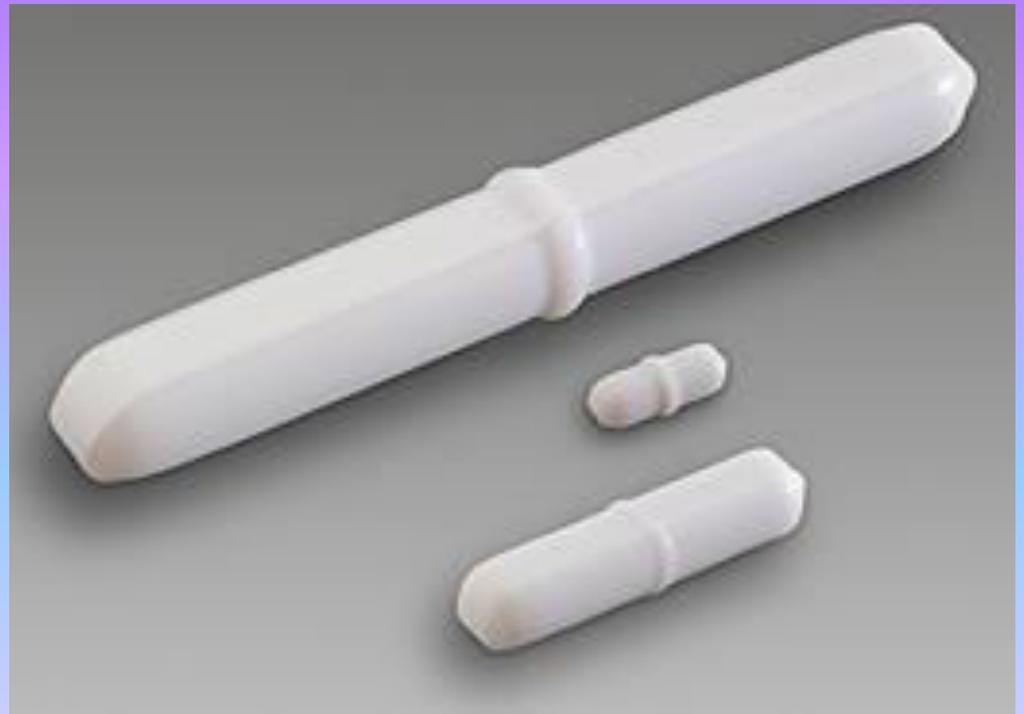


Weighing Containers

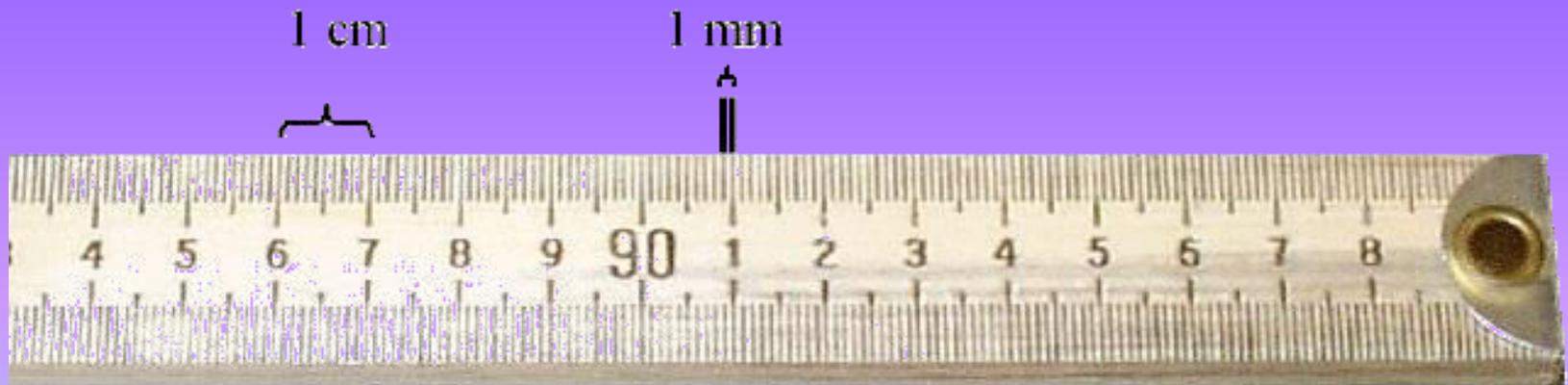


Stir Bars

- A spin bar, or stir bar, long white Teflon-covered magnet.
- These bars have only one purpose: to stir solutions

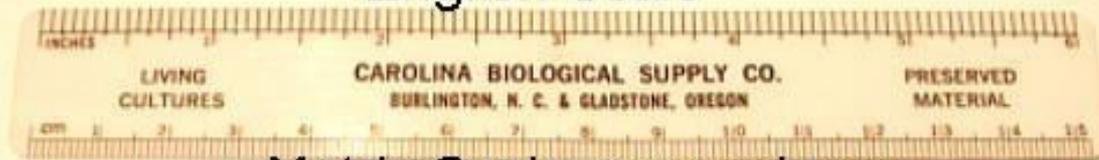


Meter Stick

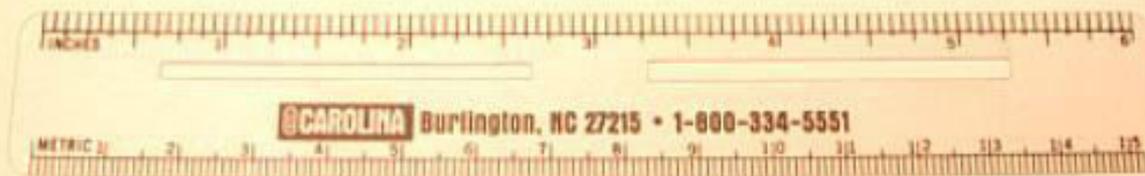


Rulers

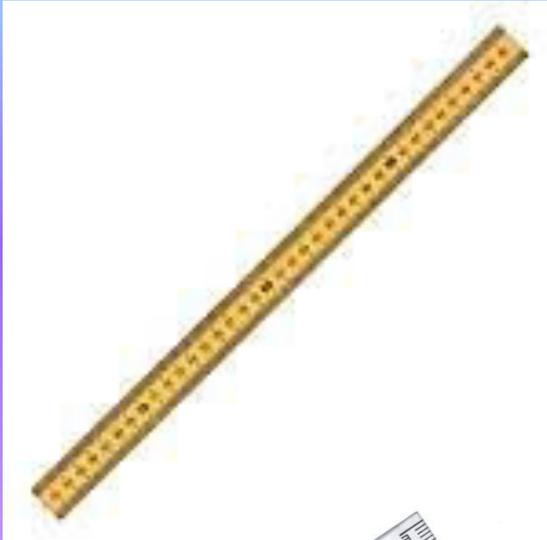
English Scale



Metric Scale, cm and mm



Meter Stick and Ruler

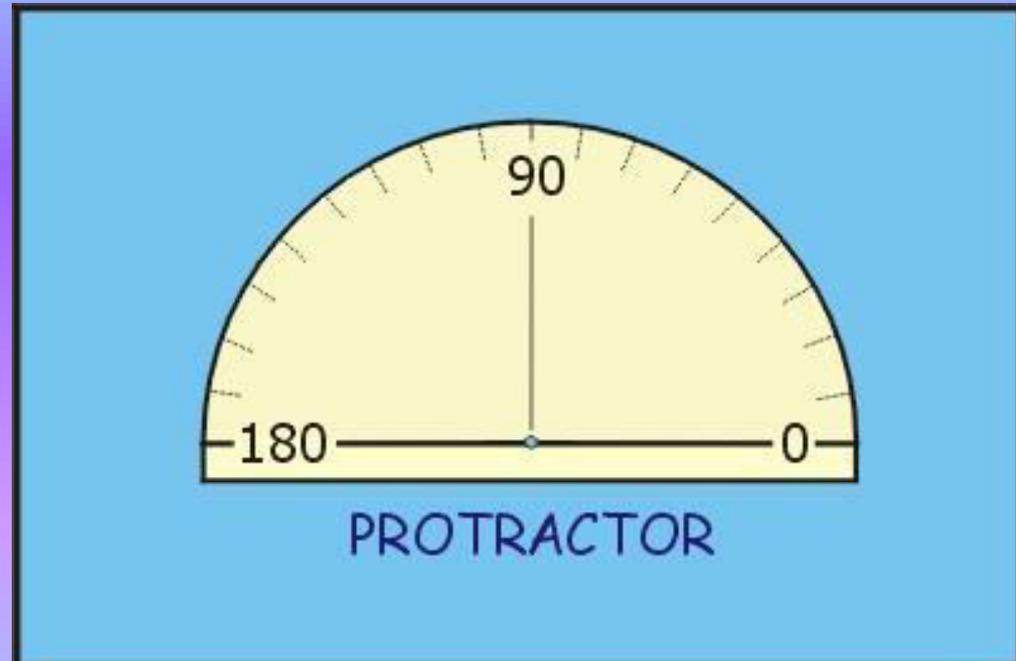
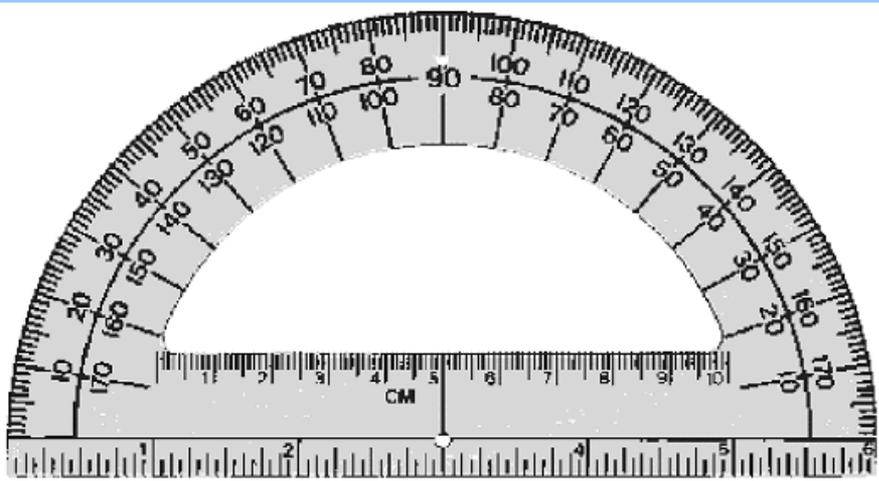


A meter stick is 39" or
100 cm long



We will use rulers that
are 12" or 6"

Protractor for Measuring Angles



A protractor is a tool for measuring angles. The most common type of protractor is a semi-circle that allows you to measure angles from 0° to 180°

Stopwatches



Stoppers

- Stoppers come in many different sizes.
- May or may not have holes for thermometers



Water Bottles

