

Chemistry Lab Equipment



There are many more lab equipment that are used in chemistry experiments. The list in this PPT contains those that will be used most often in our class. **Any equipment used in class is fair game.**

Goggles & Lab Coat



- Goggles is for eye protection and *should be worn of all times.*
- *Vision glasses are not protections gear.*
- Lab coat is to protect clothing and skin from spillage

Beakers

- Beakers hold solids or liquids
- unlikely to splatter if stirred or heated.
- Used to for mixtures *that may not release gases.*
- Can be in different sizes.



Erlenmeyer Flasks



- Erlenmeyer flasks hold solids or liquids that **may release gases** during a reaction or
- that are likely to splatter if stirred or heated.

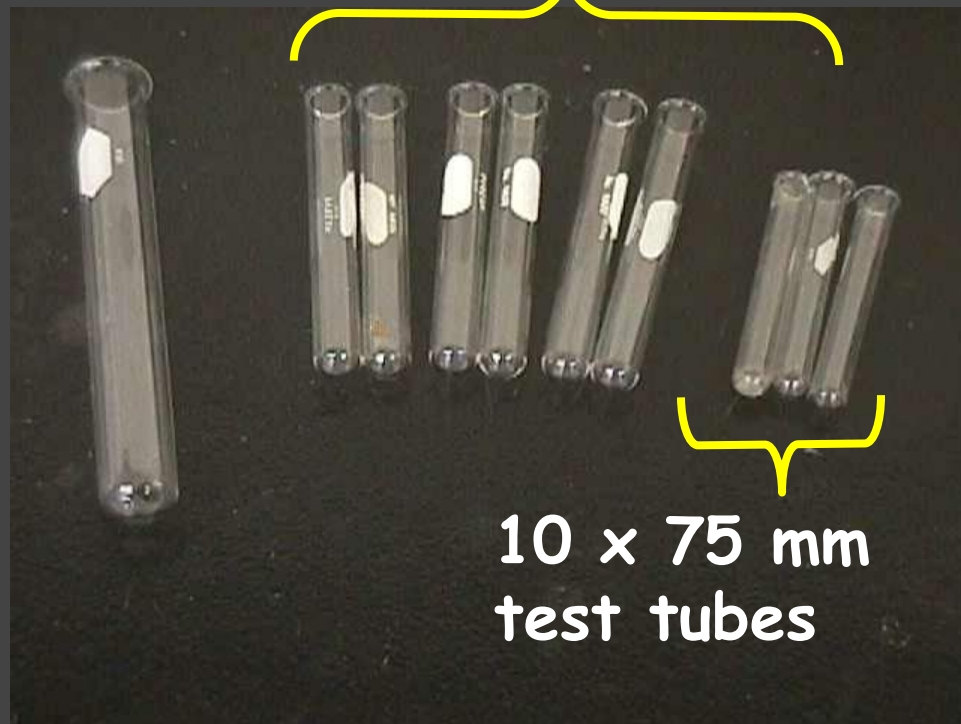
Graduated Cylinders

- A graduated cylinder is used to measure *volumes of liquids.*
- Comes in different sizes



Test Tubes

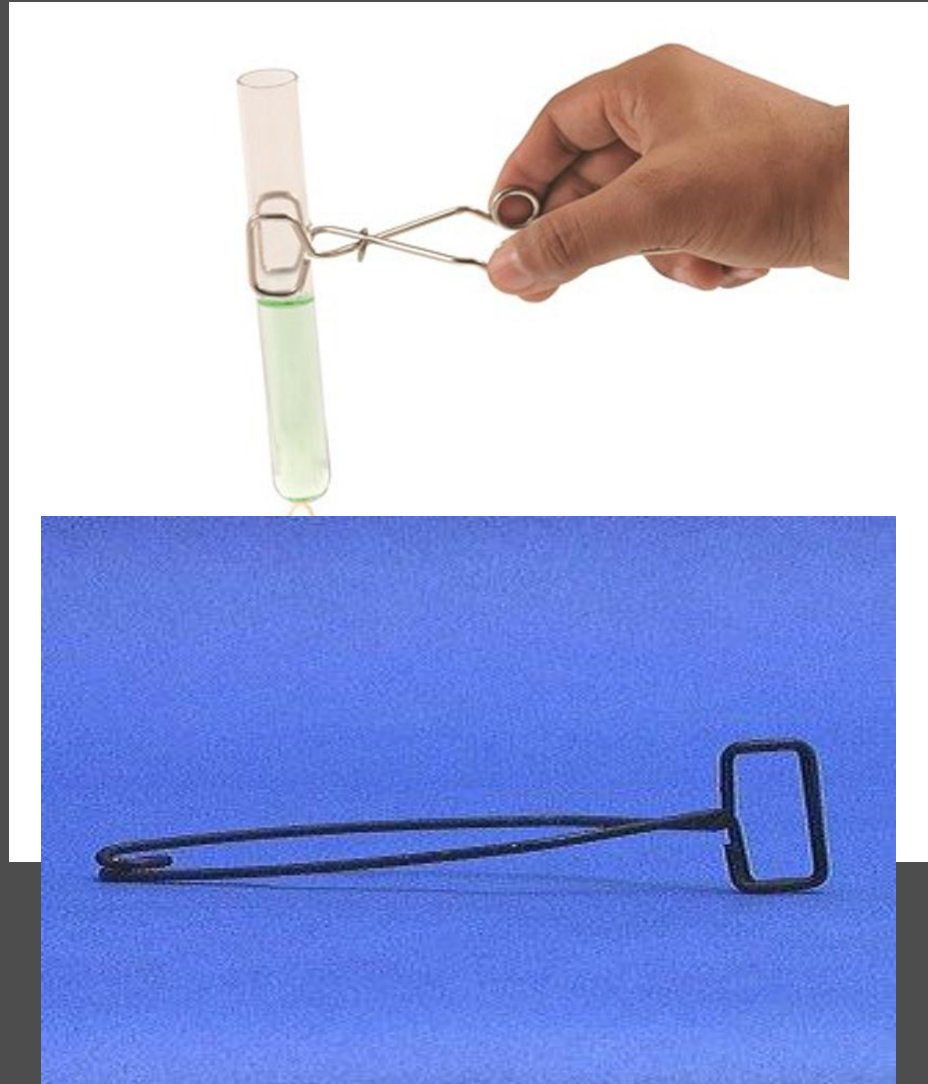
13 x 100 mm test tubes



- May be heated
- Holds small amounts of liquid chemicals
- Observe small rxns.

Test Tube Holder

A test tube holder is useful for holding a test tube which is too hot to handle.



Test Tube Racks



Test tube racks are for **holding and organizing test tubes** on the laboratory counter. Plastic racks may melt in contact with very hot test tubes. Can be plastic, wood or metal.

Test Tube Brushes

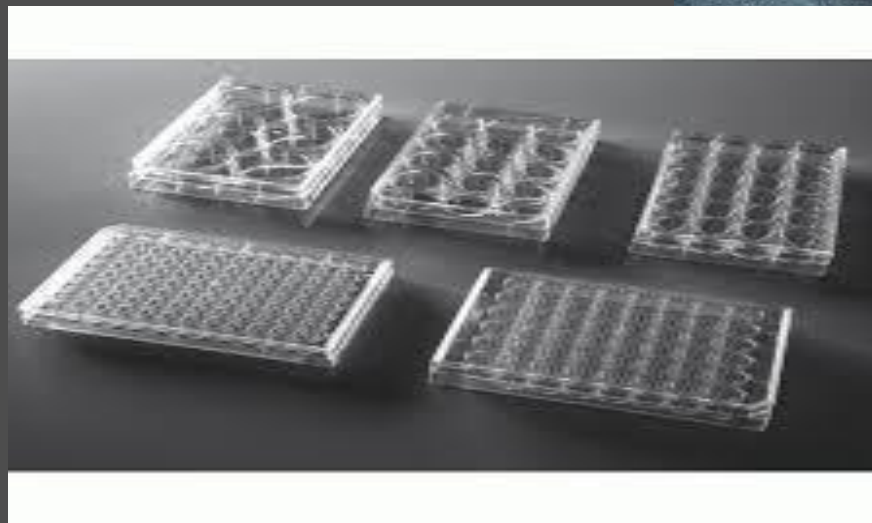
Test tube brushes are used to clean test tubes and graduated cylinders.

Forcing a large brush into a small test tube will often break the tube.



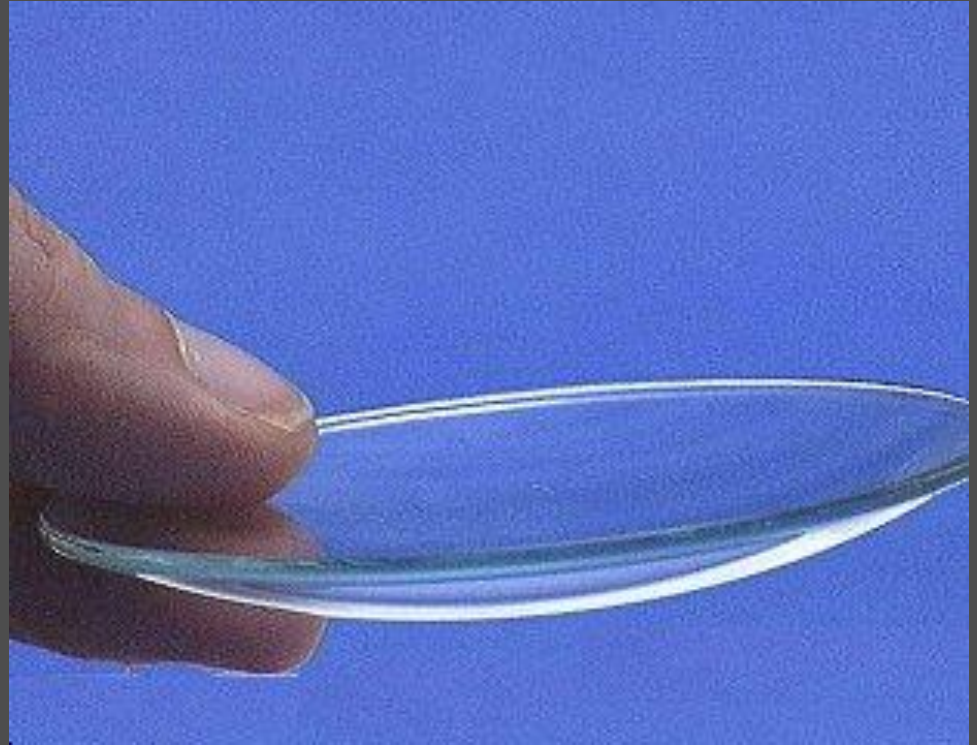
Well (Spot) Plates

Spot plates are used to perform many *(more than one)* small scale reactions at *one time*.

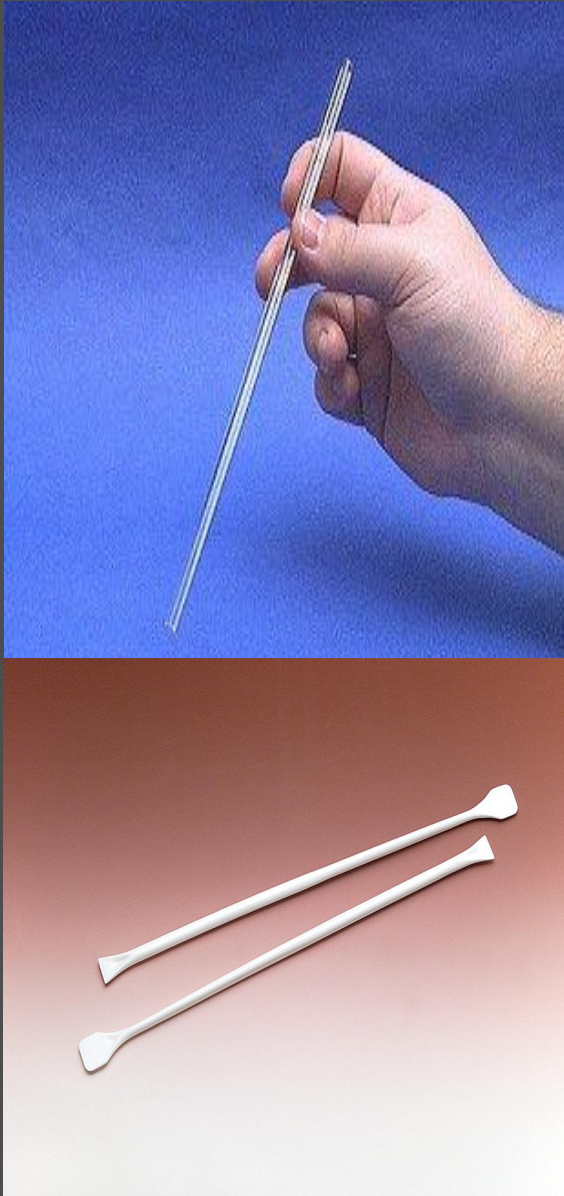


Watch Glass

A watch glass is used to hold a small amount of solid, such as the product of a reaction.



Stirring Rod

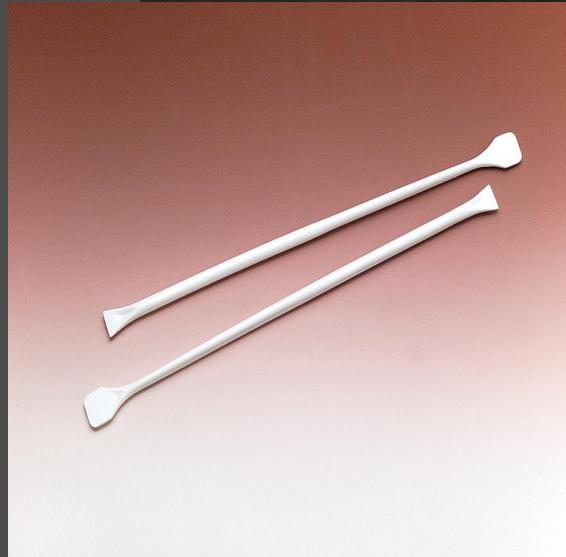


- A rod is used to **manually stir solutions**. It can also be used to transfer a single drop of a solution.
- Can be **glass, plastic or wood**.

Spatulas

Spatulas are used to *dispense solid chemicals* from their containers.

Chemicals should never be transferred with your bare hands.



Scoopula



Transfer solids: to a weigh paper for weighing, to a weighing boat.

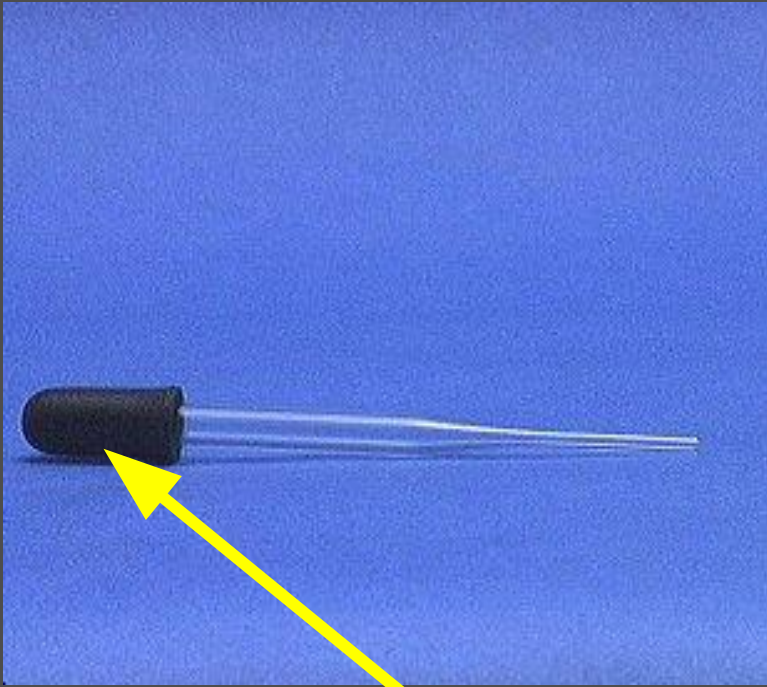
Tweezers (Forceps)



Tweezers (or forceps) are used to pick up small objects.

Medicine Dropper

A medicine dropper is used to **transfer a small volume of liquid** (less than 1 mL).



On top of each medicine dropper is a "rubber bulb"



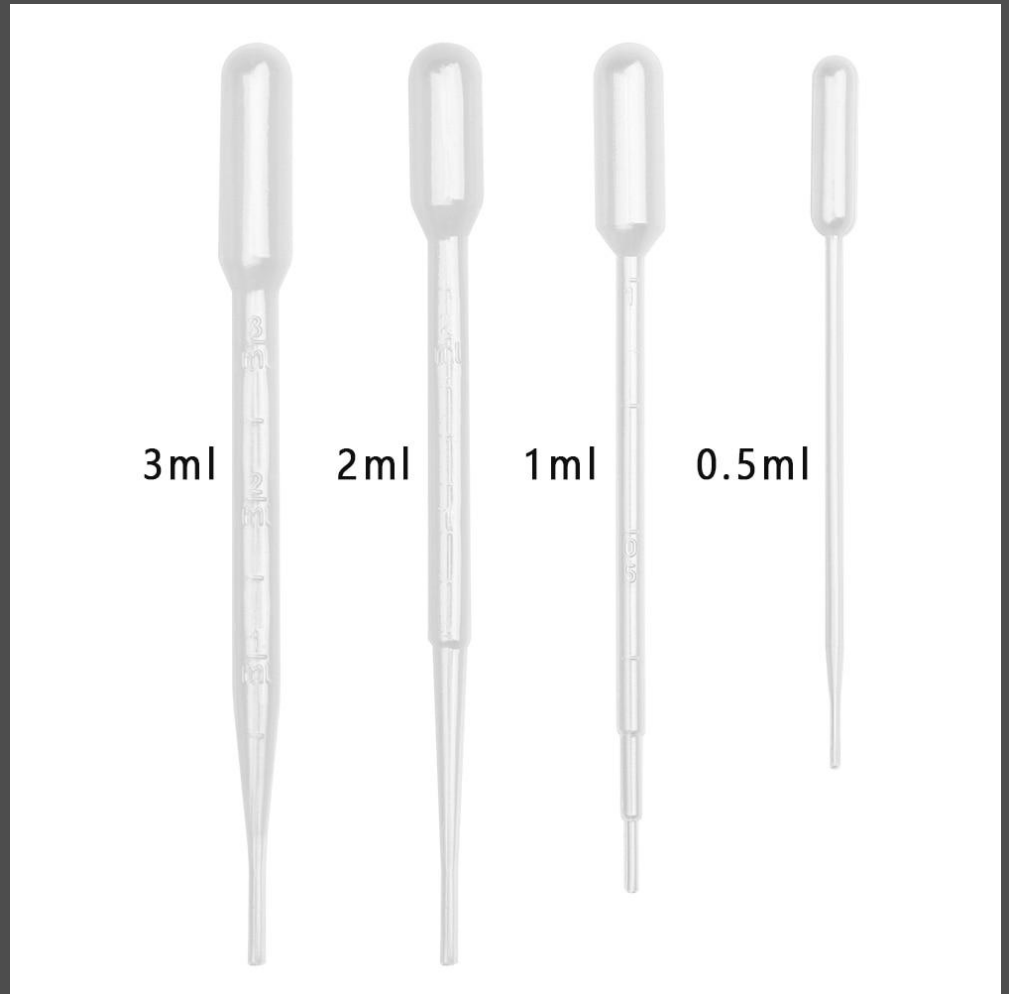
Wash Bottle



- A wash bottle has a spout that *delivers a wash solution to a specific area*. Distilled water should be used in a wash bottle.
- **IT IS NOT FOR WASHING EQUIPMENT OR CLEANING!!!**

Micropipettes

A pipette is calibrated with a series of graduation lines to allow the measurement of *one or more/less than one volume* of liquids.



Rubber Stoppers

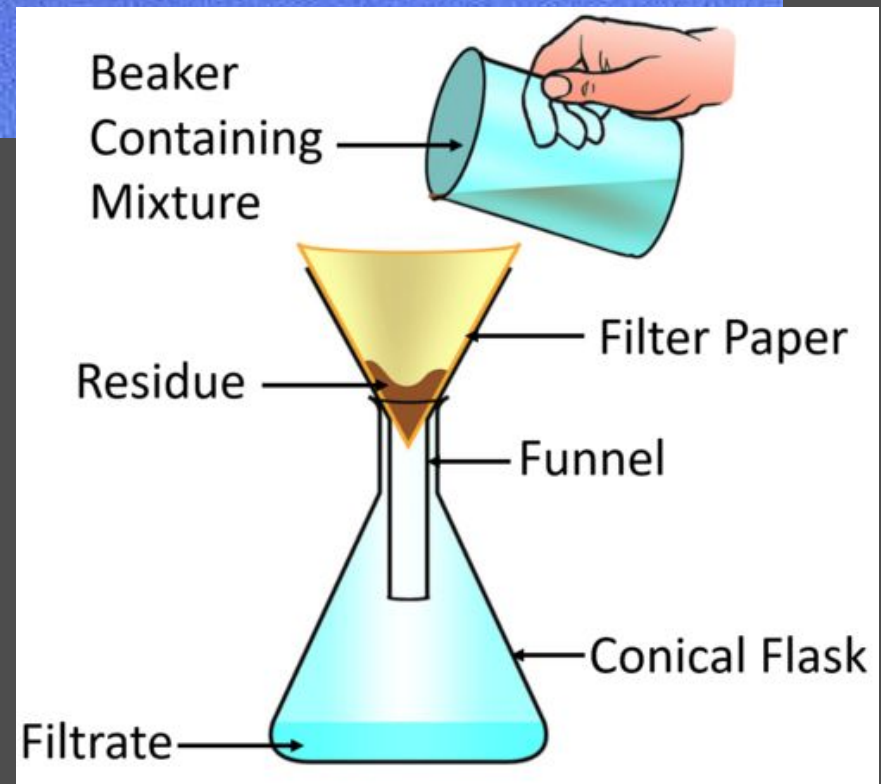
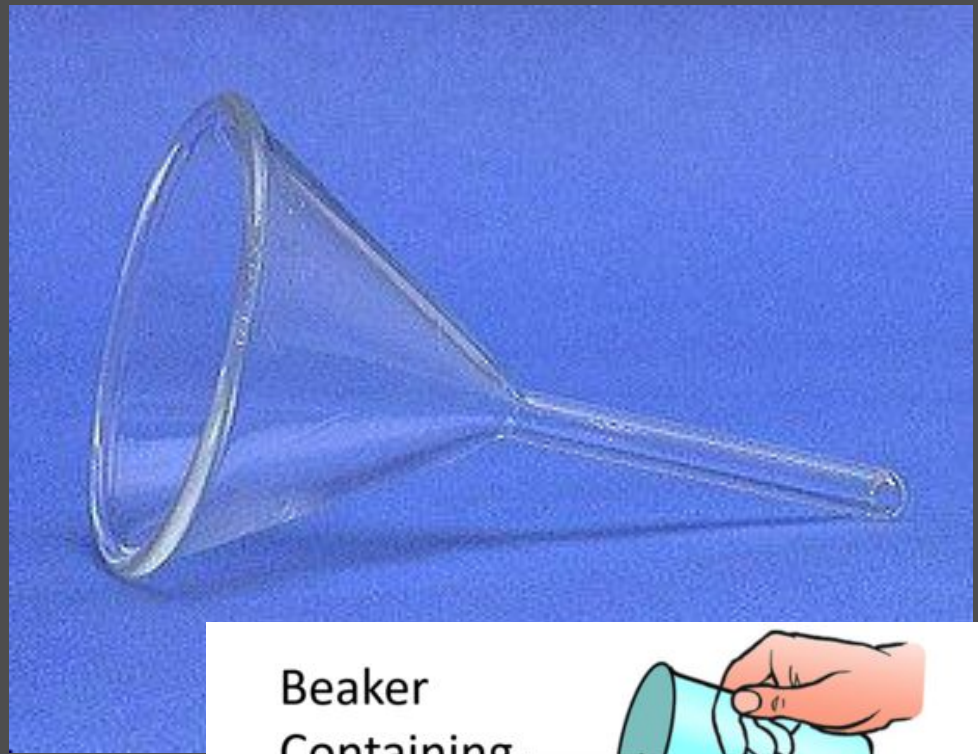


Rubber stoppers are used to close containers to avoid spillage or contamination.

Containers should never be heated when there is a stopper in place.

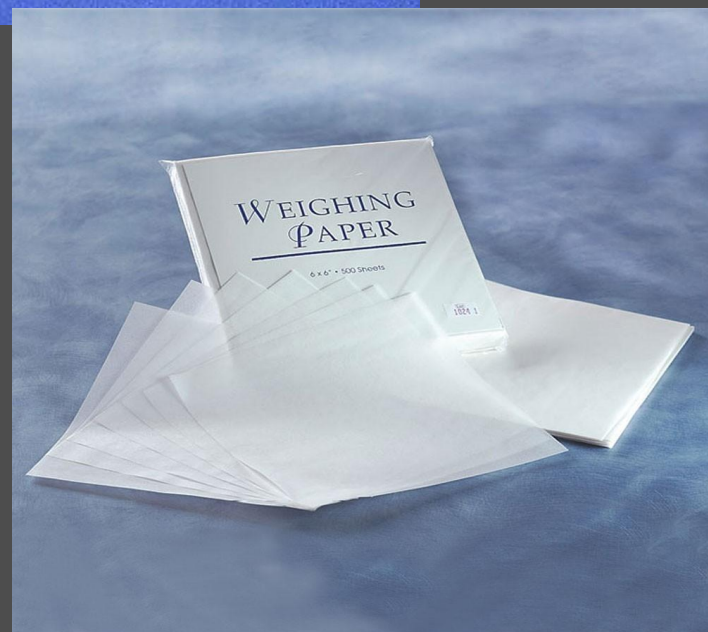
Funnel

A funnel is used to aid in the transfer of liquid from one vessel to another.



Weighing Boat / Weighing Paper

Weighing boats & papers are used to weigh solids that will be transferred to another vessel.



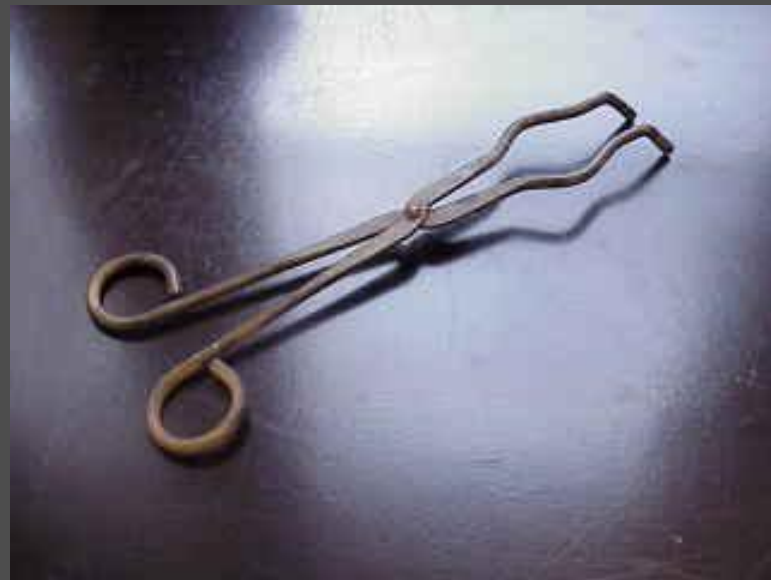
Beaker Tongs



Beaker tongs are used to move beakers containing hot liquids.

Crucible Tongs

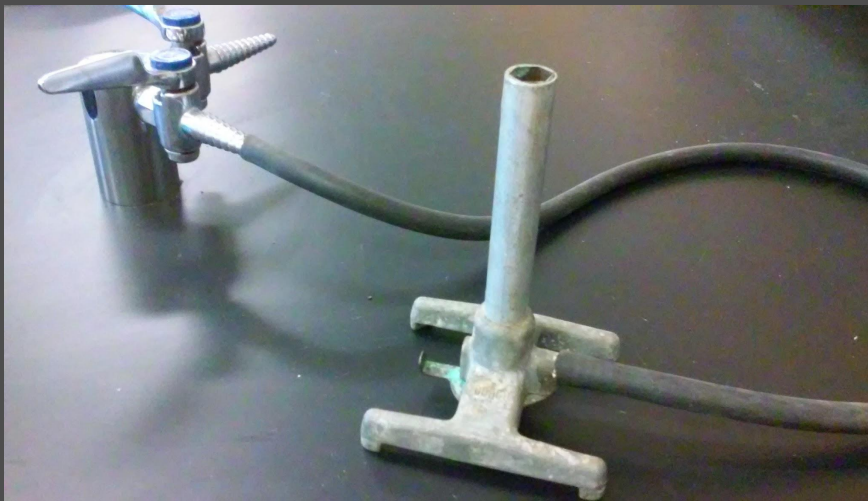
For handling hot crucibles; also used to pick up other hot objects. **NOT** to be used for picking up beakers!



Bunsen Burner

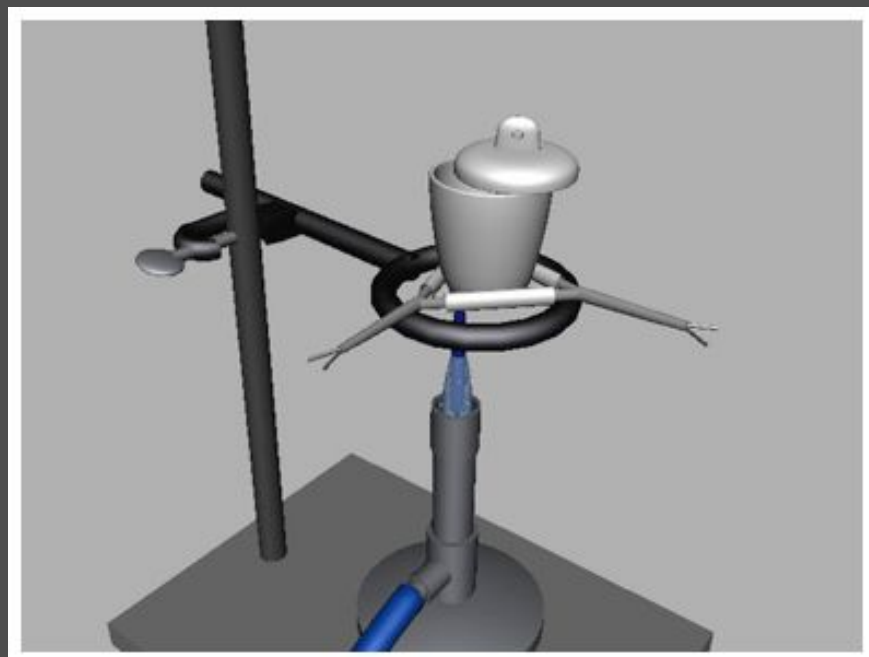


Bunsen burners are used for the heating of nonvolatile liquids and solids.



Clay Triangle

The clay triangle is used as a support for porcelain crucibles when being heated over a Bunsen burner.



Crucible



Crucibles are used for heating certain solids, particularly metals, to very high temperatures.

Evaporating Dish



The evaporating dish is used for the heating of stable solid compounds and elements.

RingStands and their Components

Ring stand

Ringstands are a safe and convenient way to perform reactions that require heating using a Bunsen burner.



Ringstands and their Components

Rings

Iron rings connect to a ring stand and provide a stable, elevated platform for the reaction.



Ringstands and their Components

Test Tube (utility) Clamp

Utility clamps are used to secure test tubes, distillation columns, and burets to the ring stand.

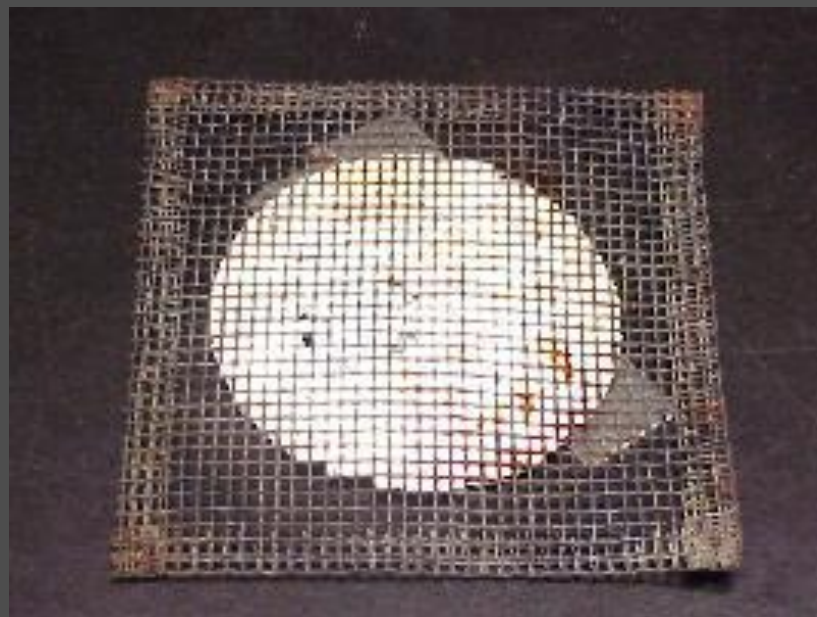


Ringstands and their Components

Wire Gauze

Wire gauze sits on the iron ring to provide a place to stand a beaker.

On older wire gauze, the white material is asbestos!



Strikers (Spark match)

Strikers are used to light Bunsen burners.

We will use regular household lighters and matches in our class.



Glass Plates

Glass plates provide a surface for semi-micro scale experiments, such as drop reactions and testing of acids and bases.



Electronic Or Triple Beam Balance

The electronic or triple beam balance is an instrument used to measure mass very precisely.

We will mostly be using electronic balance.



Hot Plate

Generally used to heat glassware or its contents.

