

CHEMICAL REACTIONS

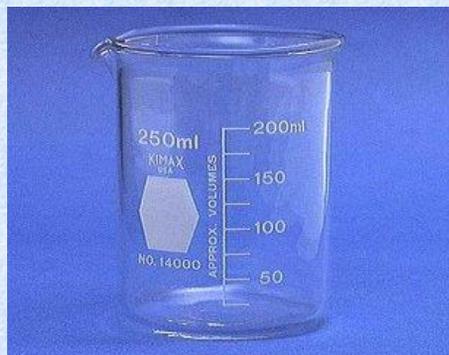


Lab Equipment



Beaker

Beakers hold solids or liquids that will not release gases when reacted or are unlikely to splatter if stirred or heated.



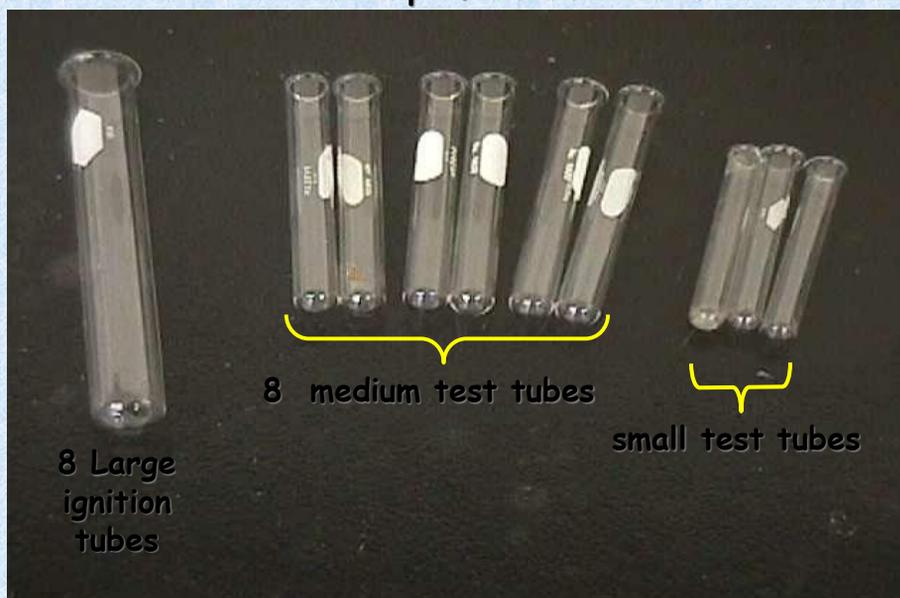
Graduated Cylinder

A graduated cylinder is used to measure volumes of liquids.



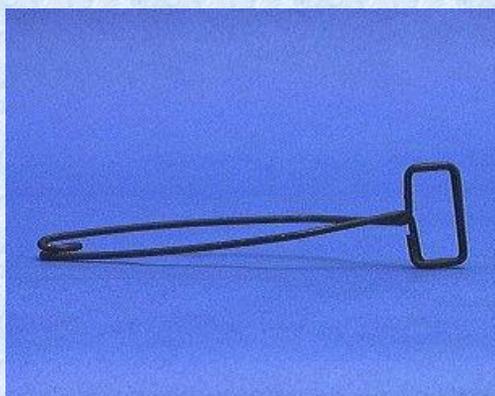
Test Tubes

Used to hold reactants & perform small chemical reactions.



Test Tube Holder

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



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.

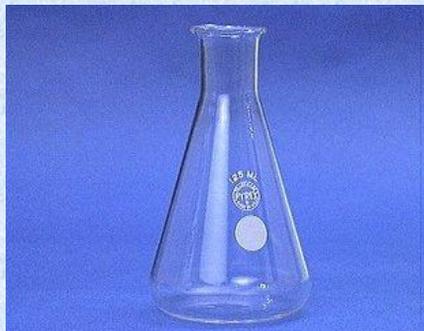


Test Tube Racks



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.

Erlenmeyer Flask



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

Florence Flask

Rarely used in high school chemistry, it is used for the mixing of chemicals. The narrow neck prevents splash exposure.



Rubber Stoppers



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

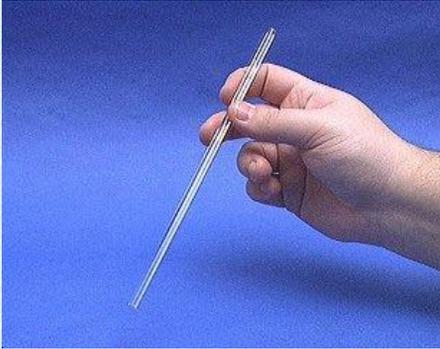
Containers should never be heated when there is a stopper in place.

Watch Glass

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

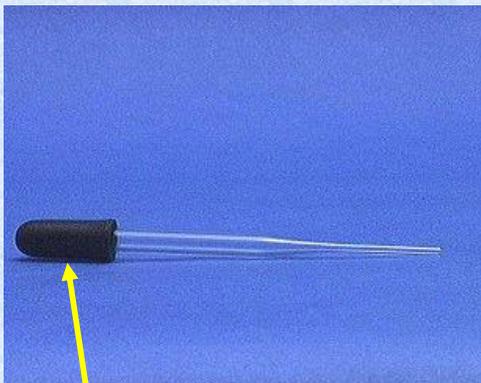


Glass Stir Rod



A glass rod is used to manually stir solutions. It can also be used to transfer a single drop of a solution.

Medicine Dropper



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

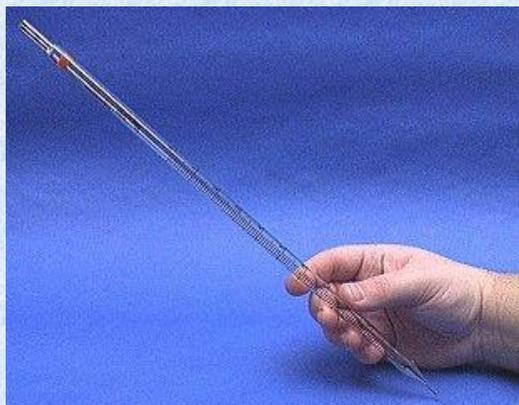
On top of each medicine dropper is a "rubber bulb"

Spot Plates

Spot plates are used when we want to perform many small scale reactions at one time. We will use these many times during the year.



Mohr Pipette



A Mohr pipet measures and delivers exact volumes of liquids.

Used with a pipet filler.



Burette



Used to measure and deliver exact volumes of liquid over an extended period of time.

Spatulas

Spatulas are used to dispense solid chemicals from their containers.

Chemicals should never be transferred with your bare hands.



Wash Bottle



A wash bottle has a spout that delivers a wash solution to a specific area. Distilled water is the only liquid that should be used in a wash bottle.

Weighing Boat

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



Beaker Tongs



Beaker tongs are used to move beakers containing hot liquids

Bunsen Burner



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

Evaporating Dish



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

Crucible



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

Crucible Tongs

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



Funnel

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



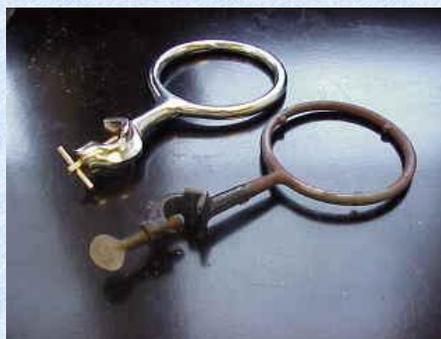
Ringstands and their Components

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



Iron Rings

Iron rings connect to a ringstand and provide a stable, elevated platform for a reaction.



Wire Gauze

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

The white material is heat and flame resistant.



Utility Clamps

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



Clay Triangle

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



Double Burette Clamps

Double Burette clamps connect to the ring stand and are used to hold burets.



Strikers

Strikers are used to light Bunsen burners.

The flints on strikers are expensive. Do not operate the striker repeatedly just to see the sparks!



Forceps



Forceps (or tweezers) are used to pick up small objects.