

# LABORATORY APPARATUS

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# *Laboratory Apparatus*

1.) **BEAKER**-is a simple container for stirring, mixing and heating liquids commonly used in many laboratories. Beakers are generally cylindrical in shape, with a flat bottom and a lip for pouring.



# *Laboratory Apparatus*

2.) **Test tube**-also known as a culture tube or sample tube, is a common piece of laboratory glassware consisting of a finger-like length of glass or clear plastic tubing, open at the top, usually with a rounded U-shaped bottom. Hold a small experiment, which would be used to conduct an investigation.



# *Laboratory Apparatus*

3.) **Florence flask**-has a round body with a single long neck and with either a round or a flat bottom. It can be used as a container to hold solutions of chemicals. It is designed for uniform heating and ease of swirling; it is produced in a number of different glass thicknesses to stand different types of use.



# *Laboratory Apparatus*

4.) **Erlenmeyer flask**, also known as a conical flask, is a widely used type of laboratory flask which features a flat bottom, a conical body, and a cylindrical neck. Erlenmeyer flasks are suitable for heating liquids. The small neck reduces evaporative losses compared to a beaker, while the flat bottom of the conical flask makes it unlikely to tip over and spill.



# *Laboratory Apparatus*

5.) **Graduated cylinder**-is a piece of laboratory equipment used to accurately measure the volume of a liquid. Water displacement can be used to find out the volume of a solid. Graduated cylinders are generally more accurate and precise for this purpose than flasks and beakers.



## *Laboratory Apparatus*

6.) **Funnel**- is a pipe with a wide, often conical mouth and a narrow stem. It is used to channel liquid or fine-grained substances into containers with a small opening. Without a funnel, spillage would occur.



# *Laboratory Apparatus*

7.) **Watch Glass**- funnel is a pipe with a wide, often conical mouth and a narrow stem. It is used to channel liquid or fine-grained substances into containers with a small opening. Without a funnel, spillage would occur.





# *Laboratory Apparatus*

8.) **Evaporating dish** - is a laboratory device for evaporation of solids and supernatant fluids, and sometimes to their melting point. Evaporating dishes are used to evaporate excess water - or other solvents - to ensure that a concentrated solution or the dissolved substance is left behind.



# *Laboratory Apparatus*

9.) **Crucible and Cover**-A crucible is a ceramic container capable of withstanding extreme temperatures, whilst the cover is designed to prevent heat escaping from the crucible itself. Crucibles are used for a range of purposes, and are particularly common amongst chemists for the chemical analysis of various substances



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10.) **Reagent bottle**-are containers made of glass, plastic, borosilicate or related substances, and topped by special caps or stoppers and are intended to contain chemicals in liquid or powder form for laboratories and stored in cabinets or on shelves.



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11.) **Bunsen burner**-device for combining a flammable gas with controlled amounts of air before ignition; it produces a hotter flame than would be possible using the ambient air and gas alone



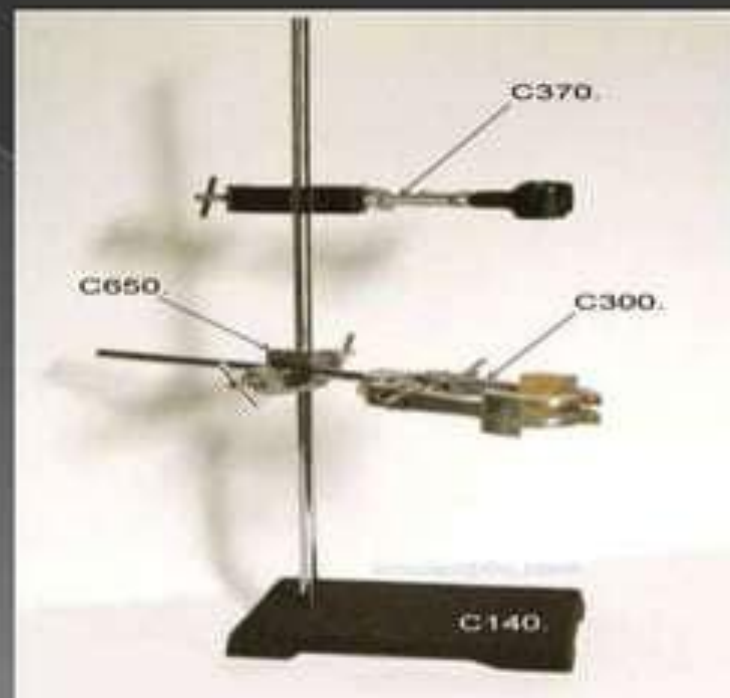
# *Laboratory Apparatus*

12.) **Iron Clamp**-An iron clamp is a piece of laboratory equipment used to hold things and is placed in an iron stand to elevate other equipment.



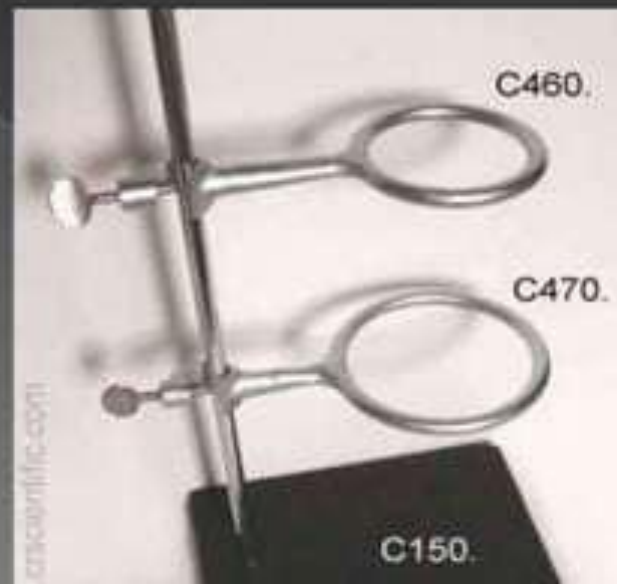
# Laboratory Apparatus

13.) **Iron stand**-A metal rod attached to a heavy metal base. The heavy base keeps the stand stable, and the vertical metal rod allows for easy height adjustment of the iron ring/clamp. (A tripod can sometimes be used in place of an iron stand.)



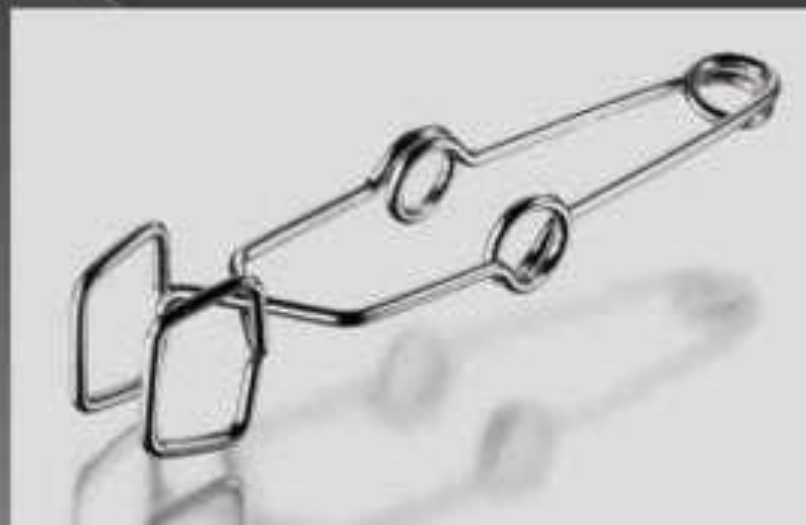
# *Laboratory Apparatus*

14.) **Iron Ring**-An iron ring that holds glassware such as a funnels or other objects, like the wire gauze or clay triangle for heating with a Bunsen burner. Often, the iron ring will be attached to an iron stand.



## *Laboratory Apparatus*

15.) **Test tube holder**-The test tube holder obviously is designed to hold test tubes. However, it can be used to hold pipettes and stirring rods, etc. as well.





## *Laboratory Apparatus*

16.) **Test tube brush**- It is a device, made with nylon bristles attached to a twisted-wire shaft, used to knock the bottoms out of test tubes. It is a brush that is long and narrow to clean the inside of glassware, in particular test tubes.



## *Laboratory Apparatus*

17.) **Wire Gauge**- The use of a wire gauze in an experiment is to place under the container holding the liquid, that is being heated by the Bunsen burner, so that the container doesn't have direct contact with the flame.



## *Laboratory Apparatus*

18.) **Tripod**- is a three-legged equipment, generally used as a platform of some sort. This lab equipment is used to support and hold various flasks, beakers and other glass ware when not in use and also during experiments.



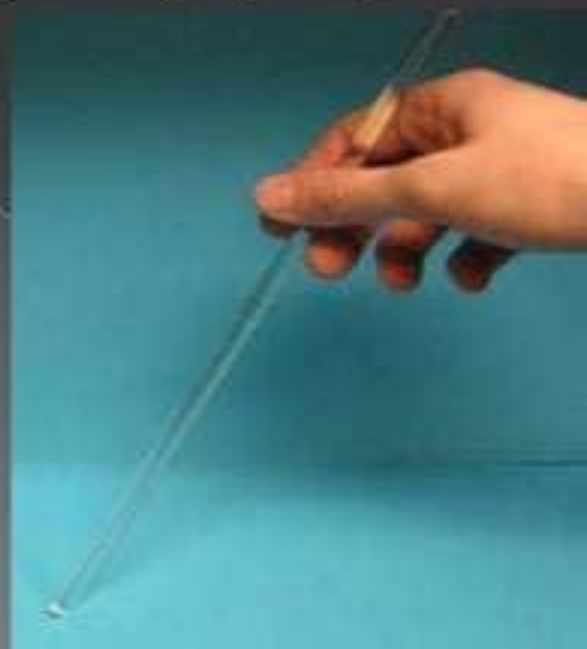
## *Laboratory Apparatus*

19.) **Spatula**- is used to take and handle small quantities of solid chemicals. It is used like a spoon or an instrument for scooping material out of a container.



## *Laboratory Apparatus*

20.) **Stirring rod**-is a piece of laboratory equipment used to mix chemicals and liquids for laboratory purposes. They are usually made of solid glass, about the thickness and slightly longer than a drinking straw.



## *Laboratory Apparatus*

21.) **Mortar and Pestle**- is a tool used to crush, grind, and mix solid substances. The substance to be ground is placed in the mortar and ground, crushed or mixed with the pestle.



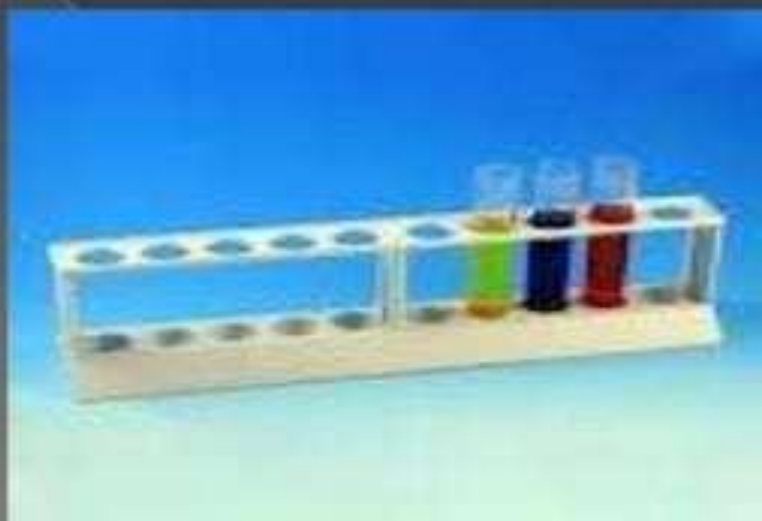
## *Laboratory Apparatus*

22.) **Medicine dropper**- is an instrument used to measure small amount of liquids, usually in milligrams.



## *Laboratory Apparatus*

23.) **Test tube racks**- is a convenient and necessary piece of laboratory equipment for the storage of test tubes.





# *Laboratory Apparatus*

24.) **Laboratory thermometer**- is a device that measures temperature or temperature gradient using a variety of different principles.



# *Laboratory Apparatus*

25.) **Microscope**- is an instrument used to see objects that are too small for the naked eye. There are many types of microscopes, the most common and first to be invented is the optical microscope which uses light to image the sample.



## *Laboratory Apparatus*

26.) **Triple beam balance**- is a type of balance commonly used in the laboratory to determine the mass of samples. To use the balance, you use sliding weights called riders on three beams, each with progressively small incremental amounts.



## *Laboratory Apparatus*

27.) **Pipette** is a laboratory tool used to transport a measured volume of liquid. It is also use to extract or deliver small amounts of liquid.



## *Laboratory Apparatus*

28.) **Burette**-is a vertical cylindrical piece of laboratory glassware with a volumetric graduation on its full length and a precision tap. It is used to dispense known amounts of a liquid reagent in experiments.



## *Laboratory Apparatus*

29.) **Platform balance**- The platform balance is a form of equal-arm balance in which two flat platforms are attached to the top side of the beam, one at each end.



# Laboratory Apparatus

30.) **Analytical balance**- is used to measure mass to a high degree of precision and accuracy. It is often found in a laboratory setting and is used only with the most meticulous of measurements.



## *Laboratory Apparatus*

31.) **Alcohol lamp**- are usually found in biology labs where they do inoculations of bacteria cultures. It heats the wire loop on a stick that they use to spread the bacteria on the growth medium, which will prevent contamination to the cultures.





## *Laboratory Apparatus*

32.) **Aspirator**- is also known as an eductor-jet pump ,or a filter pump. This is a device that is able to produce a vacuum by using the venturi effect. In an aspirator there is a fluid that flows through a narrowing tube. Once the tube starts narrowing, the fluid's speed is able to increase.



## *Laboratory Apparatus*

33.) **Tongs** - are used to hold many different things such as flasks, crucibles, and evaporating dishes when they are hot.



# *Laboratory Apparatus*

34.) **Volumetric flask** - is a piece of laboratory glassware, a type of laboratory flask, used in analytical chemistry for the preparation of solutions. Are used for making up solutions to a known volume.



## *Laboratory Apparatus*

35.) **Spring balance** is simply a spring fixed at one end with a hook to attach an object at the other. A spring balance measures the weight of an object by opposing the force of gravity with the force of an extended spring.





Thank you for  
listening...

