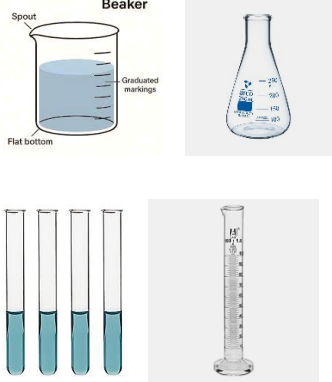
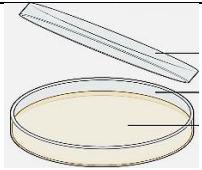
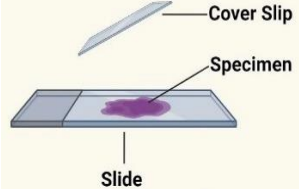
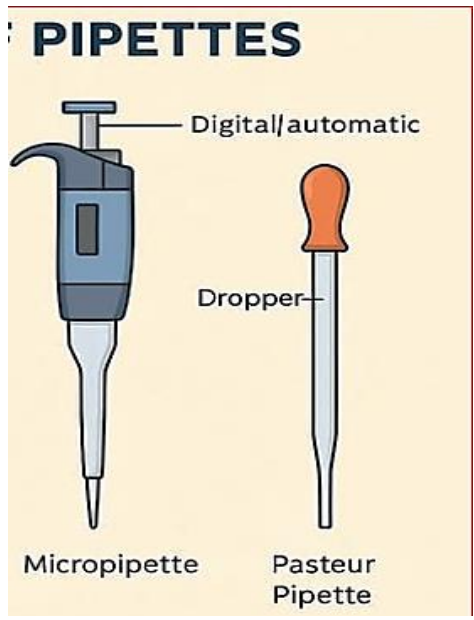
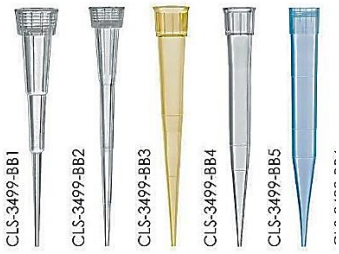
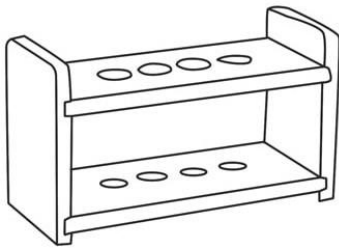
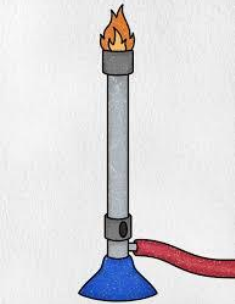


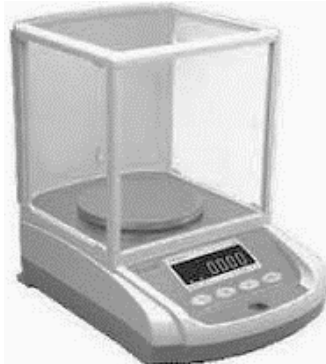
Equipments , instruments and tools

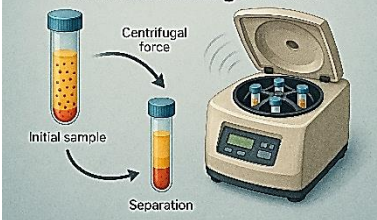
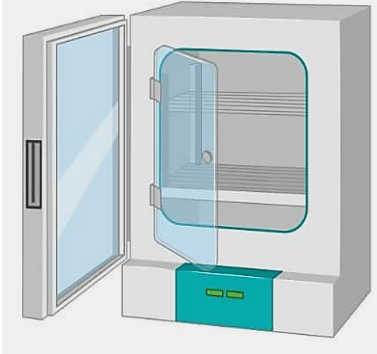
- Laboratory equipments refers to the instruments, apparatus and the tools, used by scientists, researchers, and technicians to perform experiments; the Equipment often is larger, mechanical, or electrical items (e.g., centrifuges, ovens and microscopes).While "apparatus" refers to smaller, specialized glass or manual tools (e.g., Burette and burners).
- While the instruments are specialized devices used for measuring or analyzing (e.g., balances, beakers, flasks, pipettes and PH meters).
- Tools are smaller, often handheld (e.g., test tubes rack , test tubes , Forceps & spatulas).

	The purpose	Picture
glassware laboratory: Beaker Flask Test tube Graduated cylinder	*for holding, mixing, stirring, storing, and heating liquids. *measuring the volume of liquids, ranging from milliliters to liters.	
Container to microbes: Petri dish	used to grow /culture microorganisms (bacteria, fungi, molds) .	
Microscope slide & Cover slide	used to hold specimens for examination under a microscope.	

Glass spreader	to distribute the biological samples onto the surface of a culture medium.	
Types of pipettes: Pasteur/Transfer Pipettes Micropipettes	used to transfer small amounts of liquids (a volume range between 1 and 1000 μ l).	 PIPETTES Digital/automatic Dropper Micropipette Pasteur Pipette
Pipette Tip	used to measure the small amounts of liquids (a volume range between 1 and 1000 μ l).	 CLS-3499-BB1 CLS-3499-BB2 CLS-3499-BB3 CLS-3499-BB4 CLS-3499-BB5
Test tube rack	used to hold multiple test tubes vertically.	

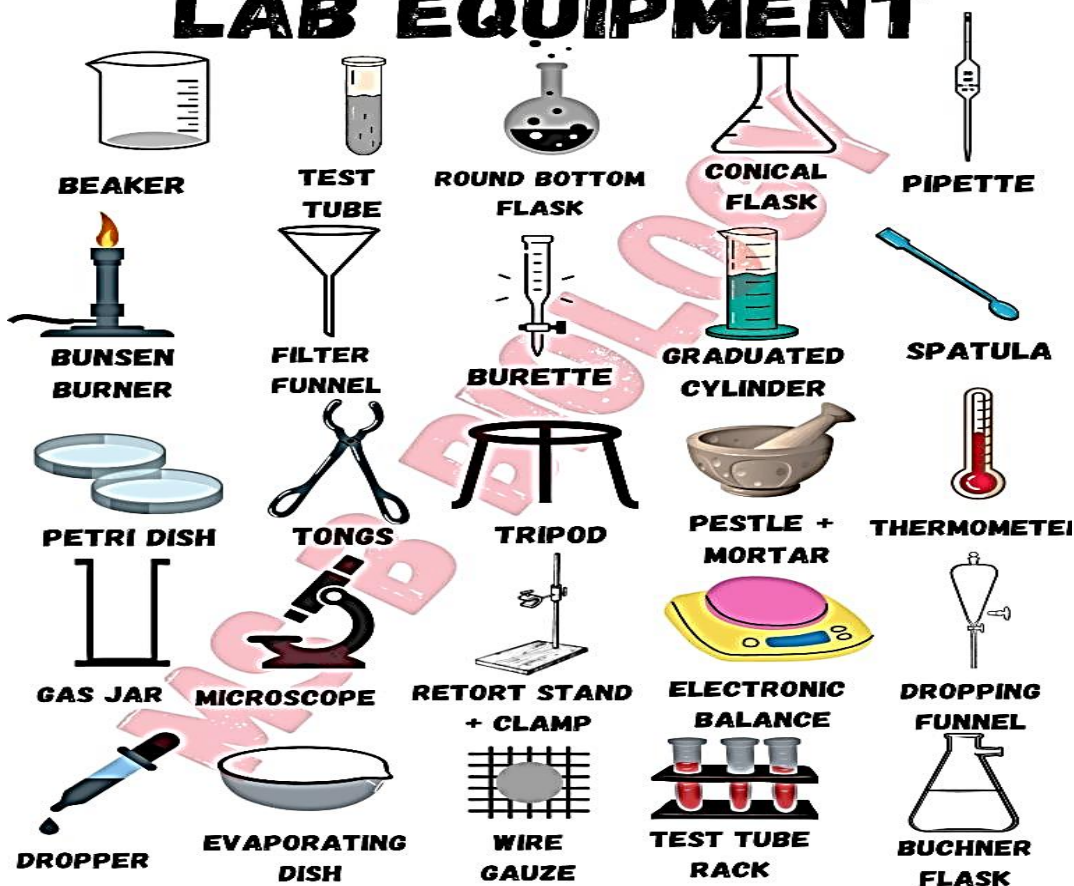
Inoculating loop needle handle	*to s transfer, streak the microorganisms (bacteria/yeast) from a sample onto culture media . *to stab the culture medium.	
Bunsen burner	used for heating & sterilization the objects .	
Tripod stand	used to support the glassware such as beakers, flasks, and other apparatus.	
Lab spatula	used for mixing ,scraping and transferring the small amounts of powder.	

Lab forceps	for holding or transferring the sterile, small objects in the laboratory.	
Electrical balance	used for measuring the mass of small objects or substances with high accuracy.	

Centrifuge	or separating liquid components according to their density by using centrifugal force.	How a Centrifuge Works 
Incubator	necessary for the growing & storing the bacterial and fungal cultures under artificial conditions.	Incubator 

Lab oven	Used to sterilize the solids and dry substances such as glassware, metal, and powders.	
Autoclave	to sterilization by destroying microorganisms (spores, bacteria, and viruses) on equipments , media, and biohazardous waste using high-pressure/moist steam (typically 121 °C within 15 -20 minutes).	
Water bath	to heat the samples or media at a constant temperature for a long time.	Water Bath 

LAB EQUIPMENT



Common Laboratory Equipment

				
Beaker	Bunsen burner	Graduated cylinder	Test tube	Pipette
				
Erlenmeyer flask	Microscope	Thermometer	Burette	Wash bottle
				
Funnel	Gloves	pH meter	Magnetic stirrer	Caliper

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