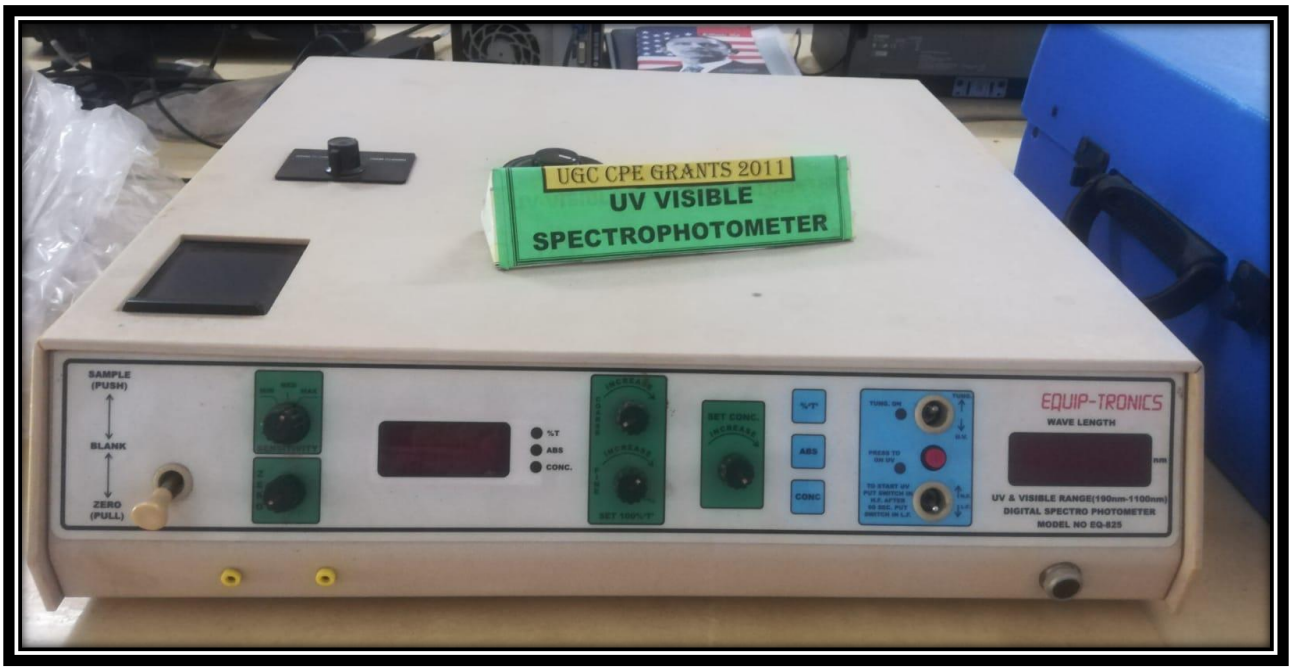
LIST OF FACILITIES PROVIDED BY THE COLLEGE FOR RESEARCH

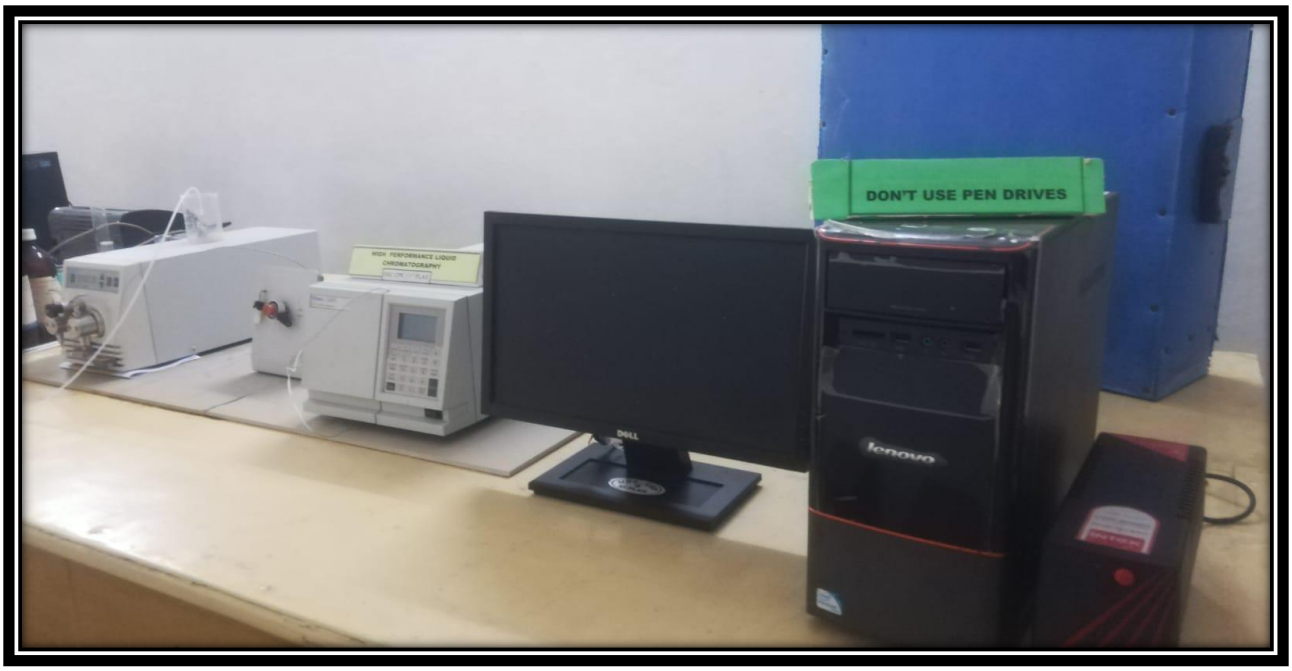
1. UV Visible Spectrophotometer
2. High performance liquid chromatography
3. Digital Melting point Apparatus
4. Magnetic stirrer with hot plate
5. Digital potentiometer
6. Digital Polarimeter
7. Digital photo Colorimeter
8. Electron Microscope
9. Micropipettes
10. Cooling Centrifuge
11. Large autoclave
12. Laminar Air flow
13. PCR
14. Incubator
15. Hot Air Oven
16. Digital Colony counter



UV Visible spectrophotometer

A method for measuring light absorbance across the ultraviolet and visible regions of the electromagnetic spectrum is known as ultraviolet-visible (UV-Vis) spectrophotometry. Incident light can be absorbed, reflected, or transmitted when it interacts with materials.

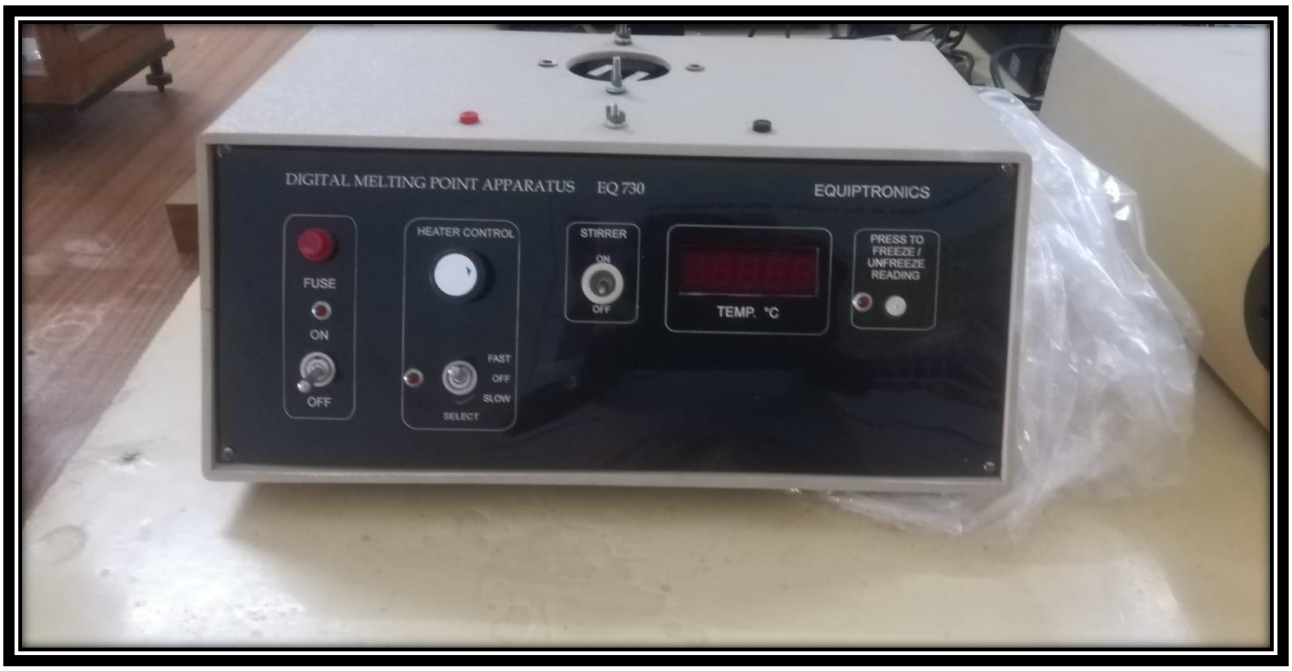
- **Identifying impurities.**
- **Detecting the concentration of substances.**
- **Organic compounds' structure elucidation.**
- **Identifying the characteristics of a protein.**
- **Identifying the dissolved oxygen content in a body of water.**
- **Analysis of respiratory gas in hospitals.**
- **Functional group detection.**
- **Determining molecular weight in a particular compound.**



High Performance Liquid chromatography

High-performance liquid chromatography or high-pressure liquid chromatography (HPLC) is a chromatographic method that is used to separate a mixture of compounds in analytical chemistry and biochemistry so as to identify, quantify or purify the individual components of the mixture.

- **Analysis of drugs**
- **Analysis of synthetic polymers**
- **Analysis of pollutants in environmental analytics**
- **Determination of drugs in biological matrices**
- **Product purity and quality control of industrial products and fine chemicals**
- **Pre-concentration of trace components**

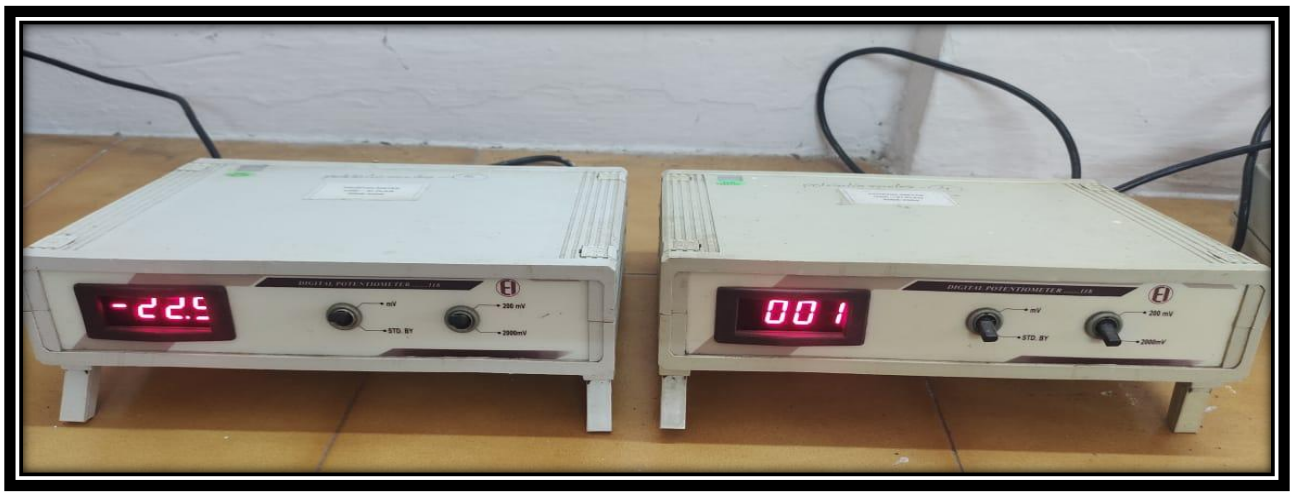


Digital Melting point Apparatus

- A melting point apparatus is a laboratory device that is used to determine the melting point of an element with great precision and accuracy.
- The temperature at which the state of a substance changes from solid to liquid is said to be its melting point.
- It is one of the most important and basic parameters to know about the nature of a substance, determine its purity, and characterize organic and inorganic compounds

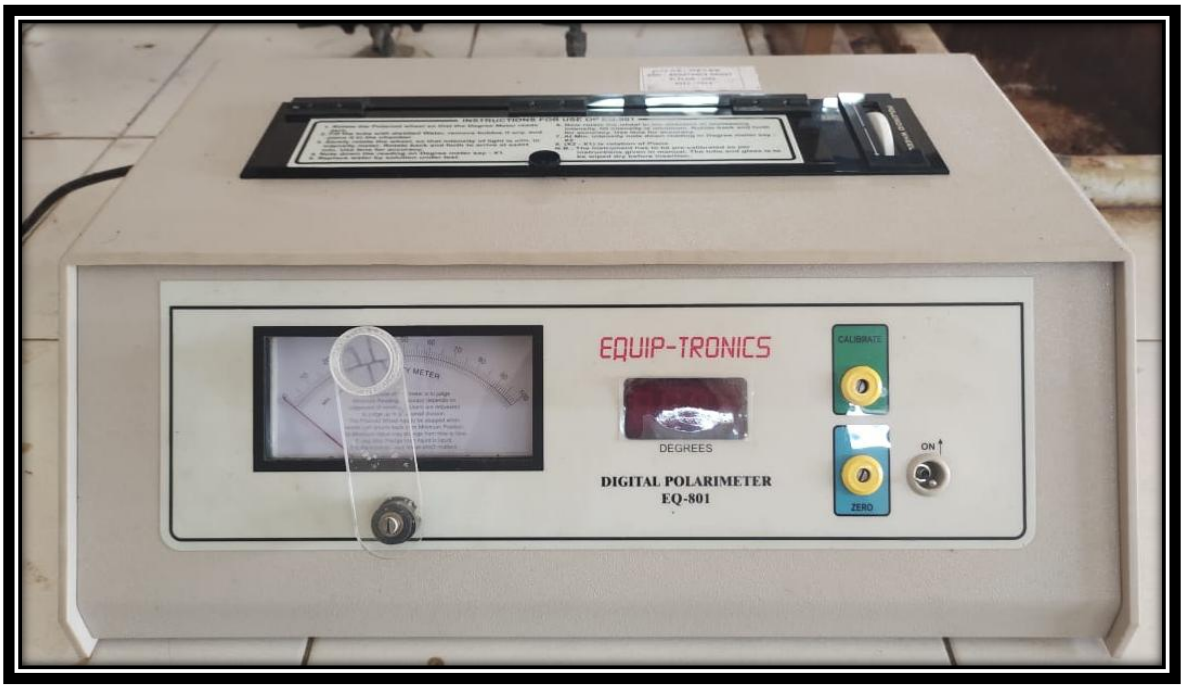
Magnetic stirrer with hot plate

- The primary use of magnetic stirrer or hot plate with magnetic stirrer is to conduct biological and chemical experiments by mixing two components.
- It is equally suitable for solids or liquid samples to obtain a consistent liquid mixture.



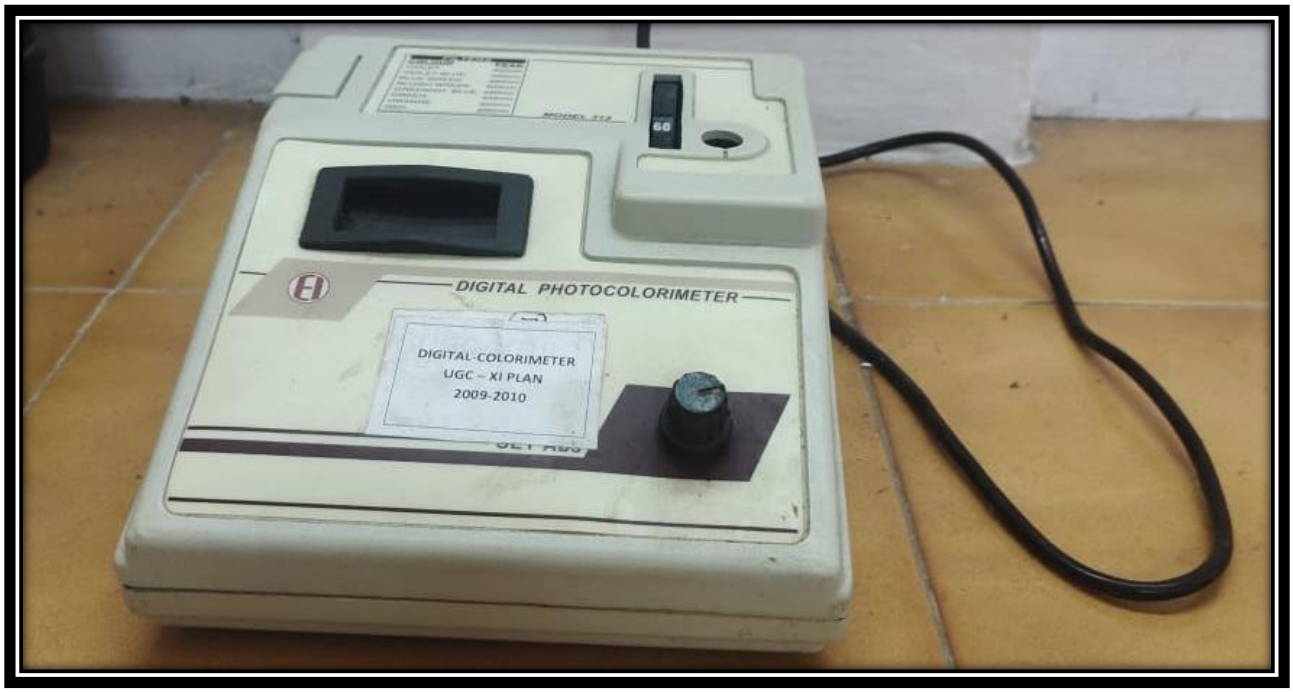
Digital potentiometer

- Digital Potentiometer is a precision instrument for potentiometric measurements
- It is supplied with a set of 4 electrodes viz. Reference, Platinum, Silver & Glass.
- It is extremely useful for potentionmetric, ORP and acid base titrations.



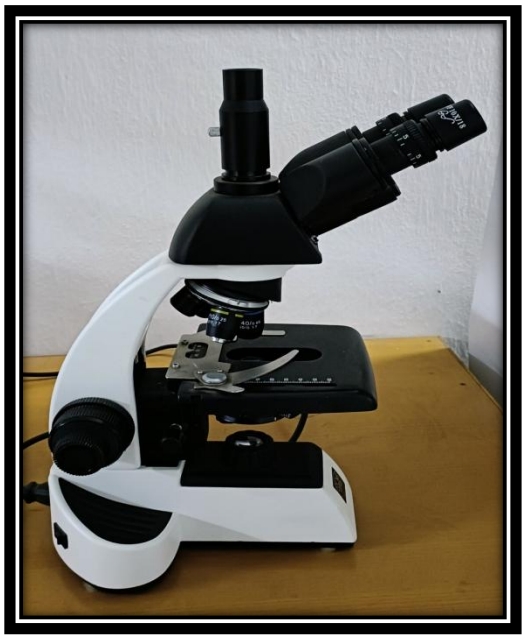
Digital Polarimeter

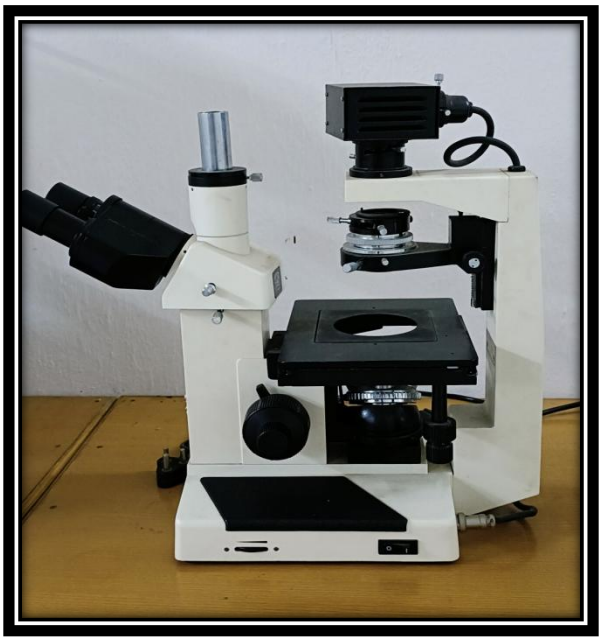
- One of the most important quality control methods used in the pharmaceutical, chemical, cosmetics, food and beverage industry is polarimetry – optically active substances are analyzed by determining their angle of rotation.
- The angle of rotation allows you to ascertain the identity and quality of substances as well as their concentration in mixtures.
- It can also indicate the progress of reactions and conversions.
- Polari meters are used in a wide range of applications, from the determination of the purity and concentration of ingredients in pharmaceuticals to the maturity testing of agricultural products to the measurement of the sugar con tent in beverages and candies.



Digital photo Colorimeter

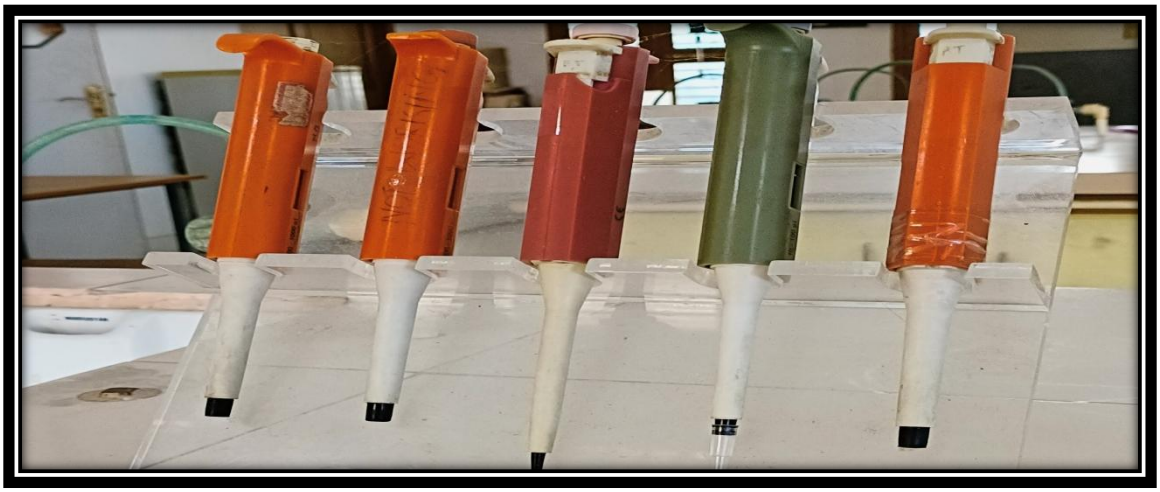
- A colorimeter is an instrument that compares the amount of light getting through a solution with the amount that can get through a sample of pure solvent.
- A colorimeter contains a photocell which is able to detect the amount of light passing through the solution under investigation.





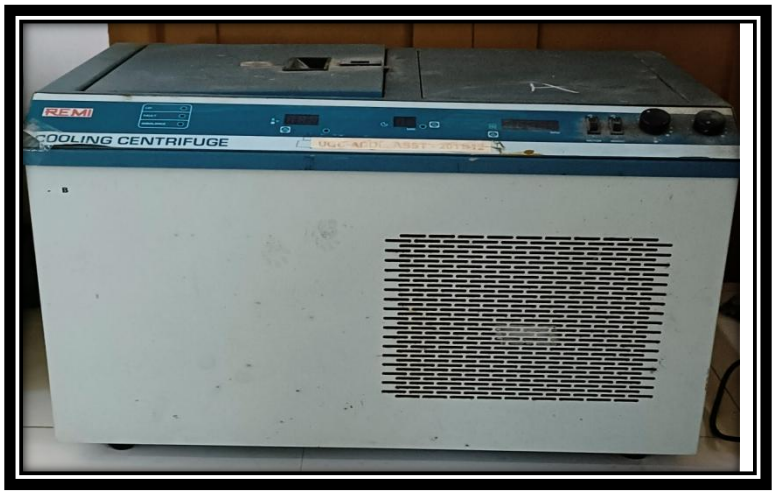
Electron Microscope

Electron microscopes are used to investigate the ultra structure of a wide range of biological and inorganic specimens including microorganisms, cells, large molecules, biopsy samples, metals, and crystals. Industrially, electron microscopes are often used for quality control and failure analysis.



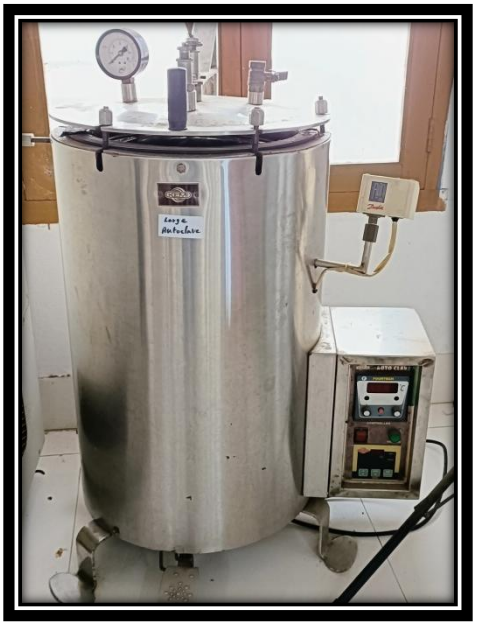
Micropipettes

A micropipette is a common yet an essential laboratory instrument used to accurately and precisely transfer volumes of liquid in the micro liter range.



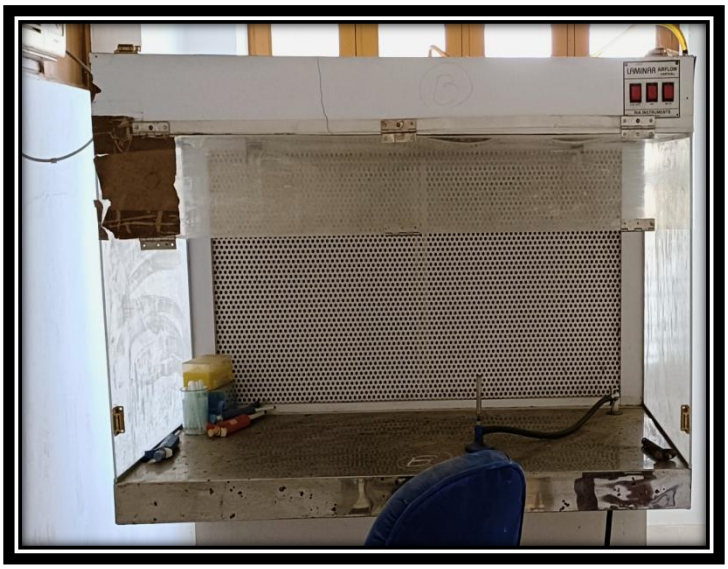
Cooling Centrifuge

A refrigerated centrifuge is laboratory equipment used for the separation of micro liter temperature-sensitive heterogeneous mixtures or samples. This device works by spinning the samples loaded in a rotor at high speed.



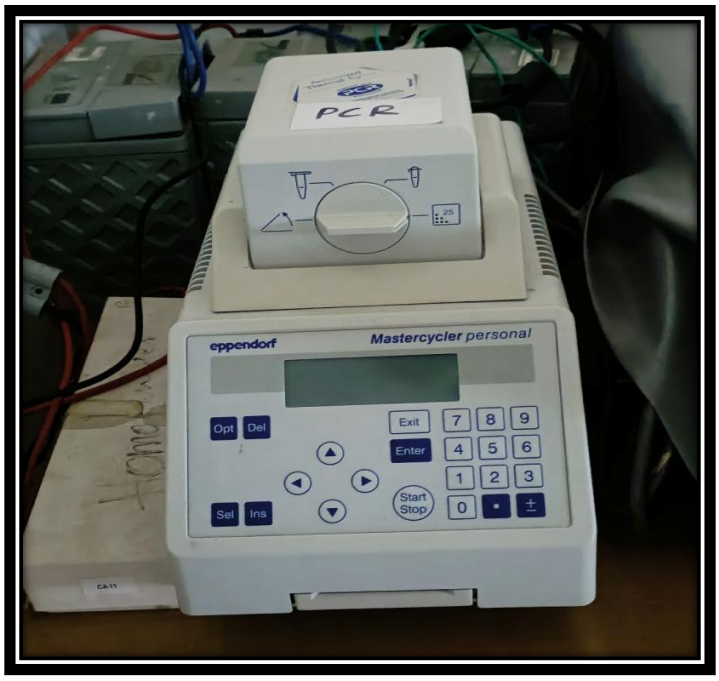
Large autoclave

Autoclaves operate at high temperature and pressure in order to kill microorganisms and spores. They are used to decontaminate certain biological waste and sterilize media, instruments and lab ware.



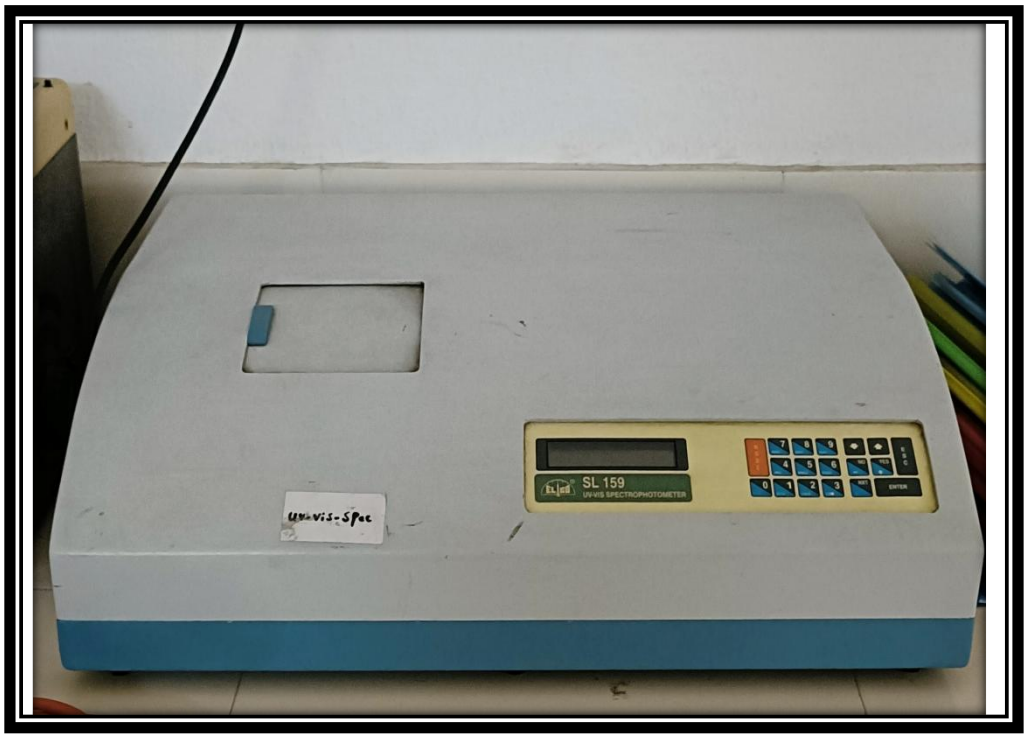
Laminar Air flow

Laminar air flow systems are used in various applications such as life science research, mushroom cultivation, microbiology, IVF, IUI and histopathology / pathology lab, plant tissue and cell culture and pharmaceutical and electronics industry and many more.



PCR

Amplification of gene fragments as fast alternative of cloning. The modification of DNA fragments. The sensitive detection of pathogenic microorganisms, if desired followed by an accurate genotyping. DNA analysis of archaeological specimens



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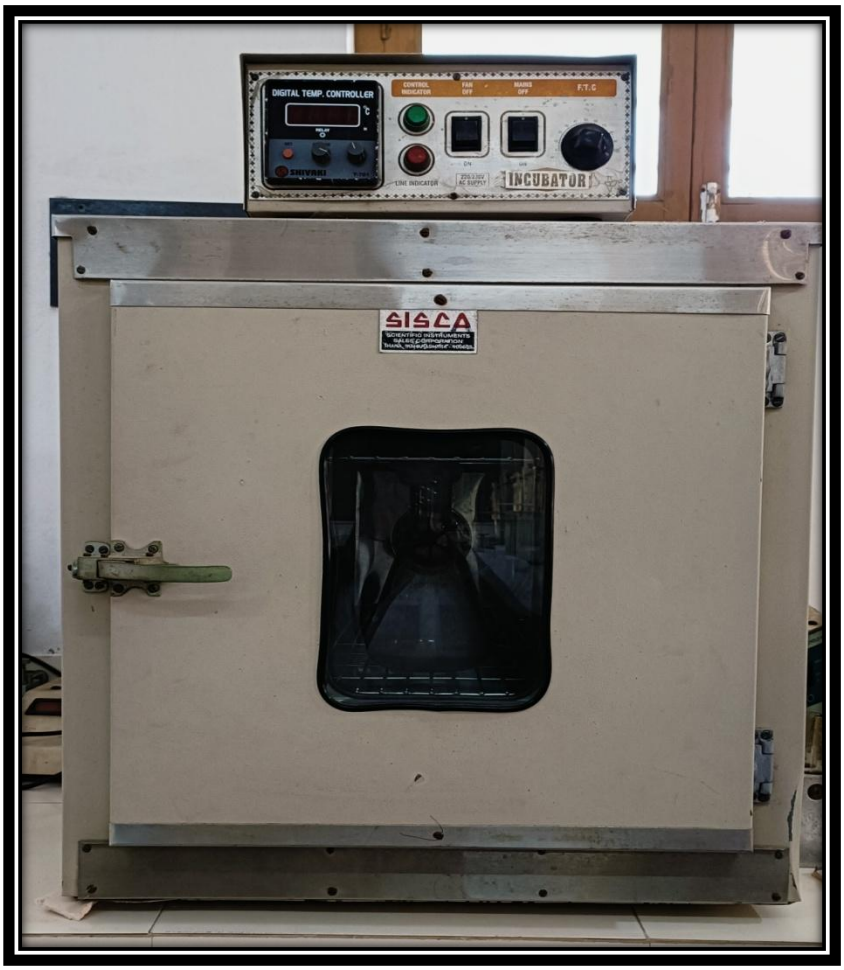
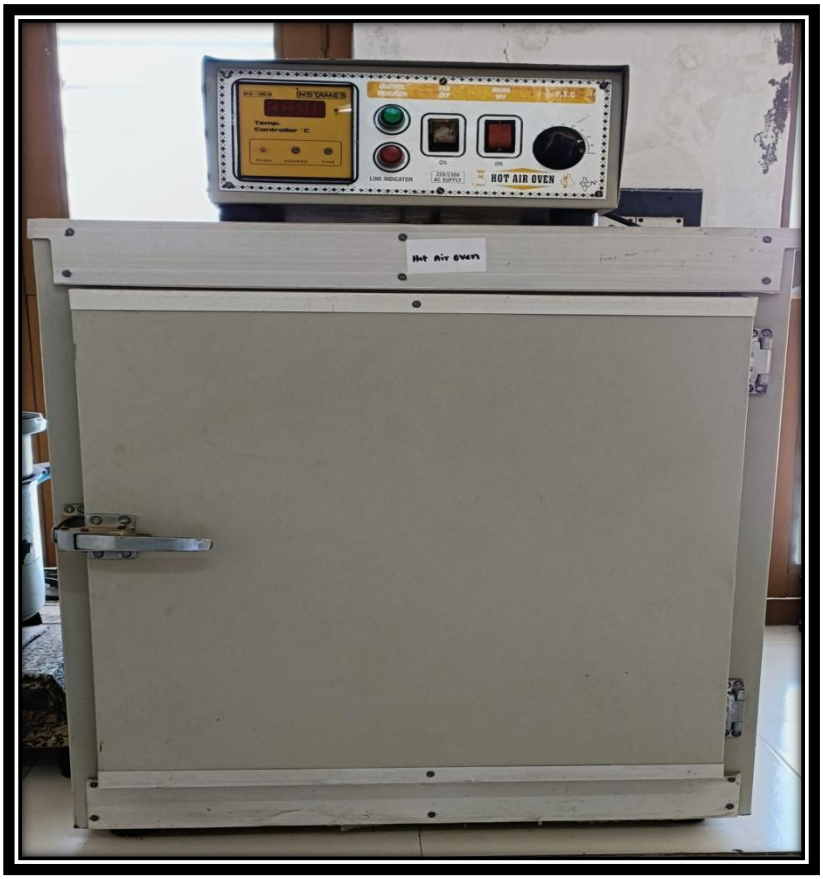


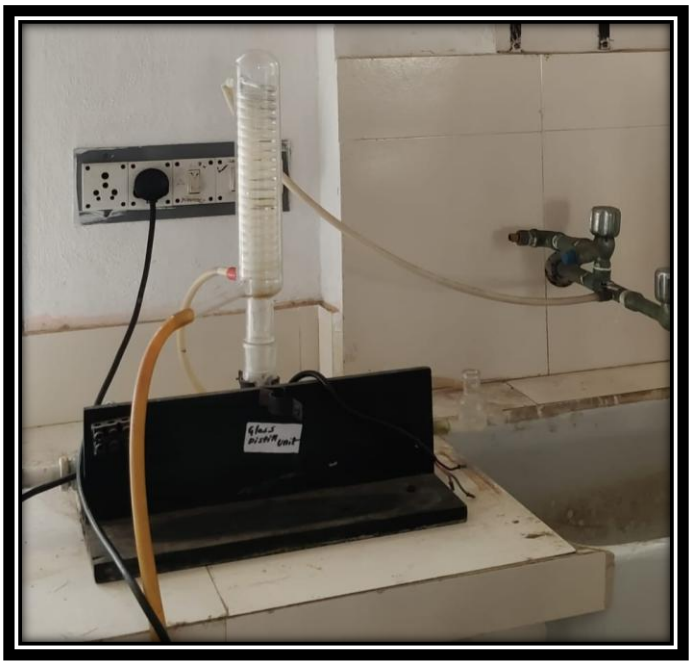
Incubator

Incubator, an insulated enclosure in which temperature, humidity, and other environmental conditions can be regulated at levels optimal for growth, hatching, or reproduction. There are three principal kinds of incubators: poultry incubators, infant incubators, and bacteriological incubators.



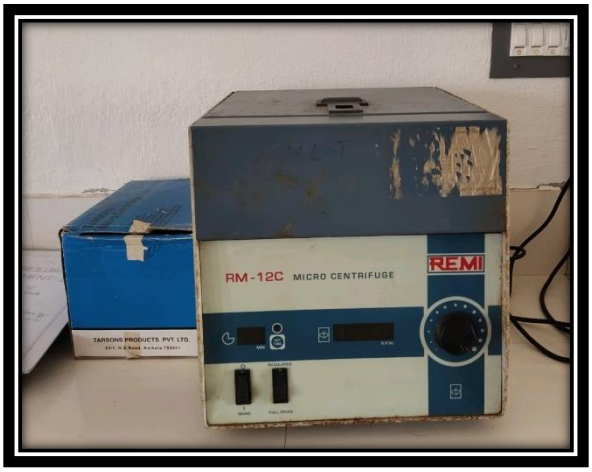
Hot Air Oven

Hot air ovens are used for testing food products, pharmaceutical items, and other consumable materials to check their temperature stability during the shelf life. Hot Air Oven plays a significant role in the sterilization process as it is also known as Hot Sterilizer.



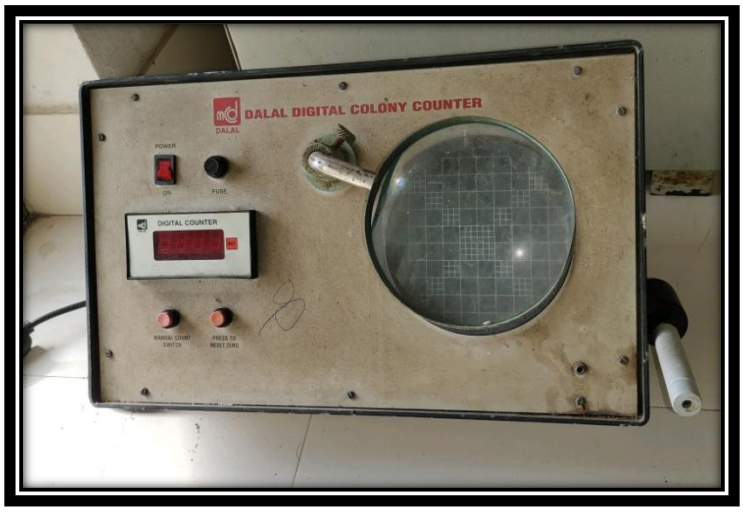
Glass Distil Water unit

Water distiller is a machine which is used to purify water using distillation process, which is related to first boiling impure water after that collecting condensed water in a separate container.



Centrifuge

Centrifuges are used in various laboratories to separate fluids, gases, or liquids based on density. In research and clinical laboratories, centrifuges are often used for cell, organelle, virus, protein, and nucleic acid purification.



Digital Colony counter

Digital Colony Counter is designed for quick and accurate counting of bacterial and mould colonies in Petri dishes. Feature packs and easy to use, this is an indispensable bench top tool for the busy microbiologist. It is designed for rapid and accurate counting of bacterial and mould colonies.