

Microscopy; used for
the separation of
particles from



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MICROSCOPY; Microscopy is a technique that helps to view microorganisms clearly which cannot be seen by the naked eye, using microscopes to view objects.

A microscope is an optical instrument that uses a lens or a combination of lenses to produce magnified images of small objects, especially of objects too small to be seen by the unaided eye. There are many branches of microscopy but the one of the compound microscope is commonly used.

CENTRIFUGATION; Is a technique which is frequently used for the separation of particles from the solution according to their size, shape, density, viscosity of the medium and rotor speed. Different speeds were used for different samples. The particles are suspended in a liquid medium and placed in a centrifuge tube. The tube is then placed in a rotor and spun at a defined speed.

Separation through sedimentation could be done naturally with the earth's gravity, nevertheless, it would take ages. Centrifugation is making that natural process much faster. Rotation of the rotor about a central axis creates a centrifugal force upon the particles in the

suspension. **GAS CHROMATOGRAPHY;** It is a technique to tell of the group of analytical separation techniques used to detect or identify volatile substances in the gas phase. In gas chromatography, the constituents of a sample are dissolved in a solvent and vaporized in order to separate the analytes by distributing the sample between two phases: a stationary phase and a mobile phase. The mobile phase is a chemically inert gas that serves to take the molecules of the analyte through the heated column.

Gas chromatography is one of the sole forms of chromatography that does not utilize the mobile phase for interacting with the

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analyte. The stationary phase is either a solid adsorbant, termed gas-solid chromatography (GSC), or a liquid on an inert support, termed gas-liquid chromatography (GLC). FLAME PHOTOMETRY; A branch of atomic spectroscopy, the oldest instrumental method for the identification of elements. This technique was introduced in the mid of 19th Century during which Bunsen and Kirchhoff showed that the radiation emitted from the flames depends on the characteristic element present in the flame. In this technique the samples in solution are excited to develop a line emission spectra by introduction into a flame.

A photoelectric flame photometer is a device used for inorganic chemical analysis to determine the concentration of certain metal ions, example sodium, potassium, lithium, and calcium. Group 1 and Group 2 metals are sensitive to Flame Photometry due to their low excitation energies