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Question no 1: what is microscope? And also explain principal of microscope?

Answer:

Microscope: The word microscope comes from the fusion of the Greek words micros which means small and skopien, to see.

A microscope is an optical instrument that uses a lens or a combination of lenses to produce highly magnified images of small specimens or objects especially when they are too small to be seen by the naked (unaided) eye.

Principle:

_ Many lenses are arrange in sequence to see the fine details. Based on three important features

Magnification: To enlarge the image

Resolution: Separate the details of two particle in image

Contrast: To produce the details visible to eye

The difference in light intensity between the image and the adjacent background background relative to overall background intensity.

Question no 2: Describe chromatography and also its phases?

Answer:

Chromatography: Chroma mean "color" and Graphy mean "plot or trace, measure, or draw up etc.

- In 19 century Dr Mikhail staved invested a system similar to paper chromatography
- Separation of technique
- Useful technique for the efficient separation of number of compound present in a mixture
- These closely related compound may include protein, amino acid, lipids, vitamins, and drugs etc.

Phases of chromatography:

(I): Mobile phase: Solvent which carries the analyte (sample).

(II): Stationary phase: the substance an which absorption/attain/adhesion of the analyte take place.

Question no3: write down the applications of Flamephotometry?

Answer:

Applications:

- To estimate sodium, potassium, calcium, lithium etc level in sample of serum, urine, CSF and other body fluids
 - Flame photometry is useful for the determination of alkali and alkaline earth metals.
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Question no 4: Explain the components of centrifuge?

Answer:

Components:

- Rotor (used of centrifuge)
 - Drive shaft “The main function of shaft in centrifuge pup is to tansmmet to impact power
 - Motor provide the power to turn the rotor
 - Hanging buckets to heavy tubes
 - Power switch
 - Timer
 - Tachometer (speed in checked by tachometer)
 - Brake
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Question no 5: write note on waterbath?

Answer:

Waterbath:

- A water bath is a device used in the laboratories to incubate samples in water maintained at a constant temperature.
 - Temperature may be controlled digitally or by a dial and once set, the water bath cycles on and off to ensure constancy of the temperature.
 - Some water baths have an additional shaking or stirring mechanism that can be set at varying speeds.
 - Available in a range of capacities from 2 liters to 28 liters, they provide the perfect blend of scientific accuracy and utility for day-to-day laboratory tasks.
 - It also prevents excessive evaporation of the fluid being heated. It allows the heating of small amounts of fluid over a period of time without the concentration of its constituents being changed by evaporation. It is also used when several tubes are to be handled while maintaining the temperature of the contents, e.g. in coagulation tests, Blood banking ,Thawing FFP.Incubate bottles of culture.
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Question no 6: Explain the types of centrifuge?

Answer:

Types of centrifuge:

- Small bench centrifuge (low speed)
- Large capacity refrigerated centrifugal.
- Ultra capacity preoperative (ultra-centrifuge used for separating particals according to densities)
- Analytical centrifuge (very high speed spinning used in molecules biology).

THE END