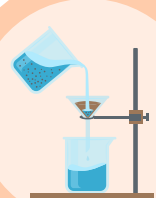


# 11 Most Common SEPARATION TECHNIQUES

Separates magnetic materials (such as iron) from non-magnetic materials.

01.

## Use of magnets



02.

## Filtration

Separates an insoluble solid from a liquid or solution by passing it through a filter medium

Separates a mixture by carefully pouring off the liquid layer while leaving the solid sediment or precipitate behind.

03.

## Decantation



04.

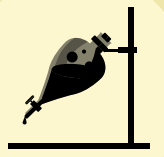
## Sublimation

Separates a mixture by heating it, causing one component to change directly from a solid to a gas, leaving behind the other components.

Separates liquids with different densities by allowing them to settle into distinct layers and then draining them through a tap.

05.

## Use of a Separating funnel



06.

## Crystallization

Separates solute from a solution by cooling it, prompting the solute to crystallize for easy separation from the liquid.

Separates components of a mixture based on differences in their boiling points by heating the mixture, then collecting the condensed vapors.

07.

## Simple Distillation



08.

## Fractional Distillation

Separates mixture components with closer boiling points more effectively than simple distillation by employing a fractionating column for enhanced separation efficiency.

Separates components of a mixture based on their affinity for a stationary phase and a mobile solvent.

09.

## Chromatography



10.

## Solvent Extraction

Separates substances based on their solubility in two immiscible solvents, usually water and an organic solvent.

Separates components of a mixture based on differences in their density by spinning the mixture at high speeds.

11.

## Centrifugation

