

Separation of Substances

- A mixture is formed when two substances are mixed in any proportion. For example, a mixture is obtained when sugar and water are mixed together.
- Separation of different components of a mixture is done to separate harmful components or sometimes useful components from a mixture.

- **Different methods of separation of mixtures:**
 - In the mixture of sand and water, the heavier sand particles settle at the bottom by the process of **sedimentation**.
 - Water is then removed (from the mixture of sand and water after sedimentation) by the process of **decantation**.
 - **Filtration:** It is used to separate the components of a mixture of an insoluble solid and a liquid.
 - **Evaporation:** It is the process of conversion of liquid into its vapour. It can be used to separate a solid dissolved in water. Salt can be separated from sea water by the process of evaporation.
 - **Condensation:** It is the process of conversion of water vapour into its liquid form.

- **Solution:** It can be prepared by dissolving a substance in liquid.
- **Saturated solution:** It cannot dissolve any more of the substance in it.
- Water can dissolve a fixed amount of a substance at a particular temperature. However, on heating, more substance can be dissolved in the solution.
- **Unsaturated Solution:** A solution in which more amount of substance can be dissolved at a particular temperature.