

SOLUTIONS

Aqueous Solution - The solution prepared in water is called aqueous solution.

Ex - sugar water solution

Non-aqueous solution - The solution prepared in organic solvents is called non-aqueous solution.

Solution - The mixture prepared by dissolving a solute in solvent is called solution.

In sugar-water solution, sugar is solute and water is solvent.

Solute - The substance which is dissolved in solvent to prepare solution is called solute.

Solvent - The substance in which a solute is dissolved is called solvent.

Inorganic solvent - water

Organic solvent - Alcohol, acetone,

Carbon tetrachloride, carbon disulphide, benzene. These are called non-aqueous solvent.

* Solution - Solution is a homogeneous mixture of two or more substances.

It is mixture having uniform composition throughout the mass.

A solution is called true solution also, because substances get mixed completely. We can not distinguish them. It is also known as molecular solution, because dissolved particles of solute are same as molecules.

Example - Sea water, tap water, lemonade, Soda water, soft drinks, vinegar, alcohol water solution, salt water solution, sugar water solution etc.

Properties of Solutions

- ① A solution is a homogeneous mixture.
- ② The size of solute particles is extremely small, i.e., it is less than 1 nm in diameter.
- ③ Particles of a solution can not be seen even with a microscope.
- ④ Particles of solution can not be separated by filtration, because they pass through filter paper.
- ⑤ A solution is very stable. It means particles of solute do not separate out on keeping, i.e., they do not settle down.
- ⑥ A solution ~~does~~ does not scatter light, i.e., it does not show Tyndall effect.

Types of Solution

- ① Solid in solid - Solution - Metal alloys
- ② Solution of solid in liquid - A solution prepared by dissolving a solid in liquid is called solid-liquid solution.
Ex - Salt Water Solution,

③ Solution of liquid in liquid - A solution prepared by mixing a liquid in other liquid.

Vinegar is a solution of acetic acid in water.

④ Solution of gas in a liquid - A solution prepared by dissolving a gas in liquid.

Soda water is a solution of carbon dioxide in water.

⑤ Solution of one gas in gas - A solution obtained by mixing a gas in other gas.
Air is a solution of gases.