

Solutions – Suspensions – Colloids

■ Solution = Solute (Solid) + Solvent (Liquid) (Mixture)

- Greater amount
- No Filtration
- Dispersion on molecular level

The solutions made by dissolving various solutes in water – aqueous solutions (Ex: Water)

The solutions made by dissolving solutes in organic liquids – non-aqueous solutions

Organic liquids – alcohol, acetone, carbon disulphide, benzene, carbon tetrachloride

Solution – Homogeneous Mixture

- Sea Water
- Copper Sulphate Solution
- Alcohol & Water Mixture
- Sugar Solution
- Salt Solution
- Metal Alloys (Paper, Coin)

True Solutions – Molecular Solutions

- Size of solute = 10^{-9} m in diameter (Maximum)
- No Scatters light (Limitation)

Types of Solutions

1. Solid + Solid \rightarrow Metal Alloys (Brass = Zn + Cu)
2. Liquid + Liquid \rightarrow Vinegar (Acetic Acid + Water)
3. Gas + Liquid \rightarrow Soda Water ($\text{CO}_2 + \text{H}_2\text{O}$)
4. Gas + Gas \rightarrow Air
5. Solid + Liquid \rightarrow Sugar Solution