

Unit  
**2**  
Solutions

**Types of Solutions:**

Solutions are homogeneous mixtures of two or more components.

For binary solutions having only two components.

The component that is present in large quantity is known as Solvent.

The component that is present in small quantity is known as Solute.

Based on the physical state of solute and solvent, nine different types of solutions are possible.

Solutions are of 3 types based on solvent.

$$\text{Solution} = \text{Solute} + \text{Solvent}$$

Type of Solution	Solute	Solvent	Common Examples
<i>Gaseous Solutions</i>	Gas	Gas	Mixture of oxygen and nitrogen gases
	Liquid	Gas	Chloroform mixed with nitrogen gas
	Solid	Gas	Camphor in nitrogen gas
<i>Liquid Solutions</i>	Gas	Liquid	Oxygen dissolved in water
	Liquid	Liquid	Ethanol dissolved in water
	Solid	Liquid	Glucose dissolved in water
<i>Solid Solutions</i>	Gas	Solid	Solution of hydrogen in palladium
	Liquid	Solid	Amalgam of mercury with sodium
	Solid	Solid	Copper dissolved in gold