Brainbox learn easy

Unit 2 Solutions

Vapour pressure of liquid solutions:

- The solutions whose solvent is liquid are known as liquid solutions.
- Vapour pressure of liquid in liquid solutions can be explained by Raoult's law.
- For a solution of volatile liquids, the partial vapour pressure of each component of the solution is directly proportional to its mole fraction in solution.
- For component 1 & 2,

$P_1 \alpha \chi_1$; $P_2 \alpha \chi_2$

$P_1 = P_1^0 \chi_1$; $P_2 = P_2^0 \chi_2$

Total pressure $P = P_1 + P_2$

$$P = P_1^0 \chi_1 + P_2^0 \chi_2$$

- For a solution containing non – volatile solid, according to Raoult's law, "The partial vapour pressure of each volatile component in the solution is directly proportional to its mole fraction".

$$P \alpha \chi \Rightarrow P = P_1^0 \chi$$