

Overview of Concentration

Concentration - How much solute + solvent in given solution

Big Picture

- "Like dissolve likes" → Yes, make solution (homogenous mixture)
↳ No, make 2 phases (heterogenous mixture)
- Dissolve/miscible - solute particle separate from each other and go into empty spaces between solvent's particle to make solution.
- If just adding solute to solvent, 3 types of "buckets"
 - a) Unsaturated - not all empty space filled with solute particles. Can add more solute
 - b) Saturated - Maximum amount solute particles into given amount solvent. No empty space left.
(Solid equilibrium)
 - c) Saturated solution with solute in bottom of bucket - Can't add more solute than saturated; if do it just stays "not dissolved"

Types of Concentration Terms

only at saturation point (saturated)

Solubility (s)

Any solution (unsaturated / saturated)

Molarity (M)

Molality (m)

Mole fraction (χ_i)

Mole %

Mass %

Volume %