

Worksheet-2

1) Distinguish between Concentration & Solubility

Ans)

Concentration	Solubility
* Concentration is amount of solute dissolved in a unit quantity (mass or volume) of a solution.	* While solubility is the maximum amount of the solute that can be dissolved in a given amount of the solvent.

* Concentration is expressed as percent by weight or volume, mole, fraction etc.	* Solubility is the ability of a solute to dissolve in a solvent at given temperature & pressure. It is expressed as gram, litre etc.
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2) How much amount of water should be added with 24ml of alcohol to make a solution of concentration of 12.5 percent?

Ans) Given,

Volume of Solute = 24 ml
Concentration of solution = 12.5%

$$\begin{aligned} \text{Total} &\Rightarrow 24 + 12.5\% \\ &\Rightarrow \underline{36.5} \end{aligned}$$

$$\text{Concentration} = \frac{\text{Volume of Solute}}{\text{Volume of Solution}} \times 100$$

$$\begin{aligned} &= \frac{24}{36.5} \times 100 \\ &= \frac{24 \times 10}{1} \times \frac{100}{365} \times \frac{20}{1} \\ &= \underline{\underline{\frac{480}{73}}} \end{aligned}$$