

H.W
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Q1) Distinguish between conc & solubility.
concentration is amount of solute dissolved in a unit quantity of a solution.

Solubility is the maximum amount of the solute that can be dissolved in a given amount of the solvent.

Q2) How much amount of water ~~and~~ ~~that~~ should be added with 24 ml of alcohol to make a solⁿ of concentration of 12.5 percentage?

Volume of alcohol solute = 24 ml

Volume of water be x .

concentration of the solⁿ = 12.5%

we know,

$$\text{conc. of the sol.}^n = \frac{\text{Vol. of solute}}{\text{Vol. of sol.}^n} \times 100$$

$$= 12.5 = \frac{24}{24+x} \times 100$$

$$\Rightarrow \frac{125}{10} = \frac{2400}{24+x}$$

$$\Rightarrow 125(24+x) = 24000$$

$$\Rightarrow 24+x = \frac{24000}{125}$$

$$\Rightarrow 24+x = 192$$

$$\Rightarrow x = 192 - 24$$

$$\Rightarrow x = 168 \text{ ml.}$$