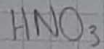


EJERCICIOS DE MOLALIDAD

① Calcular la molalidad de una disolución de 95 gramos de ácido nítrico (HNO_3) en 25g de agua. $25 \div 1000 = 0,025$



Masa = 95g

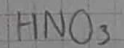
Volumen = 0,025

PM = 63

$$m = \frac{\text{gramos}}{(\text{PM})(\text{Kg})}$$

$$\begin{aligned} \text{H} &= 1 \times 1 = 1 \\ \text{N} &= 1 \times 14 = 14 \\ \text{O} &= 3 \times 16 = 48 \\ \hline &63 \end{aligned}$$

$$m = \frac{95}{(63)(0,025)} = \frac{95}{1,575} = 60,317m$$



Masa = 95g

Volumen = 0,025

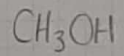
$$m = \frac{m}{\text{kg}}$$

$$\begin{aligned} \text{H} &= 1 \times 1 = 1 \\ \text{N} &= 1 \times 14 = 14 \\ \text{O} &= 3 \times 16 = 48 \\ \hline &63 \end{aligned}$$

$$\frac{95g}{63g/mol} = 1,507 \text{ moles}$$

$$\frac{1,507m}{0,025} = 60,317m$$

② Calcular la molalidad de metanol (CH_3OH) en una disolución 15g donde el disolvente son 50 gramos de agua. $50 \div 1000 = 0,05$



Masa = 15g

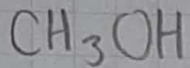
Volumen = 0,05

PM = 32

$$m = \frac{\text{gramos}}{(\text{PM})(\text{kg})}$$

$$\begin{aligned} \text{C} &= 1 \times 12 = 12 \\ \text{H} &= 3 \times 1 = 3 \\ \text{O} &= 1 \times 16 = 16 \\ \hline &32 \end{aligned}$$

$$m = \frac{15}{(32)(0,05)} = \frac{15}{1,6} = 9,375 \text{ m}$$



Masa = 15g

Volumen = 0,05

PM = 32

$$C = 1 \times 12 = 12$$

$$H = 3 \times 1 = 3$$

$$O = 1 \times 16 = 16$$

$$H = 1 \times 1 = 1$$

32

$$m = \frac{m}{kg}$$

$$\frac{15g}{32g/mol} = 0,468 \text{ moles}$$

$$\frac{0,468}{0,05} = 9,375 \text{ m}$$