

Ejercicios 2

1 Calcular la molaridad de una disolución de 95 gramos de ácido nítrico HNO_3 en 25 gramos de agua

Formula 1

$$g = 95$$

$$\text{Agua} = 25 \text{ g} \div 1000 = 0,025$$

$$PM =$$

$$\text{H } 1 \times 1 = 1$$

$$\text{N } 14 \times 1 = 14$$

$$\text{O } 16 \times 3 = 48$$

$$63$$

$$m = \frac{95}{(63)(0,025)}$$

$$\cancel{\times}$$

$$1,575$$

$$m = 60,3$$

$$m = \frac{95}{1,575} = 60,3 \text{ m}$$

Formula 2

$$\text{gramos} = 95$$

$$\text{Agua} = 0,025$$

$$PM = 63$$

$$\frac{95}{63} = 1,507$$

$$m = \frac{1,507}{0,025} = 60,2 \text{ m}$$

$$m = 60,2$$

2 calcular la molaridad de metanol CH_3OH en una disolución de 15g donde el disolvente son 50 gramos de agua

Formula 1

$$g = 15$$

$$\text{Agua} = 50 \div 1000 = 0,05$$

PM

$$\text{C } 12 \times 1 = 12$$

$$\text{H } 1 \times 4 = 4$$

$$\text{O } 16 \times 1 = 16$$

$$32$$

$$\begin{array}{r} 15 \\ \hline (32)(0,05) \\ \times \\ \hline 1,6 \end{array}$$

$$\frac{15}{1,6} = 9,375 \text{ m}$$

$$m = 9,375$$

Formula 2

$$\text{gramos} = 15$$

$$\text{Agua} = 0,05$$

$$PM = 32$$

$$\frac{15}{32} = 0,468$$

$$\frac{0,468}{0,05} = 9,36 \text{ m}$$

$$m = 9,36$$