

Ejercicios.

1.

$$C = 40\%$$

$$H = 6,7\%$$

$$O = 53,3\%$$

$$\text{Masa } 90\text{g.}$$

$$C = 40 \div 12\text{g/mol} = 3,3\text{ mol} \div 3,3 = 1$$

$$H = 6,7 \div 1\text{g/mol} = 6,7\text{ mol} \div 3,3 = 2$$

$$O = 53,3 \div 16\text{g/mol} = 3,3\text{ mol} \div 3,3 = 1$$

$$\text{Formula Empirica} = (\text{CH}_2\text{O})$$

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

$$H = 1 \times 2 = 2$$

$$O = 16 \times 1 = \frac{16}{30}$$

$$n = 90\text{g} / 30 = 3$$

$$3 \times 1 = 3$$

$$3 \times 1 = 6$$

$$3 \times 1 = 3$$

$$\text{Formula molecular } (\text{C}_3\text{H}_6\text{O}_3)$$

2.

$$C = 37,8\%$$

$$H = 6,3\%$$

$$Cl = 55,8\%$$

$$\text{Masa} = 127\text{g}$$

$$C = 37.8\% \cdot 12 \text{ g/mol} = 3.15 \text{ mol} \div 1.5 = 2$$

$$H = 6.3\% \cdot 1 \text{ g/mol} = 6.5 \text{ mol} \div 1.5 = 4$$

$$Cl = 55.8\% \cdot 35 \text{ g/mol} = 1.57 \text{ mol} \div 1.5 = 1$$

Formula empirica ($C_2 H_4 Cl$)

$$C = 12 \times 2 = 24$$

$$H = 1 \times 4 = 4$$

$$Cl = 35 \times 1 = \frac{35}{63}$$

$$n = 127 \text{ g} / 63 = 2$$

$$2 \times 2 = 4$$

$$2 \times 4 = 8$$

$$2 \times 1 = 2$$

Formula Molecular ($C_4 H_8 Cl_2$)