

Solución Taller

① un experimento arrojó los siguientes resultados:

$$C = 92.3\% = CH$$

$$H = 7.7\%$$

$$C = \frac{92.3g}{12g/mol} = 7.691 - \frac{7.691}{7.7} = 1$$

$$H = \frac{7.7}{1g/mol} = 7.7 - \frac{7.7}{7.7} = 1$$

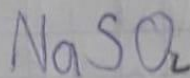
② obten la fórmula empírica si hay =

$$Na: 32.4\% \quad S: 22.5\% \quad O: 45.1\%$$

$$Na = \frac{32.4\%}{23g/mol} = 1.4 - \frac{1.4}{1.4} = 1$$

$$S = \frac{22.5}{32} = 1.4 - \frac{1.4}{1.4} = 1$$

$$O = \frac{45.1}{16} = 2.8 - \frac{2.8}{1.4} = 2$$



③ obtener la fórmula empírica si hay:

$$C = 48\% \quad H = 4\% \quad N = 12.8\% \quad O = 12.8$$

$$C = \frac{48g}{12g} = 4 - \frac{4}{0.8} = 5$$

$$H = \frac{4}{1} = 4 - \frac{4}{0.8} = 5 \quad C_5H_5NO$$

$$N = \frac{12.8}{14} = 1 - \frac{1}{0.8} = 1.25$$

$$O = \frac{12.8}{16} = 0.8 - \frac{0.8}{0.8} = 1$$

④ calcular la masa empírica = N_2O

$$N = 0.076 \quad O = 0.181$$

$$N = \frac{0.076}{14} = \frac{184}{88} - \frac{184}{88} = 2$$

$$O = \frac{0.181}{16} = \frac{88}{88} - \frac{88}{88} = 1$$

⑤ Determine la fórmula empírica

$$\text{Na} = 21.6\% \quad \text{Cl} = 33.3\%$$

$$\text{Na} = \frac{21.6}{23} = 1 \quad \frac{1}{1} = 1 \quad \text{NaCl}$$

$$\text{Cl} = \frac{33.3}{35} = 1 \quad \frac{1}{1} = 1$$