

## Fórmula Empírica

$$Na = 32.4\%$$

$$S = 22.6\%$$

$$O = 45.1\%$$

Peso 1: peso atómico

$$\text{Mol Na} = \frac{32,4 \text{ g}}{23 \text{ g/mol}} = 1,408$$

$$\text{Mol S} = \frac{22,6 \text{ g}}{32 \text{ g/mol}} = 0,706$$

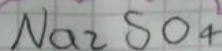
$$\text{Mol O} = \frac{45,1 \text{ g}}{16 \text{ g/mol}} = 2,818$$

Dividir con el resultado más pequeño

$$\text{Mol } 1,408 / 0,706 = 2$$

$$\text{Mol } 0,706 / 0,706 = 1$$

$$\text{Mol } 2,818 / 0,706 = 4$$



## Actividad

1  $C = 92,3\%$

$H = 7,7\%$

2  $Na = 32,4\%$

$S = 22,5\%$

$O = 45,1\%$

3  $C = 48\%$

$H = 4\%$

$N = 22,4\%$

$S = 12,8\%$

$O = 12,8\%$

4  $N = 0,079$

$O = 0,181$

5  $Na = 21,6\%$

$Cl = 33,3\%$

$O = 45,1\%$

## Solución

1

$$\text{Mol C} = \frac{92,3}{12 \text{ g/mol}} \quad 7,691 / 7,7 = 1$$

$$\text{Mol H} = \frac{7,7}{1 \text{ g/mol}} \quad 7,7 / 7,7 = 1$$

CH

2

$$\text{Mol Na} = \frac{32,4}{23} \quad 1,408 / 0,703 = 2$$

$$\text{Mol S} = \frac{22,5}{32} \quad 0,703 / 0,703 = 1 \quad \text{Na}_2\text{SO}_4$$

$$\text{Mol O} = \frac{45,1}{16} \quad 2,818 / 0,703 = 4$$

3

$$\text{Mol C} = \frac{48}{12} \quad 4 / 0,4 = 10$$

$$\text{Mol H} = \frac{4}{1} \quad 4 / 0,4 = 10$$

$$\text{Mol N} = \frac{22,4}{14} \quad 1,6 / 0,4 = 4$$

$$\text{Mol S} = \frac{12,8}{32} \quad 0,4 / 0,4 = 1$$

$$\text{Mol O} = \frac{12,8}{16} \quad 0,8 / 0,4 = 2$$

4

$$\text{Mol N} = \frac{0,079}{14}$$

$$0,005 / 0,005 = 1$$

$\text{NO}_2$

$$\text{Mol O} = \frac{0,181}{16}$$

$$0,011 / 0,005 = 2$$

5

$$\text{Mol Na} = \frac{21,6}{23}$$

$$0,939 / 0,939 = 1$$

$$\text{Mol Cl} = \frac{33,3}{35}$$

$$0,951 / 0,939 = 1$$

$\text{NaClO}_3$

$$\text{Mol O} = \frac{45,1}{16}$$

$$2,818 / 0,939 = 3$$