

Percent Composition

Percent Composition: the percent of each element in a compound

General Equation:

$$\frac{\text{mass of element}}{\text{mass of compound}} \times 100$$

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Percent Composition

Find the percent by mass of each element in NaNO_3 .

$$\begin{array}{l} \text{Na} = 1 \times 23 = 23 \text{g/mol} \\ \text{N} = 1 \times 14 = 14 \text{g/mol} \\ \text{O} = 3 \times 16 = 48 \text{g/mol} \\ \hline 85 \text{g/mol} \end{array}$$

$$\begin{array}{l} \frac{23 \text{g/mol}}{85 \text{g/mol}} \times 100 = 27.0\% \\ \frac{14 \text{g/mol}}{85 \text{g/mol}} \times 100\% = 16.5\% \\ \frac{48 \text{g/mol}}{85 \text{g/mol}} \times 100\% = \frac{56.5\%}{100\%} \end{array}$$

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