

TOPIC 7 PERCENTAGE COMPOSITION SUMMARY NOTES

Summary

1.

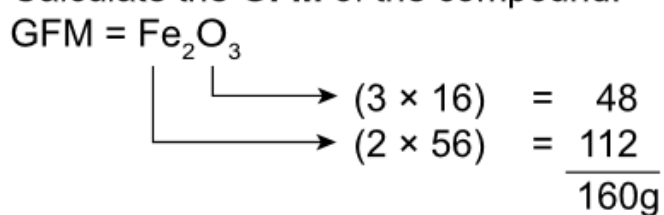
- the percentage composition of an element in any compound can be calculated from the formula of the compound.

Percentage composition can be calculated using the formula:

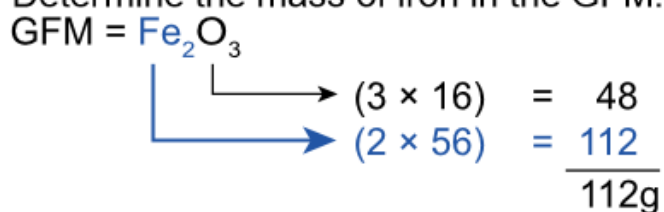
$$\% \text{ by mass} = \frac{m}{GFM} \times 100$$

This calculation is simple if you remember the following steps.

1. Calculate the **GFM** of the compound.



2. Determine the mass of iron in the GFM.



3. Use the equation to calculate percentage composition.

$$m(\text{Fe}_2) = 112 \text{ g}$$

$$GFM(\text{Fe}_2\text{O}_3) = 160 \text{ g}$$

$$\% \text{ by mass} = \frac{m}{GEM} \times 100$$

$$\% \text{ by mass} = \frac{112}{160} \times 100$$

% by mass = 70 %

Therefore, the percentage by mass of iron in hematite is 70 %.