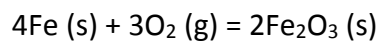


Question #63793, Chemistry / General Chemistry

How many moles of $\text{Fe}_2\text{O}_3(\text{s})$ is produced when 5.0 moles of $\text{Fe}(\text{s})$ reacts,

Solution:

Chemical reaction:



According to balanced above equation:

$$\frac{1}{4} \times n(\text{Fe}) = \frac{1}{2} \times n(\text{Fe}_2\text{O}_3)$$

n-moles. Thus:

$$n(\text{Fe}_2\text{O}_3) = \frac{2}{4} n(\text{Fe}) = \frac{1}{2} \times n(\text{Fe}) = \frac{1}{2} \times 5.0 \text{ moles} = \mathbf{2.5 \text{ moles}}$$

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