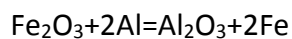


Answer on Question #63872, Chemistry / General Chemistry

Consider the reaction $\text{Fe}_2\text{O}_3 + 2\text{Al} = \text{Al}_2\text{O}_3 + 2\text{Fe}$

How many grams of Fe_2O_3 are necessary to make 100.2 grams of Al_2O_3 ?

Solution:



M (Fe_2O_3) = 159.69 g/mol

M (Al_2O_3) = 101.96 g/mol

$$\frac{x (g)}{159.69 \left(\frac{g}{mol}\right)} = \frac{100.2 (g)}{101.96 \left(\frac{g}{mol}\right)}$$

Where x is the mass of Fe_2O_3 .

$$x (g) = \frac{159.69 \left(\frac{g}{mol}\right) \times 100.2 (g)}{101.96 \left(\frac{g}{mol}\right)}$$

$$x (g) = 156.93 g$$

Answer: 156.93 g