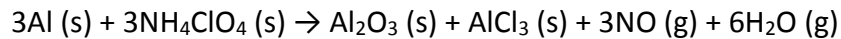


Answer on Question #66702, Chemistry, General Chemistry



If 90.0 g of Al is reacted determine the mass of nitrogen monoxide produced.

Solution:

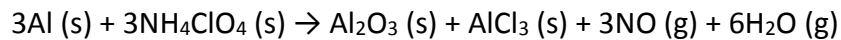
Molar mass of Aluminium is $M = 26.98 \text{ g/mol}$

Molar mass of Nitrogen monoxide is $M = 30.01 \text{ g/mol}$

Using the chemical reaction between Al and NH_4ClO_4 :

90.0 g

X g



3·26.98

3·30.01

We can determine the mass of nitrogen monoxide NO produced, according to proportion:

$$\frac{90.0}{3 \cdot 26.98} = \frac{X}{3 \cdot 30.01}$$

Where X is mass of NO:

$$X = \frac{90.0 \cdot 3 \cdot 30.01}{3 \cdot 26.98} = 100.1 \text{ (g)}$$

So, the mass of nitrogen monoxide equals 100.1 grams.

Answer: $m(\text{NO}) = 100.1 \text{ g}$.

Answer provided by <https://www.AssignmentExpert.com>