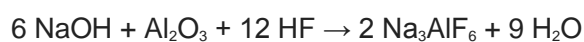


Question #81896, Chemistry / General Chemistry | for completion

If 11.3 kilograms of $\text{Al}_2\text{O}_3(\text{s})$, 51.4 kilograms of $\text{NaOH}(\text{l})$, and 51.4 kilograms of $\text{HF}(\text{g})$ react completely, how many kilograms of cryolite will be produced?

Answer:

240 g/mol 102 g/mol 240g/mol



51.4 kg 11.3 kg 51.4 kg X kg

0.2141 : **0.1108** : 0.2141

There is minimum proportion **0.1108**(Al_2O_3), therefore we choose 11.3 kg for this reaction.

$$\frac{11.3}{102} = \frac{X}{210}$$

$$X = 210 \times 11.3 / 102 = 23.264 \text{ kg (Na}_3\text{AlF}_6)$$

23.264 kg (Na₃AlF₆)

Answer provided by AssignmentExpert.com