

Answer on Question #48457, Chemistry, Other

Task:

How many moles are in 484.25 g of ammonium phosphate $[(\text{NH}_3)_3\text{PO}_4]$?

How many moles are in 75.46 g of Sulfuric Acid $[\text{H}_2\text{SO}_4(\text{aq})]$?

How many moles are in 270.0 g of Dinitrogen pentoxide $[\text{N}_2\text{O}_5]$?

How many moles are in 546 g of tin IV fluoride $[\text{SnF}_4]$

Answer:

$$v = \frac{m}{M}$$

$$M((\text{NH}_3)_3\text{PO}_4) = 143 \text{ g/mol}$$

$$M(\text{H}_2\text{SO}_4) = 98 \text{ g/mol}$$

$$M(\text{N}_2\text{O}_5) = 108 \text{ g/mol}$$

$$M(\text{SnF}_4) = 474.8 \text{ g/mol}$$

$$v((\text{NH}_3)_3\text{PO}_4) = \frac{484.25}{143} = 3.39 \text{ mol}$$

$$v(\text{H}_2\text{SO}_4) = \frac{75.46}{98} = 0,77 \text{ mol}$$

$$v(\text{N}_2\text{O}_5) = \frac{270}{108} = 2,5 \text{ mol}$$

$$v(\text{SnF}_4) = \frac{546}{474,8} = 1,15 \text{ mol}$$