

3.74  $4\text{NH}_3 + 5\text{O}_2 \rightarrow 4\text{NO} + 6\text{H}_2\text{O}$   
 1.5g 2.75g LR

LR  
 9

1.5g NH <sub>3</sub>	<del>1 mole NH<sub>3</sub></del>	<del>4 mole NO</del>	30g NO	= 2.65g NO
<del>17g NH<sub>3</sub></del>	<del>4 mole NH<sub>3</sub></del>	<del>1 mole NO</del>		

Same Product

9-16

2.75g O <sub>2</sub>	<del>1 mole O<sub>2</sub></del>	4 mole NO	30g NO	= 2.06g NO
<del>32g O<sub>2</sub></del>	5 mole O <sub>2</sub>	<del>1 mole NO</del>		

\*LR\*

b

2.75g O <sub>2</sub>	<del>1 mole O<sub>2</sub></del>	6 mole H <sub>2</sub> O	18g H <sub>2</sub> O	= 1.86g H <sub>2</sub> O
<del>32g O<sub>2</sub></del>	5 mole O <sub>2</sub>	<del>1 mole H<sub>2</sub>O</del>		

Sep 23-7:40 AM

Use 1.17g 3.92g  $4\text{NH}_3 + 5\text{O}_2 \rightarrow 4\text{NO} + 6\text{H}_2\text{O}$   
 1.5g 2.75g LR 2.06g 1.86g = 3.92g

↑  
 how much is left over

Used up

START 1.5g - used 1.17g = left over 0.33g NH<sub>3</sub>

Final AMT USED

<del>2.75g O<sub>2</sub></del>	<del>1 mole O<sub>2</sub></del>	4 mole NH <sub>3</sub>	17g NH <sub>3</sub>	= 1.17g NH <sub>3</sub> used
<del>32g O<sub>2</sub></del>	5 mole O <sub>2</sub>	<del>1 mole NH<sub>3</sub></del>		

Sep 23-8:05 AM

Yields

Actual yield <sub>experimental</sub> → how much <sup>of</sup> your product you get in a rxn yM.

Theoretical yield → calculated amount of your product

$\% \text{ error} = \frac{\text{Act} - \text{Theoretical}}{\text{Theoretical}} \times 100$  *how far off you are*

$\% \text{ yield}$   $= \frac{\text{(Exp) Actual}}{\text{Theoretical}} \times 100$  *how efficient you are*

$\Sigma = 100\%$

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Theor 25g      get 20g exp

$$\% \text{ error} = \frac{25 - 20}{25} \times 100 = 20\% \text{ error}$$

$$\% \text{ yield} = \frac{20}{25} \times 100 = 80\%$$

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AW  
PS 3-1  
(Skip 9+23)

Sep 23-8:24 AM