Exp. No.	Experiment/Subject	Date	02
Name	Lab Partner	Locker/ Desk No.	Course & Section No.

Percent Yield = $\frac{\text{Actual}}{\text{Theoretical}} \times 100\%$

$2\,C_8H_{18} + 25\,O_2 \rightarrow 16\,CO_2 + 18\,H_2O$

Actual = 28.16 g CO_2

4 mol C_8H_{18} w/ 8 mol O_2

If 2 mol C_8H_{18} takes 25 mol O_2,

then for 4 mol C_8H_{18} should take 50 mol O_2

(calculated by $4\ \text{mol}\ C_8H_{18} \times \frac{25\ \text{mol}\ O_2}{2\ \text{mol}\ C_8H_{18}} = 50\ \text{mol}\ O_2$)

This makes O_2 the limiting reactent

~~So, how much grams of CO_2 do we get from~~ this base equation.

useless

1 mol CO_2 = (12+(16·2)) = 44 g CO_2 → pulled from periodic table

~~16 mol CO_2 × $\frac{44\ g\ CO_2}{1\ mol\ CO_2}$ = 704 g CO_2~~

important!

$8\ \text{mol}\ O_2 \times \frac{16\ \text{mol}\ CO_2}{25\ \text{mol}\ O_2} = 5.12\ \text{mol}\ CO_2$

$5.12\ \text{mol}\ CO_2 \times \frac{44\ g\ CO_2}{1\ \text{mol}\ CO_2} = 225.28\ g\ CO_2$ ← This is the theoretical

Percent Yield = $\frac{28.16\ g\ CO_2}{225.28\ g\ CO_2} = 0.125 \times 100 = 12.5\%$ ← make it a percent

Signature	Date	Witness/TA	Date