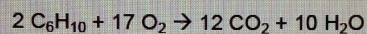


Warm-up:



- 1) If I do this reaction with 35 grams of C_6H_{10} and 45 grams of oxygen, how many grams of carbon dioxide will be formed?
- 2) What is the limiting reagent for problem 1? _____
- 3) How much of the excess reagent is left over after the reaction from problem 1 is finished?

• Theoretical Yield: amount of product that could be formed
↳ calculated in grams

• Actual Yield: amount of product formed in reality

• Percent Yield: $\frac{\text{Actual}}{\text{Theoretical}} \cdot 100 = \%$

↳ Gives us an efficiency / reaction completion



- 1) What is the theoretical yield of LiCl if 20.0 grams of LiOH are used?

$$\frac{20.0 \text{g LiOH}}{23.95 \text{g}} \cdot \frac{1 \text{ mol LiOH}}{1 \text{ mol LiOH}} \cdot \frac{1 \text{ mol LiCl}}{1 \text{ mol LiOH}} \cdot \frac{42.39 \text{g LiCl}}{1 \text{ mol LiCl}} = 35.4 \text{g LiCl}$$

- 2) If 6.0 g of LiCl are produced, what is the % yield?

$$\% = \frac{6.0 \text{g}}{35.4 \text{g}} \cdot 100 = \boxed{16.95\%}$$