

Success 24/7 Chemistry: Percent Yield

Percent Yield is the ratio of the amount of product you actually obtained (actual) to the amount of product you should have produced (theoretical).

$$\% \text{ yield} = \frac{\text{actual}}{\text{theoretical}} \times 100$$

Percent Yield Helper

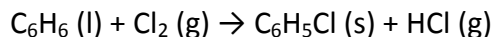
Given: amount of reactant

Want: same unit as actual (will be your theoretical)

Actual: amount of product

Ex: Zach prepares acetone by decomposing calcium acetate. If Zach collected 10.4 g of acetone and the theoretical yield is 11.6 g, what is the percent yield?

Ex: Chlorobenzene, $\text{C}_6\text{H}_5\text{Cl}$, is used in the production of chemicals such as aspirin and dyes. One way that chlorobenzene is prepared is by reacting benzene, C_6H_6 , with chlorine gas according to the following equation.



If 45.6 g of benzene react with chlorine gas and 63.7 g of chlorobenzene are produced, what is the percent yield of chlorobenzene?



If 12.0 g of ammonia produced 1.87 g of hydrogen, what was the percent yield of hydrogen?

In an experiment, using 9.21 g of calcium carbonate, 1.90 L of CO_2 was collected. What is the percent yield?

