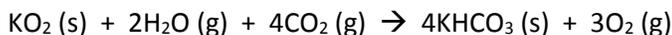


Stoichiometry WS #1

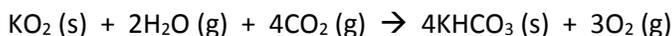
- 25.0 grams of sodium chloride reacts with 25.0 grams of silver nitrate to form sodium nitrate and silver chloride.
 - Write a balanced equation for the reaction.
 - What is the limiting reactant?
 - What is the theoretical yield in grams of silver chloride?
 - If 19.95 grams of silver chloride are produced in the lab, what is the percent yield? What is the percent error?
- Oxygen masks for producing O₂ in emergency situations contain potassium superoxide, KO₂. It reacts with CO₂ and H₂O in exhaled air to produce oxygen. If a person wearing such a mask exhales 0.702 g CO₂/min, how many grams of KO₂ are consumed in 25 minutes?



- An unknown compound contains only carbon, hydrogen, and nitrogen. The compound is analyzed and found to contain 74.0% C, 8.65% H, and 17.4% N by mass. Determine the empirical formula of this compound.

Stoichiometry WS #1

- 25.0 grams of sodium chloride reacts with 25.0 grams of silver nitrate to form sodium nitrate and silver chloride.
 - Write a balanced equation for the reaction.
 - What is the limiting reactant?
 - What is the theoretical yield in grams of silver chloride?
 - If 19.95 grams of silver chloride are produced in the lab, what is the percent yield? What is the percent error?
- Oxygen masks for producing O₂ in emergency situations contain potassium superoxide, KO₂. It reacts with CO₂ and H₂O in exhaled air to produce oxygen. If a person wearing such a mask exhales 0.702 g CO₂/min, how many grams of KO₂ are consumed in 25 minutes?



- An unknown compound contains only carbon, hydrogen, and nitrogen. The compound is analyzed and found to contain 74.0% C, 8.65% H, and 17.4% N by mass. Determine the empirical formula of this compound.

ANSWERS: see website for answer key with work (wongchemistry.weebly.com)

1.
 - a. $\text{NaCl} + \text{AgNO}_3 \rightarrow \text{NaNO}_3 + \text{AgCl}$
 - b. AgNO_3 is limiting reactant
 - c. 21.1 g AgCl
 - d. 94.5% yield; 5.45% error
2. 7.09 g KO_2 consumed
3. $\text{C}_5\text{H}_7\text{N}$

ANSWERS: see website for answer key with work (wongchemistry.weebly.com)

1.
 - a. $\text{NaCl} + \text{AgNO}_3 \rightarrow \text{NaNO}_3 + \text{AgCl}$
 - b. AgNO_3 is limiting reactant
 - c. 21.1 g AgCl
 - d. 94.5% yield; 5.45% error
2. 7.09 g KO_2 consumed
3. $\text{C}_5\text{H}_7\text{N}$