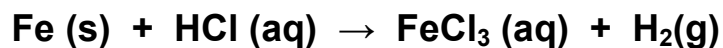


1. Pure oxygen gas was first produced by heating mercury (II) oxide:



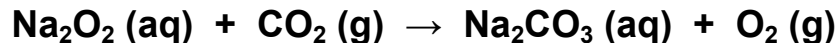
What volume (in Liters) of oxygen gas at STP is released by heating 10.57 g of HgO?

-
2. Using the following reaction:



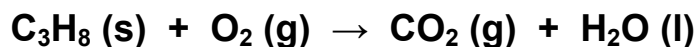
- a) How many L of H_2 would be formed at 742 mm Hg and 15°C if 25.5 g of iron reacts?
- b) How many grams of FeCl_3 would be produced if 2.50 L of H_2 was produced at 350 mm Hg and 30.0°C ?

3. Using the following reaction of sodium peroxide and carbon dioxide:



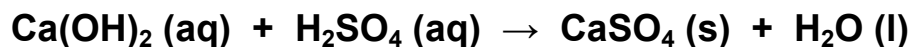
How many grams of sodium carbonate will be produced from 23.1 g of Na_2O_2 and 2.10 L of CO_2 gas at STP?

-
4. Using the following reaction for the combustion of propane:



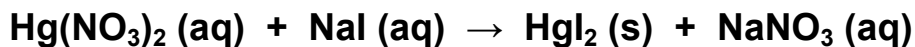
How many grams of water will be produced from 14.6 g of C_3H_8 and 3.54 L of O_2 gas at 645 torr and 31°C ?

-
5. The neutralization reaction of calcium hydroxide and sulfuric acid is as follows:



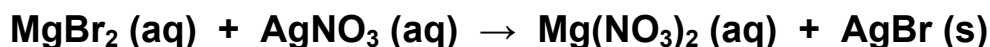
How many grams of calcium sulfate will be produced from the reaction of 125.0 mL of a 1.36 M calcium hydroxide solution?

6. Given that 24.0 mL of 0.170 M sodium iodide reacts with 0.209 M mercury (II) nitrate as follows:



What volume of mercury (II) nitrate is needed for the reaction?

-
7. 50.0 mL of 0.100 M magnesium bromide reacts with 13.9 mL of 0.250 M silver nitrate to produce 0.541 g of silver bromide according to the following reaction:



How many grams of silver bromide will be theoretically produced?

What is the percent yield of the reaction?