

Gas Stoichiometry Practice

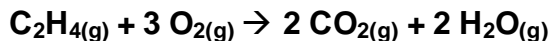
For all of these problems, assume that the reactions are being performed at a pressure of 1.0 atm and a temperature of 298 K.

- 1) Calcium carbonate decomposes at high temperatures to form carbon dioxide and calcium oxide:



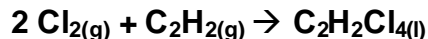
How many grams of calcium carbonate will I need to form 3.45 liters of carbon dioxide?

- 2) Ethylene burns in oxygen to form carbon dioxide and water vapor:



How many liters of water can be formed if 1.25 liters of ethylene are consumed in this reaction?

- 3) When chlorine is added to acetylene, 1,1,2,2-tetrachloroethane is formed:



How many liters of chlorine will be needed to make 75.0 grams of $\text{C}_2\text{H}_2\text{Cl}_4$?

Gas Stoichiometry Practice - Solutions

For all of these problems, assume that the reactions are being performed at a pressure of 1.0 atm and a temperature of 298 K.

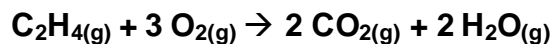
- 1) Calcium carbonate decomposes at high temperatures to form carbon dioxide and calcium oxide:



How many grams of calcium carbonate will I need to form 3.45 liters of carbon dioxide?

14.1 grams

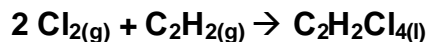
- 2) Ethylene burns in oxygen to form carbon dioxide and water vapor:



How many liters of water can be formed if 1.25 liters of ethylene are consumed in this reaction?

2.50 liters

- 3) When chlorine is added to acetylene, 1,1,2,2-tetrachloroethane is formed:



How many liters of chlorine will be needed to make 75.0 grams of $\text{C}_2\text{H}_2\text{Cl}_4$?

21.8 L