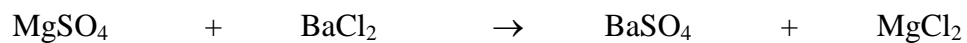


Limiting Reactant Stoichiometry Problems #1

1. Consider the following chemical reaction.

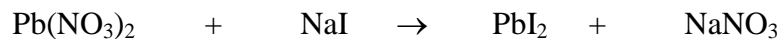


What is the maximum mass of BaSO_4 that can be prepared when 37.5 mL of 0.44 M MgSO_4 is mixed with 46.8 mL of 0.10 M BaCl_2 ?

2. Consider the reaction below. What mass of Ag_2S can be made from 12.0 g of Ag and 12.0 g of S_8 ?



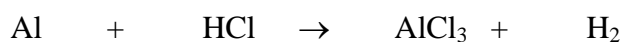
3. What mass of PbI_2 can be formed when 15 mL of 0.10 M $\text{Pb}(\text{NO}_3)_2$ reacts with 21 mL of 0.10 M NaI ?



4. Consider the following reaction. What mass of Na_2SO_4 can be prepared if 29.3 mL of 0.50 M H_2SO_4 is mixed with 17.8 g of NaHCO_3 ?



5. Consider the following chemical reaction. What mass of AlCl_3 can be made when 12.1 g of aluminum is added to 38 mL of 2.5 M HCl ?



6. (a) $\text{AgNO}_3 + \text{KCl} \rightarrow \text{KNO}_3 + \text{AgCl}$
0.45 moles 17 grams _____ grams?

- (b) $\text{NaOH} + \text{H}_2\text{SO}_4 \rightarrow \text{Na}_2\text{SO}_4 + \text{H}_2\text{O}$
0.22 moles 0.32 moles _____ grams?

- (c) $\text{BaCl}_2 + \text{K}_2\text{SO}_4 \rightarrow \text{KCl} + \text{BaSO}_4$
51.5 mL of 0.10M 16.9 mL of 0.21 M _____ grams?