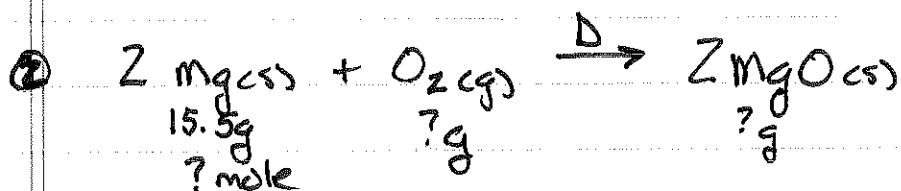


Ch 11 Pretest



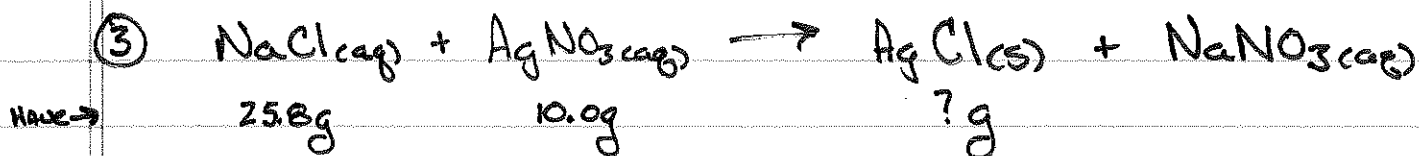
$$\text{A) } \left( \frac{15.5 \text{ g Mg}}{1} \right) \left( \frac{1 \text{ mole Mg}}{24.3 \text{ g Mg}} \right) \left( \frac{2 \text{ mole MgO}}{2 \text{ mole Mg}} \right) \left( \frac{40.3 \text{ g MgO}}{1 \text{ mole MgO}} \right) = \boxed{25.7 \text{ g MgO}}$$

B) Combination Rxn

$$\text{C) } \left( \frac{15.5 \text{ g Mg}}{1} \right) \left( \frac{1 \text{ mole Mg}}{24.3 \text{ g Mg}} \right) = \boxed{.638 \text{ mole Mg}}$$

$$\text{D) } \left( \frac{15.5 \text{ g Mg}}{1} \right) \left( \frac{1 \text{ mole Mg}}{24.3 \text{ g Mg}} \right) \left( \frac{1 \text{ mole O}_2}{2 \text{ mole Mg}} \right) \left( \frac{32.0 \text{ g O}_2}{1 \text{ mole O}_2} \right) = \boxed{10.2 \text{ g O}_2}$$

$$\text{e) } (25.7 \text{ g MgO}) (.955) = \boxed{24.5 \text{ g MgO Actual yield}}$$



$$\left( \frac{25.8\text{g NaCl}}{1} \right) \left( \frac{1\text{mole NaCl}}{58.5\text{g NaCl}} \right) \left( \frac{1\text{mole AgNO}_3}{1\text{mole NaCl}} \right) \left( \frac{169.9\text{g AgNO}_3}{1\text{mole AgNO}_3} \right) = 74.9\text{g AgNO}_3^{\text{need}}$$

**AgNO<sub>3</sub> Limiting ; NaCl Excess**

$$\left( \frac{10.0\text{g AgNO}_3}{1} \right) \left( \frac{1\text{mole AgNO}_3}{169.9\text{g AgNO}_3} \right) \left( \frac{1\text{mole NaCl}}{1\text{mole AgNO}_3} \right) \left( \frac{58.5\text{g NaCl}}{1\text{mole NaCl}} \right) = 3.44\text{g NaCl Needed}$$

25.8 g NaCl Have

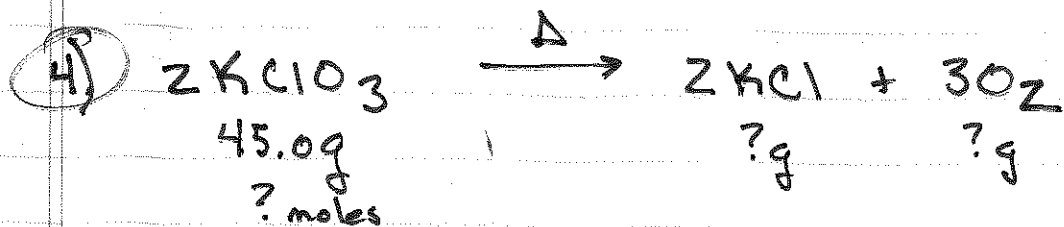
3.44 g NaCl Need

**22.4 g NaCl Excess**

Start w/ Limiting

$$\left( \frac{10.0\text{g AgNO}_3}{1} \right) \left( \frac{1\text{mole AgNO}_3}{169.9\text{g AgNO}_3} \right) \left( \frac{1\text{mole AgCl}}{1\text{mole AgNO}_3} \right) \left( \frac{143.4\text{g AgCl}}{1\text{mole AgCl}} \right) = \boxed{8.44\text{g AgCl}}$$

Produced



$$\left( \frac{45.0\text{g KClO}_3}{1} \right) \left( \frac{1\text{ mole KClO}_3}{122.6\text{g KClO}_3} \right) = \boxed{0.367\text{ mole KClO}_3}$$

$$\left( \frac{0.367\text{ mole KClO}_3}{1} \right) \left( \frac{2\text{ mole KCl}}{2\text{ mole KClO}_3} \right) \left( \frac{74.6\text{g KCl}}{1\text{ mole KCl}} \right) = \boxed{27.4\text{g KCl}}$$

$$\left( \frac{0.367\text{ mole KClO}_3}{1} \right) \left( \frac{3\text{ mole O}_2}{2\text{ mole KClO}_3} \right) \left( \frac{32.0\text{g O}_2}{1\text{ mole O}_2} \right) = \boxed{17.6\text{g O}_2}$$