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1. When excess potassium chromate is added to a solution containing 0.500 g silver nitrate, solid silver chromate forms. At the reaction's completion, 0.455 grams of silver chromate was obtained.
a. Write a balanced chemical equation for this reaction (phases not needed).
b. Mass of limiting reactant: $\qquad$ Mass of actual yield: $\qquad$
c. Calculate the theoretical yield and percent yield of silver chromate.
2. When 10.0 grams of magnesium metal reacts with excess hydrochloric acid, 29.5 grams of magnesium chloride was produced.
a. Write a balanced chemical equation for this reaction (phases not needed).
b. Mass of limiting reactant: $\qquad$ Mass of actual yield:
c. Calculate the theoretical yield and percent yield of magnesium chloride.
3. When 13.2 grams of salicylic acid reacts with excess acetic anhydride, 5.9 grams of aspirin is produced. Chemical equation for this reaction:

$$
\underset{\text { (salicylic acid) }}{2 \mathrm{C}_{7} \mathrm{H}_{6} \mathrm{O}_{3}}+\underset{\text { (acetic anhydride) }}{\mathrm{C}_{4} \mathrm{H}_{6} \mathrm{O}_{3}} \quad-\cdots-->\underset{\text { (aspirin) }}{2 \mathrm{C}_{9} \mathrm{H}_{8} \mathrm{O}_{4}}+\quad+\quad \mathrm{H}_{2} \mathrm{O}
$$

b. Mass of limiting reactant: $\qquad$ Mass of actual yield: $\qquad$
c. Calculate the theoretical yield and percent yield of aspirin.

