SCH3U

Solutions & Solubility

Solutions & Limiting Reagents

When performing stoichiometry using **concentrations & limiting reagents**, follow these steps:

1. Write a balanced chemical equation. Include state signs
2. Convert the given values to moles for **both** reactants
3. Use the mole ratio to determine which reactant is limiting

1) Find the mass of aluminum hydroxide that precipitates when 20.0mL of 0.0150 mol/L aqueous aluminum sulfate is mixed with 30.0mL of 0.0185 mol/L aqueous calcium hydroxide.

Balance Equation		+		→		
Given						
Moles we **HAVE**						
Moles we **NEED**						

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4. Use the limiting reagent number of moles and convert to the required values of moles using the mole ratio from the balanced equation

5. Convert the required amount in moles to the required value (using the appropriate conversion factor)

2) Calculate the mass of lead(II) sulfide that will precipitate when 6.75g of sodium sulfide is added to 250mL of 0.200mol/L lead(II) nitrate.

Balance Equation		+		→		
Given						
Moles we **HAVE**						
Moles we **NEED**						

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