

Stoichiometry, Concentration, Limiting Reactant, and Percent Yield **Practice Quiz**

1. How many moles of ammonium sulphide are contained in 250.0 mL of 0.500 M ammonium sulphide?
2. What volume of 3.60 M H_2SO_4 can be made from 100.0 g of H_2SO_4 ?
3. How many grams of aluminum hydroxide are contained in 55.0 mL of 1.30×10^{-3} M aluminum hydroxide?
4. What mass of water is produced when 35.4 g of HCl are reacted with 38.4 g of calcium hydroxide? What mass of the excess reactant will be left over?
5. What mass of silver sulphate is produced when 13.5 g of silver chloride reacts with 30.0 mL of 0.850 M iron (II) sulphate?

6. An excess of aqueous calcium chloride is reacted with 350.0 mL of 0.650 M aqueous sodium carbonate. If 10.0 g of a solid is produced, what is the percent yield of the reaction?

7. If you react aluminum with copper (II) chloride, the reaction has 87.3% yield. If you start with 5.6 g of aluminum, how much copper will be produced?

8. You react 3.50 g of solid sodium metal with water to produce hydrogen gas and sodium hydroxide. If, at the end of the reaction there is 6.8 L of solution, what is the concentration of sodium hydroxide?

1. 0.125 mol $(\text{NH}_4)_2\text{S}$ 2. 0.283 L 3. 5.58×10^{-3} g $\text{Al}(\text{OH})_3$ 4. 17.5 g H_2O 2.50 g $\text{Ca}(\text{OH})_2$ excess
5. 7.95 g Ag_2SO_4 6. 43.8% 7. 17.3 g Cu 8. 0.022 M NaOH