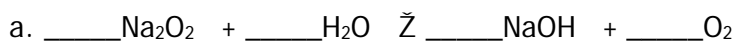


Practice Exam 2

1. **Balance** the following chemical equations:

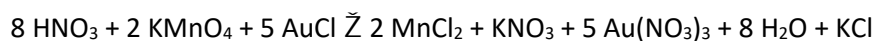


2. 133.22 g of iron(III) acetate reacts with potassium sulfide to produce iron(III) sulfide and potassium acetate. Calculate the **number of grams of iron(III) sulfide** produced if there is a 96.10 % yield.

3. Calculate the **mass of carbon dioxide produced** when 40.00 g of butanoic acid (C₂H₅COOH) reacts with 30.00 g of oxygen gas. The products are carbon dioxide and water.

4. Calculate the **%(m/m) of a sodium carbonate solution** that is 1.26 M and has a density of 1.457 g/mL.

5. 135.2 mL of a 0.436 M solution of gold(I) chloride reacts with an excess of an potassium permanganate solution. The balanced chemical equation is:



Calculate the **number of grams of the manganese(II) chloride** produced.

6. What ***volume, in mL***, of a 12.45 M solution of hydrochloric acid is needed to make 500.0 mL of a 0.1032 M solution of hydrochloric acid?

7. What ***mass, in g***, of aluminum sulfate is needed to make 150.0 mL of a 3.42 M solution of aluminum sulfate?