

Gravimetric Stoichiometry, Extra Exercises

Complete the following stoichiometric problems. All answers should be expressed to the correct number of significant digits.

1. Calculate the mass of iron(III) oxide (rust) produced by the reaction of 500 g of iron with oxygen from the air.
2. What mass of precipitate should form if 2.00 g of silver nitrate in solution is reacted with excess sodium sulfide solution?
3. Determine the mass of water vapour formed when 1.00 g of butane, $\text{C}_4\text{H}_{10}(\text{g})$, is burned in a lighter.
4. Silver metal can be recovered from waste silver nitrate solutions by reaction with copper metal. What mass of silver can be obtained using 50 g of copper?