Solutions and Dilutions

1) What mass of solute is contained in 25.00 mL of a 0.500 M sodium hydroxide solution?

2) **How** would you prepare 250.0 mL of a 1.50 M potassium nitrate solution?

3) **How** would you prepare 100.0 mL of a 1.00 M barium nitrate solution?

4) What volume of 0.157 M silver nitrate contains 0.555 gram of silver nitrate?

5) What volume of 0.225 M aluminum chloride solution contains 5.00 g of solute?

6) 100.0 mL of a 0.500 M sodium chloride solution was evaporated to dryness. What mass of solid remained?

7) In what total volume must 5.00 g of sodium nitrate be dissolved to make a 0.250 M solution?

8) To what volume must 100. ml of 1.0 M NaCl be diluted in order to obtain a 0.10 M solution?

9) **How** would you make 3.00 L of 0.50 M $KMnO_4$ solution from a 6.5 M stock solution?

10) To what volume must 100. ml of 6.0 M HCl be diluted in order to obtain a 1.0 M solution?

11) What is the concentration of a standard NaOH solution if 250. ml of 2.0 M NaOH were produced from an initial volume of 100.0 ml of stock solution?

ANSWERS