

- 1) A 9.220 g sample of a white powder containing AgNO_3 and KNO_3 was dissolved in water. Aqueous HCl was added until no more AgCl precipitated. The AgCl was collected on a filter and dried. The mass of the AgCl was 1.059 g. What was the %Ag in the white powder?

- 2) In order to determine the concentration of acetic acid in vinegar, a 250.0 mL sample of the vinegar was diluted to 1000.0 mL. A 10.00 mL sample of the diluted vinegar was titrated with 0.1025 M NaOH . The titration required 33.22 mL of the base to reach the equivalence point. What was the concentration of acetic acid in the vinegar?

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Homework Set 3

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- 3) How many mL of concentrated HNO₃ (16 M) should be diluted to 5.00 L to give a 0.725 M HNO₃ solution?
- 4) Write net ionic equations for the reaction that occurs when aqueous solutions of the following are mixed:
- a) potassium fluoride and hydrochloric acid
 - b) sodium hydroxide and nitrous acid
 - c) barium nitrate and sodium sulfate
 - d) cupric nitrate and cesium hydroxide
- 5) Draw Lewis structures for:
- sulfite anion SO₃²⁻ sulfur trioxide SO₃