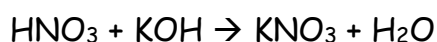


Homework 2 – Neutralisation Reactions

- 1)
 - a) Explain what is meant by a neutralisation reaction.
 - b) Name a household substance that could be used to neutralise spilt battery acid.
 - c) What will happen to the pH during the above neutralisation reaction?
- 2) Name the products formed when the following substances react together:
 - a) Potassium oxide + nitric acid
 - b) Calcium hydroxide + sulfuric acid
 - c) Zinc carbonate + hydrochloric acid

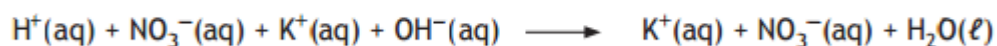
National 5 Extension

- 1) Nitric acid reacts with potassium hydroxide according to the equation:

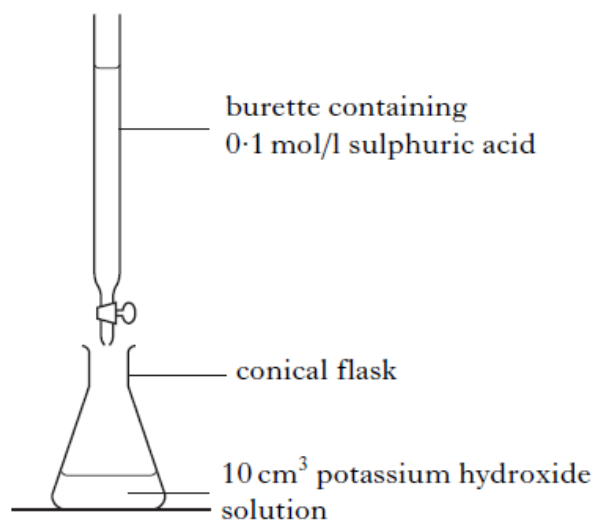


12.5 cm³ of nitric acid is neutralised by 20 cm³ of a 0.1 mol l⁻¹ solution of potassium hydroxide. What was the concentration of the nitric acid?

- 2) 1 mole of oxalic acid neutralises 2 moles of sodium hydroxide solution. What volume of a 0.5 mol l⁻¹ solution of oxalic acid neutralises 100 cm³ of a 2 mol l⁻¹ solution of sodium hydroxide?
- 3) Identify the spectator ions present in the following reaction:



- 4) Salts can be prepared by titrating an alkali with a dilute acid as shown below:



- Which salt is being prepared in the reaction above?
- The student is still to select an indicator for his titration. What would make an indicator suitable for being used in a titration?
- The average volume of sulfuric acid used in this titration was 20cm³. Write out the balanced equation for this reaction and from this calculate the concentration of potassium hydroxide solution.
- If the student wished to obtain a dry sample of the salt, how could this be done?