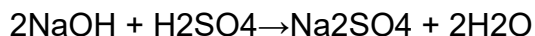# AQA Chemistry GCSE

Required Practical 2 - Neutralisation
Higher Tier

Past Exam Questions

Q1. Sodium hydroxide neutralises sulfuric acid.
The equation for the reaction is:

$$2NaOH + H_2SO_4 \rightarrow Na_2SO_4 + 2H_2O$$

(a) Sulfuric acid is a strong acid.

What is meant by a strong acid?

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(2)

(b) Write the ionic equation for this neutralisation reaction. Include state symbols.

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(2)

(c)
A student used a pipette to add 25.0 cm3 of sodium hydroxide of unknown
concentration to a conical flask.
The student carried out a titration to find out the volume of 0.100 mol / dm3
sulfuric acid needed to neutralise the sodium hydroxide. Describe how the student
would complete the titration. You should name a suitable indicator and give the colour
change that would be seen.

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(4)

(d) The student carried out five titrations. Her results are shown in the table below.

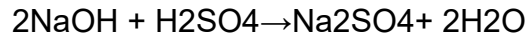|	Titration 1	Titration 2	Titration 3	Titration 4	Titration 5
Volume of 0.100 mol / dm^3 sulfuric acid in cm^3	27.40	28.15	27.05	27.15	27.15

Concordant results are within 0.10 cm3 of each other. Use the student's concordant results to work out the mean volume of 0.100 mol / dm3 sulfuric acid added.

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Mean volume = ... cm3

(2)

(e) The equation for the reaction is:

$$2NaOH + H_2SO_4 \rightarrow Na_2SO_4 + 2H_2O$$

Calculate the concentration of the sodium hydroxide.

Give your answer to three significant figures.

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Concentration = ... mol / dm3

(4)

(f) The student did another experiment using 20 cm3 of sodium hydroxide solution with a concentration of 0.18 mol / dm3. Relative formula mass (Mr) of NaOH = 40. Calculate the mass of sodium hydroxide in 20 cm3 of this solution.

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Mass = ... g

(2)