

Surname	Centre Number	Candidate Number
First name(s)		0



GCSE



S25-3410U30-1D

MONDAY, 6 JANUARY – FRIDAY, 21 FEBRUARY 2025

CHEMISTRY – Unit 3 (3410U30)

PRACTICAL ASSESSMENT

INVESTIGATING THE ELECTROLYSIS
OF COPPER(II) SULFATE

SECTION B

1 hour

For Examiner's use only		
	Maximum Mark	Mark Awarded
Section B	24	

ADDITIONAL MATERIALSA calculator and your Section **A** exam paper.**INSTRUCTIONS TO CANDIDATES**

Use black ink or black ball-point pen. Do not use gel pen or correction fluid.

You may use a pencil for graphs and diagrams only.

Write your name, centre number and candidate number in the spaces at the top of this page.

Answer **all** questions.

Write your answers in the spaces provided in this booklet. If you run out of space, use the additional page(s) at the back of the booklet, taking care to number the question(s) correctly.

INFORMATION FOR CANDIDATES

The total number of marks available for this section of the task is 24.

The number of marks is given in brackets at the end of each question or part-question.

This task is in 2 sections, **A** and **B**. You will have completed Section **A** in a previous lesson.

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SECTION BAnswer **all** questions.

2. (a) (i) State the independent variable in this experiment. [1]

.....

- (ii) State the range of the independent variable. [1]

.....

- (iii) State the dependent variable in this experiment. [1]

.....

- (iv) Complete the table below by stating **two** controlled variables in this experiment **and** describe how each was controlled. [4]

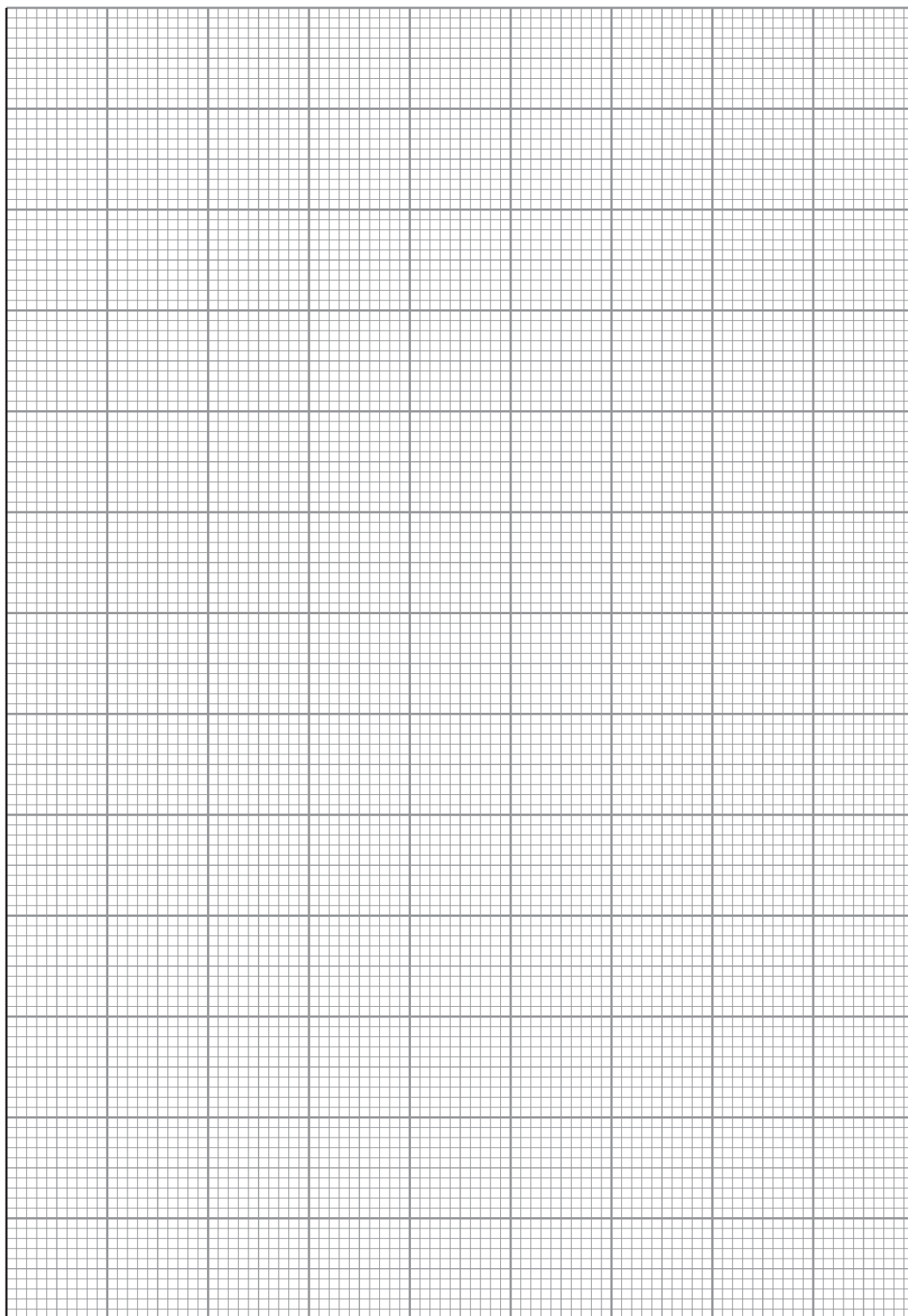
Controlled variable	How it was controlled

- (b) Use your results from Section **A** to draw a graph of the current produced (vertical axis) against the length of the electrodes immersed (horizontal axis) on the grid opposite. [5]



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- (c) (i) Use your graph to describe the relationship between the length of the electrodes immersed and the current produced. [2]

.....

.....

- (ii) Use your graph to predict the current produced when the length of the electrodes immersed is 3.5 cm. [1]

current = A

- (iii) The true value for the current produced when electrodes are immersed to a length of 3.5 cm at room temperature is 0.28 A.
Comment on the accuracy of your result in part (c)(ii). [1]

.....

.....

- (d) Comment on the repeatability of your results. [1]

.....

.....

- (e) State what you could do to check the reproducibility of your experiment. [1]

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- (f) Identify **one** inaccuracy in the method used in Section **A** and how it could be overcome. [2]

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- (g) Siwan suggests that as the temperature of the dilute copper(II) sulfate solution increases the current produced also increases.
Plan an experiment to test this hypothesis.
You will not be expected to carry out this experiment. [4]

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