

545/2

**CHEMISTRY
(PRACTICAL)
PAPER 2**

July/August, 2026

2 Hours



**TESO SECONDARY SCHOOLS MOCK EXAMINATIONS
ASSOCIATION (TESSMEA)**

Uganda Certificate of Education

CHEMISTRY

Paper 2

(PRACTICAL)

2 hours

INSTRUCTIONS TO CANDIDATES:

*This paper consists of **one** compulsory item.*

*Answers to the item are to be written in the spaces provided in this booklet.
Use **black or blue ink**.*

*All working **must** be clearly shown. Graph paper is provided.*

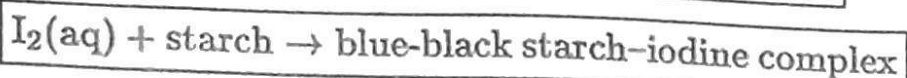
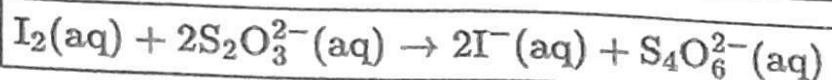
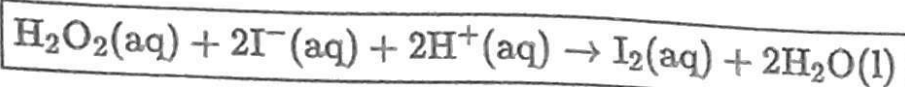
*You are **not** allowed to use reference books.*

Candidates are advised to carefully read the item, make sure that they have all the apparatus and chemicals they may need and then plan appropriately before starting.

Item 1

Hydrogen peroxide is commonly used to clean wounds and disinfect medical equipment at a local health Centre. However, the staff have noticed that hydrogen peroxide appears to lose its strength (concentration) when it is stored for a long time or exposed to high temperatures. As a result, they are concerned that it may become less effective for wound cleaning and disinfection.

One staff member suggested investigating how the concentration of hydrogen peroxide affects its effectiveness. He proposed that investigation involves adding equal volumes of sodium thiosulfate solution and acidified potassium iodide solution to varying concentrations (volumes) of hydrogen peroxide containing starch indicator. The time taken for the reaction mixture to change from colorless to blue-black is recorded for each hydrogen peroxide concentration. A more effective disinfectant contains a higher concentration of hydrogen peroxide, which reacts more quickly and therefore produces the blue-black colour in a shorter time.



The staff agreed that this would be a useful investigation, but they lacked the knowledge and skills to carry it out correctly. They have therefore approached you, an S.4 learner for help.

You have been provided with the following:

BA1 which is hydrogen peroxide solution.

BA2 which is sodium thiosulphate solution

BA3 which is acidified potassium iodide solution.

BA4 which is starch indicator.

Task:

- a) Design an experiment that you will use to guide the local health Centre staff (aim, hypothesis, variables, procedure, risks and mitigations).

[illegible]

b) Carry out the experiment, record and analyze your results

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c) Make a conclusion and give a recommendation.

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END