

Candidate's Name: .....

Signature: .....

(Do not write your School/ Centre Name or Number anywhere on this Booklet.)

545/2

CHEMISTRY

Paper 2

2 hours



**MUKONO EXAMINATION COUNCIL 2024**  
**Uganda Certificate of Education**

CHEMISTRY

Paper 2

Practical.

2 hours

**INSTRUCTIONS TO CANDIDATES:**

This paper consists of **one compulsory** examination item. Answers to this item are to be written in the spaces provided in this booklet. Use **blue** or **black** ink. All working must be clearly shown. Graph paper will be provided. Mathematical table and silent non-programmable scientific calculators may be used.

You are **not** allowed to use reference books (i.e. text books, booklets on qualitative analysis etc.)

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

**Item 1.**

A pharmaceutical company makes Magnesium Chloride to prevent and treat low amounts of Magnesium in the blood. It is exploring the use of element **X** or compound **Y** with Hydrochloric acid to prepare Magnesium Chloride.

The Company wants the option that produces minimal heat in order to minimize costs associated with equipment's damage due to excessive heat of reaction.

**X** and **Y** react with Hydrochloric acid according to the following equations:



You are provided with the following:

**BA1** which is hydrochloric acid

**X** which is an element

**Y** which is a compound of **X**

**TASK:**

Design and carry out an experiment using **X**, **Y** and **BA1** and advise the company on the right choice.

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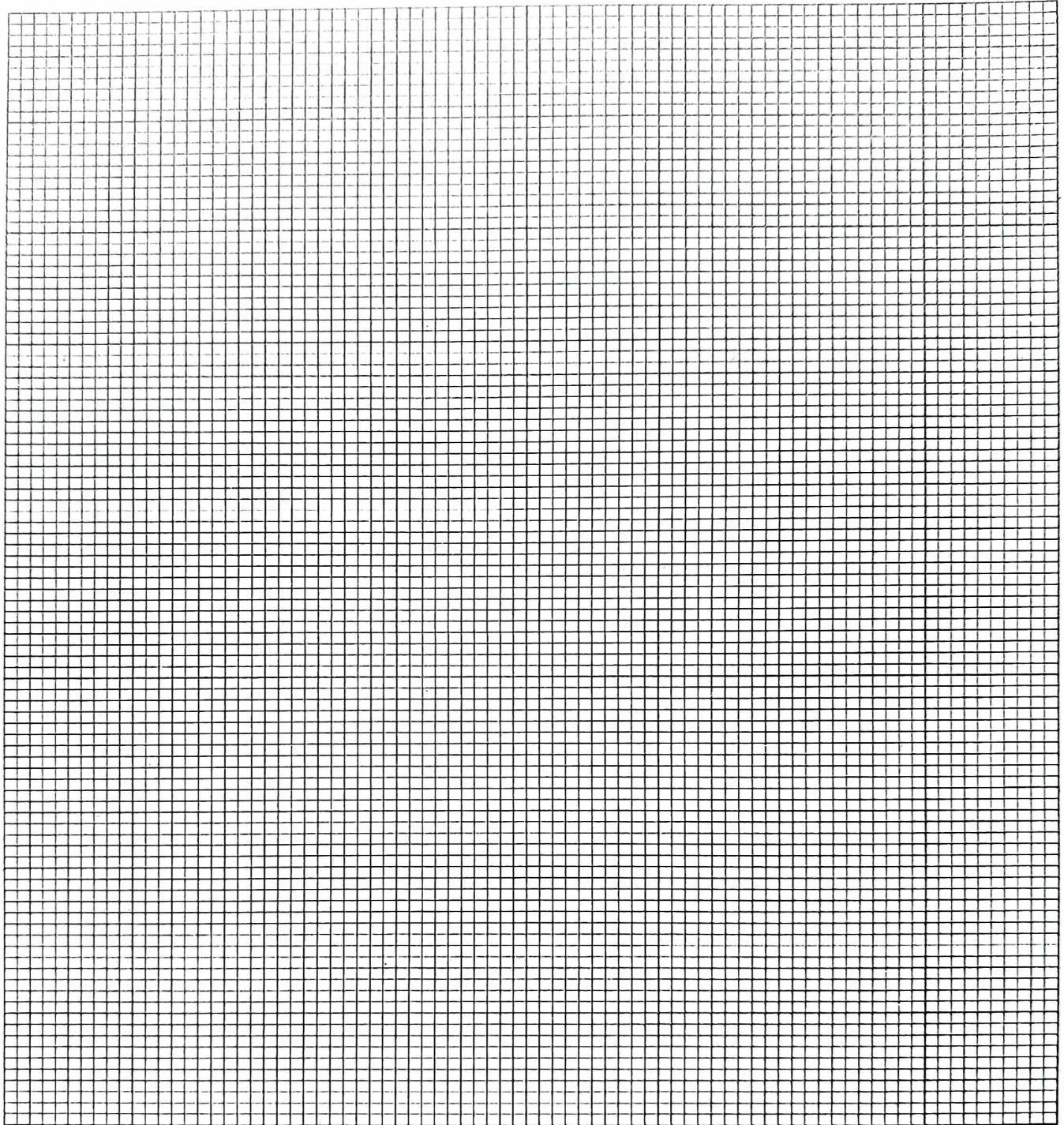
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