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Cambridge Assessment International Education

Cambridge IGCSE™

CHEMISTRY **0620/52**

Paper 5 Practical Test **October/November 2024**

CONFIDENTIAL INSTRUCTIONS

7262350396

This document gives details of how to prepare for and administer the practical exam.

The information in this document and the identity of any materials supplied by Cambridge International are confidential and must NOT reach candidates either directly or indirectly.

The supervisor must complete the report at the end of this document and return it with the scripts.

INSTRUCTIONS

- If you have any queries regarding these confidential instructions, contact Cambridge International stating the centre number, the syllabus and component number and the nature of the query.
  email info@cambridgeinternational.org
  phone +44 1223 553554

This document has **8** pages. Any blank pages are indicated.

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General information about practical exams

Centres must follow the guidance on science practical exams given in the *Cambridge Handbook*.

Safety

Supervisors must follow national and local regulations relating to safety and first aid.

Only those procedures described in the question paper should be attempted.

Supervisors must inform candidates that materials and apparatus used in the exam should be treated with caution. Suitable eye protection should be used where necessary.

The following hazard codes are used in these confidential instructions, where relevant:

C	corrosive	**MH**	moderate hazard
HH	health hazard	**T**	acutely toxic
F	flammable	**O**	oxidising
N	hazardous to the aquatic environment		

Hazard data sheets relating to substances used in this exam should be available from your chemical supplier.

Before the exam

- The packets containing the question papers must **not** be opened before the exam.
- It is assumed that standard school laboratory facilities, as indicated in the *Guide to Planning Practical Science*, will be available.
- Spare materials and apparatus for the tasks set must be available for candidates, if required.

During the exam

- It must be made clear to candidates at the start of the exam that they may request spare materials and apparatus for the tasks set.
- Where specified, the supervisor **must** perform the experiments and record the results as instructed. This must be done **out of sight** of the candidates, using the same materials and apparatus as the candidates.
- Any assistance provided to candidates must be recorded in the supervisor's report.
- If any materials or apparatus need to be replaced, for example, in the event of breakage or loss, this must be recorded in the supervisor's report.

After the exam

- The supervisor must complete a report for each practical session held and each laboratory used.
- Each packet of scripts returned to Cambridge International must contain the following items:
  - the scripts of the candidates specified on the bar code label provided
  - the supervisor's results relevant to these candidates
  - the supervisor's reports relevant to these candidates
  - seating plans for each practical session, referring to each candidate by candidate number
  - the attendance register.

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Specific information for this practical exam

During the exam, the supervisor (**not** the invigilator) must do the experiments in Questions 1 and 2 and record the results on a spare copy of the question paper, clearly labelled 'supervisor's results'.

Materials and apparatus for Question 1

Each candidate will require the following materials and apparatus. Labels do **not** need to include concentrations.

hazard	materials and apparatus	per candidate	label
	aqueous iron(III) nitrate of concentration 0.10 mol / dm^3 This solution must be made up freshly using distilled water and not stored. **Do not** heat the solution when dissolving the iron(III) nitrate. **Do not** acidify the solution.	300 cm^3	**aqueous iron(III) nitrate for Question 1**
	aqueous sodium thiosulfate of concentration 1.0 mol / dm^3 This solution must be made up freshly and not stored. Sodium thiosulfate should be dissolved in distilled water which has been boiled and allowed to cool.	70 cm^3	**aqueous sodium thiosulfate for Question 1**
	stop-watch or timer which can measure to an accuracy of 1 s		
	100 cm^3 beaker	1	
	50 cm^3 measuring cylinder	1	
	25 cm^3 measuring cylinder	1	
	10 cm^3 measuring cylinder	1	
	stirring rod	1	
	dropping pipettes		
	access to water and distilled water		

N.B. Small amounts of SO_2 **[C][T]**, which can cause respiratory distress in some people, may be produced. **The laboratory must be well ventilated.**

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During the exam, the supervisor (**not** the invigilator) must do the experiments in Questions 1 and 2 and record the results on a spare copy of the question paper, clearly labelled 'supervisor's results'.

Materials and apparatus for Question 2

Each candidate will require the following materials and apparatus. Labels do **not** need to include concentrations.

hazard	materials and apparatus	per candidate	label
[MH]	a stoppered tube containing a homogeneous 50–50 mixture by mass of iron(II) sulfate, $FeSO_4 \cdot 7H_2O$, and sodium bromide, NaBr Ammonium iron(II) sulfate, $(NH_4)_2Fe(SO_4)_2 \cdot 6H_2O$, may be used in place of iron(II) sulfate, $FeSO_4 \cdot 7H_2O$.	3 g	**M**
[MH]	ammonium carbonate, $(NH_4)_2CO_3$, in a stoppered tube	2 g	**N**
[MH]	dilute sulfuric acid of concentration 1 mol / dm^3		
[C]	aqueous sodium hydroxide of concentration 1 mol / dm^3		
[MH]	aqueous hydrogen peroxide of concentration 1.7 mol / dm^3 (20 volumes) This solution must be freshly diluted from the stock solution of 100 volumes hydrogen peroxide or be a freshly purchased solution of the correct concentration.	2 cm^3	**aqueous hydrogen peroxide for Question 2**
[F]	2 cm length of magnesium ribbon	1	
[C]	dilute nitric acid of concentration 1 mol / dm^3		
[MH][N]	aqueous silver nitrate of a concentration suitable to give a positive result in a halide test		
[MH]	limewater and apparatus to test for carbon dioxide		
	Bunsen burner and means to light it		
	heat-proof mat for use with Bunsen burner		
	apparatus to conduct a flame test		
	red and blue litmus papers		
	rack of 4 test-tubes		
	boiling tubes	5	
	stopper to fit boiling tube	1	
	wooden splints		
	test-tube holder		
	spatula	1	
	dropping pipettes		
	access to water and distilled water		

N.B. Small amounts of NH_3 **[C][MH][N]**, which can cause respiratory distress in some people, may be produced. **The laboratory must be well ventilated.**

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Supervisor's report

Syllabus and component number | | | | | / | | |

Centre number | | | | | |

Centre name .....

Time of the practical session .....

Laboratory name/number .....

Give details of any difficulties experienced by the centre or by candidates (include the relevant candidate names and candidate numbers).

You must include:
- any difficulties experienced by the centre in the preparation of materials
- any difficulties experienced by candidates, e.g. due to faulty materials or apparatus
- any specific assistance given to candidates.

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Declaration

1 Each packet that I am returning to Cambridge International contains all of the following items:
- the scripts of the candidates specified on the bar code label provided
- the supervisor's results relevant to these candidates
- the supervisor's reports relevant to these candidates
- seating plans for each practical session, referring to each candidate by candidate number
- the attendance register.

2 Where the practical exam has taken place in more than one practical session, I have clearly labelled the supervisor's results, supervisor's reports and seating plans with the time and laboratory name/number for each practical session.

3 I have included details of difficulties relating to each practical session experienced by the centre or by candidates.

4 I have reported any other adverse circumstances affecting candidates, e.g. illness, bereavement or temporary injury, directly to Cambridge International on a *special consideration form*.

Signed ..... (supervisor)

Name (in block capitals) .....

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