



Cambridge IGCSE™ (9–1)

BIOLOGY

0970/05

Paper 5 Practical Test

For examination from 2023

SPECIMEN CONFIDENTIAL INSTRUCTIONS

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 **6** pages. Any blank pages are indicated.



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.

Specific information for this practical exam

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

Question 1

Each candidate should be provided with:

hazard	materials and apparatus	quantity per candidate
	test-tube rack	1
	large test-tubes (placed in the rack)	2
	white tile	1
	scalpel	1
	30 cm transparent ruler with a mm scale (also required for Question 2)	1
	potato cylinders in a Petri dish labelled potato cylinders	2
	20 cm ³ syringe	1
	3% hydrogen peroxide solution, in a beaker labelled 3% hydrogen peroxide	40 cm ³
	empty 250 cm ³ beaker labelled hot water	1
	a supply of hot water at 80 °C Candidates will raise their hand when they are ready for hot water to half-fill their beaker.	approximately 125 cm ³
	permanent marker pen	1
	pair of forceps	1
	stop-clock	1
	pair of gloves	1
	suitable eye protection	1

Preparation of materials

3% hydrogen peroxide solution

MH To make 1 dm³, dilute a stock solution of hydrogen peroxide (20 vol or 6%) by adding 500 cm³ of distilled water to 500 cm³ of 6% hydrogen peroxide solution.

MH The 6% stock solution of hydrogen peroxide should be fresh and should be stored in a cool dark place.

The 3% hydrogen peroxide solution can be made the day before the examination and should be stored in a sealed container in a cool dark place. It should be allowed to reach room temperature before the examination.

potato cylinders

Potato cylinders should be cut from fresh potatoes (*Solanum tuberosum*). These can be cut with a cork borer to give cylinders with a diameter between 0.5 cm and 1.0 cm. The potato cylinders should be at least 5 cm long and have the same diameter. All outer skin should be removed from the potato cylinders. Potato cylinders should be supplied to candidates in a Petri dish base, covered with a damp paper towel.

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Supervisor's report

Syllabus and component number

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Centre number

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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.

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 that practical session.

- 3 I have included details of difficulties relating to this 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)