

CAMBRIDGE INTERNATIONAL EXAMINATIONS  
International General Certificate of Secondary Education

**CHEMISTRY**

**0620/05**

Paper 5 Practical Test

October/November 2003

**CONFIDENTIAL INSTRUCTIONS**

**Great care should be taken that any confidential information given does not reach the candidates either directly or indirectly.**

The teacher responsible for preparing the examination is **not** allowed to consult the question paper before the examination. Teachers should, as a part of the preparation of the examination requirements, carry out any tests indicated on page 2 in order to satisfy themselves that the supplied materials are satisfactory.

The standard Report Form to be included with the scripts is given on pages 3 and 4. Please detach and enclose it with the scripts. If scripts are to be despatched in more than one envelope, it is essential that a copy of the Supervisor's Results and of the Report Form are sent inside **each** envelope.

More material may be issued if required, without penalty, but this should not be necessary. Safety spectacles may be provided if considered necessary.

If you have any problems or queries regarding these Instructions, please contact CIE  
by e-mail: [International@ucles.org.uk](mailto:International@ucles.org.uk),  
by phone: +44 1223 553554,  
by fax: +44 1223 553558,  
stating the Centre number, the nature of the query and the syllabus number quoted above.

This document consists of 4 printed pages.



**For Question 1**

*Each candidate will need.*

- (a) about 60 cm<sup>3</sup> of aqueous potassium bromate(V) of concentration 0.02 mol/dm<sup>3</sup>;
- (b) about 20 cm<sup>3</sup> of aqueous hydrochloric acid of concentration 0.5 mol/dm<sup>3</sup>;
- (c) about 10 cm<sup>3</sup> of aqueous sodium thiosulphate of concentration 0.01 mol/dm<sup>3</sup>;
- (d) about 50 cm<sup>3</sup> of aqueous potassium iodide of concentration 0.02 mol/dm<sup>3</sup>;
- (e) 30 cm<sup>3</sup> of starch solution of concentration 4 g/dm<sup>3</sup>;
- (f) distilled water;
- (g) one measuring cylinder, 0 cm<sup>3</sup> to 10 cm<sup>3</sup>;
- (h) one burette, 50 cm<sup>3</sup>;
- (i) at least one small beaker;
- (j) a rack of six test-tubes;
- (k) a stop clock or access to a timer with a second hand.

**Note:** A mixture of 12 cm<sup>3</sup> of potassium bromate, 2 cm<sup>3</sup> of hydrochloric acid, 4 cm<sup>3</sup> of water, 5 cm<sup>3</sup> of starch, 1 cm<sup>3</sup> of sodium thiosulphate and 6 cm<sup>3</sup> of potassium iodide mixed in that order should produce a blue colour in less than 10 seconds.

**For Question 2**

*Each candidate will require:*

- (a) 20 cm<sup>3</sup> of an aqueous solution of ammonium iron(III) sulphate, NH<sub>4</sub>Fe(SO<sub>4</sub>)<sub>2</sub>.12H<sub>2</sub>O of concentration 24 g/dm<sup>3</sup> labelled 'solution of X';
- (b) aqueous ammonia solution of concentration 2 mol/dm<sup>3</sup>;
- (c) aqueous sodium hydroxide of concentration 2 mol/dm<sup>3</sup>;
- (d) barium chloride solution of sufficient concentration to give a positive sulphate test;
- (e) aqueous hydrochloric acid of concentration 2 mol/dm<sup>3</sup>;
- (f) aqueous sulphuric acid of concentration 2 mol/dm<sup>3</sup>;
- (g) pieces of granulated zinc;
- (h) red litmus or pH indicator papers;
- (i) rack of test-tubes;
- (j) distilled water;
- (k) Bunsen burner;
- (l) teat pipettes;
- (m) splints.

This form must be completed and returned in the envelope with the scripts.

REPORT ON PRACTICAL CHEMISTRY

NOVEMBER 2003

1 (a) *Supervisor's Results*

It is recommended that the Supervisor should be a chemistry teacher.

The Supervisor is asked to carry out the experiments in Questions 1 and 2 and to record the results on a spare copy of the question paper clearly labelled 'Supervisor's Results'. Failure to enclose these results and this report form may lead to candidates being unavoidably penalised.

(b) The Candidate Numbers of candidates in each session were:

*First Session*

*Second Session*

2 The Supervisor is invited to report details of any difficulties experienced by candidates giving names and Candidate Numbers. The report should include reference to:

- (a) any general difficulties encountered in making preparations for the examination;
- (b) difficulties due to faulty apparatus or materials;
- (c) accidents to apparatus or materials.

Other cases of individual hardship, e.g. illness, temporary disability, should be reported direct to UCLES on the normal Application for Special Consideration form.

NAME OF CENTRE .....

CENTRE NUMBER .....

SIGNED .....

*Supervisor*

DECLARATION (to be signed by the Principal)

The preparation of this practical examination has been carried out so as to maintain fully the security of the examination.

NAME .....

(in block capitals)

SIGNED .....(Principal)