

CAMBRIDGE INTERNATIONAL EXAMINATIONS
General Certificate of Education
Advanced Subsidiary Level and Advanced Level

BIOLOGY

9700/03

Paper 3 Practical Test AS

May/June 2003

CONFIDENTIAL INSTRUCTIONS

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

ERRATUM

Instructions for preparing apparatus

Please retain the original Confidential Instructions. For question 1 the instruction (i) should be crossed out as it is replaced by the information that follows. Additional information is given to be used with instructions (ii) and (iv). New instructions (vii) and (ix) are given. The remaining instructions are unchanged.

Page 2, Question 1

Replacement Instruction (i)

- 25 cm³ of actively respiring yeast suspension labelled **S1** for each candidate.
- The yeast suspension must be made up with **dried** yeast intended for baking bread. The dry yeast must be kept dry and cool once it has been obtained.
- The yeast suspension should be made up between 30 and 60 minutes before the examination and kept at a temperature of around 35 °C in order to ensure that it is actively respiring. It should **not** be made up before this, as there is a possibility that it might become inactive before the examination.
- The yeast suspension should be made up with 10 g of yeast and 10 g of glucose in 100 cm³ of distilled or deionised water. Some commercial baking yeast contains sugar, but this should still work with the addition of glucose.
- A sample of the yeast suspension should be made up well before the examination to ensure that the yeast is suitable and active. A foam made up of tiny bubbles should form on top of the suspension within 30 minutes. The test must be done far enough in advance to ensure that new materials can be obtained if the yeast is found to be inactive. If no foam of tiny bubbles is produced after 30 minutes, try making up the yeast suspension with different amounts of glucose, e.g. none, or 5 g or 20 g. If no foam is produced, then new yeast must be obtained. Please note any changes in the concentration of glucose on the back of the back cover of the script whose name appears first on the attendance register.

Instruction (ii) Additional Information

- The two boiling tubes, delivery tubes, test tubes and 250 cm³ beaker should be set up as shown in Fig. 1.1, but the whole apparatus should be left dry. No liquids should be added to the beaker, to either of the boiling tubes or to either of the test tubes.
- The 250 cm³ beaker shown in Fig. 1.1 is the water-bath mentioned in instruction (iv).

Instruction (iv) Additional Information

- It is recommended that a 250 cm³ beaker be provided as the water-bath shown in Fig. 1.1. It is recommended that a means of heating water to temperatures between 30 and 50 °C be provided in addition to the water-bath beaker. The beaker, Bunsen, tripod and gauze that are mentioned in this instruction would be very suitable.

New Instruction (viii)

- Access to a means of labelling glassware e.g. a wax pencil or permanent OHT marker.

New Instruction (ix)

Information required from the teacher present: