

**MARK SCHEME for the May/June 2009 question paper
for the guidance of teachers**

5038/03

5038 AGRICULTURE

Paper 3 (Practical), maximum raw mark 30

This mark scheme is published as an aid to teachers and candidates, to indicate the requirements of the examination. It shows the basis on which Examiners were instructed to award marks. It does not indicate the details of the discussions that took place at an Examiners' meeting before marking began, which would have considered the acceptability of alternative answers.

Mark schemes must be read in conjunction with the question papers and the report on the examination.

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CIE is publishing the mark schemes for the May/June 2009 question papers for most IGCSE, GCE Advanced Level and Advanced Subsidiary Level syllabuses and some Ordinary Level syllabuses.

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	GCE O LEVEL – May/June 2009	5038	03

- 1 (a) (i) **AS1** mark for labelled skin or sepal remains [2]
 mark for identifiable diagram [2]
AS2 mark for labelled skin or eye bud/stored food, OWTE; [2]
 mark for identifiable drawing [2]
- (ii) **AS1** seed or pulp [2]
 mark for identifiable drawing [2]
AS2 food store, flesh or OWTE [2]
 mark for identifiable drawing [2]
- (b) (i) **AS1** brick red – glucose present [2]
AS2 brick red or green – glucose present, or less glucose. [2]
- (Irish potato) blue/no change no glucose
- (ii) **AS1** yellow colour – no starch [2]
AS2 blue/black – starch present [2]
- (iii) **AS1** blue colour – no protein present [2]
AS2 blue colour/
 accept purple – no protein present but accept slight or some protein OTWE [2]
- (c) increase surface area [2]
 speed up reaction ; OWTE [2]
- (d) eye protection [3]
 mention of toxic or harmful substances/
 corrosive or burns skin/
 wash hands or wear lab coat/gloves; any three [3]
 accept valid points for precautions leading to accurate results.
- [Total: 19]**
- 2 (a) **AS3** Red–Yellow 4.0–5.0 [4]
AS4 Blue–purple 8.0– 9.0 [4]
 (or as supervisors report)
- (b) soil **AS3** [1]
 low pH/lack of lime or calcium in soil [1]
- [Total: 5]**
- 3 (a) **AS5** ammonium present sulphate present [4]
AS6 not present not present [4]
- (b) **AS6** Reason no sulphate or idea that chemicals could be toxic, both required for mark. [1]
 Reason – no ammonium or sulphate [1]
 Idea that they could be harmful or toxic, both needed for mark [1]
- [Total: 6]**