

28 January 2004

  
**SCOTTISH  
QUALIFICATIONS  
AUTHORITY**

To: SQA Co-ordinator  
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**For the attention of all staff responsible for the delivery of  
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| Action by Recipient            |
|--------------------------------|
| Response required              |
| ✓ Note and pass on             |
| None — update/information only |

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Dear Colleague

This letter is intended to provide centres with an update on National Qualifications and should be passed to the member(s) of staff responsible for Chemistry.

### 1. Assessment of Outcome 3 and Investigations

The subject update letter issued in November 2003 included the following paragraph:

*Centres should note that where candidates are sent to other centres for Outcome 3 practical work and for Advanced Higher Investigations it is the presenting centre that is responsible for assessment of candidates' work. Arrangements therefore need to be in place to ensure that the presenting centre's teacher/lecturer is present during practical work to meet all internal assessment requirements.*

This is essential where the delivering centre is not an SQA approved centre such as a university or research institution.

In the case of consortium arrangements being in place with other SQA approved centres, the need for the presence of the presenting centre teacher is not absolutely essential. What does need to be in place however is a very clear agreement as to which centre is responsible for which aspect of the assessment.

The following are some examples and suggestions of procedures that should be in place:

- (i) Where candidates are sent to a delivering centre for all aspects of practical work and the delivering centre assesses all aspects of carrying out the practical work and assessment of the report, the presenting centre should discuss standards with the delivering centre to ensure that they agree with the approach. This is essential since in such situations where issues are identified at moderation, these are taken up with the presenting centre rather than the delivering centre.
- (ii) Where candidates are sent to a delivering centre for the practical work only and the presenting centre assesses the report (or lab note books for AH Investigation) procedures must be in place to ensure that all aspects of carrying out the practical work comply with the Unit specifications and conditions for assessment.

For Outcome 3 this means:

*In relation to PC (a), the teacher/lecturer checks by observation that the candidate participates in the collection of the experimental information by playing an active part in planning the experiment, deciding how it will be managed, identifying and obtaining resources (some of which must be unfamiliar to the candidate), and carrying out the experiment.*

Here it would be appropriate for some sort of written evidence/checklist to be signed by the delivering centre teacher to confirm that this is the case for each candidate.

For AH Investigation, centres are referred to the NAB for the Investigation Unit. Again written confirmation from the delivering centre should be available to indicate that all aspects of the internal assessment evidence requirements and conditions for assessment have been met.

## **2. Exemplification of Advanced Higher Chemistry Investigation Report**

Exemplification materials have been produced to illustrate the standards required for the AH Chemistry Investigation Report. These materials will be available on SQA's secure website by the end of January 2004.

## **3. Grid questions in Standard Grade Chemistry**

Appendix 1 of this letter provides further detail on grid questions in examinations from 2004.

## **4. Revised arrangements documents for 2004/05**

The Chemistry subject update letter issued in November 2003 indicated that the revised Intermediate 1 and Intermediate 2 Chemistry Arrangements documents would be available on a CD-ROM issued to centres in April 2003. This should have stated 2004.

## **5. Centres selected for moderation**

Centres selected for moderation must include a copy of the NAB test used together with the mark scheme annotated with any agreed changes as a result of internal moderation.

I hope the contents of this letter are helpful to you. Please do not hesitate to contact me if you need further clarification.

Yours faithfully



Mary Hoey  
Qualifications Manager  
NQ Maths and Science Team

# Appendix 1

## Standard Grade Chemistry

### Grid Items in Examinations from 2004

1. The mark allocated to each grid item will now be indicated in the question.
2. As previously, a grid item in which only one response is required is allocated 1 mark, eg:

Atoms are made up of protons, neutrons and electrons.

|   |                                      |
|---|--------------------------------------|
| A | The number of protons                |
| B | The number of neutrons               |
| C | The number of electrons              |
| D | The number of outer electrons        |
| E | The number of protons plus electrons |

Identify the mass number of an atom.

1

- ◆ One response scores 1 mark if it is correct.
  - ◆ Two responses score 0 marks even if one of them is correct.
3. As previously, no grid item will have more than two correct responses.
  4. When two responses are required in a grid item, this will always be indicated in the stem of the question, eg 'Which **two** boxes .....?', or 'Identify the **two** .....
  5. A grid item which requires the candidate to demonstrate the **same** aspect of Knowledge and Understanding or Problem Solving twice is allocated **1 mark**, eg:

The formulae of some substances are shown in the grid.

|   |                 |   |                   |   |                 |
|---|-----------------|---|-------------------|---|-----------------|
| A | CH <sub>4</sub> | B | H <sub>2</sub> S  | C | N <sub>2</sub>  |
| D | O <sub>2</sub>  | E | CaCl <sub>2</sub> | F | NH <sub>3</sub> |

Identify the **two** substances which exist as diatomic molecules.

1

- ◆ Both correct responses are required to gain the 1 mark.
- ◆ One response scores 0 marks even if that one response is correct.
- ◆ Two responses, one correct and one incorrect, scores 0 marks.
- ◆ More than two responses scores 0 marks.

6. A grid item which requires the candidate to demonstrate two **different** aspects of Knowledge and Understanding or Problem Solving is allocated **2 marks**, eg:

Iron(III) oxide is an ionic compound.

|   |  |
|---|--|
| A | It is a salt.                                |
| B | It can be reduced to iron.                   |
| C | It has the formula $\text{Fe}_2\text{O}_3$ . |
| D | It is made up of molecules.                  |
| E | It does not react with acid.                 |

Identify the two statements which are correct for iron(III) oxide.

2

- ◆ Each of the two correct responses is worth 1 mark.
- ◆ Two responses which are both correct, ie B and C, scores 2 marks.
- ◆ Two responses, one of which is correct and the other incorrect, eg B and D, scores 1 mark.
- ◆ Three responses, two of which are correct and the other incorrect, eg A, B and C, scores 1 mark.
- ◆ Three responses, one of which is correct and the other two incorrect, eg A, B and D, scores 0 marks.
- ◆ One response scores 1 mark if it is correct, eg C.