

## Principal Assessor Report 2004

**Assessment Panel:**

**Chemistry**

**Qualification area**

**Subject(s) and Level(s)  
Included in this report**

**Chemistry Intermediate 2**

## Statistical information: update

Number of entries in 2003	1613 (Pre Appeal)
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Number of entries in 2004	2170 (Pre Appeal)
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### General comments re entry numbers

The increase in numbers of candidates was due to increased presentation of candidates from S4. In 2003 the number of candidates from S4 was around 140 and in 2004 this rose to around 670. In previous years these candidates would have been presented for Standard Grade Chemistry and it is likely that they would have gained Credit awards.

## Statistical Information: Performance of candidates

### Distribution of awards

Distribution of awards	%	Cum %	Number of candidates	Lowest mark
A	27.7	27.7	602	56
B	18.2	46.0	396	47
C	20.8	66.8	452	38
D	11.1	77.9	241	33
No award	22.1	100	479	0

### Comments on any significant changes in percentages or distribution of awards

There was evidence of good performance across the paper in line with a better candidate population. The number of candidates gaining A awards in the exam has increased from 18% in 2003 to 27.7% in 2004 and the percentage of candidates gaining an A or a B award increased from 38.1% to 46%. There was a slight increase in the percentage of candidates gaining an award at A-C.

The increased numbers of candidates gaining A awards was an expected consequence of the increased presentation of more able candidates from S4. The percentage of candidates gaining no award decreased slightly.

## Grade boundaries for each subject area included in the report

Grade Boundaries	Lowest mark	Percentage of maximum marks
A	56	70
B	47	59
C	38	48
D	33	41
No award	0	0

### General commentary on passmarks and grade boundaries

- While SQA aims to set examinations and create mark schemes which will allow a competent candidate to score a minimum 50% of the available marks (notional passmark) and a very well-prepared, very competent candidate to score at least 70%, it is almost impossible to get the standard absolutely on target every year, in every subject and level
- Each year we therefore hold a passmark meeting for each subject at each level where we bring together all the information available (statistical and judgmental). The Principal Assessor and SQA Qualifications Manager meet with the relevant SQA Business Manager and Statistician to discuss the evidence and make decisions. The meetings are chaired by members of the senior management team at SQA
- We adjust the passmark downwards if there is evidence that we have set a slightly more demanding exam than usual, allowing the pass rate to be unaffected by this circumstance
- We adjust the passmark upwards if there is evidence that we have set a slightly less demanding exam than usual, allowing the pass rate to be unaffected by this circumstance
- Where the standard appears to be very similar to previous years, we maintain similar grade boundaries
- An exam paper at a particular level in a subject in one year tends to have a marginally different set of grade boundaries from exam papers in that subject at that level in other years. This is because the particular questions are different. This is also the case for exams set in centres. And just because SQA has altered a boundary in a particular year in say Higher Chemistry does not mean that centres should necessarily alter boundaries in their prelim exam in Higher Chemistry. The two are not that closely related as they do not contain identical questions
- Our main aim is to be fair to candidates across all subjects and all levels and maintain standards across the years, even as arrangements evolve and change.

### Comments on grade boundaries for each subject area

The examination was a similar standard to 2003 but some marks proved to be more difficult than anticipated. In particular question 4(c) was ambiguous with candidates answering in relation to hot air rising. The scaling of the graph in question 5(c)(i) and the formula in question 14(d) also proved more difficult than anticipated. The C grade boundary was reduced by 2 marks to take this into account.

## Comments on candidate performance

### General comments

Candidates' performance was generally in line with expectations.

### Areas of external assessment in which candidates performed well

Candidates continue to answer questions examining Outcome 2 (problem solving) well. Labelling and drawing experimental set-ups and completing the flow-chart were done well. Candidates were also able to re-write the equation omitting spectator ions and combine the ion-electron half-equations to produce a redox equation.

### Areas of external assessment in which candidates had difficulty

Calculations remain an area of considerable difficulty. Performance appears to vary more between centres than within centres. Candidates from some centres score well, with candidates setting out answers in a similar fashion. In other centres candidates will make no attempt or a poorly structured attempt at the calculation. Candidates also find it difficult to name types of chemical reactions and draw the structure of monomers from sections of polymers. Candidates also had poor knowledge and understanding of the different types of covalent structure.

## Recommendations

### Feedback to centres

Candidates clearly find calculations, naming types of chemical reaction and drawing the structure of monomers from polymer structure difficult. Training candidates in setting out calculations and giving candidates repeated opportunity to tackle these types of question will hopefully improve performance in these areas.