

Moderators' Report/  
Principal Moderator Feedback

Summer 2016

Pearson Edexcel GCE  
in Chemistry (6CH06\_1A/1B)  
Chemistry Laboratory Skills II

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## **Grade Boundaries**

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**General**

With the scheme in its seventh year centres have built up expertise in its implementation and administration. Candidates are well prepared for the assessment tasks. High marks are common and usually well deserved. In some centres almost all the entry scores maximum or near maximum marks. The moderators saw few marks below 30.

Even though the scheme is well established, however, there are some centres that still failed to send the correct sample of work to the moderator and did not include teacher's or expected values with the sample. Some teachers did not apply the mark scheme rigorously enough.

**Comments on the administration of the scheme**

- When moderators receive a sample from a centre they first check that it includes the work requested by Edexcel plus that of the highest and lowest scoring candidates if these are not already included. A few centres failed to include the highest and lowest scoring candidates so the moderator had to contact the centre to ask for more work to be sent.
- Only the record sheets for those candidates in the sample need be sent to the moderator. The record sheets of other students were not required. When work is returned to home centres in July all of the record sheets are retained by the moderator.
- In order to check the award of accuracy marks in c tasks moderators must be supplied with teacher's values for titres, masses and volumes. Teachers should annotate work to show expected values and differences between these and the candidate's own value. It is most helpful to the moderator if centres record these on a Teacher's Values form
- An E9 feedback form, completed by the moderator, is sent to every centre. Sometimes there are comments on the E9 pointing out any shortcomings by the centre in its implementation of the scheme.

## Assessments

### Activity a(GPC)

Almost all centres correctly recorded on each candidate's record sheet five core practicals along with their completion dates. At least one physical, inorganic and organic task was included.

### Activity b Qualitative observation

Four new tasks, A2B25-A2B28, were available to centres for 2015-2016.

- The two organic exercises, A2B27 and A2B28 were the most popular tasks. Of the two inorganic tasks A2B26 was submitted by only a few centres.
- All of the exercises worked well with most candidates recording the expected observations and making the correct inferences. Generally teachers applied the mark schemes correctly. An exception to this was in the marking of explanations when interpreting the spectra in A2B27(a)(iii). The second mark should only have been awarded if the explanation included a reference to splitting.
- Candidates should understand the significance of the instruction to add a reagent "until there is no further change". In A2B25(a)(i) when sodium hydroxide solution was added to the solution of B, zinc sulfate, candidates correctly observed a white precipitate. They should have continued to add sodium hydroxide, while gently shaking the test tube, and then to have recorded that the precipitate dissolved to leave a colourless solution.
- The silver mirror test in A2B27(b)(ii) failed to give a silver mirror for some candidates. However most did record a black deposit or precipitate and this observation should have been awarded both marks.

### Activity c Quantitative measurement

- The most popular tasks were A2C9, Reaction rates, and A2C11, Potassium manganate(VII) titration.
- Although not submitted as a counting task by very many centres A2C10, Equilibrium constant, did give the expected results for those candidates who attempted this task. The rather demanding calculations were correctly completed by a pleasing number of candidates.
- In A2C9 the straight line graph did not have to pass through the origin to be awarded the third mark in (b).
- The manganate(VII) titration in A2C11 gave a high mark for most of the candidates who submitted it as a scoring task. Some candidates lost a mark in the calculations by failing to give their answers in (a) and (b) to three significant figures.
- The pH titration in A2C12 gave the expected weak acid-strong base graph for most candidates. The moderators accept that it is difficult to judge the exact volume at equivalence.

### **Activity d Preparation**

The most popular preparation was, as in earlier years, the preparation of the copper-ammonia complex, A2D7. This relatively straight-forward preparation gives a high yield of product. One of the two organic preparations, A2D8 and A2D9, was submitted by many centres.

### **Multi-stage activity**

A2M3 A small number of centres took the opportunity to assess their candidates using the extended task. Within a centre it is allowed for some candidates to submit this task and for others to use separate c and d tasks as part of their mark profile.

### **Summary**

As ever, the moderators thank centre assessors, candidates and technicians for their part in the implementation of the 6CH06 internal assessment scheme in this and earlier years.

**General**

To ensure comparability between the two components the marking and standardisation of the assessment tasks for this component are marked using the same mark schemes and standardising materials as the internally assessed 6CH06.01A option. The grade boundaries for each component are the same. The assessment tasks are also the same as those for 6CH06.01A.

**Comments on the administration of the scheme**

- In order to award accuracy marks in c tasks examiners must be supplied with teacher's values for titres, masses and volumes. These should be entered on a Teacher's Values form and sent to the examiner. It is essential that the examiner can calculate a candidate's expected value of titre or volume and award accuracy marks.
- There is no requirement for teachers to mark the assessment tasks although they often do so in order to decide which tasks are the highest scoring ones. It was helpful to the examiners when this marking was carried out in pencil and not in red ink. Even if they have marked the work teachers should not enter marks on the record sheet.
- There were a few centres that failed to complete the record sheets by adding candidate names and numbers.

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