

Examiners' Report/ Principal Examiner Feedback

Summer 2013

International GCSE Chemistry (4CH0) Paper 2CR

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#### Question 1

As expected, this was a high-scoring question. The commonest errors were in (a), where gallium was occasionally chosen, and in (e), where helium sometimes appeared.

#### **Question 2**

Very few errors were seen in (a), but (b) caused more problems for students - although most correctly identified the first box as containing a mixture, the second was sometimes stated to be an element (perhaps because all the formulae were the same), and the third as a compound.

## **Question 3**

Very few students failed to identify the gas as hydrogen, but a disappointing number failed to score the mark for the test - the commonest errors were to refer to a splint (with no indication of a flame), or a glowing splint, or to give the result ("squeaky pop" or equivalent) with no reference to either flame or splint. In (b)(i) the formula was often correct (although with  $AgCl_2$  a common error), as was the name of the other solution, while in (b)(ii) there were few errors. In (c), several students failed to score through giving an incorrect reagent, while the other cause of marks not being scored was omitting "precipitate" or equivalent.

### **Question 4**

The majority of students scored full marks in parts (a) - (c), with the commonest errors being to duplicate answers in (a) - fizzing and a gas given off, giving an ion in (b) -  $\operatorname{Li}^+$ , while in (c)(i) oxygen was a fairly common answer. Part (d) was considerably more demanding, so it was pleasing to see many excellent answers, while marks were lost through omissions rather than through errors - perhaps the commonest was failing to refer to the actual configurations, as required by the question wording.

#### **Question 5**

Parts (a) and (b) were well answered, with the commonest answers being in (b)(iii) (where there seemed to be a reluctance to give the same answer as in (b)(i)), and with some ambiguous answers (such as puntane and bentane in (b)(iv)). The ethene diagram in (c)(ii) was generally well done, with few errors seen, such as the wrong number of carbon and/or hydrogen atoms shown. Part (d) was well answered.

## **Question 6**

This was the last question on the paper and intended to be the most demanding, which proved to be the case. Even so, most students attempted every part and achieved some success. There were few errors in parts (a) and (b)(i), but (b)(ii) revealed many misconceptions (such as electrodes not fully immersed in the solution, some current used to light the lamp). The graph in (c) required more points than usual to be plotted, but was otherwise very straightforward to complete. A few students did not know how to attempt (iii) and (iv), while others answered (v) by referring to the data and not by using the graph, as the question required.

# **Grade Boundaries**

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