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Cambridge International General Certificate of Secondary Education

MARK SCHEME for the March 2016 series

0620 CHEMISTRY

0620/52 Paper 5 (Practical Test), maximum raw mark 40

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.

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Abbreviations used in the Mark Scheme

- ; separates marking points
- / separates alternatives within a marking point
- () the word or phrase in brackets is not required but sets the context
- **A** accept (a less than ideal answer which should be marked correct)
- **I** ignore (mark as if this material were not present)
- **R** reject
- ecf credit a correct statement that follows a previous wrong response
- ora or reverse argument
- owtte or words to that effect (accept other ways of expressing the same idea)

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Question	Answer	Marks
1(a)	initial, final and average temperature boxes completed correctly; times completed, in seconds; comparable to supervisor's results;	**2** **1** **1**
1(b)	appropriate scale for *y*-axis; all points plotted correctly; smooth line graph;	**1** **2** **1**
1(c)	value from graph; extrapolation;	**1** **1**
1(d)(i)	experiment 4 / 50 °C;	**1**
1(d)(ii)	more energy / higher temperature; more chance of collisions;	**1** **1**
1(e)(i)	more accurate; than a measuring cylinder;	**1** **1**
1(e)(ii)	insulation / use a lid; to reduce heat losses; **or** repeats; average results; **or** measure water using a burette / pipette / use a 2d.p. stopwatch / digital thermometer; reference to accuracy; **or** use a calorimeter; more reliable;	**2**

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Question	Answer	Marks
2(a)	green / blue (solid / crystals);	**1**
2(b)(i)	blue; precipitate; deep blue; solution;	**1** **1** **1** **1**
2(b)(ii)	blue precipitate;	**1**
2(b)(iii)	white precipitate;	**1**
2(b)(iv)	no reaction / change / precipitate;	**1**
2(c)	copper chloride;	**1** **1**
2(d)	purple vapour / gas; description of sublimate; litmus paper turns blue;	**1** **1** **1**
2(e)(i)	litmus paper turns blue;	**1**
2(e)(ii)	yellow precipitate;	**1**
2(f)	ammonium iodide;	**1** **1**

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Question	Answer	Marks
3	any six from: • chromatography; • pencil base line / origin; • apply orange colouring to the paper; • and samples of both E110 and E129; • run in solvent / named solvent; • check heights of spots of E110 and E129 against orange colouring; • conclusion;	**6**

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