CAMBRIDGE INTERNATIONAL EXAMINATIONS

Cambridge International General Certificate of Secondary Education

MARK SCHEME for the March 2016 series

0620 CHEMISTRY

0620/62 Paper 6 (Alternative to Practical), 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.

Mark schemes should be read in conjunction with the question paper and the Principal Examiner Report for Teachers.

Cambridge will not enter into discussions about these mark schemes.

Cambridge is publishing the mark schemes for the March 2016 series for most Cambridge IGCSE® and Cambridge International A and AS Level components.

® IGCSE is the registered trademark of Cambridge International Examinations.

CAMBRIDGE
International Examinations

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)

© Cambridge International Examinations 2016

Question	Answer	Marks
1(a)	tripod; stirring rod / stirrer;	**2**
1(b)(i)	B C A;	**1**
1(b)(ii)	filtration;	**1**
1(c)(i)	water;	**1**
1(c)(ii)	filtrate;	**1**
1(d)	solid / crystals appearing on edge / glass rod test;	**1**

Question	Answer	Marks
2(a)	In each column: 4 correct = [2] 3 correct = [1] average temperature boxes completed correctly: 16, 27, 41, 50; times completed in seconds correctly: 128, 58, 27, 18;	**4**
2(b)	all points plotted correctly = [3] smooth line graph;	**4**
2(c)	value from graph: 12–13 s; extrapolation;	**2**
2(d)(i)	Experiment 4;	**1**
2(d)(ii)	any **2** from: highest temperature; more energy; more (chance of) collisions;	**2**
2(e)(i)	more accurate; than a measuring cylinder;	**2**

© Cambridge International Examinations 2016

Question	Answer	Marks
2(e)(ii)	insulation / use a lid; to reduce heat losses; OR repeats; average results; OR measure water or sulphuric acid or methyl orange using a burette / use a 2 d.p. stopwatch / digital thermometer; reference to accuracy;	**2**

Question	Answer	Marks
3(a)	blue / green (solid / crystals);	**1**
3(b)(i)	(pale) blue; precipitate; royal / deep blue; dissolves / solution;	**4**
3(b)(ii)	(pale) blue precipitate;	**1**
3(b)(iii)	white precipitate;	**1**
3(b)(iv)	no reaction / change / precipitate;	**1**
3(c)	ammonium; iodide;	**2**

© Cambridge International Examinations 2016

Question	Answer	Marks
4	any **6** from: chromatography; (pencil) baseline / origin; apply orange colour to paper; and samples of both E110 and E129; solvent / named solvent; check heights of spots of E colours against orange drink; conclusion / allow comparison to known R_f values;	**6**

© Cambridge International Examinations 2016