

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

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

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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)	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

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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

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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