

CAMBRIDGE INTERNATIONAL EXAMINATIONS**Cambridge International General Certificate of Secondary Education****MARK SCHEME for the May/June 2015 series****0620 CHEMISTRY****0620/52**

Paper 5 (Practical), maximum raw mark 40

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Abbreviations used in the Mark Scheme

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

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Question	Answer	Marks	Guidance
1(f)	volumes completed for all five experiments; times completed for all five runs and time increases down table; all times in seconds; result for experiment 3 comparable to supervisors (within 10 seconds);	4	Total volume in each run = 50 cm ³
1(g)	y scale – longest time above half way up axis and scale linear; all five points plotted correctly (two marks); smooth line;	4	
1(h)	yellow / cream / white;	1	I references to pale / cloudy / precipitate / solid / milky / solution
1(i)(i)	correct value from graph; units; indication shown on graph;	3	A s / seconds / sec
1(i)(ii)	line above experimental line;	1	the lines must not meet at any point
1(j)(i)	experiment 1 / first;	1	A ecf from results
1(j)(ii)	more particles of thiosulfate / particles closer together / more concentrated / no water / more (frequent) collisions;	1	
1(k)	volume over 50 cm ³ / changing total volume; so not a fair test / so depth greater / cannot compare with other results;	2	A (result) not valid
1(l)(i)	<i>Any two from:</i> - more accurate (for volume measurement); - comparison to measuring cylinder; - less accurate measurement of time; - as it takes longer to add the acid;	2	A more precise
1(l)(ii)	time shorter / cross disappears faster; depth greater;	2	R reacts faster

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Question	Answer	Marks	Guidance
2(a)	white (solid);	1	R if described as a liquid or solution
2(b)	strong / pungent / sharp / choking smell; (pH indicator turns) green / blue / purple; Any value or range >7 and ≤ 14 ;	3	A any suitable description of the smell
2(c)	yellow; precipitate / ppt / ppte;	2	I cream I solid R the second mark if there is an indication of the precipitate dissolving
2(d)	yellow / orange / brown; fizzing / bubbles / effervescence; turns black / blue-black; glowing splint; relights;	5	I the state / red I “gas made” I all other gas tests A glows brighter
2(e)	fizzing / bubbles / effervescence; limewater; milky / cloudy; (on addition of sulfuric acid) white precipitate / ppt / ppte;	3 1	I all other gas tests A other description such as “becomes turbid”
2(f)	ammonium / NH_4^+ ; iodide / I^- ;	2	A correct formula of ammonium iodide for both marks
2(g)	barium / lead / calcium / silver; carbonate;	2	A correct formula of appropriate carbonate for both marks