



**Cambridge International Examinations**  
Cambridge International General Certificate of Secondary Education

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**CHEMISTRY**

**0620/61**

Paper 6 Alternative to Practical

**May/June 2017**

MARK SCHEME

Maximum Mark: 40

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**Published**

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This document consists of **4** printed pages.

Question	Answer	Marks
1(a)(i)	stirrer / glass rod	1
1(a)(ii)	Spatula	1
1(a)(iii)	nitric (acid)	1
1(a)(iv)	bubbles / fizz / effervescence	1
1(b)	the reaction is (fast) at room temperature	1
1(c)	strontium carbonate	1
	solid is left behind	1
1(d)	filter	1
	heat / evaporate	1
	to crystallising point / glass rod test / until saturation point	1

Question	Answer	Marks
2(a)	initial and final readings completed correctly: 4.1, 38.3	1
	difference completed correctly: 34.2	1
2(b)	initial and final readings completed correctly: 3.7, 20.8	1
	difference completed correctly: 17.1	1
2(c)(i)	solution <b>C</b> is more concentrated	1
	a greater volume of thiosulfate was needed	1
2(c)(ii)	2 × as concentrated	1

Question	Answer	Marks
2(d)	1.5 × value from table in <b>(b)</b> for Experiment 2	1
	unit: cm <sup>3</sup>	1
2(e)(i)	2 sources of error, e.g.: <ul style="list-style-type: none"> <li>• using a measuring cylinder to measure solution <b>C</b>/solution <b>D</b></li> <li>• only carrying out the experiments once</li> <li>• going past the end-point</li> </ul>	2
2(e)(ii)	2 meaningful improvements <b>related to (e)(i)</b> : <ul style="list-style-type: none"> <li>• use a pipette / burette</li> <li>• repeat the experiment</li> <li>• improvement linked to going past the end-point</li> </ul>	2

Question	Answer	Marks
3(a)	solid spits out of the tube / the tube might crack	1
3(b)	carbon dioxide	1
3(c)	copper / Cu <sup>2+</sup>	1
	carbonate / CO <sub>3</sub> <sup>2-</sup>	1
3(d)	white	1
3(e)(i)	no reaction / change	1
3(e)(ii)	yellow	1
	precipitate	1
3(f)	lilac	1

Question	Answer	Marks
3(g)	any 2 from: <ul style="list-style-type: none"><li>• blue / roaring / hot flame</li><li>• use of a splint / wire to introduce the solid into the flame</li><li>• use of (concentrated) hydrochloric acid</li></ul>	2

Question	Answer	Marks
4(a)	(red) litmus turns blue	1
4(b)	heat / boil the mixture	1
	condense the vapour	1
4(c)	filter / decant	1
	wash residue (with water)	1
	dry	1