Cambridge International Examinations
Cambridge International General Certificate of Secondary Education

CHEMISTRY **0620/61**

Paper 6 Alternative to Practical **May/June 2017**

MARK SCHEME

Maximum Mark: 40

Published

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 May/June 2017 series for most Cambridge IGCSE®, Cambridge International A and AS Level and Cambridge Pre-U components, and some Cambridge O Level components.

This syllabus is approved for use in England, Wales and Northern Ireland as a Cambridge International Level 1/Level 2 Certificate.

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 **C** 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)** for Experiment 2	**1**
	unit: cm^3	**1**
2(e)(i)	2 sources of error, e.g.: • using a measuring cylinder to measure solution **C** / solution **D** • only carrying out the experiments once • going past the end-point	**2**
2(e)(ii)	2 meaningful improvements **related to (e)(i)**: • use a pipette / burette • repeat the experiment • improvement linked to going past the end-point	**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^{2+}	**1**
	carbonate / CO_3^{2-}	**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: • blue / roaring / hot flame • use of a splint / wire to introduce the solid into the flame • use of (concentrated) hydrochloric acid	**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**