



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

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**CHEMISTRY**

**0620/51**

Paper 5 Practical Test

**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(b)	initial and final readings completed correctly	1
	differences completed correctly	1
	all readings to 1 d.p.	1
	results comparable to the Supervisor's results	1
1(c)	red / brown / amber / orange	1
1(d)	(becomes) yellow / orange / paler	1
1(e)	yellow to blue / black	1
1(f)(i)	solution <b>C</b> is more concentrated	1
	a greater volume of thiosulfate was needed	1
1(f)(ii)	ratio of the candidate's differences from the table in <b>(b)</b>	1
1(g)	$1.5 \times$ value from table in <b>(b)</b> for Experiment 2	1
	unit: $\text{cm}^3$	1
1(h)(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
1(h)(ii)	2 meaningful improvements <b>related to (h)(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

<b>Question</b>	<b>Answer</b>	<b>Marks</b>
2(a)	green	<b>1</b>
2(b)	any 2 from: <ul style="list-style-type: none"><li>• turns black</li><li>• condensation / drops of liquid formed</li><li>• moves / jumps around</li></ul>	<b>2</b>
2(c)(i)	any 3 from: <ul style="list-style-type: none"><li>• blue (solution)</li><li>• bubbles / fizz</li><li>• limewater</li><li>• milky</li></ul>	<b>3</b>
2(c)(ii)	blue	<b>1</b>
	precipitate	<b>1</b>
	(with excess) deep / royal blue solution / clear / precipitate dissolves	<b>1</b>
2(d)	blue-green	<b>1</b>

Question	Answer	Marks
2(e)	copper / $\text{Cu}^{2+}$	1
	carbonate / $\text{CO}_3^{2-}$	1
2(f)	white	1
2(g)(i)	no reaction / no change	1
2(g)(ii)	yellow precipitate	1
2(h)	lilac	1
2(i)	potassium / $\text{K}^+$	1
	iodide / $\text{I}^-$	1

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