



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

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**CHEMISTRY**

**0620/52**

Paper 5 Practical Test

**March 2017**

MARK SCHEME

Maximum Mark: 40

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**Published**

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<b>Question</b>	<b>Answer</b>	<b>Marks</b>
1(b)	initial and final readings completed correctly	<b>1</b>
	differences completed correctly	<b>1</b>
	all readings to 1 decimal place	<b>1</b>
	results comparable to the Supervisor's results	<b>1</b>
1(c)	blue to colourless	<b>1</b>
1(d)	neutralisation	<b>1</b>
1(e)(i)	solution <b>O</b>	<b>1</b>
	greater volume of acid was used in the titration	<b>1</b>
1(e)(ii)	five times as concentrated	<b>1</b>
1(f)	half volume / value from table for Experiment 2	<b>1</b>
	unit: cm <sup>3</sup>	<b>1</b>
1(g)	effect on volume: no effect	<b>1</b>
	reason: temperature would only affect the rate	<b>1</b>
1(h)(i)	use a pipette / burette	<b>1</b>
1(h)(ii)	repeat experiments (and compare / average)	<b>1</b>

Question	Answer	Marks
1(i)	<b>M1 fair test</b> to equal volumes of each sodium hydroxide solution / solutions <b>O</b> and <b>P</b> add an equal volume / measured volumes of aqueous calcium chloride	1
	<b>M2 dependent variable measured</b> measure mass / height of precipitate formed / volume of calcium chloride used	1
	<b>M3 conclusion</b> the more concentrated sodium hydroxide solution would form the most precipitate (mass / height) / would require a smaller volume of calcium chloride	1

Question	Answer	Marks
2(a)	<u>white</u> (wet) (crystals)	1
2(b)(i)	white	1
	precipitate	1
2(b)(ii)	precipitate dissolves / clears / is soluble	1
2(c)(i)	white	1
	precipitate	1
2(c)(ii)	precipitate dissolves	1
2(d)	cream precipitate	1
2(e)	zinc	1
	bromide	1
2(f)	yellow	1
2(g)	no reaction / no change / precipitate	1

Question	Answer	Marks
2(h)	yellow	1
	precipitate	1
2(i)	sodium	1
	iodide	1

Question	Answer	Marks
3(a)	any 4 from: <b>M1</b> measure initial temperature of (solid) ammonium chloride / barium hydroxide <b>M2</b> add barium hydroxide / ammonium chloride / other solid <b>AND</b> mix / stir <b>M3</b> use a thermometer <b>M4</b> measure the temperature of the mixture / final temperature <b>M5</b> temperature decreases / test-tube feels cold	4
3(b)	<b>M1</b> add (aqueous) sodium hydroxide (and warm)	1
	<b>M2</b> gas produced turns (red) litmus blue	1