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Cambridge International Examinations
Cambridge International General Certificate of Secondary Education

CHEMISTRY

0620/63

Paper 6 Alternative to Practical

October/November 2016

MARK SCHEME

Maximum Mark: 40

Published

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Page 2	Mark Scheme	Syllabus	Paper
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Question	Answer	Mark
1(a)	(clamp / retort) stand trough	1 1
1(b)	to absorb / hold / keep / soak up / contain the paraffin oil	1
1(c)	M1 bromine (aqueous / in cyclohexane) M2 turns colourless / decolourised	1 1
1(d)	to prevent suck back (of water)	1

Page 3	Mark Scheme	Syllabus	Paper
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Question	Answer	Mark
2(a)	table of results for Experiment 1 temperature boxes completed correctly 20, 20, 20, 25, 28, 31, 33, 34, 35, 36, 36	2
2(b)	table of results for Experiment 2 temperature boxes completed correctly 22, 22, 22, 71, 76, 75, 72, 70, 67, 65, 64	2
2(c)	all points correctly plotted $\pm$ half a small square smooth line graphs labelled	2 1 1
2(d)(i)	working shown clearly as construction lines or cross value from graph ($29-30^{\circ}\text{C} \pm 0.5^{\circ}\text{C}$)	1 1
2(d)(ii)	value from graph (72 s) –60 s	1 1
2(e)	room temperature or initial temperature from table ($20-22^{\circ}\text{C}$) reaction has finished / stopped	1 1
2(f)	more readings / points / data smoother curve / better or more accurate graph	1 1
2(g)	polystyrene is an insulator / copper is a (good) conductor reduced heat losses	1 1

Page 4	Mark Scheme	Syllabus	Paper
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Question	Answer	Mark
3(a)(i)	pH 1–3	1
3(a)(ii)	effervescence / fizzing / bubbling / solid disappears / dissolves lighted splint 'pops'	1 1 1
3(a)(iii)	effervescence / fizzing / bubbling / solid disappears / dissolves limewater milky	1 1 1
3(a)(iv)	white precipitate	1
3(b)	calcium / Ca^{2+} hydroxide / OH^-	1 1

Page 5	Mark Scheme	Syllabus	Paper
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Question	Answer	Mark
4	silica filter (the cleaner) wash the residue dry the residue water heat (the filtrate / cleaner) condense the vapour sodium carbonate heat to dryness / no liquid left (then solid) sodium carbonate is left OR heat until saturated then cool to crystallise / leave to crystallise	6