

CAMBRIDGE INTERNATIONAL EXAMINATIONS

Cambridge International General Certificate of Secondary Education

MARK SCHEME for the October/November 2015 series

0653 COMBINED SCIENCE

0653/52

Paper 5 (Practical Test), maximum raw mark 30

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1 (a)

<i>reagent</i>	<i>Benedict's</i>	<i>iodine solution</i>
<i>food group tested for</i>	(reducing) sugar ;	starch ;

[2]

(b)

<i>reagent</i>	<i>Benedict's</i>	<i>iodine solution</i>
<i>colour with milk</i>	yellow / red / orange	orange
<i>colour with rice</i>	blue	blue-black / black

full set of results recorded for milk **and** rice ;
 all correct for milk ;
 all correct for rice ;

[3]

(c)

	<i>food group(s) present</i>
<i>colour with milk</i>	(reducing) sugar ;
<i>colour with rice</i>	starch ;

(mark independently to observations)
 (allow: ecf from (a) if groups muddled)

[2]

(d) (i) dissolve in / mix with ethanol ;
 add water ;

[2]

(ii) cloudy / milky / emulsion (this mark linked to (e)(i) being at least partly correct) ;

[1]

[Total: 10]

2 (a) vapour burns / blue flame / flammable gas / splint remained lit ;
 solid goes grey / black / darkens / condensation ;

[2]

(b) no effervescence / no fizzing / no bubbles ;
 pungent smell / blue litmus turns red ;
 (do **NOT** allow this mark if has **red litmus to blue**)
 (conclusion) acidic gas / not a carbonate ;

[3]

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(c) effervescence / fizzing / bubbles ;
acid ; [2]

(d) (i) effervescence / fizzing / bubbles ;
(limewater becomes) milky / white ppt. ; [2]

(ii) calcium carbonate / CaCO_3 / calcium hydrogen carbonate / $\text{Ca}(\text{HCO}_3)_2$; [1]

[Total: 10]

3 (a) (i) realistic I value recorded for 15 cm ;
realistic V value recorded for 15 cm ; [2]

(ii) all I values $< 1.5\text{A}$ **and** to at least 2 d.p. ;
all V values $< 2.5\text{V}$ **and** to at least 1 d.p. ; [2]

(b) suitable choice of scales (\geq half the grid used) ;
at least 5 plots correct to half a small square ;
good best-fit line judgement ; [3]

(c) indication **on graph** of how data obtained **and** at least half of line used ;
correct calculation for triangle method using data from graph ; [2]

(d) answer equals (c) recorded to 2 or 3 significant figures ;
(*ecf from (c)*) [1]

[Total: 10]