

**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) <b>sugar</b> ;	<b>starch</b> ;

[2]

(b)

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

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) <b>sugar</b> ;
<i>colour with rice</i>	<b>starch</b> ;

(*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 /  $\text{CaCO}_3$  / 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]**