Do not write outside the box

0 6 This question is about the Earth's resources.

When most fuels burn carbon dioxide is produced.

Propane (C_3H_8) is a fuel.

0 6 . 1 Balance the equation for the combustion of propane.

[1 mark]

$$C_3H_8 + \_\_\_\_ O_2 \rightarrow 3\,CO_2 + 4\,H_2O$$

0 6 . 2 Describe the test for carbon dioxide.

Give the result of the test.

[2 marks]

Test _____

Result _____

_____

0 6 . 3 Propane can be cracked to produce propene and hydrogen.

Complete the symbol equation for the reaction.

[1 mark]

$$\underset{\text{propane}}{C_3H_8} \rightarrow \underset{\text{propene}}{\_\_\_\_\_} + \underset{\text{hydrogen}}{H_2}$$

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0 6 . 4 Describe the test for hydrogen.

Give the result of the test.

[2 marks]

Test _____

Result _____

_____

0 6 . 5 Propene is an alkene.

Describe the test for alkenes.

Give the colour change in the test.

[3 marks]

Test _____

Colour change _____ to _____

9

Turn over for the next question

Question	Answers	Extra information	Mark	AO / Spec. Ref.
06.1	$C_3H_8 + 5\ O_2 \rightarrow 3\ CO_2 + 4\ H_2O$	allow multiples	1	AO2 5.1.1.1 5.7.1.3
06.2		MP2 is dependent upon correct response in MP1		AO1.2 5.8.2.3
	(bubble gas through) lime water	allow (bubble gas through) calcium hydroxide (solution)	1	
	turns milky / cloudy / white **or** white precipitate forms		1	
06.3	C_3H_6		1	AO2 5.1.1.1 5.7.1.4
06.4		MP2 is dependent upon correct response in MP1		AO1 5.8.2.1
	burning / lit splint	allow flame do **not** accept glowing splint	1	
	burns with a (squeaky) pop sound	allow pops	1	
06.5	bromine (water)	do **not** accept bromide	1	AO1 5.7.1.4
	(colour change) orange	allow 1 mark for colourless (to) orange	1	
	(to) colourless		1	
		ignore clear		
Total			**9**	