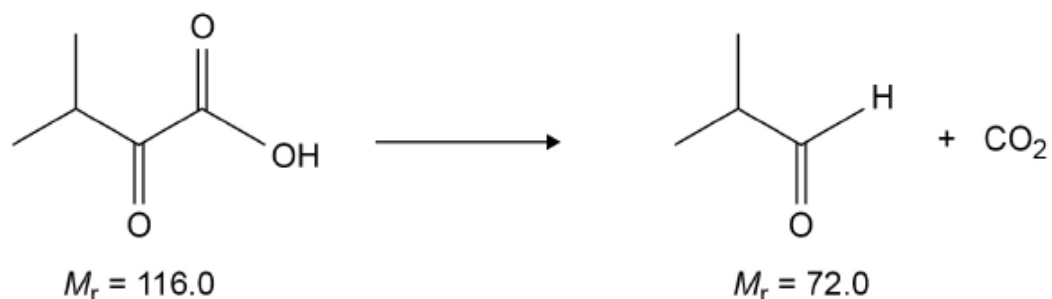
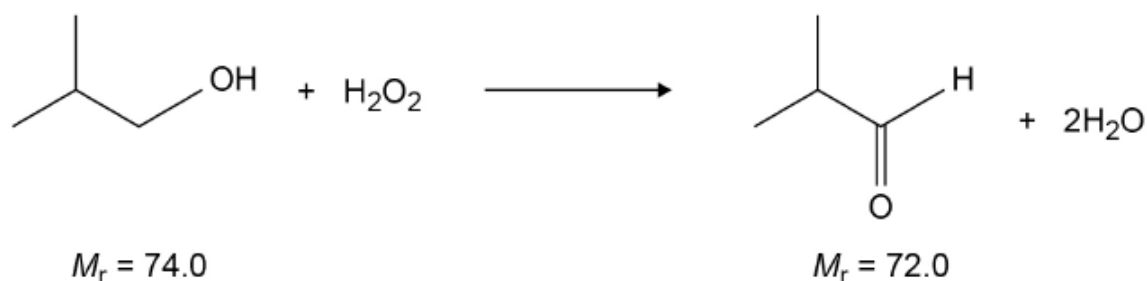


AQA – Organic analysis – AS Chemistry P2

1. June/ 2020/Paper_2/No.3

A student investigates two experimental methods of making methylpropanal. The equations for these two methods are shown.

Method 1**Method 2**

In each method, the student uses 1.00 g of organic starting material.

The yield of methylpropanal obtained using each method and other data are included in **Table 3**.

Table 3

	Method 1	Method 2
Yield of methylpropanal / mg	552	778
Percentage yield		80.0%
Percentage atom economy	62.1%	

Calculate the percentage yield for Method 1.

Calculate the percentage atom economy for Method 2.

State the importance of percentage yield and percentage atom economy when choosing the method used to make a compound.

[6 marks]

% yield _____

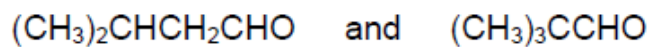
Importance of percentage yield _____

% atom economy _____

Importance of percentage atom economy _____

2. June/ 2020/Paper_2/No.13

Which can be used to distinguish between these two compounds?

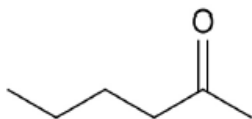
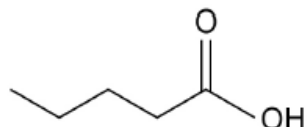
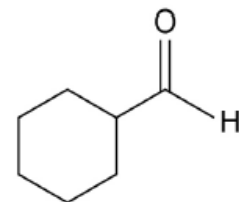


[1 mark]

- A Acidified potassium dichromate(VI)
- B Fingerprint region of infrared spectrum
- C M_r value in high resolution mass spectrometry
- D Tollens' reagent

3. June/ 2019/Paper_2/No.1

0 1

The structures of three organic compounds **A**, **B** and **C** are shown.Compound **A**Compound **B**Compound **C**

These compounds can be distinguished by simple test-tube reactions.

For each pair of compounds in questions 01.1 and 01.2, give a reagent (or combination of reagents) that could be added separately to each compound to distinguish between them.

State what is observed in each case.

0 1 . 1

Compounds **A** and **B**

[3 marks]

Reagent _____

Observation with **A** _____

Observation with **B** _____

0 1 . 2

Compounds **A** and **C**

[3 marks]

Reagent _____

Observation with **A** _____

Observation with **C** _____

5. June/ 2019/Paper_2/No.14

How many isomers are there of C_3H_9N ?

[1 mark]

A 2

B 3

C 4

D 5

6. June/ 2019/Paper_2/No.16

Which compound can react with ammonia to produce propylamine?

[1 mark]

A $CH_3CH=CH_2$

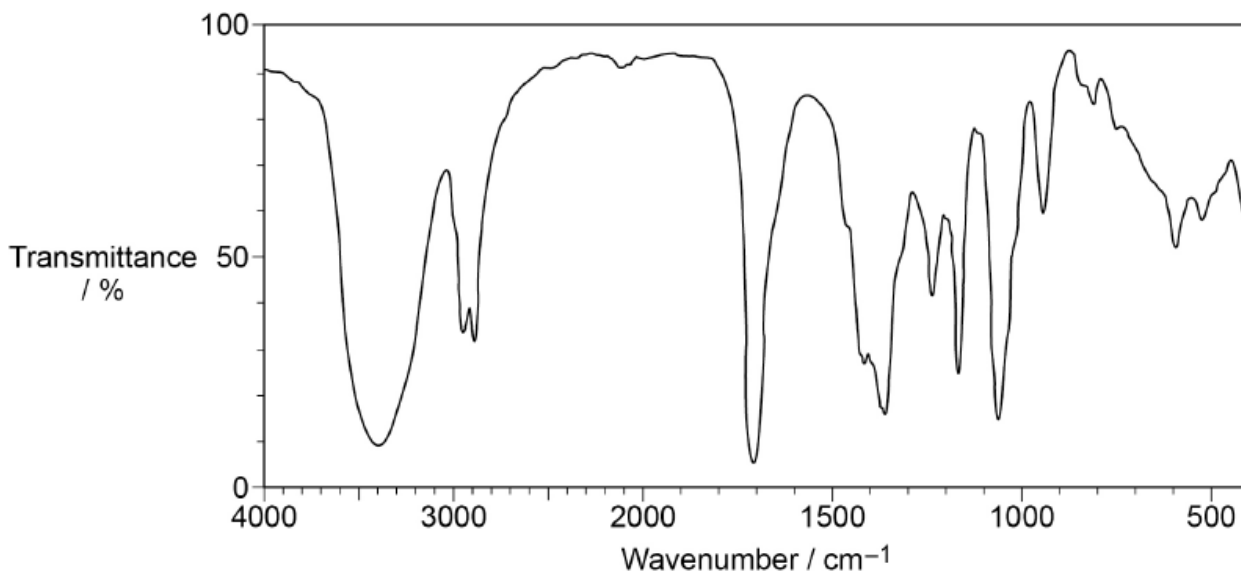
B $CH_3CH_2CH_2OH$

C $CH_3CH_2CH_2Br$

D $CH_3CH_2CH_3$

7. June/ 2019/Paper_2/No.23

The infrared spectrum of an organic compound is shown.



Which compound produces this spectrum?

[1 mark]

A ethanoic acid

B 4-hydroxybutanone

C propan-1-ol

D prop-2-en-1-ol

9. June/ 2022/Paper_2/No.16

Which reaction does **not** result in a change in the shape around a carbon atom?

[1 mark]

A chloromethane with aqueous sodium hydroxide

B ethene with bromine

C propane with excess oxygen

D propan-1-ol with acidified potassium dichromate(VI)

10. June/ 2021/Paper_2/No.21

When 2-bromobutane is warmed with potassium hydroxide solution, substitution and elimination reactions both occur.

Which of these compounds is **not** produced?

[1 mark]

A butan-1-ol

B butan-2-ol

C but-1-ene

D *E*-but-2-ene