AQA – Carboxylic acids and derivatives – A2 Chemistry P3

1. June/ 2019/Paper_3/No.25

A student is required to dry a liquid sample of pentanoic acid.

Which drying agent is suitable?

[1 mark]

A Calcium oxide ⬭

B Calcium sulfate ⬭

C Potassium hydroxide ⬭

D Potassium carbonate ⬭

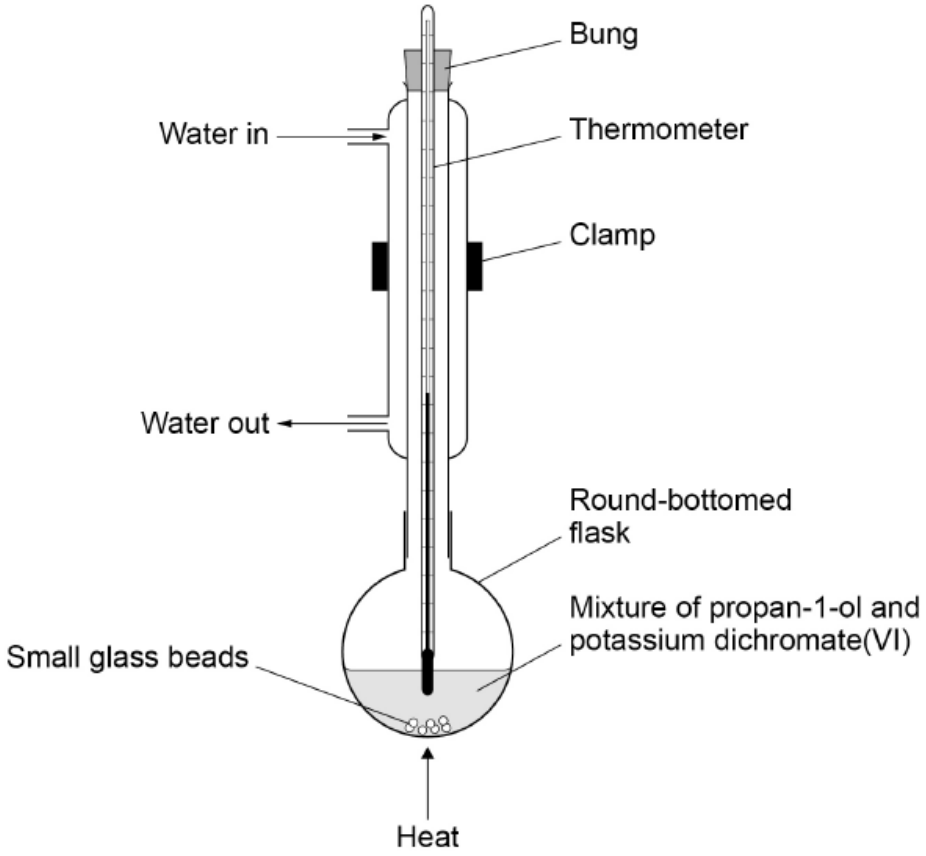
2. June/2021/Paper_3/No.6

0 6 A student plans an experiment to investigate the yield of propanoic acid when a sample of propan-1-ol is oxidised.

Figure 4 shows the apparatus that the student plans to use for the experiment.

The student's teacher says that the apparatus is not safe.

Figure 4



0 6 . 1 Give **two** reasons why the apparatus shown in **Figure 4** is not safe.

[2 marks]

1 _____

_____

2 _____

_____

0 6 . 2 Give **one** additional reagent that is needed to form any propanoic acid.

[1 mark]

_____

0 6 . 3 State **two** more mistakes in the way the apparatus is set up in **Figure 4**.

[2 marks]

1 _____

_____

2 _____

_____

0 6 . 4 State the purpose of the small glass beads in the flask in **Figure 4**.

[1 mark]

_____

_____

_____

0 6 . 5 After correcting the mistakes, the student heats a reaction mixture containing 6.50 g of propan-1-ol with an excess of the oxidising agent.
The propanoic acid separated from the reaction mixture has a mass of 3.25 g

State the name of the technique used to separate the propanoic acid from the reaction mixture.

Calculate the percentage yield of propanoic acid.

[4 marks]

Technique _____

Percentage yield _____

0 6 . 6 State a simple chemical test that distinguishes the propanoic acid from the propan-1-ol.

Give **one** observation for the test with each substance.

[3 marks]

Test _____

Propanoic acid _____

Propan-1-ol _____