AQA GCSE Chemistry | 8462

SPECIFICATION POINT 4.8.2.2

Test for oxygen

Past-paper questions

Tier	**Higher**
Question groups	**2**
Available paper years	**2010–2024**

Using this booklet

1. Answer the questions in order and show your working.
2. Original question numbers and marks are retained.
3. Print at actual size (100%) for measuring questions.
4. Use the companion answer booklet to check your work.

Name: _____ **Date:** _____

Whole questions are retained for context, so some parts assess other specification points. Current and legacy sources are labelled. Continue on extra paper if needed.

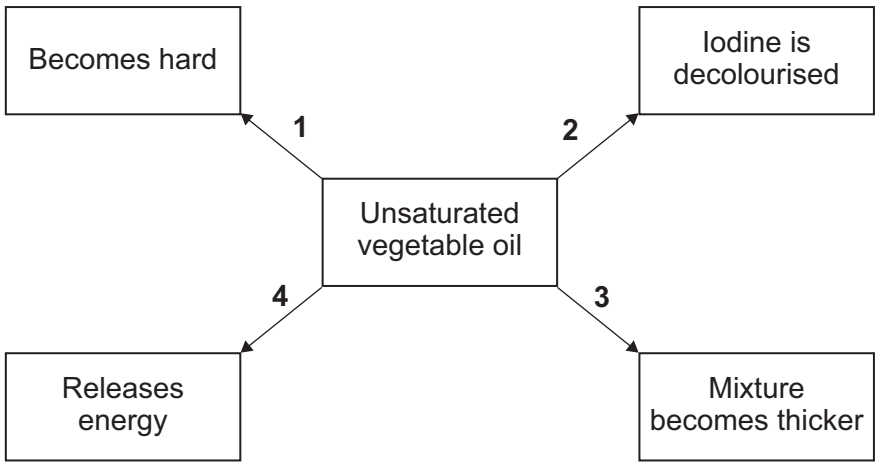
4.8.2.2 Test for oxygen

Question 01

June 2010 | CHY1BP | Original Q1 | Legacy

QUESTION ONE

The diagram shows what happens to an unsaturated vegetable oil when it is treated in different ways.



Match processes, **A**, **B**, **C** and **D**, with the numbers **1–4** in the diagram.

A Burn in oxygen

B Test for unsaturation

C Add water and shake vigorously

D React with hydrogen

4.8.2.2 Test for oxygen

Question 02

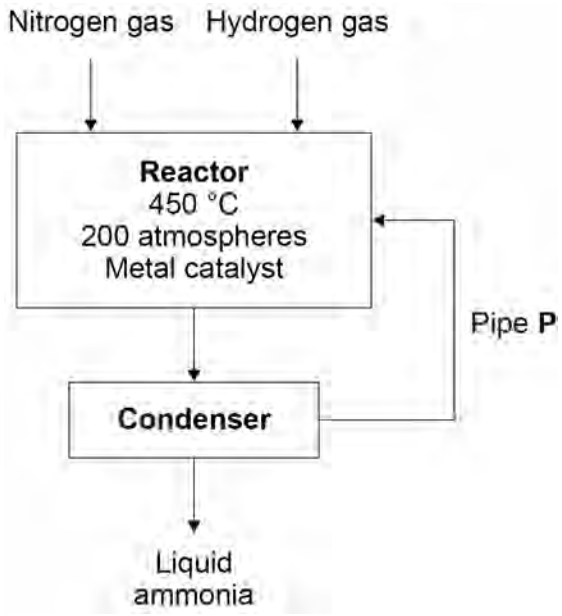
June 2024 | 8462/2H | Original Q2

0 2 This question is about ammonia and nitric acid.

In the Haber process ammonia is produced from nitrogen and hydrogen.

Figure 1 represents the Haber process.

Figure 1



0 2 . 1 Pipe **P** links the condenser to the reactor.

Why is the condenser linked to the reactor?

Use **Figure 1**.

[1 mark]

0 2 . 2 Which metal is used as a catalyst in this reaction?

[1 mark]

4.8.2.2 Test for oxygen

Question 02 · continued

Nitric acid is produced by reacting ammonia with oxygen.

The word equation for the production of nitric acid is:

ammonia + oxygen → water + nitric acid

Platinum is a catalyst in this reaction.

0 2 . 3 Describe the test for oxygen gas.

Give the result if oxygen gas is present.

[2 marks]

Test _____

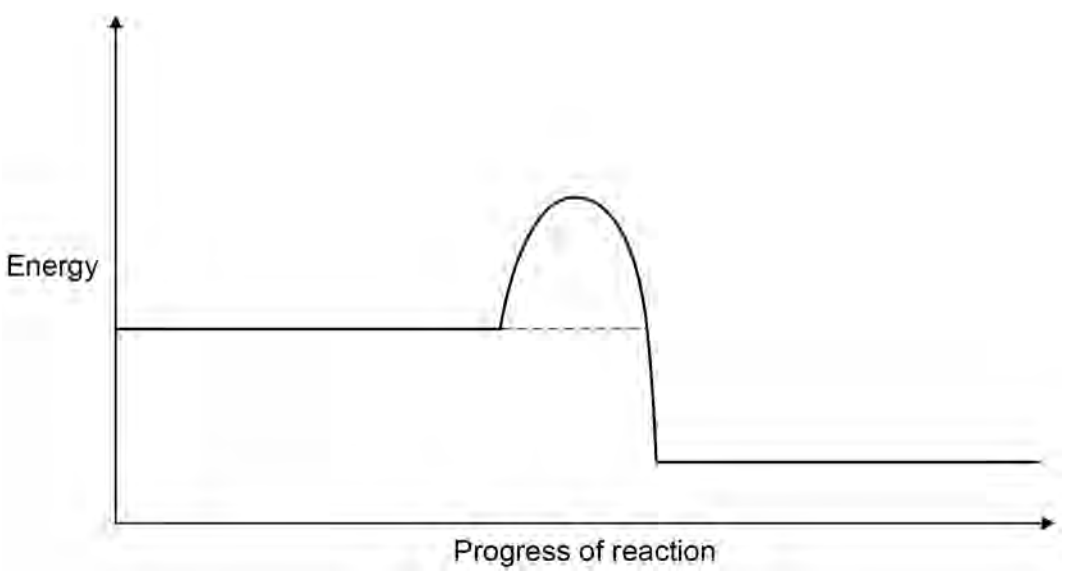
_____

Result _____

_____

Figure 2 represents the reaction profile of the catalysed reaction between ammonia and oxygen.

Figure 2



4.8.2.2 Test for oxygen

Question 02 · continued

0 2 . 4 Complete the reaction profile for the catalysed reaction in **Figure 2**.

You should:

- label the activation energy
- label the reactants and products, using the names of the reactants and products.

[2 marks]

0 2 . 5 How would **Figure 2** be different if **no** catalyst was used?

[1 mark]

Tick (✓) **one** box.

The final energy level would be higher. ☐

The final energy level would be lower. ☐

The line would reach a higher peak. ☐

The line would reach a lower peak. ☐

0 2 . 6 Ammonia and nitric acid react to produce the salt, ammonium nitrate.

Ammonium ions and nitrate ions both contain nitrogen.

Suggest **one** use of ammonium nitrate.

[1 mark]

_____

_____

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