

AQA, OCR, Edexcel

GCSE Science

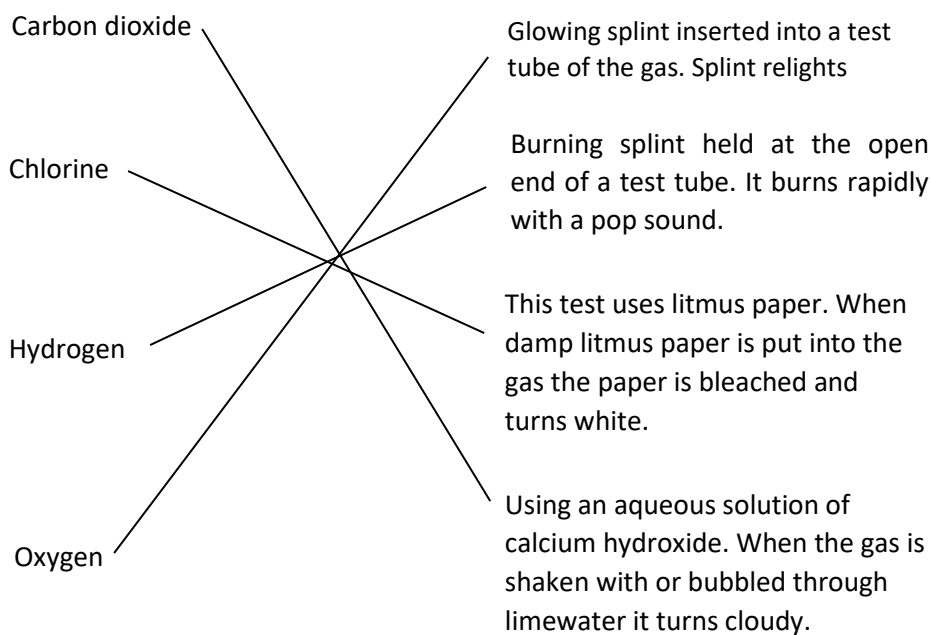
GCSE Chemistry

Tests for Ions and Gases
Questions



Total Marks: /28

Q1: Match up these tests for these common gases.

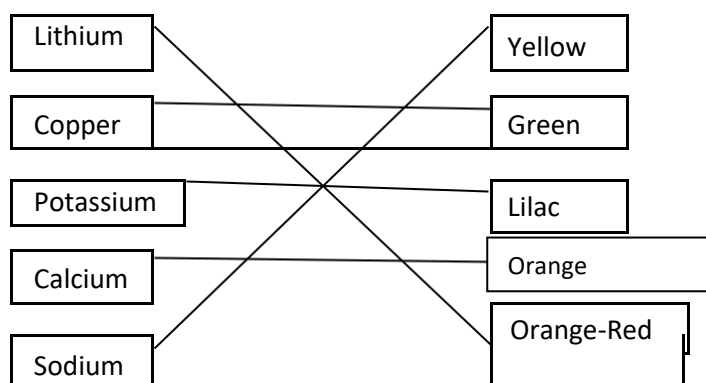


(4 marks)

Flame tests

Q2: Flame tests can be used to identify metal ions.

Match up the compounds with the colour of the flame.



(6 marks)

Q3: If a sample contains a mixture of ions what can happen to the flame colour?

A=Flame colour can be masked.

(1 mark)

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Metal hydroxides

Q4: Sodium hydroxide is used to identify some metal ions. Fill in the gaps in the following sentences.

Solutions of **aluminium (1 mark)**, **calcium (1 mark)** and **magnesium (1 mark)** ions form white precipitates when sodium hydroxide solution is added.

(3 marks)

Q5: Which hydroxide precipitate dissolves in excess sodium hydroxide solution?

A= aluminium hydroxide

(1 mark)

Q6: Solutions of copper (II), iron (II) and iron (III) form coloured precipitates. What colours are these?

Ions	Colour
Copper (II)	Blue (1 mark)
Iron (II)	Green (1 mark)
Iron (III)	Brown (1 mark)

(3 marks)

Q7: Complete the following sentences.

Carbonates react with **dilute acids (1 mark)** to form **carbon dioxide gas (1 mark)**. This can be identified using **limewater (1 mark)**.

(3 marks)

Q8: Halide ions in solution produce precipitates with silver nitrate solution in the presence of dilute nitric acid. What colour are the precipitates?

Silver chloride	White
Silver bromide	Cream
Silver iodide	Yellow

(3 marks)

Q9: What is flame emission spectroscopy?

A= An instrumental method used to analyse metal ions in solutions.

(1 mark)

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Q10: Explain how it works.

A= The sample is put into a flame (1 mark) and the light given out is passed through a spectroscope (1 mark). The output is a line spectrum that can be analysed to identify the metal ions in solution and measure their concentrations (1 mark).

(3 marks)