

## Chapter 7.5 Flame Test and Metal hydroxide test worksheet

1. When doing a flame test, which metal is identified by the presence of a yellow flame?
  - A. Lithium
  - B. Sodium
  - C. Potassium
2. When doing a flame test, which metal is identified by a blue-green flame?
  - A. Calcium
  - B. Copper
  - C. Lithium
3. Sodium hydroxide solution was added to a solution, a blue precipitate formed. Which metal ion was present in the solution?
  - A. Copper ion
  - B. Iron (II) ion
  - C. Calcium ion
4. If a brown precipitate forms when sodium hydroxide is added to a mystery solution, which metal ion was present?
  - A. Potassium ion
  - B. Sodium ion
  - C. Iron (III) ion
5. A colourless solution was tested with a few drops of sodium hydroxide. A white precipitate formed. When excess sodium hydroxide was added, the white precipitate redissolved. Which metal ion was present?
  - A. Calcium ion
  - B. Aluminium ion
  - C. Copper ion
6. An aqueous solution of a compound M is tested. The results are shown:
  - It gave a lilac colour in a flame test.
  - It produced a white precipitate when tested with acidified barium nitrate.

What is M?

- A. Copper (II) chloride
- B. Copper (II) sulfate
- C. Potassium carbonate
- D. Potassium sulfate

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7. Two tests are carried out on substance Z.

- Test 1: A flame test produces red flame.
- Test 2: Z is dissolved in water and dilute nitric acid is added, followed by aqueous silver nitrate. A yellow precipitate is produced.

What is substance Z?

- A. Lithium bromide
- B. Lithium iodide
- C. Sodium bromide
- D. Sodium iodide

8. Four different colourless solutions are each tested separately with aqueous sodium hydroxide and with acidified silver nitrate.

Which solution is sodium chloride?

	<b>Aqueous sodium hydroxide</b>	<b>Acidified silver nitrate</b>
A.	No visible reaction	White precipitate
B.	No visible reaction	No visible reaction
C.	White precipitate	No visible reaction
D.	White precipitate	White precipitate

9. A solution containing substance X was tested. The table shows the results.

<b>Test</b>	<b>Result</b>
Flame test	Lilac colour
Acidified silver nitrate solution added	Yellow precipitate

What is X?

- A. Lithium bromide
- B. Lithium iodide
- C. Potassium bromide
- D. Potassium iodide

10. A colourless solution gave an orange-red colour with a flame test, and then a white precipitate with sodium hydroxide solution. What compound is present in the solution?

- A. Copper carbonate
- B. Potassium iodide
- C. Calcium bromide