

Identifying the Products of Chemical Reactions

Total Marks : 8

1.

A student tests a solution for **chloride ions**.

She adds dilute nitric acid to the solution. She then adds a few drops of silver nitrate solution.

Why does she need to add dilute nitric acid in this test?

- A To increase the pH of the solution.
- B Nitrate ions are needed for the test to work.
- C To make sure that no carbonate ions are present.
- D The test only works in alkaline conditions.

Your answer

[1]

2.

Chemical tests are used to identify gases, anions and cations.

Leila has an unknown solution.

She thinks that the solution contains copper(II) ions and bromide ions.

Describe the chemical tests she does to confirm the presence of these two ions in the solution.

[4]

3.

A student is testing sodium carbonate solution.

She adds barium chloride solution followed by excess dilute hydrochloric acid.

Which of these observations would **not** be seen?

- A. colourless solution at the end
- B. gas bubbles when the dilute acid is added
- C. white precipitate formed when the dilute acid is added
- D. white precipitate formed when the barium chloride solution is added

Your answer

[1]

4.

Which statement describes the **advantages** of instrumental methods of analysis?

- A Instruments can analyse very small amounts and carry out the analyses slowly.
- B Instruments are very accurate and use large amounts of substances.
- C Instruments are very accurate and carry out the analyses slowly.
- D Instruments are very accurate and can run all the time.

Your answer

[1]

5.

Which statement about a **mass spectrum** of a molecule is correct?

- A Each peak represents an atom in the molecule.
- B The charge to mass ratio of the molecular ion peak is equal to the relative formula mass of the molecule.
- C The peak with the highest relative abundance represents the molecular ion.
- D The peak on the far right of the spectrum represents the molecular ion.

Your answer

[1]