Chemical analysis

Chemistry Paper 2 | 30 quick questions

GCSE science knowledge recall

Answer online, marked instantly

Name: _____ **Date:** _____ **Score:** _____ **/ 30**

1 In chemistry, what is the name for a single element or a single compound with nothing else mixed in? Answer with two words.

2 A sample melts sharply at exactly one temperature. Is it most likely pure or impure?

3 Adding salt to water changes its boiling point. Does the boiling point go up or down?

4 What is the name for a mixture made by following a recipe, with each part present in a measured amount for a useful purpose?

5 Explain why a paint is described as a formulation rather than just a mixture.

6 What is the name of the technique that separates the coloured dyes in an ink as a solvent moves up a sheet of paper?

7 In paper chromatography, the solvent is the mobile phase. What is the stationary phase?

8 Should the starting line on a chromatogram be drawn in pen or in pencil?

9 A pure substance is run on a chromatogram. How many spots does it give in any one solvent?

10 Write the word equation for working out an R_f value.

11 A spot moves 3.0 cm while the solvent front moves 12.0 cm. What is the R_f value?

12 A substance is very soluble in the solvent and only weakly attracted to the paper. Will its R_f value be high or low?

13 A lighted splint is held at the mouth of a test tube and gives a squeaky pop. Which gas is present? Give the name.

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14 Which gas relights a glowing splint? Give the name.

15 Which solution turns milky (cloudy) when carbon dioxide is bubbled through it? Give the everyday name.

16 Which gas bleaches damp litmus paper, turning it white?

17 Which metal ion gives a crimson flame in a flame test? Give the name of the metal.

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18 What colour flame do sodium ions give?

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19 What colour flame do potassium ions give? Answer in one word.

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20 What colour flame do copper(II) ions give?

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21 Sodium hydroxide solution is added to a solution of copper(II) ions. What colour is the precipitate?

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22 Sodium hydroxide solution gives a brown precipitate. Which iron ion is present? Give the name with its Roman numeral.

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23 Aluminium, calcium and magnesium ions all give a white precipitate with sodium hydroxide. Which one's precipitate dissolves when excess sodium hydroxide is added?

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24 A dilute acid is added to a solid and the gas given off turns limewater milky. Which type of negative ion was in the solid?

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25 To test for halide ions, dilute nitric acid is added and then which solution? Give the name.

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26 In the halide test, which halide ion gives a cream precipitate?

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27 Dilute hydrochloric acid and barium chloride solution are added to a solution and a white precipitate forms. Which negative ion is present?

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28 What is the name of the instrumental method that passes light from a flame through a spectroscope to identify metal ions? Answer with three words.

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29 Give one advantage of instrumental methods over simple chemical tests.

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30 Describe how flame emission spectroscopy can tell you how much of a metal ion is in a solution, not just which one.

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