

Purity and Formulations

Grade 4-6

Copper can be made extremely pure. The melting point of two samples of copper were measured. Sample A had a melting point of 1085 °C and sample B melted over the range 900 – 940 °C.

1.1 How is a pure substance defined in chemistry? Tick **one** box.

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[1]

1.2 Suggest which of the samples was the most pure? Explain your answer.

[2]

1.3 The boiling point of copper is 2,562 °C. Which of the samples is likely to have a boiling point closer to that of pure copper?

[1]

[Total 4 marks]

Grade 6-7

2 A paint was composed of 20% pigment, 35% binder, 25% solvent, and 20% additives.

2.1 Explain why the paint is a formulation.

[3]

2.2 How would a manufacturer of the paint ensure that each batch had exactly the same properties?

[1]

2.3 Other than paint, name **one** other example of a formulation.

[1]

[Total 5 marks]

Exam Practice Tip

A formulation is a mixture but a mixture isn't always a formulation. For the exam, you may need to identify formulations based on information about their ingredients and how they've been designed to make the product fit for purpose.

