

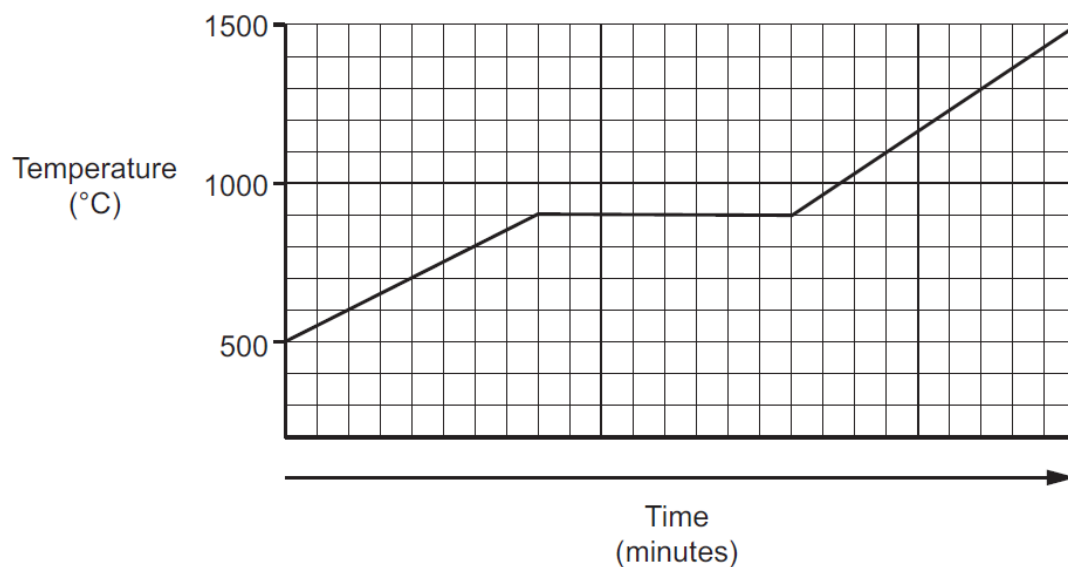
GCSE Chemistry A (Gateway Science)

J248/01 Chemistry A C1-C3 and C7 (Foundation Tier)

Question Set 26

- 1 A new solid, compound **X**, has been discovered. Scientists investigated the effect of heat on compound **X**.

Look at the graph. It shows how the state of compound **X** changes as it is heated.



- (a) (i) What is the **melting point** of compound **X**?

Melting point = °C [1]

- (ii) A scientist describes compound **X** as a **pure** substance.

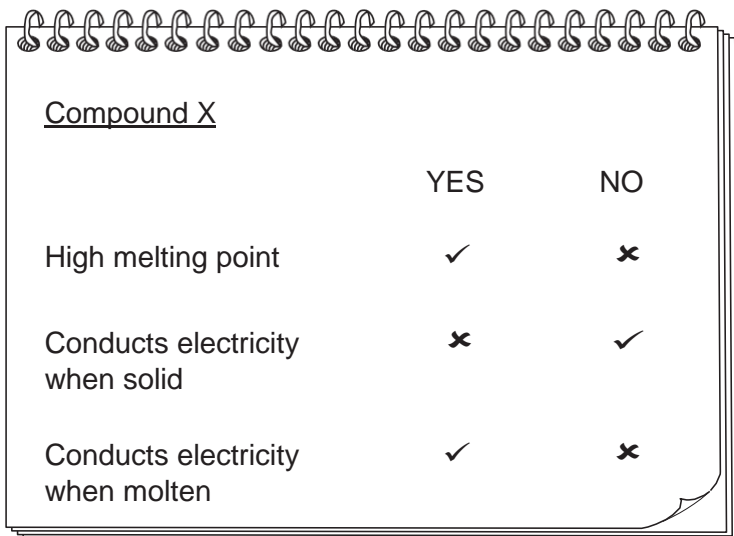
Explain what scientists mean when they describe compounds as pure.

[1]

- (iii) Explain how the scientists tell from the graph that compound **X** is a pure substance.

[1]

(b)* Scientists find out some more information about compound X.



The image shows a spiral-bound notebook with a table of properties for Compound X. The table has three rows and three columns. The first column lists properties, the second column is labeled 'YES', and the third column is labeled 'NO'. The properties and their corresponding values are: High melting point (YES: ✓, NO: ✗), Conducts electricity when solid (YES: ✗, NO: ✓), and Conducts electricity when molten (YES: ✓, NO: ✗).

<u>Compound X</u>	YES	NO
High melting point	✓	✗
Conducts electricity when solid	✗	✓
Conducts electricity when molten	✓	✗

Describe and explain the type of bonding found in compound X.

Use all the information above to justify your answer.

[6]

Total Marks for Question Set 26: 9

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