

1. Which technique is the best for separating pure water from a solution of sodium chloride in water?

- A crystallisation
- B chromatography
- C filtration
- D distillation

Your answer

[1]



END OF QUESTION PAPER

### Mark Scheme

Question		Answer/Indicative content	Marks	Guidance
1		D	1	
		<b>Total</b>	<b>1</b>	
2		<p><i>*Please refer to point 10 of the marking instructions of this mark scheme for guidance on how to mark this question.</i></p> <p><b>Level 3 (5–6 marks)</b></p> <p>Suggestion would enable pure samples of all three components to be obtained in the correct sequence with clear explanations of why the methods work. <i>There is a well-developed line of reasoning which is clear and logically structured. The information presented is relevant and substantiated.</i></p> <p><b>Level 2 (3–4 marks)</b></p> <p>Suggestion would enable pure samples of two of the components of the mixture to be obtained with an attempt at an explanation. <i>There is a line of reasoning presented with some structure. The information presented is relevant and supported by some evidence.</i></p> <p><b>Level 1 (1–2 marks)</b></p> <p>Suggestion would enable a pure sample of one of the components to be obtained. <i>The information is basic and communicated in an unstructured way. The information is supported by limited evidence and the relationship to the evidence may not be clear.</i></p> <p><b>0 marks</b> <i>No response or no response worthy of credit.</i></p>	6	<p><b>AO1.2: Knowledge of process of fractional distillation</b></p> <ul style="list-style-type: none"> <li>• Use fractional distillation to separate substance A from substance B.</li> <li>• Substance B will come off first as it has lowest boiling point.</li> <li>• Stronger forces between molecules in substance A / ora.</li> </ul> <p><b>AO2.2: Apply knowledge of process of fractional distillation</b></p> <ul style="list-style-type: none"> <li>• Fractional distillation works as substances A and B have different boiling points.</li> <li>• As substance C is insoluble in water.</li> <li>• Because there are differing forces of attraction between the molecules.</li> </ul> <p><b>AO3.3a: Analyse information in the table to develop experimental procedure</b></p> <ul style="list-style-type: none"> <li>• Heat mixture to boil off substances A and B leaving pure C.</li> <li>• Filter mixture to remove substance C.</li> <li>• Substance C can be washed with water and dried.</li> </ul>
		<b>Total</b>	<b>6</b>	