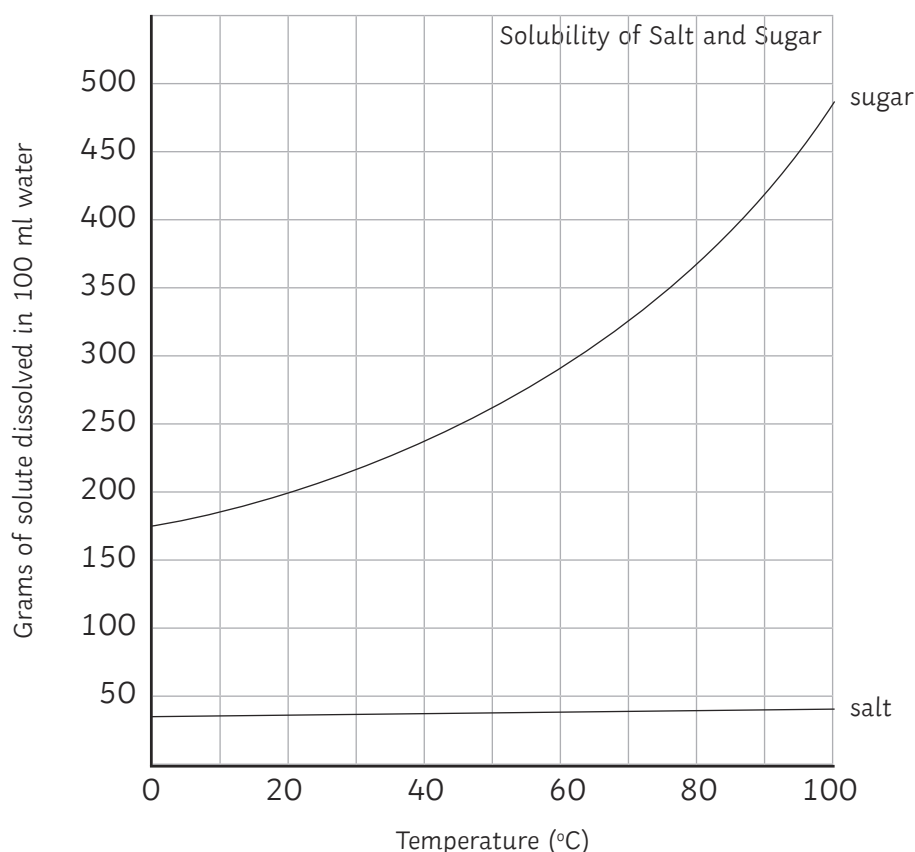


Separation Techniques Exam Style Questions 2

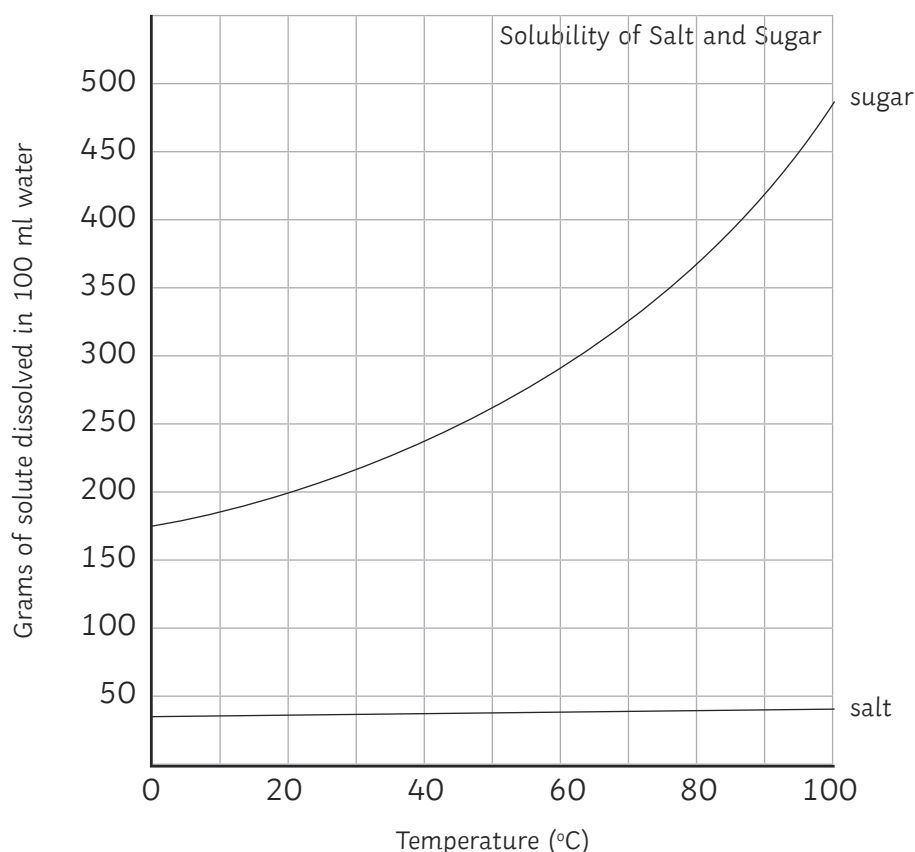
1. The results to show the solubility of sugar and salt at different temperatures is shown below.



- How does temperature affect the solubility of sugar?
 - State the main differences between the solubility of sugar and salt as there is an increase in temperature.
 - At 60°C, how many grams of sugar dissolved in 100ml of water?
2. Paper chromatography can be used to identify dissolved substances, for example in food colourings. Explain how it works.

Answers

1. The results to show the solubility of sugar and salt at different temperatures is shown below.



- How does temperature affect the solubility of sugar?
As the temperature increases the amount of sugar dissolved also increases, for example at 20°C 200g of sugar dissolved whereas at 80°C 352g of sugar dissolved.
 - State the main differences between the solubility of sugar and salt as there is an increase in temperature.
The main difference is that the amount of sugar that dissolves varies considerably whereas the amount of salt only changes slightly.
 - At 60°C, how many grams of sugar dissolved in 100ml of water? **290g**
2. Paper chromatography can be used to identify dissolved substances, for example in food colourings. Explain how it works.
A small drop of food colouring is placed on filter paper. The paper is then suspended over a beaker of water (the solvent). As the water rises, the different dyes within the food colouring are carried different distances up the paper. The most soluble dye travels furthest.