Solubility Curves Worksheet

Scoring guide · one credit per question · review written work against each rubric

Solubility Curves

Question 1

Choice (3)

Twice the water mass can dissolve twice the mass of salt at the same temperature.

Question 2

The dissolved amount, 25 g, is below the 40 g maximum. Up to 15 g more can dissolve at that temperature.

Question 3

Choice (1)

The lower solubility means some solute exceeds the dissolved limit and can form crystals.

Question 4

The amount is below the solubility limit and represents an unsaturated solution.

Cooling a Salt Solution

Question 5

Choice (2)

The curves meet at 40 °C, where both salts have a solubility of 40 g per 100 g water.

Question 6

The graph shows 80 g can dissolve at 80 °C and 40 g at 40 °C. The difference, 80 g − 40 g = 40 g, crystallizes.

Question 7

Choice (3)

At 60 °C the graph gives 60 g for salt A and 50 g for salt B. The difference is 10 g.

Question 8

Choose salt B. Its solubility changes from 30 to 60 g per 100 g water, a 30 g increase. Salt A increases from 20 to 80 g per 100 g water, a 60 g increase.