Checking What a Clumping Step Removes

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

Checking What a Clumping Step Removes

Question 1

Choice (3)

Clumping followed by the coarse filter gives 1 mg of mineral in the collected water, below both other readings.

Question 2

Without clumping the missing amount is 8 − 6 = 2 mg. With clumping it is 8 − 1 = 7 mg. The clumping step increases the missing amount by 5 mg.

Question 3

With the same coarse filter, the passed mineral falls from 6 mg to 1 mg after clumping. The larger clusters are more likely to be held back. The model keeps the amount of mineral unchanged, so the lower reading does not mean that the mineral was destroyed.

Question 4

The samples each begin with 3 mg of dissolved dye, and each collected sample still has 3 mg. The measured change is in the suspended mineral. The dye amount stays the same.

Question 5

The starting 8 mg divides into 2 mg in the cup, 1 mg in the collected water, and 8 − 2 − 1 = 5 mg on the filter. The cup accounts for 2 mg of the 7 mg missing from the collected water.