Orienting a Detergent Molecule in Water

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

Orienting a Detergent Molecule in Water

Question 1

Choice (2)

The charged heads interact favorably with water. The nonpolar tails associate with the nonpolar droplet.

Question 2

The head can remain in contact with water while the tail contacts oil, so the same molecule has favorable interactions on both sides of the boundary.

Question 3

The observation shows that the oil can still be present as droplets dispersed in water. A changed arrangement of the same substances can remove a visible layer without a chemical reaction.

Question 4

The altered molecule still interacts with water but has lost the part that favors oil. It is less likely to stay at the boundary with one end associated with the droplet.