Finding a Reading Time for a Salt Sensor

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

Finding a Reading Time for a Salt Sensor

Question 1

Choice (3)

At four minutes the high reference still reads 0.4 g/L low. At six minutes both readings match their references.

Question 2

The low reference already meets its limit at two minutes, but the high reference reads 1.5 g/L low at that time. A rule for both concentrations needs evidence from both.

Question 3

The known 8.0 g/L solution also gives a rising reading while its concentration stays fixed. A slow sensor response could account for the rise without any salt entering the unknown.

Question 4

Use the second method on the unknown at 2 and 6 minutes. If the concentrations from the second method agree within its measurement uncertainty while the original readings rise, that supports a slow response from the original sensor. Equivalent checks using a second, independently verified measurement at both times earn credit.