Controls and Fair Tests Worksheet

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

Controls and Fair Tests

Question 1

Choice (2)

Dye exposure can affect uptake. Keep it the same while changing the coating.

Question 2

Coating and soaking time both changed. Either could affect uptake, so a matched-time comparison is needed.

Question 3

Choice (2)

The amount of retained dye is the measured outcome.

Question 4

It shows whether similar readings occur under the same conditions. Consistent repeats give more evidence that the measured difference is repeatable.

A Model Coating Test

Question 5

Choice (1)

P and Q use the same 10-minute soak and differ in coating.

Question 6

6.0 mg − 2.0 mg = 4.0 mg.

Question 7

Choice (3)

Q and R both have a coating and use different soaking times.

Question 8

Use an uncoated sample of the same size and material and soak it for 20 minutes in the same dye solution. Compare its uptake with R.