Tracing the Source of Oxygen in a Leaf Model

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

Tracing the Source of Oxygen in a Leaf Model

Question 1

Choice (1)

The label appears in released O_2 only when water carries it. This supports water as the source under the stated model.

Question 2

A label in the released gas could have come from either source. Labeling only one starting substance per run distinguishes the two possibilities.

Question 3

K uses labeled carbon dioxide but the released O_2 does not carry the label. Using carbon dioxide in photosynthesis does not require its oxygen atoms to supply the released oxygen gas in this model.

Question 4

Run the same model without any labeled starting substance and check the released gas with the same detector settings. This provides a baseline for a label reading.