Testing Filters for a Chalk Dust Demo

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

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Question 1

Filter K retains 200 − 14 = 186 particles. Dividing by 200 and multiplying by 100% gives 93%.

Question 2

Choice (2)

J retains 80%. L retains 98% but passes only 9 L/min. K retains 93% and passes 15 L/min.

Question 3

An opening can be larger than an individual air molecule and smaller than a chalk grain. The air molecule can fit through that opening while the grain is blocked.

Question 4

Twenty-two particles leaving could represent a different fraction if a different number arrived. Count the particles entering the filter at the higher setting and compare percentages retained, or repeat both settings with matched input counts.