Reading Two Atom Masses in One Peak

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

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Question 1

Choice (2)

A nitrogen atom of mass 14 u and one of mass 15 u have a combined mass of 29 u.

Question 2

Both a silicon atom of mass 29 u and a nitrogen molecule containing one atom of each isotope can contribute at 29 u. The mass reading alone cannot separate them.

Question 3

After all nitrogen molecules separate, individual nitrogen atoms can give only 14 or 15 u. The remaining 29 u particles fit the silicon atoms in the stated model.

Question 4

The peaks at 14 and 15 u would remain because both nitrogen isotopes are still present. The 29 u peak would be absent once the nitrogen molecules separate.