

Questão 56

TEXTO PARA AS QUESTÕES DE 56 A 58

As astronomers gaze into the depths of space, they do so with unease: They don't know precisely what the universe is made of.

Surprisingly, no one knows the stars' exact chemical composition: how many carbon, nitrogen and oxygen atoms they have relative to hydrogen, the most common element 5

These numbers are crucial, because they affect how stars live and die, what types of planets form and even how readily life might arise on other worlds.

Twenty years ago, astronomers expressed confidence in the numbers they had been working with. Now, not so much. The problem lies not in the far corners of the cosmos, but much closer to home. Astonishingly, scientists don't know exactly what the sun is made of. As a result, they don't know what the other stars are made of, either. 10

"The sun is a fundamental yardstick," says Martin Asplund, an astrophysicist at the Max Planck Institute for Astrophysics, in Germany. "When we determine the abundance of a certain element in a star or a galaxy or a gas cloud anywhere in the universe, we use the sun as a reference point." 15

The sun's location in the Milky Way also makes it a good representative of the entire galaxy. Most stars reside in giant galaxies like the Milky Way, which makes the sun a touchstone for the entire cosmos. 20

For nearly a century, astronomers have judged stars normal or not by seeing whether their chemical compositions match the sun's. Most stars near us do; some don't 25

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Segundo o texto, conhecer a composição de elementos químicos que constituem as estrelas é fundamental, pois ela, entre outros aspectos,

- (A) fornece evidências da ligação entre as idades das estrelas.
- (B) sugere a existência de planetas rochosos formados por elementos pesados.
- (C) influencia na possibilidade de presença de vida em outros locais do universo.
- (D) determina condições cosmológicas da evolução de aglomerados estelares.
- (E) possibilita a síntese de moléculas em nuvens de gás e poeira cósmica.

RESPOSTA

ALTERNATIVA C

Lê-se a resposta no seguinte trecho do terceiro parágrafo *"how readily life might arise on other planets"*.