Yeast thrives in hydrogen

Read the full article at rsc.li/2Ym9ISI

For the first time, yeast and E coli have been shown to survive in a 100% hydrogen atmosphere. Neither E coli nor yeast are adapted to living under hydrogen. The findings suggest that life could exist on exoplanets with a hydrogen-rich atmosphere.

Researchers grew the two microorganisms in solutions saturated with hydrogen in bottles also filled with the gas. Both species survived and even reproduced. E coli grew half as fast in hydrogen as in air, but faster than in a nitrogen/carbon dioxide atmosphere. This is because carbon dioxide acidifies the growth medium. Yeast cells grew two and a half times faster in air than under hydrogen. Without oxygen, yeast cannot synthesise certain chemicals such as haem, and rely on external sources of these compounds.
Yeast thrives in hydrogen

Read the full article at rsc.li/2Ym9ISI

For the first time, yeast and E coli have been shown to survive in a 100% hydrogen atmosphere. Neither E coli nor yeast are adapted to living under hydrogen. The findings suggest that life could exist on exoplanets with a hydrogen-rich atmosphere.

Researchers grew the two microorganisms in solutions saturated with hydrogen in bottles also filled with the gas. Both species survived and even reproduced. E coli grew half as fast in hydrogen as in air, but faster than in a nitrogen/carbon dioxide atmosphere. This is because carbon dioxide acidifies the growth medium. Yeast cells grew two and a half times faster in air than under hydrogen. Without oxygen, yeast cannot synthesise certain chemicals such as haem, and rely on external sources of these compounds.

1. Why does yeast grow more slowly in hydrogen than in air?
2. Describe a test to show the presence of hydrogen gas.
3. Suggest why the Earth has no hydrogen in its atmosphere.