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## Chances of Finding Life on Mars Wane After Probe Fails to Detect Methane



Extensive testing by NASA's Curiosity rover has revealed that, contrary to previous research carried out by US and international scientists, Mars's environment contains no methane. The finding is considered a major blow to the possibility of life on the Red Planet due to the fact that the gas, produced during digestion, often signals the presence of living organisms. (Photo: Reuters/NASA)

Extensive testing by NASA's Curiosity rover has revealed that, contrary to <u>previous research</u> carried out by US and international scientists, the environment on Mars contains no methane. The finding is considered a major blow to the possibility of life on the Red Planet due to the fact that the gas, produced during digestion, often signals the presence of living organisms.

According to the article published in the journal *Science Express*, the probe analyzed samples of the Martian atmosphere in search for the gas six times between October 2012 and June of this year, each time coming up empty.

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"It would have been exciting to find methane, but we have high confidence in our measurements, and the progress in expanding knowledge is what's really important," said the report's lead author, Chris Webster of NASA's Jet Propulsion Laboratory in Pasadena, Calif. "We measured repeatedly from Martian spring to late

summer, but with no detection of methane."

Given the sensitivity of the instrument in use, scientists estimate that in the case that the rover missed it, methane levels could be no more than 1.3 parts per billion, or one-sixth as much as some previous estimates.

Still, all is not necessarily lost, according to Michael Meyer, NASA's lead scientist for Mars exploration.

"This important result will help direct our efforts to examine the possibility of life on Mars," Meyer said. "It reduces the probability of current methane-producing Martian microbes, but this addresses only one type of microbial metabolism. As we know, there are many types of terrestrial microbes that don't generate

## methane."

According to researcher Sushil Atreya of the University of Michigan: "Methane is persistent. It would last for hundreds of years in the Martian atmosphere. Without a way to take it out of the atmosphere quicker, our measurements indicate there cannot be much methane being put into the atmosphere by any mechanism, whether biology, geology, or by ultraviolet degradation of organics delivered by the fall of meteorites or interplanetary dust particles."

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