

# Magnets can boost production of ethanol for fuel

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In a finding that could reduce the cost of ethanol fuel, researchers in Brazil report success in using low frequency magnetic waves to significantly boost the amount of ethanol produced through the fermentation of sugar. Their study is scheduled for the Oct. 5 issue of *ACS' Biotechnology Progress*.

While bioethanol (ethanol produced from corn and other plants) is a promising alternative to fossil fuels, it currently is expensive and inefficient to make. An intensive research effort now is underway to improve production methods for this biofuel, which is expected to be the cornerstone of the renewable fuel industry.

In a new study, Victor Perez and colleagues showed that yeast-based fermentation of sugar cane — the main source of bioethanol in Brazil — in the presence of extremely low frequency magnetic waves boosted ethanol production by 17 percent.

The scientists also showed that ethanol production was faster, taking two hours less than standard fermentation methods.

“The results presented in this report suggest that an extremely low frequency magnetic field induces alterations in ethanol production by *S. cerevisiae* [yeast] and that the magnetic field treatment can be easily implemented at an industrial scale,” the article states.

Source: American Chemical Society

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