

# New test for detecting fake organic milk

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German scientists have developed a test to differentiate real organic milk from fake. Credit: Max Rubner Institute

Scientists in Germany are reporting development of a new, more effective method to determine whether milk marketed as "organic" is genuine or just ordinary milk mislabeled to hoodwink consumers. Their report appears in the current edition of *ACS' Journal of Agricultural and Food Chemistry*.

In the study, Joachim Molzentin and colleagues point out that organic milk has soared in popularity in many countries. Sales in Germany, for instance, rose by almost one-third between 2006 and 2007. Consequently, crooks may take advantage of the situation by marketing increasing quantities of fake organic milk. That situation created a need

for better tests to detect the fraud.

To address the issue, the scientists developed a test based on an analysis of milk fat for the ratio of stable isotopes of carbon. They used it to identify milk samples from cows raised on feed containing a higher ration of maize. Such a feeding regimen is typical of conventional milk production. Organically raised cows are fed less maize but more pasture feed. In addition, the team identified a significant difference in the alpha-linolenic acid content of milk fat between organic and conventional milk samples. Organic milk typically has a higher alpha-linolenic acid content than conventional milk.

More information: "Authentication of Organic Milk Using  $d_{13}C$  and the  $\alpha$ -Linolenic Acid Content of Milk Fat", Journal of Agricultural and Food Chemistry

Provided by ACS

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