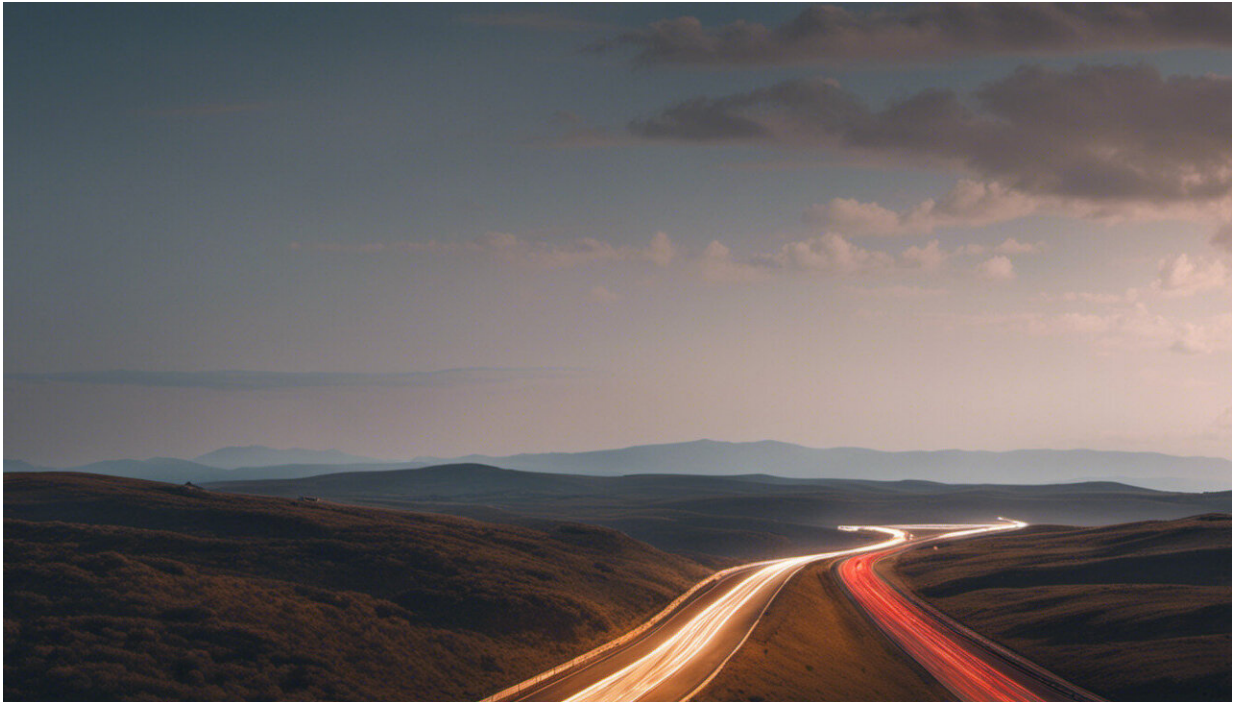


New method makes milk safer and tastier

August 8 2013



Credit: AI-generated image ([disclaimer](#))

EU-funded project SMARTMILK ('A novel system for the treatment of milk based on the combination of ultrasounds and pulsed electric field technologies ') has developed a non-thermal treatment to make raw milk safer, at the same time retaining its natural taste. The new technology may help the EU's dairy sector, which produces 130 billion litres of raw milk a year, become more competitive.

Consumer interest in [raw milk](#) has been growing as many people believe raw milk contains a higher proportion of beneficial microorganisms and vitamins.

However, raw or inadequately pasteurised milk has been associated with several outbreaks of enteric infections caused by bacteria such as *Listeria* and *Campylobacter*.

SMARTMILK built on promising research results obtained by University College Dublin, which found that thermosonication combined with the use of a pulsed electric field (PEF) approach could be used to keep milk's natural taste while killing [dangerous microbes](#).

Thermosonication can help reduce the thermal damage done to milk. The technique helps retain more of the taste and nutrition of raw milk. It could also potentially result in a prolonged shelf life of milk compared to [conventional treatments](#).

SMARTMILK researchers focused on optimising the combination of thermosonication and PEF to treat milk. The team completed research by building a [prototype system](#) based on the developed non-thermal milk treatment method. The SmartMILK process was then successfully tested and validated in milk production facilities.

SMARTMILK project coordinator, Dr. Edurne Gaston Estanga, head of food technology at IRIS in Spain said companies would be able to treat milk, juice and other liquid products without compromising their taste and smell.

"The combination of ultrasound and pulsed electric fields represents an alternative to [high temperatures](#) in the field of product pasteurisation liquids," she explains.

The project involved research organisations and companies from Spain, Ireland, United Kingdom, Denmark and Turkey. Together they developed an affordable technology for use by Europe's dairy and beverage industries.

SMARTMILK received around EUR 1.1 million from the EU. The project finished in March 2013.

More information: www.iris.cat/

Provided by CORDIS

Citation: New method makes milk safer and tastier (2013, August 8) retrieved 25 April 2024 from <https://phys.org/news/2013-08-method-safer-tastier.html>

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