NANOENCAPSULATED GINGER EXTRACT FOR FOOD APPLICATIONS

TECHNOLOGY SUMMARY

Method for obtaining a dairy product, e.g. yogurt, with ginger extract and a natural additive, cyclodextrin. Cyclodextrin is a nanocapsule with taste-masking properties, allowing using higher amounts of ginger while keeping a mild taste. The taste-masked yogurt is better accepted by consumers than the one without the additive.

BENEFITS

PRESERVATION OF GINGER'S BENEFICIAL PROPERTIES

BETTER ACCEPTATION of the product by the consumers.

MILDER AND MORE PLEASANT FLAVOUR for ginger-added products.

LONGER SHELF LIFE

NON-TOXIC

CONTEXT

Ginger is currently much in vogue for food applications by its nutraceutical properties as digestive, anti-nausea and anti-inflammatory. Moreover, its immune-boosting action makes it ideal for wintertime foods. Commercially available yogurts with ginger have just a small quantity, which provides a spicy flavour but is insufficient for medicinal properties to be observed. Increasing the amount of ginger to clinically-relevant doses leads to an overwhelming taste that makes the product inedible.

This technology solves the issue of the strong flavour by encapsulating ginger's bitter/pungent components at the nano level. This way, one can have all the benefits and keep the flavour mild. The result is a well-accepted product as demonstrated by tests conducted on a panel of non-trained tasters of all ages.

APPLICATIONS

This method of nanoencapsulation of ginger extract by cyclodextrin can be used in the production of:

FUNCTIONAL FOODS

NANOENCAPSULATED GINGER EXTRACT FOR FOOD APPLICATIONS

IP RIGHTS

Trade secret.

DEVELOPMENT STAGE

TRL 3: The product (yogurt) was produced on a small scale and a product preference test was conducted comparing it against a control (product with the same amount of ginger but with no additive). The tests were conducted on a panel of non-trained tasters of all ages.

KEYWORDS

GINGER

DAIRY

TASTE-MASKING

NANOENCAPSULATION

CONTACT

University of Aveiro
UATEC – Unidade de Transferência de Tecnologia
Edifício do Departamento de Educação e Psicologia
Campus Universitário de Santiago
3810-193 Aveiro | Portugal

tel: +351 234 370 887
fax: +351 234 370 089
e-mail: uatec@ua.pt
web: www.ua.pt/uatec

Technology #CI18007

DEVELOPED BY

Researchers from the Organic Chemistry, Natural Products and Foods Stuffs Research Unit (QOPNA) from the University of Aveiro.

BUSINESS OPPORTUNITY

Joint further development.

Testing of new applications.

License agreement.

PARTNERSHIP

The University of Aveiro seeks partners within food industry.

TRL: Technology Readiness Level – more information in https://ec.europa.eu/research/participants/portal/desktop/en/support/faqs/faq-2890.html