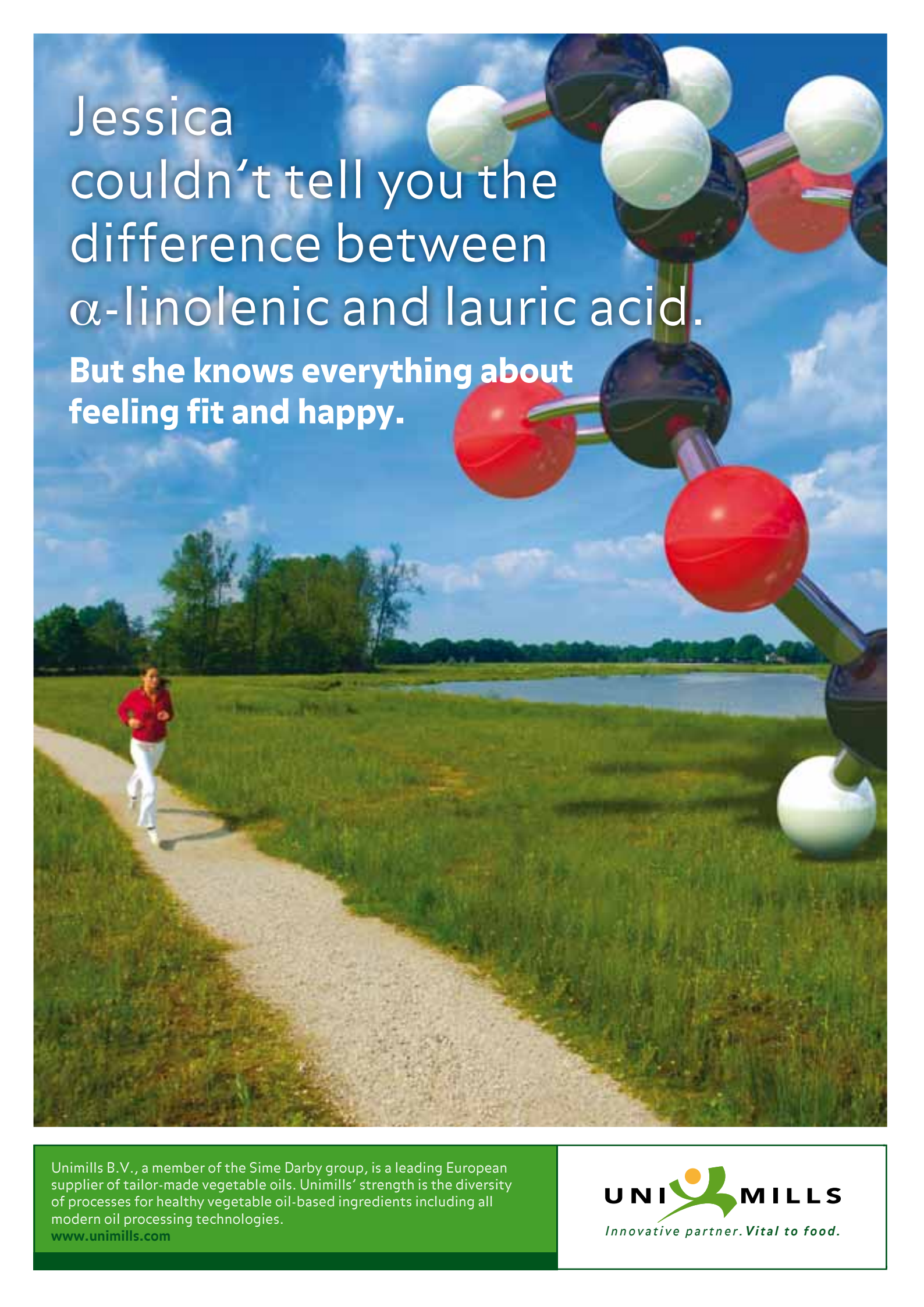


Gold Bake®

A TASTY BITE EVERY TIME





Jessica
couldn't tell you the
difference between
 α -linolenic and lauric acid.

**But she knows everything about
feeling fit and happy.**

Unimills B.V., a member of the Sime Darby group, is a leading European supplier of tailor-made vegetable oils. Unimills' strength is the diversity of processes for healthy vegetable oil-based ingredients including all modern oil processing technologies.

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UNI  **MILLS**
Innovative partner. Vital to food.

UNIMILLS GOLDBAKE® DOUGH FATS

GoldBake® is Unimills' brand for dough fats used in the production of doughs for biscuits, pastries, cookies and cakes. At the very heart of baking, Unimills GoldBake® dough fats are tailored to provide the desired dough structure so essential for guaranteeing that perfect taste and mouth feel you want in your product. They are available as liquid fats for pre-crystallization in your Kombinator or votator, or as pre-crystallized fats ready-to-use in dough. The pre-crystallized Unimills GoldBake® products have a smooth fluid consistency and crystal structure to give the right aeration and volume to the finished product every time. The new generation of innovative Unimills GoldBake® products meets the consumers' demands for healthy, tasty products with saturated fat levels as low as 25%.



WHY CHOOSE UNIMILLS?

Unimills' reputation for high-quality dough fats is based on our in-depth knowledge and experience of processing oils and fats gained over almost 100 years. The modern, integrated plant at Zwijndrecht, the Netherlands, is a key factor in guaranteeing that Unimills will continue to meet the requirements of the baking industry.

We are ready to support you in selecting the right Unimills GoldBake® dough fat for your specific application. We can supply custom formulated oils and fats to match your needs. Moreover, we have the flexibility to meet health trends, match quality requirements and maintain our place as one of the leading suppliers in this field.



Jessica enjoys her healthy lifestyle with healthy food she trusts.

HEALTH TRENDS

Consumers want food products that contribute to a healthier lifestyle. Moreover, they want responsibly produced food products. We are all well aware that a healthier lifestyle involves reducing our intake of saturated and trans fats. Consumers may not know the difference between α -linolenic acid and lauric acid, but when purchasing food products, they want to know about the origins and quality. Catering to this health trend is vital to the baking industry.

Unimills GoldBake® meets this trend with a broad range of trans-free dough fats and oils that are low in saturated fats and yet have good dough functionality. The Unimills GoldBake® 500 series fat solutions have tailored nutritional properties, rich in natural antioxidants and vitamins.



A TASTY BITE EVERY TIME

How do Unimills GoldBake® dough fats offer a tasty bite every time? Bakery products in different countries and cultures are amongst the most varying and complex in the food industry, characterized by a great variety of products, recipes and processes. Fat, a key ingredient, has a profound influence on the bite and taste. In selecting the right fat for each product there are several aspects to consider: dough making, baking procedure, moulding equipment and required shelf life. The fat content can range from a few percent in bread, up to 35% in soft cookies. Hence, Unimills customizes dough fat products to the needs of the bakery customers.

Unimills Goldbake® Products

GoldBake® 100 series	Traditional dough fats
GoldBake® 200 series	Traditional pre-crystallized dough fats
GoldBake® 300 series	Premium dough fats with less saturated fat
GoldBake® 400 series	Premium pre-crystallized dough fats with less saturated fat
GoldBake® 500 series	Fat solutions for bakery doughs with tailored nutritional properties

PRE-CRYSTALLIZATION OF DOUGH FATS

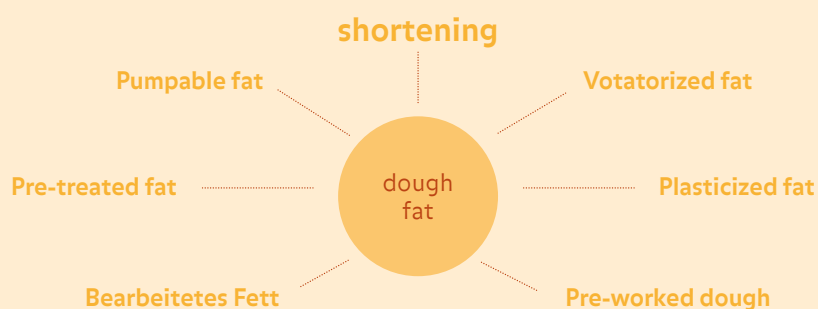
Large highly automated factories now produce most of the traditional fine pastry products, biscuits and cookies. A key requirement for efficient dough processing is consistent fat functionality with the right crystal structure in the solid phase. Certain applications, such as low fat biscuits, use liquid dough fats. However, in most doughs, pre-crystallization of fat is required prior to dough making. Unimills GoldBake® dough fats are available as liquid fats for pre-crystallization in your Kombinator or votator to get the right crystal structure. Unimills also offers ready-to-use pre-crystallized dough fats delivered in bulk. In addition, we offer pre-crystallized dough fats packed in boxes (10-25 kg).

GoldBake® is Unimills' brand for dough fats used in the production of doughs for biscuits, pastries, cookies and cakes. Unimills GoldBake® dough fats are tailored to provide the desired dough structure guaranteeing perfect taste and mouth feel.

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Synonyms for pre-crystallized dough fats

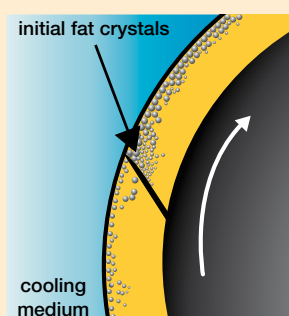


Filling boxes with pre-crystallized dough fat.

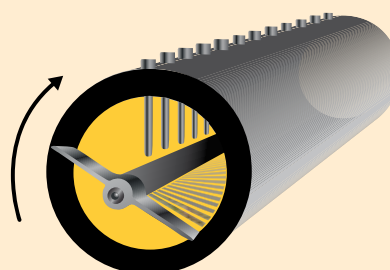
As shown above, one of the traditional names for pre-crystallized dough fat is shortening. By coating the dough gluten, the fat prevents gluten network growth, consequently 'shortening' the dough. As they have a stable fluid consistency at room temperature, it is possible to pump these dough fats. Controlling the crystallization produces smooth dough with all the desired characteristics.

Unimills is a leading expert in making pre-crystallized dough fats. After selecting the right fat blend, controlled crystallization is achieved using a specific combination of processes as indicated in Figure 1 with well controlled specific time-temperature combinations. The processes include cooled, scraped surface heat exchangers (often called SSHE or A-unit) and pinrotors (often called C-unit). Finally, during the last maturation step the fine crystals are stabilized in the solid phase. Typically, the hardness is measured with a 'texture analyzer' and expressed as Stevens value or as Newton-value.

Typical processes used to make a ready-to-use pre-crystallized dough fat with a smooth fluid consistency



Cooled and Scraped Surface Heat Exchanger (also called SSHE or A-unit)



Pinrotor (also called C-unit)



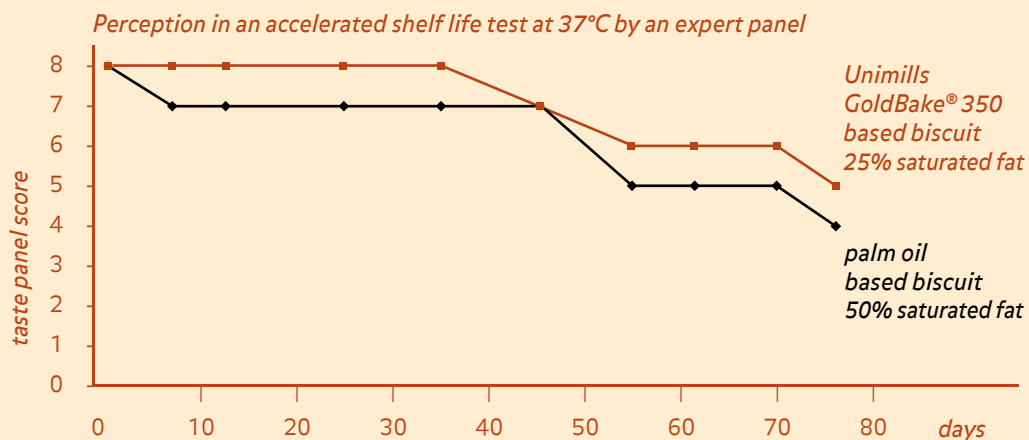
INNOVATIONS

The Unimills R&D team is continuously developing healthier and more functional dough fats. Our scientists are among the leading experts in the complex structure-property relationships of crystallization of dough fats. In addition, Unimills cooperates with leading scientists in universities and research institutes. This fundamental knowledge is essential in creating innovative dough fats.

In the past, dairy butter and margarines were mainly used as dough fats. Unimills was one of the first companies to make the change to liquid and pre-crystallized dough fats to give good functionality with lower costs. Over the last decades, our customers have successfully used the Unimills dough fats with typical saturated fat levels of 50-60%, now sold as the Unimills GoldBake® 100 and 200 products.

Our scientists have now developed a second generation dough fats, the Unimills GoldBake® 300 and 400 series. These have significantly lower saturated fat levels without compromising on functionality or taste. As an example, the Unimills GoldBake® 350 is a liquid dough fat especially developed for biscuits. This product, based on patented technology, with a saturated fat-level as low as 25%, provides good processibility, allows optimal sensory perception and has an excellent shelf life.

Comparing the tasty bite of traditional biscuits based on palm oil, to healthy biscuits made with unimills GoldBake® 350



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Figure 2 shows a typical accelerated shelf-life test at 37 °C performed on the new Unimills GoldBake® 350 product with only 25% saturated fat. In all trials, the biscuits based on Unimills GoldBake® 350 outperformed the reference biscuit made from refined palm oil with a typical saturated fat content of 50%.

Another example is the Unimills GoldBake® 550 product that has a saturated fat level of 25% and contains vitamin A and vitamin E, naturally retained from the palm oil. Consequently, you can include these health ingredients and natural color in your finished baked product without the need to label them on your packaging! It results in a uniquely long shelf life and fits well into a healthy diet, as it is rich in natural antioxidants. This patented product, based on a revolutionary new mild refining technology developed by our Malaysian colleagues, retains the naturally present β -carotenes and tocotrienols from freshly harvested palm oil.



Our responsibility is to ensure that each step from palm seedling to your product is sustainable.

VALUES

Today's consumers are increasingly aware of health and environmental issues. While consumers want foods that look and taste good, they also want foods produced in an ethical, environmentally friendly and sustainable way.

Most of our tropical raw materials come from sustainable sources, the estates of our Sime Darby plantations in Malaysia and Indonesia. Our parent company is a founding member of the Roundtable on Sustainable Palm Oil (RSPO). Our ambition is to be one of the first companies worldwide to deliver certified sustainable palm oil products.

We adhere to strict quality assurance standards from raw material source to final product. We have adopted various food standards such as HACCP, ISO, BRC and IFS.

Unimills' strategic thrusts of innovation and responsibility are embodied in Unimills GoldBake® dough fats. By applying these thrusts to every aspect of our work, we are committed to meeting your needs and the needs of your customers, the consumers.



If you would like to learn more about how you could use our expertise to successfully co-develop your products, please contact our sales department or product development experts:

telephone : +(31) 78 610 99 11

facsimile : +(31) 78 619 60 01

E-mail : sales@unimills.nl

: innovation@unimills.nl

Website : www.unimills.com

unimills B.V.

Lindtsedijk 8

3336 LE Zwijndrecht, The Netherlands



Developing
Sustainable
Futures