



**FUNCTIONAL, ORGANIC CERTIFIED TAGS  
DESIGNED TO IMPROVE FOOD FORMULATIONS**

# Palm-free Alternative for Fats and Oils

Nutriswiss AG, a Swiss company that specialises in the sourcing and processing of vegetable oils and fats, has recently instigated novel methods to manufacture structured triglycerides that help replace palm fat with organic-certified vegetable alternatives such as shea or cocoa butter. And Wholesaler Pellegrini S.R.L. is already showcasing the benefits to innovative food manufacturers and retail brands.

**P**ellegrini is a family-owned business based in the north-east Italian village Roncà, halfway between Verona and Vicenza. Since the early 1800s, the Pellegrini family has been dedicated to cultivating the olive trees on their land for the production of highly prized oil with exceptional nutritional and organoleptic properties. Over the generations, the business has grown substantially and is now a wholesaler distributing edible oils to industrial food manufacturers and big retailers throughout Italy. These include sunflower, olive and almond oils, as well as fats such as palm, coconut, shea and cocoa butter.

## **GROWING DEMAND FOR ORGANIC**

Thirty-one-year-old Marco represents the fifth generation of the Pellegrini family and joined the company two years ago as business development manager. His aim is to navigate future challenges in the most important business segments for Pellegrini: ice cream, confectionery, bakery products and spreadable creams. In recent years, he has seen growing demand for organic certified fats with tailor-made functional properties. "Italian people traditionally have a keen interest in high-quality food

ingredients," he explains. "There is also growing interest in organic certified alternatives, with the sourcing and environmental impact of fats and oils becoming an important issue for both consumers and customers. Here, the tailor-made TAG solutions from Nutriswiss supplement our product range with an organic-certified, palm-free, vegan fat alternative that improves formulations and maintains the anticipated functional properties."

## **INNOVATIVE PROCESS**

Organic-certified structured triglycerides (TAGs), provide a broad range of opportunities when it comes to the development and formulation of confectionery, fillings and spreads. This is particularly appealing to the growing number of consumers who no longer want to see palm oil on the ingredient list but do want a product that is certified organic. Martin Mäder, Managing Director at Nutriswiss, points out: "Until now, retail choice and ingredient options have been limited. This is mainly because substitutes could only be produced using non-organic processes and some manufacturers have been unwilling to sacrifice technological properties. To overcome these issues, we use

an innovative process to create palm oil-free solutions that meet the highest quality standards.”

### SEARCH FOR ALTERNATIVES

Palm fat has the perfect technological attributes for use in pastries, spreads, confectionary and chocolate products. However, when replaced by other vegetable oils or fats, characteristics such as flavour, consistency and stability may all be adversely affected. That is why the Nutriswiss team creates customised recipes that optimise final products while also taking the manufacturing process into account. One way to ensure the ideal texture of conventional products is to harden (hydrogenate) the oil ingredients. Yet this is not permitted in the organic segment. Nutriswiss, however, has found a solution. Frank Möllering, Head of Research and Development, explains: “With the help of various steps within a process sequence, we have managed to restructure the triglycerides. This results in different physical properties that enhance crystallisation behaviour and ensure the desired soft and creamy mouthfeel.” The matrix formed by the recombination of the fatty acids binds the oils, resulting in stable sensory properties with an organoleptically appealing melting behaviour.

### VALUE-ADDED PARTNERSHIP

Pellegrini sees the TAGs as an important element of his portfolio: “With the structured triglycerides we can respond to specific needs and help customers achieve the desired properties in their final products. This may be, for example,

the fat phase for a biscuit filling cream that must withstand the whole baking process without losing its soft structure.” For the development of such tailor-made ingredient solutions, he relies on his company’s partnership with Nutriswiss: “If we receive technical data and specific requests from our customers, we discuss them with Nutriswiss and rely on their expertise and experience to create the most suitable solutions,” says Pellegrini.

### TAGS DELIVER MULTIPLE SOLUTIONS

Likewise, new structured TAGs can be used in filling fats for bars and chocolates that deliver the anticipated mouthfeel. Nuts, nut oils and/or milk fat can be incorporated and, despite their delicate melting behaviour, the resulting fat creations have good temperature stability and prevent migration and fat bloom. That’s not all, though, as for creamy (chocolate) fillings (croissants), spreads and biscuit garnishes, variants based on cocoa or shea butter with sunflower oil, as an example, can also be prepared without tempering. Finally, in bakery applications, chocolate-covered biscuits can be made with a TAG-based glaze that shows good drying/tightening behaviour and is non-smear.

The days of just milk fat, pure coconut fat or pure cocoa butter are numbered. Nutriswiss is setting new standards in this area: there is no alternative to the perfect sensory properties of chocolate products, which is why the Swiss company individually selects high-quality raw materials and modifies them using state-of-the-art processes. •



Infant formula

**Omega-3**

Pesticide free

**Palm oil free**

Tailor-made

**Chocolate**

Sensory competence

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