Akomix LS 25 – for heart-healthy ice cream

AAK introduces Akomix LS 25 – a unique ice cream fat enabling ice cream with improved nutritional profile. Akomix LS 25 is tailored for ice cream and gives excellent taste and creaminess with only 25% saturated fats.

High SAFA levels in traditional ice cream fats

By tradition, lauric fats like coconut oil or palm kernel are often used as fat source in ice cream. Lauric fats have a high content of saturated fatty acids (SAFA) - coconut oil contains 92% SAFA. Dairy fat, used in dairy-based ice cream has a SAFA content of around 65% (figure 1). Intake of trans fatty acids and a high intake of SAFA contribute to elevated blood cholesterol levels. Elevated blood cholesterol level is a risk factor in the development of cardio-vascular disease, one of the major causes of death in the developed world. Hence dietary recommendations from food and health authorities worldwide advocate a reduction in the intake of SAFA and to replace it by unsaturated fats.
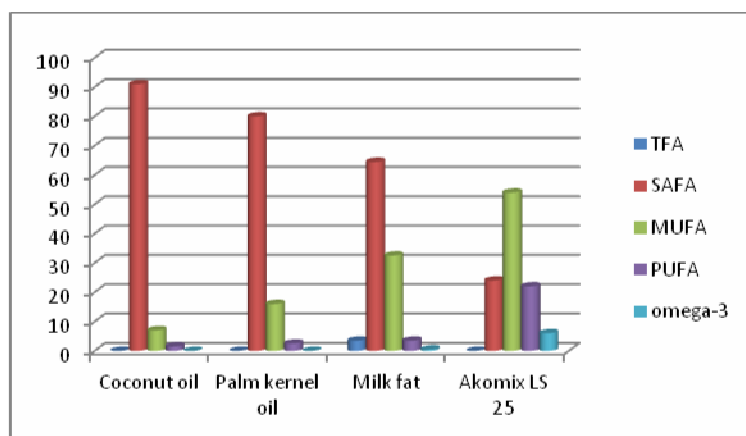

Akomix LS 25 is used in standard ice cream recipes with standard ice cream equipment. No extra additives are needed.

Akomix LS 25 is non-hydro, non-trans, non-GMO and contains no palm oil.

Figure 1. Fatty acid composition of commonly used ice cream fats

According to Euromonitor, innovation in health and indulgence will continue to play a key role, despite recessionary pressures. Obesity and dietary concerns are spread globally and constrain sales, giving an opportunity for value-added products. The winners are products with improved nutritional profile that still taste as good as the standard version.

Volatile lauric market

In addition to the high level of saturated fats, lauric fats have a volatile price structure. As it is a relatively small raw material on the world market, extreme weather and other nature disasters have significant impact on the world market prices of lauric fats. During the last 12 months the lauric prices have shown extreme volatility, making cost prediction of ice cream ingredients a night mare.

Akomix LS 25 – healthier choice with less volatile cost structure

AAK has expertise knowledge in fat crystallization and access to a wide range of raw materials. Based on many years of experience in providing fat blends for ice cream manufacturers, AAK has now developed a non-lauric ice cream fat with a more than 70% reduced SAFA content. Akomix LS 25 has only 25% SAFA, making it a healthier choice for your ice cream production. By replacing lauric fats with Akomix LS 25, you will boost your brand image by improving the nutritional profile of your ice cream, in line with dietary recommendations. In addition, the cost structure of your raw materials will be more predictable as Akomix LS 25 is a non-lauric blend of oils.

Structure and drop stability

Structure and drop stability are crucial parameters of ice cream where water/ice is locked by agglomerated fat. Due to the high sugar content, a large amount of the water in ice cream is liquid even at low temperatures. If the water is not kept inside the ice cream body, the ice cream collapses. Akomix LS 25 is tailored to provide a network with much less serum separation. Due to its crystallization pattern, ice cream based on Akomix LS 25 performs in line with coconut oil based ice cream, even better than cream-based ice cream, as shown in figure 2. It outperforms other low-SAFA solutions.
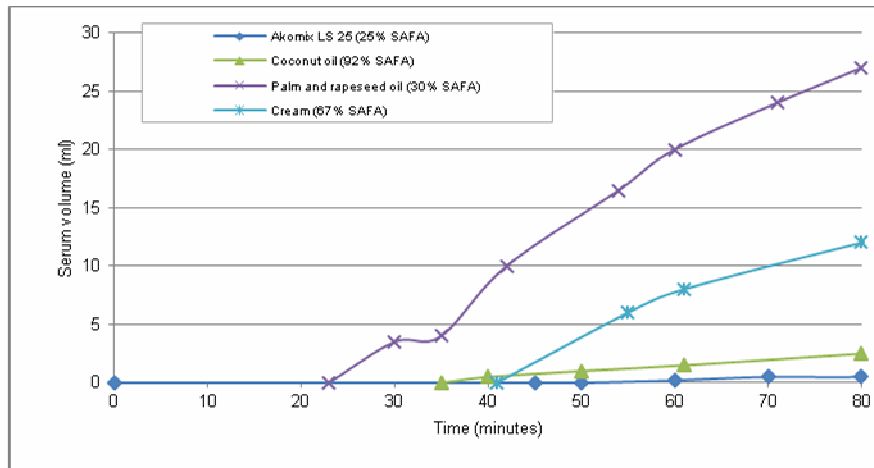

Figure 2. Drop stability measured as serum separation in ice cream based on different fats

Sensory properties

Also for sensory properties the crystallization is important. By having the fat in the most stable form some extra solid-fat-content units are obtained. The stable form enables ice cream with 25% SAFA to obtain sensory properties fully comparable to coconut oil. Figure 3 shows a sensory comparison between ice creams based on coconut oil and on Akomix LS 25. There is no difference between the most important parameters creaminess and melting, showing that Akomix LS 25 gives an ice cream with improved nutritional profile and maintained performance.

Figure 3. Sensory comparison between ice cream based on Akomix LS 25 and ice cream based on coconut oil