

Recombining dairy

– A core competence of
Arla Foods Ingredients



#### Recombination

## – an important part of the future within dairy

Recombination of basic dairy products is well known, as it has been the foundation for a major part of the dairy production in e.g. the Middle East, Africa, Latin America and Asia for many years.

However as a result of the increasing middle class population and urbanisation, the demand for dairy products is estimated to grow approx. 25% in South East Asia, China, Russia and Africa towards 2020\*.

In these regions recombination is an optimal way to produce dairy products, as local milk supply is insufficient, and import of readymade products often is very expensive.

# Value added dairy products are the most challenging to recombine

The modern consumers are increasingly looking for value added dairy products, such as speciality cheeses, high quality yoghurts and ice creams.

The majority of these products are not possible to produce solely from commodity milk- or protein powders (skimmed milk powder or milk protein concentrate).

Therefore recombiners must look for special ingredients in order to grow the market for value added dairy products.

\*) OECD-FAO Agricultural Outlook 2011

# Nutrilac® is the perfect choice for recombiners

In Arla Foods Ingredients we have worked with recombination technology for more than 25 years, and we can therefore say that recombination is one of our core competences.

The range of special milk and whey protein Nutrilac® solutions is developed for recombined dairy processing with following advantages:

#### FOR THE RECOMBINER

- · Milk proteins of the highest quality
- · 100% yield no whey drainage
- Similar product quality as production based on fresh milk
- Production of multiple product types on same processing line

## FOR THE CONSUMER

- Nourishing and delicious speciality cheeses, ice cream and yoghurt varieties
- Products adapted to local lifestyle
- Product quality in line with products based on fresh milk





# Simple technique – high quality output

The backbone of recombination with Nutrilac® is water, proteins and fat, combined with the leanest possible manufacturing process. Water, proteins and fat constitute at least 90% of the entire list of ingredients, and additional ingredients such as salt, sugar, acidifiers, bacteria cultures, flavouring agents, etc. give each product type its specific characteristics.

At Arla Foods Ingredients recombination is a core competence, and we have a constant desire to offer solutions that, besides a unique protein functionality, also contain the simplest process possible.

## Creamy and nourishing speciality cheeses

Arla Foods Ingredients offers designed and well proven solutions for three categories of speciality cheeses:

#### **CREAM CHEESE**

We offer a flexible range of smooth and creamy cream cheeses (15% or 25% fat), based on Nutrilac® and recombined HiYield processing with no whey drainage.

- · Spreadable cream cheese based on fermentation
- · Spreadable cream cheese based on acidification with GDL or citric acid
- · Bake stable cream cheese based on acidification with GDL or citric acid

#### WHITE CHEESE (FETA)

Creamy white cheese of the highest quality, is the result when you explore the possibilities of Nutrilac® in a recombined production setup. Arla Foods Ingredients' HiYield manufacturing process without membrane filtration or any whey- or permeate drainage, enables you to produce creamy white cheeses with 16% or 21% fat.

- · Creamy white cheese based on acidification with GDL
- · White cheese bakery fillings

#### PROCESSED CHEESE

Producing processed cheese without real cheese in the formulation, increases the requirements for the protein ingredients used. Nutrilac® makes it possible to produce a broad variety of processed cheeses; All demanded in the continents mentioned.

- · Processed cheese spreads
- · Processed cheese portions
- · Processed jar cheese cheese flavoured

## Refreshing yoghurts

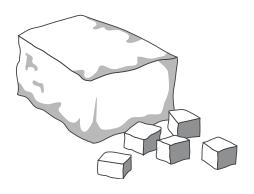
Arla Foods Ingredients offers recombined yoghurt solutions which are flexible depending on the raw material possibilities you have.

- Set yoghurt
- · Stirred yoghurt
- · Drinking yoghurt

## Indulgent ice creams

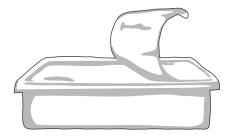
Tap into the ice cream market using Arla Foods Ingredients' recombined solutions for ice creams. We have a wide range of possibilities ranging from low fat to high protein product solutions.





WHITE CHEESE (FETA)

Creamy white cheese blocks or bake stable fillings



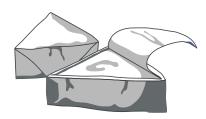
**CREAM CHEESE** 

Fermented or acidified



**CREAM CHEESE** 

Bake stable fillings



**PROCESSED CHEESE** 

Triangles or mild portions



**PROCESSED CHEESE** 

Spreads or jar cheeses



**ICE CREAM** 

From low fat to high protein



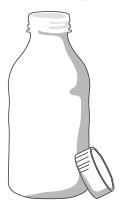
**SET YOGHURT** 

Delicious texture



STIRRED YOGHURT

Smooth mouthfeel



**DRINKING YOGHURT** 

No stabilisers – No syneresis



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