

**HIGH HIGHER
HIGHEST PROTEIN**



**High protein solutions
with Nutrilac® from Arla Foods Ingredients**





Explore the healthy benefits of **higher protein**

69% of American consumers are willing to switch to another brand if a similar product has a higher protein content.

As consumers become increasingly aware of the health benefits, the demand for high protein products is rising.

Protein is proven to speed up metabolism and build more muscle mass. Some people even feel fuller for longer. This is why high protein foods and beverages have gained a healthy reputation on the global market. Consumers are even ready to change their eating habits in order to gain the health benefits of protein.¹

With our Nutrilac® solutions, you can offer consumers a broad range of high protein products.



HIGH PROTEIN SOLUTIONS

Protein enrichment of foods and beverages has become a huge global trend over the past decade. A number of surveys suggest that consumers have a growing positive attitude towards high protein products, believing that they promote satiety and better control of their eating habits. As the market focuses on these benefits, consumers are increasingly calling for products that can support their healthy lifestyle.²

Nutrillac® protein solutions for dairy products make it possible to combine a high protein content with a tailor-made low viscosity. In this way, our solutions overcome the challenges of developing dairy products with a very high protein content and an optimal texture.



CALCIUM ENRICHMENT

The global population is growing older. People live longer and want to stay active and fit – and they are looking for products to help them maintain a healthy lifestyle. As they age, they need small-portion meals with a higher nutritional value. With Nutrilac®, you can produce tasty dairy products with a high content of protein and calcium to support these nutritional needs. Providing a delicious taste and delightful smooth mouthfeel, our solution for calcium enrichment is bound to go down well with quality-conscious seniors.³

In our Ageless solution one small-portion serving contains a 1/4 of the recommended daily calcium intake. This enables you to add a calcium enrichment and bone health claim to product packaging.



FIBRES

Fibres are known for helping the digestive system stay clean and healthy. They also boost the immune system and prolong the feeling of fullness.^{4a} Add fibres and Nutrilac® to your dairy products, and you can satisfy consumer needs for filling, fibre-rich dairy products that can help control blood cholesterol and sugar levels.



PROBIOTICS

Probiotic cultures strengthen the microflora in the intestinal system, supporting immune and digestive health. More consumers are calling for the healthy benefits of probiotic cultures in dairy products.^{4b} Probiotic cultures are easy to use in our Nutrilac® solutions.



WHEY PROTEIN

The mainstream sports segment is one of the fastest growing health categories. Sports-focused consumers want to perform better when exercising, feel and look fit, and they want food and beverage products that help them do that.

Some of the finest whey protein profiles consist of branched-chain amino acids, which are synthesised directly in the muscle mass and do not need to be treated by the liver. This makes them very important for building up muscle mass when exercising on a regular basis. Whey protein has some of the most essential amino acids that the body cannot produce on its own. Therefore, the focus on whey protein as an integrated part of a healthy diet, has increased immensely.⁵

With Nutrilac® for sports solutions, you can develop products high in whey protein that both enhance consumer performance and deliver a good taste and texture.



HIGH YIELD PROCESS




Obtain a more eco-friendly image and product range using our Nutrilac® solution for high yield dairy production. Our proteins combined with our HiYield production process enable you to expand your product portfolio, while eliminating acid whey drainage.

This helps you achieve a more eco-friendly product range and 100% yield in your production.



The many **benefits** of Nutrilac®

You can benefit from using Nutrilac® in your products in many ways. In the table below, we have listed our current concepts horizontally and the consumer and producer benefits vertically. The three bottom rows show the applications where our solutions can be used.

	Ageless	Sports	Greek-style	Flavoured milk	Protein yoghurt	High nutrition ice cream	Protein smoothie
High protein	✓	✓	✓	✓	✓	✓	✓
Calcium enrichment	✓					✓	
Fibres	✓	(✓)			(✓)		(✓)
Probiotic	✓	(✓)	(✓)		(✓)		
Whey protein	✓	✓	✓	✓	✓		✓
HiYield process	✓		✓		✓		
 Spoonable	✓	✓	✓		✓		
 Drinkable	✓	✓	✓	✓	✓		✓
 Frozen	✓	✓	✓			✓	



: Benefit is present in solution



(✓): Benefit can easily be obtained in solution




Nutrilac® — tailoring **unique** solutions

Define your texture

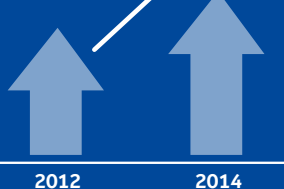
When using Nutrilac® in your high protein products, you remain in full control of the texture, no matter whether your goal is to produce a delicious thick spoonable yoghurt or a refreshing milk drink. Our proteins easily overcome the potential defects of high protein dairy products, such as graininess, dryness and process issues. It is entirely up to you to define the texture, creaminess and smoothness that you desire.

When using Nutrilac® proteins, you will have no acid whey drainage, resulting in 100% yield.



Global high protein
product launches
in dairy⁶

+53%



Protein drinking
yoghurt

*High protein content
while keeping the yoghurt drinkable*



Protein stirred
yoghurt

*High protein content while maintaining a
stirred and smooth texture in the yoghurt*

” Consumers believe that products with high protein content are healthier for them”⁷



Protein smoothie

Long shelf life and fruity smoothie with high protein content



Protein enriched flavoured milk

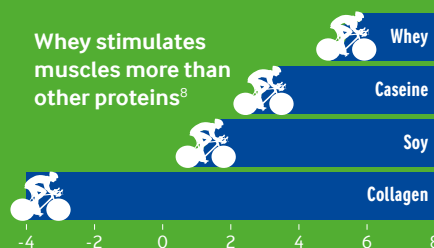
Delicious long life milk with high protein content

100%
whey protein
source



Muscle stimulation

Whey stimulates muscles more than other proteins⁸



Sports yoghurt

Drinkable or spoonable high protein yoghurt with a great taste, based on 100% whey protein



Sports ice cream

Creamy and smooth high protein ice cream with low fat content

Elders focus increasingly **on their health**⁹



In 2015 Europe will have **twice as many seniors as young people**¹⁰

1/4
recommended
daily calcium
intake for adults
per 100g of final
product



Ageless yoghurt

Indulgent calcium enriched and high protein yoghurt or dessert with great taste and texture



Ageless ice cream

Indulgent calcium enriched and high protein ice cream or sherbet with creamy mouthfeel

Target
consumers
with **small
appetites**



170
kcal packed in
a 100g serving

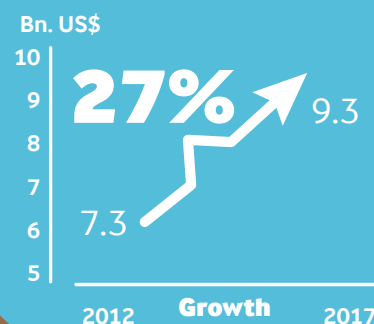


High nutrition ice cream

*Delicious ice cream with 170 kcal due to a
highly nutritious protein and fat content*

” Greek
yoghurt accounts
for **44%** of
yoghurt sales
in the US”¹¹

**Greek yoghurt
sales in the US** ¹²



Greek-style ice cream

*Smooth ice cream with high
protein content and a fresh
Greek-style taste*



**Greek-style yoghurt
and smoothie**

*Thick, protein-packed yoghurt or
drinkable smoothie with no acid whey
waste during production*



Individual needs,
individual **Nutrilac®**
solutions

A close-up, side-profile shot of a person's face and hand as they bite into a red apple. The person has light-colored hair and is wearing a dark top. The background is a soft-focus green, suggesting an outdoor setting with foliage.

References

- 1 Chris, Schmidt, Euromonitor, 2014: Protein – Trends – Technologies
- 2 Mintel, 2015: US consumers have a healthy appetite for high protein food
- 3 Mintel, 2014: Ageing – Understanding the global consumer ‘super’ trend
- 4^{a/b} Beneo, 2014: Functional Fibers and 12 Key Trends in Food, Nutrition and Health
- 5 Dietary protein quality evaluation in human nutrition – Report of an FAO Expert Consultation 2011 and FAO Food and Nutrition Paper 92 & Schaafsma 2000 Br J Nutr.
- 6 Innovadatabase.com, 2015: High protein product launches in dairy
- 7 Euromonitor international, 2014 : Nutrition Podcast Series: High-Protein Market Booming Globally, Creating Risk for Oversaturation
- 8 EAA, Difference from RDA, Adults g/100g protein
- 9 Source: Strategic Nutrition For Healthy Aging Technical Paper, March 2014
- 10 Source: Numbers released by the Global Burden of Disease study 2010; the Lancet 2012
- 11 Foodnavigator.com, 2014, Manufacturers, Greek yoghurt
- 12 Source: The yogurt market and yogurt innovation: Greek yogurt and beyond” – Packaged Facts



Arla Foods Ingredients Group P/S

Sønderhøj 10-12
8260 Viby J
Denmark

Office +45 89 38 10 00
email dairy@arlafoods.com

www.arlafoodsingredients.com