



Advanced, high quality proteins naturally rich in essential amino acids.

SolmikoHD is manufactured from fresh ultra-filtered skim milk, it is an excellent source of native micellar casein and whey proteins in the same ratio as found naturally in milk (80/20).

Let's get technical

Key features:



INNOVATIVE MEMBRANE FILTRATION

Gentle processing to deliver low spore counts while maintaining product safety



HIGHER BULK DENSITY POWDER

Specialised HD technology provides a higher bulk density which aids dispersion



EXCELLENT FUNCTIONALITY

SolmikoHD displays excellent solubility and demonstrates low viscosity in high protein nutritional drinks, before and after heat treatment (i.e. UHT and retort beverages)



HIGH NUTRITIONAL VALUE

High quality proteins, naturally rich in essential amino acids and rich in calcium



Glanbia Ireland Goodness Grows Here

Glanbia Ireland is an ingredient solutions partner to some of the world's leading companies and brands. At the forefront of ingredient technology, we offer a range of solutions to match the ever-changing demands of the food and nutrition industry and its consumers. With quality dairy and grains sourced from 5,000 Irish family farms, combined with advanced market research and insights, our unique platform offers fully traceable and sustainably produced natural solutions to help our customers stay ahead of the curve.

Solmiko is suitable for a variety of applications



RTM powdered nutritional products



RTD beverages including meal replacement & pH neutral sports drinks



Protein fortified foods



Weight management products








Medical & clinical nutrition applications



Child nutrition such as follow-on formula and growing up milks

Functional benefits of our Solmiko milk proteins

With over 40 years' experience in manufacturing our milk proteins, we've been able to develop highly efficient spray-drying technology to create a higher bulk density powder with high nutritional value.

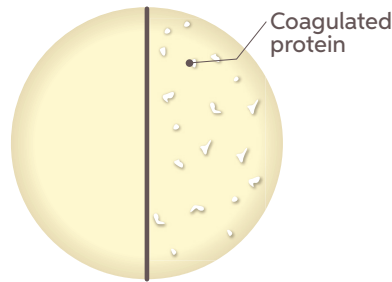
	SolmikoHD MPC	Standard MPC
 Heat Stability	Superior heat stability – UHT and retort	Standard heat stability
 Bulk Density	Higher bulk density - HD technology delivers better dispersion	Standard bulk density
 Solubility	Enhanced solubility - 90% @50°C in 30 minutes	Standard wettability
 Flavour	Clean, fresh dairy taste	Fresh dairy taste
 Credentials	Vegetarian, halal and kosher	Vegetarian, halal and kosher

Heat stability

Heat stability is an important attribute of milkprotein powders, especially when used in the creation of UHT beverages.

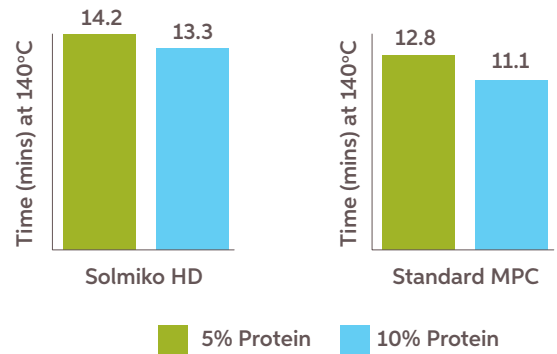
SolmikoHD MPC & MPI products demonstrate increased heat stability over competitor MPC & MPI from the market.

SolmikoHD demonstrates excellent heat stability in UHT and retort beverages versus standard MPC.



SolmikoHD MPC Standard MPC

Heat stability at 140°C

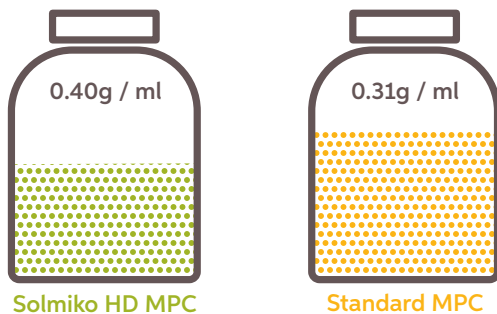


Higher bulk density

The bulk density of milk powder is an economically, commercially, and functionally important property. A high bulk density reduces volume, saves packaging and enables product handling.

GI apply a specialised HD technology to our milk protein production which creates a higher bulk density in our SolmikoHD milk powders.

Powder bulk density: The HD technology delivers almost 25% higher bulk density than standard technology

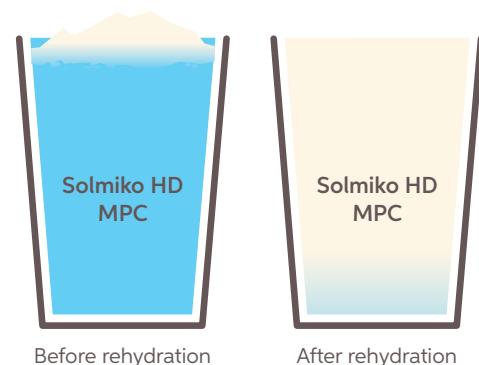


Rehydration

Solubility is an important feature for milk powders. Poorly soluble powders can cause processing difficulties and consumer usage difficulties which result in economic loss.

SolmikoHD has excellent rehydration properties which makes highly functional, it performs well for manufacturing in industrial use and consumer RTM applications.

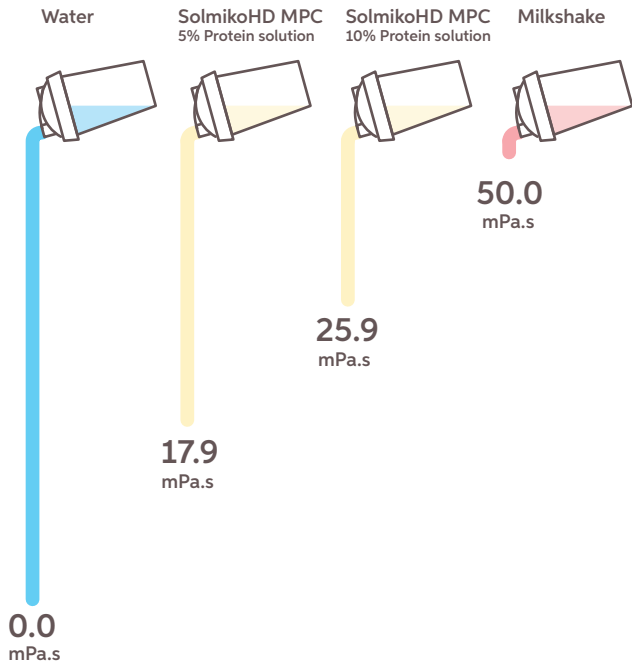
SolmikoHD MPC demonstrates 90% solubility at 50°C after 30 minutes.



Viscosity

SolmikoHD advanced protein powders maintain low levels of viscosity during processing and under UHT and retort style conditions.

Viscosity of SolmikoHD in applications



Product application

SolmikoHD as applied in a lifestyle beverage.



Ingredients	%
Skim milk	88.5
SolmikoHD MPC	6.20
Sugar	5.00
Phosphate salts	0.10
Natural vanilla extract	0.20

Typical nutritional information	Per 100ml
Energy kcal/kJ	76/319
Fat g	0.40
Saturated fat	0.17
Carbohydrate g	10.0
Of which sugars	10.0
Protein g	8.45
Calcium mg	250

The Complete Range:

Glanbia Ingredients Ireland now offers 4 types of HD advanced milk protein.



	Solmiko HD MPC	Solmiko HD MPC LOW LACTOSE	Solmiko HD MPI	Solmiko HD MPI LOW LACTOSE
Protein	80% min	80% min	85% min	85% min
Fat	2% max	2% max	2% max	2% max
Lactose	6%	4%	2%	0.5%
Bulk density	0.40	0.39	0.38	0.38

Nutritional Benefits

When it comes to protein, it is important to consider both the quality and quantity. The main determinate for nutritional quality of protein is the amount of essential amino acids (EAA's) present in a dietary protein and the digestibility of these. Protein Digestibility Corrected Amino Acid Score (PDCAAS) is a widely used assay for evaluating protein quality. EAAs cannot be synthesised by the body and therefore, need to be consumed through the diet.

Dairy protein is considered a "complete" protein source containing all the essential amino acids vital for human health. Dairy protein receives a PDCAAS of 100. SolmikoHD contains both casein and whey protein in the natural ratio as found in milk (80:20).

SolmikoHD is naturally rich in all nine Essential Amino Acids including:

Leucine is one of the key drivers of muscle protein synthesis. Leucine acts like a molecular switch that turns on the manufacturing of muscle in the body^{1,2}

Valine stimulates muscle growth and regeneration and is involved in energy production.

Isoleucine is involved in muscle metabolism. It's also important for immune function, haemoglobin production and energy regulation.³

Our unique dairy system



Grass fed cows

Outdoor grazing on nutritious grass for most of the year



Cleanest air in Europe

Urban outdoor air pollution index



Island location

On the edge of the Atlantic Ocean with plentiful rain



Product quality

Multiple checkpoints from farm to factory



Food authenticity

Produced honestly by safe family farms



Clean label

Non-GMO, hormone-free, Kosher & Halal



Cow & milk traceability

From grassland to customer



Trusted partner

Supporting leading global brands

What does 25g of protein look like?



30g
SOLMIKO HD*
*approximate weight +/-2g



4 large
EGGS



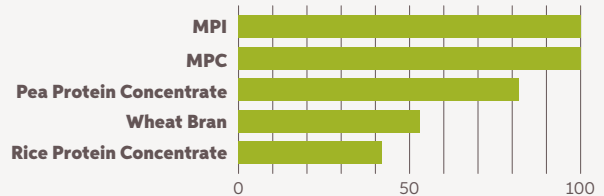
300g
GREEK YOGHURT



290g
KIDNEY BEANS

Not all proteins are the same

PDCAAS Values for different protein sources



Reference: Rutherford, S. M., A. C.Fanning, B. J.Miller, and P. J.Moughan. 2015. Protein digestibility-corrected amino acid scores and digestible indispensable amino acid scores differentially describe protein quality in growing male rats. J. Nutr. 145:372-379

1. Donald K Layman, Tracy G Anthony, Blake B Rasmussen, Sean H Adams, Christopher J Lynch, Grant D Brinkworth, Teresa A Davis, Defining meal requirements for protein to optimize metabolic roles of amino acids, The American Journal of Clinical Nutrition, Volume 101, Issue 6, June 2015, Pages 1330S-1338S

2. Phillips, S.M., 2016. The impact of protein quality on the promotion of resistance exercise-induced changes in muscle mass. Nutrition & metabolism, 13(1), p.64

3. Lanham-New, Susan A., Ian A. MacDonald, and Helen M. Roche, eds. Nutrition and metabolism. Vol. 5. John Wiley & Sons, 2011.

Our R&D Function



The innovation hub

Our Innovation Hub houses world class facilities enabling us to bring our concepts to life.



Leading the way in process and technology

Functionalising and developing ingredients whilst always maintaining nutritional integrity.



Our external ecosystem

Our extensive network of external partners ensures we are agile.



Developed by our experts

Our team of experts passionately researching the worlds of dairy and plant.



Providing superior nutrition

At Glanbia Ireland the foundations of nutrition are built on dairy and plant. Our ethos: "Good for You, Good for the Planet".

Get in Touch

To find out more about this solution, please contact us at Glanbia Ireland.

Email: solutions@glanbia.ie

www.glanbiairelandingredients.com

[LinkedIn.com/company/glanbia-ingredients-ireland](https://www.linkedin.com/company/glanbia-ingredients-ireland)

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glanbia
ireland

GOODNESS
GROWS
HERE