



# Opti-Bake

## Better-For-You Indulgence

A complete range of bakery solutions tailored to help meet the needs of health conscious consumers who are seeking Better-for-You indulgence.

### 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.

### Meet Consumer Demand with Opti-Bake Better-For-You



High protein



Better-For-You Indulgence



Reduced sugar



High sensory quality

### What Your Consumers Say

**Consumers want Better-for-You** - Due to global health concerns, consumers are looking for Better-for-You products that give them moments of indulgence in a guilt free manner.

**High Protein** - With increased awareness of health, consumers are seeking to maximize their nutritional intake. They are looking for ingredients that they trust. Consumers use protein for overall health & wellness.

**Great Taste** - Consumers are not willing to trade-off sensory attributes in favour of nutritional value. Consumers are willing to pay premium price as long as the snack has a great taste.

**Convenience** - Mealtime habits are becoming more fragmented and consumers are missing meals on a regular basis. Consumers are looking for healthy on the go snacks that are nutritious and act as a genuine meal substitute.

**Seeking Natural** - With busy schedules of daily life consumers are feeling tired and fatigued and are seeking out products that offer a natural energy boost.

Source: FI Global Insights



# Opti-Bake Better-For-You in Application

## Sample solution 1: High Protein Chocolate Brownie

With our Opti-Bake Better-For-You Indulgent solution\*, it is possible to achieve high protein functionality and still maintain good levels of typical brownie texture, which consumers expect. Our Opti-Bake Better-For-You brownie solution contains 30% less sugar compared to a standard brownie in the market. Opti-Bake Better-For-You is the perfect solution for manufacturers looking to create functional bakes that also deliver on consumers desire for indulgence, it is easy to handle and its functional properties make it easy to incorporate into the baking process.

### Typical Nutritional information g/100g

Opti-Bake-Better-For-You Brownie Recipe		
<b>SolmikoHD MPC</b> chocolate, butter, sugar, egg, water, glucose syrup, sweetener, cornflour, flavourings, cocoa powder, salt	Energy (kj/kcal)	1647/394
	Fat (g)	22
	Of which saturates (g)	13
	Carbohydrate (g)	30
	Of which sugars (g)	23
	Protein (g)	20
	Fibre (g)	1.4
	Salt (g)	3.7



### High Protein Brownie Method

-  Preheat oven to 165°C.
-  Sieve salt, SolmikoHD MPC, cornflour & cocoa powder into a bowl.
-  Melt butter & dark chocolate over a saucepan of hot water. Add water at 32° to chocolate mixture and stir.
-  Gradually combine your dry and wet mix until all your ingredients are well incorporated and the mix is smooth.
-  Combine eggs, sugar and glucose with a mixer.
-  Pour mixture into brownie tray and bake for 20-25 minutes.
-  Turn off the oven and with the door left slightly ajar, leave in the oven for a further 20 minutes.
-  Remove from oven and cool upside down in the brownie pan.

## Sample Solution 2: High protein Chocolate Chip Cookie

Our Opti-Bake Better-For-You Indulgent solution\* allows manufacturers to create high protein indulgent treats without compromising on taste and texture. Our Opti-Bake Better-For-You cookie solution contains 30% less sugar compared to standard market cookies. SolmikoHD MPC has excellent solubility and rehydration properties, which makes it highly functional, and it performs well for industrial use.

### Typical Nutritional information g/100g

Opti-Bake-Better-For-You brownie recipe		
<b>SolmikoHD MPC</b> flour, sugar, butter, water, egg, chocolate, flavouring, skim milk powder, baking soda, sea salt	Energy (kj/kcal)	1448/346
	Fat (g)	15
	Of which saturates (g)	1.8
	Carbohydrate (g)	33
	Of which sugars (g)	19
	Protein (g)	20
	Fibre (g)	1
	Salt (g)	3.9



\* These claims are based on European legislation. Available at: [https://ec.europa.eu/food/safety/labelling\\_nutrition/claims/nutrition\\_claims\\_en](https://ec.europa.eu/food/safety/labelling_nutrition/claims/nutrition_claims_en)

## Process Considerations



Sieve MPC and flour together to ensure good uniform dispersion. Due to HD technology used in the manufacturing process, SolmikoHD MPC easily combines with other dry ingredients.



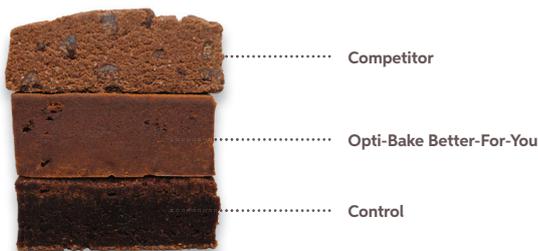
High protein powders are typically cohesive in nature. When combining dry and wet ingredients, the MPC dry mixture should be added slowly to wet ingredients to avoid any clumping.

## Functional Benefits of our Opti-Bake Better-For-You Range

Our Opti-Bake Better-For-You solution delivers high protein benefits while also maintaining textural benefits consumers expect from an indulgent bakery product.

### Texture

As protein levels in bakery products increase, the product firmness can also increase which can lead to a texture that is dry with less taste. Our Opti-Bake Better-For-You solution enables **protein levels to be raised to 20%** while maintaining a soft appealing chewy bake.



Our Opti-Bake Better-For-You solution displayed good structural properties, which made for easy slicing in brownie application while also displaying good resilience and crumb strength in cookie application.



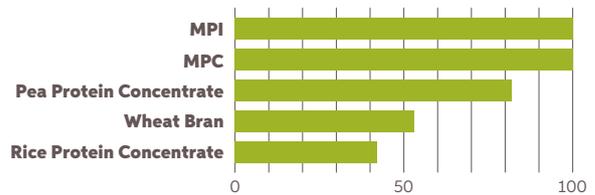
### Nutritional Benefits

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. These solutions are high in protein but also high quality protein. Dairy protein receives a PDCAAS of 100.

### 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

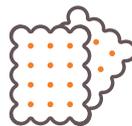
## Suitable Bakery Applications



Brownies/ Muffins



Cookies



Biscuits



Cakes

## Summary

With increased awareness for 'better for you' snacks, popularity for guilt free indulgence is rising. Consumers are seeking snacks that are high protein, low fat and low sugar. Consumers are looking for healthy alternatives that are nutritious but also contain great taste. Whether it's a soft cookie or a fudgy brownie, Opti-Bake Better-For You is the perfect solution for manufacturers looking to create high protein functional bakes.



High protein



Better-For-You  
Indulgence



Reduced sugar



High sensory  
quality

## 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

We stay at the forefront of ingredient innovation by investing in our people, our processes and our infrastructure



### 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 how Glanbia Ireland can support you in developing your solutions, please contact us directly.

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



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