

A NEW OPTION FOR HEALTHY DIET

MYCORENA



pro  
myc<sup>®</sup>

Get a taste of the future.

[www.mycorena.com](http://www.mycorena.com)





SUGAR  
FREE



NUT  
FREE



EGG  
FREE



SOY  
FREE



GLUTEN  
FREE



LACTOSE  
FREE



## INNOVATING VEGAN FOOD LANDSCAPE THROUGH FUNGI-BASED PROTEIN

Promyc® is a fungi-based natural ingredient to be used in the formulation of food products as a core vegan protein source that provides a whole new texture profile.

With a neutral taste and chewy texture that can be applied to numerous food formats, Promyc® has many benefits like nutritious, versatile, and sustainably produced protein-rich ingredient that suits a wide variety of food applications for today's discerning consumer.

You can use Promyc® as a replacement for the creation of any plant-based formulations that make use of rehydrated TVP, whether it is soy, pea, or gluten-based.

Whether you are striving to create a nutritious and delicious meat replacement, bakery item, snack food, or dairy alternative, we have the expertise and ability to provide innovative and sustainably created products to add an appealing point of difference to your food portfolio.

Promyc® is a balanced ingredient and can be closely compared with other protein sources, both animal and plant based. In addition, Promyc® can also bring you unique advantages that other diets can't match.

## LOW AND BALANCED FAT

Promyc® is a low-fat product. It contains only 1.5g per 100g of fresh product (or 6g per 100g of dry product), and this fat is composed of 76% unsaturated fats, and only 24% saturated. Promyc does not contain any trans-fat.

As a comparison, fat from animal sources such as meat and milk are usually composed of up to 50% saturated fats, as well as for some “unhealthy” plant oils such as palm oil. \*

\*Müller, H. et al (2003). The Serum LDL/HDL Cholesterol Ratio Is Influenced More Favourably by Exchanging Saturated with Unsaturated Fat Than by Reducing Saturated Fat in the Diet of Women. The Journal of Nutrition, 133, 78–83, doi:/10.1093/jn/133.1.78

## DIETARY FIBRE

Promyc® also possesses a unique fiber, comprising about 12% of its dry weight, composed mainly of polymeric n-acetyl glucosamine (chitin) and beta 1-3 and 1-6 glucans.

Ingestion of this type of fiber has been shown in different studies to have many different potential benefits. Some of these effects include relief of joint pain in osteoarthritis and stimulation of beneficial bacteria in the colon and improvement of the individual's glycemic profile. \*\*,\*

\* Bottin, J et al. (2016) Mycoprotein reduces energy intake and postprandial insulin release without altering glucagon-like peptide-1 and peptide tyrosine-tyrosine concentrations in healthy overweight and obese adults: a randomised-controlled trial Br J Nutr 116, 360-374

\*\* Turnbull and Ward (1995) Mycoprotein reduces glycemia and insulinemia when taken with an oral-glucose-tolerance test; Am J Clin Nutr, 1,1

## POTENTIAL FOR MUSCLE BUILDING

Of the 9 essential amino acids, BCAA (leucine, isoleucine, and valine) supplements have been shown to build muscle, decrease muscle fatigue and alleviate muscle soreness. And so far, whey protein is so considered to have the highest concentration of BCAAs of any dietary source of protein.

It is worth noting that Promyc® contains 26% of BCAAs, the same as the content in whey protein, which makes Promyc the ideal ingredient for fitness people.



## CONTROLLED BLOOD SUGAR

It is shown that Promyc® can control blood sugar levels, more specifically bring beneficial effects on glycemia and insulinemia. In this sense, a reduced glycaemic response is a desirable trait to avoid the development of type-2 diabetes and heart disease.

The mechanisms for this action are thought to be related to mycoprotein's fiber content, since fiber has been shown to slow down the passage of food to the small intestine, creating a slower sugar uptake in general\*.

Therefore, Promyc® is a suitable food for fighting obesity and type 2 diabetes.\*\*

\* Turnbull WH et al. Effect of Mycoprotein on blood lipids, *Am J Clin Nutr* 1990;52:646-50

\*\* Turnbull WH et al. Mycoprotein reduces blood lipids in free-living subjects, *Am J Clin Nutr* 1992; 55:415-9

## SATIETY

Satiety is the state of a person feeling satisfied, or "feeling full" after a meal. According to different studies, having a mycoprotein meal has been associated with higher satiety than having the same meal with Chicken.\*

The reason for this is because Promyc® as mycoprotein is a combination of both the protein and fiber present, and meat lacks in its fiber content. The practical outcome of these observations is that possibly a diet including mycoprotein can be effective in overcoming hunger, reduce total calorie intake (up to 24%\*\*), and in this way make weight loss easier.

\* Turnbull, WH (1993) Acute effects of mycoprotein on subsequent energy intake and appetite variables *The American Journal of Clinical Nutrition*, 58 (4) 507-512, doi: /10.1093/ajcn/58.4.507

\*\* Bottin, J et al. (2016) Mycoprotein reduces energy intake and postprandial insulin release without altering glucagon-like peptide-1 and peptide tyrosine-tyrosine concentrations in healthy overweight and obese adults: a randomised-controlled trial *Br J Nutr* 116, 360-374

## LOWERS CHOLESTEROL

Previous studies with mycoprotein in controlled groups have shown significant decreases in the blood cholesterol levels of individuals consuming mycoprotein.

Promyc® does not contain any amount of cholesterol, as opposed to meat. Besides, it contains a healthy amount of unsaturated fats which contribute to lowering LDL cholesterol to reduce the risk of heart disease.

SUGAR  
FREESATURATED  
FAT FREEHIGH  
PROTEINLOW FAT  
PRODUCTSOURCE  
OF FIBRE

Promyc® is a rich source of bioavailable iron and zinc (without containing phytic acid) and delivers good levels of B and D vitamins. Its high-quality complete protein profile and fiber content provide a feeling of satiety through a balanced combination of macronutrient supply.

Promyc® is appropriate as a complementary food in sustainable diets for vegans, flexitarians, and meat lovers.

## PROMYC® NUTRITIONAL CONTENT

	Per 100g of fresh product	Per 100g of powder/dry product
Energy (kj)	350 kJ	1400 kJ
Energy (kcal)	<b>85 kcal</b>	<b>340 kcal</b>
Protein	15.07 g	<b>60.29 g</b>
Fiber	3.08 g	12.30 g
Fat	1.49 g	5.97 g
- Saturated fat	0.34 g	1.36 g
- Monounsaturated fat	0.4 g	1.6 g
- Polyunsaturated fat	0.68 g	2.72 g
Carbohydrates	0.94 g	3.74 g
- Sugar	<b>0 g</b>	<b>0 g</b>
Salt	0.30 g	1.19 g

	Mg per 100 g	% DRI*	Dry Product (mg per 100 g)	
MINERALS	Calcium	127.3	13%	509.1
	Potassium	251.1	5%	1004.5
	Magnesium	29.1	7%	116.5
	Sodium	37.2	2%	148.6
	Sulfur	59.6	-	238.5
	Phosphorous	637.5	91%	2550.2
	Iron	2.7	25%	10.8
	Zinc	3.9	35%	15.5
VITAMINS	Copper	1.3	130%	5.2
	Vitamin A	147 µg	16 %	441 µg
	Riboflavin (Vit. B2)	142 µg	9%	568 µg
	Niacin (Vit. B3)	2.36 mg	13%**	7.08 mg
	Vitamin B5	107 µg	2%	428 µg
	Vitamin B12	<0.20 µg	<1%	<0.20 µg
	Vitamin B6	260 µg	19%	1 mg
Vitamin D2	3.71 µg **	18%**	14.9 µg **	
Vitamin D3	<12.5 µg	<1%	<12.5 µg	

\* Daily Recommended Intake, average for male adults

\*\* Vitamin D can be naturally increased during downstream processing.



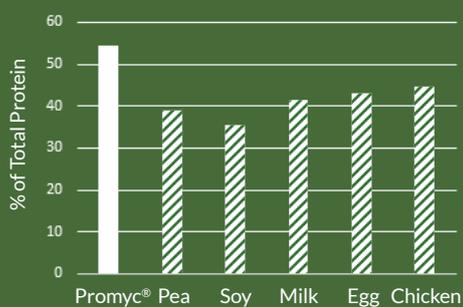


## COMPLETE PROTEIN INGREDIENT

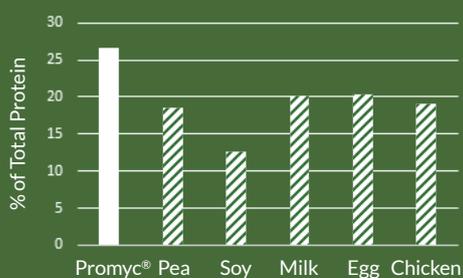
Promyc® is a protein of the highest quality. It's a complete protein containing all essential amino acids. It has an essential amino acid content of 54.4%, which is higher than in any of the most consumed sources of protein, animal or plant based.

Additionally, 26.7% of its amino acids are branched-chain amino acids (BCAAs), which are proteinogenic amino acids that favours muscle building and are therefore beneficial for fitness products.

### Essential Amino Acids



### Branched-chain Amino Acids (BCAAs)



Promyc® is a product from a safe and edible species of filamentous fungi. Our fungi are naturally present in existing food products and have been consumed for many decades in large quantities without adverse effects. Still, product safety is of major importance to us, and we have tested our product for the existence of toxins that can potentially arise in certain species of filamentous fungi - mycotoxins. We have confirmed through third-party accredited laboratory analysis that our fungi do not contain mycotoxins and its consumption as a food product is safe. The fungi species we use has also been classified Generally Regarded as Safe (GRAS) by the US Food and Drug Administration (FDA).

## ALLERGIES

Allergic reactions are possible for virtually every existing source of protein. Different sources of protein can contain allergens that affect the population with different severity but can never be completely excluded. It is possible for an individual to have an allergic reaction to mycoprotein if they react to mold due to the potential similarity of allergens.

However, previous studies have shown that allergic reactions to mycoprotein are drastically less than for other protein sources. Consumption of mycoprotein has shown that on average one potential allergic reaction was observed for each 1.85 million servings consumed\*. That's an incident rate about 600 times\* lower than for soy protein, in which statistics indicate that 1 in every 300 people is allergic to soy.

\* Finnigan TJ et al. (2019) Mycoprotein: The Future of Nutritious Nonmeat Protein, a Symposium Review, Current Developments in Nutrition 3;6: nzz021 doi: /10.1093/cdn/nzz021

## HEALTH CLAIMS

Promyc® has been analyzed by accredited laboratories to ensure a safe and healthy product. Below are the health claims we can make according to the EU Commission:

- Protein composed of 55% essential amino acids and 27% branched-chain amino acids (BCAAs).
- Non-essential or conditionally essential amino acids with health benefits (immune system function), Tyrosine and Alanine (enhanced performance), Proline (maintenance of normal blood pressure).
- Not a novel food under EFSA's Novel Food regulatory framework.

### DISCLAIMER

Mycoprotein is a general term describing protein derived from filamentous fungi, a term that covers many different fungal species with different characteristics among them. In this sense, Mycorena only assumes responsibility from the sample data labelled under the "Promyc®" name, as opposed to when "mycoprotein" is referred to in the text as data from the literature, in which the species used might be different from the species used to produce Promyc®.







## UNLOCK ENDLESS POSSIBILITIES OF GOURMET COOKING

Comparable to the firm taste of real meat, balanced chewiness and neutral taste, these advantages make Promyc® the basic raw material for many healthy dishes.

### MEAT ALTERNATIVES

Steak  
Meaty balls  
Burgers  
Chorizo  
Hot dogs

### CHICKEN ALTERNATIVES

Nuggets  
Chicken fillets

### FISH ALTERNATIVES

Fish fingers  
Tuna flakes

### SAVOURY SNACKS

Jerky Chips  
Snack sausages

### SWEET SNACKS

Protein bars  
Cookies

- If you have other food inspirations or needs, please contact us at [info@mycorena.com](mailto:info@mycorena.com). Our powerful R&D abilities can help you to realize Promyc® products with different textures, tastes and shelf life.

## MEAT ALTERNATIVES

Green meat with real bite



### STEAK

**Ingredients:** Promyc® (98%), water, salt, beetroot juice, spices, sugar, natural flavours

**Texture/taste:** Tender with a chewy, satisfying mouthfeel

**Readiness index:** 



### MEATY BALLS

**Ingredients:** Promyc® (60%), onion, water, canola oil, spices, methylcellulose, beetroot juice, salt

**Texture/taste:** Chewy with a slight savoury taste, holds firm when bitten or cut

**Readiness index:** 

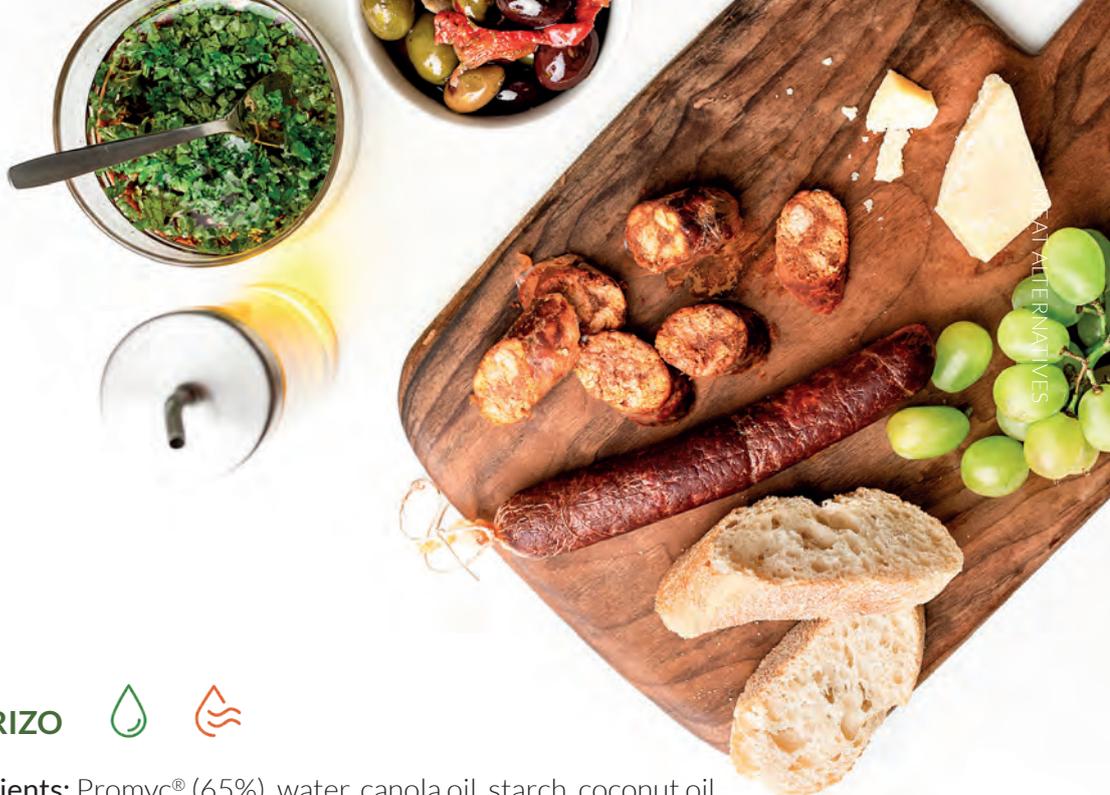


### BURGER (BEEF FLAVOUR)

**Ingredients:** Promyc® (75%), water, coconut oil, canola oil, spices, methylcellulose, salt, natural flavours

**Texture/taste:** Juicy with a savoury taste, sizzles when pan-frying and grilling

**Readiness index:** 



## CHORIZO

**Ingredients:** Promyc® (65%), water, canola oil, starch, coconut oil, spices, beetroot juice, salt, sugar

**Texture/taste:** Smokey, savoury flavour with good chewiness

**Readiness index:** 



## HOT DOGS

**Ingredients:** Promyc® (30%), water, canola oil, pea protein, starch, spices, methylcellulose

**Texture/taste:** Alike hotdogs with good bite through

**Readiness index:** 



 Fresh product

 Frozen product

 Dry product

 Ready for scale-up

 Recipe & scale-up development

 Kitchen prototype



## CHICKEN ALTERNATIVES

Tastes even better than real



### CHICKEN FILLETS



**Ingredients:** Promyc® (82%), water, canola oil, starch, spices, salt, methylcellulose, natural flavours

**Texture/taste:** Firm texture with a chewy bite, absorbs flavours well and has a nice roasting or pan-frying surface

Readiness index:

### NUGGETS

**Ingredients:** Promyc® (53%), water, canola oil, pea protein, fava bean protein, maize flour, rice flour, starch, spices, methylcellulose, natural flavours

**Texture/taste:** Crisp to the bite with a nice chewy mouthfeel very similar to chicken

Readiness index:



## FISH ALTERNATIVES

As fresh as out of the sea



### FISH FINGERS



**Ingredients:** Promyc® (36%), rice flakes, canola oil, starch, maize flour, rice flour, salt, carrageenan, spices, natural flavours

**Texture/taste:** Crisp bite with a fishy taste

**Readiness index:** 



### TUNA FLAKES



**Ingredients:** Promyc® (92%), water, salt, spices, starch, sugar, natural flavours

**Texture/taste:** Fishy, fibrous texture, absorbs flavours well.

**Readiness index:** 





## SAVOURY SNACKS

The healthier way to snack



### JERKY



**Ingredients:** Promyc® (98%), water, salt, beetroot juice, spices, sugar, smoke flavour

**Texture/taste:** Chewy and tough with a smoky flavour

**Readiness index:**

### SNACK SAUSAGES



**Ingredients:** Promyc® (50%), water, rice starch, spices, salt, beetroot juice, carrageenan, smoke flavour

**Texture/taste:** Chewy with a smoky, savoury flavour

**Readiness index:**

### CHIPS



**Ingredients:** Promyc® (50%), potato flour, starch

**Texture/taste:** Crispy with a nice crunch and appealing look

**Readiness index:**



## SWEET SNACKS

Sweet temptations without the guilt



### COOKIES

**Ingredients:** Promyc® (20%), wheat flour, margarine, chocolate, sugar, sodium bicarbonate

**Texture/taste:** Crumbly texture with a nice, sweet flavour

**Readiness index:** 



### PROTEIN BARS

**Ingredients:** Promyc® (30%), oats, peanut butter, sugar, cocoa, spices

**Texture/taste:** Smooth appearance, good chewiness with a delicious flavour of peanut and chocolate

**Readiness index:** 



We are happy to work with companies who want a competitive advantage and innovative new solution. Whether using our existing products or cooperating to develop new products, our strong R&D and production team is a powerful assistant to your business success.



## WE ARE MYCORENA

We envision being the world's leading brand for fungi-based biotechnology.

We are a team of biologists, engineers, and business professionals, and we are on a mission to create a sustainable and healthy protein alternative that is easy to access.

Since 2018, Mycorena has been creating innovative, fungi-based protein products. We hope to enable more climate-friendly and environmentally sustainable eating habits through our products for the world.

With a vision to transform the food landscape through sustainable, nutritious, and scalable technology, Mycorena provides companies with an innovative way to enrich and diversify their product offering using Promyc®.

**To find out how Promyc® can add value to your product portfolio, contact us!**

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