

Ingredients for dairy industry



# WE PRODUCE NEW, HEALTHY, NATURAL PRODUCTS

### COMPANY INFORMATION

Partner-M is a leading Russian producer of food and feed ingredients. Since 2005, the company specializes in the deep processing of plant raw materials and the production of textured plant proteins, as well as starch-containing products, dietary fibers, dairy and animal proteins and auxiliary ingredients.

Our products have a wide range of applications and are used in the meat processing, vegetarian/ vegan, dairy, fish, bakery, confectionery, canning, fruit and vegetable and feed industries.

We produce 50 000 TONS of ingredients per year





### R&D DEPARTMENT

We are proud of our highly intelligent and creative research center, which develops new products and technological solutions, unique for the domestic and foreign markets.

Scientific and technological group of our company in cooperation with the leading research organizations develops innovative solutions for the food and feed industries. We introduce the most advanced and future-oriented technological processes into production of new ingredients.

ISO 22000

Certificate of Food Safety Management System OVER 15 YEARS



#### **LABORATORY**

Partner-M introduces global business standards: our products are certified in accordance with ISO 22000 and HACCP food safety management requirements.

We work only with trusted suppliers of GMO-free raw materials and use soybeans, wheat, peas and other crops grown in Russia. Having an advanced laboratory, we carry out an independent overall inspection from incoming raw materials to the final product and guarantee high quality of all produced ingredients.





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# VEGETABLE MONO INGREDIENTS

# POWDERED SOYBEAN MILK

#### **Description**

Powdered soybean milk is produced by spray dehydration of liquid soybean milk. It contains easily digestible vegetable protein, soybean oil with high content of polyunsaturated fatty acids, essential vitamins (folic acid, vitamins B1, B2, B6) and rich assortment of minerals.

#### **Technological advantages**

- Powdered soybean milk is certified for Halal and Kosher products.
- Eliminates the use of expensive production equipment for vegan products.
- Proportion: 1:9.

#### **Application**

Extensive list of dairy products and vegan products.

Products	GS 1115	GS 1118	GS 1130	GS1118S	G1118SS
Ingredients	Sc	ybean, maltose syr	Soybean, maltos	se syrup, sucrose	
Appearance, smell, taste	Light yellow powder with soybean milk smell and taste			Sweetish taste	Sweetish taste
Humidity, %	≤5	≤5	≤5	≤5	≤5
Protein (as absolute dry matter), %	≥15	≥18	≥30	≥18	≥18
Ash, %	≤5	≤5	≤5	≤5	≤5
Soluble fiber, %	≤4	≤4	≤4	≤4	≤4
Fat, %	7-11	7-12	14-18	7-12	7-12



#### VEGETABLE FIBERS

- Biocell wheat fiber
- Protocell FW200/1, FW200/2 vegetable fiber
- Protocell soybean fiber

#### **Description**

Dietary fibers have a highly developed capillary structure and the status of low-calorie prebiotics.

#### Technological advantages

- Significant content of protein comparable to animal proteins in soybean fiber increases the nutritional value of the final product.
- · Highly developed capillary structure.
- High water retention capacity.
- Positive effect on rheological properties: increases density, elasticity, adhesion.
- Provides stability during heat processing, in the freezethaw cycle and during storage of final products.
- Biocell XL90 (powder) hydration 1: 4.

#### **Application**

Curd products, cheese products, cream cheese.



**Biocell** is a wheat fiber with various dimensions of fibers.



**Protocell FW 200/1 and Protocell 200/2** are wheat fibers with increased functionality. The product has thermal stability properties.



**Protocell** is a soybean dietary fiber of protopectin type.

Group trade mark of products	Protocell	Biocell	Protocell FW 200/1, FW 200/2				
Ingredients	Soybean fiber	Wheat fiber	Combination of fibers				
	Organolepti	c parameters					
Appearance, particle size (μm)	$\cdot$ POWARE IN THE POWARE IN POWARE IN POWARE ZERO						
Taste and smell	Neutral						
	Physical and chemical parameters						
Moisture content, % Not more than	10,0 12,0 10,0						
Protein content, % as absolute dry matter, not more than			1,0				
Fiber content, % as absolute dry matter, not less than	5/1		97,0				
Functional characteristic							
Water-binding ability	1:8-10	1:7-9	1:12-15, 1:9				

# SOYBEAN PROTEIN ISOLATE

#### **Description**

Isolated soybean protein is a multipurpose protein with a wide range of uses. It has high emulsifying/ gelling properties and high viscosity. Isolated soybean protein forms a stable emulsion. It has high nutritional properties, excellent digestibility and a complete amino acid set, it does not produce dust when used.

#### Technological advantages

- High protein content allows to obtain a high quality product at a lower cost.
- Compared to similar products, it has less strong taste (more neutral), which allows to use the product in higher dosages.
- Cream colour: the final product with isolated soybean protein has a distinctive pleasant color

#### **Application**

Full or partial replacement of raw milk - the product can be used for the entire range of dairy products.



Parameter	Value
Moisture content, %, not more than	10,0
Protein content, % as absolute dry matter, not less than	90,0
Particle size, mesh	100



# ANIMAL MONO INGREDIENTS

#### **ANIMAL PROTEINS**

- Novapro bovine collagen protein
- Protomax-A bovine collagen protein

#### **Description**

Bovine collagen proteins are produced in technological modes of raw materials processing which do not allow hydrolytic breakdown of proteins.

# Novapro

**Novapro bovine collagen protein** is a native protein with a highly developed capillary structure and excellent organoleptic properties

#### **Technological advantages**

- Excellent organoleptic characteristics due to the high content of native protein and the absence of hydrolysis products.
- Advanced functionality moisture-binding, moistureretaining, emulsifying properties are combined with texturing properties, increased thermal stability, including freeze-thaw cycles.
- When Novapro is used in the recipe for the production of curd and curd products, the cost of the final product is reduced through increased yield.



**Protomax-A bovine collagen protein** is a mixture of collagen fibers of various degrees of refinement, adapted for use in various types of products.

#### **Application**

Cream cheese and processed cheese, curd products, cottage cheese 5-18%.

Group trade mark	Bovine collagen proteins							
of products	Novapro			Protomax-A				
Ingredients	Fiber	Fine powder	RZ / SV		RZ / DV	RZ / MV		
Organoleptic parameters:								
Appearance, consistency	Soft fibers	Soft powder			Soft powder			
Colour, taste and smell	Milky,	neutral		White, neutral				
Physical and chemical parameters								
Mass content of protein, % as absolute dry matter, not less than	98,	98,0 (N × 6,25) 95,0 (N × 5,62)			62)			
Functional characteristic								
Water-binding ability	1:10	1:10	1:10		1:8	1:12		
Granule-forming ability	1:10	1:10-15	1:9-10		1:8-9	1:10		
Fat emulsifying ability	1:10:10	1:10:10	1:10:10 1:12:12 1		1:12:12			



## COMPLEX FOOD ADDITIVES

#### **Description**

Starch-free stabilization system consisting of a complex of hydrocolloids and milk proteins.

#### **Technological advantages**

- Low raw material cost of the final product.
- Friable structure
- Thermal stability
- Without foreign taste
- Good solubility
- Absence of high viscosity of the mixture with complete dissolution of the stabilizer
- Absence of syneresis

#### **Application**

Curd products with milk fat substitutes

Skimmed milk powder	1	62,5 kg
Milk fat substitute		220 kg
Gelekon 35M P7		7,5 kg
Sodium citrate		2 kg
Fermentation starter, calcium chloride		
Water		708 kg
Yield		650-690 kg





#### **Description**

Complex food additive consists of a complex of modified starches and emulsifiers.

#### Technological advantages

- Proportion: 4–5 kg per 1 ton of mixture.
- Compared to competitors, demonstrates negative reaction to iodine in the product.
- Resistant to syneresis.
- Withstands many hours of simmering at a temperature of 95 °C, which makes it possible to use this type of stabilizer in production of fermented baked milk.
- · Dissolves quickly in milk mixture.
- Gives the final product a thick and uniform texture.
- It performs its function both when using whole milk and skimmed milk, skimmed milk powder and milk fat substitutes.
- Final product does not separate into layers during storage.
- Does not contain animal products.
- Does not change the taste characteristics of the final product.

#### **Application**

Drinking yogurt, kefir, fermented baked milk, sour cream or sour cream product, snezhok.

#### **Proportions**

Тип продукта	Proportion
Sour cream 20%	6 kg
Sour cream 20%	4-5 kg
Drinking yogurt/snezhok	5 kg
Fermented baked milk	5 kg
Kefir	3-4 kg



#### **Description**

Stabilization system based on modified starches and emulsifiers.

#### Technological advantages

- When making a sour cream product (fat content of 20% or more) with Gelekon 3SM P9, the final product is whipped with sugar into a dense cream and does not liquate.
- Affordable price of complex food additives, possibility to adjust the proportion of an ingredient depending on the desired result.
- The final product has all the characteristics of a sour cream product (dense texture, no grains, no syneresis).
- Proportion: 0,6–1%.

#### **Application**

Confectionary sour cream or sour cream product

Skimmed milk powder	65 kg
Milk fat substitute	200 kg
Gelekon 3SM P9	6 kg
Sodium citrate	2 kg
Fermentation starter	
Water	727 kg





#### **Description**

Complex food additive consists of a complex of modified starches and hydrocolloids.

#### Technological advantages

- Reduction of cost by increasing the proportion of moisture in the final product.
- Dense structure.
- Final mixture is convenient for packing in a pack (it does not stick to the auger and keeps its shape).
- Absence of syneresis.
- It dissolves well in «dry» form.
- Without foreign taste

#### **Application**

Curd and curd cheeses, as well as curd fillings.

Product type	Proportion of complex food additive	Additional water
Curd product, 58 % moisture	1%	30%
Curd product, 62 % moisture	1%	25%



#### **GELEKON 750 K**

#### **Description**

Complex mixture of vegetable and animal proteins to increase the yield of curd product.

#### Technological advantages

- Low raw material cost of the final product.
- Friable structure
- Thermal stability
- Without foreign taste
- Good solubility
- Absence of high viscosity of the mixture with complete dissolution of the stabilizer.
- · Absence of syneresis.
- The product does not contain starch, it contains more than 75% protein, thereby increasing the yield of the final product on low-quality raw materials.

#### **Application**

Curd products with milk fat substitutes

Skimmed milk powder	62,5 kg
Milk fat substitute	220 kg
Gelekon 750K	10 kg
Sodium citrate	2 kg
Fermentation starter, calcium chloride	
Water	706 kg
Yield	750 kg



#### **NOTES**





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