GROUP OF COMPANIES
SODRUGESTVO

PRODUCTS CATALOG

GROUP OF COMPANIES SODRUGESTVO

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MANUFACTURED PRODUCTS

SERTIFICATION

GROUP OF COMPANIES SODRUGESTVO

PRODUCT QUALITY AND SAFETY is of Sodrugestvo Group's priorities. All the raw materials received by the company go through quality and safety checks. We ensure that quality is maintained of our trade and transit goods of third parties, and quality and safety of finished products in the course of production, storage and supply. We share and track flows of products with various names and trademarks, in particular in terms of GM/non-GM.

For operational management of activities on high-quality finished products output the technology of express quality analysis is implemented in the production cycle. The present technology is implemented through the use of in-line and stable NIR-analysers.

Incoming control of raw materials and supplied goods, control over technological processes and finished products in terms of their quality and safety are ensured by internal structural subdivisions, as well as through engagement of independent surveyor and expert organizations, divisions of trade and industry chambers and accredited testing laboratories. Our main partner in the area of laboratory testing in Russia and the FSU is an independent testing laboratory New Lab located in the territory of our production and logistics complex in the Kaliningrad Region. Besides, our modern complex in the Russian Federation accommodates permanent control points of governmental authorities that perform control and supervision over turnover of crops, oilseed and products made by processing them.

All imported and released products subject to conformity declaration, certification or state registration go through the corresponding procedures.

We pay special attention to compliance with requirements and wishes of our customers and consumers of our products and services and that is why we are always open to external audits. Our production, trade and logistical units are subject to regular inspections by such customers as MARS, AAK, WRIGLEY, EWOS, BIOMAR, SKRETTING.

The Food/Feed Product Safety Management System is based on the HACCP principles and complies with ISO 20000 and GMP+ standards, which is proved by conformity certificates issued by Russian and foreign certification bodies.

All claims are handled by the Department of Raw Materials and Products Quality and Safety.

SOYBEAN MEAL is a product of soybean processing after oil extraction with the use of additional treatment involving heat and humidity. During soybean processing, the enterprise uses direct extraction with preliminary removal of the soy husks.

The significant protein and energy content of soybean meal makes it possible to create high-protein and high-energy diets without having to use expensive feed components of animal origin. Soybean meal is widely used in feeding all farm animals, poultry and fish.

Depending on the type, age, gender, physiological condition, area and level of productivity, the amount of soybean meal introduced into the diets of farm animals and poultry may be up to 30%.

QUALITY FACTORS:	Standard Protein Soybean Meal	Soybean Meal with High Protein Content	Soybean Meal with Super High Protein Content
WEIGHT FRACTION OF PROTEIN AT ACTUAL MOISTURE CONTENT, %, MINIMUM	46.0	47.5	48.0
WEIGHT FRACTION OF MOISTURE, %, MAXIMUM	12.0		
WEIGHT FRACTION OF FAT ON DRY BASIS, %	OVER 2.0 TO 4.0		
WEIGHT FRACTION OF FIBRE AT ACTUAL MOISTURE CONTENT, %, MAXIMUM	7.0	4.0	4.0

* «Pro-fat» parameter is allowed for use

Safety parameters meet Unified veterinary (veterinary and sanitary) requirements for the goods subject to veterinary control (supervision) as of 18.06.2010 № 317.

Packaging:
Soybean meal is delivered in bulk or in 50 kg bags.

Storage:
In clean dry premises as per GOST R 53799-2010.

Shelf life for bulk storage:
- meal with mass percentage of fat on absolute dry matter basis not exceeding 2.8% - 4 months;
- meal with mass percentage of fat on absolute dry matter basis over 2.8% - 3 months;
For storage in bags – one year.

TOASTED FEED SOYBEAN MEAL

Feeds, feed materials for productive animals

SOY HULL

Feeds, feed materials for productive animals

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FEED SOY HULL is a feed granulated product manufactured from high protein soybean meal and soy oil by direct extraction with prior soybean dehulling and separation of hull from the extractive material.

Separated hull undergoes crushing, wet-heat treatment (toasting) and granulation. Granulated soy hull is used as a supplement feed in the production of combined feed for livestock animals and as raw material for production of fibre.

QUALITY FACTORS:

MASS FRACTION OF CRUDE PROTEIN ON ABSOLUTE DRY MATTER BASIS, %, MINIMUM	10.0
MASS FRACTION OF CRUDE FAT ON ABSOLUTE DRY MATTER BASIS, %, MAXIMUM	6.0
WEIGHT FRACTION OF MOISTURE AND VOLATILE MATTERS, %, MAXIMUM	14.0
MASS FRACTION OF CRUDE FIBRE ON ABSOLUTE DRY MATTER BASIS, % MAXIMUM	45.0

Safety parameters meet Unified veterinary (veterinary and sanitary) requirements for the goods subject to veterinary control (supervision) as of 18.06.2010 № 317.

Packaging:
Soy hull is delivered in bulk or in 50 kg bags.

Storage: In dry clean premises according to the requirements of TU 10.41.72-002-15323453-2007.

Shelf life:
max. 12 months from manufacturing date.

SOYBEAN FEED GRADE PROTEIN CONCENTRATE is a purified protein product with up to 65% crude protein. It is made from toasted feed-grade soy meals or food-grade soy meals (white flake) separated from soluble sugars in the alcohol extraction process. The basic protein fractions are presented in an easily available form.

Soybean protein concentrate is used in animal nutrition by way of its direct inclusion into animals' diets or for production of combined feed production. Soybean protein concentrate (SPC) is suitable as a feed supplement for all animal, bird and fish species.

Soybean protein concentrate is used successfully in animal nutrition as a high-quality protein source that serves as an alternative to milk substitute and fishmeal. The main advantages of soybean protein concentrate as an ingredient of commercial mixed feed for animals and poultry are the high digestibility of protein, beneficial amino acid profile, low level of anti-nutritional factors and long shelf life.

Depending on the protein content and particle size, the following product range is manufactured:

- 62-K (semolina)
- 65-K (semolina)
- 70-K (semolina)

Feed-grade soy protein concentrate is produced from **non-GM** raw material.

ORGANOLEPTIC FACTORS:

APPEARANCE	Semolina of 1.0 - 1.7 mm
COLOUR	From light cream to light yellow or light beige
ODOUR	Specific to soybean protein products, without off-odours

SOY PROTEIN CONCENTRATE

Feeds, feed materials for productive animals

GROUP OF COMPANIES SODRUGESTVO

SOY PROTEIN CONCENTRATE

Feeds, feed materials for productive animals

PHYSICAL AND CHEMICAL FACTORS:	62-K	65-K	70-K
WEIGHT FRACTION OF MOISTURE AND VOLATILE MATTERS, %, MAXIMUM	10.0		
WEIGHT FRACTION OF CRUDE PROTEIN, ON ABSOLUTE DRY MATTER BASIS, %, MINIMUM	56.0	59.0	63.0
WEIGHT FRACTION OF CRUDE FAT, ON ABSOLUTE DRY MATTER BASIS, %, MAXIMUM	1.5		
WEIGHT FRACTION OF CRUDE ASH, ON ABSOLUTE DRY MATTER BASIS, %, MAXIMUM	7.5		
WEIGHT FRACTION OF CRUDE FIBRE, ON ABSOLUTE DRY MATTER BASIS, %, MAXIMUM	5.5		

Safety parameters meet Unified veterinary (veterinary and sanitary) requirements for the goods subject to veterinary control (supervision) as of 18.06.2010 № 317.

TYPICAL AMINO ACID COMPOSITION (MG/100 G OF PRODUCT):

LYSINE	4.15	ASPARTIC ACID	7.62
METHIONINE	0.92	GLYCINE	2.86
TRYPTOPHAN	0.86	PHENYLALANINE	3.56
THREONINE	2.58	GLUTAMIC ACID	12.9
CYSTEINE	0.63	PROLINE	3.48
ALANINE	2.95	TYROSINE	2.51
HISTIDINE	1.71	VALINE	3.22
ISOLEUCINE	2.92	SERINE	3.61
LEUCINE	5.32		

ADDITIONAL RESEARCH:

Metabolic energy (MJ/kg)	11.36
Glycinin (mg/kg)	<1
B – conglycinin (mg/kg)	<0.1
Lectins (mg/kg)	<0.1
Trypsin inhibitor activity (mg/g)	<1
Calcium, mg/kg on absolute dry matter basis	0.35
Phosphorus, mg/kg on absolute dry matter basis	1.00
Protein digestibility (0.02% pepsin), %	90 – 95
Mass percentage of soluble protein (in 0.2% KOH medium)	65 - 70

Packaging:
- Polypropylene bags with an insert/paper laminates, net weight of up to 50 kg;
- Soft polypropylene containers (big bags) net weight of up to 1 000 kg or as agreed with the customer.

Packaging has the manufacturer's logo and a label inserted into the seam with standard consumer information.

Storage:
in a ventilated room in the original packing at a temperature below 25°C and relative air humidity below 75%.

Shelf life:
18 months as of the manufacturing date.

SOY PROTEIN CONCENTRATE

Feeds, feed materials for productive animals

GROUP OF COMPANIES SODRUGESTVO

SOY MOLASSES

Feeds, feed materials for productive animals

SOY MOLASSES is a by-product of soy protein concentrate production.
Molasses is a thick viscous syrupy liquid colored from brown to dark-brown.

Soy molasses is applied as a feed material or feed component in production of feeds for agricultural animals, and as a raw material for production of biofuel at enter/prises of power-generation industry.

Due to high contents of sugars, molasses is also used to increase energy value of animal feeds. This product favorably impacts feed consumption by animals, improves the feed taste.

Mass percentage of dry matter in soy molasses is at least 75%.

Safety parameters meet Unified veterinary (veterinary-sanitary) requirements specified for commodities subject to veterinary supervision as of 18.06.2010 №317.

Packaging:
soy molasses is packed in bulk.

Storage: in ground-level metal tanks with roofing which should be fault-free, securely protecting the molasses from atmospheric precipitations and snowmelt as per requirements of the standard TU 10.81.14-009-15323453-2014.

Shelf life:
maximum 12 months from manufacturing date.

TOASTED RAPESEED MEAL

Feeds, feed materials for productive animals

RAPESEED MEAL is the product of rapeseed processing after oil extraction with the use of additional treatment involving heat and humidity (toasting). The rapeseed processing employed at the factory is based on the fore-pressing/extraction method without the preliminary seed hull separation stage.

The rapeseed meal features has high general nutrient value and digestibility and therefore is a valuable source of premium quality feed protein and well-balanced amino acid supply. The bioavailability of the rapeseed protein is about 86%.

The addition of the rapeseed meal into animal feed diets is one of the key factors of animal breeding intensification, especially in the poultry and hog breeding industries.

QUALITY FACTORS:

Weight fraction of moisture, %, maximum	8 - 12
Mass fraction of crude protein on absolute dry matter basis, %, minimum	37.0
Mass fraction of crude fat on absolute dry matter basis, % maximum	3.0
Mass fraction of crude fibre in defatted product on absolute dry matter basis, %, maximum	16.0

Safety parameters meet Unified veterinary (veterinary and sanitary) requirements for the goods subject to veterinary control (supervision) as of 18.06.2010 № 317.

Packaging:
rapeseed meal is packed in bulk or packed in:
- polypropylene bags with liner/multilayer paper bags with net weight up to 50 kg;
- soft polypropylene containers (Big bags) with net weight of 1000 kg.

Storage:
in dry clean premises in compliance with the requirements of GOST 30257-95.

Shelf life:
maximum 3 months from manufacturing date.

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RAPESEED OIL

Vegetable oils

RAPESEED OIL - is produced during the processing of rapeseed.
As a rich source of essential polyunsaturated fatty acids similar to the soy oil, it plays an important role in the human vital needs; it is used for the prevention of cardiovascular diseases (reduces the potential of thrombosis in the human organism and level of cholesterol in the blood) and contributes to enhanced metabolic activity.

Taking into account the chemical and physiological properties of rapeseed oil, only refined deodorized rapeseed oil can be used for direct human consumption and in the various sectors of the food processing industry (oil and fat production, bakery, confectionary, canned foods, meat processing).

Unrefined rapeseed oil can be further processed into commercial goods or used for industrial purposes. Olso we produce high oleic unrefined rapeseed oil as per order of the customers (minimum content of oleic acid is 72%).

QUALITY FACTORS:		MAXIMUM:
F.F.A (as oleic, molec. weight 282), %	(ISO 660)	1.75
Moisture and volatile matter, %	(ISO 662)	0.4
Impurities (insoluble in petrol, ether), %	(ISO 663)	0.4
Phosphorus - 300 ppm = 0,75% as lecithin (conversion factor 25), (expressed as phosphorus), %	(ISO 10540-2)	0.03
Erucic acid, %	(ISO 5508/5509)	2.0

Packaging:
200 kg barrels, 1 000 kg barrels, tanks, flexi-containers.
Other packaging can be used at the consumer's request.

SOY OIL - is a product derived from soybean processing.

Soy oil plays a very important role in the life of humans, since it is a source of biologically active and valuable fatty acids, and is used in to help prevent cardiovascular diseases and facilitate metabolism.

It is used as a concentrated source of energy, fat-soluble vitamins and essential fatty acids.

Alongside with other vegetable oils, soy oil should be a mandatory part of the diet that contributes to good health and longevity.

Refined deodorized soy oil is widely used in food industry, including: oil and fat industry, bakery, candy manufacturing, cannery and meat processing.

Soy oil is also used in the combined feed, paint and varnish and other industries.

QUALITY FACTORS:	BASIS:	MAXIMUM:
F.F.A (as oleic, molec. weight 282), %	0.75	2.25
Moisture and volatile matter, %	0.2	0.25
Impurities (insoluble in petrol, ether), %	0.1	0.4
Lecithin (expressed as phosphorus)	0.02	0.045
Colour (1" Lovibond Cell) not darker than 50 yellow and 5 red		
Flashpoint minimum 121 C (250 F)		

Packaging:
200 kg barrels, 1,000 kg barrels, tanks, flexi-containers.
Other packaging can be used at the consumer's request.

SOY OIL

Vagetable oils

FOOD-GRADE SOY MEAL
WHITE FLAKE

Production for food industry

GROUP OF COMPANIES SODRUGESTVO

«WHITE FLAKE» FOOD-GRADE SOY MEAL is a fat-free protein product, which is the source material for production of food-grade fat-free soy flour and soy grits, textured, concentrated and isolated soy proteins. Used in making bakery products, concentrated foods, meat and fish products in order to enhance their biological value and reduce costs.

Food-grade soybean meal «White flake» is also used for production of semi-finished chopped meat products (cutlets, schnitzels etc.), half-smoked, cooked and uncooked smoked sausages etc.

In pet feed formulas food-grade soybean meal is used as a source of protein and nutrients.

Baltsoy 70 is «White flake» made using moderate heat treatment. It is used for production of textured soy products and fat-free soy flour for baking, candy, and pasta industries, meat and fish processing, and for effective replacement of dry fat-free milk and egg powder in various food industries.

«White flake» food-grade soy meal is manufactured of non-GM raw materials.

ORGANOLEPTIC CHARACTERISTICS

COLOUR	From pale yellow to cream
SMELL	Typical of soy protein products without foreign odours
TASTE	Mild, without side touch
STRUCTURE	Granular homogenized product without inclusions
SIZE OF PARTICLES	100% through 10 mm meshes

PHYSICAL AND CHEMICAL CHARACTERISTICS:

MASS FRACTION OF MOISTURE, %, NOT MORE THAN	10.0
MASS FRACTION OF PROTEIN, ON A DRY MATTER BASIS, %, NOT LESS THAN	50.0
NSI CHARACTERISTIC UNDER MEDIUM HEAT TREATMENT	60-79
NSI CHARACTERISTIC UNDER MINIMAL HEAT TREATMENT	80-90
MASS FRACTION OF FAT, ON A DRY MATTER BASIS, %, NOT MORE THAN	1.3
MASS FRACTION OF ASHES, ON A DRY MATTER BASIS, %, NOT MORE THAN	7.0
MASS FRACTION OF RAW FIBRE, ON A DRY MATTER BASIS, %, NOT MORE THAN	3.5

Food-grade soybean meal «White flake» is manufactured in compliance with requirements of Technical specifications TU 10.41.41-001-15323453-2014

Nutrients (mg/100 g)

BIOTIN	0.04	VITAMIN B2	0.38
FOLIC ACID	0.03	VITAMIN B1	0.82
NIACIN	3.82	VITAMIN A	100
PANTOTHENIC ACID	2.16	VITAMIN C	1.20
VITAMIN B6	0.55	VITAMIN D	0.5
VITAMIN E	0.5		

FOOD-GRADE SOY MEAL WHITE FLAKE

Production for food industry

GROUP OF COMPANIES
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FOOD-GRADE SOY MEAL
WHITE FLAKE

Production for food industry

Standard amino acid composition (mg/100g of product):	
CYSTINE	0.7
HISTIDINE	1.4
ISOLEUCINE	2.5
LEUCINE	4.3
LYSINE	3.4
METHIONINE	0.7
PHENYLALANINE	2.8
THREONINE	2.1
THRYPTOPHAN	0.6
TYROSINE	1.8
VALINE	2.6

Standard mineral composition (mg/100g of product):	
ALUMINIUM	0.7
CALCIUM	280
CHROMIUM	0.75
COBALT	0.1
COPPER	1.48
IODINE	0.001
FERRUM	7.57
MAGNESIUM	310
MANGANESE	3.52
PHOSPHOR	725
POTASSIUM	2310
SODIUM	10
SULFUR	404
ZINC	4.75

Packing:
- polypropylene bags with insert/paper laminated for net weight up to 40 kg;
- soft polypropylene containers (big-bags) for net weight 1000 kg.

The bags have the manufacturer's logo and the label sewed in the seam with standard information for the customer.

To store in ventilated premises in original packing under temperature not higher than 25 C and relative air humidity of not more than 70% as per requirements of TU 10.41.41-001-15323453-2014

Shelf life:
«White flake» grade 70 (moderate tempering) – 12 months from the date of production.

WHITE FLAKE
FOOD-GRADE SOY MEAL

Production for food industry

LECITHINS

Production for food industry

GROUP OF COMPANIES SODRUGESTVO

LECITHIN is a mixture of fractions extracted from vegetable oils using physical methods. By their nature, the lecithins are the most widespread group of polar lipids, which are present in cell membranes of all living organisms.

Lecithin is a valuable food ingredient comprised of a number of natural vegetable phospholipids. It is used as a highly effective food additive enhancing the emulsifying and dispersing, as well as other rheological properties of various foods, and is used as an antioxidant.

PHYSICOCHEMICAL PARAMETERS:	Soy lecithin	Rapeseed lecithin
Acetone insolubles	Min. 60.0	Min. 60.0
Toluene insolubles	Max. 0.3	Max. 0.3
Moisture and volatile matter	Max. 1.0	Max. 1.0
Acid value	Max. 36.0	Max. 36.0
Peroxide value	Max. 10.0	Max. 10.0
Color value of 10%-solution in toluene	Max. 80.0	Max. 80.0
Viscosity at 25 C	Max. 12.0	Max. 12.0

Sodrugestvo Group is a leading Russian manufacturer of high-quality food-grade soy and rapeseed lecithin. Our production capacities allow us to manufacture up to 12 tonnes of the product per day in various packaging ranging from 200 to 1 000 kg depending on the customer's needs.

PRODUCT CHARACTERISTICS:	LIQUID LECITHIN (SOY, RAPESEED)
Consistency	Homogeneous thick liquid
Colour	From pale yellow to dark brown
Odour and taste	Typical of its raw material
Mass fraction of substances non-soluble in toluene, %, not more than	0.30
Mass fraction of substances non-soluble in acetone, %, not less than	60.0
Mass fraction of moisture and volatile substances, %, not more than	1.0
Acid value, mg KOH/g, not more than	36.0
Peroxide value, mmole/kg of active oxygen, not more than	10.0
Colour value of 10% toluene solution, mg iodine, not more than	80.0
Viscosity at 25°C, Pa.S, not more than	12

LECITHINS

Production for food industry

GROUP OF COMPANIES SODRUGESTVO

LECITHINS

Production for food industry

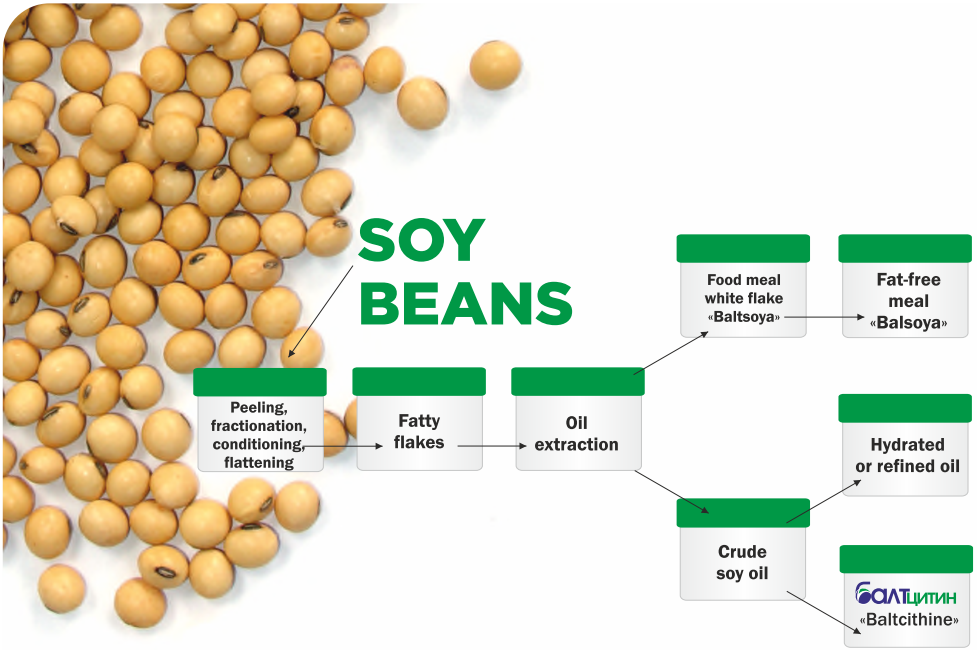
Lecithins are manufactured in compliance with requirements of GOST 32052-2013, Technical Regulations TR TC 021/2011, TR TC 029/2012.

Storage:
in well-cleaned closed metal tanks, protected from sunlight, in clean storage premises at temperatures within 00C to 350C in compliance with requirements of GOST 32052-2013, Technical Regulations TR TC 021/2011, TR TC 029/2012.

If stored in original packing in premises protected from light and heat at temperature 0°C-35°C the shelf life of rapeseed lecithin packed in special tare is 18 months from the manufacture date.

Lecithins are E322 food additives. Specifications relating to origin and purity of E322 food additive comply with Codex Alimentarius standards.

Food additive –liquid soy lecithin «Baltithin» E322 and food additive –liquid rapeseed lecithin E322 manufactured in accordance with GOST 32052-2013, complies with TR CU 021/2011, TR CU 029/2012.



All over the world soy oil is the main source of lecithin because of all vegetable oils it contains the greatest amount of phospholipids.

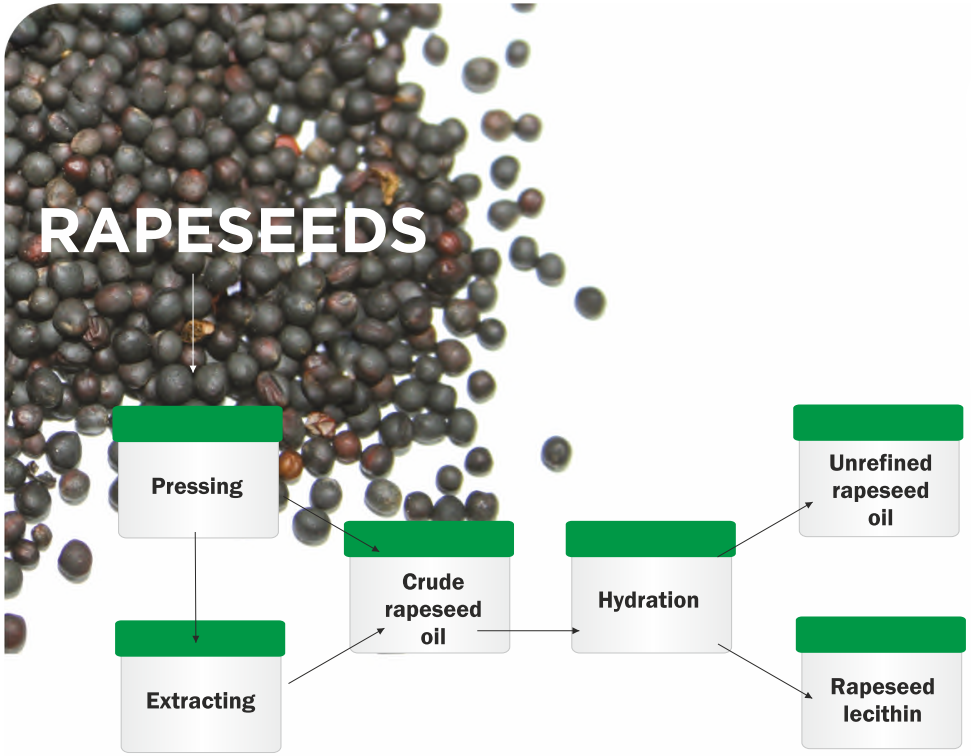
Soy lecithin «Baltithin» is a standardized liquid phosphatide concentrate with high amount of phospholipids which is manufactured while soy oil is processed.

SOY LECITHIN «BALTITHIN»

Production for food industry

RAPESEED LECITHIN

Production for food industry



Rapeseed is one of the major sources of lecithin. Lecithin is composed of polyunsaturated fatty acids, as well as phosphorus which is a vital transport means for cells of a living organism. Rapeseed lecithin is used in different fields of food and non-food industries.

GRAIN CROPS AND OTHER PRODUCTS FOR RUSSIAN CONSUMERS AND FOR EXPORT

GROUP OF COMPANIES SODRUGESTVO

On an ongoing basis our company purchases the following goods in Russia and the CIS countries for processing, as wells as to supply them to the consumers of the internal market or for export:

- milling and fodder wheat
- barley
- corn
- soybeans
- rapeseed
- flax
- rye
- pea
- chickpea
- granulated beet pulp
- meal, sunflower cake
- sunflower oil

CONTACT INFORMATION

GROUP OF COMPANIES SODRUGESTVO

BELARUS

+ 375 (17) 388 52 58

BRAZIL

ALIANÇA AGRÍCOLA DO CERRADO S.A.
+ 55 (34) 3293 6600
SODRUGESTVO AGRONEGÓCIOS S.A.
+ 55 11 3179 1030

CYPRUS

+ 357 253 42 800

KAZAKHSTAN

+ 7 7172 550 515

LITHUANIA

+ 370 (381) 58 200

PARAGUAY

SODRUGESTVO PARAGUAY S.A.
+ 595 21 237 7063
SARCOM S.A.
+ 595 21 237 70 64

POLAND

+ 48 58 731 13 43

RUSSIAN FEDERATION

+ 7 (4012) 30 55 14

SERBIA

SODRUGESTVO BALKANS D.O.O.
+ 381 213829971

SWITZERLAND

+ 41 22 817 03 30

LITHUANIA

+ 370 (381) 58 200

TURKEY

+ 90 216 504 41 60/65

UZBEKISTAN

+ 99 890 188 45 07

UKRAINE

+ 38 (044) 233 62 74

SODRUGESTVO GROUP S.A.
Societe Anonyme

Registered office
26 Avenue de la Liberté
L-1930 Luxembourg
Tel.: +352 276 9381

The Grand Duchy of Luxembourg
R.C.S. Luxembourg: B 151174
VAT: Lu25110536
Business Permit № 10039358/1

E-mail: info@sodru.com
www.sodrugestvo.com