

PRODUCT SPECIFICATION

DATE OF ISSUE
14-02-2024

ORGANIC LOCUST BEAN GUM (E410)

PRODUCT
CODE: 29

**NATUURLIJK
NATUURLIJK**
special food ingredients

T140224M230724A140224

1. PRODUCT IDENTIFICATION

1.1 Supplier product information

Product name	Organic Locust bean gum		
Product code	29		
Product number	Content	EAN	Packaging
1623	55g	8718309831493	Plastic jar and screw lock cap with warranty seal.  Jar =  Cap =
1624	140g	8718309831509	
1625	550g	8718309831516	
1622	10kg	8718309831448	Blue bag =  in box

1.2 Scientific product information

Single ingredient

Chemical name	Locust bean gum, Carob bean gum
Main use	Thickening agent, stabiliser, emulsifier for aqueous systems, after heating (about 80 °C for 1-2 min.)
Description	Locust bean gum is a natural hydrocolloidal polysaccharide with a high molecular weight, obtained from the cotyledons of carob seeds (<i>Ceratonia Siliqua</i>).
Production method	Remove the peel and the germ by thermo-mechanical process (not by chemical common process), milling, sieving and drying.

1.3 Legislative product information

CAS number	9000-40-2	HS code (customs)	1302 32
EU food additive	E410		
Country of Origin	Italy		
Certification	Organic	Certification number	103446
	Institute	Skal NL-BIO-01	

2. PRODUCT INFORMATION

2.1 Physical and Chemical properties

	Unit	Specification	Method
Appearance		Fine powder	
Colour		White cream	
Odour/taste		Neutral	
Bulk density	g/cm ³	590	

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Moister content	%	< 10,0	FCC
Ash, 800°C	%	< 1,2	FCC
pH		5-7	1% P/P
Solubility		Soluble in hot water	insoluble in organic solvents
Acid insoluble matter	%	< 4	FCC
Protein	%	< 7	FCC
Fat	%	< 1,1	FCC
Starch	%	negative	FCC
Specks		low	
Galactomannan content	%	> 75	
Viscosity	cps	2600, ± 200	1% solution, hot, Brookfield Viscosimeter RVF SPINDLE NR.3 20RPM
Particle size	US mesh	100	Min. 90%
Particle size	μ	<150	Min. 90%

2.2 Microbiological data

Total plate count	Cfu/g	< 5.000	Ph. Eur.
Yeasts and Moulds	Cfu/g	< 500	Ph. Eur.
E Coli	Cfu/g	negative	Ph. Eur.
Salmonella	Cfu/25g	negative	Ph. Eur.

2.3 Chemical analyses

Etanol and Propan - 2 - OLO	ppm	negative	
Heavy metals	ppm	< 20	total
Arsenic (As)	ppm	< 3,0	
Cadmium (Cd)	ppm	< 1,0	
Mercury (Hg)	ppm	< 1,0	
Lead (Pb)	ppm	< 2,0	

2.4 Nutritional Information

2.4.1 Nutritional Values

Energy	kJ/100g	808	
Energy	kcal/100g	193	
Protein	g/100g	5,31	

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Carbohydrate:	g/100g	0,00	
Of which Sugars	g/100g	0,00	
Polyols	g/100g		
Starches	g/100g	0,00	
Dietary fiber:	g/100g	82,6	
Soluble fiber	g/100g		
Insoluble fiber	g/100g		
Others	g/100g		
Fat:	g/100g	0,70	
Of which Saturated	g/100g	0,14	
Mono-unsaturated	g/100g		
Poly-unsaturated	g/100g	0,47	
Transfatty acids	g/100g	0,00	
Cholesterol	mg/100g	< 1,00	
Water	g/100g	10,05	
Organic acid	g/100g		

2.4.2 Minerals

Sodium Chloride (NaCL)	mg/100g	2	
Sodium (Na)	mg/100g	0,80	
Iron (Fe)	mg/100g	0,83	
Calcium (Ca)	mg/100g	67,74	
Potassium (K)	mg/100g	357,96	

2.4.3 Vitamins

Vitamin D	µg/100g	0,00	
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3. FOOD INTOLERANCE

3.1 Allergens

Yes = ✓ / No = ✗	Contains
Eggs and products thereof	✗
Cereals containing gluten and products thereof	✗
Lupin and products thereof	✗
Milk and products thereof (including Lactose)	✗

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Sesame seeds and products thereof	X
Nuts and products thereof (almonds, hazelnuts, walnuts, cashews, pecan nuts, Brazil nuts, pistachios, macadamia nuts)	X
Sulphur dioxide and sulphites (>10mg/kg or >10mg/l)	X
Celery and products thereof	X
Peanuts and products thereof	X
Mustard and products thereof	X
Fish and products thereof	X
Molluscs and products thereof	X
Soy and products thereof	X
Crustacea and products thereof	X

3.2 Suitability for other diets:

Coeliacs	✓	Lactose intolerant	✓
Halal	✓	Vegans	✓
Kosher	✓	Vegetarian	✓

3.3 GMO Declaration:

Organic locust bean gum does not contain genetically modified organisms and is not produced using raw materials of a genetically modified origin. At no stage during production does the product comes into contact with genetically modified organisms.

3.4 Irradiation:

Organic locust bean gum is not treated with ionizing radiation .

4. STORAGE CONDITIONS

Storage conditions	In closed original packaging. Must be kept cool, dark and dry.
Shelf life	>24 months after production, under the above mentioned conditions.

5. FOOD SAFETY

5.1 Hygiene:

This product is produced in a facility wit an on HACCP based food safety system.

5.2 Identifications of dangers:

Classification of the substance (Regulation (EC) No 1272/2008)	Not classified. (non-hazardous)

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6. EXTENDED PRODUCT INFORMATION

6.1 Usage

Locust bean gum is used as natural thickening agent, emulsifier and stabilizer.

Locust bean gum (LBG) is the ground endosperm from the seed of the locust bean tree (carob tree). LBG is the preferred texturizer for various food applications due to its natural image, the neutral taste and the very creamy texture it provides.

The powder partially hydrates in cold water, but the full viscosity can be obtained only by heating the solution (85°C). LBG is widely used as a thickening agent in hot-prepared fabricated foods, such as; sauces, soups, ketchups and mayonnaises.

It is non-digestible and may be classified as soluble fiber. In appropriate dosages, it is known to increase intestinal tract mobility and reduce blood serum cholesterol levels.

LBG is an efficient thickening and gelling agent. It is an ideal additive in applications where good stabilizing, thickening and emulsifying properties are required.

LBG forms thermoreversible elastic gels when mixed with xanthan gum (ideally in the ratio 1:1).

Because it readily absorbs water and swells, it should not be ingested as a dry powder.

LBG is an essential component in dairy applications and other foods, including frozen desserts (ice cream), cultured dairy products, and cream cheese.

In ice cream, LBG serves to slow the rate of melt-down and improve storage properties, due to its positive influence of the ice crystal growth. Its texturizing properties are excellent, as are its freeze-thaw and water binding characteristics.

Bakery products also benefit from the addition of locust bean gum. When added to wheat flours, the result is a softer, tastier product with an extended shelf life. It retards staleness and "crumbliness," and reduces the quantity of eggs required in products like biscuits, rolls and cakes.

LBG has a positive impact on the protein stability and does not interact with other ingredients in food due to its neutral behavior.

Agar-agar gels have a brittle, crumbly-type texture. The addition of LBG to agar enhances the gel's elasticity and reduces its brittleness.

LBG is used at ~0,6% in cheese spreads to obtain a highly homogeneous, fine product with a spreadable texture.

Maximum interaction and maximal peak rupture strength occur at a Xanthan gum to LBG ratio of 60:40. Xanthan gum – LBG gels set and melt thermoreversibly at 55/80°C

Dosage advice, as a percentage of the total weight:

Mix the locust bean gum with the other dry ingredients before adding it to the liquid while stirring. Then heat while stirring to at least 80°C for a few minutes until completely absorbed. Never pour the liquid over the powder. Don't add the powder to hot liquids, to prevent lumps. Dosage: 0.05-0.5%

Dosage suggestions, as a percentage of the total weight:

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0,15-0,25%	Ice cream	Heat shock resistant, smooth meltdown
0,10-0,30%	Milk products	Contribute body mouthfeel
0,25-0,35%	Cheese	Fine texture, excellent body and structure
0,20-0,40%	Confectionary	Minimize syneresis
0,20-0,40%	Fish products	Avoiding breakage
0,10-0,40%	Beverages	Improve body
0,30-1,00%	Sauces	Stabilize oil and non-oil sauces
0,30-0,60%	Canned meat	Maximize gel strength
0,10-0,50%	Cereal product	Better texture, less crumbling
0,20-0,50%	Frozen food	Improve freeze-thaw stability
0,30-1,00%	Dietary food	Replace gluten, low calorie ingredient

6.2 Dictionary

NL	The Netherlands	Johannesbroodpitmeel
GB	Great Britain (UK)	Locust bean gum, LBG, St. John's bread, carob gum, carob bean gum
DE	Germany	Johannisbrotkernmehl
FR	France	Gomme de caroube, Gomme de caroubier
ES	Spain	La goma garrofín, goma de semillas de algarrobo
PT	Portugal	Alfarrobeira
IT	Italy	Farina di carrube
DK	Denmark	Johannesbrødmel, Johannesbrødkernemel
NO	Norway	Fruktkjernemel, Johannesbrødkjernemel
SE	Sweden	Fruktkärnmjöl, Johannesbrödkärnmjöl.
FI	Finland	Johanneksenleipäpuujauhe, Johanneksenleipäpuu
IS	Iceland	Engisprettugraut
CZ	Czech Republic	Svatojánská guma
SK	Slovak Republic	Svätojánska guma
HU	Hungary	szentjánoskenyér-liszt
HR	Croatia (Hrvatska)	Guma od rogača
GR	Greece	Κόμμα χαρουπιών
SI	Slovenia	Rožičev gumi
PL	Poland	Mączka chleba świętojańskiego
RO	Romania	Roșcov
BG	Bulgaria	Дъвка от рожков
RU	Russian Federation	Камедь бобов рожкового дерева
TR	Turkey	Keçiboynuzu Zamkı

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7. DISCLAIMER

Although we take great care in setting up this product specification, we cannot accept any liability for the completeness and fully accurateness of the information provided. The content of this Product Specification is completed to the best of our knowledge.

This document does not dismiss the user of his legal obligations with respect to food safety.

This product specification replaces any previously issued specifications.