PRODUCT SPECIFICATION

biolla Maltodextrin DE 10

Dextrose Equivalent 10.0-12.0 / Grade: EP 11.2

Product description

Molecular Formula:	$H(C_6H_{10}O_5)_n$-OH
EI N ECS:	232-940-4
CAS No:	9050-36-6
Appearance:	homogeneous free flowing fine powder, microgranules
Colour:	white
Taste and odour:	typical to maltodextrin, without foreign taste and odour
Intended use:	intended for use as a carbohydrate component, structure-forming agent, forming agent, natural sweetener, sweetener regulator, stabilizer, neutral carrier of flavouring additives in various industries.
Production method:	partial starch cleavage product consisting of a multicomponent mixture of glucose, maltose, maltotriose and polysaccharides in various ratios.

- Plant based product produced from corn grain not containing GMO.
- Complies to the Food Chemical Codex and to the European / US Pharmacopeia monographs on Maltodextrin.

Nutrition value in 100 g of a product, min.	93/100 g
Carbohydrates, %, min	93
Fats, %	0
Proteins, %	0
Energy value (calorific value) kcal / kJ per 100g maltodextrin, min	372/1581
Composition	Maltodextrin 100%

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Terms and conditions
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Physical and chemical specifications

Parameter	Units	Typical value	Method of analysis
Moisture, max	%	5.0	Determination of loss in mass on drying (130°C / 5 g / 1,5 h) (Ref. ISO 1666:1996)
Dextrose Equivalent (Lane-Eynon method), max	%	10.0 – 12.0	Titremetry, Lane-Eynon method (Ref. ISO 5377:1981)
Iodine Test		NO BLUE	Reaction to 5% alcohol solution of iodine
Mass fraction of protein in terms of dry matter, %, max	%	0.1	Oxidation of a weighed portion of starch with concentrated sulfuric acid upon heating, followed by distillation of ammonia and conversion of the nitrogen contained in it into protein (N * 6.25) (ISO3188:78)
Sulphated Ash Content, %, max	%	0.20	Weighing of residuals from burning a weighed portion of maltodextrin in muffle oven at 550°C ($+H_2SO_4$) (Ref. ISO5809:1981)
Bulk density (loose)	kg/dm^3	0.45 – 0.60	Internal method (Product weight in $1dm^3$ in free state)
		Not less than 0.65	Internal method (Product weight in $1dm^3$ in a packed state by shaking)
Sulphur dioxide content (SO_2), max	mg/kg	10.0	Iodometry (Oxidation of sulfurous acid in a 50% solution of maltodextrin in the presence of a starch indicator)
Solubility, min	%	98.0	Internal method (Dissolving 50 g of maltodextrin in 100 g hot water)
pH value	pH units	4.5-6.5	pH-metry 40 % solution of maltodextrin
Particles size: Residue on sieve 200 µm, max	%	5.0	Granulometry
Particles size: Residue on sieve 40 µm, min	%	90.0	Granulometry

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Carbohydrate composition (in DS)

Glucose (DP_1)	%	max 1.0	HPLC (Ref. ISO 10504)
Maltose (DP_2)	%	max 3.0	HPLC (Ref. ISO 10504)
Maltose (DP_3)	%	max 6.0	HPLC (Ref. ISO 10504)
Higher sugars (DP_{4+})	%	On balance	HPLC (Ref. ISO 10504)

Food safety parameters

Total Aerobic and Anaerobic Microbial Count, max	CFU/g	50.0	Ref. ISO 4833
Yeast, max	CFU/g	50.0	Ref. ISO 7954
Molds, max	CFU/g	50.0	Ref. ISO 7954
Coliforms	CFU/1.0 g	not allowed	Ref. ISO 4831, ISO 4832
Pathogenic microbes including Salmonella	CFU/25 g	not allowed	Ref. EN ISO 6579-1

Content of Heavy Metal (mg/kg), max

Lead (Pb)	0.10	Atomic absorptive method (mineralization and determination with atomic absorptive spectrometer)
Cadmium (Cd)	0.10	
Arsenic (As)	0.10	
Mercury (Hg)	0.02	

Content of GMO (PCR Real - Time)

Genetically Modified Organisms	not allowed	PCR Real – Time (Ref. ISO 21569, ISO 21571)

Additional information

Shelf life is 2 years. Maltodextrin must be stored at relative humidity not exceeding 75% Standard packing – 25 kg paper bags with PE lining.