Certificate of Analysis

MALTODEXTRIN DE 15

Product description

Molecular Formula:	$H(C_6H_{10}O_5)_n\text{-}OH$
EI N ECS:	232-940-4
CAS No:	9050-36-6
Appearance:	homogeneous free flowing fine powder, microgranules
Colour:	white
Taste and odour:	peculiar 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
biolla.de/agb

Physical and chemical specifications

Parameter	*Units*	*Typical value*	*Method of analysis*
Moisture, max	%	6.0	Determination of loss in mass on drying (130°C / 5 g / 1,5 h) (Ref. ISO 1666:1996)
Dextrose Equivalent (Lane-Eynon method), max	%	12.0 – 16.0	Titremetry, Lane-Eynon method (Ref. ISO 5377:1981)
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	Iodomety (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	4.5-6.0	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

Carbohydrate composition (in DS)

Glucose (DP_1)	%	max 1.0	HPLC (Ref. ISO 10504)
Maltose (DP_2)	%	max 5.0	HPLC (Ref. ISO 10504)

Maltotriose (DP_3)	%	max 7.0	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	100,0	Ref. ISO 4833
Yeast, max	CFU/g	50,0	Ref. ISO 7954
Molds, max	CFU/g	100,0	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)	0.50	Atomic absorptive method (mineralization and determination with atomic absorptive spectrometer)
Cadmium (Cd)	0.10	
Arsenic (As)	0.50	
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.