DELTAZYM® GA L-E5

Product Data Sheet

Date of issue: 29 July 2022

Concentrated glucoamylase for starch hydrolysis and ethanol production

Description:	DELTAZYM® GA L-E5 is a glucoamylase obtained from a selected strain of *Aspergillus niger*. The enzyme produces glucose from liquefied starch during the starch saccharification stage, or during Simultaneous Saccharification and alcoholic Fermentation (SSF).

Properties:

Enzyme:	glucoamylase	IUBMB:	3.2.1.3
Activity:	>500 AMG units/g	Form:	liquid
Density:	1.05–1.20 g/ml	Colour:	brown

Colour and appearance may vary from batch to batch. Colour intensity or turbidity is not an indication of enzyme activity.

Application:	DELTAZYM® GA L-E5 is a glucoamylase that has been specially developed for a high output glucose production.
Conditions of use:	DELTAZYM® GA L-E5 has shown to best perform when used under the following conditions:

Application	Dosage	Recommendation
Starch saccharification (SSF)	400-500 g per ton of cereal	Application at pH 3.0-5.5 and temperature 30–64°C Optimum conditions: pH 4.2–4.6 and 62 °C

GM Status:	The product and its constituent enzymes are not genetically modified. Enzyme proteins are produced by fermentation of classical microorganisms, which are removed and not present in the final product. Only agricultural raw materials of non-genetically modified (non-GM) origin are used for the fermentation process and in the final formulation.
Composition:	DELTAZYM® GA L-E5 is stabilised with glycerol and preserved with small amounts of potassium sorbate and sodium benzoate.
Packaging and storage:	DELTAZYM® GA L-E5 is available in 25 kg polyethylene drums or IBCs. The product is best stored in the original and unopened packaging under refrigerated conditions (4–8°C) in order to retain maximum activity during storage. Under optimum conditions shelf life is 24 months.
Safety and caution:	Enzyme products need to be handled with care. Please consult the separately available Safety Data Sheet for further information.

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Compliance and legal:	Our enzyme products are used as processing aids in the food manufacturing process and are thus free from any labelling provisions in the European Union. The product does not fall within the scope of EU regulations (EC) 1829/2003 and (EC) 1830/2003 on genetically modified food and feed.
	The product is manufactured to comply with recommended purity specifications given by the Joint FAO/WHO Expert Committee on Food Additives (JECFA), and conforms with the recommended specifications of the Food Chemical Codex for food enzymes.

Purity criteria:		
	Total plate count	< 50 000 CFU per g
	Yeasts & Moulds	< 1 000 CFU per g
	Total Coliforms	< 30 CFU per g
	Salmonella	absent in 25 g
	Escherichia coli	absent in 25 g
	Heavy Metals (as Pb)	< 30 ppm
	Lead	< 5 ppm
	Arsenic	< 3 ppm
	Cadmium	< 0.5 ppm
	Mercury	< 0.5 ppm

Special diet information:		
	Kosher:	Certified
	Halal:	Certified
	Vegan/Vegetarian:	enzyme product or any constituents are not of animal origin

Certification:	WeissBioTech GmbH has a certified quality management system according to ISO 9001:2015 and a certified Food Safety Management System according to FSSC 22000 incl. HACCP, which are reviewed in regular audits.

Made by WeissBioTech GmbH, Germany