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Food-grade β-Amylase (Solid, 700,000 U/g)

Product Number: FE58

Shipping and Storage

1. This product is an active biological agent. During transportation and storage, it should be kept away from light, at low temperatures, dry, and ventilated.
2. This product is originally packaged in a cool and dry environment, with a shelf life of 12 months.

Component

Component	FE58
Food-grade β-Amylase (Solid, 700,000 U/g)	25kg/barrel

Description

Food grade β-amylase is a refined and highly efficient enzyme preparation that uses starch as a substrate to sequentially hydrolyze α -1,4-glucoside bonds from the non reducing end of starch under certain conditions, producing maltose.

Application

This product can be applied in the starch sugar industry, such as:

1. Applied in the production of 50-55% maltose syrup, starch is liquefied with α-amylase, and the liquefied mash is adjusted to a temperature of 62℃ -65℃ and a pH of 4.5-5.5, followed by the addition of beta amylase 0.1-0.3kg/tds. Maltose syrup with a content of 50-55% maltose can be obtained by saccharification at the same temperature for 8-24 hours.
2. Applied in the production of ultra-high maltose syrup, starch is liquefied with α-amylase, and the liquefied mash is adjusted to a temperature of 62℃ -65℃ and pH 4.5-5.5. Then, beta amylase 1-1.5 kg/tds is added, along with pullulanase. Maltotriose is subsequently added. Within 50 hours of saccharification at the same temperature, ultra-high maltose syrup containing over 88% maltose can be obtained.

Mechanism of action

β-amylase is a hydrolytic enzyme that can sequentially hydrolyze maltose from the non reducing end of liquefied starch. This enzyme cannot hydrolyze the α-1,6-glucoside bond, and starch decomposition stops at 2-3 glucose residues before the α-1,6-glucoside bond. Therefore, this hydrolysis does not produce glucose.

Operating conditions

1. Effective temperature range: 40℃ -65℃; Effective pH range: 3.0-7.5
2. Optimal temperature range: 50℃ -62℃; Optimal pH range: 4.5-6.5

Appearance

White powder Due to factors such as fermentation materials and cycles, there may be slight differences in color, but it will not affect the effectiveness of use.

Standard

This product complies with the relevant provisions of GB 1886.174 "National Food Safety Standard - Food Additives - Enzyme Preparations for Food Industry". The specific product quality standards are as follows:

Project	Indicator
Lead (Pb/(mg/kg)	≤5.0
Total arsenic (calculated as As)/(mg/kg)	≤3.0

Total colony count/(CFU/g)		≤50000
Coliform bacteria/(CFU/g)		≤30
Escherichia coli	(CFU/g)	< 10
	(MPN/g)	≤3.0
Salmonella (25g)		Not detected

Usage

The recommended dosage is 0.1-0.4kg of enzyme preparation per ton of raw materials. However, due to differences in application fields, raw material composition, and process parameters among factories, the actual addition method and amount of this product should be determined through experiments.

Note

Enzyme preparations are proteins, and inhaling dust or suspended particles may cause allergic reactions in people. If exposed to certain enzymes for a long time, it may irritate the skin, eyes, and mucous membranes; Splashing and strong agitation may cause inhalable dust. It is recommended to wear protective clothing, gloves, and eye or face protection.