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## PRODUCT SPECIFICATION

### PRODUCT DETAILS

Product Name	Bioglucanase GB (25Kg)
Kerry Code	20267853
Legacy	
Product Description	Bioglucanase GB is a betaglucanase enzyme preparation derived from <i>Trichoderma reesei</i> which also contains cellulase and hemicellulase activities. The activities present in Bioglucanase GB are effective in the degradation of the complex carbo- hydrates found in plant cell walls. This product is made from a natural raw material and as such may be subject to some batch to batch colour and/or odour variation, but these variations are not an indicator of enzyme activity and do not impact on product performance.

### INGREDIENT LISTING

Water, Enzyme, Glycerol, Sucrose, Sodium Chloride, Sodium Benzoate, Potassium Sorbate

### USAGE / APPLICATION INFORMATION

Treatment with Bioglucanase GB in the brewing process results in the degradation of of high molecular weight non starch polysaccharides such as beta glucan and arabinoxylan.

#### Benefits

- Reduces wort viscosity
  - Increases run off rates
  - Reduces beer haze problems
  - Increases extract yield
  - Allows new, more cost effective, local raw material sources to be used, but maintains final product integrity
- Reduces total cost and carbon footprint

The dose rate used is typically in the range 0.005-0.015% on grist.

### KEY PARAMETERS

Test	Min	Max	Units
Betaglucanase	1900	2300	u/ml

### MICROBIOLOGICAL DATA

Total Viable Count	<50000 cfu/g
Coliforms	<30 cfu/g
E. coli	Absent/25 g
Salmonella	Absent/25 g

Kerry Code 20267853  
Spec Version: 001  
Spec Status: Commercialised Kerry Approved

Issue date: 6/30/2017  
Revision Date: 1/6/2023  
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ALLERGEN DATA	
Allergen	Present Yes/No
Beef and products thereof	No
Carrot and products thereof	No
Celery and products thereof	No
Cereals containing gluten(1)	No
Chicken meat and products thereof	No
Cocoa and products thereof	No
Coriander and products thereof	No
Corn/maize and products thereof	No
Crustaceans and products thereof	No
Egg and products thereof	No
Fish and products thereof	No
Glutamate and products thereof	No
Milk and products thereof (including lactose)	No
Mustard and products thereof	No
Nuts (other than peanuts) and products thereof(2)	No
Molluscs and products thereof	No
Legumes and products thereof	No
Lupin and products thereof	No
Peanuts and products thereof	No
Pork and products thereof	No
Sesame Seeds and products thereof	No
Soybeans and products thereof	No
Sulphur Dioxide/Sulphites > 10ppm	No
Wheat and products thereof(3)	No
<p>Definitions conform to Regulation (EU) 1169/2011 as amended, US Food Allergen Labelling and Consumer Protection Act (FALCP) and ALBA-List.</p> <p>(1) i.e. wheat, rye, barley, oats, spelt, kamut or their hybridised strain</p> <p>(2) Nut allergens: Almond <i>Prunus dulcis</i> (Rosaceae) Beech nut <i>Fagus</i> spp. (Fagaceae), Brazil nut <i>Bertholletia excelsa</i> (Lecythidaceae), Butternut <i>Juglans cinerea</i> (Juglandaceae), Cashew <i>Anacardium occidentale</i> (Anacardiaceae), Chesnut (Chinese, American, European, Seguin) <i>Castanea</i> spp.(Fagaceae), Chinquapin <i>Castanea pumila</i> (Fagaceae), Coconut <i>Cocos nucifera</i> L. (Arecaceae (alt. Palmae)), Fibert/Hazelnut <i>Corylus</i> spp. (Betulaceae), Ginko nut <i>Ginkgo biloba</i> L.(Ginkgoaceae), Hickory nut <i>Carya</i> spp.(Juglandaceae), Lichee nut <i>Litchi chinensis</i> Sonn. (Sapindaceae), Macadamia nut/Bush nut <i>Macadamia</i> spp.(Proteaceae), Pecan <i>Carya illinoensis</i> (Juglandaceae), Pine nut/Pinon nut <i>Pinus</i> spp. (Pinaceae), Pili nut <i>Canarium ovatum</i> (Burseraceae), Pistachio <i>Pistacia vera</i> L. (Anacardiaceae), Sheanut <i>Vitellaria paradoxa</i> (Sapotaceae), Walnut (English, Persian, Black, Japanase, California), Heartnut, <i>Juglans</i> spp.(Juglandaceae)</p> <p>(3)i.e. common wheat, durum wheat, club wheat, spelt, semolina, Einkorn,emmer, kamut and triticale</p>	

SUITABILITY DATA	Yes = Suitable, No = Unsuitable	Comment/Certification Status
	Certified / Not Certified	Comment
Vegetarian (Ova-lacto)	Yes	
Halal	Certified	Suitable
Kosher	Certified	Suitable

NUTRITION INFORMATION		
Nutrient	Typical Value	Unit
Energy	454	kJ/100 g
Energy	108	kCal/100 g
Total Carbohydrates	1	g/100 g
Total Fat	0	g/100 g
Protein	8	g/100 g
Moisture	50	g/100 g
Ash	2	g/100 g
<b>Data Source</b>		
Values quoted are typical and should be used for guidance purposes only.		

<b>GMO STATUS</b>
This product is not a GMO. The production strain is not present in the final enzyme product. The production strain has not been improved by means of modern biotechnology.

<b>PROCESS SUMMARY</b>
Kerry has implemented and maintains food hygiene standards and HACCP Plans in line with the requirements of food legislation.
The Carrigaline, Co Cork site is certified against the requirements of FSSC22000 and ISO14001.

RECOMMENDED SHELF-LIFE & STORAGE	
Transport & Storage Conditions:	Temperature controlled transport is not required, but prolonged storage should be dry, at 18°C or below. When stored at 18°C or below, product will maintain at least 95% activity for a minimum of 12 months. After this time period reassay is advisable.
Shelf life (original package):	365 days (12 months)

<b>PACKAGING</b>	
Pack Size (Net)	25 Kg
Pack Type Inner	Plastic drums
Pack Type Outer	Plastic drums

<b>HEALTH &amp; SAFETY DATA</b>

Liquid enzyme products may cause skin or eye irritation and inhalation of aerosol can result in sensitisation of susceptible individuals. Standard handling procedures should be followed to prevent direct contact with the product or inhalation of aerosol." & chr (10) & "A separate Safety Data Sheet (SDS) is available on request.

## LEGISLATION & WARRANTY STATEMENT

We warrant that the product is manufactured in accordance with the specification and is manufactured and packaged in compliance with all EU food and food safety legislation applicable to products of this nature at time of manufacture and sale by us. We warrant that the product also complies with the food purity specifications for food-grade enzymes recommended by the JECFA and recommended in the Food Chemical Codex.

We make no further warranty in relation to the product or as to the suitability of the product for any specific purpose or application. The user should satisfy itself as to the suitability of the product as an ingredient in a specific application or for any use whatsoever. The information supplied in this specification sheet is in accordance with our product formulation, is also based on manufacturing plant data and on data provided by our raw material suppliers and is accurate to the best of our knowledge at the date of issue of this specification. Local national regulations should also be consulted by user in relation any specific application and in relation to appropriate ingredient declarations as legislation may vary from country to country.

## CONFIDENTIALITY

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