

Attenuzyme® Pro

In this product the key enzyme activity is provided by glucoamylase that hydrolyzes (1,4)- and (1,6)-alpha-D-glucosidic linkages at the non-reducing ends of polysaccharides
pullulanase that hydrolyzes (1,6)-alpha-D-glucosidic linkages in pullulan, amylopectin and glycogen

PRODUCT CHARACTERISTICS/PROPERTIES

Component name	Glucoamylase (glucan 1,4-alpha-glucosidase) Pullulanase
Activity	1300 AGU/g 315 PUN/g
Color	Light to dark brown
Physical form	Liquid
Approximate density (g/ml)	1.15
Viscosity (cps)	10-40

Color can vary from batch to batch. Color intensity is not an indication of enzyme activity.

PRODUCT SPECIFICATION

	Lower Limit	Upper Limit	Unit
Amyloglucosidase unit AGU	1300		/g
Pullulanase unit PUN-J	315		/g
pH at 25°C	3	5	
Total viable count	-	10000	/g
Molds	-	100	/g
Yeast	-	100	/g
Coliform bacteria	-	30	/g
E.coli	Not Detected		/25 g
Salmonella	Not Detected		/25 g
Heavy metals		Max 30	mg/kg
Lead		Max 5	mg/kg
Arsenic		Max 3	mg/kg
Cadmium		Max 0.5	mg/kg
Mercury		Max 0.5	mg/kg

The enzyme analytical method is available from Novozymes Market or customer sales representative.

COMPOSITION

Preservatives	Sodium benzoate Potassium sorbate
Stabilizers	Sucrose/Glucose, D-

ALLERGEN

Allergen	Substance contained ¹	Allergen	Substance contained ¹
Celery	no	Molluscs	no
Cereals containing gluten^{2,4}	no	Mustard	no
Crustaceans	no	Nuts³	no
Egg	no	Peanuts	no
Fish	no	Sesame	no
Lupin	no	Soy	no
Milk (including lactose)	no	Sulphur dioxide/sulphites, more than 10 mg per kg or l	no

¹Definition of substances according to EU Regulation 1169/2011, as amended. List covers allergens mentioned in 21 USC 301 (US) and GB 7718-2011 (China).

²i.e. wheat, rye, barley, oats, spelt, kamut

³i.e. almond, hazelnut, walnut, cashew, pecan nut, Brazil nut, pistachio nut, macadamia nut and Queensland nut

⁴ If No: Glutenfree i.e. < 20ppm (EU Regulation 828/2014)

GM STATUS

This product is not a GMO.

The enzyme product is manufactured by fermentation of a microorganism that is not present in the final product. The production organism and the enzyme effectiveness are improved by means of modern biotechnology.

Valid from 2020-01-28

STORAGE CONDITION

Recommended storage: 0-10 °C (32-50 °F)

Packaging must be kept intact, dry, and away from sunlight. Please follow the recommendations and use the product before the best-before date to avoid the need for a higher dosage.

Best before: You will find the best-before date in the certificate of analysis or on the product label.

The product gives optimal performance when stored as recommended and used prior to the best-before date.

SAFETY AND HANDLING PRECAUTIONS

Enzymes are proteins. Inhalation of dust or aerosols may induce sensitization and may cause allergic reactions in sensitized individuals. Some enzymes may irritate the skin, eyes, and mucous membranes upon prolonged contact. See the Safety data sheet for further information regarding safe handling of the product and spills.

COMPLIANCE

The product complies with the recommended purity specifications for food-grade enzymes given by the Joint FAO/WHO Expert Committee on Food Additives (JECFA) and the Food Chemical Codex (FCC).

CERTIFICATIONS

Novozymes is a signatory to United Nations Global Compact, United Nations Convention on Biological Diversity and report on our sustainability performance through Global Reporting Initiative (GRI). See all our commitments under sustainability on www.novozymes.com.



FOOD SAFETY

Novozymes has carried out a hazard analysis and prepared an HACCP plan describing the critical control points (CCPs). The HACCP plan is supported by a comprehensive prerequisite program implemented in Novozymes' GMP practices. The product is produced according to Novozymes' HACCP plan, GMP practices, and additional requirements controlled by Novozymes' Quality Management System.

The product complies with FAO/WHO JECFA- and FCC-recommended purity requirements regarding mycotoxins.

PACKAGING

The product is available in different types of packaging. Please contact the sales representative for more information.

For more information, or for office addresses, visit www.novozymes.com

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