



Enzymology Research Center, Inc.
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LACTASE FUNGAL (*Aspergillus oryzae*)

SPECIFICATION SHEET

I.U.B. 3.2.1.1

DESCRIPTION

Is a B-galactosidase produced by the controlled fermentation of a Non-GMO strain of *Aspergillus oryzae*. The lactose hydrolyzes the B-1,4-glycosidic bonds in lactose; releasing an equal molar mixture of glucose and galactose. The food grade powder contains no chemical preservatives.

PHYSICAL PROPERTIES

A white to off white to colored, free-flowing powder, soluble in water, free of offensive odor and taste.

ENZYMATIC PROPERTIES

The pH optimum is 4.0 to 5.0 with a stability range of 4.0 to 7.5. The optimum temperature is 55°C with a stability range from 30°C to 55°C.

ACTIVITY

One FCC Lactase Unit (ALU) is defined as the quality of enzyme that will liberate one micromole of o-nitrophenol per minute at 37°C and a pH of 4.5. It is based on a 15 minute hydrolysis of an o-nitrophenol-beta-D-galactopyranoside substrate. The acceptance criteria for all enzyme assays is: NLT 85.0% and NMT 115.0% of the declared units of enzyme activity.*

COUNTRY OF ORIGIN China

STORAGE/SHELF LIFE/STANDARD PACK SIZE

Product is stable for two years (24 months) if stored at or below 10°C in sealed poly bags in boxes or drums away from sunlight and high humidity. Product is packed in 25 kilo fiber drums or double-wall boxes.

HANDLING PRECAUTIONS

Avoid the formation of aerosol and dust of the product. Repeated inhalation of enzyme aerosol or dust may cause allergic type reactions in sensitized individuals. For detailed information please refer to the SDS.

Description	Specification	Method
Activity:	NLT 160,000 ALU/GM	FCC
Identity:	Lactase Fungal	FTIR
Moisture:	NMT 10%	Ohaus MB-45
Metals:		
Lead	NMT 5 ppm	SW-846 6020
Microbiological Data:		
TPC	<10,000 CFU/g	Soleris / AOAC 990.12
E.coli	Negative/10g	Soleris / AOAC 991.14
Enterococcus	<100 CFU/g	AOAC 2003.01
Salmonella**	Negative/25g	BAM Ch. 5 / AOAC 2011.03
Yeast	<1,000 CFU/g	Soleris / AOAC 997.02
Mold	<1,000 CFU/g	Soleris / AOAC 997.02
Coliforms	<100 CFU/g	Soleris / AOAC 991.14

*FCC 9 Page 414

**If Enterococcus test results exceed 100 CFU/g then Salmonella testing is completed.

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