



Enzymology Research Center, Inc.  
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## CELLULASE (*Aspergillus niger*)

### SPECIFICATION SHEET

I.U.B. 1.11.1.6

#### DESCRIPTION

Is derived from the fermentation of a selected Non-GMO strain of *Aspergillus niger*. This enzyme product is characterized by its ability to modify, hydrolyze, or degrade the carbohydrate cellulose.

#### PHYSICAL PROPERTIES

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

#### ENZYMATIC PROPERTIES

The pH optimum is 4.5 with a stability range of 3.5 to 5.5. The optimum temperature is 60°C with a stability range of 45°C to 75°C.

#### ACTIVITY

Contains three activities (endo- and exo-cellulase and beta-glucosidase activities) required to achieve complete hydrolysis. One cellulase unit (CU) is defined as the amount of activity that will produce a relative fluidity change of 1 in 5 min in a defined carboxymethyl cellulose substrate under the conditions of the assay. 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 USA

#### 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 100,000 CU/GM	FCC
Identity:	Cellulase 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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