



Enzymology Research Center, Inc.
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PROTEASE NEUTRAL BACTERIAL (*Bacillus subtilis*)

SPECIFICATION SHEET

I.U.B. 3.4.24.28

DESCRIPTION

A Non-GMO highly concentrated proteolytic enzyme produced from a selected strain of *Bacillus subtilis*. The enzyme hydrolyzes proteins into peptides and amino acids.

PHYSICAL PROPERTIES

A light tan to tan colored, free-flowing powder, soluble in water, with characteristic odor and taste.

ENZYMATIC PROPERTIES

The pH optimum is 7.0 with a stability range of 5.5 to 9.0. The optimum temperature is 55°C with a stability range from 30°C to 70°C. The enzyme can be inactivated by raising the temperature to 80°C and holding for 15 minutes.

ACTIVITY

One bacterial protease unit (PC) is defined as that quantity of enzyme that produces the equivalent of 1.5 micrograms/mL of L-tyrosine per minute 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 2,000,000 PC/GM	FCC
Identity:	Protease Neutral Bacterial	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.