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SERRATIOPEPTIDASE (*Serratia marcescens*)

SPECIFICATION SHEET

I.U.B. 3.4.24.40

DESCRIPTION

Is an enzyme derived from bacteria belonging to genus *Serratia marcescens*. It is a "proteolytic" or protein digesting enzyme.

PHYSICAL PROPERTIES

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

ENZYMATIC PROPERTIES

The pH optimum is 8.5 to 9.5. The optimum temperature is 37°C with thermal stability between 30°C to 50°C.

ACTIVITY

The activity of Serratiopeptidase is measured based on a 20 minute hydrolysis of casein substrate at 37°C and pH 9.0. One unit of Serratiopeptidase is equivalent to one microgram of Tyrosine that one milligram of Serratiopeptidase produces from substrate Casein for one minute. 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 South Korea

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 U/GM	JSPI 1991
Identity:	Serratiopeptidase	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

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