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LIPASE FUNGAL (*Rhizopus oryzae*)

SPECIFICATION SHEET

I.U.B. 3.1.1.3

DESCRIPTION

This Lipase Fungal is an enzyme capable of hydrolyzing fats and oils, typically used in dietary supplements, and suitable for other food grade applications. It is derived from the fermentation from a selected Non-GMO strain of *Rhizopus oryzae*.

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 7.0 with a stability range of 4.5 to 7.5. The optimum temperature is 37°C with a stability range from 25°C to 45°C.

ACTIVITY

One unit of enzyme activity (FIP Unit) is defined as that quantity of a standard lipase preparation (Fungal Lipase International FIP Standard) that liberates the equivalent of 1 micromole of fatty acid per minute from the Substrate Emulsion under the described assay conditions. 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 150,000 FIP/GM	FCC
Identity:	Lipase Fungal (<i>Rhizopus oryzae</i>)	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
Enterococci	<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 Enterococci test results exceed 100 CFU/g then Salmonella testing is completed.