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## PAPAIN REDUCED SULFITE (Carica papaya)

### SPECIFICATION SHEET

I.U.B. 3.4.22.2

### DESCRIPTION

A widely used enzyme obtained from the latex of the fruit of the Papaya tree (Carica papaya), Papain is Non-GMO, obtained by drying latex by a suitable method: sun drying, tray drying, and spray drying. This Papain has reduced sulfites and is chloramphenicol free. The papaya latex has been processed without the addition of sodium metabisulfite.

### PHYSICAL PROPERTIES

An off-white, fine, free-flowing powder, soluble in water with sharp latex odor and mild pleasant taste.

### ENZYMATIC PROPERTIES

With most substances, Papain exhibits maximum activity in the temperature range of 50°C to 60°C, although in some instances it has been reported to be useful at temperatures as high as 80°C to 90°C. At room temperature, Papain is generally useful in a pH range of 4.0 to 10.0. In general the optimum stability of Papain falls in the pH range of 5.0 to 6.0 at 60°C. At lower temps, its pH range extends further into both acid & alkaline sides.

### ACTIVITY

The activity is based on a 60-minute proteolytic hydrolysis of a casein substrate at pH 6.0 and 40° C. Unhydrolyzed substrate is precipitated with trichloroacetic acid and removed by filtration; solubilized casein is then measured spectrophotometrically. The acceptance criteria for all enzyme assays is: NLT 85% and NMT 115.0% of the declared units of enzyme activity.\*

**COUNTRY OF ORIGIN** Republic of the Congo

### 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 900 TU/MG	Industry
Identity:	Papai	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
Enteroc	<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 Enteroc test results exceed 100 CFU/g then Salmonella testing is completed.

Product Code:112009/12.15.20

