

## Pectinase for Ramie Degumming

Cat. No. NATC-206

Lot. No. (See product label)

### Introduction

#### Description

This product is a pectinase enzyme preparation that is refined by the excellent bacterial strain *Aspergillus niger*, through the process of deep liquid fermentation and ultrafiltration. It can quickly and reliably degrade pectin and other substances in plants other than fibers, and quickly reduce viscosity, etc. It also accelerates clarification and improves ultrafiltration.

#### Applications

Pectinase degrades pectin through a complex enzyme system composed of various enzymes, with the main components as follows: 1. Protopectinase: Hydrolyzes insoluble protopectin into water-soluble pectin by breaking the chemical bonds between polymethoxygalacturonic acid and arabinose. 2. Polygalacturonase: This enzyme cleaves the  $\alpha$ -1,4 glycosidic bonds in pectic acid, promoting the hydrolysis of polygalacturonic acid chains. Based on the hydrolysis mechanism, it is divided into two types: exo-polygalacturonase (exo-PG1, EC 3.2.1.67; exo-PG2, EC 3.2.1.82) and endo-polygalacturonase (endo-PG, EC 3.2.1.15). The endo-enzyme randomly hydrolyzes the  $\alpha$ -1,4 bonds within the molecule, rapidly reducing the viscosity of pectin or pectic acid, while the exo-enzyme sequentially hydrolyzes the  $\alpha$ -1,4 bonds from the molecular ends, producing galacturonic acid. 3. Lyase: Cleaves pectin polymers through trans-elimination, breaking the glycosidic bond at the C-4 position while eliminating a hydrogen atom at C-5 to produce an unsaturated product. It includes endo-pectate lyase (endo-PGL, EC 4.2.2.2), exo-pectate lyase (exo-PGL, EC 4.2.2.9), endo-pectin lyase (endo-PL, EC 4.2.2.10), and endo-polymethylgalacturonase (endo-PMG). 4. Pectinesterase (EC 3.1.1.11): Randomly removes the ester bonds between methoxy groups and galacturonic acid in water-soluble pectin molecules, producing methanol and free carboxyl groups. This product exhibits good synergy between various enzyme systems, rapidly degrading pectin and other substances (except fiber) in plants, quickly reducing viscosity, and simultaneously accelerating clarification and improving ultrafiltration.

### Product Information

<b>Source</b>	Aspergillus niger
<b>Appearance</b>	Light yellow-brown liquid.
<b>Form</b>	Liquid
<b>Optimum pH</b>	3.3-4.0
<b>Optimum temperature</b>	50-60°C

### Storage and Shipping Information

<b>Storage</b>	This product is active biological agents, transport and storage process should be dark, low temperature, dry, ventilated.
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