Creative Enzymes®

Highly Concentrated Acid Cellulase (Industrial Grade)

Cat. No. TEXT-0130

Lot. No. (See product label)

Introduction

Description	Industrial-grade Acid Cellulase is refined from Trichoderma reesei through liquid deep fermentation and ultrafiltration processes. This enzyme has good thermal stability, maintaining excellent hydrolytic activity in the temperature range of 40°C-80°C and a wide pH range of 4.5-6.0. Mechanism of Action Cellulose is a polysaccharide molecule composed of glucose linked by β-1,4-glucosidic bonds. Cellulase refers to a group of enzymes that hydrolyze the β-1,4-glucosidic bonds of cellulose, converting it into cellobiose and glucose. It is not a single enzyme but a multi-component enzyme system that acts synergistically. The hydrolysis process involves at least three main cellulases: 1. Endoglucanases (EC3.2.1.4): These endoenzymes randomly hydrolyze β-1,4-glucosidic bonds within the non-crystalline regions of cellulose molecules, shortening the long-chain cellulose molecules and producing many small cellulose molecules with non-reducing ends. 2. Cellobiohydrolases (EC3.2.1.91): Known as CBH enzymes, they are divided into CBH I and CBH II, which hydrolyze cellobiose from the reducing and non-reducing ends of cellulose molecules, respectively. 3. β-1,4-Glucosidase (EC3.2.1.21): BG enzymes hydrolyze cellobiose and short-chain oligosaccharides to produce glucose. Industrial-grade Acid Cellulase mainly contains endoglucanase (EG), with small amounts of cellobiohydrolase and β-1,4-glucosidase.
Applications	This product can be widely used in the paper, textile, detergent, and environmental protection industries, such as: 1. Paper Industry: Used in pulp beating. 2. Textile Industry: Used in fabric biopolishing and improving washing effects.

Product Information

Appearance	Light yellow solid powder
Form	Powder
Optimum pH	4.5-6.0
Optimum temperature	65-75°C

Storage and Shipping Information

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