

## Native *Bacillus* sp Chitosanase

Cat. No. NATE-1746

Lot. No. (See product label)

### Introduction

- Description** Chitosanase is a powdered chitosanase preparation made by submerged fermentation of a selected strain of the bacterium *Bacillus* sp. The enzyme catalyzes the breakdown of chitosan, a partially or completely de-acetylated derivative of chitin ( $\beta$ -1,4 homopolymer of N-acetyl glucosamine).
- Applications** Chitosanase can be used for hydrolyzing chitosan (degree of de-acetylation: 40~100%). Especially, it can be used for the production of chitosan oligosaccharides from chitosan, which have a variety of biological activities such as immuno-stimulating activity, anti-tumor activity, anti-microbial activity, etc.
- Synonyms** Chitosanase; EC 3.2.1.132; 51570-20-8; Chitosan N-acetylglucosaminohydrolase

### Product Information

- Source** *Bacillus* sp
- Appearance** White or light yellow colored, freeze-dried powder
- EC Number** EC 3.2.1.132
- CAS No.** 51570-20-8
- Molecular Weight** 45,000Da estimated by SDS-PAGE
- Activity** 35,000U/g
- pH Stability** Stable in pH range of 4.5 to 8.0
- Optimum pH** pH range of 4.5 to 6.0
- Thermal stability** More than 90% activity remains after 24 hr incubation at 40°C.
- Optimum temperature** 60°C
- Specificity** Shows high activities against chitosan substrates which are de-acetylated by 40 to 100%.
- Unit Definition** The standard activity is determined by modified Schales method. One unit(U) is defined as the amount of enzyme that releases one  $\mu$ mole of reducing sugar (measured as D-glucosamine equivalents) from chitosan per minute at pH 5.0 at 48°C. A detailed description of the method is available on request.
- Notes** Arsenic: Less than 4ppm. Heavy metals: Less than 10ppm (as Pb). Coli-form bacteria: Less than 30 colony-forming units(CFU) per gram. Salmonella: Negative.

### Storage and Shipping Information

- Storage** The product should be stored in a cool, dry environment with temperatures below 4°C.