

## Native Barley $\beta$ -Amylase

Cat. No. NATE-0761

Lot. No. (See product label)

### Introduction

**Description**  $\beta$ -Amylase hydrolyzes the  $\alpha$ -(1,4) glucan linkages in polysaccharides of three or more  $\alpha$ -(1,4) linked D-glucose units. Natural substrates such as starch and glycogen are broken down into glucose and maltose. Pure, crystalline  $\beta$ -amylase preparation consists of four isoenzymes with different isoelectric points. The enzyme polymerizes very rapidly through the sulfhydryl groups in the absence of reducing agents. p-Chloromercuribenzoate inhibits the polymerization and the enzymatic activity. The reducing agents mercaptoethanol or dithiothreitol can completely restore the activity.

**Applications**  $\beta$ -Amylase is used to hydrolyze  $\alpha$  bonds of  $\alpha$ -linked polysaccharides, such as starch and glycogen.  $\beta$ -Amylase, has been used in various plant studies, such as carbon starvation studies in *Populus tremuloides*.  $\beta$ -Amylase, from barley, has been used to study how pressure and temperature affect catalytic activity.

**Synonyms** saccharogen amylase; glycogenase;  $\beta$  amylase,  $\beta$ -amylase; 1,4- $\alpha$ -D-glucan maltohydrolase; EC 3.2.1.2; 9000-91-3

### Product Information

**Source** Barley

**EC Number** EC 3.2.1.2

**CAS No.** 9000-91-3

**Activity** 20-80 units/mg protein (biuret)

**Unit Definition** One unit will liberate 1.0 mg of maltose from starch in 3 min at pH 4.8 at 20°C.

### Storage and Shipping Information

**Storage** 2-8°C