



## ALPHA-AMYLASE (*Bacillus licheniformis*) (Lot 100601b)

**E-BLAAMI00**

07/2011

(EC 3.2.1.1)

CAZy: GH Family 13

### PROPERTIES

#### 1. ELECTROPHORETIC PURITY:

- Single major band on isoelectric focusing (pI = 7.4)
- Single major band on SDS-gel electrophoresis (MW = 58,000)

#### 2. SPECIFIC ACTIVITY AND LEVEL OF OTHER ACTIVITIES:

Substrate	Specific Activity (U/mg Protein)
$\alpha$ -Amylase (Ceralpha Reagent at pH 6.0)	54.0
Amyloglucosidase ( <i>p</i> -Nitrophenyl $\beta$ -maltoside)	undetectable
Cellulase (CM-Cellulose 4M)	undetectable
$\beta$ -Mannanase (carob galactomannan)	undetectable

**One Unit** of  $\alpha$ -amylase is the amount of enzyme required to release one  $\mu$ mole of *p*-nitrophenol from blocked *p*-nitrophenyl-maltoheptaoside per minute (in the presence of excess  $\alpha$ -glucosidase) at pH 6.0 and 40°C.

#### 3. PHYSICOCHEMICAL PROPERTIES:

pH Optima:	6.0-6.5
pH Stability:	4.5-8.0
Temperature Optima:	75°C
Temperature Stability:	< 80°C

#### 4. STORAGE CONDITIONS:

The enzyme is supplied in vials of **100 mL** as a stabilised solution and should be stored at 4°C.

The enzyme is supplied at a concentration of 3000 U/mL on Ceralpha Reagent at pH 6.0 and 40°C (i.e. approximately 10,000 U/mL on soluble starch under the same assay conditions).

This enzyme is recommended for use in **Total Dietary Fibre** analytical procedures and the **Megazyme Total Starch** test method. The preparation is effectively devoid of cellulase and is free of catalase.