α-GLUCOSIDASE (Maltase from Yeast) (Lot 190301)

E-MALTS **03/19**

(EC 3.2.1.20) alpha-glucosidase; alpha-D-glucoside glucohydrolase
CAZy Family: GH13
CAS: 9001-42-7

PROPERTIES

1. ELECTROPHORETIC PURITY:

- Single band on SDS-gel electrophoresis (MW ~ 52,000)
- One major band on isoelectric focusing (pI ~ 5.7)

2. SPECIFIC ACTIVITY:

129 U/mg protein (on *p*NP-α-glucopyranoside) at pH 6.8 and 40°C

One Unit of α-glucosidase activity is defined as the amount of enzyme required to produce one µmole of p-nitrophenol from *p*NP-α-glucopyranoside (10 mM) in sodium maleate buffer (100 mM), pH 6.8 at 40°C.

3. SPECIFICITY:

Hydrolysis of terminal, non-reducing (1,4)-linked α-D-glucose residues with release of D-glucose

4. RELATIVE RATES OF HYDROLYSIS OF SUBSTRATES:

Substrate	%
*p*NP-α-Glucoside	100.0
Maltose	15.7
Sucrose	16.6
*p*NP-β-Glucosidase	< 0.001
*p*NP-α-Galactoside	< 0.001
*p*NP-β-Galactoside	< 0.001
Blocked *p*NP-Maltoheptoaside (Ceralpha reagent)	< 0.001

Action on *p*NP-substrates and polysaccharides or oligosaccharides was determined at a final substrate concentration of 2.5 mM and 5 mg/mL, respectively, in sodium maleate buffer (100 mM), pH 6.8 at 40°C.

5. PHYSICOCHEMICAL PROPERTIES:

Recommended conditions of use are at pH 6.0-7.0 and up to 40°C

pH Optima:	6.8
pH Stability:	5.0-7.0
Temperature Optima:	40°C
Temperature Stability:	up to 40°C

6. STORAGE CONDITIONS:

The enzyme is supplied as an ammonium sulphate suspension containing 0.02% (w/v) sodium azide and should be stored at 4°C. For assay, this enzyme should be diluted in sodium maleate buffer (100 mM), pH 6.8 containing 1 mg/mL BSA. **Swirl to mix the enzyme immediately prior to use.**