SUCRASE (MALTASE) From Yeast (Lot 181001)

E-SUCR **10/18**

EC 3.2.1.20 alpha-D-glucoside glucohydrolase
CAZy Family: GH13
CAS: 9001-42-7

PROPERTIES

1. ELECTROPHORETIC PURITY:

- Single major band on SDS-gel electrophoresis (62,000)
- Single major band on isoelectric focusing (pI = 5.7)

2. SPECIFIC ACTIVITY:

23 U/mg protein (on sucrose) at pH 6.8 and 30°C

One Unit of sucrase activity is defined as the amount of enzyme required to release one µmole of glucose per minute from sucrose (10 mg/mL) in sodium maleate buffer (100 mM), pH 6.8 at 30°C.

3. SPECIFICITY:

Hydrolysis of terminal, non-reducing (1,4)-linked α-D-glucose residues with release of D-glucose. This enzyme specifically hydrolyses sucrose in the presence of fructo oligosaccharides.

4. RELATIVE RATES OF HYDROLYSIS OF SUBSTRATES:

Substrate	%
Sucrose	100
Maltose	~95
*p*NP-α-Glucoside	~586
Kestose & Kestotetraose	< 0.025
*p*NP-β-Glucosidase	< 0.0045
*p*NP-α-Galactoside	< 0.0045
*p*NP-β-Galactoside	< 0.0045
Blocked *p*NP-Maltoheptoaside	< 0.0045

Action on *p*NP-substrates and polysaccharides or oligosaccharides was determined at a final substrate concentration of 5 mM and 5 mg/mL, respectively, in sodium maleate buffer (100 mM), pH 6.8 at 30°C.

5. PHYSICOCHEMICAL PROPERTIES:

pH Optima:	6.4-6.8
pH Stability:	5.6-7.0
Temperature Optima:	30°C
Temperature Stability:	< 40°C

6. STORAGE CONDITIONS:

The enzyme is supplied as a lyophilised powder and should be stored at -20°C. On dissolution in buffer or water, the enzyme should be stored in the frozen state. It is recommended that all buffers used for dilution contain BSA (1.0 mg/mL).