α-D-GLUCOSIDASE from *Bacillus stearothermophilus* (Lot 130403b)

Recombinant - Thermostable

E-TSAGS **03/19**

(EC 3.2.1.20) alpha-D-glucoside glucohydrolase
CAZy Family: GH13

PROPERTIES

1. ELECTROPHORETIC PURITY:

- Single band on SDS-gel electrophoresis (MW ~ 66,000)
- Single major band on isoelectric focusing (pI ~ 6.7)

2. SPECIFIC ACTIVITY:

80 U/mg protein (on 4-nitrophenyl α-D-glucopyranoside) at pH 6.5 and 40°C

One Unit of α-D-glucosidase activity is defined as the amount of enzyme required to produce one µmole of *p*-nitrophenol from 4-nitrophenyl α-D-glucopyranoside per minute at pH 6.5 and 40°C measured at 400 nm.

3. RELATIVE RATES OF HYDROLYSIS OF SUBSTRATES:

Substrate	%
4-Nitrophenyl α-D-Glucopyranoside	100
Blocked *p*-Nitrophenol Maltoheptaoside	< 0.0001

Action on *p*-nitrophenol substrates was determined at a final substrate concentration of 5 mM in sodium phosphate buffer (100 mM), pH 6.5 at 40°C.

4. PHYSICOCHEMICAL PROPERTIES:

pH Optima:	6.0 - 6.5
pH Stability:	5.0 - 9.0 (> 75% control activity after 24 hours at 4°C)
Temperature Optima:	60°C (10 min. reaction)
Temperature Stability:	up to 60°C (> 90% control activity after 15 min.)

5. STORAGE CONDITIONS:

The enzyme is supplied as an ammonium sulphate suspension in 0.02% (w/v) sodium azide and should be stored at 4°C. For assay, this enzyme should be diluted in sodium phosphate buffer (100 mM), pH 6.5 containing 1 mg/mL BSA. **Swirl to mix the enzyme immediately prior to use.**