



β -GLUCOSIDASE from *Aspergillus niger* (Lot 150102c)

E-BGLUC

(EC 3.2.1.21) beta-D-glucoside glucohydrolase
CAZy Family: GH3
CAS: 9001-22-3

02/19

PROPERTIES

1. ELECTROPHORETIC PURITY:

- Single band on SDS-gel electrophoresis (MW ~ 121,000)
- One major band on isoelectric focusing (pI ~ 4.0)

2. SPECIFIC ACTIVITY:

80 U/mg protein (on pNP- β -L-glucoopyranoside) at pH 4.0 and 40°C

One Unit of β -glucosidase activity is defined as the amount of enzyme required to release one μ mole of *p*-nitrophenol per minute from *p*NP- β -L-glucoopyranoside in sodium acetate buffer (100 mM), pH 4.0 at 40°C.

3. SPECIFICITY:

Hydrolysis of terminal, non-reducing β -D-glucosyl residues with release of β -D-glucose.

4. RELATIVE RATES OF HYDROLYSIS OF SUBSTRATES:

Substrate	%
<i>p</i> NP- β -glucoopyranoside	100
Starch	< 0.065
Sucrose	< 0.045
Maltose	< 0.019
CM-Cellulose	< 0.0075

Action on *p*NP-substrates and polysaccharides was determined at a final substrate concentration of 5 mM and 5 mg/mL, respectively, in sodium acetate buffer (100 mM), pH 4.0 at 40°C.

5. PHYSICOCHEMICAL PROPERTIES:

Recommended conditions of use are at pH 4.0-5.0 and up to 60°C

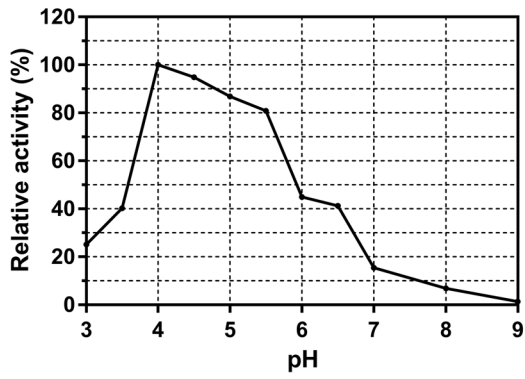
- pH Optima: 4.0
pH Stability: 3.0-9.0 (> 75% control activity after 24 h at 4°C)
Temperature Optima: 70°C (10 min reaction)
Temperature Stability: up to 60°C (> 75% control activity after 15 min incubation at temperature)

6. STORAGE CONDITIONS:

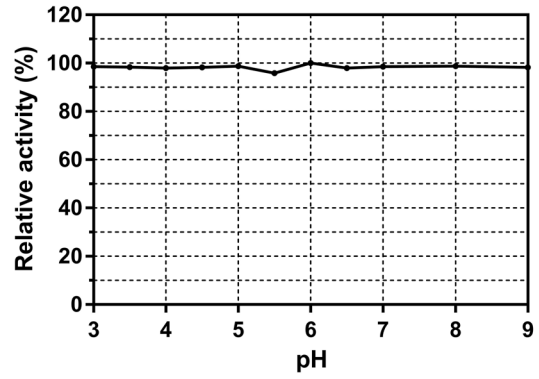
The enzyme is supplied as an ammonium sulphate suspension containing 0.02% (w/v) sodium azide and should be stored at 4°C. For assay, this enzyme should be diluted in sodium acetate buffer (100 mM), pH 4.0 containing 1 mg/mL BSA. **Swirl to mix the enzyme immediately prior to use.**

7. EXPERIMENTAL DATA:

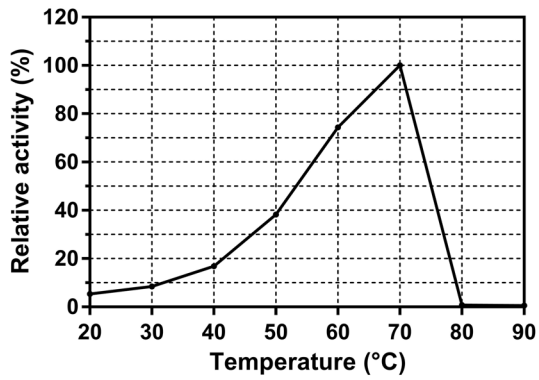
pH Optima



pH Stability



Thermal Optima



Thermal Stability

