



β -GALACTOSIDASE from *Aspergillus niger* (Lot 151202a)

E-BGLAN

(EC 3.2.1.23) beta-D-galactoside galactohydrolase

CAZy Family: GH35

CAS: 9031-11-2

08/19

PROPERTIES

1. ELECTROPHORETIC PURITY:

- Single band on SDS-gel electrophoresis (MW ~ 125,000)
- Single band on isoelectric focusing.

2. SPECIFIC ACTIVITY:

170 U/mg protein (on *p*-nitrophenyl- β -D-galactoside) at pH 4.5 and 40°C

One Unit of β -galactosidase activity is defined as the amount of enzyme required to release one μ mole of *p*-nitrophenol per minute from *p*-nitrophenyl- β -D-galactoside (10 mM) in sodium acetate buffer (100 mM), pH 4.5 at 40°C.

3. SPECIFICITY:

Hydrolysis of terminal non-reducing β -D-galactose residues in β -D-galactosides.

4. RELATIVE RATES OF HYDROLYSIS OF SUBSTRATES:

Substrate	%
<i>p</i> NP- β -galactoside	100
<i>p</i> NP- α -galactoside	0.0001
<i>p</i> NP- α -L-arabinofuranoside	0.2083
<i>p</i> NP- α -L-arabinopyranoside	0.0708
<i>p</i> NP- α -glucoside	0.0025
<i>p</i> NP- β -glucoside	0.001
<i>p</i> NP- β -xyloside	0.003
<i>p</i> NP- β -mannoside	0.001
Ceralpha (α -amylase)	0.002
Sucrose (invertase)	0.0025
Maltose (maltase)	0.0033

Action on *p*NP-substrates and polysaccharides or oligosaccharides was determined at a final substrate concentration of 5 mM and 10 mg/mL, respectively, in sodium acetate buffer (100 mM), pH 4.5 at 40°C.

3. PHYSICOCHEMICAL PROPERTIES:

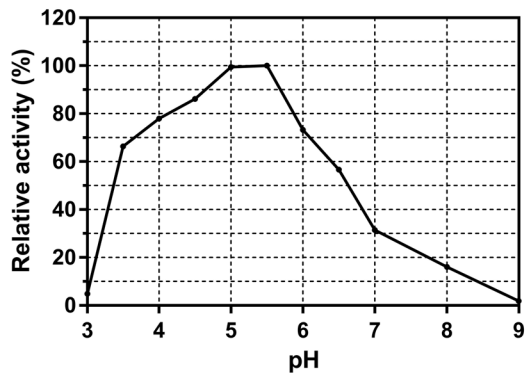
pH Optima:	5.0
pH Stability:	4.0-9.0
Temperature Optima:	60°C
Temperature Stability:	< 70°C

4. STORAGE CONDITIONS:

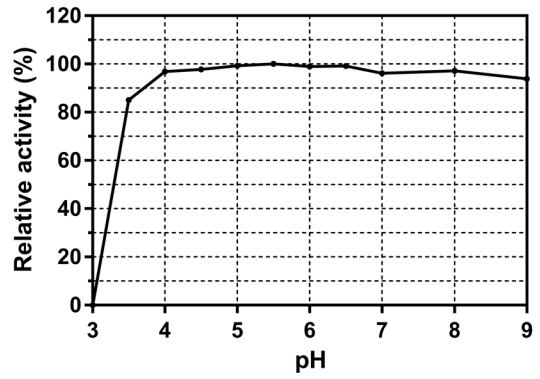
The enzyme is supplied as an ammonium sulphate suspension containing 0.02% (w/v) sodium azide and should be stored at 4°C. For assay, this enzyme should be diluted in sodium acetate buffer (100 mM), pH 4.5 containing 1 mg/mL BSA. **Swirl to mix the enzyme immediately prior to use.**

5. EXPERIMENTAL DATA:

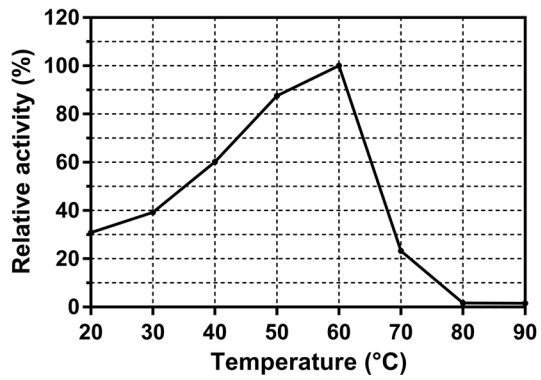
pH Optima



pH Stability



Thermal Optima



Thermal Stability

