α-GALACTOSIDASE from *Aspergillus niger* (Lot 170303b)

E-AGLAN **03/21**

(EC 3.2.1.22) alpha-D-galactoside galactohydrolase
CAZy Family: GH36
CAS: 9025-35-8

PROPERTIES

1. ELECTROPHORETIC PURITY:

- Single major band on SDS-gel electrophoresis (MW ~ 97,000)
- Single major band on isoelectric focusing (pI ~ 4.2)

2. SPECIFIC ACTIVITY:

650 U/mg protein (on *p*-nitrophenyl-α-D-galactopyranoside) at pH 4.5 and 40°C

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

3. SPECIFICITY:

Hydrolysis of terminal, non-reducing α-D-galactose residues in α-D-galactosides, including galactose oligosaccharides, galactomannans and galactolipids.

Substrate	Enzyme Measured	%
*p*NP-α-Galactoside	α-Galactosidase	100
*p*NP-β-Galactoside	β-Galactosidase	< 0.0002
*p*NP-α-Glucoside	α-Glucosidase	< 0.0002
*p*NP-β-Glucoside	β-Glucosidase	< 0.0002
*p*NP-β-Xyloside	β-Xylosidase	< 0.0002
*p*NP-β-Mannoside	β-Mannosidase	< 0.0002
*p*NP-α-L-arabinoside	α-L-Arabinofuranosidase	< 0.0002
Carob Galactomannan	*endo*-1,4-β-Mannanase	< 0.005
Sucrose	Invertase	< 0.001
1-Kestose	*exo*-Inulinase	< 0.001
1,1-Kestotetraose	*exo*-Inulinase	< 0.01
Fructan (polymer)	*exo*-Inulinase	< 0.01

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 acetate buffer (100 mM), pH 4.5 and 40°C

4. PHYSICOCHEMICAL PROPERTIES:

pH Optima:	4.5-5.0
pH Stability:	4.0-8.0
Temperature Optima:	60°C (at pH 5.0)
Temperature Stability:	Unstable above 60°C

5. 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.**