α-GALACTOSIDASE from Guar (Lot 130801c)

E-AGLGU **02/20**

(EC 3.2.1.22) alpha-galactosidase; alpha-D-galactoside galactohydrolase
CAZy Family: GH27
CAS: 9025-35-8

PROPERTIES

1. ELECTROPHORETIC PURITY:

- Single major band on SDS-gel electrophoresis (MW = 44,500)
- Three bands on isoelectric focusing (pI = 3.7-4.1)

2. SPECIFIC ACTIVITY:

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

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

3. SPECIFICITY:

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

4. RELATIVE RATES OF HYDROLYSIS OF SUBSTRATES:

Substrate	%
*p*NP-α-Galactoside	100
*p*NP-β-Galactoside	< 0.001
*p*NP-α-Glucoside	< 0.001
*p*NP-β-Glucoside	< 0.0001
*p*NP-β-Xyloside	< 0.0001
*p*NP-β-Mannoside	< 0.0001
*p*NP-α-L-arabinoside	< 0.0001
Mannazyme tablets	< 0.0000001

Action on *p*NP-substrates and polysaccharides or oligosaccharides was determined at a final substrate concentration of 10 mM and 10 mg/mL, respectively, in sodium acetate buffer (100 mM), pH 45 at 40°C.

5. PHYSICOCHEMICAL PROPERTIES:

pH Optima:	4.5-5.0
pH Stability:	4.0-8.0
Temperature Optima:	40°C
Temperature Stability:	Unstable above 40°C

6. STORAGE CONDITIONS:

The enzyme is supplied as an ammonium sulphate suspension containing 0.02% sodium azide and 0.5 mg/mL BSA 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.**