



α -GALACTOSIDASE (Guar) (Lot 130801a)

E-AGLGU

11/14

(EC 3.2.1.22) alpha-D-galactoside galactohydrolase

CAZy Family: GH 27

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 AND LEVEL OF OTHER ACTIVITIES:

All activities are at pH 4.5 and 40°C. Glycosidase activities were measured using the appropriate *p*-nitrophenyl glycoside (at 10 mM). *endo*-Glycanases were determined with the appropriate substrate (at 10 mg/mL) and using the Nelson/Somogyi reducing-sugar procedure. **One Unit** of activity is the amount of enzyme required to release one micromole of product (e.g. *p*-nitrophenyl) per min at pH 4.5 and 40°C.

Substrate	Enzyme Measured	Specific Activity (U/mg protein)
<i>p</i> -NP- α -Galactoside	α -Galactosidase	55.0
<i>p</i> -NP- β -Galactoside	β -Galactosidase	< 0.001
<i>p</i> -NP- α -Glucoside	α -Glucosidase	< 0.001
<i>p</i> -NP- β -Glucoside	β -Glucosidase	< 0.0001
<i>p</i> -NP- β -Xyloside	β -Xylosidase	< 0.0001
<i>p</i> -NP- β -Mannoside	β -Mannosidase	< 0.0001
<i>p</i> -NP- α -L-arabinoside	α -L-arabinofuranosidase	< 0.0001
Mannazyme tablets	<i>endo</i> -1,4- β -Mannanase	< 0.0000001

3. PHYSICOCHEMICAL PROPERTIES:

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

4. STORAGE CONDITIONS:

The enzyme is supplied as an ammonium sulphate suspension in 0.02% sodium azide and should be stored at 4°C. BSA (0.5 mg/mL) is added to improve stability properties. On dissolution in buffer, the enzyme should be stored in the frozen state in a polypropylene container between use. We recommend the addition of BSA (0.5 mg/mL) to all dilution buffers.

The enzyme is supplied at a concentration of approximately 500 U/mL.