



## AMYLOGLUCOSIDASE from *Rhizopus sp.* (Lot 171102)

### E-AMGPU

11/20

(EC 3.2.1.3) 4-alpha-D-glucan glucohydrolase  
CAZy Family: GH15  
CAS: 9032-08-0

### PROPERTIES

#### 1. ELECTROPHORETIC PURITY:

- Single band on SDS-gel electrophoresis (MW ~ 68,000)
- One major band on isoelectric focusing (pI ~ 8.2), one minor band (pI ~8.0)

#### 2. SPECIFIC ACTIVITY:

**42 U/mg protein (on soluble starch) at pH 4.5 and 40°C**

**One Unit** of amyloglucosidase activity is defined as the amount of enzyme required to release one  $\mu$ mole of D-glucose reducing-sugar equivalents per minute from soluble starch (10 mg/mL) in sodium acetate buffer (100 mM), pH 4.5 at 40°C.

#### 3. SPECIFICITY:

Hydrolysis of terminal  $\alpha$ -1,4 and  $\alpha$ -1,6 D-glucose residues successively from non-reducing ends of maltodextrins.

#### 4. RELATIVE RATES OF HYDROLYSIS OF SUBSTRATES:

Substrate	%
Starch	100
Maltose	11.9
p-Nitrophenyl $\beta$ -maltoside	6.7
Ceralpha Reagent	< 0.000002
Barley Beta-Glucan	< 0.000002
Wheat arabinoxylan	< 0.000002

Action on pNP-substrates and polysaccharides or oligosaccharides was determined at a final substrate concentration of 2.5 mM and 5 mg/mL, respectively, in sodium acetate buffer (100 mM), pH 4.5 at 40°C.

#### 5. PHYSICOCHEMICAL PROPERTIES:

Recommended conditions of use are at pH 4.0-5.5 and up to 40°C

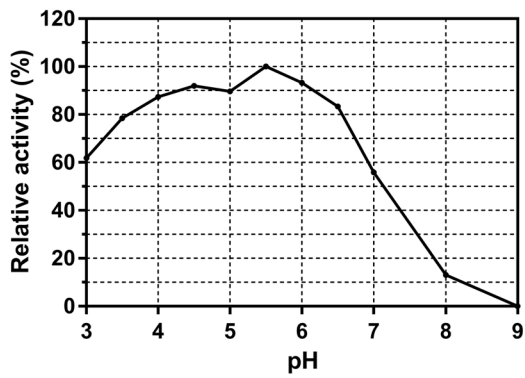
- pH Optima: 5.5  
pH Stability: 3.0-9.0 (> 75% control activity after 24 h at 4°C)  
Temperature Optima: 60°C (10 min reaction)  
Temperature Stability: up to 50°C (> 75% control activity after 15 min incubation at temperature)

#### 6. STORAGE CONDITIONS:

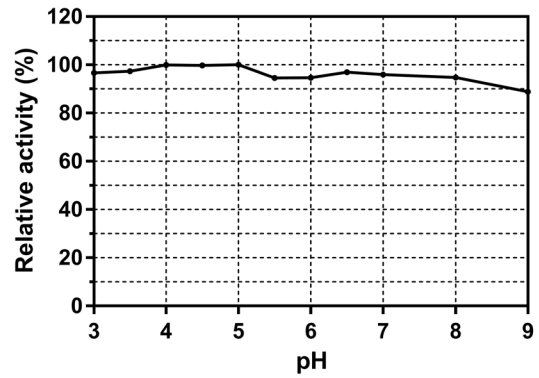
The enzyme is supplied as a lyophilised powder and should be stored below -10°C. For assay, this enzyme should be dissolved in sodium acetate buffer (100 mM), pH 4.5 containing 0.5 mg/mL BSA.

7. EXPERIMENTAL DATA:

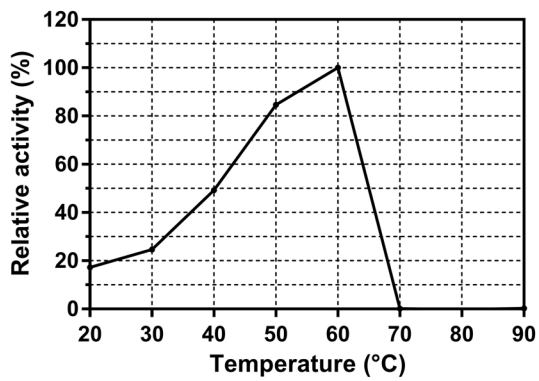
pH Optima



pH Stability



Thermal Optima



Thermal Stability

