



## **endo-POLYGALACTURONANASE from *A. aculeatus* (Lot 180804)**

### **E-PGALUSP**

01/19

(EC 3.2.1.15) polygalacturonase; (1->4)-alpha-D-galacturonan glycanohydrolase  
CAZy Family: GH28  
CAS: 9032-75-1

### **PROPERTIES**

#### **1. ELECTROPHORETIC PURITY:**

- Single band on SDS-gel electrophoresis (MW = 42,000); very minor bands at 24,000 and 20,000
- One major band on isoelectric focusing (pI ~ 4.8)

#### **2. SPECIFIC ACTIVITY:**

**350 U/mg protein (on polygalacturonic acid) at pH 5.5 and 40°C**

**One Unit** of *endo*-polygalacturonanase activity is defined as the amount of enzyme required to release one  $\mu$ mole of galacturonic acid per minute from polygalacturonic acid (2.5 mg/mL) in sodium acetate buffer (100 mM), pH 5.5 at 40°C.

#### **3. SPECIFICITY:**

Random hydrolysis of  $\alpha$ -1,4-D-galactosiduronic linkages in pectate and polygalacturonans.

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

Substrate	%
Polygalacturonic acid	100
Galactan (potato)	<0.03
Arabinazyme Tablets ( <i>endo</i> -arabinanase)	< 0.001
pNP- $\alpha$ -L-arabinofuranoside	< 0.0001

Action on pNP-substrates and polysaccharides was determined at a final substrate concentration of 2.5 mM and 5 mg/mL respectively, *endo*-arabinanase action was determined on Arabinazyme tablets (**T-ARZ**). All assays were carried out in sodium acetate buffer (100 mM), pH 5.5 at 40°C.

#### **5. PHYSICOCHEMICAL PROPERTIES:**

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

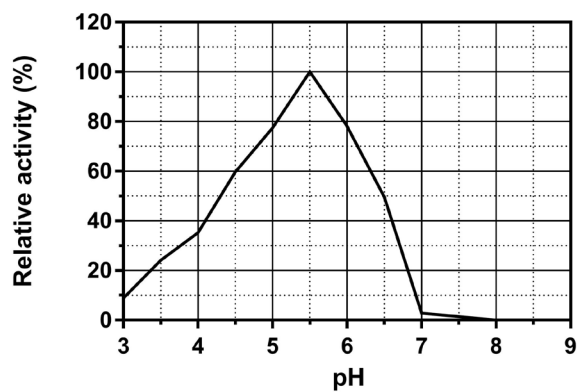
pH Optima:	5.5
pH Stability:	3.0-7.0
Temperature Optima:	50°C
Temperature Stability:	up to 40°C

#### **6. STORAGE CONDITIONS:**

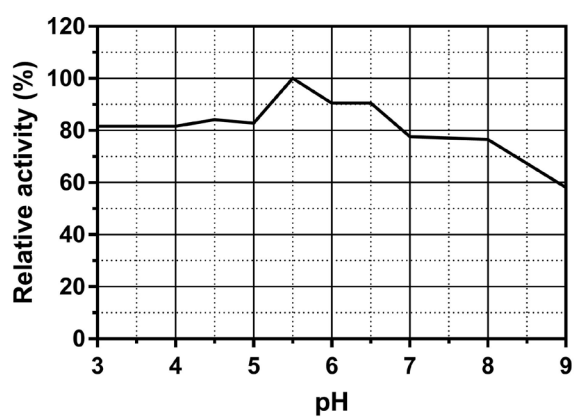
The enzyme is supplied as an ammonium sulphate suspension containing 0.02% (w/v) sodium azide and should be stored at 4°C. For assay, this enzyme should be diluted in sodium acetate buffer (100 mM), pH 5.5. **Swirl to mix the enzyme immediately prior to use.**

## 7. EXPERIMENTAL DATA:

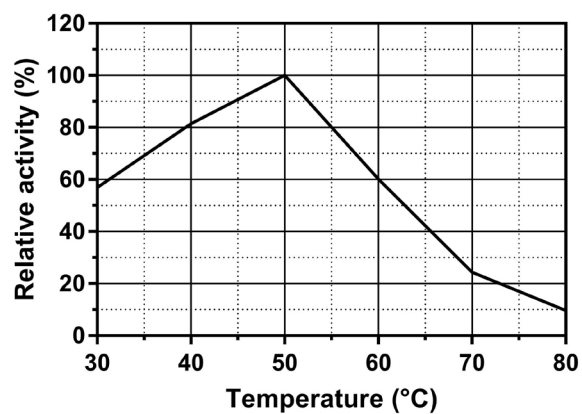
**pH Optima**



**pH Stability**



**Thermal Optima**



**Thermal Stability**

