



## PECTATE LYASE from *Aspergillus sp.* (Lot 170902a)

### E-PCLYAN

12/19

(EC 4.2.2.2) (1->4)-alpha-D-galacturonan lyase

CAZy Family: PL1

CAS: 9015-75-2

### PROPERTIES

#### 1. ELECTROPHORETIC PURITY:

- Single major band on SDS-gel electrophoresis (MW = ~ 45,000)

#### 2. SPECIFIC ACTIVITY:

**180 U/mg protein (on polygalacturonic acid) at pH 8.0 and 40°C**

**One Unit** of pectate lyase 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 Tris.HCl buffer (50 mM), pH 8.0 at 40°C.

#### 3. SPECIFICITY:

Eliminative cleavage of (1,4)- $\alpha$ -D-galacturonan to give oligosaccharides with 4-deoxy- $\alpha$ -D-galact-4-enuronosyl groups at their non-reducing ends.

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

Substrate	%
Polygalacturonic acid (pectate lyase)	100 (Tris-Bispropane, pH 8.0)
Polygalacturonic acid (pectate lyase)	47.5 (CAPS buffer, pH 10.8)
Polygalacturonic acid (pectate lyase)	19.5 (Tris.HCl buffer, pH 8.0)
Polygalacturonic acid ( <i>endo</i> -Polygalacturonanase)	< 0.0015
Galactazyme Tablets ( <i>endo</i> -Galactanase)	< 0.0015
Arabinazyme Tablets ( <i>endo</i> -Arabinanase)	< 0.0003

Action on polysaccharides was determined at a final substrate concentration 2.5 mg/mL in the relevant buffer. Activity was monitored at 235 nm in a recording spectrophotometer. *endo*-Polygalacturonanase, *endo*-arabinanase and *endo*-galactanase were assayed at pH 4.5 and 40°C.

#### 5. PHYSICOCHEMICAL PROPERTIES:

pH Optima:	8.0
pH Stability:	6.5-11.0
Temperature Optima:	55°C
Temperature Stability:	< 55°C

#### 6. STORAGE CONDITIONS:

The enzyme is supplied as a solution containing 50% glycerol and 0.02% (w/v) sodium azide and should be stored below -10°C. For assay, this enzyme should be diluted in Tris.HCl buffer (100 mM), pH 8.0.

**Swirl to mix the enzyme immediately prior to use.**

The enzyme is also supplied as an ammonium sulphate suspension (**E-PCLYAN2**).

The enzyme is used for the identification of Pectin in foodstuffs, feed and fruit juices (**K-PECID**)