PECTATE LYASE from *Aspergillus sp.* (Lot 170902b)

E-PCLYAN **03/21**

(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 µmole 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)-α-D-galacturonan to give oligosaccharides with 4-deoxy-α-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 (*endo*-Polygalacturonanase)	< 0.0015
Galactazyme Tablets (*endo*-Galactanase)	< 0.0015
Arabinazyme Tablets (*endo*-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**)