



PECTATE LYASE from *Aspergillus sp.* (Lot 111202d)

E-PCLYAN2

11/19

(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 μ 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)- 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 (<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: 5.0-11.0 (> 75% control activity after 24 h at 4°C)
 Temperature Optima: 40°C (10 min reaction)
 Temperature Stability: < 70°C (> 75% control activity after 15 min incubation at temperature)

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 Tris.HCl buffer (100 mM), pH 8.0.

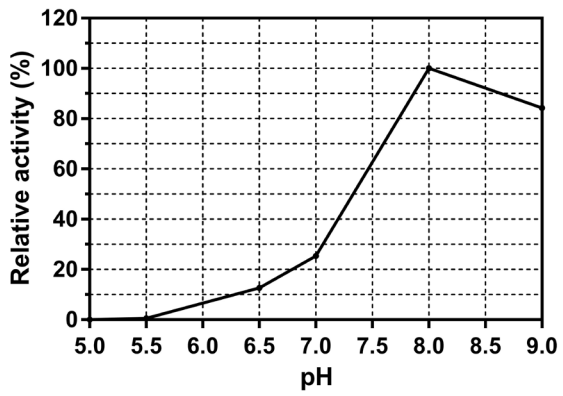
Swirl to mix the enzyme immediately prior to use.

The enzyme is also supplied as a solution in 50% glycerol (**E-PCLYAN**).

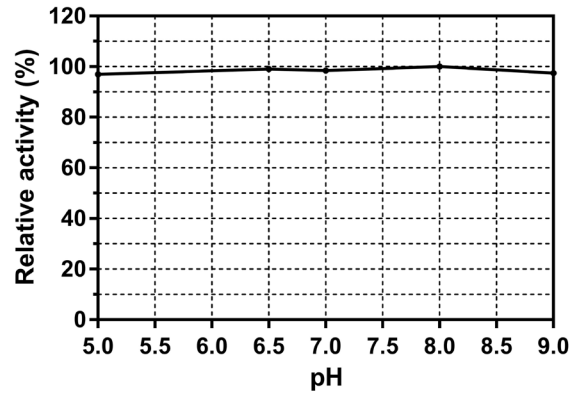
The enzyme is used for the identification of Pectin in foodstuffs, feed and fruit juices (**K-PECID**).

7. EXPERIMENTAL DATA:

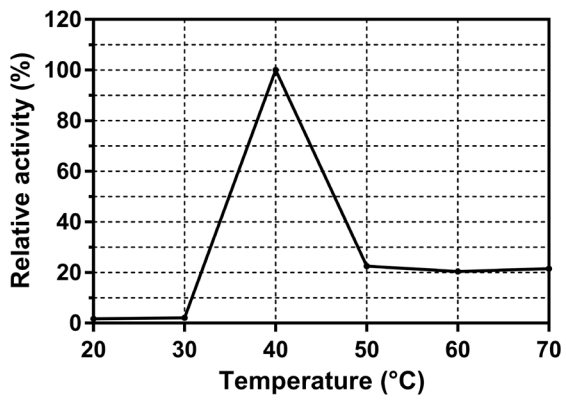
pH Optima



pH Stability



Thermal Optima



Thermal Stability

