



PULLULANASE M1 from *Klebsiella planticola* (Lot 130102b)

E-PULKP

11/19

(EC 3.2.1.41) pullulanase; pullulan 6- α -glucanohydrolase
CAZy Family: GH13
CAS: 9075-68-7

PROPERTIES

1. ELECTROPHORETIC PURITY:

- Single band on SDS-gel electrophoresis (MW ~ 109,000)

2. SPECIFIC ACTIVITY:

30 U/mg protein (on pullulan) at pH 5.0 and 40°C

One Unit of pullulanase activity is defined as the amount of enzyme required to release one μ mole of glucose reducing-sugar equivalents per minute from pullulan (5 mg/mL) in sodium acetate buffer (100 mM), pH 5.0 at 40°C.

3. SPECIFICITY:

Hydrolysis of (1,6)- α -D-glucosidic linkages in pullulan, amylopectin and glycogen, and in the α - and β -limit dextrans of amylopectin and glycogen.

4. RELATIVE RATES OF HYDROLYSIS OF SUBSTRATES:

Contamination with α -glucosidase (maltase) is less than 0.001%, with α -amylase is less than 0.007% and with *exo*- α -glucanase is less than 0.00009%.

Action on *p*NP-substrates and polysaccharides or oligosaccharides was determined at a final substrate concentration of 5 mM and 5 mg/mL, respectively, in sodium acetate buffer (100 mM), pH 5.0 at 40°C.

5. PHYSICOCHEMICAL PROPERTIES:

Recommended conditions of use are at pH 5.0 and up to 50°C

pH Optima:	5.0
pH Stability:	4.5-5.5
Temperature Optima:	40°C
Temperature Stability:	up to 50°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 5.0 containing 1 mg/mL BSA. **Swirl to mix the enzyme immediately prior to use.**