



endo-1,4- β -XYLANASE from rumen microorganism (Lot 80202f)

E-XYRU6

11/17

(EC 3.2.1.8) endo-1,4-beta-xylanase; 4-beta-D-xylan xylanohydrolase

CAZy Family: GH11

CAS: 9025-57-4

PROPERTIES

1. ELECTROPHORETIC PURITY:

- Single band on SDS-gel electrophoresis (MW ~26,500)
- Several bands on isoelectric focusing:
(major bands pI 6.0, 6.6 and 6.9)
(minor bands pI 3.6-5.1 and 7.0)

2. SPECIFIC ACTIVITY:

380 U/mg protein (on wheat arabinoxylan) at pH 6.0 and 40°C

One Unit of xylanase activity is defined as the amount of enzyme required to release one μ mole of xylose reducing-sugar equivalents per minute from wheat arabinoxylan (10 mg/mL) in sodium phosphate buffer (100 mM), pH 6.0 at 40°C.

3. SPECIFICITY:

endo-hydrolysis of (1,4)- β -D-xylosidic linkages in xylans.

4. RELATIVE RATES OF HYDROLYSIS OF SUBSTRATES:

Substrate	%
Wheat arabinoxylan	100
CM-Cellulose 4M	< 0.0003
Barley β -Glucan	< 0.0003
Carob Galactomannan	< 0.0003
<i>p</i> -Nitrophenyl α -L-arabinofuranoside	< 0.0003
<i>p</i> -Nitrophenyl β -xyloside	< 0.0003
Casein	< 0.0003

Action on pNP-substrates and polysaccharides or oligosaccharides was determined at a final substrate concentration of 2.5 mM and 5 mg/mL, respectively, in sodium phosphate buffer (100 mM), pH 6.5 at 40°C.

5. PHYSICOCHEMICAL PROPERTIES:

Recommended conditions of use are at pH 6.0 and up to 55°C

pH Optima: 5.5-6.5 (10 min reaction)

pH Stability: 6.0-8.5 (> 75% control activity after 24 h at 4°C)

Temperature Optima: 55°C (10 min reaction)

Temperature Stability: < 55°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 in sodium phosphate buffer (100 mM), pH 6.0 containing 1 mg/mL BSA. **Swirl to mix the enzyme immediately prior to use.**