



β -D-XYLANASE from *Bacillus stearothermophilus* T6 (Lot 101003b)

Recombinant - Thermostable

E-XYNBS

06/14

(EC 3.2.1.8) *endo*-1,4- β -D-xylanase

CAZy: GH Family 10

PROPERTIES

1. ELECTROPHORETIC PURITY:

- Single band on SDS-gel electrophoresis (MW ~ 43,600)
- Single major band on isoelectric focusing (pI ~ 6.5)

2. SPECIFIC ACTIVITY:

65 U/mg protein (on wheat arabinoxylan) at pH 6.5 and 70°C; ~12 U/mg protein (on wheat arabinoxylan) at pH 6.5 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 (5 mg/mL) in MES buffer (100 mM) pH 6.5.

3. RELATIVE RATES OF HYDROLYSIS OF SUBSTRATES:

Substrate	%
Wheat Arabinoxylan	100
CM-Cellulose 4M	~ 0.04
Barley β -Glucan	~ 5.7

Action on polysaccharide substrates was determined at a final substrate concentration of 5 mg/mL in MES buffer (100 mM), pH 6.5 at 40°C.

4. PHYSICO-CHEMICAL PROPERTIES:

- pH Optima: 6.5
- pH Stability: 3.0 - 9.0 (> 75% control activity after 24 hours at 4°C)
- Temperature Optima: 70°C (10 min. reaction)
- Temperature Stability: up to 60°C (> 90% control activity after 15 min.)

5. STORAGE CONDITIONS:

The enzyme is supplied as an ammonium sulphate suspension in 0.02% (w/v) sodium azide and should be stored at 4°C. For assay, this enzyme should be diluted in MES buffer (100 mM), pH 6.5 containing 0.5 mg/mL BSA. **Swirl to mix the enzyme immediately prior to use.**