



CELLULASE (*endo*- β -GLUCANASE) from *Trichoderma* sp. (Lot 111101a)

E-CELTR

03/14

PROPERTIES

1. ELECTROPHORETIC PURITY

- single band on SDS-gel electrophoresis (MW = 57,250); some minor bands
- single major band on Isoelectric focusing (pI = 4.7); minor band at pI 4.6

2. SPECIFIC ACTIVITY AND LEVEL OF OTHER ACTIVITIES

Substrate	Enzyme Measured	Specific Activity (U/mg protein)
CM-Cellulose 4M	<i>endo</i> -1,4- β -Glucanase	74
CM-Cellulose 7M	<i>endo</i> -1,4- β -Glucanase	72
Xyloglucan (Tamarind)	<i>endo</i> -1,4- β -Glucanase	52
Barley β -Glucan	<i>endo</i> -1,4- β -Glucanase	51
Amorphous Cellulose	<i>endo</i> -1,4- β -Glucanase	21
Konjac Glucomannan	<i>endo</i> -1,4- β -Glucanase	4.3
Birchwood Xylan	<i>endo</i> -1,4- β -Xylanase	7.5
Carob Galactomannan	<i>endo</i> -1,4- β -Mannanase	< 0.04
Pachyman	<i>endo</i> -1,3- β -Glucanase	< 0.001
Curdlan	<i>endo</i> -1,3- β -Glucanase	< 0.03
Starch	<i>endo</i> -1,4- α -Glucanase	< 0.04
<i>p</i> -NP- α -Glucoside	α -Glucosidase	< 0.001
<i>p</i> -NP- β -Glucoside	β -Glucosidase	< 0.001
<i>p</i> -NP- β -Xyloside	β -Xylosidase	< 0.001
<i>p</i> -NP- α -Galactoside	α -Galactosidase	< 0.001
<i>p</i> -NP- β -Galactoside	β -Galactosidase	< 0.001
<i>p</i> -NP- β -Mannoside	β -Mannosidase	< 0.001
<i>p</i> -NP- α -L-arabinoside	α -L-arabinofuranosidase	< 0.001

All activities are at pH 4.5 and 40°C. Glycosidase activities were measured using the appropriate *p*-Nitrophenyl glycoside (at 10 mM). *endo*-Glycanases were determined with the appropriate substrate (at 10 mg/mL) and using the Nelson/Somogyi reducing-sugar procedure.

3. PHYSICOCHEMICAL PROPERTIES

pH Optima:	4.5 - 5.0
pH Stability:	2.5 - 7.5
Temp. Optima:	70°C
Temperature Stability:	< 65°C

4. STORAGE AND USE CONDITIONS / RECOMMENDATIONS

The enzyme is supplied as an ammonium sulphate suspension in 0.02% sodium azide and should be stored at 4°C. For assay, this enzyme should be diluted in 100 mM sodium acetate buffer pH 4.5 containing 0.5 mg/mL BSA. On dissolving in buffer, the enzyme should be stored in the frozen state between use.