



CELLULASE (*endo*- β -GLUCANASE) from *Talaromyces emersonii* (Lot 30601)

E-CELTE (formerly known as *Penicillium emersonii*)

12/03

PROPERTIES

(1) ELECTROPHORETIC PURITY

- two bands on SDS-gel electrophoresis (MW = 37,000 - cellulase)
(and 47,200 - non-active).
- two major bands on isoelectric focusing (pI's = 3.4 and 3.6)

(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	102
CM-Cellulose 7M	<i>endo</i> -1,4- β -Glucanase	40
Barley β -Glucan	<i>endo</i> -1,4- β -Glucanase	70
Xyloglucan (Tamarind)	<i>endo</i> -1,4- β -Glucanase	0.2
Konjac Glucomannan	<i>endo</i> -1,4- β -Glucanase	0.6
Wheat Arabinoxylanylan	<i>endo</i> -1,4- β -Xylanase	0.5
Carob Galactomannan	<i>endo</i> -1,4- β -Mannanase	0.13
Ceralpha Reagent	-Amylase	0.001
<i>p</i> -NP- α -Glucoside	-Glucosidase	0.001
<i>p</i> -NP- β -Glucoside	β -Glucosidase	0.004

All activities except α -amylase are at pH 4.5 and 40°C. Glycosidase activities were measured using the appropriate *p*-Nitrophenyl glycoside (at 10mM). *endo*-Glycanases were determined with the appropriate substrate (at 10mg/ml) and using the Nelson/Somogyi reducing-sugar procedure. α -Amylase measured using the Ceralpha reagent at pH 5.2.

(3) PHYSICOCHEMICAL PROPERTIES

- pH Optima: 4.5 - 4.6
- pH Stability: 3-8 (1 h at 40°C or 30 h at 4°C).
- Temperature Optima: 70°C
- Temperature stability: < 70°C.

(4) STORAGE CONDITIONS

The enzyme is supplied as an ammonium sulphate suspension in 0.02% sodium azide and should be stored at 4°C. On dilution in buffer or water, the enzyme should be stored in the frozen state between use.

The concentration of enzyme as supplied is approximately 700U/ml.