INSTRUCTION MANUAL

SERVA Electrophoresis

Cellulase from *Trichoderma viride* Cat. No. 16426

Product Description:

General	An enzyme complex[1] derived from the fermentation of a selected strain. Contains macerase activity which is capable of cell wall decomposition. Cellulase is able to decompose natural (e.g. filter paper) as well as modified celluloses (e.g. carboxymethyl cellulose). It hydrolyses 1,4-β-D-glucosidic linkages in cellulose, lichenin and cereal β-D-glucans. In nature, cellulose is found in association with other components e.g. hemicellulose, lignin and pectin. SERVA cellulases contain a number of other activities, which assist in breaking down these components and degrading cell walls. α-Amylase hydrolyses 1,4-α-D-glucosidic linkages in polysaccharides containing three or more 1,4-α-linked D-glucose units. Pectinase randomly cleaves 1,4-α-D galactosiduronic linkages in galacturans.
Application	• Hydrolizes or degrades cellulosic materials from a wide variety of sources depending on enzyme dosage, reaction conditions and the type of material being treated.
Features	• Lyophilisate activity: ca. 1.5 U/mg* • Temperature optimum: 50 – 60 °C • Optimal pH: 4 - 5 (activity range 3 - 7) • Extraneous activities: α-amylase, hemicellulase, pectinase, protease
Stability/ Storage	Lyophilisate should be stored at a dry place in a tightly closed container at +2 °C to +8 °C. Cellulase solutions ar e stable at pH 5 – 7 at 4 °C for 24 h. Activity is completely d estroyed after 10 – 15 minutes at 80 °C.
Inhibition/ Inactivation	Cellulase is inhibited by its reaction products e.g. glucose, cellobiose. Hg^{2+} inhibits the activity completely, whereas Mn^{+}, Ag^{2+}, Zn^{2+} and Cu^{2+} are only slightly inhibitory.

***Unit definition:** 1 U catalyses the liberation of 1 µmol glucose from sodium carboxymethyl cellulose per minute at 40 °C, pH 4.5; glucose is determined with alkaline copper reagent[2].

[1]Beldman, G. et al. (1985) Eur. J. Biochem. 146, 301 - 308
[2]Okada, G. (1988) Methods Enzymol. 160, 259 – 263

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