

CELLULASE from *TRICHODERMA REESEI*

TENTATIVE

Prepared at the 31st JECFA (1987), published in FNP 38 (1988) and in FNP 52 (1992). An ADI 'not specified' was established at the 39th JECFA (1992)

Information required on the applicability of Method of Assay for Cellulase

SOURCES

Commercial enzyme preparations are produced by the controlled fermentation of *Trichoderma reeser* and isolated from the medium

Active principles

1. Cellulase (endo-1,4- β -glucanase)
2. Exo-1,4- β -D-glucosidase (glucan-1,4- β -glucosidase)
3. Exo-cellobiohydrolase (cellulose 1,4- β -cellobiosidase)
4. β -glucanase

Systematic names and numbers

1. 1,4-(1,3; 1,4)- β -D-Glucan-4-glucanohydrolase (EC 3.2.1.4)
2. 1,4- β -D-Glucoside glucohydrolase (EC 3.2.1.74)
3. 1,4- β -D-Glucan cellobiohydrolase (EC 3.2.1.91)
4. 1,3-(1,3; 1,4)- β -D-glucan-3(4)-glucanohydrolase (EC 3.2.1.6)

Reactions catalyzed

The enzyme preparations hydrolyze 1,4- β -glucan linkages in such polysaccharides as cellulose, yielding β -dextrins.

Secondary enzyme activities

Xylanase (EC 3.2.1.32)
Beta-glucosidase (EC 3.2.1.21)

DESCRIPTION

Off-white to tan amorphous powders, or liquids that may be dispersed in food-grade diluents and carriers; soluble in water but practically insoluble in ethanol, chloroform and ether

FUNCTIONAL USES

Enzyme preparation
Used in the preparation of fruit juices, wine, beer and vegetable oils

GENERAL SPECIFICATIONS

Must conform to the *General Specifications for Enzyme Preparations used in Food Processing* (see Volume Introduction)

CHARACTERISTICS

IDENTIFICATION

Cellulase activity (Vol. 4)

The sample shows cellulase activity