

CELLULASE from *TRICHODERMA LONGIBRACHIATUM*

Prepared at the 39th JECFA (1992), published in FNP 52 Add 1 (1992) superseding specifications prepared at the 31st JECFA (1987), published in FNP 38 (1988) in FNP 52 (1992) under the name Cellulase from *Trichoderma reesei*. An ADI 'not specified' was established at the 39th JECFA (1992)

SOURCES

Commercial enzyme preparations are produced extracellularly by the controlled fermentation of *Trichoderma longibrachiatum* and isolated from the medium. The name of the organism used previously was *Trichoderma reesei*. In 1986, the International Commission on the Taxonomy of Fungi (ICTF) recommended use of the name *Trichoderma longibrachiatum*.

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

Amyloglucosidase (EC 3.2.1.3); Cellobiase
Xylanase (EC 3.2.1.32); Proteinase
Hemicellulase; Lipase (ED 3.1.1.3)
Pectinase (EC 3.2.1.15)

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