

α -AMYLASE from *BACILLUS STEAROTHERMOPHILUS* expressed in *BACILLUS SUBTILIS*

Prepared at the 53rd JECFA (1999) and published in FNP 52 Add 7 (1999), superseding tentative specifications prepared at the 37th JECFA (1990), published in FNP 52 (1992). An ADI 'not specified' was established at the 37th JECFA (1990).

SYNONYMS

Glycogenase

SOURCES

Produced by the controlled fermentation of *Bacillus subtilis* containing the gene for alpha-amylase from *Bacillus stearothermophilus*. The strain of *Bacillus subtilis* is non-pathogenic and non-toxicogenic (for example ATCC 39,709). When fermentation is complete, the broth is clarified with calcium chloride. The broth is separated from the cells by filtration with diatomaceous earth, and the filtered, clarified broth containing the soluble enzyme is then ultrafiltered to concentrate the product to the desired activity.

Active principles

alpha-Amylase

Systematic names and numbers

1,4-alpha-D-Glucan glucanohydrolase (EC 3.2.1.1)

Reactions catalysed

Endohydrolysis of 1,4-alpha-D-glucosidic linkages in polysaccharides, containing three or more 1,4-alpha-linked D-glucose units

DESCRIPTION

Typically tan to dark brown liquid containing the active enzyme

FUNCTIONAL USES

Enzyme preparation
Used in starch hydrolysis

GENERAL SPECIFICATIONS

Must conform to the General Specifications for Enzyme Preparations Used in Food Processing (See Volume Introduction)

CHARACTERISTICS

IDENTIFICATION

alpha-Amylase activity
(Vol. 4)

The sample shows bacterial alpha-amylase activity