

GLUCOSE ISOMERASE from *STREPTOMYCES OLIVACEUS*

Prepared at the 28th JECFA (1984), published in FNP 31/2 (1984) and in FNP 52 (1992). An ADI 'acceptable' was established at the 29th JECFA (1985).

SYNONYMS

Xylose isomerase

SOURCES

Produced by the controlled fermentation of *Streptomyces olivaceus*

Active principles

Xylose isomerase (glucose isomerase)

Systematic names and numbers

D-Xylose ketol-isomerase (EC 5.3.1.5)

Reactions catalyzed

D-Xylose and D-glucose are converted to D-xylulose and D-fructose, respectively

DESCRIPTION

Off-white to brown granules (immobilized preparation) or liquids, insoluble in water (granules), ethanol, chloroform and ether
The immobilized preparations are rendered insoluble in water by treatment with gelatine (carrier) and glutaraldehyde (immobilization agent).

FUNCTIONAL USES

Enzyme preparation
Used in the preparation of high fructose corn syrup and other fructose starch syrups.

GENERAL SPECIFICATIONS

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

CHARACTERISTICS

IDENTIFICATION

Glucose isomerase activity
(Vol. 4)

The sample shows glucose isomerase activity

PURITY

Glutaraldehyde (Vol. 4)

Passes Limit Test for Glutaraldehyde from Immobilized Glucose Isomerases crosslinked with Glutaraldehyde