GLUCOSE ISOMERASE from BACILLUS COAGULANS

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 Bacillus coagulans

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