Review

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Biocatalytic strategies for the production of high fructose syrup from inulin

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ABSTRACT

The consumption of natural and low calorie sugars has increased enormously from the past few decades. To fulfil the demands, the production of healthy sweeteners as an alternative to sucrose has recently received considerable interest. Fructose is the most health beneficial and safest sugar amongst them. It is generally recognised as safe (GRAS) and has become an important food ingredient due its sweetening and various health promising functional properties. Commercially, high fructose syrup is prepared from starch by multienzymatic process. Single-step enzymatic hydrolysis of inulin using inulinase has emerged as an alternate to the conventional approach to reduce complexity, time and cost. The present review, outlines the enzymatic strategies used for the preparation of high fructose syrup from inulin/inulin-rich plant materials in batch and continuous systems, and its conclusions.

Keywords: Inulin, Inulinase, High fructose syrup, Fructooligosaccharides

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