

HIGH-FRUCTOSE SYRUP PRODUCTION FROM SUGARCANE USING IMMOBILIZED INVERTASE

Process to produce High-fructose syrup from sugarcane juice as raw material, using immobilized invertase.



BACKGROUND

Cane sugar and High-fructose corn syrup (HFCS) are highly used sweeteners in the beverage industry. It is estimated that more than 2 million tons of sugar are used only by this industry in Mexico (2012).

The sweetener industry (mainly sugar and HFCS) is highly regulated by local government, and in Mexico the importation/exportation of sugar is limited.

TECHNOLOGY

Our researchers have developed a novel process to produce High-fructose syrup from sugarcane juice as raw material, using immobilized invertase.

This syrup can be used in different industries, including beverage, bakery, confectionary, pharmaceutical, among others.

KEY BENEFITS

- Uses sugarcane juice, instead of corn.
- Uses immobilized invertase to produce the syrup, with more than 90% conversion efficiency of sucrose.
- 1 ton of sugarcane juice at 16°Brix produces around 200 kg of syrup at 70°Brix.

DEVELOPMENT STATUS

- Technology licensed in June 2017.
Technology Readiness Level: 6/9


INTELLECTUAL PROPERTY


Granted patents in: Mexico, Cuba, USA, Australia, China, Brazil, Southafrica, India and Pakistan.

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