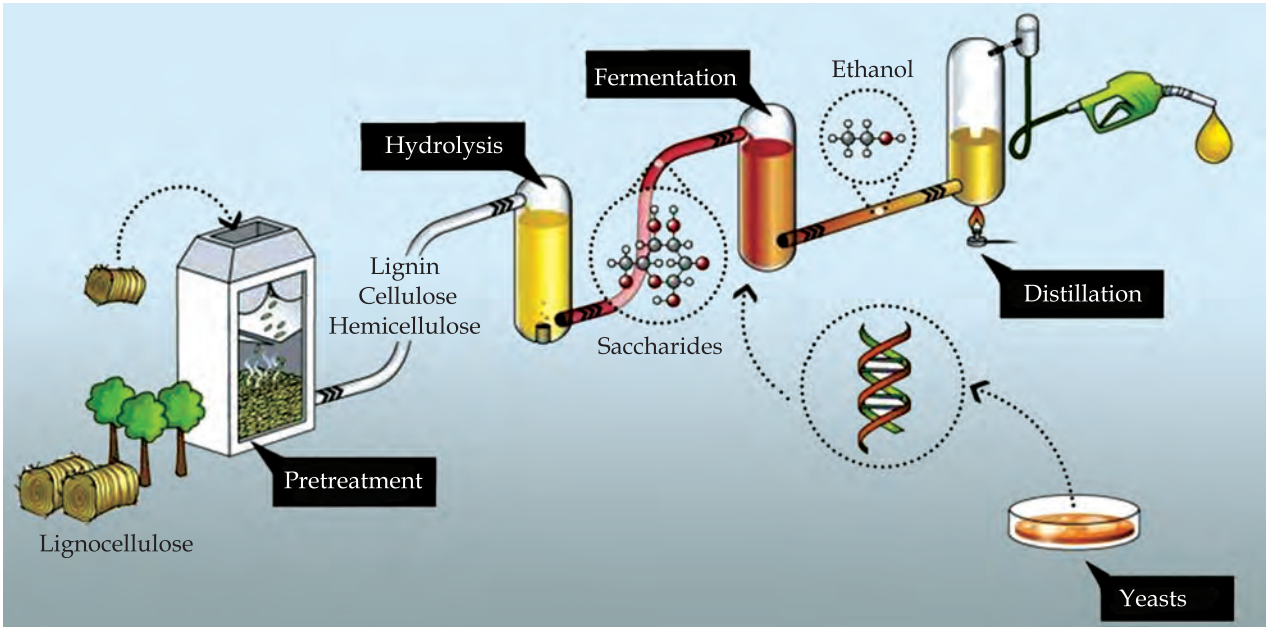
ETHANOL BIOTECHNOLOGICAL PRODUCTION FROM XYLOSE WITH THE USE OF YEASTS



Scheme for ethanol production from lignocellulose with the use of yeasts

Areas of Application

Ethanol is a promising renewable liquid fuel used as a gasoline additive to reduce the content of toxic substances in exhaust gas and to prevent emission of additional carbon dioxide to atmosphere due to the use of renewable vegetable raw material (lignocellulose)

Specification

Ogataea (Hansenula) polymorpha recombinant strains with a 25 times higher yield of ethanol from xylose, an optimized medium composition, and conditions of their cultivation are a framework for obtaining effective producers of ethanol from lignocellulose hydrolysates with a maximum yield of target product

Advantages

O. polymorpha yeast recombinant strains are more thermotolerant as compared with the known counterparts. Due to a high ethanol yield in the course of high-temperature xylose alcohol fermentation the obtained strains can be used in simultaneous saccharization and fermentation of lignocellulose

Stage of Development. Suggestions for Commercialization

IRL3, TRL3
Recombinant strains with increased yield of ethanol from xylose, which have been tested on real hydrolysites of vegetable raw materials are provided

IPR Protection

IPR3

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