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Effect of different Pretreatment, Processing and Optimization methods on Bioethanol Production from a variety of Fruits and Fruit wastes

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Abstract : Due to rising energy demands and environmental concerns, there is an urgent need for the development of biofuels made from economical, renewable, and environmentally safe raw materials. Fruit biomass rich in sucrose, cellulose, and hemicellulose is cheap, readily available, and underutilised; it has the potential to be a substrate for bioethanol, one of the world's most widely produced liquid biofuels. Fruits being highly perishable, amounts to large quantities of waste as they are simply discarded due to spoilage during harvesting, transportation, storage and processing by fruit vendors and food processing industries, which can be industrially utilized to produce bioethanol. This bioethanol can be made more effective by using different pretreatment, processing methods and parameters that govern its efficacy.This paper explores those pre-treatment and processing methods used to improve bioethanol yield, as well as the parameters for optimising bioethanol production from a variety of fruits and fruit wastes.

Keywords : Bioethanol, Fruit wastes, Pretreatment, Fermentation.

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