

Pretreatment of Lignocellulosic Material - Bagasse for Ethanol Production

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Abstract: *Lignocelluloses are most viable raw materials which can be utilized for the fermentative production of ethanol. However, to convert them for biodegradation / hydrolysis these need to be pretreated by various methods. In the present study, biodegradability / digestibility of bagasse has been identified using different physical and chemical methods. The reagents used for pretreatment of bagasse are NaOH, H₂SO₄ and HCl, whereas grinding, milling, steam explosion have been used as physical methods. A significant removal of lignin has been obtained in all the methods used, which ranged from 32-85%. Alkali treatment and steam explosion gave best results, but hydrochloric acid was comparatively less effective and required more time and drastic experimental conditions. Sulphuric acid too was effective in removing lignin and increasing the digestibility of cellulose.*

Keywords: Lignocellulosic waste, Bagasse, Pretreatment, Ethanol etc.