Short Communication

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Efficient detoxification of corn cob hydrolysate with ion-exchange resin for enhanced xylitol production by *Candida tropicalis* MTCC 6192

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Abstract

The present study demonstrates utilization of secondary agricultural wastes for xylitol production. The highest xylan-to-xylose (70%) conversion was achieved using dilute nitric acid as catalyst followed by resin treatment. Results show that resin treatment efficiently removed nitrate salt (70%), phenolic content and 5-HMF (70%). Highest xylitol yield (85%) was achieved during fermentation using *Candida tropicalis* MTCC 6192 from the neutralized hemicellulosic hydrolysate medium. Good recovery (>15%) was achieved from corncob with 85% xylose to xylitol conversion during fermentation. This two-step process for transformation of agri-waste to xylitol is much simpler and it could possibly be considered for up scaling after process optimization parameters.

Keywords: Corncob; Xylitol; Nitric acid hydrolysis; *Candida tropicalis*; Fermentation

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