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**Ethanol production from mixtures of sugarcane bagasse and *Dioscorea composita*
extracted residue with high solid loading**

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ABSTRACT

Various mixing ratios of alkali pretreated sugarcane bagasse and starch-rich
waste *Dioscorea composita* hemls extracted residue (DER) were evaluated via
simultaneous saccharification and fermentation (SSF) with 12% (w/w) solid loading,
and the mixture ratio of 1:1 achieved the highest ethanol concentration and yield.
When the solid loading was increased from 12% to 32%, the ethanol concentration
was increased to 72.04 g/L, whereas the ethanol yield was reduced from 84.40% to
73.71%. With batch feeding and the addition of 0.1 % (w/v) Tween 80, the final
ethanol concentration and yield of SSF at 34% loading were 82.83 g/L and 77.22%,
respectively. Due to the integration with existing starch-based ethanol industry, the
co-fermentation is expected to be a competitive alternative form for cellulosic ethanol

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