

Onggok Hydrolysis Process Using Catalysts From Kesambi Fruit Extract (Schleichera oleosa, Merr) To Produce Bioethanol

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ABSTRACT

Onggok is solid waste produced by tapioca flour industry. Onggok have 62,57% starch and 3,89% fibers so it can be used to produce bioethanol. This study aims to found the best hydrolysis process using catalyst from kesambi fruit extract with concentration 60%, 50%, 30% and the hydrolysis time is 30 minutes and 45 minutes. Parameters that will be observed is sugar reduction, total sugar and dextrose equivalent. Fixed variabel in this research is hydrolysis process temperature at 121°C using autoclave. The best concentration and time for hydrolysis process is 60% concentration and time is 30 minutes. Based on this research, total sugar is 9,88%, the highest sugar reduction is 0,62%, dextrose equivalent is 6,27% and can produced bioethanol 21 ml with 9,59% concentration from 275ml fermentation substract.

Keywords : onggok, bioethanol, hydrolysis, dextrose equivalent.