



A Peer Reviewed International Journal of Asian
Academic Research Associates

AARJMD

**ASIAN ACADEMIC RESEARCH
JOURNAL OF MULTIDISCIPLINARY**



DIRECT CHLORO ETHANOL FUEL CELL PRODUCTION FROM ORGANIC AND FOOD WASTES

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Abstract

To achieve this, the conversion of organic waste (Old newspapers) and food waste (maize) were respectively carried out via acid and microbial hydrolysis, which yielded 42% and 63% fermentable sugar wort. Production of chloro ethanol fuel from organic and food waste has been carried out with the singular aim of converting the waste to useful material. This was then converted into chloro ethanol by fermentation process using *Sacchromyces ceverisiae*. 95% chloro ethanol was obtained by fractional distillation of the fermentable wort and the total volume of chloro ethanol produced from 2,500 grams of the organic and food wastes was 0.86 liters. Fermentation Kinetic parameters were evaluated. Considering the percentage fermentable sugar yield from the biomasses in study, it is more economical to produce chloro ethanol from food waste (maize) than old organic waste (old newspaper).

Keywords; Ethanol fuel; Organic waste; Biomass; Fermentation; Conversion; Distillation.

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