# Effect of 1-butyl-3-methyl-imidazodium chloride (BMIMCl) Pretreatment on Structural and Glucose Yield of the Rice Husk

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**ABSTRACT**

Ionic liquid (IL) are of great interest as solvents for production of fuels from lignocellulosic biomass. The aim of this research is to determine the effect of ionic liquid, 1-butyl-3-methylimidazolium (BMIMCl) pretreatment on rice husk (*Oryza sativa*) based on it structural changes and glucose yield production. The pretreatment was conducted by heating 5% (w/w) rice husk in BMIMCl solution at 80 ℃ for 48 hours. The structural changes of regenerated rice husk were observed and characterized using X-ray diffraction (XRD) and Fourier transform infrared spectroscopy (FTIR). It was found that the regenerated rice husk was less crystalline and higher amorphous upon BMIMCl treatment. The total sugar yield before and after fermentation by *saccharomyces cerevisiae* was analysed using dinitrosalicyclic acid (DNS) method. The regenerated rice husk produces higher total sugar yield compared with untreated rice husk.

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