Biodiesel Production Catalysed by Magnetic Palm Kernel Shell-Potassium Hydroxide

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Abstract. Biodiesel was prepared by transesterification process using heterogeneous catalyst has received a lot of interest lately as a sustainable source of biofuel. Hence, there is a need to study a generalized reaction kinetic model that can be used for all the reactions involved in biodiesel production. This study produces biodiesel by transesterifying palm oil using magnetic palm kernel shell-potassium hydroxide. The catalyst recorded a BET surface area of 47.72 m^2/g. The maximum biodiesel yield, 95.78%, was obtained when reaction temperature and time were 55°C and 2 hours, respectively.