Biodiesel Production from Waste Lard Oil using Supercritical Methanol Process

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In this study, we have made a fundamental study on the transesterification of the waste lard oil in supercritical methanol to validate the application possibility of one-step supercritical methanol process without any pretreatments. The effects of reaction factors on the content of fatty acid methyl esters (FAMEs) were investigated. The content of FAMEs in biodiesel was analyzed by gas chromatography (GC). It was found that one-step supercritical transesterification of waste lard oil is much simpler and environment-friendly compared with the conventional catalytic method in which pretreatment of raw material have to be needed and all the catalysts and saponificated products have to be removed.