

Biodiesel production from refined and waste soybean oil using supercritical methanol

이시홍, 류재훈, 신희용, 배성열*
한양대학교
(bae5272@hanyang.ac.kr*)

In this study, non-catalytic transesterification of refined and waste soybean frying oil using supercritical methanol was performed. The highest content of fatty acid methyl esters (FAMEs) in biodiesel from refined oil was obtained under the following reaction conditions (320°C, 20MPa, 15min, and 500rpm). Results showed that the content of FAMEs in biodiesel from waste oil was considerably lower than that from refined oil because waste soybean frying oil contains glycerides of oxidation and polymerization. It is estimated that post-treatment such as distillation would be required to obtain high purity biodiesel.