

A kinetic study for the synthesis of biodiesel fuel from vegetable oils using supercritical methanol

이홍식^{1,2}, 유성진^{1,2}, 이윤우^{1,2,*}
¹서울대학교 화학생물공학부;
²서울대학교 화학공정신기술연구소
(ywlee@snu.ac.kr*)

A kinetic study about reactions during the synthesis of biodiesel fuel from vegetable oils using supercritical methanol was performed for the process design and economic estimation. A series of experiments were carried out altering various parameters such as kind of vegetable oils, temperature and molar ratio of methanol and oil. The content of each components in products was measured by gas chromatograph. As reaction temperature increased, the rate of transesterification also increased. However, at the same time, the rate of decomposition of reactants and products also increased so that the yield of fatty acid methyl ester decreased.