

### Synthesis of biodiesel using supercritical methanol

임정원, 이윤우\*, 최준혁, 백지원  
서울대학교 공과대학 화학생물공학부  
(ywlee@snu.ac.kr\*)

Diesel fuel is being used in large fields in transport, agriculture, industrial, commercial and domestic sectors. Recently, biodiesel is more and more important as an alternative fuel for diesel, because the world is confronted with fossil fuel exhaustions and environmental problems. Biodiesel is prepared using the transesterification process of triglycerides. Supercritical methanol process requires the shorter reaction time and simpler purification procedure since reaction does not need any catalyst. In this work, the transesterification of soybean oil has been carried out a tubular-type reactor with supercritical methanol in the absence of catalyst. We investigated reaction yield at various temperatures, pressures, oil to alcohol molar ratios, and reaction times.