

Synthesis of Terephthalic Acid in Supercritical Carbon Dioxide

김대성, 신영호, 이현욱, 김화용, 김재훈¹, 이윤우*
서울대학교 화학생명공학부; ¹한국과학기술연구원
(ywlee@snu.ac.kr*)

Synthesis of terephthalic acid via the partial oxidation of p-xylene in supercritical carbon dioxide at temperature ranging from 150 to 265 °C was performed. The volume of the titanium batch reactor was 32 ml, and a molten salt bath was used as a heat source. Oxygen gas served as the oxidant, and cobalt bromide mainly as the catalyst. The products from the reactions were characterized by high performance liquid chromatography (HPLC). Through this study, some process variables such as retention time, reaction temperature, catalyst type, and the amount of catalyst were investigated.