

Difatty acyl urea from corn oil: synthesis and characterization

ABSTRACT

In this study, difatty acyl urea has been successfully synthesized from corn oil using sodium ethoxide as a catalyst. Ethyl fatty ester and glycerol were produced as by-products. In this reaction, corn oil was refluxed with urea in ethanol. The highest conversion percentage (78%) was obtained when the process was carried out for 8 hours using urea to corn oil ratio of 5.6: 1.0 at 78 degrees C. Both difatty acyl urea and ethyl fatty ester have been characterized using elemental analysis, Fourier transform infrared (FTIR) spectroscopy and ^1H nuclear magnetic resonance (NMR) technique.

Keyword: Difatty acyl urea; Ethyl fatty ester; Corn oil