

Determination of methyl ester content in biodiesel prepared by supercritical methanol process

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The content of fatty acid methyl esters (FAMEs) in biodiesel, which was produced by a supercritical methanol process, was determined by gas chromatography (GC). In this method, quantitative and qualitative analyses of biodiesel samples were conducted by GC and GC mass spectroscopy (GC/MS), respectively, using a capillary column (J&W, DB-23). It was found that FAME isomers were detected in biodiesel samples prepared by the supercritical methanol treatment. The quantity of FAME isomers was used to determine the ester content of biodiesel. Results showed that the methyl ester content in biodiesel prepared by supercritical process can be more accurately analyzed by the method developed in this study in comparison to the established method.