

Assessment of factors that affect the selectivity of catalytic partial hydrogenation of FAMES

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Biodiesel consists of saturated FAMES (fatty acid methyl esters), monounsaturated FAMES, and polyunsaturated FAMES. Olefin metathesis of these unsaturated FAMES yield valuable olefin products. Of these olefin products, those derived from monounsaturated FAMES give the most valuable olefins. In order to increase the yield of these olefins, partial hydrogenation of polyunsaturated FAMES into monounsaturated FAMES has been studied.

This study aims to assess the factors that affect the selectivity of catalytic FAME partial hydrogenation. Different methods of FAMES production such as supercritical transesterification and base-catalyzed transesterification have been done and various treatments on FAMES such as dry-washing and distillation have been carried out. Their results have been analyzed to see which factors affect the selectivity of catalytic partial hydrogenation.