

Title: Methanolysis of Triglycerides using Jatropha Oil and KOH Catalyst.

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Outlet: International Journal of Advanced Research in IT and Engineering, Vol. 2(3), March 2013, Pp. 61-69.

Date of Publication: 2013

Abstract: In this study, Jatropha curcas oil was used as feedstock for biodiesel production by alkali-catalyzed methanolysis. To establish the optimum conditions for biodiesel production, effects of certain factors were investigated, these factors are oil-to-methanol molar ratios (1:4 - 1:8), KOH catalyst concentrations (0.5 - 1.5% w/w oil), reaction temperatures (50 - 70°C), and reaction times (55 - 90minutes). Biodiesel produced were analyzed to determine its viscosity, flash point and pour point. The experimental work revealed that optimum conditions for Jatropha curcas biodiesel production were oil-to-methanol molar ratio of 1:6, a catalyst concentration of 1.0% w/w oil, a reaction temperature of 60 °C, and a reaction time of 80 minutes. The methyl ester produced under these optimum conditions was 93.75 % w/w.