

## Statistic Optimization of Supercritical Transesterification of Soybean Oil

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Transesterification of soybean oil in supercritical methanol was carried out without using any catalyst. Response surface methodology (RSM) was used to evaluate the effects of reaction parameters such as reaction temperature (T), time (t), pressure (P) and the molar ratio of methanol to oil (M). Central composite design was employed to fit the available response data to a second order polynomial RS models. The optimum conditions maximizing the methyl ester content in biodiesel were investigated.