

## Excess Methanol Recovery in Biodiesel Production Process Using a Distillation Column: A Simulation Study

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### Abstract

This paper presents an ASPEN PLUS™ simulation study for excess methanol recovery in continuous biodiesel production process using a distillation column. The feedstock used for biodiesel production was Triolein containing 15% free fatty acid (Oleic Acid). The special attention was devoted to the effect of different alcohol to oil ratio and important design and operating parameters of distillation column on excess methanol recovery from the product. The energy consumption is represented by reboiler heat duty of distillation column. Analysis of simulation results shows that for a certain distillation operating condition and reaction parameters it is possible to recover around 95-98% of excess methanol before phase separation of biodiesel and glycerol, although for high alcohol to oil ratio the energy requirement increases exponentially.

DOI: 10.3329/ceerb.v13i2.3538

*Chemical Engineering Research Bulletin* 13 (2009) 55-60

### References

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*Chemical Engineering Research Bulletin* ISSN Print: 0379-7678 Online: 2072-9510

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