

**PRODUCTION OF BIODIESEL FROM *Jatropha curcas*
SEEDS AND USED COOKING OILS**

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ABSTRACT

PRODUCTION OF BIODIESEL FROM *Jatropha curcas* SEEDS AND USED COOKING OIL

Jatropha curcas is a plant that grows in arid condition with variety of applications and economic potential. *Jatropha curcas* seeds contain high amount of oil that can be converted to biodiesel and used as alternative fuel. Used cooking oil (UCO) causes severe environment problems. This oil has potentials as raw material for biodiesel production. The aim of this study was to produce biodiesel from *Jatropha curcas* seeds and also from UCO through transesterification process 120 minutes of reaction time. Soxhlet extraction was used to extract oil from the *Jatropha curcas* seeds. Visual inspection was performed to observe the layers that indicate successful biodiesel reaction while pH value and FTIR analysis was used to determine the production of biodiesel. Flame test was used to testing the biodiesel. Result showed oil can be obtained by using soxhlet extractor. All the samples form two phases layer after transesterification process. Ester compound were present in all the samples using FTIR analysis. All the samples showed positive flame test. The oil from *Jatropha curcas* seeds and used cooking oil could be useful as biodiesel feedstock.