

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

**NURUL NABILA BINTI SHAMSUL KHAMAR**

**Final Year Project Report Submitted in  
Partial Fulfillment of the Requirement for the  
Degree of Bachelor of Science (Hons.) Biology  
In the Faculty of Applied Science  
Universiti Teknologi MARA**

**JANUARY 2017**

This Final Year Project Report entitled “**Production of Biodiesel from *Jatropha curcas* and Used Cooking Oils**” was submitted by Nurul Nabila binti Shamsul Khamar, in partial fulfilment of the requirements for the Degree of Bachelor of science (Hons.) Biology, in the Faculty of Applied Sciences, and was approved by

---

Sarini binti Ahmad Wakid  
Supervisor  
Faculty of Applied Science  
UiTM Negeri Sembilan  
Kampus Kuala Pilah  
Pekan Parit Tinggi  
72000 Kuala Pilah  
Negeri Sembilan

---

Ilyanie binti Haji Yaacob  
Project Coordinator  
Faculty of Applied Science  
UiTM Negeri Sembilan  
Kampus Kuala Pilah  
Pekan Parit Tinggi  
72000 Kuala Pilah  
Negeri Sembilan

---

Dr. Nor' Aishah Abu Shah  
Head of Biology School  
Faculty of Applied Science  
UiTM Negeri Sembilan  
Kampus Kuala Pilah  
Pekan Parit Tinggi  
72000 Kuala Pilah  
Negeri Sembilan

Date \_\_\_\_\_

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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.