PROPERTIES OF PARTICLEBOARD MADE FROM ADMIXTURE MATERIALS OF KELEMPAYAN (*Neolamarckia cadamba*), MIXED SPECIES OF DURIAN HUSK AND OIL PALM FROND (*Elaeis guineensis jacq.)* IN RELATION TO DENSITY

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Final Year Project Report Submitted in
Partial Fulfilment of the Requirement for the
Bachelor of Science (Hons.) in Furniture Technology
in the Faculty of Applied Science
Universiti Teknologi MARA

JULY 2014

ACKNOWLEDGEMENT

بسم الله الرحمن الرحيم

Assalamualaikum W.B.T

First of all, I would like to express my gratitude to Allah SWT, the almighty for giving me the opportunity and a healthy condition during the process of finishing my final year project. To my FYP's lecturers, Prof. Dr. Jamaluddin bin Kasim and Assoc. Prof. Dr. Wan Mohd Nazri bin Wan Abd Rahman , thank you so much for all your valuable guidance and knowledge and all the experiences you had shared with me .

I also would like to say a big thanks to my supervisor, Dr. Shaikh Abdul Karim Yamani bin Zakaria, for guiding and correcting me through all the way in finishing my project. Do not forget, thanks to Miss Nurus Syahida binti Tahreb for helping me in my writing.

My sincerest appreciation also goes to UiTM staffs and other people whom willing to sacrifice their time and also provided me with the materials I need. Lastly, thousand thanks to my beloved parents, Mr Ismadi bin Ismail and Madam Rohayati bt. Mohd Ali for their support in term of finance and morale. And thanks to all my classmates from AS2276B for all the information they shared and all those helping hands they had gave.

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PROPERTIES OF PARTICLEBOARDS MADE FROM ADMIXTURE MATERIALS OF KELEMPAYAN (*Neolamarckia cadamba*), MIXED SPECIES OF DURIAN HUSK AND OIL PALM FROND (*Elaeis guineensis jacq.*) IN RELATION TO DENSITY

The properties of particleboards made from admixture materials of Kelempayan (*Neolamarckia cadamba*), mixed species of durian husk and oil palm frond (*Elaeis guineensis jacq.*) were studied. This is due to the depleting amount of forest resources and also concerned towards the environment. Three types of boards which were produced from Kelempayan (*Neolamarckia cadamba*), Kelempayan (*Neolamarckia cadamba*) mixed with the mixed species of durian husk and Kelempayan (*Neolamarckia cadamba*) mixed with oil palm frond (*Elaeis guineensis jacq.*). The effect of different board densities (600, 700 and 800 kg/m^3) and different admixture materials on particleboard's mechanical and physical properties were determined. 10% of Phenol Formaldehyde (PF) was used in this study. Tests were done according to MS 1787. The result obtained were compared to specification MS 1036: 2006. The MOR, MOE, internal bonding and thickness swelling results had showed that higher density has a higher value. Among three boards, Kelempayan (*Neolamarckia cadamba*) mixed with oil palm frond (*Elaeis guineensis jacq.*) the best performance for mechanical and physical properties.