# PROPERTIES OF KELEMPAYAN PARTICLEBOARD WITH DIFFERENT RESIN CONTENT

## (10%, 11% AND 12%)

AHMAD HUSNI BIN RIPAAI

MOHAMAD AMIRUL BIN KAMARUDDIN

MUHAMMAD SYARAFI BIN ABDUL KARIM

DIPLOMA IN WOOD INDUSTRY

UNIVERSITI TEKNOLOGI MARA

MARCH 2012

## ACKNOWLEDGEMENTS

Alhamdulillah with the times that has been given, we're kindly can complete our report. Our greatest gratitude to Allah Almighty for His Blessing because we're able to continued our normal life as usual.

We would like to take this opportunity to thanks to everyone especially to our advisor Madam Noorshashillawati Azura Mohammad. Actually she gives all the support, suggestion, comment and advice towards this final project paper. Meanwhile, we also have to appreciate to Prof. Madya Abdul Jalil for his entire lesson in finishing this final project paper. All the kindness you've showed we would remember for all our life.

Also special thanks to the staff diploma in Wood Industry workshop, Mr. Shahril Izanie for his priceless help in preparing and information gave in this research.

Lastly, for someone very special in our heart who always gives support and advice, our smile make us become stronger and to all my friends and families, thanks you for all. Your support and advice though out completing this report successfully. We're really appreciating all your kindness. May ALLAH bless you.

## TABLE OF CONTENTS

## ABSTRACT

## PROPERTIES OF KELEMPAYAN PARTICLEBOARD WITH DIFFERENT RESIN CONTENT (10%, 11% AND 12%)

The properties of particleboard from kelempayan (*Anthocepalus chinensis*) species with phenol formaldehyde (PF) resin were study. The effect of different particle size (1.0 mm, and 2.0 mm ) and resin contents (10%, 11%, and 12% ) on particleboard were determined. Target density of particleboard is 550 kg/m$^3$. The particleboard are tested for physical and mechanical properties using European standard. Mechanical properties similar MOE, MOR, IB and physical properties (thickness swelling and water absorption) were carry out. In general, Kelempayan has significant and non significant on the mechanical properties and physical properties of boards. By using the British standard (BS EN), the board were met the requirement only for mechanical properties, while for physical properties, it do not met the standard.