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Effect of palm oil coating at different concentration on mango (Mangifera indica L.) during storage at ambient temperature / Hamizah Hassan.

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### EFFECT OF PALM OIL COATING AT DIFFERENT CONCENTRATION ON MANGO (*Mangifera indica* L.) DURING STORAGE AT AMBIENT TEMPERATURE

By Hamizah Binti Hassan

Research Report submitted in partial fulfillment of the requirement for the degree of Bachelor of Agrotechnology Science (Post Harvest Technology)

Department of Agrotechnology FACULTY OF AGROTECHNOLOGY AND FOOD SCIENCE UNIVERSITI MALAYSIA TERENGGANU 2009



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## DECLARATION

I hereby declare that the work in this thesis is my own except for quotations and summaries which have been duly acknowledged.

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#### ACKNOWLEDGEMENT

First and foremost, I would like to thank to Allah The Almighty for His blessing, I acquired the spiritual strength to complete this thesis. I would like to express my heartfelt gratitude to all those who gave me the possibility to complete this project. Most of all, I would like to thank my final year project supervisor, Dr. Adzemi Mat Arshad for his patience and professionalism in teaching me from the very basic. His trust and scientific excitement inspired me in the most important moment of making right decision and I am glad to work with him. Special thanks to all staffs of Post Harvest Laboratory, I am truly grateful for the kindness and guidance from which I was able to complete my project work smoothly. Special grateful also to my beloved mom, dad and siblings for all the supports and advices that strengthen up my soul to accomplish this study. Lastly to all my course mates, roommate and friends, thanks for helping and being supportive to me. May Allah bless all of you, thank you.

#### ABSTRACT

As a climacteric fruit, mango has a short post-harvest life especially at ambient temperature. Lipid-based edible coatings can be used to help in the preservation of fresh fruit because they provide a partial barrier to moisture, oxygen and carbon dioxide in slowing fruit ripening. But, the exact coatings concentration to be used for specific fruits should be continually evaluated to optimize it effect. This study was conducted to determine the effects of four different coating concentrations of palm oil which are 0% (uncoated) served as control, 5%, 10% and 15%, used as a coating material for 'Chokanan' mango (Mangifera indica, L.) stored at ambient temperature. Color, firmness, total soluble solids and percentage of weight loss were assessed every 2 day intervals until day 12. Mango at maturity index 2 were dipped into homogenized palm oil coating, air-dried and stored for at ambient temperature. 10% palm oil coating concentration found to be the most suitable treatment in improving the post harvest quality of mango because this treatment showed the most positive results in maintaining firmness and skin color (L\*, a\*and b\* values) followed by 15% coating concentration that was able to maintain mangoes total soluble solids during storage. However, most of the coated samples had no significant different in several parameters.