DEVELOPMENT AND PHYSICOCHEMICAL PROPERTIES OF CHINESE STEAMED BREAD INCORPORATE WITH PARKIA SPECIOSA POD FLOUR

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FACULTY OF AGROTECHNOLOGY AND FOOD SCIENCE
UNIVERSITI MALAYSIA TERENGGANU
2012

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DEVELOPMENT AND PHYSICOCHEMICAL PROPERTIES OF CHINESE STEAMED BREAD INCORPORATE WITH PARKIA SPECIOSA POD FLOUR

by

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

FOOD SCIENCE DEPARTMENT
FACULTY OF AGROTECHNOLOGY AND FOOD SCIENCE OF
UNIVERSITI MALAYSIA TERENGGANU
2012

ENDORSEMENT

The project report entitled **Development and Physicochemical Properties of Chinese Steamed Bread Incorporated with Parkia Speciosa Pod Flour,** by **Wan Maisara Binti Wan Kamarudin,** Matric No. **UK 18022** has been reviewed and corrections have been made according to the recommendations by examiners. This report is submitted to the Department of **Food Science** in partial fulfillment of the requirement of the degree of **Bachelor of Food Science of Food Technology**, Faculty Agrotechnology and Food Science, University Malaysia Terengganu.

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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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ACKNOWLEDEMENT

First and foremost, I would like to thanks to Allah S. W. T for given me a chance to finish up my final year project successfully. I also want to add my deepest appreciation and sincere tto my supervisor, Dr. Amir Izzwan Zamri for his supervision, guidance and assistance throughout this project. Special thanks also go to my Final Year Project's coordinator, Dr. Yusnita Bt Hamzah. Sincere thanks also go to other lectures for their comments and fees back through my presentations.

Furthermore, my heartfelt gratitude goes to the all lab assistant especially Mrs. Dayang, Mrs. Haryani, and Mrs. Ros from the Department of Food Science who give a lot contribution and helps during the finishing my work.

My appreciation also goes to my friends who always giving me spiritual supports and motivation throughout this project. Special thanks and appreciation is extended to my lovely parents, who giving me support and courage to finish my project till the end. Lastly, my appreciation goes to those who have contributed in my project either directly or indirectly. Thank you, very much

ABSTRACT

This study was conducted in order to determine the effect of the incorporation of the 'petai' (*Parkia Speciosa hassk)* to the properties of Chinese Steamed Bread (CSB). PSP flour actually one of the product that can be produced from *P. Speciosa* and had a potential to substitute wheat flour because it is high in diet fiber, antioxidant, and vitamin. In this study, *P. Speciosa* flour (PSP) was produced, followed by production of Chinese steamed bread that was incorporated with the highly fiber content of flour. In the Chinese steamed bread production, standard wheat flour was been substitute with the PSP flour. Once the Chinese steamed bread were finished, proximate analysis, quality assessment and sensory evaluation were conducted. Range of proximate composition of the Chinese steamed bread samples were moisture content (20.450%-25.365%), protein content (4.795%- 7.395%), fat content (2.125%-4.390%), fiber content (1.470%- 4.850%) and ash content (0.41%- 0.755%). Chinese steamed bread that incorporated with the PSP flour have the colour more darker than the CSB that used the wheat flour, because it have positive value for whiteness. CSB that incorporated with the PSP flour was most acceptable in most (color, odor, hardness, elasticity, chewiness and overall acceptance) in terms of panelist acceptance.

ABSTRAK

Kajian ini di jalankan bertujuan untuk mengenalpasti kesan penggunaan tepung petai (*P.Speciosa Hassk*) terhadap ciri- ciri roti pau. Tepung petai ini merupakan salah satu produk yang boleh dihasilkan daripada kulit petai dan berpotensi untuk mengggantikan tepung gandum kerana tepung petai ini mempunyai kandungan fiber, anti-oksidan dan vitamin yang lebih tinggi berbanding tepung gandum biasa. Dalam kajian ini, tepung petai dihasilkan terlebih dahulu dan di ikuti penghasilan roti pau. Lima sampel roti pau telah di hasilkan dengan kandungan tepung petai yang berbeza (0.2%, 0.4%, 0.6%, 0.8%). Petai yang segar dibeli diproses menjadi tepung dan disimpan pada suhu bilik. Kemudian, roti pau yang di hasilkan dan kandungan tepung petai telah di campurkan dengan sebanyak mana seperti yang telah di tetapkan dalam formulasi. Kemudian, roti pau yang telah siap di hasilkan itu di teruskan lagi dengan analisis komposisi proksimat, penilaian kualiti dan juga penilaian pengguna ke atas roti pau yang telah di campurkan tepungnya dengan tepung petai dalam proses penghasilan itu. Didapati kandungan kelembapan (20.45%-25.365%), kandungan protein (4.795%- 7.395%), kandungan lemak (2.125%- 4.390%), kandungan fiber (1.470%- 4.850%) dan kandungan abu (0.41%- 0.755%). Roti pau yang menggunakan tepung petai mampunyai keputihan yang kurang berbanding roti pau yang menggunakan tepung gandum biasa. Ini dapat dilihat melalui nilai positif yang didapati dan nilai yang lebih rendah untuk ciri keputihan. Roti pau yang dihasilkan dengan campuran tepung petai ini lebih diterima dari segi warna, bau, kekerasan, kekenyalan dan penerimaan keseluruhan berdasarkan panel.