EFFECTS OF SOYMILK SUBSTITUTION ON
PHYSICOCHEMICAL CHARACTERISTICS AND SENSORY
ACCEPTANCE OF Sarawak Laksa

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Effects of soymilk substitution on physicochemical characteristics and sensory acceptance of Seri Kaya / Lau Chen Chen.

EFFECTS OF SOYMILK SUBSTITUTION ON PHYSICOCHEMICAL CHARACTERISTICS AND SENSORY ACCEPTANCE OF *Seri Kaya*

By

Lau Chen Chen

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

DEPARTMENT OF FOOD SCIENCE

FALCUTY OF AGROTECHNOLOGY AND FOOD SCIENCE

UNIVERSITY MALAYSIA TERENGGANU

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ENDORSEMENT

The project report entitled **EFFECTS OF SOYMILK SUBSTITUTION ON PYHSICOCHEMICAL CHARACTERISTICS AND SENSORY ACCEPTANCE OF *Seri Kaya*** by **LAU CHEN CHEN**, Matric No. **UK17599** 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 (Food Technology), Faculty of Agrotechnology and Food Service, University Malaysia Terengganu.

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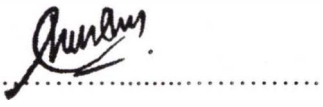
DECLARATION

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

Signature : 

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ABSTRACT

Seri kaya is a favorite local food spread which is consumed as traditional spread in various countries such as Malaysia and Singapore. However, *seri kaya* is high in total fat and saturated fat, sugar and hence increasing its calories. Although there has been a study conducted to reduce the sugar content in *seri kaya* with inulin as sugar replacer, study on *seri kaya* with lower fat is still limited. One of the possible fat replacer for *seri kaya* is soymilk which is low in both total fat and saturated fat. This study was carried out to determine the effects of different percentage of soymilk substitution (0%, 25%, 50%, 75% and 100%) on physicochemical characteristics and sensory acceptance of *seri kaya*. Results showed that soymilk had significantly increase ($p<0.05$) moisture content, protein content, ash content, oxidative stability, viscosity and consistency. In addition, it also significantly decreased ($p<0.05$) fat content and available carbohydrate content. However, it did not significantly affect ($p>0.05$) crude fiber content, firmness, spreadability, water activity and color. Besides that, soymilk substitution also significantly affect ($p<0.05$) sensory acceptance of *seri kaya* partially substituted with inulin except for aroma. The most accepted sample was *seri kaya* with 25 % soymilk substitution, which gave lower total fat and saturated fat content, higher protein and essential fatty acids with high sensory acceptance. This study showed that soymilk had potential to be used as fat replacer in seri kaya partially substituted with inulin to produce healthier version of seri kaya with lower fat and saturated fat, sugar and calories content.

ABSTRAK

Seri kaya adalah sejenis makanan tempatan yang digemari dan dimakan sebagai makanan tradisional di negara-negara seperti Malaysia dan Singapura. Walaubagaimanapun, seri kaya adalah tinggi dalam kandungan lemak dan lemak tepu, kadungan gula dan juga kandungan kalori. Walaupun terdapat kajian telah dijalankan untuk mengurangkan kandungan gula dalam seri kaya dengan menggunakan inulin sebagai pemanis gantian, kajian tentang seri kaya dengan kandungan lemak yang rendah masih terhad. Susu kacang soya, salah satu gantian lemak, berpotensi digunakan untuk menggantikan santan dalam seri kaya kerana susu kacang soya adalah rendah dalam lemak dan lemak tepu. Kajian ini telah dijalankan untuk menentukan kesan penggantian susu kacang soya dengan peratusan yang berbeza (0%, 25%, 50%, 75%, 100%) ke atas ciri-ciri fizikokimia dan penerimaan deria terhadap seri kaya dengan sebahagian pemanis gantian, iaitu inulin. Keputusan menunjukkan bahawa susu kacang soya telah menunjukkan peningkatan yang ketara ($p<0.05$) dalam kandungan kelembapan, protein, abu, kestabilan oksidatif, kelikatan dan konsistensi. Di samping itu, susu kacang soya juga menunjukkan penurunan yang ketara ($p<0.05$) dalam kandungan lemak dan kandungan karbohidrat. Walaubagaimanapun, susu kacang soya tidak memberi kesan yang ketara ($p>0.05$) untuk kandungan gentian kasar, ketegaran, kebolehan untuk disapu, aktiviti air dan warna. Selain itu, penggantian susu kacang soya juga memberi kesan yang ketara ($p<0.05$) terhadap penerimaan deria seri kaya sebahagian ganti dengan inulin kecuali dari aspek aroma. Sampel yang paling diterima ialah seri kaya dengan 25 % gantian susu kacang soya kerana ia memberi kandungan lemak dan lemak tepu yang lebih rendah, protein dan acid lemak perlu yang lebih tinggi, dan penerimaan deria yang tinggi. Kajian ini menunjukkan bahawa susu kacang soya mempunyai potensi untuk digunakan sebagai pengganti lemak di seri kaya untuk menghasilkan seri kaya yang lebih sihat dan lebih rendah pada kandungan lemak dan lemak tepu, kandungan gula dan kandungan kalori.