EFFECT OF SUBSTITUTION OF SOY MILK AND COCONUT
MILK ON RHEOLOGICAL CHARACTERISTICS AND
SENSORY PREFERENCE OF MALAY CHICKEN CURRY

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FACULTY OF AGRO TECHNOLOGY AND FOOD SCIENCE
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Lihat Sebelah

EFFECT OF SUBSTITUITION OF SOY MILK AND COCONUT MILK ON PHYSICOCHEMICAL CHARACTERISTICS AND SENSORY PREFERENCE OF MALAY CHICKEN CURRY

By

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

DEPARTMENT OF FOOD SCIENCE
FACULTY OF AGROTECHNOLOGY AND FOOD SCIENCE UNIVERSITI
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ENDORSEMENT

The project report entitled **Effect of Soy Milk on Physicochemical Characteristics and Sensory Preference of Malay Chicken Curry** by **Yah Xin Yi**, Matric No **UK16459** 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 Science, University Malaysia Terengganu.

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DECLARATION

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

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ABSTRACT

Malay chicken curry is a famous cuisine in Malaysia. It is usually meat cooked with combination of spices and coconut milk. Coconut milk is white opaque aqueous extract of coconut that is high in saturated fat. Thus, High intake of Malay chicken curry may lead to an increased level of Low Density Lipoprotein (LDL), the main risk for cardiovascular diseases. This study was carried out to determine physicochemical properties and sensory preference of Malay chicken curry obtained through substitution of coconut milk with soy milk, as one of the ingredients that contains high nutritional values and low in saturated fat, but has not been fully utilized in traditional cuisine. Substitution of coconut milk with soy milk in Malay chicken curry prepared according to the ratio of coconut milk to soy milk (100:0, 75:25, 50:50, 25:75 and 0:100)was carried out. Results showed substitution of coconut milk with soy milk in Malay chicken curry had significantly (p<0.05) lower its fat and calorie content compared to control of Malay chicken curry. Apart from that, fatty acid profile showed that with higher level of substitution, the lower amount of saturated fat could be found in Malay chicken curry. Besides that, there was significant differences (p<0.05) in oxidative stability at ambient and chill temperature. Control sample was rapidly oxidized while substitution samples were protected from oxidation for longer time due to the presence of natural antioxidant found in soy milk. However, there were no significant differences (p<0.05) in their protein, carbohydrate, ash and moisture contents. In terms of viscosity and colour, they had significant differences (p<0.05), but not in their water activity. Sensory preference showed no significant differences (p>0.05) in tested attributes of colour, odour, texture and taste.

ABSTRAK

Kari ayam Melayu ialah satu hidangan terkenal di Malaysia. Ia biasanya dimasak dengan gabungan rempah ratus, daging dan santan. Santan ialah ekstrak akueus legap putih kelapa yang tinggi dalam lemak tepu. Oleh itu, pengambilan kerap kari ayam Melayu boleh membawa kepada satu peningkatan tahap *Low Density Lipoprotein* (LDL), risiko utama untuk penyakit kardiovaskular. Kajian ini dijalankan untuk menentukan ciri-ciri fizikokimia dan keutamaan deria kari ayam Melayu diperolehi melalui penggantian santan dengan susu soya, iaitu satu daripada bahan yang mengandungi rendah dalam lemak tepu, tetapi belum digunakan sepenuhnya dalam hidangan tradisional. Penggantian santan dengan susu soya dalam kari ayam Melayu disediakan mengikut nisbah santan untuk susu soya (100:0, 75:25, 50:50, 25:75 dan 0:100)telah dijalankan. Keputusan menunjukkan penggantian santan dengan susu soya dalam kari ayam Melayu mempunyai penurunan perbezaan signifikasi ($p<0.05$) dalam lemak dan kandungan kalori berbanding dengan kawalan kari ayam Melayu. Selain itu, profil asid lemak menunjukkan penggantian lebih tinggimembawa kepada penurunan lemak tepu dalam kari ayam Melayu. Selain itu, terdapat perbezaan signifikasi ($p<0.05$) dalam kestabilan oksidaan di suhu ambien dan dingin. Sampel kawalan cepat dioksidakan manakala sampel penggantian telah dilindungi dari pengoksidaan untuk masa lebih panjang disebabkan kehadiran antioksidan semula jadi yang ditemui dalam susu soya. Bagaimanapun, tiada perbezaan signifikasi yang ketara ($p<0.05$) dalam protein,karbohidrat, abu dan kandungan kelembapan. Dalam soal kelikatan dan warna, mempunyai perbezaan signifikasi yang ketara ($p<0.05$), tetapi tiada dalam kandungan air. Keutamaan deria tidak menunjukkan perbezaan-perbezaan ketara ($p<0.05$) dalam karakter yang diuji iaitu warna, bau, tekstur dan rasa.