

DEVELOPMENT OF INNOVATIVE  
FOODS

Z. ZHANG et al.

COLLEGE OF AGRICULTURE AND FOOD SCIENCES

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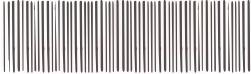
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Development of akok premix / Aznizah Ahmad.

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## **DEVELOPMENT OF AKOK PREMIX**

**By**

**Aznizah bt Ahmad**

**Research Report submitted in partial fulfillment of  
the requirements for the degree of  
Bachelor of Food Science (Food Service and Nutrition)**

**Department of Food Science  
FACULTY AGROTECHNOLOGY AND FOOD SCIENCE  
UNIVERSIT MALAYSIA TERENGGANU  
2008**



FAKULTI AGROTEKNOLOGI DAN SAINS MAKANAN  
UNIVERSITI MALAYSIA TERENGGANU

PENGAKUAN DAN PENGESAHAN LAPORAN  
PROJEK PENYELIDIKAN I DAN II

Adalah ini diakui dan disahkan bahawa laporan penyelidikan bertajuk:

DEVELOPMENT OF AKOK PREMIX

oleh..... AZNIZAH BT AHMAD ....., No.Matrik UK 11234 .....

telah diperiksa dan semua pembetulan yang disarankan telah dilakukan. Laporan ini dikemukakan kepada Jabatan ..... SAINS MAKANAN .....

sebagai memenuhi sebahagian daripada keperluan memperolehi Ijazah Sarjana Muda  
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**FAKULTI AGROTEKNOLOGI DAN SAINS MAKANAN  
UNIVERSITI MALAYSIA TERENGGANU**

**PENGAKUAN DAN PENGESAHAN LAPORAN  
PROJEK PENYELIDIKAN I DAN II**

Adalah ini diakui dan disahkan bahawa laporan penyelidikan bertajuk Development of Akok Premix oleh Aznizah binti Ahmad, No. Matrik UK11234 telah diperiksa dan semua pembetulan yang disarankan telah dilakukan. Laporan ini dikemukakan kepada Jabatan Sains Makanan sebagai memenuhi sebahagian daripada keperluan memperolehi Ijazah Sarjana Muda Sains Makanan (Perkhidmatan Makanan dan Pemakanan), Fakulti Agroteknologi dan Sains Makanan, Universiti Malaysia Terengganu.

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## DECLARATION

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

Signature : ..... 

Name : AINIYAH BT AHMAD

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Date : 21/4/2009

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## ABSTRACT

Akok was converting to Akok Premix which is much easier to prepare by modern technique instead of long time taken with traditional method. Five formulations were produced and the manipulated variable is the percentage of wheat flour and rice flour. It was the Formulation 1 (100% rice flour), Formulation 2 (80% rice flour, 20 % wheat flour), Formulation 3 (50% rice flour, 50% wheat flour), Formulation 4 (20% rice flour, 80% wheat flour) and Formulation 5 (100% wheat flour). The chemical analysis that has been tested on the product is the determination of moisture, protein, fat, carbohydrate, ash and fiber. There was no significant difference ( $p>0.05$ ) for moisture, protein and ash but it has a significant difference ( $p<0.05$ ) for fat content. The physical analysis tested was the texture and color analysis. The textured was measured by compression test with the value of g/force indicating the softness of the product. There was a significant difference ( $p<0.05$ ) among the formulation. The color was measured the value of  $L^*$ ,  $a^*$  and  $b^*$ . There was no significant difference ( $p>0.05$ ) for  $L^*$  and  $a^*$  value but has significant difference for  $b^*$  value. The sensory evaluation test shows that most of the panel has greater preferences of Akok Premix made from Formulation 4 compared with other formulation and Control due to the higher acceptance of odor, softness, sweetness and overall acceptance.

## ABSTRAK

Akok Premix dihasilkan bagi memudahkan pembuatan Akok dengan teknik lebih moden iaitu dengan menggunakan oven konvensional sebagai menggantikan teknik tradisional yang mengambil masa lebih lama. Lima formulasi telah dihasilkan dan boleh ubah yang dimanipulasikan adalah peratusan (%) tepung gandum dan tepung beras yang dicampurkan. Formulasi tersebut adalah Formulasi 1 (100% tepung beras), Formulasi 2 (80% tepung beras, 20% tepung gandum), Formulasi 3 (50% tepung beras, 50% tepung gandum), Formulasi 4 (20% tepung beras, 80% tepung gandum) dan Formulasi 5 (100% tepung gandum). Analisis kimia yang dijalankan ke atas produk adalah penentuan kelembapan, protein, lemak, karbohidrat, abu dan serat. Tidak terdapat perbezaan bererti ( $p>0.05$ ) bagi kelembapan, protein dan abu tetapi terdapat perbezaan bererti ( $p<0.05$ ) bagi kandungan lemak. Analisis fizikal yang dijalankan adalah analisis tekstur dan warna. Tekstur diukur dengan menggunakan ujian kemampatan dan diukur mengikut nilai (g/daya) yang menunjukkan kelembutan produk. Terdapat perbezaan yang bererti ( $p<0.05$ ) di antara formulasi manakala analisis warna dijalankan dengan mengukur nilai  $L^*$ ,  $a^*$  dan  $b^*$ . Tidak terdapat perbezaan bererti ( $p>0.05$ ) bagi nilai  $L^*$  dan  $a^*$  tetapi terdapat perbezaan bererti bagi nilai  $b^*$ . Ujian penilaian sensori menunjukkan bahawa panel-panel lebih menyukai Akok Premix daripada Formulasi 4 berbanding dengan formulasi-formulasi lain dan Rujukan berikut dengan kadar penerimaan yang tinggi bagi bau, kelembutan, kemanisan serta penerimaan keseluruhan.