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Effect of mandai addition in physicochemical properties and acceptability of chicken sausage / Zuhainiza Zuber.

**PUSAT PEMBELAJARAN DIGITAL SULTANAH NUR ZAHIRAH
UNIVERSITI MALAYSIA TERENGGANU (UMT)
21030 KUALA TERENGGANU**

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HAK MILIK
PUSAT PEMBELAJARAN DIGITAL SULTANAH NUR ZAHIRAH

**EFFECT OF MANDAI ADDITION IN PHYSICOCHEMICAL PROPERTIES AND
ACCEPTABILITY OF CHICKEN SAUSAGE**

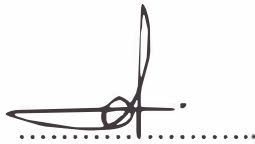
**By
Zuhainiza binti Zuber**

**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
UNIVERSITY MALAYSIA TERENGGANU
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ENDORSEMENT

The project report entitled **Effect of Mandai Addition in Physicochemical Properties and Acceptability of Chicken Sausage** by **Zuhainiza binti Zuber, UK 17827** 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 partially fulfillment of the requirement of the degree of Bachelor of Food Science (Food Technology), Faculty of Agrotechnology and Food Science, Universiti Malaysia Terengganu.




DR.AMIR IZZWAN BIN ZAMRI
Head of Food Science Department

DR. AMIR IZZWAN ZAMRI
Head
Department of Food Science
Faculty of Agrotechnology and Food Science
Universiti Malaysia Terengganu
21030 Kuala Terengganu.

Date: 9/2/2012

DECLARATION

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

Signature : 

Name : Zuhainiza binti Zuber

Matric No. : UK 17827

Date : 9 Februari 2012

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ABSTRACT

This study was conducted to determine the effect of Mandai addition in chicken sausage. Five different formulation of chicken sausage were analyzed for quality characteristics. Chicken sausages formulated with Mandai addition 0%, 10%, 20%, 30%, and 35%. The formulations also contained salt, sugar egg white powder, isolate soy protein, sodium tripolyphosphate, monosodium glutamate, ice water, and seasoning. The chemical composition was in the range of 72%-77.% moisture content, 15.11%-17.86% protein, 4.07%-5.23% fat, 0.85%-3.20% carbohydrate, 1.62%-3.10% ash and 0.20%-0.91% fiber. No significant differences were observed for the L*(lightness) in the range 79.380- 82.285. However, significant differences were observed for the texture analysis. The hardness, , chewiness, springiness, and gumminess in the range 1381.9g-3698.7g, 592.0 gmm- 2545.8gmm, 0.8010gmm- 0.926gmm and 738.3g-2757.6g. Sensory evaluation was then carried out by using acceptance test that involved 35 untrained panelists. Attributes tested were color, aroma, taste, hardness, and overall acceptance. From the sensory evaluation, chicken sausage with 10% Mandai addition has higher acceptance score approximately same with chicken sausage without Mandai addition. However, the best formulation could not determine due to all formulation indistinguishable for most attributes. All data was analyzed using One-Way ANOVA.

ABSTRAK

Kajian ini dijalankan bagi menentukan kesan penambahan Mandai di dalam sosej ayam. Lima formulasi yang berbeza dengan penambahan Mandai iaitu 0%, 10%, 20%, 30% dan 35%. Setiap formulasi juga mempunyai bahan-bahan seperti garam, gula, serbuk putih telur, isolasi protein soya, natrium tripolyphosphate, air ais, dan penambah perasa. Komposisi kimia adalah di dalam lingkungan 15.11%-17.86% protein, 4.07%-5.23% lemak, 0.85%-3.20% karbohidrat, 1.62%-3.10% mineral dan 0.20%-0.91% fiber. Tiada perbezaan ketara bagi L^* (kecerahan) di dalam lingkungan 82.285. Walaubagaimanapun, terdapat perbezaan ketara bagi analisis tekstur. Kekerasan, keliutan keliatan dan kekenyalan adalah di dalam lingkungan 1381.9g-3698.7g, 592.0gmm- 2545.8gmm, 0.8010gmm- 0.926gmm and 738.3g-2757.6g. Penilaian sensori telah dilakukan dengan menggunakan ujian penerimaan yang melibatkan 35 orang ahli panel tidak terlatih. Atribut-atribut yang diuji adalah warna, aroma, rasa, kekerasan dan penerimaan keseluruhan. Kertas markah berskala 7 poin telah digunakan. Dalam penilaian penerimaan formulasi dengan penambahan Mandai 10% menerima skor yang paling diterima hampir sama dengan sosej ayam tanpa Mandai. Walaubagaimanapun formulasi yang terbaik tidak dapat ditentukan disebabkan tiada perbezaan di dalam kebanyakan ciri-ciri. Analisis statistik telah dijalankan dengan rekabentuk rawak lengkap, ujian One-Way ANOVA.