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Ng Suk Chen.

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

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PUSAT PEMBELAJARAN DIGITAL SULTANAH NUR ZAHIRAH

**EFFECT OF SILVER CATFISH TO SURIMI RATIO AND  
POTATO STARCH ADDITION ON THE PHYSIOCHEMICAL AND SENSORY  
PROPERTIES OF FISH SAUSAGE**

**By  
Ng Suk Chen**

**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 MALAYSIA TERENGGANU  
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## ENDORSEMENT

The project report entitled **Effect of Ratio of Surimi to Silver Catfish and Potato Starch Addition on the Physicochemical and Sensory Properties of Fish Sausage** by **NG SUK CHEN**, Matric No. **UK 17241** has been reviewed and corrections have been made according to the recommendation 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, Universiti Malaysia Terengganu.



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**(PROF MADYA DR. AMIZA MAT AMIN)**


Main Supervisor  
-Official Stamp-

**PROF. MADYA DR. AMIZA MAT AMIN**  
Pensyarah  
Jabatan Sains Makanan  
Fakulti Agroteknologi dan Sains Makanan  
Universiti Malaysia Terengganu  
21030 Kuala Terengganu.

Date: 1/2/12.....

## DECLARATION

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

Signature : .....  .....

Name : ..... Ng Suk Chen .....

Matric No. : ..... UK 17741 .....

Date : ..... 1 / 2 / 2012 .....

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## ABSTRACT

In this study, the effect of ratio of surimi to silver catfish mince (0-100%) and potato starch addition (0-7% w/w of fish and surimi) on the fish sausage were investigated. Physicochemical properties of fish sausage which examined in this study included texture, color, cooking loss, pH, lipid oxidation (POV and TBA), proximate composition and sensory evaluation. There were significant interaction between ratio silver catfish to surimi and potato starch addition fat content, ash content, hardness, cohesiveness, gumminess, chewiness, lightness, greenness, cooking loss, peroxide value and TBA value. Different ratio of surimi to silver catfish had affected the moisture content, protein content, pH, cooking loss, greenness, lightness and hardness. The different addition of potato starch level had affected carbohydrate content, springiness and yellowness. The optimum formulation was 40/60 ratio of surimi to silver catfish and 7% potato starch addition based on high hardness with low cooking loss and most acceptable sensory attributes. The vacuum-packed sausages gave low TBA and peroxide values after 12 days of refrigerated storage.

## ABSTRAK

Dalam kajian ini, kesan nisbah surimi kepada daging ikan patin (0-100%) dan amaun kanji kentang yang berbeza (0-7% w/w ikan dan surimi) atas sosej ikan akan disiasat. Sifat-sifat fizikokimia sosej ikan yang dikaji dalam kajian ini termasuk tekstur, warna, kehilangan masak, pH, pengoksidaan lipid (POV dan TBA), komposisi proksimat dan penerimaan deria. Terdapat interaksi yang signifikan antara nisbah ikan kepada surimi dan kanji kentang pada fizikokimia (kandungan lemak, kandungan abu, kekerasan, keperetakan, kelikatan, kebolehenyalan, kecerahan, warna kehijiauan, kehilangan masak, nilai-nilai POV dan TBA). Kandungan kelembapan, kandungan protein, pH, kehilangan memasak, warna kehijauan, kecerahan dan kekerasan sosej dipengaruhi oleh nisbah ikan patin kepada surimi yang berbeza. Amaun kanji kentang yang berbeza telah memberi kesan kepada kandungan karbohidrat, keelastikan dan warna kekuningan. Formulasi optimum adalah sosej yang mengandungi 40/60 nisbah surimi kepada ikan patin dan 7% kanji kentang berasaskan pada kekerasan yang tinggi dengan kehilangan masak yang rendah dan mempunyai ciri-ciri yang paling diterima dalam sensori. Sosej dengan pembungkusan vakum memberi nilai-nilai TBA dan peroksidaan yang rendah selepas 12 hari penyimpanan sejukbeku.