

IODINE DETERMINATION AND EFFECT OF COOKING
METHODS ON IODINE CONTENT IN SELECTED FISHES

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UNIVERSITI MALAYSIA TERENGGANU

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**IODINE DETERMINATION AND EFFECT OF COOKING METHODS ON
IODINE CONTENT IN SELECTED FISHES**

**By
Yeap Pei Ching**

**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 OF AGROTECHNOLOGY AND FOOD SCIENCE
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ENDORSEMENT

The project report entitled **Iodine Determination And Effect Of Cooking Methods On Iodine Content In Selected Fishes** by **Yeap Pei Ching**, Matric No. **UK16522** 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 Service and Nutrition), Faculty of Agrotechnology and Food Science, Universiti Malaysia Terengganu.



(DR. HAYATI MOHD YUSOF)

Main supervisor

Date: 18/6/2012

DECLARATION

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

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ABSTRACT

There is still high prevalence of iodine deficiency disorders (IDD) in Malaysia, particularly in the East Coast. A modified micromethod for urine iodine concentration was utilized in iodine determination of selected fishes. There were 5 types of selected fishes used in this study, namely Black Pomfret, Sardine, Round Scad, Indian Mackerel, and Hairtail Scad. Addition, there were 3 types of cooking methods applied in fish samples preparation. From this study, we found that Hairtail Scad showed the highest iodine content ($7.7966\mu\text{g/L}$) by steaming method. Hairtail Scad and Sardine were found to be increase in iodine content by steaming method. To date, there is no published information or research on iodine content of selected fish, effect of cooking methods on iodine content of selected fishes which are commonly consumed in Malaysia. Therefore, this study is required to obtain the iodine content in selected fishes.

ABSTRAK

Masalah kekurangan iodine di Malaysia masih berada pada tahap yang membimbangkan, terutamanya di Malaysia Timur. Mikrometod terubah-suai yang biasa digunakan untuk menganalisis iodine dalam urin telah digunakan untuk mengkaji kandungan iodine dalam ikan yang terpilih. Ikan-ikan yang dikaji dalam kajian ini termasuk ikan bawal hitam, ikan sardin, ikan selang, ikan kembung dan ikan cencaru. Terdapat 3 jenis cara masak digunakan dalam menyediakan sampel-sampel ikan tersebut. Menurut kajian ini, didapati ikan cencaru kukus menunjukkan kandungan iodine yang tertinggi. Di samping itu, kandungan iodine dalam ikan cencaru dan ikan sardin didapati meningkat dengan menggunakan cara mengukus. Sehingga sekarang, masih tiada cetakan kajian berkenaan dengan kandungan iodine dalam ikan-ikan terpilih dan kesan hasil daripada cara-cara masakan berkenaan terhadap kandungan iodine dalam ikan-ikan terpilih. Oleh sebab itu, kajian adalah penting untuk mengetahui kandungan iodine dalam ikan-ikan terpilih tersebut.