

DEVELOPMENT OF NATURAL SEASONING
FROM TORCH GINGER
(*Edingera ciliata*)

TAN BEE HONG

FACULTY OF AGRICULTURE AND FOOD SCIENCE
UNIVERSITI MALAYSIA SARAWAK
KEMASING TELUK ANSON
2007

C/01: 4183

1100090069



I.P 75 FASM 3 2007



1100090069
Development of natural seasoning from torch ginger (Etlingera elatior) / Tan Bee Hong.

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

	1100090069	

Lihat Sebelah

HAK MILIK
PUSAT PEMBELAJARAN DIGITAL SULTANAH NUR ZAHIRAH

**DEVELOPMENT OF NATURAL SEASONING FROM TORCH GINGER
(*Etilingera elatior*)**

TAN BEE HONG

**RESEARCH PROJECT submitted in partial fulfillment of the requirements for the
Degree of Bachelor of Food Science (Food Service and Nutrition)**

**FACULTY OF AGROTECHNOLOGY AND FOOD SCIENCE
UNIVERSITY MALAYSIA TERENGGANU
MENGABANG TELIPOT
2007**

This project report should be cited as :

Tan, B.H. 2007. Development of natural seasoning from Torch Ginger (*Etilingera elatior*). Undergraduate thesis, Bachelor of Food Science, Faculty Agrotechnology and Food Science, University Malaysia Terengganu, Terengganu,

No part of this project report may be reproduced by any mechanical, photographic or electronic process or in the form of photographic recording nor may it be used in a retrieval system, transmitted, or otherwise copied for public or private use, without written permission from the author and the supervisor of the project.

DECLARATION

I hereby declare that this research project is based on my original work except for quotations and summaries that have been duly acknowledged.

25th June 2007



TAN BEE HONG
UK9301

25th June 2007

Approved by,



PUAN ZAMZAHAILA BINTI MOHD ZIN
(Supervisor)

ACKNOWLEDGEMENTS

First and foremost, I am very pleased to extend my deepest appreciation and gratitude to my kindly supervisor, Puan Zamzahaila Binti Mohd Zin, for her guidance, encouragement, patience, constructive suggestions, invaluable knowledge and comments in accomplishing this research project.

I am grateful to the Head of Food Science Department, Prof. Madya Dr. Amiza Mat Amin, all the lecturers and the staffs of Food Science Department especially to Cik Nasrenim, Puan Suzana, Puan Fadlina, Puan Aniza, Puan Faridah, Puan Zarina and Cik Rose Haniza for their technical assistance during this research project work.

Thank are also extended to my beloved family for their full support, love and encouragement throughout the entire course of this research study.

Lastly but not least, I would like to take the opportunity here to thank my adorable friends and all my course mates for their helping, teaching, kindness and cooperation during the process to complete this research project.

ABSTRACT

In this study, the development of natural seasoning from Torch Ginger (*Etilingera elatior*) was accessed. The buds of Torch Ginger (*Etilingera elatior*) was selected in this study. There were three methods had been selected which are air oven drying method, vacuum drying method, and freeze drying method. The aims of this study were to compare the effects of different drying method on physical and chemical properties of dried torch ginger and to compare the difference on dried torch ginger between the three drying methods through the sensory evaluation. From the physical and proximate analysis, there were some little differences between the freeze drying method and the other two methods which are air oven drying and vacuum drying with the Torch Ginger (*Etilingera elatior*)'s product. For the colour analysis, there were significant difference ($p < 0.05$) between the three drying methods. On the other hands, in the nutrition composition such as fat, carbohydrate, ash, insoluble ash in HCl and fibre, there were no significant difference ($p < 0.05$) between the freeze drying, vacuum drying and air oven drying methods. Besides, there were significant difference ($p < 0.05$) on the moisture content analysis between the freeze drying, vacuum drying and air oven drying methods. In the sensory evaluation, there were no significant difference ($p < 0.05$) on aroma and taste sensory evaluation between the freeze drying, vacuum drying and air oven drying methods. Moreover, there were significant difference ($p < 0.05$) on the colour sensory evaluation between the freeze drying, vacuum drying and air oven drying methods.

PERKEMBANGAN BAHAN PERASA SEMULAJADI DARIPADA TORCH GINGER (*Etilingera elatior*)

ABSTRAK

Dalam kajian ini, perkembangan bahan perasa semulajadi daripada bunga kantan (*Etilingera elatior*) dijalankan. Bahagian kudup daripada bunga kantan (*Etilingera elatior*) dipilih dalam perkembangan produk baru ini. Tiga kaedah telah dipilih untuk perkeringan kudup bunga kantan (*Etilingera elatior*) iaitu kaedah pengeringan udara panas, kaedah vakum, dan kaedah pengeringan sejuk beku. Tujuan utama kajian ini dijalankan adalah untuk membuat perbandingan dari segi fizikal dan prosimat produk bunga kantan (*Etilingera elatior*) dan juga membuat perbandingan bagi bunga kantan kering daripada ketiga-tiga kaedah pengeringan melalui penilaian sensori. Dari kajian yang dijalankan, terdapat sedikit perbezaan antara kaedah pengeringan sejuk beku dengan kaedah air oven dan kaedah vakum. Bagi analisis warna, terdapat perbezaan signifikan ($p < 0.05$) antara ketiga-tiga kaedah pengeringan. Manakala bagi komposisi nutrisi, tidak terdapat perbezaan signifikan ($p < 0.05$) antara tiga kaedah untuk analisis lemak, gentian kasar, abu, ketidaklarutan abu dalam HCl dan karbohidrat. Di samping itu, terdapat perbezaan signifikan ($p < 0.05$) antara tiga kaedah pengeringan untuk analisis kelembapan. Dalam penilaian sensori, tidak terdapat perbezaan signifikan ($p < 0.05$) antara tiga kaedah pengeringan untuk sensori bau dan rasa. Manakala, terdapat perbezaan signifikan ($p < 0.05$) antara tiga kaedah pengeringan untuk sensori warna.