

THE DEVELOPMENT OF ICE CREAM FROM  
SALAKKU (Salacca zalacca)

RUSDAWAN BT ABDULLAH

FACULTY OF AGRICULTURE AND FOOD SCIENCES  
UNIVERSITY MALAYSIA TERENGGANU  
2008

DN. 9284

1100090122

Pusat Pembelajaran Digital  
Universiti Malaysia Terengganu.



LP 37 FASM 2 2008



1100090122

The development of ice cream from snakefruit (Salacca zalacca)  
/ Rusdawani Abdullah.

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

1100090122

Lihat Sebelah

HAK MILIK

PUSAT PEMBELAJARAN DIGITAL SULTANAH NUR ZAHIRAH

THE DEVELOPMENT OF ICE CREAM FROM SNAKEFRUIT (*Salacca zalacca*)

By

Rusdawani bt Abdullah

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

UNIVERSITI MALAYSIA TERENGGANU

2008

This project report should be cited as:

Rusdawani, A. 2008. The Development of Ice Cream from Snakefruit (*Salacca zalacca*). Undergraduate Thesis, Bachelor of Food Science (Food Service & Nutrition). Faculty of Agrotechnology and Food Science. University of Malaysia Terengganu, Terengganu.

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



**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:

.....  
.....  
.....  
.....

oleh....., No.Matrik .....  
telah diperiksa dan semua pembetulan yang disarankan telah dilakukan. Laporan ini  
dikemukakan kepada Jabatan .....  
sebagai memenuhi sebahagian daripada keperluan memperolehi Ijazah Sarjana Muda

.....  
Fakulti Agroteknologi dan Sains Makanan, Universiti Malaysia Terengganu.

Disahkan oleh:

Penyelia Utama

DR. AMIR IZZWAN ZAMRI

Nama:

Ketua

Jabatan Sains Makanan

Cop Rasmi Fakulti Agroteknologi dan Sains Makanan  
Universiti Malaysia Terengganu  
21030 Kuala Terengganu.

Tarikh: 21/12/08.....

.....  
Penyelia Kedua (jika ada)

Nama:

Cop Rasmi

Tarikh: .....

## **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: Rusdawani bt Abdullah

Matric No: UK 11715

Date: 4<sup>th</sup> of December 2008

## **ACKNOWLEDGEMENT**

Alhamdulillah to the Almighty, Allah S.W.T for giving me capability, patience and strength in order to finish this final year project and thesis write up.

Firstly, I would like to take this opportunity to wish thousands of thanks, gratitude and appreciation to my first important guidance, Dr. Amir Izzwan Zamri as my supervisor as well as a lecturer of Department of Food Science under the Faculty of Agrotechnology and Food Science for his great useful guidance, patience, kindness, suggestion, support, advices and encouragement throughout this study. Instead of that, I also would like to express my thanks to all my lecturers and staffs for their kindness and co-operation in completing this study.

Last but not least, I would like to thank my parents with million of thanks for their support with love either psychologically or financially to accomplish this project. Not forgotten to all my fellow friends who always give me their helping hands to finish this project.

Thousands of thank to all.

# THE DEVELOPMENT OF ICE CREAM FROM SNAKEFRUIT (*Salacca zalacca*)

## ABSTRACT

This study was conducted to determine the effects of different level of snakefruit flesh and juice on the snakefruit ice cream development. This study also was conducted to determine the physicochemical properties of snakefruit ice cream after incorporation of snakefruit flesh and juice at different level. Besides that, this study was purposely organized to determine the sensory acceptance of snakefruit ice cream by panels. There are 7 formulations which is 1 control that was not added with any snakefruit puree or juice and 6 formulations were added with snakefruit puree and juice for about 21.1%, 28.6% and 34.8% respectively. According to the result obtained from physicochemical analyses show that the more snakefruit puree and juice added, the more percentage of protein, ash, carbohydrate and total soluble solid will be. Furthermore, the pH value tends to decrease when snakefruit puree and juice increase. There are 40 panels involved for the sensory evaluation session. Panels were provided with 7 gradation point numeric scale (Hedonic scale) to evaluate all 6 attributes given. From the sensory acceptance result obtained, the optimum formulation accepted by panels was control ice cream (reference). However, ice cream with the lowest percentage of juice (21.1%) used had the highest score compared to other ice cream made up by snakefruit puree or juice since recorded the highest score for color acceptance, sweetness acceptance, creaminess acceptance and flavor acceptance and automatically recorded the second highest score for overall acceptance after control ice cream.

## PENGHASILAN AIS KRIM DARIPADA BUAH SALAK (*Salacca zalacca*)

### ABSRTRAK

Kajian ini dilakukan untuk menentukan kesan terhadap penggunaan isi dan jus buah salak pada kuantiti yang berbeza terhadap ais krim buah salak yang dihasilkan. Kajian ini juga adalah untuk menentukan ciri-ciri kimia dan fizikal yang terdapat pada ais krim buah salak pada kuantiti yang berbeza. Selain itu, kajian ini bertujuan menentukan tahap penerimaan sensori oleh panel terhadap produk ais krim yang dihasilkan daripada buah salak. Terdapat 7 formulasi yang dihasilkan dimana 1 formulasi merupakan kawalan dengan tanpa ditambah mana-mana isi atau jus buah salak dan 6 formulasi lain adalah dengan menggunakan isi dan jus yang mana masing-masing menggunakan sebanyak 21.1%, 28.6% dan 34.8% isi atau jus buah salak. Dapatkan yang diperolehi daripada analisis kimia dan fizikal mendapati semakin meningkat peratusan isi atau jus buah salak, semakin tinggi peratusan kandungan protein, abu, karbohidrat dan kandungan pepejal larut dalam 6 produk ais krim yang dihasilkan dengan menggunakan isi dan jus buah salak. Dalam pada itu, peningkatan penggunaan isi dan jus buah salak menyebabkan tahap pH ais krim menurun. Seramai 40 panel terlibat dalam sesi penilaian sensori. Dalam sesi penilaian sensori, panel akan menilai sebanyak 6 atribut dimana setiap atribut dilengkapi dengan skala numerik 7 titik (Skala Hedonik). Daripada keputusan kajian ini, formulasi yang paling optimum diterima panel adalah produk kawalan. Walaubagaimanapun, ais krim yang paling rendah kandungan jus buah salak (21.1%) paling diterima panel berbanding formulasi ais krim salak yang lain berdasarkan darjah penerimaan atribut warna, kemanisan, krim, rasa yang optimum dan sekaligus mencatat penerimaan keseluruhan yang kedua tertinggi selepas produk kawalan.