

4/n: 7520

1100076509

Perpustakaan Sultanah Nur Zahirah
Universiti Malaysia Terengganu (UMT)



bpd

LP 30 FASM 2 2009



1100076509

The effects of vacuum packaged storage on the quality of dragon
fruit (*Hylocerces polyrhizus* / Saidatul Akmal Wahid.

PERPUSTAKAAN SULTANAH NUR ZAHIRAH
UNIVERSITI MALAYSIA TERENGGANU (UMT)
21030 KUALA TERENGGANU

1100076509		

Lihat sebelah

HAK MILIK
PERPUSTAKAAN SULTANAH NUR ZAHIRAH UMT

1100076509

THE EFFECTS OF VACUUM PACKAGED STORAGE ON THE QUALITY OF
DRAGON FRUIT (*Hylocereus polyrhizus*)

By

Saidatul Akmal Binti Wahid

Research Report submitted in partial fulfillment of the requirements for the degree of
Bachelor of Agrotechnology Science (Post Harvest Technology)

Department of Agrotechnology
FACULTY OF AGROTECHNOLOGY AND FOOD SCIENCE
UNIVERSITI MALAYSIA TERENGGANU
2009



FAKULTI AGROTEKNOLOGI DAN SAINS MAKANAN
UNIVERSITI MALAYSIA TERENGGANU

PENGAKUAN DAN PENGESAHAN LAPORAN
PROJEK ILMIAH I DAN II

Adalah ini diakui dan disahkan bahawa laporan ilmiah bertajuk:

*THE EFFECTS OF VACUUM PACKAGED STORAGE ON THE
QUALITY OF DRAGON FRUIT (Hylocereus polyrhizus)*

oleh *Saidatul Akmal Bt. Wahid*, No.Matrik *UK7937* telah diperiksa dan semua pembetulan yang disarankan telah dilakukan. Laporan ini dikemukakan kepada Jabatan *Agroteknologi* sebagai memenuhi sebahagian daripada keperluan memperoleh *Ijazah Sarjana Muda Sains Agroteknologi (Teknologi Lepas Tuai)*, Fakulti Agroteknologi dan Sains Makanan, Universiti Malaysia Terengganu.

Disahkan oleh:

Penyelia Utama

Nama:

PROF. MADYA HJ. ABDULLAH MOHD ZAIN
Pensyarah
Jabatan Agroteknologi
Fakulti Agroteknologi dan Sains Makanan
Universiti Malaysia Terengganu
21030 Kuala Terengganu

Cop Rasmi:

Tarikh:

28/4/09

Penyelia Kedua (jika ada)


Nama:

Cop Rasmi

Tarikh:

DECLARATION

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

Signature : 

Name : Saidatul Akmal binti Wahid

Matric no : UK7937

Date : 29 April 2009

ACKNOWLEDGEMENT

First of all, I would like to express my sincere appreciation and deepest gratitude to my supervisor Prof. Dr Awang Soh Bin Mamat and my co-supervisor Prof Madya Hj. Abdullah Md. Zain for their inspiring guidance, invaluable advice, great understanding and considerations throughout this project. Heartiest thanks for their help and cooperation in guiding through this project.

I also dedicate my appreciation to all lecturers of Faculty of Agrotechnology and food science and to all post harvest technology laboratory staffs for their cooperation and permission to use the facilities in the laboratory.

In addition, a lot of thanks to Idayu Idris, Noor Shazaliyana and all my friends for their contribution and constant help in technical assistance and spiritual support during the studies. I'm deeply indebted to Nuradzrina binti Haji Norani for her stimulating suggestion and encouragement helped in all the time of research.

Lastly, my special thanks to my parents including my brother and sister for their support and love. Not to forget for special person in my life whose patient love enables me to complete this work. May the Lord bring all of you His blessing.

ABSTRACT

This study was conducted to determine effects of vacuum packaged on quality of dragon fruit (*Hylocereus polyrhizus*) stored at temperature of 10°C. The dragon fruit were collected at two different maturity indices (index 2 and index 4) packed in plain nylon bag and then vacuumed at different vacuum time at 10" and 40" seconds. The control fruits were stored in non-vacuum packaging. Changes in the skin colour, weight loss, total soluble solid (Brix value), the fruit quality and presence of rots on the fruits in the packaged were observed during the storage. Vacuum packaged has caused a distinct disorder for the physiological of the dragon fruit (vacuum injury) and becoming more obvious with longer vacuum time. However, the assessment done showed that other quality characteristics of the fruits were not affected by the vacuum injury. During 20 days of storage, weight loss and skin color showed significance different compared to non-vacuum packed fruits but the total soluble sugar was minimally affected. From the observation of rots appearance, include blossom end rot and body rots, it showed that vacuum packaged storage did not affect the fruit pulp at least 16 days of storage. It can be concluded that vacuum packaging not suitable for dragon fruit since all packaged fruits were injured by vacuum packaging. This study indicates that fruits in the non-vacuum packaged were maintained at acceptable quality level for at least 16 days thus, the vacuum packaging was unnecessary for dragon fruit in storage.