





ثبكة المعلومات الجامعية





جامعة عين شمس

التوثيق الالكتروني والميكروفيلم



نقسم بللله العظيم أن المادة التي تم توثيقها وتسجيلها علي هذه الأفلام قد اعدت دون آية تغيرات



يجب أن

تحفظ هذه الأفلام بعيداً عن الغبار

في درجة حرارة من 15-20 مئوية ورطوبة نسبية من 20-40 %

To be kept away from dust in dry cool place of 15-25c and relative humidity 20-40 %



ثبكة المعلومات الجامعية







MICROBIOLOGICAL STUDIES ON MILK AND DAIRY PRODUCTS

BY *MOHAMED ISMAEL AHMED HASHEM*

A Thesis Submitted in Partial Fulfillment.

Of

The requirements for the degree of

Doctor of Philosophy

In

Agricultural Science (Dairying)

Department of Food Science Faculty of Agriculture Zagazig University 2002

15c1

, et

MICROBIOLOGICAL STUDIES ON MILK AND DAIRY PRODUCTS

BY MOHAMED ESMAEIL AHMED HASHEM

B. SC. (1984) Food Science M. SC. (1993) Dairying This thesis for PhD degree has been

Under the supervision of:

1-Prof. Dr. W. M. Abo-El-Ella Emertus Prof. Of Dairying at the Food Science Department Faculty of Agriculture, Zagazig Miversity 2- Prof. Dr. M. M. Ashour -Dairy microbiology Prof. Science Department Faculty of Food Agriculture, Zagazig Upinersity 3- Prof. Dr. A. H. Guirguis Emertus Proft Science Department Faculty Agriculture, Zagazig University

Approval Sheet

MICROBIOLOGICAL STUDIES ON MILK AND DAIRY PRODUCTS

BY MOHAMED ESMAEIL AHMED HASHEM

B. SC. (1984) Food Science M. SC. (1993) Dairying This thesis for PhD degree has been

. Approved by:

1- Prof. Dr. W. M. Abo-El-Ella W. J. June
Emertus Prof. Of Dairying at the Food
Science Department Faculty of
Agriculture, Zagazig University
2- Prof. Dr. A. M. El-Fak
Emertus Prof. Of Dairying at the Food
Science Department Faculty of
Agriculture, Zagazig University
Agriculture, Zagazig University 3- Prof. Dr. A. E. Hagras - A. E. Hagras
Prof. Of Dairying at the Food Science
Department Faculty of Agriculture, Ain
Shams University 1
Shams University As how
Prof. Of Dairy microbiology at the
Food Science Department Faculty of
Agriculture, Zagazio, Unixersity
5-Prof. Dr. A. H. Guirguis
Emertus Prof. Of Dairying at the Food
Science Department Faculty of
Agriculture, Zagazig University

Date of Examination: 18/6/2002

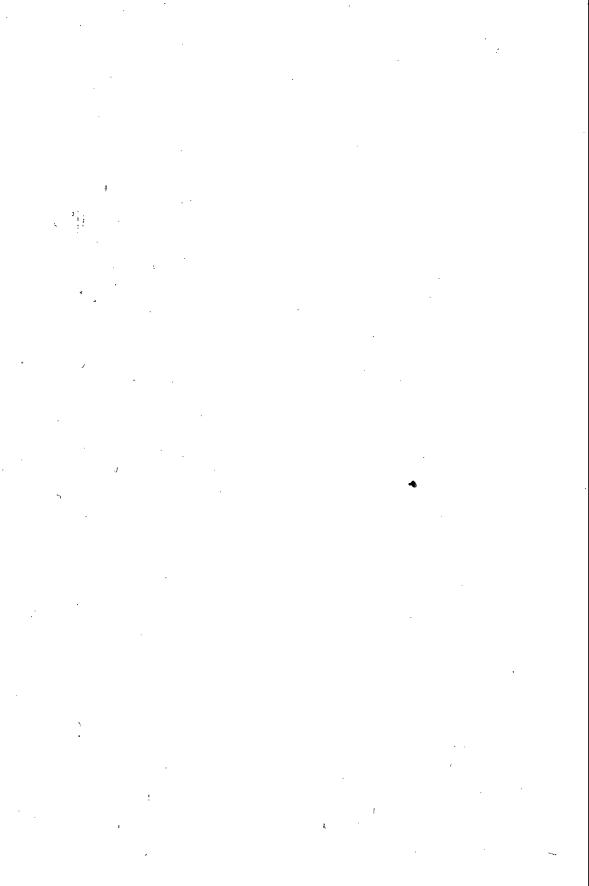
9 .

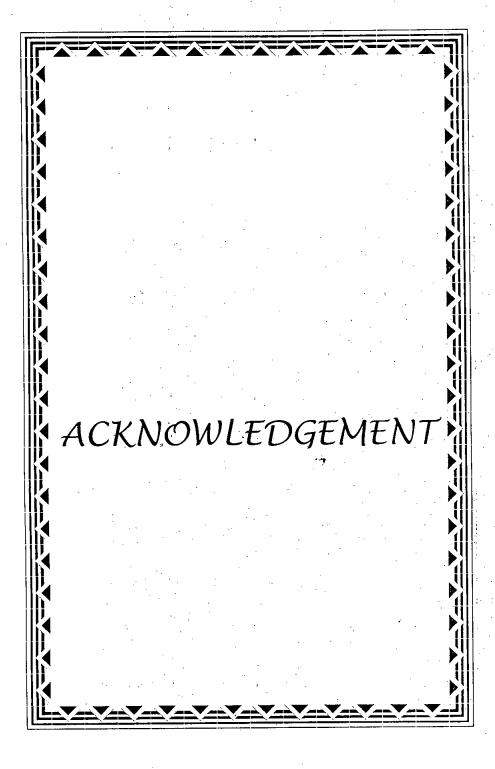
ABSTRACT

This study aims to produce a Mini Ras cheese with good microbiological quality. The Mini Ras cheese must avoid the problems which face the traditional Ras cheese by some changes in the technological steps. The use of heat shocked starter culture in order to enhance ripening process. In the mean time the low fat and low salt Mini Ras cheese is considered to be an important task to meet the needs of people with special needs

The study was carried on the following parts:-

- Part 1: Processing of mini Ras cheese from different mixtures cow's and buffaloe's milk
- **Part2** :Acceleration of Mini Ras cheese ripening with heat-shocked starter culture.
- Part3: Processing of low fat mini Ras cheese.
- Part4: Processing of low salt mini Ras cheese
- The following conclusion can be observed:-
- 1-In order to manufacture mini Ras cheese the most suitable ratio of cow's and buffaloe's is (2:1)
- 2-The use of heat –shocked *P.acidilactis* enhanced the ripening of mini Ras-cheese.
- 3-The production of low fat Mini Ras cheese with good quality can be obtained by the use of Zabadi starter in addition to heat –shocked *P. acidilactis*.
- 4-The low salt Mini Ras cheese can be made with the youghurt starter *streptococcus salivarus* subsp *thermophilus* +1.. *delberuckii* subsp *bulgaricus* and temperature of storing must be reduced.





			-	