

بسم الله الرحمن الرحيم



HOSSAM MAGHRABY



شبكة المعلومات الجامعية التوثيق الالكتروني والميكرو فيلم



HOSSAM MAGHRABY

جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها
على هذه الأقراص المدمجة قد أعدت دون أية تغيرات



يجب أن

تحفظ هذه الأقراص المدمجة بعيدا عن الغبار

HOSSAM MAGHRABY



بعض الوثائق الأصلية تالفة



HOSSAM MAGHRABY



بالرسالة صفحات

لم ترد بالأصل



HOSSAM MAGHRABY

B10c77

**INFLUENCE OF SOME FACTORS ON THE YIELD,
COMPOSITION AND PHYSICAL PROPERTIES OF
COTTONSEED OIL**

BY

Ibrahim Mohamed Ibrahim Galal

B.Sc (Food Science and Technology)

EL Mansura Univ. 1980.

M.Sc (Food Science and Technology)

Ain Shams Univ. 1992

**A thesis submitted in partial fulfillment.
of
the requirement for the degree of
doctor of Philosophy
in
Agriculture**

Food Science and Technology

To

**Department of Food Science
Faculty of Agriculture
Ain Shams University
1997**

APPROVAL SHEET

INFLUENCE OF SOME FACTORS ON THE YIELD , COMPOSITION AND PHYSICAL PROPERTIES OF COTTONSEED OIL

BY

Ibrahim Mohamed Ibrahim Galal

B.Sc (Food Science and Technology)

EL Mansura Univ. 1980.

M.Sc (Food Science and Technology)

Ain Shams Univ. 1992

This thesis for Ph.D degree has been approved by:

Prof. Dr. F. M. H Ashour ..F....Ashour.....

Prof. of Food Science and Dean of the Faculty of
Agriculture, Moshtohor Zagazig University.

Prof. Dr. M. A. Abdallah.....A.....

Prof. of Food Science . Food Sci. Dept., Fac. of Agric,
Ain Shams University and Dean of the Faculty of
Specific Education, Cairo.

Prof. Dr. M. A. El-Samkary M. A. El-Samkary

Prof of Food Science, Ain Shams University.

Date of examination : 20/ 1 / 1997

INFLUENCE OF SOME FACTORS ON THE YIELD ,
COMPOSITION AND PHYSICAL PROPERTIES OF
COTTONSEED OIL

BY

Ibrahim Mohamed Ibrahim Galal

B.Sc (Food Science and Technology)

EL Mansura Univ. 1980.

M.Sc (Food Science and Technology)

Ain Shams Univ. 1992

Under the supervision of:

Prof. D.M.A EL - Samkary

Prof. of Food Sci , Faculty of
Agric. Ain Shams University

Dr.M.G.EL . Shemy

Associate Prof. of Food Sci. Faculty of Agric.
Ain Shams University

Dr. Z . A. EL-Emary

Chief Sector of Food Development Centre, Food
Industries Company

ABSTRACT

Ibrahim Mohamed Ibrahim galal. Influence of some factors on the yield , composition and physical properties of cottonseed oil. Unpublished Doctor of Philosophy, University of Ain Shams faculty of Agriculture, Department of food science 1996.

Ten Egyptian varieties of cottonseeds were subjected to physical and chemical analysis. Results revealed that, variety. Of Giza 75 gave the highest value of seed index, while variety 45 was the highest yield of oil. The highest protein was 24.1% in cottonseeds variety 85. The lowest crude fibre was, 18.45% in Giza 77 . Whereas ash value were closed in all Egyptian cottonseed varieties. Specific gravity, refractive index, free fatty acids , iodine number, unsaponifiable matter were determined in cottonseed oil extracted from each variety - Moreover GLC analysis showed , fatty acids structure of each oil.

Moisture content in Engel hard type (U.S.A) contained was the highest value of moisture , 13. 16% . The values of pH were very close. The highest bleachability was observed by using Engel hard. Egyptian bleaching earth reduce 12.5 % of peroxide value and 26.14% of TBA value.

Edible cottonseed oil was packaged in different containers and stored at different conditions. Measurements of peroxides,, Anisidine , TBA and flavor scores indicated that , lacquered metal cans was the best protection for destruction during storage of oil in the presence of 10% head space or in light. Glass pakaging gave better

protection than polyethylene. Best storage condition at room temperature was in darkneses and zero head space .

Edible cottonseed oil packaged in polyethylene terephthalate bottles recorded lower total oxidation values (peroxide , anisidine value and TBA) and highest flavor score than high density polyethylene bottles

Key Words: Cottonseed , Cottonseed oil , Bleaching earth , Packaging materials , Storage conditions

ACKNOWLEDGEMENT

The author would like to express his sincere gratitude and deep appreciation . *Dr. M.A EL - Samkary* , professor of food science , food sci . Dept., Fac . of Agric ., Ain Shams Univ., for his valuable advices , parental guidance , supervision , and constructive criticism.

Many thanks are also due to *Dr. M.G.El Shemy* , Assoc. Prof. of food Sci.,Dept. Fac. of Agric. Ain Shams Univ., for his supervision and contineous guidance during this work.

Also , grateful acknowledgment should be extended to *Dr. Z. H. El-Emary* chief sector of food Development centre for her constructive help through this study.

