شبكة المعلومات الجامعية

بسم الله الرحمن الرحيم

Ain Shams University Information Network
جامعة عين شمس
شبكة المعلومات الجامعية
@ ASUNET

شبكة المعلومات الجامعية

جامعة عين شمس

التوثيق الالكتروني والميكروفيلم

قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها

علي هذه الأفلام قد أعدت دون أية تغيرات

يجب أن

تحفظ هذه الأفلام بعيدا عن الغبار

في درجة حرارة من 15-25 مئوية ورطوبة نسبية من 20-40%

To be Kept away from Dust in Dry Cool place of 15-25- c and relative humidity 20-40%

شبكة المعلومات الجامعية

التوثيق الالكتروني والميكروفيلم

EFFECT OF IRRADIATION ON SOME PROPERTIES OF LITHIUM BORATE GLASSES

Submitted to

Faculty of Science
AIN SHAMS UNIVERSITY

in the fulfillment of the
Requirements for

Master Degree in Chemistry

By

RASHA MAMDOUH HUSSEIN MOHOMED
(B.Sc. 1994)

National Center for Radiation Research
And Technology (NCRRT)

Atomic Energy Authority

1999

Acknowledgment

The author wishes to express her great thanks to Prof. Dr. Saad Abd El-Wahab Mohammed, Faculty of Science, Ain Shams University for his capable supervision, encouragement, kind interest and guidance.

I would like to express my heartily and deep gratitude to Ass. Prof. Dr. Nagia Al-Alaialy, National Center for Radiation Research and Technology for her close supervision, continuous guidance helpful discussions and valuable help in the final accomplishment this work.

Deepest gratitude is owed to Ass. Prof. Dr. Fathy Ezz- El Din for his keen enthasiam, and valuable discussion.

Special thanks are due to the staff working in irradiation source facilitate in Al- Azhar University for their cooperation and assistance throughout this work.

Thanks are indebted to Dr. M. Abdel ElHakma, national center for research, Ass. Prof. Dr. Lobna Abdel Wahab and Ass. Prof. Dr. Ahmed Ashour, (NCRRT) for the facilities and measurements presented throughout this work.

My best thanks to the chairman of the National Center for Radiation Research and Technology (NCRRT).

Deepest Gratitude to Prof. Dr. Abdel Wahab El- Naggar, Head of Radiation Chemistry Department, National Center for Radiation Research and Technology for useful facilities throughout this work.

Finally, I would like to thank the stuff and fellow colleagues of Radiation Chemistry Department for their cooperation and encouragement throughout this work.

Special Thanks to Spirit of my Father
& many Thanks to my Family and my
Husband

THESIS
ENTITELD

The effect of Irradiation on Some Properties of Lithium Borate Glasses

Thesis Supervisors **Approved**

Prof. Dr. S.Abd- Elwahab..S.M.Abdel Wahaab.
Faculty of Science, Ain Shams University

Ass. Prof. Dr. N. A. ElAlaialy.....N.A. ElAlaily
NCRRT, AEA.

Head of Chemistry Department

Prof. Dr. Saad Hassan

CONTENTS