

Mona maghraby



# بسم الله الرحمن الرحيم

مركز الشبكات وتكنولوجيا المعلومات

قسم التوثيق الإلكتروني



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# جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

قسم

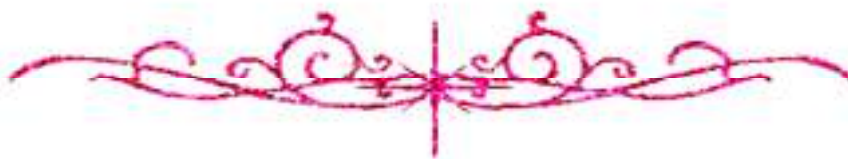
نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها  
على هذه الأقراص المدمجة قد أعدت دون أية تغيرات



Mona maghraby



بعض الوثائق الأصلية تالفة  
وبالرسالة صفحات لم ترد بالأصل





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CONSTRUCTION AND PERFORMANCE  
CHARACTERISTICS OF NEW PLASTIC MEMBRANE  
ION-SELECTIVE ELECTRODES FOR SOME  
BRONCHODILATOR PHARMACEUTICAL COMPOUNDS IN  
BATCH AND FIA CONDITIONS

A Thesis Presented  
To  
FACULTY OF SCIENCE  
CAIRO UNIVERSITY

By

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B. Sc. Chemistry (Honour)  
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2001

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ  
وَقُلْ رَبِّ زِدْنِي عِلْمًا

صدق الله العظيم

آية ١١٤ سورة طه

## APPROVAL SHEET FOR SUBMISSION

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Title of Ph. D. Thesis:

***CONSTRUCTION AND PERFORMANCE CHARACTERISTICS OF  
NEW PLASTIC MEMBRANE ION-SELECTIVE ELECTRODES  
FOR SOME BRONCHODILATOR PHARMACEUTICAL  
COMPOUNDS IN BATCH AND FIA CONDITIONS***

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## ABSTRACT

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**Name:** Rasha Mohamed Ibrahim Magdy El-Nashar

**Title of thesis:**

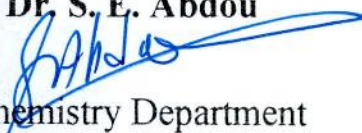
CONSTRUCTION AND PERFORMANCE CHARACTERISTICS OF  
NEW PLASTIC MEMBRANE ION-SELECTIVE ELECTRODES FOR  
SOME BRONCHODILATOR PHARMACEUTICAL COMPOUNDS IN  
BATCH AND FIA CONDITIONS

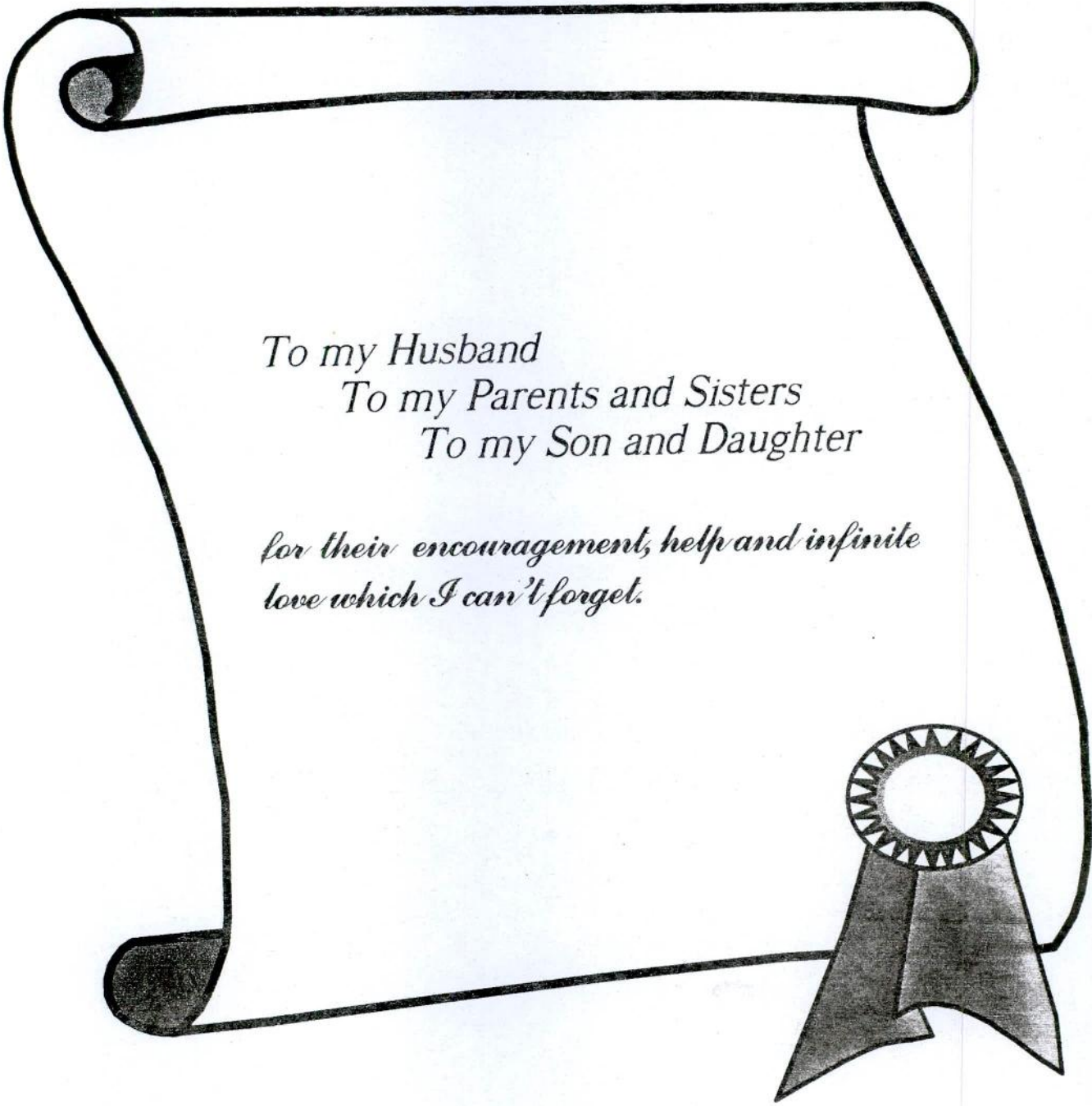
**Degree:** Doctor of Philosophy in Analytical Chemistry, Faculty of Science,  
Cairo University, 2001.

This work has been carried out to present and characterize new plastic membrane ion-selective electrodes based on individual and mixed ion-exchangers with phosphotungstic and/or phosphomolybdic acid to be used in the analysis of some important pharmaceutical bronchodilator compounds in batch and flow injection analysis (FIA) conditions. The performance characteristics of these electrodes are compared under the two studied conditions. Among these pharmaceutical compounds are: pipazethate hydrochloride, reproterol hydrochloride, salbutamol sulphate and terbutaline sulphate.

**Key words:** Pipazethate hydrochloride, reproterol hydrochloride, salbutamol sulphate, terbutaline sulphate, Bronchodilator, ISE, FIA, Potentiometry.

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To my Husband  
To my Parents and Sisters  
To my Son and Daughter

*for their encouragement, help and infinite  
love which I can't forget.*





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The authoress

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1. Salbutamol Plastic Membrane Electrodes Based on Individual and Mixed Ion-Exchangers of Salbutamolium Phosphotungstate and Phosphomolybdate, *Analyst*, 125, 2000, 1129.
2. Flow Injection Potentiometric Determination of Pipazethate Hydrochloride, *Analyst*, 126, 2001, 79.
3. Potentiometric Flow Injection Determination of Salbutamol, *Analytical Letters*, accepted for publication, AL-1629, 34 (17), 2001.
4. Reproterol Plastic Membrane Ion-Selective Electrodes Based on its Individual and Mixed Ion-Exchangers with Phosphotungstic and/or Phosphomolybdic Acids, *Microchemical Journal*, accepted for publication, MSN 135, 2001.
5. Flow Injection Potentiometric Determination of Reproterol, *Quimica Analitica*, accepted for publication, MS00-40, 2001.
6. Conductimetric Determination of Reproterol HCl and Pipazethate HCl and Salbutamol Sulphate in their Pharmaceutical Formulations, *Journal Pharmaceutical and Biomedical Analysis*, accepted for publication, L00-205, 2001.
7. Construction and Performance Characteristics of Terbutaline Plastic Membrane Electrode in Batch and FIA Conditions, *Microchemical Journal*, accepted for publication, MSP 049, 2001.

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