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شبكة المعلومات الجامعية

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التوثيق الالكتروني والميكروفيلم

قسم

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بالرسالة صفحات نم ترد بالاصل

٢٩٨٤

**Determination of diphenhydramine hydrochloride
using screen printed and carbon paste electrodes**

Presented by

Wael Gaber El-Sayed

(B.Sc. Degree, Chemistry, Ain Shams University 2002)

A Thesis Submitted

to

Faculty of Science

In the partial fulfillment of the requirements for

The M.Sc Degree

(Analytical Chemistry)

Submitted To

Chemistry Department

Faculty of Science

Cairo University

(2011)



ABSTRACT

Name: Wael Gaber El-Sayed

Title of the thesis: Determination of diphenhydramine hydrochloride using screen printed and carbon paste electrodes.

Degree: (M.Sc) unpublished M.Sc of Science Thesis, Faculty of Science- Cairo University, 2010.

This work has been carried out to investigate:

Development of new screen-printed and carbon paste ion-selective electrodes for the determination of DPH.HCl drug. The work has focused on the preparation of home made carbon ink and testing the performance of such ink in the fabrication of screen-printed carbon paste electrodes (SPEs) for the potentiometric determination of DPH.HCl in pure and pharmaceutical preparations. The performance of such sensors in the potentiometric determination of DPH.HCl is compared with those of CPEs, CWE, PVC and coated graphite electrodes.

Keywords: Diphenhydramine hydrochloride, screen-printed, carbon paste, sensors, pharmaceutical and potentiometric titration.

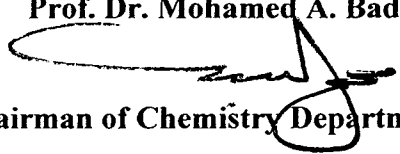
Supervisor

1- Prof. Dr. Gehad Genidy Mohamed

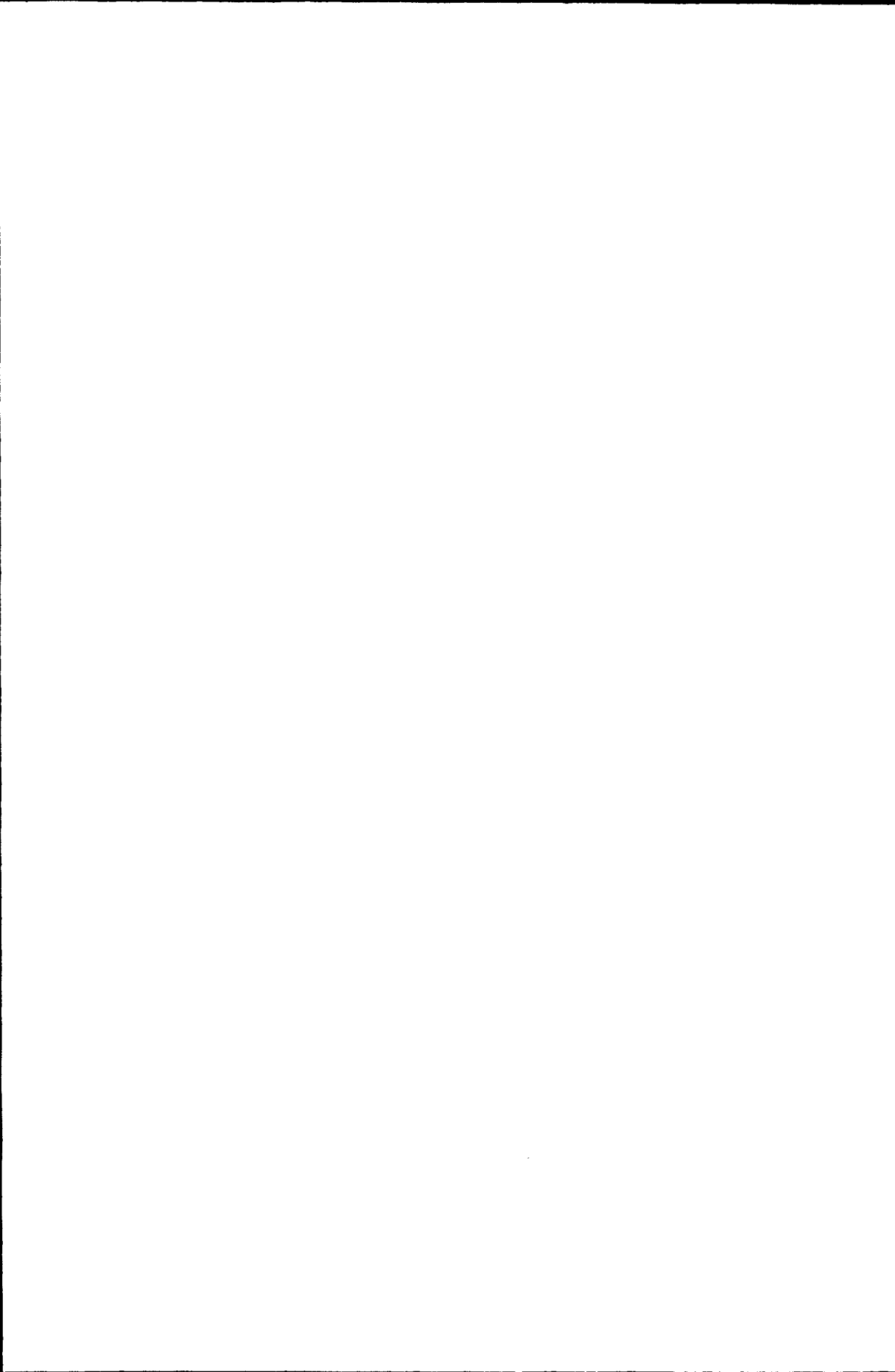
Signature



Prof. Dr. Mohamed A. Badawy



**Chairman of Chemistry Department
Faculty of Science- Cairo University**



APPROVAL SHEET FOR SUBMISSION

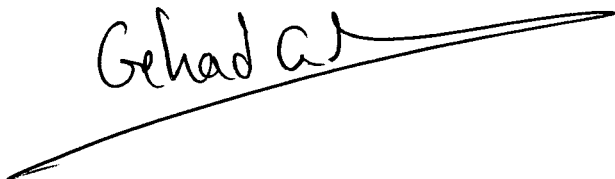
Title of [M.Sc] Thesis: Determination of diphenhydramine hydrochloride using screen printed and carbon paste electrodes.

Name of candidate: Wael Gaber El-Sayed

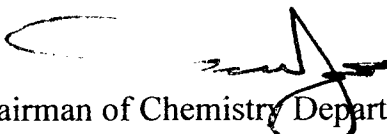
This thesis has been approved for submission by the supervisor:

1- **Prof. Dr.** Gehad Genidy Mohamed

Signature:



Prof. Dr. Mohamed A. Badawy



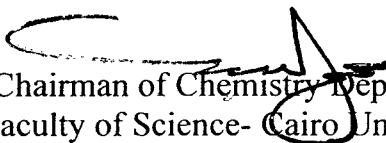
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STATEMENT

This thesis is submitted in partial fulfillment of the requirements of M.Sc. Degree. In addition to the work carried out in this thesis, the candidate has accomplished with success the post graduate studies in the following topics.

1. Advanced Analytical Chemistry.
2. Statistical Thermodynamics
3. Quantum Chemistry.
4. Advanced Inorganic Chemistry.
5. Surface Chemistry.
6. Studies on the Electrical Double Layer
7. Solar Energy
8. Voltammetry
9. Metallurgy.
10. Nuclear Chemistry
11. Electrochemistry of Molten Salts
12. Catalysis.
13. X-ray Analysis.
14. Physical Polymer
15. Mathematical Modeling in Physical Chemistry
16. Mechanisms of Inorganic Reaction.
17. Chelatimetry.
18. Elucidation of Molecular Structure
19. Advanced Electrochemistry.
20. Studies on the Group Theory
21. German Language.

Prof. Dr. Mohamed A. Badawy



Chairman of Chemistry Department.
Faculty of Science- Cairo University.



Acknowledgement

*First and foremost I want to thank Allah Almighty, the most beneficent, unlimited and continuous blessing on me, and for all gifts he gave to me. I wish to express my respectful thanks and full gratitude to **prof. Dr. Gehad G. Mohamed**, Professor of Analytical chemistry, Chemistry Department, Faculty of Science, Cairo University, for suggesting this research project, valuable guidance and fruitful comments, perfect supervision and continuous support, which were indispensable to the completion of this work.*

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Wael Gaber El-Sayed

