Ain Shams University
Faculty of Education
Department of Chemistry

"Utility of naturally occurring khellin in heterocyclic synthesis"

A Thesis Submitted
By

Noura Ali Abd El-Fatah
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In Partial Fulfillment for
Requirements of Master Degree for Teacher's Preparation
in Science (Organic Chemistry)

Supervisors

Assist. Prof. Magdy Ahmed Mohamed Ibrahim
Dr. Nasser Mohamed Abdel-Fatah Ahmed

Department of Chemistry
Faculty of Education
Ain Shams University

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Ain Shams University
Faculty of Education
Department of Chemistry

Approval Sheet

"Utility of naturally occurring khellin in heterocyclic synthesis"

Supervisors *Signature*

Assist. Prof. Magdy Ahmed Mohamed Ibrahim ……

Assist. Prof. of Organic Chemistry, Faculty of Education, Ain Shams University.

Dr. Nasser Mohamed Abdel-Fatah ……

Lecturer of Organic Chemistry, Faculty of Education, Ain Shams University.

Head of Chemistry Department

Prof. Dr. Mahmoud Mohamed Mashaly

……

Higher studies:

The thesis was approved Approval date / / 2017

Approved by Council of Faculty Approved by Council of University

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Noura Ali Abd-El-Fatah

This work is dedicated

to

Soul of "My father and my brother"

My mother, my husband, my brother

and my sisters

بسم الله الرحمن الرحيم

قُلْ إِنَّ صَلَاتِي وَنُسُكِي وَمَحْيَايَ
وَمَمَاتِي لِلَّهِ رَبِّ الْعَالَمِينَ ﴿١٦٢﴾ لَا شَرِيكَ لَهُ
وَبِذَٰلِكَ أُمِرْتُ وَأَنَا أَوَّلُ الْمُسْلِمِينَ ﴿١٦٣﴾

سورة الأنعام
صدق الله العظيم

المقررات الدراسية النظرية التى قامت الطالبة بدراستها واجتازتها بنجاح بعد البكالوريوس

١- مقررات برنامج الدبلوم العام لاعداد المعلم فى العلوم تخصص: الكيمياء

Organic Chemistry 1:

(A) Natural Products (B) Polymer Chemistry

Organic Chemistry 2:

(A) Reaction Mechanism (B) Stereochemistry

Physical Chemistry 1:

(A) Catalysis Chemistry (B) Electrochemistry

Physical Chemistry 2: Quantum Chemistry

Inorganic Chemistry 1: Polarography

Inorganic Chemistry 2: Organometallic Compounds

Inorganic Chemistry 3: Solutions

Inorganic Chemistry 4: Metal Chelates

مقرر تربوي ١

مقرر تربوي ٢

English Language

٢- مقررات برنامج الدبلوم الخاص لاعداد المعلم فى العلوم تخصص: الكيمياء العضوية

Organic Chemistry 1: Spectroscopy I: IR, UV and Mass Spectrometry

Organic Chemistry 2: Spectroscopy II: NMR Spectrometry

Organic Chemistry 3: Heterocyclic Chemistry

Organic Chemistry 4:

Selected Topics: Aromaticity, Delocalized Chemical bonding, and Aromatic Nucleophilic Substitution

Organic Chemistry 5: Stereochemistry

Organic Chemistry 6: Organic Reactions

Organic Chemistry 7: Free Radicals Reactions

Organic Chemistry 8:

(A) Sulfur and Phosphorous compounds

(B) Organic Analytical Chemistry

Organic Chemistry 9: Review Article

مقرر تربوي ١

مقرر تربوي ٢

English Language

٣- مقررات برنامج الماجستير لإعداد المعلم في العلوم وتخصص: الكيمياء العضوية

Organic Chemistry 1: Physico-organic Chemistry

Organic Chemistry 2:

(A) Microanalysis (B) Modern Organic Synthesis

Organic Chemistry 3: Advanced Organic Spectroscopy

Organic Chemistry 4: Pericyclic Reactions

مقرر تربوي ١

مقرر تربوي ٢

كفاءة لغوية

English Language

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