سامية محمد مصطفى



شبكة المعلومات الحامعية

بسم الله الرحمن الرحيم



-Caro-

سامية محمد مصطفي



شبكة العلومات الحامعية



شبكة المعلومات الجامعية التوثيق الالكتروني والميكروفيلم





سامية محمد مصطفى

شبكة المعلومات الجامعية

جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

قسو

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



يجب أن

تحفظ هذه الأقراص المدمجة يعيدا عن الغيار



سامية محمد مصطفي



شبكة المعلومات الجامعية



المسلمة عين شعور المسلمة عين شعور المسلمة عين شعور المسلمة عين شعور المسلمة ا

سامية محمد مصطفى

شبكة المعلومات الحامعية



بالرسالة صفحات لم ترد بالأصل



Isolation and Structure Determination of Active Ingredients of Certain Plant from Asclepiadaceae Family

Submitted by

Amal Mahmoud Youssef Moustafa

M.Sc. Chemistry Suez Canal University

Submitted to

Department of Chemistry

Faculty of Science Suez Canal University

for

The Degree of Doctor of Philosophy in Science "Organic Chemistry"

Supervised by

Prof. Dr. Ahmed I. Khodair Professor of Organic Chemistry Faculty of Science Suez Canal University

Former President of Suez Canal University and Former President of Misr University for Science & Technology Prof. Dr. Mahmoud A. Saleh Professor of Chemistry and Director of Environmental Chemistry and Toxicology Laboratory, Texas Southern University, Houston, TX, USA

Suez Canal University Faculty of Science 2001

(07 V 9



Isolation and Structure Determination of Active Ingredients of Certain Plant from Asclepiadaceae Family

Name: Amal Mahmoud Youssef Moustafa

Advisor

Approval

- 1. Prof. Dr. Ahmed I. Khodair
 Professor of Organic Chemistry,
 Faculty of Science, Suez Canal University
- 2. Prof. Dr. Mahmoud A. Saleh Professor of chemistry, Texas Southern University, USA

Approval Sheet

"Isolation and Structure Determination of Active Ingredients of Certain Plant from Asclepiadaceae Family"

Judgment and Discussion Committee

Approved By

Signature

1- Prof. Dr./ Ahmed Ismail Khodair

Professor of Organic Chemistry, Faculty of Science

Suez Canal University

2-Prof. Dr./ Faiza Mohamed Hammouda F Hammoula

Professor of Phyto Chemistry National Research Center

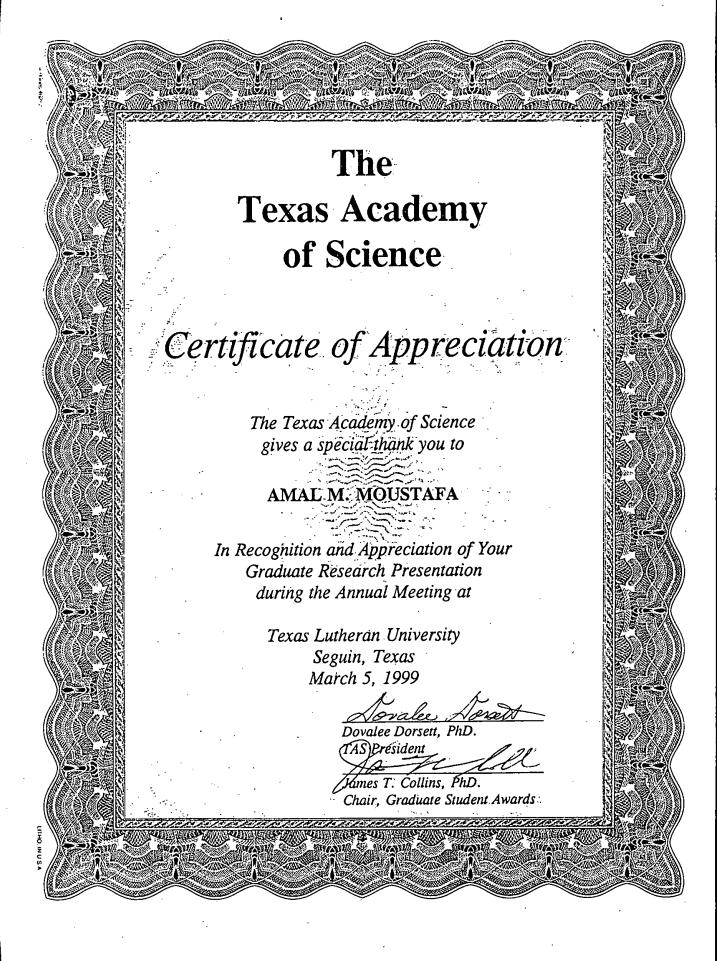
3-Prof. Dr./ Amin Farouk Fahmi (J. T. Jalumm Professor of Organic Chemistry, Faculty of Science

Ain-Shams University

This thesis has not been previously submitted for any degree at this University or at any other University.

Signed

Amal Mahmoud Youssef Moustafa



101st ANNUAL MEETING OF THE TEXAS ACADEMY OF SCIENCE

PROGRAM AND ABSTRACTS OF PAPERS

March 5 - 7, 1998

The University of Texas at Tyler Tyler, Texas

were identified. The identification of chemical constituents of the used oil as compared to the fresh oil would help in studying the environmental impact of the used motor oil. A group of hydrocarbons, aldehydes, ketones, carboxulic acids, as well as trace elements were identified as major constituents of the volatile fraction of the used oil. The chemical structure and environmental impact of the identified chemicals will be presented. This research was supported by a grant from the Welch Foundation.

Posters

72. ANTIBACTERIAL TRITERPENOIDS ISOLATED FROM LANTANA CAMARA. Mahmoud Saleh, Alaa Kamel*, and James Swaray, Environmental Chemistry and Toxicology Laboratory, Texas Southern University, Houston, TX

Four pentacyclic triterpenoids were isolated from Lantana camara (family Verbenaceae). Their isolation was carried out by medium pressure liquid chromatography (MPLC) and high performance liquid chromatography (HPLC). The structures of the isolated triterpenoids were elucidated by infra-red, mass, and nuclear magnetic resonance spectroscopic analysis. The antibacterial activity of these compounds was carried out using bioautography assays for gram positive and gram negative bacteria. The compounds were found to possess strong antibacterial activity against *E. coli* and *B. cereus*, in which 0.08 µg and 0. I µg of lantic acid were the minimum ihibition doses, compared to 0.05 µg and 0.005 µg of chloramphenicol respectively.

73. Andrew Kippenberger, Department of Chemistry, University of Texas at Tyler, Tyler, TX.

New methods for the reduction and remediation of hazardous wastes like carcinogenic organic solvents, toxic materials, and nuclear contamination are vital to environmental health. Neglect, carelessness or ignorance have led to the contamination of entire facilities, soil, ground-water, and the atmosphere by carcinogenic solvents, heavy metals, toxic pesticides, and hazardous nuclear materials. Procedures must be developed and implemented to reduce the amount of waste produced in chemical processes and to detect the presence and/or concentration of contaminants and to decontaminate fouled environments. Here we propose to design and develop polymeric "smart" coatings and sensors that are capable of both detecting and removing hazardous contaminants such as lead and mercury from contaminated surfaces.

(74.) CARDIAC GLYCOSIDES FROM LEPTADENIA PYROTECHNICA. Mahmoud Saleh, Ahmed I. Khodair, Faiza M. Hammouda, Fakher El-Shahed, Alaa Kamel, Amal M. Moustafa, Environmental Chemistry and Toxicology Laboratory, Texas Southern University, Houston, TX

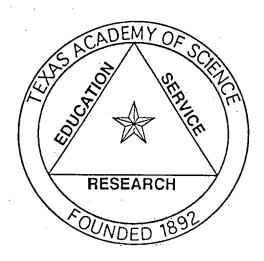
The cardiac glycosides of Leptadenia pyrotechnics (Asclepiadaceae family) collected from Sinai, Egypt were isolated from the latex of the plant. Their isolation and purification were carried out by Rotation Locular Counter Current Chromatography (RLCCC) and High Performance Liquid Chromatography (HPLC). The structures of the isolated cardenolides were elucidated by Ultra-violet, Infra-red, Mass and Nuclear Magnetic Resonance spectroscopic analysis.

75. GRAPHITE FURNACE ATOMIC ABSORPTION SPECTROMETRIC DETERMINATION OF LEAD USING RUTHENIUM AS A MATRIX MODIFIER. Tangela O'Neil*, Serkadis Tefera, K. Cai, and C. McDonald, Department of Chemistry, Texas Southern University, Houston, TX. 77004

The most widely used analytical method for determining trace quantities of lead in environmental samples and biological fluids is the Graphite Furnace Atomic Absorption Spectrometric technique (GFAAS). This technique is beset by problems associated with the sample matrices, particularly in the case of biological fluids such as urine and blood. These problems are due to the low melting point of lead and the large amount of biological materials such as blood cell fragments which must be destroyed in the graphite furnace during the analysis. The addition of matrix modifiers to the samples have been suggested as a technique to improve the sensitivity for determining lead in these samples using the GFAAS technique. Our study involves determining the feasibility of using certain rare metals, particularly the platinum metals, for improving the determination of lead in a number of environmental and biological materials. We have concentrated this study on the utilization of ruthenium as a matrix modifier. Our study to date indicates that ruthenium can improve the sensitivity for lead several fold in aqueous solution. These findings will be presented. Supported by Grant 5 S06 GM08061-22 (MBRS)

76. THE ROLE OF THE PLATINUM METALS AS CHEMICAL MODIFIERS FOR THE DETERMINATION OF LEAD USING GRAPHITE FURNACE TECHNIQUES. Prima Tatum*, K. Cai, and C. McDonald, Department of Chemistry, Texas Southern University, Houston, TX. 77004

102nd ANNUAL MEETING OF THE TEXAS ACADEMY OF SCIENCE



PROGRAM AND ABSTRACTS OF PAPERS

March 4 - 6, 1999

Texas Lutheran University Seguin, Texas

77. SPROUTING OF CROTON ALABAMENSIS VAR. TEXENSIS AFTER A CROWN FIRE AT FORT HOOD, TEXAS, Laura L. Sanchez, The Nature Conservancy of Texas, Fort Hood, TX

In February 1996 a crown fire burned 6,000 ha at Ford Hood Military Reservation, Texas. Individuals of Croton alabamensis var. texensis were top killed by this fire. In September 1996 we surveyed known populations and found numerous individuals were sprouting from the remaining charred stems. Previous studies of C. alabamensis indicate that fire is fatal to this species and can even limit its distribution (Farmer 1962). We now know that fire is not as detrimental to this state threatened species as was previously thought.

78. THE IMPORTANCE OF LIGHT INTENSITY AND NUTRIENT LEVELS ON THE GROWTH OF HELIANTHUS PARADOXUS (COMPOSITAE), Monica Mendez and O.W. Van Auken, University of Texas at San Antonio, San Antonio, TX

(Abstract not available)

Chemistry

79. DETAILED SPECTRA ANALYSIS OF HYDROTRO(PYRAZOLYL)BORATE COMPLEXES OF ZIRCONIUM(IV) Renard L. Thomas, Department of Chemistry, Texas Southern University, Houston, TX

The reaction products of independent reactions of zirconium IV tetrahalides (chloride and bromide) with hydrotris(pyrazol-1-yl)borate in 1:2 mole ratios are dichlorobis[hydrotris(pyrazol-1-yl)]boratezirconium(IV) and dibromobis[hydrotris(pyrazol-1-yl)]boratezirconium(IV). Previous attempts to characterize these complexes were clouded with uncertainty about the coordinating behavior of the hydrotris(pyrazol-1-yl) borate ligand - bidentate or tridentate fashion. The focus of this study was to acquire high-resolution proton NMR and IR analyses to attempt to confirm proposed structure.

80. THE SYNTHESIS AND CHARACTERIZATION OF DICHLORO[BIS-(DIHYDROBIS(PYRAZOLYL)BORATE] ZIRCONIUM(IV), Tonja L. Parker* and Bobby Wilson, Department of Chemistry, Texas Southern University, Houston, TX

The reaction of ZrCl4 with the potassium dihydrobis(pyrazolyl)borate salt in methylene chloride led to the formation of dichloro[bis(dihydrobis(pyrazolyl)borate] zirconium(IV). The reaction proceeded as follows: ZrCl4 + 2K[H2(Pz)2)] ->ZrCl2[H2(Pz)2]2 +2KCl. The complex was soluble in organic solvents such as dichloromethane, chloroform, and toluene. The complex had a melting point range of 88-89oC and was characterized by proton NMR and I.R. The I.R. showed that the H2B(Pz)2 group was intact and behavioring in a bidentate fashion. The NMR spectrum indicated that both pyrazolyl groups were coordinated. Therefore, it was concluded that the zirconium complex was six coordinated with the ligand acting in a bidentate fashion.

81. INVESTIGATION OF THE FLAVONOIDS OF LEPTADENIA PYROTECHNICA, Amal M. Moustafa*, Ahmed I. Khodair, Faiza M. Hammouda, Fakher El-Shahed, Alaa Kamel and Mahmoud Saleh, Department of Chemistry, Texas Southern University, Houston, TX

The flavonoids of Leptadenia pyrotechnica (Asclepiadaceae family) collected from Sinai, Egypt were isolated from the aerial parts of the plant. The flavonoids were isolated from the plant by extraction with organic solvents CHCl3 and ethyl acetate) followed by fractionation on sephadex LH-20 column chromatography and preparative paper chromatography, and then subjected for further purification on sephadex LH-20 column chromatography. Moreover, the purity of isolated flavonoids was checked by using two-dimensional TLC on cellulose paper chromatography. The structures of the isolated constituents were elucidated by Ultra-violet (UV), Infra-red (IR), Mass and Nuclear Magnetic Resonance spectroscopic analysis. Biological evaluation of the activity of the isolated flavonoids on brine shrimps will be presented.

82. A PRELIMINARY STUDY OF ARSENIC LEVELS IN GARDEN SOIL NEAR PRESSURE-TREATED WOOD, Rony Kampal* and Delphia Harris, University of St. Thomas, Houston, TX

In order to prevent decay promoted by insects and fungi, some pressure-treated lumber is infused with chromated cuprous arsenate. Pressure treated logs are commonly used as landscape logs in yards and gardens. There is some concern that arsenic from these logs may leach into nearby soil presenting an environmental