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شبكة المعلومات الجامعية



شبكة المعلومات الجامعية

التوثيق الالكتروني والميكرو فيلم

# جامعة عين شمس

التوثيق الالكتروني والميكروفيلم

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# بعض الوثائق الأصلية تالفة



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بالرسالة صفحات

لم ترد بالأصل

Physico-chemical studies on binary and  
ternary complexes of some transition metal  
ions. Investigation of their potential role in  
the catalysis of hydrolysis of amino acid  
esters

BI. 989

*A thesis Submitted*

*To*

*The Department of Chemistry  
Faculty of Science  
Cairo University*

*For the Ph.D Degree  
(Chemistry)*

2002

*By*

*Ahmed Abdou Ali El-Sherif*

*M.Sc. (1997)*

## APPROVAL SHEET FOR SUBMISSION

**Title of the Ph.D. thesis :** Physico-chemical studies on binary and ternary complexes of some transition metal ions. Investigation of their potential role in the catalysis of hydrolysis of amino acid esters.

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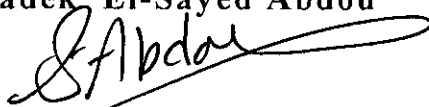
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## **Abstract**

**Name:** Ahmed Abdou Ali El-Sherif

**Title of thesis:**

Physico-chemical studies on binary and ternary complexes of some transition metal ions. Investigation of their potential role in the catalysis of hydrolysis of amino acid esters

**Degree:** Ph. D. in Chemistry, Departement of Chemistry, Faculty of Science, Cairo University, 2002.

This work has been carried out to investigate the synthesis and characterization of Pd(II) complexes with Picolylamine and the equilibria involved in the interaction of  $[\text{Pd}(\text{pic})]^{2+}$  with 1,1-cyclobutane dicarboxylic acid and some biologically important ligands. The effect of chloride ion concentration and the effect of solvent on the stability of Pd(Pic)-CBDCA complex are also reported. The palladium(II)-picolylamine complex promoted the hydrolysis of amino acid esters and the kinetic evidence of intermolecular mechanisms have been investigated. Also Ternary complexes of copper(II) involving picolylamine (Pic) and amino acids, peptides or DNA constituents have been studied. The stability constants and concentration distribution as a function of pH of the complexes formed have been potentiometrically investigated. The kinetics of hydrolysis of amino acid esters coordinated to  $\text{Cu}(\text{pic})^{2+}$  complex have also been studied.



Keywords: Complex-formation equilibria, picolylamine, Pd(II), Cu(II), amino acids, peptides, DNA, Cyclobutane dicarboxylic acid.

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*Dedicated*

*To*

*My Loving*

*Parents*

*And*

*To My Family*

*Especially*

*To*

*My Wife*

## Acknowledgement

All gratitude is due to **ALLAH** who guided and helped me to bring forth to light this thesis.

I wish to express my sincere appreciation to Prof. Dr. E. M. Khairy, Prof. Dr. M. M. Shoukry, Prof. Dr. Maher M. El-Dessouky and Prof. Dr. A. Saeed, all being in the Inorganic Chemistry Division of Chemistry Department, Faculty of Science, Cairo University, for suggesting the problem, their keen supervision, continuous and valuable help, fruitful criticism and encouragement during the execution of this work.

It is my pleasure to express deep gratitude to all members of staff in the Department of Chemistry, Faculty of Science, Cairo University for their invaluable help and advice.

Finally, I would like to express my sincere appreciation to all colleagues who helped me in the completion of this work in its final form.

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