



شبكة المعلومات الجامعية

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ





شبكة المعلومات الجامعية



شبكة المعلومات الجامعية

التوثيق الالكتروني والميكرو فيلم

# جامعة عين شمس

التوثيق الالكتروني والميكروفيلم



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



## يجب أن

تحفظ هذه الأفلام بعيداً عن الغبار

في درجة حرارة من 15 – 20 مئوية ورطوبة نسبية من 20-40 %

To be kept away from dust in dry cool place of  
15 – 25c and relative humidity 20-40 %



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# بعض الوثائق الأصلية تالفة



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بالرسالة صفحات

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**PHYTOCHEMICAL AND BIOLOGICAL  
STUDY OF SOME PLANTS BELONGING  
TO FAMILY CHENOPODIACEAE.**

**A THESIS SUBMITTED**

**BY**

**FATMA SOLIMAN EL-SHARABASY**

**FOR THE DEGREE OF PHILOSOPHY  
DOCTOR (CHEMISTRY)**

**THE CHEMISTRY DEPARTMENT**

**FACULTY OF SCIENCE  
AIN SHAMS UNIVERSITY**

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## APPROVAL SHEET FOR SUBMISSION

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Title of [Ph. D] Thesis :

**"Phytochemical and Biological Study of Some Plants  
Belonging to Family Chenopodiaceae."**

Name of the Candidate : **Fatma Soliman El-Sharabasy**

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## AIM OF THE WORK

The present work consists of two parts :

### Part I : Chemistry of four *Salsola* species :

- 1) Identification, isolation and purification of the chemical constituents of the chosen plants using different chromatographic techniques including column chromatography vacuum liquid chromatography and high performance liquid chromatography.
- 2) Structure elucidation of the isolates by chemical means preparation of derivatives, acid hydrolysis) as well as spectral menas (GC / Mass,  $^1\text{H-NMR}$ ,  $^{13}\text{CNMR}$ )

### Part II : Biological study of the hydroalcoholic extracts of *Salsola villosa* and *Salsola volkensii*.

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## PHYTOCHEMICAL AND BIOLOGICAL STUDY OF SOME PLANTS BELONGING TO FAMILY CHENOPODIACEAE

Aim of this thesis is to find new source of natural products having biological activity from wild Egyptian plants.

Four *Salsola* species have been chosen for this study viz, *Salsola baryosma* , *Salsola inermis* , *Salsola villosa* and *Salsola volkensii* .

This study includes two parts , general part and special part .

### General part :

This part includes three items , the first is concerned with the introduction .

The second is a survey of literature and collection of previously isolated steroids , saponins , flavonoids , coumarins and alkaloids from *Salsola* species , pharmacological tests and importance of *Salsola* plants in folk medicine is also mentioned . The third items defines the botanical position of the plants under investigation .

**Special part :**

It is concerned with the experimental studies carried out in this thesis and is divided into two main parts :

**Part one :**

This part is concerned with the phytochemical study of the four plants and contains six items numbered IV , V , VI , VII , VIII and IX .

**Part two :**

This part is concerned with the pharmacological tests carried out to define the biological activity of *S.villosa* and *S. volkensis* .

**Part 1 :**

**IV** . This is concerned with materials , apparatus and methods used during the present work .

**V** . Includes some pharmacopoeial constants , estimation of lipids , unsaponifiable matter and fatty acids in the four species . Tables 6, 7, 9 , 10, 11, 12 .

**VI** . Column chromatographic segregation of the constituents of the lipoidal part of *Salsola villosa* where eight compounds