



شبكة المعلومات الجامعية  
التوثيق الإلكتروني والميكرو فيلم

# بسم الله الرحمن الرحيم



**HANAA ALY**



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# جامعة عين شمس

## التوثيق الإلكتروني والميكروفيلم

### قسم

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



### يجب أن

تحفظ هذه الأقراص المدمجة بعيدا عن الغبار



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# **Comparative phytochemical studies of some edaphic algae.**

**A Thesis**

Submitted for the Degree of Doctor of Philosophy of Science  
in Botany

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**Title:** "Comparative phytochemical studies of some edaphic algae."

**Degree:** Doctor of philosophy in science in Botany

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## *Declaration*

*This Thesis has not previously been submitted for a degree at this or any other university and it is the original work of the authors.*

*The references in the text will show specifically the extent to which I have availed myself of the work of other authors.*

*Neamat Hassan Sayed Mostafa*

# DEDICATION

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## *List of Abbreviations*

<i>Abb.</i>	<i>Complete Name</i>
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<b>A.O.A.C.</b>	<i>Official Methods of Analysis of the Association of Official Agricultural Chemists</i>
<b>AA</b>	<i>Amino Acids</i>
<b>AgCl</b>	<i>Silver chloride</i>
<b>AgNO<sub>3</sub></b>	<i>Silver nitrate</i>
<b>AMU</b>	<i>Atomic Mass Units</i>
<b>ANOVA</b>	<i>Analysis of variance</i>
<b>APHA</b>	<i>American Public Health Association</i>
<b>Asc</b>	<i>Ascorbic acid</i>
<b>BaCl<sub>2</sub></b>	<i>Barium chloride</i>
<b>BaSO<sub>4</sub></b>	<i>Barium sulphate</i>
<b>Ca (NO<sub>3</sub>)<sub>2</sub></b>	<i>Calcium nitrate</i>
<b>Ca<sup>2+</sup></b>	<i>Calcium ion</i>
<b>CaCl<sub>2</sub>. 2H<sub>2</sub>O</b>	<i>Calcium chloride</i>
<b>Ch a</b>	<i>Chlorophyll a</i>
<b>Cl</b>	<i>Chloride</i>
<b>CN</b>	<i>Cetane Number</i>
<b>CuSO<sub>4</sub>. 5 H<sub>2</sub>O</b>	<i>Copper sulphate</i>
<b>DPPH</b>	<i>1,1-Diphenyl-2-Picrylhydrazyl radical</i>
<b>Dwt</b>	<i>Dry weight</i>
<b>E.C.</b>	<i>Electrical Conductivity</i>
<b>EAA</b>	<i>Essential Amino Acids</i>
<b>EDTA</b>	<i>Ethylenediaminetetraacetic acid</i>
<b>EI</b>	<i>Electron impact</i>
<b>FAMES</b>	<i>Fatty Acid Methyl Esters</i>
<b>FAO/WHO</b>	<i>Food and Agriculture Organization of the United Nations and the World Health Organization</i>
<b>FeCl<sub>3</sub></b>	<i>Ferric chloride</i>
<b>fw</b>	<i>Fresh weight</i>
<b>GC-MS</b>	<i>Gas Chromatography- Mass spectrometry</i>
<b>GPS</b>	<i>Global Positioning System</i>
<b>H<sub>2</sub>O<sub>2</sub></b>	<i>Hydrogen peroxide</i>

<b><math>H_2SO_4</math></b>	<i>Sulfuric acid</i>
<b><math>H_3BO_3</math></b>	<i>Boric acid</i>
<b><math>HCl</math></b>	<i>Hydrochloric acid</i>
<b><math>HCO_3^-</math></b>	<i>Bicarbonate ion</i>
<b>HPLC</b>	<i>High-Performance Liquid Chromatography</i>
<b><math>K^+</math></b>	<i>Potassium ion</i>
<b><math>K_2HPO_4</math></b>	<i>Dipotassium hydrogen phosphate</i>
<b>KOH</b>	<i>Potassium hydroxide</i>
<b>M.C.</b>	<i>Moisture Content</i>
<b>M.wt.</b>	<i>Molecular Weight</i>
<b><math>Mg^+</math></b>	<i>Magnesium ion</i>
<b><math>MgSO_4 \cdot 7H_2O</math></b>	<i>Magnesium sulphate</i>
<b><math>MnSO_4 \cdot H_2O</math></b>	<i>Manganese sulphate</i>
<b>mS</b>	<i>Millisiemens</i>
<b>MUFAs</b>	<i>Monounsaturated Fatty Acids</i>
<b><math>Na^+</math></b>	<i>Sodium ion</i>
<b><math>Na_2CO_3</math></b>	<i>Sodium carbonate</i>
<b><math>Na_2SiO_3</math></b>	<i>Sodium silicate</i>
<b>NaCl</b>	<i>Sodium chloride</i>
<b><math>NaNO_3</math></b>	<i>Sodium nitrate</i>
<b>NaOH</b>	<i>Sodium hydroxide</i>
<b>ND</b>	<i>Not Detected</i>
<b><math>(NH_4)_6Mo_7O_{24} \cdot 4H_2O</math></b>	<i>Ammonium molybdate</i>
<b>NIST</b>	<i><u>National Institute of Standards &amp; Technology</u></i>
<b>Nm</b>	<i>Nanometer</i>
<b>O.C.</b>	<i>Organic Carbon</i>
<b>OD</b>	<i>Optical Density</i>
<b>ppm</b>	<i>Part per million</i>
<b>ppt</b>	<i>Part per thousand</i>
<b>PUFAs</b>	<i>Polyunsaturated Fatty Acids</i>
<b>RT</b>	<i>Retention Time</i>
<b>SFAs</b>	<i>Saturated Fatty Acids</i>
<b><math>SO_4^{2-}</math></b>	<i>Sulphate ion</i>

<b>SPSS</b>	<i>Statistical Package for Social Sciences</i>
<b>T.D.S.</b>	<i>Total Dissolved Solids</i>
<b>UV/VIS</b>	<i>Ultraviolet/Visible</i>
<b>ZnSO<sub>4</sub> · 7H<sub>2</sub>O</b>	<i>Zinc sulphate</i>

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