

بسم الله الرحمن الرحيم





شبكة المعلومات الجامعية التوثيق الالكتروني والميكروفيلم



جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

قسم

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تحفظ هذه الأقراص المدمجة بعيدا عن الغبار





Ain Shams University
Faculty of Science
Microbiology Department

**Phytochemical and biological studies
on *Teucrium brevifolium*
at North Western Coastal region**

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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

قالوا

سبحانك لا علم لنا
إلا ما علمتنا إنك أنت
العليم العظيم

صدق الله العظيم

سورة البقرة الآية: ٢٢



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Declaration

I declare that this thesis has been composed by myself and the work of which it is a record has been done by myself. It has not been submitted for a degree at this or any other university.

 *Heba Yehia Sayed*

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LIST OF ABBREVIATIONS

| Abbrev. | Full-term |
|------------------------------------|--------------------------------------------------------------|
| AcOH | : Acetic acid/water (15%). |
| AlCl₃ | : Aluminum chloride. |
| BAW | : n-Butanol-Acetic Acid-Water (4:1:5) |
| CC | : Column Chromatography. |
| CHCl₃ | : Chloroform. |
| CD₃OD | : Methanol deuterated. |
| CA/g | : chlorogenic acid equivalent. |
| CE/g DW | : catechin equivalent per gram of dry weight. |
| ¹³C-NMR | : Carbon Nuclear Magnetic Resonance analysis. |
| d | : Doublet. |
| dd | : Doublet of doublet. |
| DM | : Dry Matter. |
| Fig | : Figure. |
| GAE/g DW | : gallic acid equivalent per gram of dry weight. |
| g | : Gram. |
| GC-MS | : Gas Chromatography-Mass Spectrum. |
| H₃BO₃ | : Boric acid. |
| HCL | : Hydrochloric acid |
| HEPG2 | : Liver carcinoma cell line. |
| HELA | : Cervical carcinoma. |
| HPLC | : High Performance Liquid Chromatography. |
| ¹H-NMR | : Proton Nuclear Magnetic Resonance analysis. |
| H₂SO₄ | : Sulfuric acid |
| hr | : Hour. |
| HRESIMS | : High resolution electrospray ionization mass spectrometry. |
| Hz | : Hertz. |
| IC₅₀ | : Half maximal inhibitory concentration. |

| | |
|----------------|-----------------------------------------------------------------|
| IR | : Infra-Red. |
| J | : Coupling constant. |
| Kg | : Kilogram. |
| µg | :Micro gram |
| MI | : milli |
| MDA-MB- | : Breast cancer cell line. |
| 361 | |
| m | : Multiplet. |
| MIC | : Minimum Inhibition Concentration. |
| ml | : Millimeter. |
| mM | : millimole. |
| MTT | :3-[4,5-dimethylthiazole-2-yl]-2,5-diphenyltetrazolium bromide. |
| MW | : Molecular Weight. |
| NaOAc | : Sodium acetate. |
| NaOMe | : Sodium methoxide. |
| No. | : Number. |
| NCI | : National Cancer Institute. |
| PC | : Paper Chromatography. |
| ppm | : Part Per Million. |
| rpm | : Rate per minute. |
| mg RU/g | : rutin equivalent |
| s | : Singlet. |
| UV | : Ultraviolet. |
| Wt | : Weight. |
| WHO | : World Health Organization |
| 1MM | : Whatman filter paper No. 1 |
| 3MM | : Whatman filter paper No. 3 |
| β | : Beta |
| δ | : Chemical shift. |
| λ | : Lambda. |