


**EXTRACTION AND ELUCIDATION OF CHEMICAL  
CONSTITUENTS FROM THE ROOTS OF  
*DERRIS ELLIPTICA***

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This Final Year Project Report entitled **“Extraction and Elucidation of Chemical Constituents from the roots of *Derris elliptica*”** was submitted by Tengku Muzzabfarrullah B. Tengku Sham, in partial fulfillment of the requirement for the Degree of Bachelor of Science (Hons.) Applied Chemistry, in the Faculty of Applied Sciences, and was approved by



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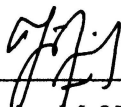
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## ABSTRACT

### EXTRACTION AND ELUCIDATION OF CHEMICAL CONSTITUENTS FROM THE ROOTS OF *DERRIS ELLIPTICA*

The chemical compounds from the roots of *Derris elliptica* were extracted and isolated by various chromatography methods. The isolated compounds were elucidated by the spectroscopic methods. Extractions of the roots of *Derris elliptica* (300g) were done by macerated in the chloroform. The extraction yield crude extract 8.74g (0.03 % w/w) were isolated using the chromatography methods. Vacuum liquid chromatography (VLC) and Radial chromatography (RC) were used to isolate the crude extract. Thin layer chromatography (TLC) was used to identify the pure compounds. The isolated crude produce two compound were produce labeled DE1 (16.7mg) and DE2 (14.1mg). The pure compound were elucidated by the spectroscopic method; Nuclear Magnetic Resonance (NMR), Gas Chromatography – Mass Spectrometry (GC-MS), UV spectroscopy and Fourier Transform Infrared (FTIR). From the comparison of the spectrums with the literature reviews, the compounds were identified. Compound DE1 known as rotenone and compound DE2 known as 2',-hydroxy-1',2'-dihydrorotenone.