TOTAL FLAVONOID AND PHENOLIC CONTENT IN *Catharanthus roseus* AND *Clitoria ternatea LEAVES EXTRACT*

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This Final Year Project Report entitled "**Total Flavonoid and Phenolic Content in *Catharanthus roseus* and *Clioria ternatea* Leaves Extract"** was submitted by Muhammad Syukri bin Razali, in partial fulfilment of the requirements for the Degree of Bachelor of Science (Hons.) Biology, in the Faculty of Applied Sciences, and was approved by

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ABSTRACT

TOTAL FLAVONOID AND PHENOLIC CONTENT IN *Catharanthus roseus* AND *Clitoria ternatea LEAVES EXTRACT*

In this research, the total flavonoid and phenolic content in *Catharanthus roseus* and *Clitoria ternatea* leaves extract have been identified and compared. The dried leaves of *Catharanthus roseus* and *Clitoria ternatea* were extract using 90% ethanol and crude extract acquired by using rotary evaporator. The extract of *Catharanthus roseus* and *Clitoria ternatea* were then used in phytochemical screening qualitative and quantitative screening. The qualitative test used are Ferric chloride test and Shinoda's test. Ferric Chloride test proved the presence of phenolic in the extract when the colour of *Catharanthus roseus* and *Clitoria ternatea* leaves extract changed from green to dark green while Shinoda's test proved the presence of flavonoid in the extract when the of colour of *Catharanthus roseus* and *Clitoria ternatea* leaves extract change from green to dark red. Next, the Quantitative test for total flavonoid and phenolic was conducted and its concentration where determined by using spectrophotometer. Folin-Ciocalteu assay was used for total phenolic content and aluminium chloride assay was used for total flavonoids content. The result for total flavonoids for *Catharanthus roseus* and *Clitoria ternatea* are 77.22867 ± 0.113161 and 73.70833 ± 0.98150 respectively while total phenolic content for *Catharanthus roseus* are 36.33600 ± 0.935313 and *Clitoria ternatea* are 7.35767 ± 0.046188. Total flavonoid content and total phenolic content in *Catharanthus roseus* are higher than *Clitoria ternatea*. Independent t-test was conducted to compare the total phenolic and total flavonoid content between *Catharanthus roseus* and *Clitoria ternatea.* The test shows that there are significance difference between *Catharanthus roseus* and *Clitoria ternatea* ($p<0.05$)