

**DETERMINATION OF PHYTOCHEMICAL
CONSTITUENTS AND ANTIOXIDANT ACTIVITY IN
Cleome gynandra AND *Cosmos caudatus***

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**Final Year Project Report Submitted in
Partial Fulfilment of the Requirements for the
Degree of Bachelor of Science (Hons.) Biology
In the Faculty of Applied Sciences
Universiti Teknologi MARA**

JULY 2016

ACKNOWLEDGEMENTS

I would like to express my gratitude and thanks to my supervisor, Madam Ainun Jariah Binti Manaf and also my co-supervisor Dr Neni Kartini Binti Che Ramli for all the guide and knowledge they give. I would like to extend my appreciation towards my fellow FYP group members for the cooperation in order to finish this final year project. Last but not least, I would like to thanks my families for all the support and motivation throughout the completion of this final year projects. I also want to thanks all the laboratory assistant of UiTM Jengka especially to Encik Suhairi for all the guide and help during the laboratory work.

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ABSTRACT

DETERMINATION OF PHYTOCHEMICAL CONSTITUENTS AND ANTIOXIDANTS ACTIVITIES IN *Cleome Gynandra* AND *Cosmos Caudatus*

Cosmos caudatus and *Cleome gynandra* are herbal plants that commonly known for their beneficial effects on human health. Therefore, this study was conducted to determine quantitatively the compositions of phytochemical constituents and antioxidant properties of the crude extract of *C. gynandra* and *C. caudatus* leaves. The extraction of phytochemical constituents of these plants were carried out by sequential extraction using different polarities of solvents started with hexane, chloroform and methanol. The types of phytochemical constituents are determined through phytochemical screening. Both herbal plants shows positive result on the presence of flavonoid, alkaloids and phenol which contributed to antioxidant activity. Antioxidant activities were assessed by using DPPH scavenging method. Both methanolic extract of *C. caudatus* and *C. gynandra* gave the highest percentage yield which is 40.5% and 32.3% that indicates the presence of bioactive compounds which contributes in antioxidant activity. Meanwhile, the scavenging capacities in *C. caudatus* and *C. gynandra* are the highest at 85.5% and 76.3% in methanol extract indicating the high antioxidant activities. The higher the scavenging capacities the higher the antioxidants activities in these plants. The presence of antioxidant compounds were detected by using HPLC analysis. The highest peak on *C. gynandra* and *C. caudatus* chromatogram is at $r = 3.144$ min and 3.162 min may indicate detection of secondary metabolites in these plants.