

**HYDROLYSIS OF FLAVONOID GLYCOSIDES  
OF AQUEOUS EXTRACT OF *Octomeles*  
*Sumatranus* AND ITS ANTIOXIDANT  
ACTIVITIES**

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

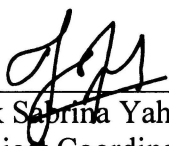
**APRIL 2009**

This Final Year Project Report entitled “ **Hydrolysis of Flavonoid Glycosides of Aqueous Extract of *Octomeles Sumatranus* and its Antioxidant Activities**” was submitted by Farah Ad-Din Nordin, in partial requirements of the Degree of Bachelor of Science (Hons.) Applied Chemistry, in the Faculty of Applied Sciences, and was approved by



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## **ACKNOWLEDGEMENTS**

In the names of Allah, the Most Gracious and the Most Merciful. All praises be with Allah the Almighty who has given me the courage and patience to complete this academic exercise. However, I would have not completed it without the help and supports from these people who show lots of guidance and supports throughout the preparation of this academic exercise. My gratitude goes to my supervisor, Dr. Nor Hadiani Binti Ismail, whom I am deeply indebted for her valuable advice and constructive comments. Not to forget, to my beloved family especially my lovely parents, En. Nordin Bin Othman and Pn. Masriah Binti Hj. Basirun. I would like to express my deepest sincere gratitude for their unfailing and continuous support and love. All of you have been Difference Makers in my life. Also to Asmah Alias, Emi Norzehan Mohamad Mahbob, Sarah Zaifa Zainal and Che Puteh Osman for their undivided assistance and patience in helping and guiding me throughout the completion of this research. Not to forget, to Siti Rahayu Mohd Zakria for giving her support and for always being with me and helping me to make sure that this project can be finished on time. Besides that, to all of the lab assistants whom have helped me in the lab, without their assistance, the experiment would not have been completed and to my entire friends whom have supported me all the way during my study and to everyone that is involved in this project either directly or indirectly. Thanks for the kindness and your cooperation is highly appreciated.

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## ABSTRACT

### HYDROLYSIS OF FLAVONOID GLYCOSIDES OF AQUEOUS EXTRACT OF *Octomeles Sumatranus* AND ITS ANTIOXIDANT ACTIVITIES

The extract of *Octomeles Sumatranus* has been used by the Sarawak and Sabah natives as health tonic. An attempt has been made to chemically profile the extract using LC-MS but the types of flavonoids cannot be determined since the flavonoids glycosides compounds contain many sugars. Therefore, the glycosides were hydrolysed for 3 hours at 80<sup>0</sup>C and the resulting aglycones were identified using LC-MS. The conditions for analyzing the aglycones at HPLC and LC-MS were the same. The hydrolysis was a success based on the differences from the retention time of the unhydrolyzed and hydrolyzed extract. The R<sub>t</sub> of the unhydrolyzed extract was 15 minutes while the R<sub>t</sub> of the hydrolyzed extract was 30 minutes. The hydrolyzed extract was later being submitted to LC-MS for identification and structural determination of the aglycones. The MH<sup>+</sup> peak was *m/z* 365.26 which shows the possible molecular weight of the aglycones. The antioxidant activities of *Octomeles Sumatranus* were investigated based on free radical scavenging activity, DPPH. The IC<sub>50</sub> of the unhydrolyzed extract was detectable at 517 nm and the value was determined to be 19 µg/mL.