

**ANTIOXIDANT ACTIVITY AND PHENOLIC CONTENT OF
SELECTED FRUIT SEEDS**

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This Final Year Project Report entitled “**Antioxidant Activity and Phenolic Content of Selected Fruit Seeds**” was submitted by Aminah Binti Ignasius, in partial fulfilment of the requirements for the Degree of Bachelor of Science (Hons.) Applied Chemistry, in the Faculty of Applied Sciences, was approved by



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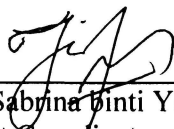
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ABSTRACT

ANTIOXIDANT ACTIVITY AND PHENOLIC CONTENT OF SELECTED FRUIT SEEDS

The total phenolic content and antioxidant activities in *Citrullus lanatus* (watermelon), *Nigella sativa* (sawda) and *Vitis vinifera* (grapes) fruit seeds were studied. From the extraction of the seeds, the sawda seed's extract afforded the highest yield (18.67%) while the lowest yield was obtained from the seed of watermelon (10.28%). The total phenolic content of the extracts was analyzed using Folin–Ciocalteu method. The highest content of total phenolic compounds was detected in the seeds of grape extract (17.0980mg GAE/g dry sample) whereas the lowest content was detected in the seed of sawda extract (3.2160 mg GAE/g dry sample). The ethanolic extract of seeds were analyzed for antioxidant activity (AA) by 2,2-diphenyl-1-picrylhydrazyl radical-scavenging. The scavenging activity of the extract (50, 100 and 200 ppm) increased in a dose dependent manner and the highest scavenging activity was in seed of grape with the range of 37.09% to 77.07% as compared to ascorbic acid with range 49.45% to 93.27%). The results obtained in this study clearly indicate that seeds of fruits have a significant potential to use as a natural antioxidant agent.