

**ANTIOXIDANT AND TOXICITY ASSAYS OF
*IPOMOEA BATATAS***

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

JULY 2015

This Final Year Project entitled “**Antioxidant and Toxicity Assays of *Ipomoea batatas***” was submitted by Ali Ammar bin Jamaludin, in partial fulfillment of the requirements for the Degree of Bachelor Science (Hons.) Biology, in the Faculty of Applied Sciences, and was approved by

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ABSTRACT

ANTIOXIDANT AND TOXICITY ASSAYS OF *IPOMOEA BATATAS*

A study has being conducted on *Ipomoea batatas* obtained from wet market of Kuala Pilah, Negeri Sembilan. The study aim is to determine the presence of antioxidant properties of *Ipomoea batatas* by using DPPH assay, which potentially can be used in pharmaceutical and human health. A total of four explant were successfully isolated from *Ipomoea batatas* and obtained a crude methanolic extract through maceration. All explant such leaves, petioles, roots, and stems were screening for antioxidant activity. Out of four, the highest percentage of scavenging activity was showed by roots (89.04%) followed by leaves (86.37%), petioles (79.82%), and stems (76.84%). Then, all sample of methanolic crude extract were further tested to investigate the toxicity level of *Ipomoea batatas* by using brine shrimp lethality assay and also determination of lethal concentration LC_{50} as a standard toxicity indicator. Explant that showed highest lethal concentration LC_{50} effected in 24 hours was petioles (2.07 mg/ml), followed by stems (2.03 mg/ml) and leaves (1.17 mg/ml). Roots show slightly high toxicity level since the lethal concentration was lowered than 1 mg/ml, which is 0.84 mg/ml. This study show that explant such leaf, stem, and petiole might become the potential sources since as it have high antioxidant with low toxicity level.