ISOLATION AND MOLECULAR CHARACTERIZATION OF FUNGI ISOLATED FROM DECAYED FRUIT

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This Final Year Project Report entitled "**Isolation and Molecular Characterization of Fungi Isolated from Decayed Fruit**" was submitted by Nur Afeeqah Binti Mohamed Zanudin, 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

ISOLATION AND MOLECULAR CHARACTERIZATION OF FUNGI ISOLATED FROM DECAYED FRUIT

Malaysia has been listed as one of the world largest tropical fruits producer, specifically exporting mango, banana and pineapple. However, improper handling during post-harvest process will increase the chances of fungal contamination associated with decayed fruits. Therefore, the aims of this study were to isolate and characterized pathogenic fungi by using morphological and molecular method. Three decayed samples (banana, mango and pineapple) were collected from fruit stalls in Pekan Kuala Pilah. One isolated fungus was successfully found in banana namely B1 and two isolated fungi were found in mango namely M1 and M2. However, the attempt to isolate any pathogenic fungus from pineapple was failed. Based on morphological examination, the presence of fusiform macroconidia and ellipsoidal microconidia indicate that B1 was belongs to genus *Fusarium.* Morphological characteristic of long and globose at tip conidiophores shows that M1 was belong to genus *Aspergillus.* M2 represent genus *Cladosporium* as the colonies appeared as grey and lightly wrinkled. Amplification of each fungal DNA with ITS primer pairs ITS 1 and ITS 4 showed that A belongs to *Fusarium sp.* (551bp), B representing *Aspergillus sp.*(599 bp) and C indicates *Cladosporium sp.* as the DNA band deposited in between of 549 bp to 551 bp. Findings in this study would suggest the proper and hygienic post-harvest handling of fruits.