

**ANTIBACTERIAL AND ANTIOXIDANT ACTIVITIES OF THE  
SEEDS OF *ARTOCARPUS HETEROPHYLLUS***

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**Final Year Project Submitted in  
Partial Fulfillment of the Requirement for the  
Degree of Bachelor of Sciences (Hons.) Chemistry  
in the faculty of Applied Sciences  
Universiti Teknologi Mara**

**JANUARY 2017**

This Final year project entitled “**Antibacterial and Antioxidant Activities of the Seeds of *Artocarpus Heterophyllus***” was submitted by Eumi Nazera binti Mohd Nazir, in partial fulfillment of the requirement for the Degree of Bachelor of Science (Hons.) Chemistry, in the faculty of Applied Sciences, approved by

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## ABSTRACT

### ANTIBACTERIAL AND ANTIOXIDANT ACTIVITIES OF THE SEEDS OF *Artocarpus heterophyllus*

The Jackfruit tree, which also known as *Artocarpus heterophyllus*, is widespread tree all over Asia. The seed of fruit from this species was studied. The seed was extracted using soxhlet extractor with hexane, dichloromethane (DCM) and methanol. The extraction yield obtained were 1.9%, 2.6% and 2.3% of extract methanol, DCM and hexane respectively. Thin Layer Chromatography (TLC) analysis displayed a suitable solvent system to separate the component within each extract. The identified solvent system suitable for methanol extract was DCM:chloroform:hexane (3:2:2), for DCM extract, the identified solvent system was chloroform: hexane (2:1), while, for hexane extract, the identified solvent system was toluene:ethyl acetate:formic acid (7:1:1). The crude extracts was then undergone several test which was antioxidant and antibacterial. The antioxidant test was done using DPPH Radical Scavenging Activity method and the antibacterial test was done using Disc Diffusion method. It was found that all sample extracts had a low antioxidant activity with the percentage radical scavenging activity lower than 22% compared to ascorbic acid. For the antibacterial test, methanol extract exhibited a highest inhibition zone of 16 mm against *Salmonella sp.*, 14 mm against *E.coli*, and, 18 mm against *B.subtillis* and *S. aureus*.