

**SCREENING AND ISOLATION OF THE POTENTIAL  
SOIL BACTERIA FOR ABILITY TO PRODUCE  
ANTIBIOTICS**

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**Final Year Project Report 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**

**JANUARY 2017**

This Final Year Project entitled “**Screening And Isolation Of The Potential Soil Bacteria For Ability To Produce Antibiotics**” was submitted by Rashidah Binti Abd Halim, in partial fulfillment 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

### SCREENING AND ISOLATION OF THE POTENTIAL SOIL BACTERIA FOR ABILITY TO PRODUCE ANTIBIOTICS

Antibiotics are a group of medicines which produced by microbes and used to treat any infections. Bacteria are the most producers for antibiotic. Bacteria producing antibiotic normally had been found in soil. Soil is one of potential habitat to isolate bacteria producing antibiotic. Thus, the aims of this study were to screen and to isolate the potential bacteria producing antibiotic from soil sample. Soil suspension was prepared from soil sample of Hutan Simpan UiTM Negeri Sembilan by diluting one gram of soil into nine ml of water prior incubation at 37°C for 24 hours. After incubation period, two potential bacteria were successfully identified namely bacteria A and bacteria B. Morphological characteristics was carried out to characterize both potential bacteria. Result demonstrated that both bacteria have similar bacilli structure with chain arrangement. However, gram staining characterized bacteria A as Gram positive and bacteria B as Gram negative. Antibacterial activity was performed to identify the potential of both bacteria producing antibiotic against three bacteria namely *Staphylococcus aureus*, *Escherichia coli* and *Shigella* species. Result showed a positive result in bacteria A by performing a clear zone against bacteria *Staphylococcus aureus* with average diameter of 5 mm. Bacteria B showed a negative result for all bacteria tested. Biochemical test performed in bacteria A indicated that it demonstrate the similar characteristic with *Bacillus* species.