EVALUATION ON ANTIBACTERIAL PROPERTIES OF *CAULERPA LENTILLIFERA'S* EXTRACT AGAINST FOOD SPOILAGE BACTERIA

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This Final Year Project Report entitled **"Evaluation on Antibacterial properties of *Caulerpa lentillifera's* Extract Against Food Spoilage"** was submitted by Syazani Salman Bin Radzaini 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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TABLE OF CONTENT

ABSTRACT

The green seaweed *Caulerpa lentillifera* is a species of edible green algae that also known as sea grapes in certain location that gaining a considerable amount of recognition for their antioxidant and antibacterial properties that have beneficial consumption for human in future. Besides of *C. lentillifera* nutritional value that can acts as functional food, it was reported that green seaweed contains bioactive compound such as caulerpin and caulerpenyne that contributed to antibacterial activity. The *C. lentillifera* palatable trait are one of the reason this green seaweed does not need of many processes for human gain benefits by consumption for daily basis. The intake of synthetic antibacterial can bring bad side effects to human being thusly the study of antibacterial properties of *C. lentillifera* are conducted to substituted the synthetic antibacterial with natural bioactive compound antibacterial. The purpose of this research is to evaluate the antibacterial properties of *Caulerpa lentillifera* extract against the food spoilage bacteria. The antibacterial activity of *C. lentillifera* extracts were tested using agar well diffusion. There are three concentration of *C. lentilifera* extract which are 10mg/ml, 30mg/ml and 50mg/ml tested against *Escherichia coli* and *Bacillus licheniformis*. However, the result indicated that *C. lentillifera* fail to inhibit the growth of bacteria. The result of ager well diffusion could be influenced of malfunction practice during inoculum preparation and clinical resistance of both bacteria against *C. lentillifera* extract.