PREVALENCE AND ANTIBIOTIC SUSCEPTIBILITY OF *Vibrio* spp. AND *Vibrio cholerae* IN COCKLES (*Anadara granosa*) AT THREE RETAIL LEVELS IN KUALA PILAH, NEGERI SEMBILAN.

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This Final Year Project Report entitled **"Prevalence and Antibiotic Susceptibility of *Vibrio* spp. and *Vibrio cholerae* in Cockles (*Anadara granosa*) at Three Retail Levels in Kuala Pilah, Negeri Sembilan"** was submitted by Nur Hajaratul Aswat binti Kamaruddin, 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

PREVALENCE AND ANTIBIOTIC SUSCEPTIBILITY OF *Vibrio* spp. AND *Vibrio cholerae* IN COCKLES (*Anadara granosa*) AT THREE RETAIL LEVELS IN KUALA, NEGERI SEMBILAN

People nowadays have very little consideration on food safety and practice poor eating habits such as eating raw or undercooked seafood. There is a presence of microorganism that is said to be opportunistic pathogens such as in cockles, there is a presence of *Vibrio* spp. which can cause vibriosis. This study is to detect the presence of *V.*spp. and *V.cholerae* in cockles at three different retails in Kuala Pilah, Negeri Sembilan and the antibiotic susceptibility of that species. The findings of the study show that there is more than 2.4 x 10^{10} MPN/g in 10 g of cockles from all three places. The result obtained by using Most Probable Number (MPN) method. Then in specifically determining of *V.cholerae*, night market cockles were found to have highest rate of contamination with 71.43%. In order to clarify the presence of *V.* spp. and *V.cholerae* in cockles, Polymerase Chain Reaction (PCR) and visualization by Gel Electrophoresis had been done, proving that the presence of both species were positive. Lastly, for antibiotic test, the Multiple Antibiotic Resistance (MAR) and Disk Diffusion method were used and seven out of 14 types of antibiotics were found to be resistance since the MAR index was between 0.2 to 0.5. Bacitracin, Vancomycin, Furazididone, Tetracycline and Erythromycin are highly resistance to *Vibrio* spp. where Bacitracin is the best antibiotic to treat that species.