

## ABSTRACT

**Suhartini ,Nur. 2014 . Characterization of Genetic Finger Shrimp (*Metapenaeus elegans* De Man, 1907) Catch of Laguna Segara Tillers, Cilacap, Central Java Based on Mitochondrial DNA haplotypes by Using PCR -RFLP method. Biology Supervisor: Kholifah Holil, M.Sc. Supervisor Religion: Umaiatus Syarifah, M.A.**

**Keywords : Finger Shrimp (*Metapenaeus elegans*), haplotypes, Mitochondrial DNA(mtDNA), PCR - RFLP.**

The decline occurred in the lagoon ecosystem Segara Tillers, Cilacap, Central Java, has resulted in the problem of the decline in the quality of genotype and phenotype in shrimp catches Finger (*Metapenaeus elegans*). Information on the genetic character of shrimp needed as a basis for the selection of individuals in order to obtain a good parent and shrimp. Analysis of mitochondrial DNA has been reported to be used in the delivery of the right information because the genetic code has a maternal and offspring traits can produce composite haplotypes. Therefore, this study aims to determine the genetic characterization and haplotype patterns Finger Shrimp (*Metapenaeus elegans*) based on mitochondrial DNA haplotypes using PCR -RFLP method.

This research is a descriptive study. The sample used in this study were 7 individual finger shrimp (*Metapenaeus elegans*) foot road and the tail section taken from the catch of the lagoon Segara Tillers, Cilacap, Central Java. The sample is extracted with a modified PCI method, and amplified by PCR. Parameter study is the total DNA concentration ( $\mu\text{g} / \mu\text{L}$ ), size total DNA (bp), size mtDNA (bp) from product PCR , size and type mtDNA (bp) restriction enzyme cutting results by *Nla* III .

The results showed that the purity of the DNA in the DNA  $A_{260/280}$  absorbance ranged from 1.64 to 2.29  $\mu\text{g} / \mu\text{L}$  . Genetic character of the total DNA Finger Shrimp (*Metapenaeus elegans*) were obtained measuring 992 bp. Results of mitochondrial DNA amplification using PCR with primers COIL and COIH mtDNA produces a single band located at 495 bp. Cutting results with *Nla* III restriction enzyme in mtDNA genome Finger Shrimp (*Metapenaeus elegans*) produce haplotype Type A (97 bp), Type B (198 bp and 200 bp) and Type C (97 bp, 198 bp and 200 bp).