

ABSTRACT**Genotype and Phenotype Detection of classical enterotoxigenic *Staphylococcus aureus* strains isolated from Swiftlet's Nest**

The objective of this research was to detect a bacteria, *Staphylococcus aureus*, in swiftlet's nest. But, Not all of *Staphylococcus aureus* cause staphylococcal swiftlet's nest poisoning. Only *Staphylococcus aureus* strain enterotoxigenic can produce enterotoxin.

Staphylococcus aureus was detected with Multiplex PCR. Determining genotype of gene encoding classical enterotoxigenic was observed through DNA sequences. The expression of gene encoding classical enterotoxigenic was detected by ligating DNA fragment to pMOSBlue-T vector and transforming to cell competence, *Escherichia coli* DH5 α . After that, DNA fragment was confirmed by recombinant plasmid isolation and restricted with *EcoRI* enzyme.

The result of this experiment was founded that *Staphylococcus aureus* was enterotoxigenic D and P on number 9B. Detection of genotype that based on DNA sequencing analysis showed that the enterotoxin was related to the *sep* gene.

The results of phenotype detection depict that DNA fragment (fragment of enterotoxigenic D and P) was able to ligated to pMOSBlue-T vector. Measurement on the length of plasmid recombinant increases \pm 3500 base pairs. After transformation to *Escherichia coli* DH5 α , plasmid recombinant which has T7 promoter and being supported by RNA polymerase *Escherichia coli* DH5 α , was capable to express enterotoxin its \pm 26 kDa weight molecules. The expression of enterotoxin D was detected by agglutination latex. The principle of agglutination latex was based on with antigen-antibody reaction which was D specific.

Key words: *Staphylococcus aureus*, *Staphylococcal* classical enterotoxin, swiftlet's nest.