(IN VITRO) ANTIBACTERIAL ACTIVITY OF THE SUPERNATANT OF SHRIMP POND ISOLATE *Bacillus subtilis* AGAINST *Aeromonas hydrophila* AND *Staphylococcus aureus*

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ABSTRACT

The aim of this study was to know the antibacterial activity of supernatant of shrimp pond isolate *Bacillus subtilis* against *Aeromonas hydrophila* as Gram negative bacteria and *Staphylococcus aureus* as Gram positive bacteria. Microdilution method was used to evaluate the antibacterial activity of the supernatant of *Bacillus subtilis* by determining Minimum Inhibition Concentration (MIC) and Minimum Bactericidal Concentration (MBC). Concentration range was from 100-10% and Oxytetracycline was used as positive control. The result showed the range of MIC and MBC values against *Staphylococcus aureus* were 50-80% and 60-70% respectively. Meanwhile, the range of MIC and MBC values against *Aeromonas hydrophila* were 70-80% and 80-90% respectively. Statistical analysis by *t test* with 95% certainty showed that there was no significant difference of antibacterial activity of supernatant of *Bacillus subtilis* shrimp pond isolate against *Aeromonas hydrophila* as Gram negative and *Staphylococcus aureus* as Gram positive bacteria.

Keyword: antibacterial activity, *Aeromonas hydrophila, Bacillus subtilis*, *Staphylococcus aureus*,