

**ANTIBACTERIAL ACTIVITY OF SUPERNATANT OF *Bacillus subtilis*
SOIL ISOLATE AGAINST *Aeromonas hydrophila* and *Staphylococcus
aureus* (IN VITRO)**

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Abstract

The aim of this research was to know the antibacterial activity (*Minimum Inhibitory Concentration* and *Minimum Bactericidal Concentration*) of supernatant of *Bacillus subtilis* soil isolate against *Aeromonas hydrophila* and *Staphylococcus aureus* and compare the antibacterial activity both of them. Antibacterial compound from *B. subtilis* are subtilin, subtilisin A, TasA, sublancin, circulin, polymixin and colistin which effective against Gram positive and Gram negative bacteria. Microdilution method use for the assessment of antibacterial activity to determined MIC and MBC. Concentration range was from 100% - 10%. The result showed the range of MIC against *Aeromonas hydrophila* were 60% - 70% and MBC were 70% - 80%. The range of MIC against *Staphylococcus aureus* were 80% - 90% and MBC were 90% - 100%. Statistical analyzed showed that there were highly significant difference among of antibacterial activity both *Aeromonas hydrophila* and *Staphylococcus aureus*.

Keywords : *Bacillus subtilis*, MIC, MBC, *Aeromonas hydrophila*, *Staphylococcus aureus*