

ANTIBACTERIAL SUSCEPTIBILITY OF *Bacillus subtilis* ISOLATED FROM SOIL  
AND FISHPOND SEDIMENT

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KKC KK KH 157 11 Sus a

**ABSTRACT**

The aim of this research is to know the characters of *Bacillus subtilis* isolated from soil and fishpond sediment, its susceptibility to antibacterial agents and also to compare the susceptibility between isolates from those two samples. Nine isolates were obtained from soil and six isolates from fishpond sediment with the characters of isolates were rod shaped, Gram positive, unchained, glucose and sucrose fermentation positive, catalase positive, urease negative, H<sub>2</sub>S negative, indole negative, motility positive and starch hydrolysis positive. The result of antibacterial susceptibility test showed that all *Bacillus subtilis* were susceptible to antibacterial agents used on the research which were penicillin, ampicillin, gentamicin, ciprofloxacin, oxytetracycline and sulfamethoxazole with a very wide range of sensitivity that these *Bacillus subtilis* were considered to be a safety probiotic candidate. The comparison of the susceptibility to all antibacterial used on this research is not significant except for penicillin.

**Keywords:** *Bacillus subtilis*, antibacterial susceptibility, probiotic