

**ISOLATION, IDENTIFICATION AND SENSITIVITY TEST OF
Bacillus subtilis FROM SHRIMP CULTURE PONDS
TO ANTIMICROBIAL AGENTS**

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ABSTRACT

The aims of this study was to know the characteristic and the sensitivity of *Bacillus subtilis* isolated from shrimp culture ponds to antimicrobial agents. Fifty isolates of *Bacillus spp.* that fermented mannitol on MSA media and showed rod shapes, had been identified by macroscopic, microscopic, biochemical and sugars test. The result showed six isolates were *Bacillus subtilis*. Antimicrobial agents that had been used for sensitivity test were Penicillin, Ampicillin, Oxytetracycline, Gentamicin, Ciprofloxacin, and Sulfamethoxazole by in vitro using Kirby-Bauer method. Disc of these antimicrobial agents were placed on the cultures of *Bacillus subtilis* at the surface of MHA media, incubated at 37°C for 24 hours. Diameter of inhibitor area around the disc was measured on mm to identify the isolates resistant or sensitive. The sensitivity test result that *Bacillus subtilis* sensitive to all of the antimicrobial agents with range of diameter inhibition was 16 until 38 mm. It means that *Bacillus subtilis* didn't have gen resistant and couldn't transfer it to pathogen bacteria in shrimp culture so that it was very safe for the use as a probiotic. It was suggested to do another identification test and do in vivo study to know the isolates safe to be used as a probiotic or not.

Key words : *Bacillus subtilis*, sensitivity test, antimicrobial agents.