

Preliminary Study of Antimicrobial Activity against *Escherichia coli* sp. and Probiotic Properties of Lactic Acid Bacteria Isolated from Thailand Fermented Foods

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Abstract : The lactic acid bacteria (LAB) were isolated from 10 samples of fermented foods (Sa-tor-dong and Bodo) in South locality of Thailand. The 23 isolates of lactic acid bacteria were selected, which were exhibited a clear zone and growth on MRS agar supplemented with CaCO₃. All of lactic acid bacteria were tested on morphological and biochemical. The result showed that all isolates were Gram's positive, non-spore forming but only 10 isolates displayed catalase negative. The 10 isolates including BD 1.1, BD 1.2, BD 2.1, BD2.2, BD 2.3, BD 3.1, BD 4.1, BD 5.2, ST4.1, and ST 5.2 were selected for inhibition activity determination. Only 2 strains (ST 4.1 and BD 2.3) showed inhibition zone on agar, when using *Escherichia coli* sp. as target strain. The ST 4.1 showed highest inhibition zone on agar, which was selected for probiotic property testing. The ST4.1 isolate could grow in MRS broth containing a high concentration of sodium chloride 6%, bile salts 7%, pH 4-10 and vary temperature at 15-45^oC.

Keywords : lactic acid bacteria, probiotic, antimicrobial, probiotic property testing

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