DETERMINATION THERMOSTABLE LACTIC ACID BACTERIA PRODUCING ANTIMICROBIAL COMPOUND AND EXTRACELLULAR AMYLASE

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Summary

Lactic acid bacteria are potential source of antimicrobial compound and enzymes that can be used in food biotechnology because they are generally regarded as safe. Twenty four LAB strains were determined thermostable ability at 50^{o}C from 91 strains that isolated from fermented rice. There was TD3.6 producing highly antibacteria compound against some idicator bacteria *Lactobacillus plantarum*, *Bacillus cereus, Listeria monocytogenes* và *Escherichia coli* and extracellular amylase. The main environmental conditions affecting enzyme productivity were identifed. The soluble starch concentration 1.5%, cultural pH 6 and cultural temperature 45^{o}C were the best condition for producing amylase. The optimal temperature of raw amylase solution to hydrolyse starch was 45°C. The morphology, physiology and biochemistry characteristics of TD3.6 strain were as similar as *Lactobacillus*. This strain or extracted antimicrobial compound and extracellular amylase have potential apply for preservating and processing food.

Keywords: *Lactic acid bacteria, thermostable, antimicrobial compound, amylase.*