

Research Title	Screening of Bile-Salt-Hydrolyze Enzyme Producing Lactic Acid Bacteria Probiotic and <i>in-vitro</i> Determination of Their Cholesterol-Lowering Property
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Abstract

Hypercholesterolemia is a major risk factor for atherosclerosis and cardiovascular disease, cause of mortality and defectiveness in several country. The recent studies have demonstrated that lactic acid bacteria may remove and reduce cholesterol level. Dairy products such as milk, yoghurt, ice cream and cheeses are common carriers for lactic acid bacteria (LAB), and fermented dairy products, including food supplement have been reported to exhibit hypercholesterolemia properties, know as probiotics. For the reason, this study aims to study on cholesterol-lowering properties of LAB from *Enterococcus faecium* N15 and *Lactobacillus plantarum* L26 including isolated from natural source, food and food supplements (*Lact. pentosus* I and *Lact. pentosus* II). All tested LAB have been growth in Mann Rogosa Sharpe (MRS), Gram-positive bacilli and cocci, negative result for catalase test. Also, they could be grown in MRS plus 0.30 % oxgall and showed capability to reduce cholesterol level significantly difference ($p < 0.05$) from 24.04% to 62.67%, but not depended on bile salt hydrolase activity. Interestingly *Ent. faecium* (N15) showed the most reduce cholesterol level (62.67%) and may produce bacteriocin (*enterocin* gene) when detected indirectly by PCR method. It implied that N15 may benefits for hypercholesterolemia and supplemented with probiotic product in order to promotion of health in nearly future.