

Antimicrobial activity and antibiotic sensitivity of three isolates of lactic acid bacteria from fermented fish product, Budu.

ABSTRACT

Three isolates of lactic acid bacteria (LAB) from the fermented food product, Budu, were identified as genus lactobacillus (Lactobacillus casei LA17, Lactobacillus plantarum LA22 and L. paracasei LA02), and the highest population was Lb. paracasei LA02. The antibacterial agent produced by the isolates inhibited the growth of a range of gram-positive and gram-negative microorganisms. Antimicrobial sensitivity test to 18 different types of antibiotic were evaluated using the disc diffusion method. Inhibition zone diameter was measured and calculated from the means of five determinations and expressed in terms of resistance or susceptibility. All the LAB isolates were resistant to colestin sulphate, streptomycin, amikacin, norfloxacin, nalidixic acid, mecillinam, sulphamet hoxazole/ trimethoprim, kanamycin, neomycin, bacitracin and gentamycin but susceptible to erythromycin, penicillin G, chloramphenicol, tetracycline, ampicillin and nitrofurantion.

Keyword: Lactic acid bacteria; Antimicrobial activity; Antibiotic sensitivity; Fermented fish product; Inhibition zone.