

Isolation, characterization and identification of lactic acid bacteria from fermented soy sauce

ABSTRACT

Microorganisms play an important role in various fermented foods in Asia. Traditional soy sauce production involve fermentation process in which lactic acid bacteria (LAB) take place at the moromi stage. Traditionally brewed soy sauce produces balance flavor, aroma and also functional preservatives that comes from the LAB activity. Thus, this study aims to discover LAB diversity in the soy sauce produced through the fermentation process. A total of 38 isolates of presumptive LAB were isolated from MRS agar by using pour plate method. Bacterial colonies with different morphological characteristics were chosen and sequential screening by Gram-staining and catalase test were conducted. Out of 38, only 5 isolates were successfully maintained their morphological characteristics through several consecutive single colony isolation. Four of the identified isolates were *Lactobacillus plantarum* and one isolates identified as *Pediococcus* spp. This study provided information on the availability of LAB community involved in fermentation process of traditionally produced soy sauce.