Rhizopus Oryzae as a processing Starter in Fermentation of Unripened Cheese

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Abstrak

Rhizopus oryzae is known to produce lactic acid, protease and lipase, make it potential as a starter in cheese production. However, R oryzae aplication in the unripened cheese production has not been elucidated. In this research, microbiology and nutritional status of unripened cheese fermented by R. oryzae was analysed and compared to that of the cheese made by rennet as a control. Total Plate Count of bacteria in unripened cheese fermented by R. Oryzae was 8.1 x 10 cfuml in PCA medium and 3.7 x 10 cfu/ml in MRSA. Total Count of fungi group was conducted using PDA, resulting in 1.2 x 10 cfu/ml. Dominant microflora were identified as Eterococcus faecalis and Bacillus subtilis in MRSA and Aspergillus sp. in PDA. HPLC analysis of the unripened cheese fermented by R. oryzae showed that it had higher essential amino acid content than the control. The essential amino acid found were Threonine (1,15 ppm), L-Methionine (0,47 ppm), L-Valine + L-Tryptophan (0,70 ppm), L-Phenylalanine (0,66 ppm), L-Isoleucine (0,48 ppm), L-Leucine (1,28 ppm), and L-Lycine (1,64 ppm).