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Production angiotensin I-converting enzyme (ACE) inhibitory peptides using soy-powder based medium fermented with *Lactobacillus plantarum*

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Lactobacillus plantarum was grown on soy powder based medium with or without fortified local agricultural products fermentation at 35°C for 24 hours to investigate the fermentation condition. Soy powder based medium treated with or without protease (Alcalase) fermented by *L. plantarum* will affect the ACE inhibition rates. Batch fermentation was carried out in a 10 L fermenter containing 7.0 L fermentation medium which was sterilized at 121°C for 20 min. The pH was automatically recorded. The temperature and agitation speed were maintained at 35°C and 100 rpm, respectively. There was no aeration. During the fermentation time, cell growth was determined as CFU using MRS agar plates containing CaCO₃. ACE inhibitory rates were analyzed by colorimetric method. The cell number from 12 hours to 24 hours was maintaining at 10⁹ CFU/mL and pH was reduced from pH 6.0 to pH3.9. ACE inhibitory rates were evaluated from 89 % to 98 % during 8-24 hours fermentation. The above results have demonstrated that ACE inhibitory peptide production with soy powder based medium fermented with *L. plantarum* is possible.

Biography

Shu Chen Wang has completed her PhD from Chung Hsing University, Taiwan. She was the head of department of food science and technology from 2002-2007. She has published more than 30 papers in food science journals. Recently, her research is focus on fermentation and functionality of lactic acid bacteria.

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