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Preparation of Angiotensin I-Converting Enzyme Inhibiting Peptides from Soybean Protein by Enzymatic Hydrolysis

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Soybean protein isolate was hydrolyzed using two proteases (Protease M and Orientase 90N), and the inhibitory activity of angiotensin I-converting enzyme (ACE) and bitterness of the hydrolysates were investigated. The ACE inhibitory activity of the hydrolysates increased with increasing hydrolysis time. Hydrolysates obtained using Protease M for 4 to 10 h and Orientase 90N for 6 to 10 h showed a high ACE inhibitory activity, and the bitterness was negligible. The ACE inhibitory peptides were shown to be oligopeptides composed of 2–5 amino acid residues. These peptides might be useful for therapeutic applications based on the consumption of an anti-hypertensive food.

Keywords: soybean protein, peptides, angiotensin I-converting enzyme, bitterness

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