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Enzymatic Modification of a Whey Protein Isolate to a Peptide Mixture with a High Fischer Ratio

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A peptide mixture with a high Fischer ratio, which is defined as the molar ratio of Val+Leu+Ile to Phe+Tyr, was prepared from a whey protein isolate (WPI) by consecutively hydrolyzing with neutral and acid proteases and then by treating with SP-206 resin to adsorb the aromatic amino acids. The Tyr and Phe concentrations in the supernatant after adsorption on SP-206 resin were reduced by 8.3% and 14.2%, respectively. After this adsorption process had been repeated 7 times, the Fischer ratio of the peptide mixture was 9.0, while that of WPI was 4.7. The molecular weight, total average residue number and free amino acid concentration were 200-2,500, 2.6 and 22.3%, respectively.

Keywords: [whey protein isolate](#), [peptide](#), [Fischer ratio](#)

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