



Factors influencing the formation of sediment from seasoning soy sauce

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Factors influencing the formation of sediment produced in a well-known commercial brand of seasoning soy sauce were studied. The white sediment was gradually formed during processing and also during storage and display in the store. Consequently, it affected the appearance of bottled seasoning soy sauce on the shelf. Various variables of protein content (12%, 14%, and 16%), pH values (in the range of 1-11), and calcium ion concentrations (0.00, 0.48, 0.96, and 1.92 g) added into 250 mL of the soy sauce during processing, were investigated. It was found that protein content, pH value, and calcium ion concentration in the soy sauce were found to be the key factors promoted the sediment formation. Classical analytical method, Kjeldahl method, X-ray fluorescence spectroscopy and thermogravimetric analysis were used in characterization. The highest amount of the sediment formation exhibited at the highest protein content and the highest addition of the calcium ion concentration of 16% and 1.92 g, respectively. While the higher the pH values showed the higher sediment formation. However, the maximum sediment formation exhibited at pH value of 9. As expected, the main component of the sediment was calcium compounds. It revealed the highest content of 88.68 %w/w.

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