

Functional Properties of Cholesterol-Removed Compound Whipping Cream Applied by Palm Oil

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The present study was carried out to examine the changes in functional properties of cholesterol-removed compound whipping cream made by β -CD treated cream and palm oil. Six different ratios of cream to palm oil (10:0, 9:1, 8:2, 7:3, 6:4, and 5:5, v/v) were tested. The overrun percentage increased with an increased of amount of palm oil. When the ratio of cream to palm oil was 10:0, the overrun was 130%, which was significantly lower than other ratios reached to 150%. Foam instability was measured as 3.1 mL deformed cream with 10:1 ratio, however, the value of foam instability decreased with an increase of palm oil addition. The TBA value of cholesterol-removed compound whipping cream increased from 0.08 to 0.13 with no addition of palm oil during 4 wk storage. When the ratio of cream to palm oil was 5:5, TBA value increased dramatically at 3 wk and thereafter. Among sensory characteristics, texture value increased with higher amount of palm oil, flavor and overall preference were the opposite. Above results indicated that application of palm oil in manufacture of cholesterol-removed compound whipping cream resulted in a stable foam development with little adverse effect on flavor and lipid oxidation during storage.