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Effect of different treatment for coconut cream on quality of coconut milk based butter

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Coconut cream is the major ingredient for coconut milk based butter. The present study was undertaken to compare the final quality of coconut butter made from coconut cream vacuum evaporated at 70°C for 15 min. (VE-1), coconut cream vacuum evaporated at 70 °C for 30 min. (VE-2), coconut cream which was separated from scraped fresh coconut (FC), and coconut cream obtained from steam treated (5 min.) scraped coconut (SC). Moisture content (%), solid non-fat content (%), fat content (%), and firmness (kg) of each coconut butter type were measured. Stability of the emulsion was evaluated by measuring the creaming index (%) and by visual observation, using a microscope. Organoleptic properties of different butter types were evaluated by a sensory test using 30 untrained panelists.

Results revealed that mean values of moisture content, solid non-fat content, fat content and firmness for all four different coconut butter types were significantly different ($p < 0.05$). VE-2 type had significantly lower moisture content (27.29 ± 0.45) than other types [SC (30.91 ± 1.06), VE-1 (35.07 ± 0.27) and FC (41.30 ± 0.29)]. Solid non-fat content of different butter types were ranged from 6.68 ± 0.03 (SC) to 13.49 ± 0.33 (VE-2). SC type had significantly higher fat content (62.41 ± 1.09) than other types. Firmness ranged from 1.83 ± 0.25 kg (FC) to 6.8 ± 0.3 kg (SC) and it increased with the fat content. There was no significant difference ($p > 0.05$) in values of creaming index between FC (18.24 ± 0.93) and VE-1 (18.34 ± 0.45) and between VE-2 (42.91 ± 1.17) and SC (43.41 ± 0.81). Mean ranks obtained from sensory evaluation for overall acceptability of FC, VE-1, VE-2, and SC were 3.17, 3.07, 1.6, and 2.17 respectively. All attributes tested in sensory evaluation (appearance, taste, odour, texture, spreadability, and overall acceptability) were not significantly different ($p > 0.05$) in FC and VE-1.

Keywords: Coconut milk based butter, firmness, vacuum evaporation, sensory evaluation.

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