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Influence of heating time of shea nuts (*Vitellaria paradoxa*) on some chemical properties of shea butter

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The experiment was conducted in the laboratories of the Departments of Chemistry and Animal Health and Production Technology, Adamawa State University Mubi, Nigeria. The experiment was replicated three times in a Randomized Complete Block Design (RCBD) and consisted of six heating time 30, 60 and 120 minutes boiling, 30, 60 and 120 minutes roasting and one control. Data were collected on acid value, free fatty acid, iodine value, peroxide value, saponification value and unsaponifiable matter. The data collected were analyzed statistically using Generalized Linear Model (GLM) procedure of statistical analysis system (SAS). The means that were significantly different were separated using Least Significant Difference (LSD). The results showed that there were highly significant differences ($P \leq 0.01$) among the treatments. The highest Acid Value (AV) of 3.53 and 3.64 were recorded by heating time at 120 minutes of boiling and 120 minutes of roasting. Heating time at 30 minutes of boiling, 30 minutes roasting, 60 minutes boiling and 60 minutes roasting recorded lower Free Fatty Acid (FFA) values of 1.52, 1.55, 1.57 and 1.58, respectively. Heating time at 60 minutes of roasting and 60 minutes of boiling recorded the highest Iodine value (IV) of 43.80 and 43.53, respectively. Based on the results of this study, it can be concluded that heating time of 30 or 60 minutes by boiling or roasting are better than longer heating times for Shea butter extraction.

Biography

Vadlya T Tame has completed his PhD at the age of 35 years from Federal University of Technology, Yola Nigeria. He is a Lecturer with Modibbo Adama University of Technology, Yola Nigeria, the CEO of Agro Professional Care Foundation (NGO). He has published 3 books and 13 papers in reputed journals and has been serving as an editorial board member of Nigerian Journal of Tropical Agriculture, and a member of American Association for Science and Technology (AASCIT).

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