Effect Of Nut Roasting Temperature, Extraction, Process And Packaging Material On The Storage Properties Of Shea Butter

J.O. Akingbala, E.T. Adebisi, G.S.H. Baccus-Taylor, K.O. Falade & I.A. Lambert

Abstract

Shea butter samples from nuts roasted at 140, 160 and 180°C were extracted by the traditional water displacement method, and by mechanical expression, using the screw press. Aliquot of the shea butter from nuts roasted at 160°C was bleached. The bleached and unbleached samples were stored in opaque plastic containers, amber coloured clear glass bottles and clear colourless glass bottles for 28 days at 63°C. Refractive index, free fatty acid content and peroxide value of the butter samples determined at 7-day intervals during storage, increased with increasing duration of storage, and nut-roasting temperature. Shea butter produced by the traditional method had higher refractive index, peroxide value, and free fatty acid content than mechanically extracted shea butter from similarly treated nuts. The opaque plastic container reduced rancidity best, followed by the amber coloured container, and the clear colourless glass bottle during butter storage. Bleaching increased the tendency of shea butter to rancidity.