

Effect of extraction temperature on the yield and physicochemical properties of cashew nut oil

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Abstract

Effect of Extraction temperature on the yield and Physicochemical Properties of Cashew nut oil were investigated using standard analytical methods. The oil was extracted using solvent extraction method at two different temperatures; the physicochemical properties and the oil yield were determined. The physical properties of the extracted oil at two temperatures 55°C and 65°C are as follows: specific gravity 0.93 and 0.9; refractive index 1.39 and 1.40; viscosity 6.93 and 6.57; smoke point 183.33 and 187.00 respectively. The chemical properties of the extracted oil at the two temperatures of 55°C and 65°C are as follows: Saponification value of 156.61 and 199.62; acid value of 12.53 and 14.40; iodine value (mg iodine/100g) of 55.23 and 52.36; peroxide value of 8.55 and 7.59 and free fatty acid (mgKOH/g) of 6.26 and 7.20 respectively. The oil yield for the extraction temperatures of 55°C and 65°C were 41.52% and 50.33% respectively. The result shows that oil yield increases with increase in extraction temperature; the refractive index and specific gravity were not significantly different.

Keywords: Temperature, Extraction, Cashew nut, Oil, Physicochemical

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