World Academy of Science, Engineering and Technology
International Journal of Nutrition and Food Engineering
Vol:11, No:08, 2017

Physicochemical Properties of Rambutan Seed Oil (RSO)

Authors : Nadya Hajar, Naemaa Mohamad, Nurul Azlin Tokiman, Nursabrina Munawar, Noor Hasvenda Abd Rahim

Abstract : Rambutan (Nephelium lappaceum L.) fruit is abundantly present in Malaysia during their season of the year. Its short shelf life at ambient temperature has contributed to fruit wastage. Thus, the initiative of producing canned Rambutan is an innovation that makes Rambutan fruit available throughout the year. The canned Rambutan industry leaves large amount of Rambutan seed. This study focused on utilization of Rambutan seed as a valuable product which is Rambutan Seed Oil (RSO). The RSO was extracted using Soxhlet Extraction Method for 8 hours. The objective of this study was to determine the physicochemical properties of RSO: melting point (°C), Refractive Index (RI), Total Carotene Content (TCC), water activity (Aw), acid value, peroxide value and saponification value. The results showed: 38.00±1.00 – 48.83±1.61°C melting point, 1.46±0.00 RI, 1.18±0.06mg/kg TCC, 0.4721±0.0176 Aw, 1.2162±0.1520mg KOH/g acid value, 9.6000±0.4000g/g peroxide value and 146.8040±18.0182mg KOH/g saponification value, respectively. According to the results, RSO showed high industrial potential as cocoa butter replacement in chocolates and cosmetics production.

Keywords : Cocoa butter replacer, Rambutan, Rambutan seed, Rambutan seed oil (RSO)
Conference Title : ICFSIMF 2017 : International Conference on Food Science, Ingredients and Modified Foods
Conference Location : Kuala Lumpur, Malaysia
Conference Dates : August 24-25, 2017