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Corresponding author:
Promluck Sanporkha,
E-mail: promluck@yahoo.com

Research article

Effect of Sacha Inchi Pressed-Cake (*Plukenetia volubilis* L.) on the Physical, Chemical and Sensory Properties of Tuiles

Kultida Rungrot, Chatrapa Hudthagosol, and Promluck Sanporkha*

Department of Nutrition, Faculty of Public Health, Mahidol University, Bangkok 10400, Thailand

Abstract The objective of this research was to study the effect of sacha inchi pressed-cake (SPC) on the physical, chemical and sensory properties of tuiles. The addition of SPC in tuiles can increase the nutritive value in terms of protein and antioxidant efficiency. The ratios of SPC to wheat flour varied from 50:50, 60:40 and 70:30 by weight. The color, textural properties and antioxidant activities of tuiles were determined. The sensory evaluation was conducted by 30 elderly with age between 60 to 70 years. Results showed that the moisture, protein and fat contents of the tuiles with sachu inchi pressed-cake (TSPC) significantly increased with increasing level of SPC. The color values (L^* and b^*) of tuiles also significantly decreased ($P \leq 0.05$), while a^* value significantly increased ($P \leq 0.05$) when increasing SPC content. The textural properties showed that increased level of SPC resulted in increase of hardness and crispness of TSPC ($P \leq 0.05$). Tuile with 50% SPC showed the highest sensory quality attributes of liking and JAR. In conclusion, the total phenolic content and antioxidant activities by DPPH, FRAP and ORAC assay of TSPC at the ratio of SPC to wheat flour of 50:50 were higher than tuile without SPC.

Keywords: Elderly, Pressed Cake, Sacha Inchi, Substituting, Tuiles

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