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PROXIMATE ANALYSIS AND PHYSICAL CHARACTERISTICS OF A NOVEL VEGETARIAN RICE BASED CEREAL PRODUCT FROM KALU HEENATI AND POKKALI RICE VARIETIES

Arachchi S.S. and Godakumbura P.I.*

Department of Chemistry, Faculty of Applied Sciences, University of Sri Jayewardenepura, Sri Lanka

pahanig@gmail.com

ABSTRACT

Sri Lankan traditional rice varieties (STRV) grown under organic farming are becoming popular due to their high nutritional and medicinal values compared to that of improved rice varieties. This study was conducted to develop novel, ready – to – eat, fully vegetarian, rice based cereal bars (RCB) from traditional rice varieties**,** Kalu heenati (KH) and Pokkali (PK) as the main ingredients, followed by proximate analysis and determination of physical measurements. Also, *Neolitsea cassia* (L.) Kosterm gel was used as a novel vegetarian egg replacer. The study reveals that RCB are rich in crude protein content **(**4.7 ± 0.1%**),** crude fiber content (1.8 ± 0.1%) and ash content **(**1.8 ± 0.1%) compared to that of cereal bars manufactured using wheat flour. (WF (control)) Also, the traditional cereal bars showed low moisture content **(**5.3 ± 0.1%) and low fat content **(**1.2 ± 0.1%**),** and are suitable for daily consumption. Additionally, RBC aids to maintain the recommended daily intake of iron (3.1 ± 0.2 mg/100 g), potassium (121.7 ± 0.2 mg/100 g), sodium (536.7± 0.2 mg/100 g), magnesium (38.2 ± 0.1 mg/100 g), calcium (18.4 ± 0.3 mg/100 g), zinc (0.7 ± 0.1 mg/100 g) and manganese (0.5 ± 0.3 mg/100 g). Furthermore, the consumption of RCB will not cause any toxic effects due to heavy metals, Pb, As, Cd, Hg and Cu. Moreover, a significant difference from WF was observed for KH and PK from physical measurements analysed using a texture analyzer. RBC show high hardness (3761 ± 64 g), low adhesiveness, (7.18 ± 0.41 mJ), low gumminess (279.5 ± 6.5 g), low chewiness (10.79 ± 0.54 mJ) and low cohesiveness (0.05 ± 0.02).

Keywords: Kalu Heenati, Pokkali, Rice based cereal bars, Sri Lanka, Traditional rice varieties