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DEVELOPMENT OF FIBER RICH SOFT DOUGH BISCUITS FORTIFIED WITH LASIA SPINOSA (KOHILA) FLOUR

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Currently there is a growing demand for fiber fortified food products. This research was mainly carried out to develop a high fiber soft dough biscuit. Kohila flour was added to biscuit formulation at 10% and 15% levels respectively. Sugar was substituted with sucralose (1 g) to obtain a low energy product. The chemical composition (moisture, pH, protein, fat, ash, dietary fiber, carbohydrate, sodium and heavy metal, antioxidant) was determined. Sensory evaluation was done by a panel of 30 tasters, using a paired preference test and hedonic test to select the most preferred sample with the best sensory attributes. A market survey was done using 60 samples to evaluate the consumer preference for the prepared biscuit. Results showed that kohila flour fortified biscuits contained significantly (p<0.05) high amount of fiber (7.00 % (w/w), dry basis). Fortified biscuits contained high amount of iron (48 ppm, dry basis) while toxic heavy metal as As, Pb, Cd were below detectable. The antioxidant capacity (Radical DPHH scavenging capacity) was high in kohila flour added biscuits (20-23%). The 10% kohila flour added biscuits yielded the highest consumer acceptability by the sensory evaluation. Survey results showed that there was a correlation between preferences for sucralose added biscuits and health condition (P<0.05). The preference for fiber fortified biscuits and sucralose added biscuit were high among consumers with high qualifications in education. Findings of this study revealed that Kohila flour fortified biscuits are a valuable source of dietary fiber, iron and antioxidants, which are beneficial to improve the health of the consumers.