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Development of fibre rich soft dough biscuits fortified with *kohila* (*Lasia spinosa*) flour

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Currently there is a growing demand for fiber-fortified food products in the world to prevent from non-communicable diseases. To develop high fiber soft dough biscuit, kohila flour was added to biscuit formulation at 10% and 15% levels (w/w), respectively. Sugar was substituted with sucralose (1g) to obtain a low energy product. The chemical and proximate composition of the product (moisture, pH, protein, fat, ash, dietary fiber, carbohydrate, sodium and heavy metal, antioxidant capacity) was determined. Sensory evaluation was carried out by a panel of thirty sensory panelists, using a paired preference test and hedonic test to select the most preferred sample with the best sensory attributes. A market survey was done by using sixty sample sizes to evaluate the consumer preference for the prepared biscuit. Results showed that kohila flour fortified biscuits contained significantly ($p<0.05$) high amount of fibre (7% (w/w), on dry basis). High amount of iron (48% ppm, dry basis) contained in fortified biscuits while toxic heavy metal as As, Pb and Cd were absent. The antioxidant capacity (Radical DPHH scavenging capacity) was as high in kohila flour added biscuits (20-23%). The10% kohila flour added biscuits yielded the highest consumer acceptability. Survey results showed that there was a correlation between preference for sucralose added biscuits and health condition ($p<0.05$) of the consumers. The preference for fiber-fortified biscuits and sucralose added biscuits were high in consumers with higher level of education. Findings of this study revealed that kohila flour fortified biscuits can be used as a valuable source of dietary fibre which is beneficial to improve the health of the consumers.

Key words: Antioxidant, dietary fiber, non-communicable diseases, soft dough biscuits, consumers

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