

## **Development of Fiber-Enriched Bun from Wheat Flour Fortified with Kohila (*Lasia Spinosa*) Flour**

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Wheat flour buns are generally rich in carbohydrates, energy and low in dietary fiber. Due to affordability, easy access, and convenience in consumption, buns have become a ready-to-go type food source in the community. The regular consumption of carbohydrate rich wheat flour buns can result in health issues such as obesity, constipation, and other non-communicable diseases. This study was conducted to develop a fiber-enriched wheat flour bun by adding kohila (*Lasia spinosa*) flour to wheat flour. Kohila was specifically selected due to its high dietary fiber content. Buns were prepared by blending 5, 7.5, 10, and 12.5% (by mass) kohila flour with wheat flour. A 100% wheat flour bun was used as a control. After mixing all the ingredients (wheat flour, kohila flour, egg, yeast, salt, margarine and water) the fermented dough in the molds was baked in a hot air oven at  $200 \pm 5$  °C for 15 min until golden-brown colour appeared on the surface of buns. At 0.05 significance level, the highest acceptability ( $5.93 \pm 1.143$ ) by sensory evaluation was achieved by the 7.5% kohila flour substituted buns on a hedonic scale (7 points, 1: dislike very much, 7: like very much). The proximate composition of 7.5% kohila flour added bun revealed higher amounts of moisture ( $48.63 \pm 0.68$ ), dietary fiber ( $3.49 \pm 0.88$ ), ash ( $1.16 \pm 0.05$ ), lower amounts of proteins, ( $13.78 \pm 0.29$ ) carbohydrates ( $26.24 \pm 1.25$ ) and significantly lower calorie value ( $217.65 \pm 1.80$ ) compared to the control sample. There was no significant difference in crude fat content between the 7.5% kohila flour sample ( $6.39 \pm 0.3$ ) and the control ( $6.27 \pm 0.95$ ). The lightness value of 7.5% kohila flour containing bun ( $57.12 \pm 0.64$ ) was significantly lower than the control sample ( $67 \pm 3.64$ ). In conclusion, 7.5% kohila flour substituted wheat flour is a potential enrichment for the dietary fiber content in buns providing health benefits for regular bun consumers.

**Keywords:** Bakery products, Consumers, Crude fiber, Non-communicable diseases