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Micro-Nutrients and sensory properties of breakfast cereals formulated from flour blends of rice, african yam bean and orange flesh sweet potato

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Abstract

Ready-to-eat breakfast cereals were formulated from flour blends of local rice, malted African yam bean and orange flesh sweet potato. The raw materials were processed into flour by washing, drying and milling. The three flours were blended at different ratios with malted African yam bean being constant (10 %) while Adani rice and orange flesh sweet potatoes varied. The blended flours were conditioned, pre-heat treated (for 10 minutes), aged (4°C for 6 hours), cut, toasted (120°C for 1 hour),and packaged. The breakfast cereal blends were subjected to sensory evaluation using a 9 point hedonic scale with 20 panelists while micro-nutrient analysis were carried out using standard method . The samples were coded into different codes for sensory evaluation; sample R (100 % rice flour), RA (90 :10; rice: malted African yam bean flour), RAP1 (80:10:10; rice: African yam bean: orange flesh sweet potato flour), RAP2 (70:10:20; rice : African yam bean :orange flesh sweet potato flour), RAPS (60:10:30; rice: African yam bean :orange flesh sweet potato flour) and RAP4 (50:10:40; rice: African yam bean: orange flesh sweet potato flour). Fortification increased the vitamin A (0.13 to 0.25mg/100g), calcium (11.32 to 42.20mg/100g) and iron (11.33 to 54.20mg/100g) content of the products. The mean scores for overall acceptability for sensory ranged from 7.30 to 7.60 with sample RAP4 and RA having the highest value. The sensory evaluation conducted showed that the six samples had the same level of preference. There was no significant ($p>0.05$) difference between the samples.

Biography

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