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## Effect of domestic cooking on carotenoids content and proximate composition of three Cameroonian foods prepared with crude palm oil: Maize (*Zea mays*) cake, cassava (*Manihot esculenta*) cake and black eye peas (*Vigna unguiculata*) cake

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Crude Palm Oil (CPO), richest known food in provitamin A, is very important to fight against Vitamin A Deficiency (VAD). In Cameroon, it is used to cook many dishes among which maize, cassava and black-eyed peas cakes which are widely consumed. The objective of this work was to evaluate the effect of domestic cooking on carotenoids content and proximate composition of these foods. The foods were cooked according to the information collected near the housewives. For maize cake, CPO, water, and salt were added to flour. The whole was mixed until obtaining a homogenous paste. Concerning cassava cake, the tubers (beforehand soaked during the days) were crushed. The paste obtained was mixed with CPO, water and salt. As for the black-eyed peas cake, the seeds (previously soaked for 1 h) were crushed. The paste obtained was mixed with CPO, water and salt. For each dish, portions of 300 g of paste were wrapped in banana leaves and steamed on gas stoves for 2 h. Carotenoids content and proximate composition were evaluated before and after cooking. After cooking, organoleptic qualities were evaluated. We found that for the three foods, carotenoids content significantly decreased during cooking and there was no significant difference between foods (between 21.50 and 26.20%). Contrary to carotenoids, proximate composition was not significantly varied during cooking and there was no significant difference between foods. Concerning organoleptic qualities, all the foods were found cooked thoroughly and their taste was well appreciated. During the cooking of foods with CPO, carotenoids are really affected compared to proximate composition. So, in order to optimize the potential of CPO for the fight against VAD, housewives should develop the strategies to reduce maximally carotenoids losses during cooking of foods while giving them appreciable organoleptic qualities.

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## Wheat bran: Composition, functionality and application in fried cereal snacks

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Production of wheat bran for human consumption is estimated to be about 90 million tonnes per year. Wheat bran is a cheap and abundant source of dietary fiber which has been linked to improved bowel health and prevention of colon cancer. It also contains minerals, vitamins, and bioactive compounds such as phenolic acids, arabinoxylans, alkylresorcinol, and phytosterols. These compounds have been suggested to aid in prevention of non-communicable diseases like obesity and cardiovascular diseases. In recent years, a link between health and nutrition has been established, because consumers are more aware of their diet and its relationship to their health. Due to the high consumption of fried cereal snacks, various synthetic oil reducers and fat replacers have been used in the food industry; but more natural and edible fat reducers are currently being opted for. Fried cereal snacks are consumed worldwide and therefore a need to reduce oil content of these food products. Consumer acceptability of wheat bran enriched foods are still lower than expected because of the gritty taste bran imparts on food; but investigations are currently on going to increase acceptability of bran-enriched cereal snacks. Wheat bran can be tagged a potential functional food ingredient for fiber enrichment and oil reduction, thus making fried cereal snacks healthier food option.

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