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IMPACT OF ZINC FORTIFICATION ON PHYSICO-CHEMICAL, SENSORY AND BIOACCESSIBILITY OF PUFFED MILLETS

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Abstract

Micronutrient deficiency is currently a global concern as about 2 billion people around world are affected by it. Zinc deficiency is believed to be as widespread as that of iron, with equally serious consequences. Fortification of staple foods with this mineral is a cost-effective method that can be used to combat the deficiency. Millets are less expensive and staple food of low income people, so it is selected as food vehicle and in this study sorghum millet is chosen as a vehicle for fortification. Zinc oxide is chosen as fortificant along with EDTA and Citric acid as cofortificant at different levels, soaking method of fortification is carried out and the fortified millets are prepared as RTE (Ready To Eat) puffed / popped snack and the parameters are optimized using RSM. Puffing Characteristics, total zinc content, anti nutrient factors, bioaccessibility of zinc, organo-leptic properties of the popped millets are analyzed.

Keywords: Zinc Deficiency, Sorghum Millet, Fortification, Optimization, Bioaccessibility

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