



DEVELOPMENT AND CHARACTERIZATION OF ANTIOXIDANT RICH WHEATGRASS CUPCAKE

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ABSTRACT

The optimum formulation for production of an Indian traditional baked wheatgrass cupcake was determined using response surface methodology. Effects of amount of ingredients such as wheatgrass powder (5-15%), and baking time (15–35 min) on the antioxidant potential (total phenolic content, total flavonoid content, % DPPH radical scavenging activity and vitamin C), mineral (Iron) and sensory attributes (overall acceptability) of cakes were investigated. Significant regression models which explained the effects of different percentages of wheatgrass powder, and baking time on all response variables were determined. The coefficients of determination, R^2 of all the response variables were higher than 0.83. Based on the response surface and superimposed plots; the basic formulation for production of baked wheatgrass cupcake with desired sensory quality was obtained by incorporating with 5% of wheatgrass powder, and 35 minutes of baking time. Optimized formulation was analyzed for its nutritional composition, antioxidant properties and anti-nutritional factors. The optimized formulation could be recommended to all the age group but especially for children, lactating mothers and geriatric population due to its high antioxidants, iron, calcium, and fiber content.
