

Development and Physio-Chemical Analysis of Amaranth and Foxnut Flour-Based Nutrient-Rich Cookies

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Abstract: The development and physio-chemical analysis of Amaranth and Foxnut flour-based nutrient-rich cookies were studied at the Department of Food Technology, Parul Institute of Applied Sciences, Parul University, Vadodara. The main goal of developing nutrient-rich cookies is to provide macronutrients as well as micronutrients such as Protein, Fat, Carbohydrates, Dietary fiber; and Iron, Zinc, and Potassium respectively. The nutrient-rich cookies are beneficial for gastrointestinal cancer, lowering the level of LDL (Low-Density Lipoprotein), and guarding against anemia, constipation, and kidney issues. Four different formulations were prepared T0, T1, T2, and T3 by using amaranth flour, foxnut flour, and wheat flour in the different ratios of 0:0:1, 1:1:2, 1:2:4, and 1:1:3 respectively. The best composition (T2) is used for sensory evaluations like color, texture, flavor, and overall acceptability. These cookies were evaluated for physical (thickness, diameter, spread ratio, and bake loss), textural, and organoleptic attributes. The diameter and spread ratio were found to be higher in whole amaranth flour and foxnut flour cookies 48mm and 11.70 respectively. Textural measurement showed that the hardness of cookies decreased with the addition of amaranth and foxnut flour. The final composition contained 318.93kcal Calories, 8.36% Total Protein, 61.9% Total Carbohydrate, 25.38% Total Fat, 4.21% Dietary Fiber, 2.35% Moisture, 2.01% Total Ash, 25.68mg/kg Zinc, 140.81mg/kg Iron, and 1655.35mg/kg Potassium. For folks who eat them regularly, cookies' high nutritional value works as an immunity booster.

Keywords: Amaranth flour, Foxnut flour, Wheat flour, Nutrient-rich Cookies

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