

POSITION 2 OFSP PRODUCT DEVELOPMENT

Chemical and sensory properties of cookies produced from Orange Fleshed Sweet Potato (OFSP) and sclerotium of edible mushroom

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Abstract

Urbanization and increase in the number of people engaged in white collar jobs have influenced the consumption pattern of food. This development has led to deviations from the traditional pattern of the daily three large meals of breakfast, lunch and dinner. Consequently, the habit of snacking has been on the increase. Orange Fleshed Sweet Potato (OFSP) is a biofortified variety of sweet potato with high β -carotene content but with low protein content and low shelf life. *Pleurotus tuberregium* is an indigenous crop which has high protein and micronutrients contents, with high antioxidant potentials. Therefore, this study was carried out to develop nutrient dense cookies from OFSP and *P. tuberregium* sclerotium. A randomized complete block design with three replicates was used for this study. Fresh OFSP and Sclerotium tubers were processed into flour. Composite blends of 100:0; 90:10; 80:20 and 70:30 from OFSP and sclerotium, respectively, were obtained while 100% wheat flour served as control. All flour samples and corresponding cookies were analyzed for proximate, mineral compositions and antioxidant property. Cookies were also subjected to sensory evaluation using descriptive test. Sclerotium flour had the highest contents of protein (18.97%), ash (5.38%), fiber (9.08%), antioxidant activity (30.40%), and iron (37.87 mg/100g). Highest values of 9.48% protein, 19.55% antioxidant activity, and iron (30.56 mg/100g) were obtained in 70:30 OFSP/sclerotium cookies. Nutrient dense cookies of acceptable sensory quality were produced from OFSP and sclerotium flours which could be included in the dietary pattern of children and adults.