World Academy of Science, Engineering and Technology
International Journal of Nutrition and Food Engineering
Vol:13, No:06, 2019

Evaluation of Storage Stability and Quality Parameters in Biscuit Made from Blends of Wheat, Cassava (Manihot esculenta) and Carrot (Daucus carota) Flour

Authors : Aminat. O Adelekan, Olawale T. Gbadebo

Abstract : Biscuit is one of the most consumed cereal foods in Nigeria and research has shown that locally available tropical crops like cassava, sweet potato can be made into flour and used in the production of biscuits and other pastries. This study investigates some quality parameters in biscuits made from blends of wheat, cassava and carrot flour. The values of result of samples increased with increasing percentage substitution of cassava and carrot flour in some quality parameter like fiber, ash, gluten content, and carbohydrate. The protein content reduced significantly (P < 0.05) with increasing percentage substitution of cassava and carrot flour which ranged from 14.80% to 11.80% compared with the control sample which had 15.60%. There was a recorded significant increase (P < 0.05) in some mineral composition such as calcium, magnesium, sodium, iron, phosphorus, and vitamin A and C composition as the percentage substitution of cassava and carrot flour increased. During storage stability test, samples stored in the fridge and freezer were found to be the best storage location to preserve the sensory attributes and inhibit microbial growth when compared with storage under the sun and on the shelf. Biscuit made with blends of wheat, cassava and carrot flour can therefore serve as an alternative to biscuits made from 100% wheat flour, as they are richer in vitamin A, vitamin C, carbohydrate, dietary fiber and some essential minerals.

Keywords : biscuit, carrot, flour blends, storage
Conference Title : ICFSN 2019 : International Conference on Food Science and Nutrition
Conference Location : London, United Kingdom
Conference Dates : June 27-28, 2019

Open Science Index, Nutrition and Food Engineering Vol:13, No:06, 2019 publications.waset.org/abstracts/107445/pdf