World Academy of Science, Engineering and Technology International Journal of Mathematical and Computational Sciences Vol:14, No:12, 2020

Performance of Riped and Unriped Plantain-Wheat Flour Blend in Biscuit Production

Authors: J. O. Idoko, I. Nwajiaku

Abstract : Unripe and ripe plantain were dried and milled into flour and used with wheat flour in biscuit production to determine the best plantain-wheat composite flour for biscuit production. The blends as follows: 100% wheat flour, 100% ripe plantain flour, 100% unripe plantain flour, 50% wheat flour and 50% ripe plantain flour and 50% wheat flour and 50% unripe plantain flour. The Biscuit samples were stored at ambient temperature for 8 weeks after which the equilibrium moisture content and water activity were determined. The sensory evaluation of the biscuit samples was also determined. The results of these analyses showed 100% unripe plantain flour as the most stable of the biscuit samples judging from its equilibrium moisture content level of 0.32% and water activity of 0.62. The sensory evaluation results showed Biscuit made from 150:50 ripe plantain and wheat flour as most generally accepted at 5% level of significance.

Keywords: biscuit, equilibrium moisture content, performance, plantain, water activity

 $\textbf{Conference Title:} \ \text{ICSRD 2020:} \ \text{International Conference on Scientific Research and Development}$

Conference Location : Chicago, United States **Conference Dates :** December 12-13, 2020