

## **Effect of Different Processing Methods on the Proximate, Functional, Sensory, and Nutritional Properties of Weaning Foods Formulated from Maize (*Zea mays*) and Soybean (*Glycine max*) Flour Blends**

**Authors :** C. O. Agu, C. C. Okafor

**Abstract :** Maize and soybean flours were produced using different methods of processing which include fermentation (FWF), roasting (RWF) and malting (MWF). Products from the different methods were mixed in the ratio 60:40 maize/soybean, respectively. These composites mixed with other ingredients such as sugar, vegetable oil, vanilla flavour and vitamin mix were analyzed for proximate composition, physical/functional, sensory and nutritional properties. The results for the protein content ranged between 6.25% and 16.65% with sample RWF having the highest value. Crude fibre values ranged from 3.72 to 10.0%, carbohydrate from 58.98% to 64.2%, ash from 1.27 to 2.45%. Physical and functional properties such as bulk density, wettability, gelation capacity have values between 0.74 and 0.76g/ml, 20.33 and 46.33 min and 0.73 to 0.93g/ml, respectively. On the sensory quality colour, flavour, taste, texture and general acceptability were determined. In terms of colour and flavour there was no significant difference ( $P < 0.05$ ) while the values for taste ranged between 4.89 and 7.1 l, texture 5.50 to 8.38 and general acceptability 6.09 and 7.89. Nutritionally there is no significant difference ( $P < 0.05$ ) between sample RWF and the control in all parameters considered. Samples FWF and MWF showed significantly ( $P < 0.5$ ) lower values in all parameters determined. In the light of the above findings, roasting method is highly recommend in the production of weaning foods.

**Keywords :** fermentation, malting, ratio, roasting, wettability

**Conference Title :** ICSRD 2020 : International Conference on Scientific Research and Development

**Conference Location :** Chicago, United States

**Conference Dates :** December 12-13, 2020