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## Production of drum dried ready-to-serve Sorghum ]Sorghum biocolor (L) Moench[-white bean (Phaseolus vulgaris) instant infants food

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Protein energy malnutrition (PEM) is considered as the top of the nutritional problems especially among children in Sudan or other African countries where sorghum is the main source of energy and protein. Therefore, feterita sorghum as a basic staple food in Sudan and white bean as a protein supplement were selected as basic raw materials for production of drum dried sorghum based-ready-to-serve instant infants food. The results obtained in this study confirmed the great beneficial effects of white beans supplementation on sorghum nutritional value. Addition of white beans flour to feterita sorghum flour at ratios of 30:70 overcame lysine amino acid deficiency in sorghum protein. Also, all the other essential amino acids in sorghum-white beans composite flour were found more abundant than is needed for the different physiological needs for infants or pre-school children as envisaged by the FAO/WHO/UN. Moreover, the net protein value in sorghum native flour increased from 5.7% to 19.0% in sorghum white beans composite flour. Beside, the ratios of the amino acids leucine to isoleucine, leucine to lysine and arginine to lysine were favorably remained below the safety limits that predicted by the FAO to prevent the pellagragenic effects of sorghum protein. On the other hand, the drum dried method used in this study was found suitable for processing Feterita sorghum-white beans composite flour into ready-to-serve instant infants' food with high nutritional-high energy values and acceptable functional properties.

### Biography

Hattim Makki has completed his PhD from Institute of Food Technology, University of Agricultural Sciences, Vienna, Austria. Now, he is a Professor in Food Science and Technology and the Head of Food Science and Technology Department, College of Agricultural Studies, Sudan University of Science and Technology. He has published more than 20 papers in reputed journals. He has been serving as an Editorial Board Member of NFRJ Journal of Food Science and Technology.

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