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Nutritional, microbial and sensory of complementary food from kocho, orange-fleshed sweet potato and haricot bean

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Abstract

Protein energy malnutrition and vitamin A deficiency in children associated with poor nutritional knowledge resulting in early weaning, delayed introduction of complimentary foods, low protein and vitamin A diet and sever/ frequent infection. In Ethiopia the intake of vitamin A is inadequate; especially provision of the vitamin through dietary improvement, food fortification, and supplementation is less. The consumption of vitamin A-rich fruits and vegetables and foods made from roots and tubers is about 24–25 %. Orange fleshed sweet potato is climate smart and food and nutrition sensitive crops. Kocho is the product from Enset, is also climate smart crops. The purpose of this study was to assess nutritional, microbial and sensory properties of complementary food developed from Kocho, Orange fleshed sweet potato and haricot beans. Porridge was developed with different proportion of kocho to haricot bean flour: 90:10, 80:20, 70:30 and 100:0 (control) and orange fleshed sweet potato (15 %) was incorporated. The Nutritional composition of porridge was done by using a method of Association of Official Analytical Chemists, 2000. The beta carotene/Vitamin A content was determined by using High Performance Liquid Chromatography. The total mold and yeast and total plate count for the safety were carried out by using the standard procedure for examining microbial load on the food products. Sensory acceptability of the porridge was evaluated with 30 panelists comprising of mother-children in pair using 5 point hedonic scale. The result of the study showed that the Nutritional composition fulfils the minimum recommended daily allowance for children age between 6–23 months and full fills 65.14 % daily requirement of vitamin A. The microbial analyses of the developed porridge were within the microbiologically accepted limit. All porridge were accepted and liked by the consumers. Thus, based on the finding of this study it was suggested that mothers/caregivers should feed their children haricot bean and orange fleshed sweet potato incorporated porridge.

Keywords: Children, protein-energy malnutrition, VA deficiency

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