ABSTRACT

Finger millet (*Eleusine coracana* (L.) Gaertn.) is a drought resistant crop with potentially tremendous but under-explored source of nutraceutical properties as compared to other regularly consumed cereals in the era of drawback of nutritional security, these characteristics must be harnessed to develop finger millet as a novel functional food. Under-nutrition caused by inadequate diets, and other factors that influence nutritional status, is the underlying factor in 45% child deaths. In Kenya only 25% of young children are fed adequately diverse diets. The main objective of this study was to prepare baby food formulas using finger millets with pigeon peas as protein source and to analyze their nutritional profiles. Two finger millets varieties (i) Snapping Green Early, low altitude and medium altitude varieties and (ii) U-15) were studied to determine effects of environment on nutrient profiles. This study showed that Snapping Green Early had better nutrient profiles (12.13% protein and is high in Ca, Mg, Fe, Zn and P) than U-15 (11.69% protein and lower nutrients (Ca, Mg, Fe, Zn and P)), and hence was selected for use in the malting process as best variety. As expected, the pigeon peas had the highest protein value (21%). The samples malted for 72 h resulted in reduction of tannin concentration from 0.091% to 0.03% and the amount of nutrients (Ca, Mg, Fe and Zn) doubled and in fact the protein profile increased by 8.31%. The appropriate ratio for the formulation of the baby food was 70:30. The composting resulted in 18.5% increase in protein.

KEYWORDS

Malnutrition, baby food, finger millet, protein source, nutrient profile, pigeon pea.