ABSTRACT

The locally available agricultural produce as wheat, rice, maize, Bengal gram dhal and green gram dhal along with groundnuts and sesame seeds were used to develop weaning foods. Different processing techniques as roasting, cooking, malting and fermentation were used for processing of different produce and were ground to fine powder. Vitamin and mineral mixtures were prepared. The prepared ingredients were mixed in different ratio to develop 21 formulae of weaning foods. The prepared weaning foods were stored in aluminium laminated paper pouches for 30, 60 and 90 days. The products were evaluated as fresh and after different storage intervals for organoleptic, proximate and nutritional parameters and in vitro protein digestibility. The organoleptic scores were high for the formulae using roasted ingredients. Malting of maize and wheat increased the ash content. The fibre was maximum (3.53%) for broken wheat samples. The true protein value was highest for M5 (fermented maize+ cooked Bengal gram+ malted maize) with the value of 17.56 per cent followed by rice based weaning foods (15.21%) and wheat based weaning foods (13.17%). Malting increased the calcium and iron content in the wheat based weaning foods followed by rice and maize based weaning foods. Malting of maize and wheat gave higher energy value as 344.32 kcal and 342.64 kcal for M4 and W4, respectively followed by R2 (314.35 kcal) using cooked rice and Bengal gram. The fermented maize based weaning foods had highest value for in vitro protein digestibility (72.20%) followed by malted wheat based food using roasted ingredients. All the weaning foods indicated 9×10^2 to 22×10^2 cfu after 90 days of storage period indicating good shelf life of products. All the prepared samples were instant to prepare which took 2-4 minutes to cook in boiling water. The cost of prepared weaning foods ranged between Rs. 62.00 to 77.50 per kg.