ABSTRACT
Development, Sensory Evaluation and Nutritional Qualities of a Millet based Food Replacer for Geophagy among Adolescent Girls Millet grains (Eleusine coracana L), Amaranth grain (Amaranthus cruentus L) and Winged Termites (Macrotermes subhylanus R) are traditional foods among communities in Western province of Kenya. Although traditional foods have huge benefits to human health, they are generally uncultivated and under–utilized. The non-availability of ready to use processed millet based foods has limited the usage and acceptability, despite their nutritional superiority. The purpose of this study was to develop an iron- rich product from millet, amaranth and termites as replacer of soil for geophagists. The study further sort to establish the acceptability and nutrient content of the product. Linear programming was used to come up with four formulations of Finger millet, Amaranth and Termites in the proportions of 100:00:00; 70:15:15; 70:10:20 and 70:20:10 respectively. The flour made from the three ingredients was hydrated at a ratio of 500g of flour to 300ml of water; these were then mixed to a thick consistency. Approximate 8 mm thick layer of the dough was spread on baking trays then baked in an oven at 120°C for one and a half hours. The product was then dried in an oven at 40°C for one hour. The product was left to cool and stored in polythene bags and sealed. The sprinkles were subjected to a taste panel test to determine the most acceptable formulation. The most preferred formulation had a ratio of 70:20:10 (millet: amaranth: termites), it had high content of iron; one hundred grams of the product would provide more than the recommended dietary allowance for adolescent girls. The study recommends development of a program for commercial production of the soil replacer at community level or industrial level in order to offer a food alternative, which will not only help stop the practice but also supply essential nutrients to the users.