ABSTRACT

Baobab (*Adansonia digitata* L.) is an indigenous fruit tree associated with the Savannah drylands of sub-Saharan Africa. Local communities mainly utilize the leaves, pulp, and seeds of baobab as a source of food and for income generation. The present study was conducted to determine the nutritive attributes of baobab fruit pulp and seeds across provenances in east, west, and southern Africa and to determine whether the nutrient content varied with the provenance of origin. Pulp and seed proximate composition and mineral element concentration were determined using the AOAC 1984 methods and inductively coupled plasma atomic emission spectroscopy (ICP-AES), respectively. The results showed that there exist significant variation ($p < .05$) in pulp moisture, protein, fiber, ash, and elemental content among provenances. The highest mean pulp crude fiber (8.68 g 100 g^{-1} dw) was recorded in Kenya. At country level, Malawi had the highest mean pulp potassium (22.2 mg g^{-1}), calcium (4,300 mg kg^{-1}), magnesium (2,300 mg kg^{-1}), sodium (1,000 mg kg^{-1}), and phosphorus (1,100 mg kg^{-1}) levels. Kenya had the highest mean pulp iron (57.4 μg g^{-1}) and manganese (27.2 μg g^{-1}) content, while Mali had the lowest iron (13.1 μg g^{-1}) and manganese (8.6 μg g^{-1}). At country level, the mean seed calcium content was highest (3,200 mg kg^{-1}) in Malawi and lowest (2,000 mg kg^{-1}) in Kenya. The highest mean iron content of 63.7 μg g^{-1} was recorded in seeds from Kenya, while the lowest (25.8 μg g^{-1}) was in Mali. Baobab seed mineral and proximate content varied significantly ($p < .001$) among the selected countries. Overall, baobab fruit pulp and seeds contain significant amounts of nutritionally essential minerals and proximate components but the amounts varied significantly among the selected countries. This variation offers opportunities for selecting provenances to concentrate on during germplasm collection for conservation and domestication of baobab.