PDF - DEVELOPMENT OF PRODUCTS FROM SORREL - researchcub.infoABSTRACT
The objectives of the study were to develop products fromsorrel calyces, leaves and seeds, evaluate the products for nutrients, phytochemicals,antinutrients, food toxicant, physicochemical, microflora, sensory, storage properties and compare theproducts produced with existing products. Dry red sorrel calyces, leaves and seedswere used for the study. Pilot study was carried out to standardize recipe used for theformulation of the products. The products developed were jelly, cordial juice, food condiment, foodseasoning and oil. Sorrel jelly and cordial juice were produced from sorrel calyx usingstandardized recipe and procedure by International jellies and preserved Association. Sorrel foodcondiments were produced from fermented sorrel seeds and sorrel oil was produced fromsorrel seed. Sorrel food seasoning was produced from sorrel leaf.
The nutrients, phytochemicals, antinutrients, food toxicantand sensory properties of the products were determined usingAOAC methods. The sorrel seed oil was evaluated for physico-chemical properties using standardprocedures. Similar products (grape jelly, black currant cordial juice, royco foodcondiment, rosemary seasoning and groundnut seed oil) by flavour, colour and texture used byconsumers served as control for evaluation of the products developed. The products were keptat room temperature 28±2ºC to determine the keeping qualities for sixteen (16) months.Sorrel jelly had significantly higher ($p<0.05$) crude protein, crude fat, ash, calcium (Ca),iron (Fe), phosphorus (P), sodium (Na), copper (Cu) and -carotene. Sorrel jelly contained crudeprotein (5.51%), Fe (15.43mg), P (30.57mg), Cu (54.00g), ascorbate (18.10mg) and -carotene(22.50g). Sorrel cordial juice had significantly higher ($p<0.05$) crude protein, ash, Ca,Fe, P, Zn, Cu, ascorbate and -carotene. The cordial juice from sorrel calyx hadsignificant amount of crude protein (18.43%), carbohydrate (68.77%), Fe (50.66mg), P (48.40mg),Cu (56.66g), and ascorbate (36.10mg). Sorrel seasoning had significantly higher ($p<0.05$)fat, ash, crude fibre, Ca, P, Na, Zn, Cu and -carotene.
The seasoning from sorrel leaf had significant quantity ofcrude protein (11.82%), carbohydrate (67.12%), Ca (414.00mg), P (841.66mg),ascorbate (39.53mg) and -carotene (38.20g). Sorrel food condiment had higher($p<0.05$) protein, fat, crude fibre, P, Zn, Cu, ascorbic acid and -carotene.The sorrel condiment was rich in crude protein (30.67%), carbohydrate (60.78%),Fe (16.70mg), P (787.34mg), ascorbate (40.27mg) and - carotene (38.40g). Theoil had higher ($p<0.05$) relative density (0.916ºC), refractive index(1.475ºC), saponification value (189.00mgKOH/g), iodine value (103.00mg) and-carotene (14.20g, respectively). Sorrel products developed containedsignificant quantities of flavonoids. There were generally traces of cyanideand phytate except in the seasoning.
Tannins were low (0.38-2.40mg) in all products except sorreljuice and royco food condiment.
The sorrel products were preferred to the standard productsexcept sorrel oil. The products

DEVELOPMENT OF PRODUCTS FROM SORREL