count (RBC) of the groups increased in the ranges of 50-69.59% and 89.74-140% respectively. However, they were comparable (($p>0.05$)) with the control. Hemoglobin values decreased in the ranges of 50-17.39% and the control groups were significantly ($p<0.05$) higher than that of the experimental groups.

Conclusion: Herbst's bloodleaf increases PCV and RBC but reduces hemoglobin level.

NUTRITIONAL, SHELF STABILITY AND PRODUCTION COST OF POWDERED ALTERNATIVE READY-TO-USE THERAPEUTIC FOODS BASED ON NIGERIAN TRADITIONAL DIETS

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ABSTRACT

Introduction: Over 6.2 million children in Africa have severe acute malnutrition and out of this, Nigeria has a value over 500,000 under-5 children in this category. Although different ingredients have been blended to produce RUTF, however, powdered RUTF produced from Nigerian based diet is yet to be formulated and evaluated for Community Management of Acute Malnutrition.

Objectives: This study was conducted to formulate and evaluate powdered alternative ready-to-use therapeutic Foods (ARUTFs) using Nigeria based traditional foods for community management of acute malnutrition (CMAM).

Methodology: This study was analytical in design. Appropriate process characteristics and blend formulations using three formulations with Powdered Groundnut Seed (A, B and C), three blends with Powdered Groundnut Cake (D, E and F), Millet, Cowpea, Icing Sugar, Vegetable Oil, Egg yolk, Vitamin/Mineral premix in different proportions were therefore developed. Its quality was evaluated in terms of Proximate Analysis, Water Activity and Cost of Production and compared with F75 and F100 using SPSS (20.0).

Results: The mean and standard error of means (SEM) of the triplicate analyses of the samples were calculated. The analysis of variance (ANOVA) was performed to determine significant differences between the means of proximate composition and water activity; while the means were separated using the new Duncan Multiple Range test at $p<0.05$. Among the six samples formulated (A - F), Proximate Composition and Water Activity analysis showed that samples A, B and C are of adequate nutritional qualities to reinstate Malnourished children back to their nutritional status and the samples are shelf stable. Cost evaluation showed that samples A, B and C were cheaper than F-75 and F-100.

Conclusion: ARUTFs prepared from the composition of samples A, B and C by complementing cereal –legume traditional Nigerian diets with vitamin/mineral premix as described in this study have quality protein, stability properties and cost characteristics.