

**COMPARATIVE EVALUATION OF THE
MICROBIOLOGICAL QUALITY AND SENSORY
PROPERTIES OF COFERMENTED MAIZE,
CARROT, PIGEON PEA AND MILLET,
SWEETPOTATO, PIGEON PEA.**

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ABSTRACT

In Nigeria low-socio economic mothers use fermented cereals like maize(*Zea mays*) and Millet (*Pennisetum americanum*) as infants' complementary food. Pigeon peas (*Cajanus cajan* L). are underutilized legumes in Nigeria. This study co-fermented of maize, carrot/pigeon pea and millet, sweet potato/ pigeon pea were co-fermented in ratio 6:2:2(w/w)and the fermented products were compared.Nutritional, viscosity and microbial status of co-fermented cereal, legumes, tubers and vegetable were studied.Products were analyzed for vitamins, reducing sugar, trypsin inhibitory activity, PH and Titratable acidity using standard methods. The predominant microorganisms isolated from both samples during fermentation period were *Lactobacillus* spp. Consistency properties were determined using Bostwick Consistometer. Vitamin B3 content was higher in the samples ($p > 0.05$) which are higher than recommended value. Vit B6 (Pyridoxine) and B1 (Thiamine) values were comparable to recommended values while some values were lower. In terms of organoleptic properties of the product co-fermented sample A (maize, carrot/ pigeon pea) was most preferred by the panelist with regards to color, taste, texture and aroma than sample that are not co-fermented. . Co-fermentation of maize, carrot/pigeon pea and millet, sweet potato/pigeon pea resulted in a product of improved nutritional quality than fermented maize.