

PEA1.55 **Microbiological composition of *Tayohounta*, a fermented baobab flavour food of Benin**

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The importance of forest foods in general and in particular baobab foods in most African countries is well known. The present work provides data on the microbial ecology of *Tayohounta*, a product from spontaneous/natural fermentation of baobab seed kernels from Benin. Samples were produced and collected from 3 different small scale producers from Benin at the end of the fermentation process. Aerobic mesophilic microorganisms, Lactic Acid Bacteria (LAB), Enterobacteriaceae, Bacterial spores, Micrococci, yeast and moulds were enumerated on suitable substrates and identified using both phenotypic and molecular methods. Selected strains were further investigated using Denaturing Gradient Gel Electrophoresis (DGGE) and cloning. Isolated microorganisms were tested for their effect on pH, protein degradation and flavour production as an index of their functionality in baobab seed kernel fermentation. Total viable counts (TVC) were around 9 log cfu/g consisting mainly of *Bacillus* spp., whereas LAB (8 log cfu/g) and yeasts and mould represent a smaller part of the total flora in all samples. Identification of isolated strains showed that there are large differences between the samples. Detailed characterisation of the 3 samples of *Tayohounta* showed the presence of *Bacillus subtilis*, *Bacillus licheniformis*, *Bacillus thermoamylovorans*, *Lactobacillus fermentum* and *Streptococcus* spp. in all three products, whereas other *Bacillus* spp., *Enterococcus*, *Lactobacillus* and *Pediococcus* spp. were found in 2 of the 3 products. Many other identified species (i.e *Bacillus cereus*, *Klebsiella pneumoniae*, *Lactobacillus agilis*, *Staphylococcus aureus*) were found in only one of the 3 *Tayohounta* samples. Products made by 3 different producers of *Tayohounta* showed considerable variability.