

**BACILLUS SPECIES ASSESSMENT OF SORREL CALYCES  
SOURCED FROM NIGERIA AND SENEGAL**

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Sorrel calyces are products of an herbaceous plant species from the family *Malvaceae* widely grown in the North-Eastern and middle-belt regions of Nigeria. They are grown commercially for their calyces. The three available commercial varieties in Nigeria include; red, purple and the cream calyces. The red and purple varieties are used for the production of Sorrel drink. Sample of raw calyx of sorrel (purple variety) was transported in a plastic container from Nigeria to the United Kingdom in August 2013. The second sample was provided by NRI but had originally been obtained from Senegal. And the materials used for microbial analysis were sourced from the Microbiology laboratory, Natural Resources Institute, University of Greenwich, UK. Microbial analysis was conducted using the method described by literature. In this work, results for aerobic plate count (APC) from samples of sorrel calyces from Senegal and Nigeria indicated that both samples contained microbial cells with sorrel calyx from Nigeria showing higher counts on PCA. ZcHSg harbours significantly ( $P < 0.05$ ) less Presumptive *Bacillus* spp. count (PBSC) compared with ZcHNg, which could possibly be attributed to poor post-harvest practices among farmers and traders in Nigeria, such as the traditional sun-drying of calyx in an open field; inappropriate packaging; exposure of sorrel calyx to microbial spores at selling points and bad storage practice. In this study, ZcHNg shows significantly higher counts in both APC and PBSC than ZcHSg.

Keywords: Sorrel calyces from Nigeria and Senegal, *Bacillus species*

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