The present investigation highlights the effect of storage on the physico-chemical status and bacteriological quality of sachet water produced in Port Harcourt, Nigeria for a period of four months. Ten brands of sachet water were collected within 24 hours of production and stored at ambient temperature. Sub-samples were drawn from the stock samples on monthly basis for physico-chemical measurement and on weekly basis for enumeration of total aerobic heterotrophic bacteria and indicator organisms using ASTM, APHA and WHO analytical methods. pH values increased in all brands to acceptable WHO limits within 8 weeks of storage and gradually decreased toward the end of the experiment. Dissolved oxygen, volatile organic matter and nitrate values decreased throughout the investigation period while phosphate and potassium values increased throughout the investigation period in all brands tested. Total aerobic heterotrophic bacterial count increased gradually in all brands to unacceptable limit within four weeks of storage and gradually diminished to zero level by the end of experiment. Total and faecal coliform appeared in 40% of sachet water samples.
Storage Effects on the Quality of Sachet Water Produced within Port Harcourt Metropolis, Nigeria. Sunday B. Akinde. 1  The present investigation highlights the effect of storage on the physico-chemical status and bacteriological quality of sachet water produced in Port Harcourt, Nigeria for a period of four months. Ten brands of sachet water were collected within 24 hours of production and stored at ambient temperature.

Issues

Analytical data indicated that the levels of Escherichia coli and faecal Streptococci were not detected throughout the investigation period. However, storage beyond the first three weeks led to diminished aesthetic quality of sachet water and increased proliferation of bacteria to a level deleterious to human health.