

**EFFECT OF USING NITROGEN GAS IN DIFFERENT
TEMPERATURES AS A PRESERVATION METHOD ON
STORING HERBALS**

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ABSTRACT

Herbal products are getting significant attention in international market. In Sri Lanka, there are lot of tea exporting companies which export teas as value added products. Most of the value added herbal products exported as pure herbals without blending because of the demand for those herbals. This study was conducted to preserve herbals by using Nitrogen gas (N_2) at different temperatures to reduce degrading freshness, physical properties and taste profile of stored herbals Chamomile and Supper Berry were taken as herbal types for the study. First herbal samples were prepared. Moisture test was done for the initial samples. Total Plate Count, Yeast and Mold, E-coli, Total Coliform were conducted for initial samples and for final samples after treatments to analyze microorganisms. The sensory scores were analyzed using Friedman test using Minitab 17 package. Sensory evaluation was done by 10 trained tea taster panel. It reveals that microbiological properties and physical properties of the Chamomile and Supper Berry can be affected by modified atmospheric packaging. Physical properties and taste profile of Chamomile and Supper Berry can be affected by modified atmospheric packaging. N_2 gas in $20^\circ C$ enhance the microbial growth in both chamomile and Supper Berry but those conditions show the best results in preserving the physical characteristics and taste profile of both herbals.

(*Key words:* Herbals, Modified Atmospheric Packaging, Nitrogen, Microbial Growth)