DEVELOPMENT OF A HERBAL TEA BEVERAGE

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By

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ABSTRACT

Across the globe, there are an estimated 150 million people suffering from diabetes mellitus. Each of these people is at increased risk of developing a number of complications, each of which are associated with a reduction in quality of life and an increase in individual morbidity and mortality. One treatment that is emerging as a potential panacea for the management of diabetes is *Gymnema sylvestre*. The leaves are used in herbal medicine preparations. Herbal drinks have increased in popularity in recent years due to the Health benefits.

The study was aim to development of herbal ready to serve tea by using *Gymnema sylvestre*, green tea and spice flavor. Gymnema leaves were selected as reliable plant parts and dried under room temperature. Ten experienced tea tasters were conducted sensory analysis to find best dosage of *Gymnema sylvestre* and green tea ratio for herbal tea development. Cinnamon and Cardamom were separately blended with identified best dosage of *Gymnema sylvestre* and green tea ratio. Combinations of these functional ingredients extract were prepared by following a Specific procedure and evaluated. Sensory Analysis was done by using Kruskal-Wallis Test in Minitab software. Conover-Inman Method equation was used to selection of best treatments. Sensory evaluation showed that there were significant differences between treatments with respects to color, aroma, taste, Mouth feel and overall acceptability.

Result revealed that the formulated beverage with 250mg Cinnamon added Treatments was found to be superior in quality. The findings of microbial studies showed no total plate counts in the formulated beverages and the results of physico-chemical analysis revealed that pH decreased with the time and tested pH change is not harmful for the consumption compared with values of 2.5 (0.05) for Coca-Cola and 6.7 ± 0.00 for distilled water.

Keywords: *Gymnema sylvestre* , Dosage , Kruskal-Wallis Test , Physico-chemical analysis, Ready-to-serve beverage , Sensory evaluation

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