

Development of a Flavored Herbal Tea using Broken Mixed Fannings and *Moringa (Moringa oleifera)* Leaves

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Abstract

Tea (*Camellia sinensis* L.) is the second most widely consumed popular non-alcoholic beverage in the world for centuries due to its sensory attributes and health promoting effects. Herbal drinks gain more popularity in recent years due to its associated health benefits. The study was carried out to add value to the tea grade of Broken Mixed Fannings (BMF) by developing a flavored herbal tea by incorporating *Moringa oleifera* leaves which contains various health benefits. *Moringa oleifera* leaf powder was prepared. Five treatments were tested incorporating various quantities of *Moringa* leaf powder and BMF to make final quantity of 2.0 g of herbal tea blend for a tea bag. A sensory evaluation was conducted using ten experienced tea tasters to find out the best combination of *Moringa oleifera* leaf powder and Broken Mixed Fannings ratio for herbal tea development. Color, aroma, taste, mouth feel and overall acceptability were evaluated as sensory characteristics based on a five-point hedonic scale. Tea is flavored by using lemon flavor. The data was statistically analyzed by Kruskal-Wallis test and Conover-Inman method. 0.8 g of *Moringa* leaf powder and 1.2 g of BMF incorporated combination was selected as the best treatment for the herbal tea development among the five different treatments tested. Total polyphenol content and total antioxidant content of the newly developed product were 0.05 % (g/ml) and 0.19 % (g/ml) respectively as a percentage of the extract. The findings of the microbial studies showed that the newly developed herbal tea blend is safe for the consumption and the physico-chemical analysis revealed that pH and the moisture content of the new product were fulfilled the required standards.

Keywords: Herbal tea, *Moringa oleifera*, broken mixed fanning