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Effect of dehydration temperature, time and blanching methods on the sensory properties of an herbal tea developed from *Moringa oleifera* leaves

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Moringa oleifera is a highly nutritious plant which can be used as a good source of nutrition and leaves have been found to contain high amounts of vitamins, minerals, proteins and fiber. The main objective of this study is to explore the use of *Moringa oleifera* leaves, to produce an herbal tea with acceptable sensory properties, by using different dehydration temperatures, time and blanching methods which can be used in the Sri Lankan market. According to AOAC procedures the initial moisture content (%) of fresh leaves was found to be 78.17 ± 1.57 (dry basis). Six sets of samples were prepared where temperature and time combinations were; 60°C 4 h 30 min, 65°C 3 h, 55°C 6 h for unblanched samples and; 60°C 5 h 30 min, 65°C 4 h and 55°C 6 h for the steam blanched samples. The gross yields of the dried leaves to its initial weights were 22.86%, 20.88%, 23.62%, 19.18%, 15.21% and 14.97% respectively. The moisture content of the dried leaves ranged from 2.09 ± 0.17 to 5.36 ± 0.06 . The colour values L*, a*, b* ranged from 16.83 ± 3.02 to 30.2 ± 3.32 , -1.93 ± 0.46 to -6.41 ± 0.79 and 5.1 ± 1.29 to 15.49 ± 1.29 respectively. These samples were given to a trained panel of tea tasters for the sensory evaluation and sample 5 (steam blanched, 65°C 4 h) was selected as the sample with the best sensory attributes. These samples were evaluated using a 5-point hedonic scale, by a semi-trained panel of 35 assessors and data were analyzed using the MINITAB statistical package using Friedman test. According to the statistical analysis, sample 5 showed the highest score. The brew of unblanched leaves was giving harsh unpleasant characters whereas the steam blanched samples were giving a pleasant taste.

Keywords: Herbal beverage, herbal tea, *Moringa oleifera* leaves, value-addition