Development of Iramusu *(Hemidesmus indicus)* herbal syrup

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Iramusu *(Hemidesmus indicus)* belongs to family Asclepiadaceae. In Sri Lanka "Iramusu" is the synonym. Root gives a volatile, cristalizable acid, 2 hydroxy-4-methoxy benzoic acid on which the taste, smell and probably the medicinal properties depend. Iramusu is being used as powdered form, infusion or decoction as syrup. Preparation of decoctions, infusion involve with several unit operations and difficult to prepare with busy lifestyle. The objectives of the research were to identify the optimum extraction condition, to develop Iramusu herbal syrup & sensory evaluation and storage study.

The extraction condition was studied using dried Iramusu. The copped dried pieces of Iramusu root samples of 60 g, 100 g, and 125 g were washed. added 1 L of water and boiled separately for 1 hour. The extracts were cooled and total soluble solid (TSS), acidity, pH and arsenic content were measured. Syrup was prepared (1st step 52, 42 & 32 Brix) and (2nd step 37, 42 & 57 Brix) using the extract, citric acid, Carboxy Methyl Cellulose and preservatives. Sensory evaluation and storage study were conducted on the best syrup (Brix 42). pH, acidity, colour, Total Soluble Solids (TSS), microbiological studies were measured for two months of storage period.

Moisture and ash content of *heen Iramsu* and *maha Iramusu* were 14.7 & 4.2 % and 14.5 & 4.8 % respectively (n =3). pH Brix and acidity of the best maha Iramusu extract (100 g Iramusu, 1 l water, 1 hr boiling) were 3.6, 5.17 and 3.65 respectively. Arsenic content of Iramusu root extract was 0.006 (n = 3). According to the SLS standards, SLS 221 of 1985, arsenic content of diluted drink should not be exceed 1 ppm. The syrup (42 Brix) was selected as the best over other samples. There was no significant deference in Titratable acidity and pH during storage (p = 0.05). Probability values were P = 0.0475, 0.0236 and 0.3757 for "l", "a" and "b" values respectively. There was no significantly difference in "b" value. The Brix value was been increased and constant after 6th week onward. Changes in TSS may be due to chemical reactions of sugar presence with acids. Aerobic plate count, yeast & mould count were 2 and 2.X10^{1} cfu/g respectively. The values were not exceeded the recommended level (Aerobic plate count, 1.0 x 10^{4} cfu/g and yeast & mould count, 5.0 x 10^{1} - 1.0 x 10^{2} cfu/g). The optimum extraction condition of Maha Iramusu roots was 100 g of Iramusu roots in 1 l of water for 1 hr boiling period. Arsenic content of extract was 0.006 ppm and the level was below the SLS standard. Reconstituted Iramusu syrup with 42 Brix was highly accepted over the syrup 37 and 57 Brix. Storage studies revealed that syrup bottled in glass containers was acceptable up to 2 months storage period.

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