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Development of herbal tea as potential replacement for Guava tea

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Herbal teas are commonly consumed by our population since people believe they are natural, harmless, and can assist in treating or controlling various therapeutic illnesses. Even though guava tea has already been developed and proven to have anti-diabetic and antioxidant properties, the purpose of this study was to develop a guava leaf-based herbal tea with a combination of supporting and activating herbs such as guava (*Psidium guajava*) leaf, cinnamon (*Cinnamomum zeylanicum*) leaf and bark, avaram senna (*Senna auriculata*) flower, gurmar (*Gymnema sylvestre*), holy basil (*Ocimum tenuiflorum*) leaf and lemon (*Citrus limon*) leaf in order to improve guava tea. To prepare herbal tea, plant materials are collected, cleaned, and processed. Herbal teas were prepared using nine different combinations of the above-mentioned plant materials, as well as guava tea for comparison. Extraction of tea was done by infusion and phytochemicals were screened with the standard procedures. Total Polyphenolic Content (TPC) was determined using the Folin-Ciocalteu approach, and Total Flavonoid Content (TFC) was determined using the aluminium chloride spectrophotometric method. According to the findings, all of the prepared herbal teas and guava tea are rich in essential phytochemicals. Surprisingly, the five designed herbal tea combinations had greater TPC than guava tea. Most notably, the combination of guava-leaf: cinnamon-bark, cinnamon-leaf: avaram senna-flower: gurmar-leaf: holy basil-leaf: lemon-leaf; 35: 20: 1: 1: 1: 1: 1 exhibited the highest TPC (2027.12 mg GAE/L). In conclusion, as the developed herbal tea showed the highest TPC, further study is needed based on antioxidant and anti-diabetic properties to replace guava tea with prepared herbal tea.

Keywords: *Antioxidants, Guava-tea, Herbal-tea, Phytochemicals, Polyphenolics*