

## Comparison of Physicochemical Properties of Twelve Iced Teas in Sri Lanka

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Tea is the second most consumed beverage in the world and there are many variations of tea that are manufactured around the world. Iced tea is one such beverage and the industry has grown tremendously over the past few years. But the data available on the quality of the Sri Lankan iced tea products are scarce. Therefore, the aim of this study was to analyse the physicochemical properties of different iced teas available in the Sri Lankan market in order to assess their quality. Twelve different iced teas were tested; they were aqueous extracts of green (G) and black tea (B) iced concentrates, three peach flavoured teas (P<sub>1</sub>, P<sub>2</sub>, P<sub>3</sub>), two strawberry flavoured teas (S<sub>1</sub>, S<sub>2</sub>), ginger (G<sub>2</sub>), lemon (L) and apple (A) flavoured tea, unflavoured iced tea of black tea (B<sub>1</sub>) and green tea (G<sub>1</sub>). The physicochemical parameters polyphenol content (TPC), antioxidant activity (AA), titratable acidity (TA), total soluble solids (TSS) and turbidity were measured using standard protocols. The free radical scavenging ability was analysed using the DPPH assay and TPC was examined employing the Folin-Ciocalteu method. TA was determined as per AOAC methods, and TSS was measured using ATAGO Hand Held Refractometer MASTER-53T. The turbidity was assessed by using Thermo Scientific Eutech TN-100 Waterproof Turbidimeter. The highest level of AA was recorded in G<sub>2</sub> and the lowest in B<sub>1</sub> as 32.5 µg/ml and 3.65 µg/ml, respectively. Whereas the greatest amount of TPC was noted in G<sub>2</sub> at 20.08 µg/ml and the least was found in B<sub>1</sub> at 1.45 µg/ml. The highest level of TA was found in B<sub>1</sub> at 2.56 g/l and lowest level of TA was noted in both P<sub>1</sub> and L at 1.28 g/l. The highest was reported in B<sub>1</sub> at 13.2 °Bx and lowest level of TSS was showed in G<sub>2</sub> at 6.4 °Bx. At 3.35 NTU, the least amount of turbidity was documented in L and the greatest in B<sub>1</sub> at 57.9 NTU. Out of the twelve types, ginger flavoured tea showed the best quality whereas the unflavoured iced tea of black tea demonstrated the poorest quality.

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