

QUALITY AND SAFETY ASPECTS OF COMMERCIALLY AVAILABLE GREEN TEA IN SRI LANKAN MARKET

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Green tea is popular for its functional properties and health benefits. Hence, a wide range of green tea products emerges with diverse quality. A comprehensive analysis is vital to assess whether the green tea products available in Sri Lankan market comply with the regulatory standards and are safe for the consumption. Present study evaluated randomly collected green tea products (loose and packed form) available in Sri Lankan market for their physical, physicochemical, microbial & sensory properties and adulterations following standard procedures. Data were analysed by ANOVA and Friedman test. Means were separated by Duncan's Multiple range test ($p < 0.05$) using SAS software. Moisture content of the tested green tea products varied between 5.21–10.27%, exceeding the accepted level of 2.5–6.5%. Total ash and water-soluble ash content of all products complied with ISO requirements and were within the range of 4.67–6.98% and 48.50–61.55%, respectively. Alkalinity of the water-soluble ash and acid insoluble ash content fulfilled the ISO requirement and varied between 1.53–2.35% and 0.25–0.98%, respectively. Particle size varied from small dust particles to large leafy grades. Colour of the particles varied from brown to green, even if the green colour is favoured. Infusion colour varied from coppery to golden yellow. None of the green tea products was identified as adulterated with colour, iron filling, leather flakes or sand. Microbial contaminations were recorded in green products, yet did not exceed the acceptable level of 10,000 CFU g⁻¹. Sensory evaluation scored varying consumer preferences for different green tea products for their brew characters. Except the moisture content, green tea products available in the Sri Lankan market are with acceptable quality as they comply with ISO recommendations and are absent of adulterations.

Keywords: Adulteration, Infusion colour, ISO standards, Microbial contamination, Sensory evaluation