

DETERMINATION OF CHEMICAL QUALITY PARAMETERS OF COMMERCIAL TEA BLENDS

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ABSTRACT

This study attempted to add more information about chemical quality by evaluating and finding variations of consecutive 3 blend preparations with selected chemical quality parameters for sensory evaluated commercial tea blends and compared to the selected parallel products from different brands under six different product categories available in International market. Total polyphenol content, caffeine content, moisture content, pH value of the brew, total soluble solids of the brew and colour intensity of the brew were measured for eight black tea blends, two local green tea blends, three imported green tea blends and selective market product categories. Total polyphenol content was determined according to the International Organization for Standardization method (ISO) 14502-1. Caffeine determination was based on Jenway Bibby Scientific (Application note: A09-010A). Local green tea showed a higher polyphenol content than black tea. The total polyphenol content in local green tea was ranged from 21.4 % GAE (Gallic Acid Equivalents) to 18.8 % GAE while it ranged 14.4 % GAE to 10.8 % GAE in imported green teas whereas in black tea, the polyphenol content ranged from 17.9 % GAE to 12.2 % GAE. ($p < 0.05$). The mean value of caffeine content was ranged 3.18 g/100 g to 2.9 g/100 g in black tea, local green tea it ranged from 2.50 g/100 g to 2.45 g/100 g and in imported green tea it ranged 2.34 g/100 g to 1.97 g/100 g ($p < 0.05$). Sri Lankan origin black tea and green tea blends are in higher chemical quality compare to the chemical quality of other origin green teas. Chemical quality of black tea blends are frequently changed and affect for astringency. Different tea blend categories of different market samples show significant differences in chemical quality.

Key words: Total polyphenol content, Caffeine, GAE, Tea blend, Quality