

**DEVELOPING A LOW-FAT DRINKING YOGHURT BY  
INCORPORATING GREEN TEA (*Camellia sinensis*) EXTRACT AS A  
FUNCTIONAL INGREDIENT**

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Nowadays people are health-concerned and consume more of functional foods. Thus, this study focused on developing a drinking yoghurt incorporated with green tea (*Camellia sinensis*) extract (GTE) as a functional ingredient. Green tea extract was obtained by brewing 02 g of dried green tea leaves in 100 mL of water at 90 °C for 30 minutes. Drinking yoghurts were prepared with standardized sterilized milk incorporated with 0%, 10%, 15%, 20%, and 25% (v/v) of GTE. Physio-chemical, microbial, and sensory analysis were conducted to evaluate the quality attributes of the developed product. It was stored under refrigerated conditions (4 °C) for 15 days. Parametric and non-parametric data were analysed using the analysis of variance and Kruskal Wallis test, respectively. The addition of GTE had a significantly positive effect ( $p < 0.05$ ) on sensory attributes of the drinking yoghurt and 25% GTE incorporated drinking yoghurt showed the best organoleptic properties. It had the significantly ( $p < 0.05$ ) highest ash ( $1.75 \pm 0.02\%$ ) and lower fat ( $1.61 \pm 0.01\%$ ) contents compared to the control ( $1.24 \pm 0.02\%$  and  $1.65 \pm 0.01\%$ , respectively). The protein, total solids and moisture contents were not significantly different ( $p > 0.05$ ) among the treatments. Significantly ( $p < 0.05$ ) higher pH ( $4.54 \pm 0.01$ ) and lower titratable acidity ( $0.83 \pm 0.00$ ) values were observed in 25% GTE incorporated yoghurt compared to the control ( $4.42 \pm 0.01$  and  $0.87 \pm 0.00$ , respectively) on 15<sup>th</sup> day of storage. The microbial analysis did not show the presence of coliform. The yeast and mould counts were within the acceptable limit of the Sri Lanka Standards ( $< 10^3$  CFU mL<sup>-1</sup>). The cost of production of 25% GTE added yoghurt was 56.64 LKR. In conclusion, yoghurt incorporated with 25% (v/v) GTE has better organoleptic properties and nutritional value while it can be stored under refrigerated conditions for 15 days without any quality deterioration while producing at affordable price.

**Keywords:** Drinking yoghurt, Green tea extract, Microbial analysis, Physio-chemical analysis, Sensory evaluation,