

**DEVELOPMENT OF A GREEN-TEA-
INCORPORATED WHITE CHOCOLATE**

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ABSTRACT

White Chocolate is one of the most popular confections with low nutritive value comparing to the other milk and dark chocolate which majority not heard so far. Green tea is rich with the polyphenole and provides highest health benefit to the consumers. Incorporation of green tea powder in to white chocolate and increases the polyphenol content and the organoleptic profile of the product while conveying different experience to the consumer. The aim of the study was, to develop a white chocolate by incorporating green tea powder.

Green tea incorporated white chocolate were prepared according to the standard procedure with slight modifications. There were six treatments with respect to green tea powder percentage as 0% (w/w), 1% (w/w), 2% (w/w), 3% (w/w), 4% (w/w) and 5% (w/w). Best green tea incorporation percentage was selected by sensory evaluation using 30 untrained panelists with 5 point hedonic scale to assess sensory attributes such as, colour, appearance, chocolate flavour, sweetness and overall acceptability. Sensory data were analyzed by friedman nonparametric statistical method while polyphenole content were compared in green tea incorporated white chocolate and commercial available white chocolate by two-sample t test in MINITAB 14. Shelf life determination was done by analyzing yeasts and moulds, and salmonella at once a week intervals for six weeks. Also determine the free fatty acid value and moisture content fluctuation for the six weeks period at twice a week intervals.

White chocolate prepared with 2% incorporation of green tea powder showed higher ($P < 0.05$) preference with all sensory attributes. There is a significant polyphenol content in green tea incorporated white chocolate than the commercial available white chocolate. Salmonella were not detected with the storage duration. Yeast and mould counts were not exceed the specifications in Sri Lankan Standards for the chocolate during six weeks period. Free fatty acid and moisture content also not exceed the chocolate standards.

Based on results it can be concluded that white chocolate prepared with incorporating 2% green tea powder has highest sensory attributes with 6 weeks of shelf life based on the time period of research at room temperature.

Key words: White chocolate, Green tea powder