

STUDY ON EFFECT OF TEMPERATURE AND RELATIVE HUMIDITY ON DIFFERENT TYPES OF FLAVOURED BLACK TEA

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ABSTRACT

Flavoured tea highly contributes to the value-added exports and thereby to earn high revenue to the country. Over a significant period of time, Sri Lanka tea industry has made progress in expanding the value-added tea products. At present, Sri Lanka's value-added tea exports include instant tea, tea bags, iced tea, flavoured tea, green tea, herbal tea, ready to drink tea and organic tea. The main quality problem found in flavoured tea is melting of flavour granules during the blending, packaging, storage and transportation period. Which will increase the moisture content of the black tea. This will lead to quality failure and the final product is not in compliance with the expected standard. This research focused to Study on the Effect of Temperature and Relative humidity on flavoured tea and Sensory evaluation of three types flavoured Black tea such as Lime, Strawberry and Mandarin flavoured black tea. The best temperature and relative humidity combination were assessed under the three levels of temperature ($30\pm 2^{\circ}\text{C}$, $40\pm 2^{\circ}\text{C}$, $50\pm 2^{\circ}\text{C}$) and four levels of relative humidity ($60\pm 2\%$, $70\pm 2\%$, $80\pm 2\%$, $90\pm 2\%$) altogether twelve treatment combinations and each combination were tested 3 times. Temperature and relative humidity were considered two factors. The research was designed as two factor factorial design experiment. Temperature $30\pm 2^{\circ}\text{C}$ and Relative humidity $60\pm 2\%$ were the best combination to reduce the degree of melting of flavour granules used in black tea. Which will reduce the moisture content of the black tea. This maintains the quality of the final product.

Key words: Flavour granules, Black tea, Temperature, Relative humidity, Moisture content