



## PHYSICOCHEMICAL QUALITY AND STORAGE STABILITY OF RETAIL CAKES AVAILABLE IN TANGAIL CITY, BANGLADESH

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**ABSTRACT**

The study was carried out to assess the physicochemical and storage stability of seven different retail cake samples available in Tangail city, Bangladesh. The proximate composition of the collected cake samples was found significantly different ( $p < 0.05$ ) and was found within the acceptable range of the Bangladesh Standard and Testing Institution (BSTI) standards though most of the cake samples (except S7) had moisture content near to the BSTI borderline range for moisture (~25%). Volume and specific volume of the cake samples ranged from 12.00 to 29.99 cm<sup>3</sup> and 1.64 to 2.93 ml/g respectively. The color measurement of all samples were analyzed for L\*, a\* and b\* values, hue angle, saturation index and whiteness index. Textural properties of the cake samples were analyzed for 7 days of storage where hardness of all samples were increased significantly ( $p < 0.05$ ) and springiness was decreased with storage time. Regarding the storage stability most the cake samples (except S7 containing lowest moisture) showed higher total viable count (TVC) ( $1 \times 10^4$  cfu/g to  $2.71 \times 10^6$  cfu/g) and total fungal count (TFC) (0 cfu/g to  $1.4 \times 10^5$  cfu/g) than the WHO acceptable range for consumption just after the 2<sup>nd</sup> day and 6<sup>th</sup> day of storage respectively.

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