EFFECT OF INCORPORATION OF *KITHUL* FLOUR ON PHYSICAL, MICROBIOLOGICAL AND SENSORY ATTRIBUTES OF PROBIOTIC SET YOGURT

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The present trend of consumers to choose functional food containing natural ingredients. In this study, set yogurts were developed by incorporating four levels (0.25%, 0.5%, 1% and 1.5% (w/v)) of *Kithul* (*Caryota urens*) flour (KF) in order to evaluate its effect on physicochemical, microbiological and sensory properties of set yogurt. Gelatine incorporated yogurt and yogurt without any added ingredient (control) were used to compare the results. The commercial thermophilic yogurt cultures and *Bifidobacterium bifidum* (BB12) were used for yogurt production. Samples were stored at the 4°C for 21 days and physicochemical and microbiological properties were analysed by weekly intervals. Proximate analysis of both extracted KF and yogurts were evaluated initially. Parametric data were statistically analysed using Statistical Analysis System and mean separation was done by using Tukey's test. Sensory data were analysed using the Friedman test in MINITAB. Addition of all levels of KF result in lower syneresis compared to the gelatine incorporated and the control. The incorporation of 4% (w/v) of KF showed significantly higher ($p<0.05$) viable count of BB12 in yogurt during the storage, while the control showed the lowest viable count. Sensory data revealed that yogurt containing 0.25% (w/v) of KF led for a higher rank of appearance and odour while yoghurt with 0.5% (w/v) of KF showed the highest rank for taste, texture and overall acceptability. This study concluded that incorporation of KF has a potential to enhance the stability of yogurts and the growth of probiotic bacteria.

Keywords: *Bifidobacterium bifidum*, *Kithul* flour, Syneresis, Yogurt