

PHYSICOCHEMICAL, SENSORY AND MICROBIAL ASSESSMENT OF NEWLY FORMULATED AND FORTIFIED YOGURT

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<https://doi.org/10.34302/crpfst/2021.13.2.6>

Article history:

Received,
20 February 2020
Accepted,
22 March 2021

Keywords:

Yogurt;
Coconut milk;
Date molasses;
Physicochemical
characteristics;
Sensory attributes;
Microbial properties.

ABSTRACT

Yogurt is an ideal source of gut microbes. Newly formulated six yogurt samples apart from control were prepared using 10 % and 20 % of coconut milk as partial substitute of milk; followed by incorporation of date molasses (10 %, 15 % and 20 %). Samples were analyzed for physicochemical properties such as moisture, ash, fat, protein, total solids (TS), total soluble solids (TSS), pH, titratable acidity, total phenolic contents (TPC) along with microbial and sensory properties. pH, acidity and microbiological characteristics were examined on the 1st and 7th day (refrigeration at 4°C). A significant ($p < 0.05$) decrease in moisture content (ranged- 69.06% to 76.12%) in enriched samples was observed in comparison with control (80.33%). Significant ($p < 0.05$) positive effect of treatment in TS, TSS, fat, protein, ash and TPCs of yogurt samples had been noticed. pH and acidity for each treatment level were not significant ($p < 0.05$) in paired comparison (1st day and 7th day) but the significant effect of treatments in pH and acidity ($p < 0.05$) was marked. The total coliform count was observed as nil in control and experimental yogurt at 1st and 7th day (storage at 4°C). For all developed samples, total viable bacteria count at 7th day was significantly higher than that of at 1st day (p -value < 0.05). However, these results were significantly lower than in controlled sample. Yogurt formulated using 10% coconut milk followed by 20% date molasses revealed significant higher value for taste, flavor and overall acceptability ($p < 0.05$) but color and texture change were not significant ($p < 0.05$).