

**DEVELOPMENT OF A DRINKING YOGHURT BY
INCORPORATING CORN (*Zea mays*) MILK AND
CORN SEEDS**

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Abstract

Drinking yoghurt is fast growing food and beverage category purchased by consumers worldwide. But still it is not well developed sector in Sri Lanka. Value added products for drinking yoghurt is rare in local market. Corn milk incorporated drinking yoghurt would be much healthier and may be attractive to some consumers. Hence, the objectives of this study were to develop corn milk incorporated drinking yoghurt and to assess the consumer acceptability for the presence of corn seeds in the corn milk incorporated drinking yoghurt. Based on sensory properties best corn milk was selected from mature fresh corn seeds, mature boiled corn seeds and germinated corn seeds. The trial and error method was used to develop the basic formula, and next trial was carried out to select most compatible sugar (8%, 9% and 10% w/v) and gelatin (0%, 0.2% and 0.4% w/v) levels for different corn milk percentages (5%, 10%, 15% and 20% w/v). After selecting appropriate combinations of sugar and gelatin levels, next trial was done to select the best corn milk incorporation level by narrowing down the corn milk percentages. Best corn seed particles were selected on the textural basis from the prepared samples. Treatments were arranged in Completely Randomized Design (CRD) with three replicates. Parametric data (pH, acidity, microbial count) were analyzed using SAS. Significant means of treatments were separated using the Least Significant Difference ($P < 0.05$) test (LSD). Sensory data were analyzed by Friedman test using MINITAB and shelf-life of most sensory scored sample were determined by evaluating organoleptic, microbial and chemical properties. Sensory evaluation results showed that treatment 2 (corn milk 8%, sugar 10% and gelatin 0%) had the best quality product. There were significant differences ($p < 0.05$) in taste, mouth feel and overall acceptability among treatments and there was no significant difference ($p > 0.05$) in colour and aroma. The sensory panel has found the preference (taste, aroma, mouth feel, color and overall acceptability) for T4 (without corn seeds) was high. Based on sensory evaluation, microbiological and physico-chemical results shelf life of the final product was around 21 days after that sensory properties had changed although no any microbial contamination occurred. Among three different treatments 8% corn milk, sugar (10%) and gelatin (0%) incorporation levels without corn seed particles was selected. Shelf life of final selected corn milk incorporated drinking yoghurt (0.003% Potassium sorbate) is 21 days at 4°C.