



EFFECT OF STORAGE ON NUTRITIONAL AND SENSORY QUALITIES OF YOGHURT MADE FROM COW MILK

G. Jayapiradha, K. Premakumar, Y. Inthujaa

IPalmyrah Research Institute

Department of Agricultural Chemistry, Faculty of Agriculture, Eastern University, Sri Lanka

yinthujaa@gmail.com

A study was conducted to assess the quality and the shelf life of yoghurt prepared from cow milk. Milk was boiled, sugar and gelatin were added, boiled milk was then cooled down to near 42°C and vanilla flavor was added, inoculated with starter culture at the room temperature, poured into the plastic cups and kept at an incubation temperature for 42°C until complete coagulation. The sample was stored in a refrigerator at about 4-5°C for one month. Yoghurt was subjected to nutritional (Titrable acidity, pH, Moisture, Ash, Lactose, Protein and Fat), microbial (Total Plate Count) and sensory assessment (Colour, Aroma, Taste, Texture and Overall Acceptability) after formulation and during storage. Seven points hedonic scale ranking method was used to evaluate sensory characters. Quality assessments of yoghurts were carried out in one week interval throughout the storage period. Nutritional analysis of fresh yoghurt revealed that, 86.35% moisture, 3.75% lactose, 4.55 pH, 1.35% acidity, 3.65% protein, 3.75% fat and 0.85% minerals. The results of storage studies revealed that, increasing trend in acidity, minerals and protein and decreasing trend in pH, moisture, lactose and fat; from 1.33 to 1.76%, 0.85 to 1.22% and 3.82 to 4.41% respectively and from 4.55 to 3.11, 86.35 to 82.47%, 3.75 to 2.38% and 3.75 to 1.57% respectively. According to Tukey's test, sensory evaluation of fresh yoghurt showed acceptable consumer response for colour, aroma, taste, texture and overall acceptability of 6.40, 6.45, 6.40, 6.20 and 6.40 respectively and sensory evaluation of stored yoghurt showed slight difference in the sensory attributes within the limit. The findings of microbial studies showed no harmful total plate counts were observed in the fresh and stored yoghurt. Nutritional and sensory parameters of yoghurt were significantly ($p < 0.05$) affected during the storage period without any loss in the quality.

Keywords: *Composition of milk, nutritional quality, overall acceptability, shelf life, yoghurt*