EFFECT OF DIFFERENT TYPES OF STABILIZER USE IN YOGHURT PRODUCTION

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ABSTRACT

This study was conducted to investigate nutritional, physical and sensorial properties of different stabilizer added to yoghurt at milk processing unit of Department of Animal Science, Eastern University, Sri Lanka 2017. This experiment was designed as Complete Randomized Design and consisted of five treatments and three replications. Different types of stabilizers were added to the yoghurt such as gelatin, sweet potato, cassava, citrus fiber and corn.

Selected parameters were analyzed as chemical, physical and sensory basis. At day one, it was found that quality attributes such as dry matter, ash and titratable acidity were not sifnificantly ($p > 0.05$) different among the types of yoghurt samples and Fat, Reducing sugar, Total sugar and pH were significantly ($p<0.05$) different among the types of yoghurt samples. Syneresis was high after half an hour and two hours was corn stabilizer treatment. Which showed the highest values (26.91±0.02), (39.92±0.05), respectively. Gelatin stabilizer added yoghurt showed lowest value (25.20±0.10), (35±0.10), respectively. During the storage period, dry matter, ash content, total sugar, reducing sugar, pH, and titratable acidity significantly ($p < 0.05$) different between the yoghurt samples. In case of fat, slight changes were observed. During the storage period there was no significant difference in fat content among treatments. At the end of the storage period corn stabilizer added yoghurt showed highest value of dry matter content (23.56±0.12) and sweet potato

stabilizer added yoghurt showed lowest value of dry matter content (18.4±0.18). At the end of the storage period corn stabilizer added yoghurt showed highest value of ash content (0.80±0.00) and Corn starch added yoghurt and sweet potato starch added yoghurt showed lowest value of Ash content (0.66±0.28) (0.66±0.14), Respectively. During the storage period corn stabilizer added yoghurt showed lowest value of reducing sugar content (2.05±0.04) than other treatments. During the storage period gelatin stabilizer added yoghurt showed lowest value of total sugar content (16.49±0.05) than other treatments. During the storage period citrus fiber stabilizer added yoghurt showed lowest value of pH (4.17±0.03) than other treatments. Titratable acidity of the treatments was increased with storage period. During the storage period citrus fiber stabilizer added yoghurt showed highest value of Titratable acidity (0.78±0.05).

The results of the sensory evaluation showed that organoleptic parameters had influence on overall acceptability of yogurt product. According to the panelist preference of texture colour flavour and overall acceptability they preferred citrus fiber stabilizer added yoghurt.

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