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Analysis of the physico-chemical quality of some consumer preferred plain set yoghurts sold in Matara municipal area of Sri Lanka: A case study.

Wedage L.T.[1], Amarathunga S.M.[2], Hemamali K.K.G.U.[2] and Jayasekara L.A.L.W[1*]

[1]*Department of Mathematics, University of Ruhuna, Matara, Sri Lanka.*
[2]*Department of Botany, University of Ruhuna, Matara, Sri Lanka.*

Researchers often measure several variables on each subject or experimental unit. If the variables are correlated we have to use multivariate techniques to access the key features of the process. This study is an attempt to fill that gap by providing data on evaluation of the changes of physico-chemical parameters of some brands of plain set yoghurt sold in Matara municipal area of Sri Lanka.Samples from five different brands of plain set yoghurt were collected on the basis of consumer preferences for this study. Fifteen samples from each brand were analyzed of their physico-chemical parameters (syneresis effect, pH, titratable acidity, total protein content and calcium concentration) by using three replicates of each sample at 4, 7, 14, 21 and 28 days intervals from production date and compared against local and international standards by using univariate techniques. In the present study,multivariate techniques were applied to those data and found that total protein content of all plain set yoghurt brands were not within the permissible range for local and international standards. Titratable acidity was only in the permissible range of local standards. Physico-chemical parameters except calcium concentration of collected samples were significantly affected by storage period. This study also revealed that there is a variation in quality parameters of plain set yoghurt among different brands. There is a fallacy of applying the univariate techniques and fidelity of applying multivariate techniques for the correlated data. Hence, we have to use multivariate techniques to analyze these data instead of univariate techniques.

Keywords: *plain set yoghurts, physical parameter, chemical parameters, univariate techniques, multivariate techniques*

*Corresponding Author: leslie@maths.ruh.ac.lk