Abstract No: TO 9

Proximate composition of tetra-packed fresh milk in Sri Lankan Market

H. N. Disanayaka[1, 2], Sagarika Ekanayake[2]* and A. A. P. Keerthi[1]

[1] *College of Chemical Sciences, Institute of Chemistry Ceylon, Rajagiriya 10107, Sri Lanka*

[2] *Department of Biochemistry, Faculty of Medical Sciences, University of Sri Jayewardenepura, Nugegoda 10250, Sri Lanka*

**Corresponding author: sagarikae@hotmail.com*

Fresh milk is well-known for its nutritional value and is considered as a healthy food product. In Sri Lanka, fresh milk is marketed as different types and by different manufactures. The objectives of this study were to proximate the composition of different local brands of tetra-packed fresh milk in Sri Lankan market, compare and legitimate the composition as suitable to digest as per the standards. In the study high selling three different local brands (A, B, C) were selected after a market survey. The moisture content, total solid content, ash content, total carbohydrate content, fat content, titratable acidity, total solid not fat (SNF) content and pH were determined (nx5). All the methods used for analyses were either AOAC methods or standard methods. All the values were expressed as mean of five replicates on fresh weight basis and significances were calculated at 95% confidence interval. The average values for moisture and total solid content were 87.82%, 88.37%, 88.03% and 12.18%, 11.63% and 11.97% respectively for A, B and C brands. The average values for ash content were 0.65%, 0.68% and 0.61% respectively for A, B and C brands. Slight variations with respect to the manufacturers were observed for carbohydrate contents (5.50%, 5.53% and 4.01%) and fat contents (3.8%, 3.8% and 4.1%) of A, B and C brands respectively. Titratable acidity which is a measurement of lactic acid in the milk was 0.16%, 0.15% and 0.15% for A, B and C respectively. The samples had a pH of 6.40 and SNF content of 8.4%, 7.8% and 7.9% for A, B and C respectively. Among the parameters studied three brands were not significantly different from each other except for the carbohydrate content. Difference in carbohydrate level may be due to the breed of the cow or due to addition of sugar as flavor enhancers. The moisture content of Sri Lankan fresh milk products was slightly higher than most of other published values. The titratable acidity was within the range of SLSI recommendation. However, the fat content of all three brands was higher than the SLSI value with brand C having the highest fat content. Since SLSI regulations for moisture, ash and carbohydrate content are non-existent these parameters were compared with the literature values and were within the accepted level. Thus, it could be recommended to introduce regulations for these parameters for Sri Lankan milk and milk products for betterment of the fresh milk industry and for the benefit of consumers.

Keywords: Tetra-packed, fresh milk, composition

Abstract No: TO 12

Investigation of Antityrosinase and Antioxidant Activity of *Polyscias balfouriana* L. H. Bailey (Koppa Plant)

E. G. Divyanjalee Suraweera[1] and Kushan C. Weerasiri[2]*

[1] *College of Chemical Sciences, Institute of Chemistry Ceylon, Rajagiriya 10107, Sri Lanka*

[2] *The Open University of Sri Lanka, Nawala, Nugegoda 11222, Sri Lanka*

**Corresponding author: kush.weerasiri@gmail.com*

Tyrosinase is a copper-containing enzyme that catalyses different reactions in melanin synthesis. It is a key enzyme in melanin biosynthesis, involve in determining the colour of mammalian skin and hair. Hence it has gained an important role in the fields of cosmetic, food and pharmaceuticals. *Polyscias balfouriana* L. H. Bailey is a species in the family Araliaceae and native to Australia (Queensland) and Papua New Guinea