

Study on Milk Composition and Adulterants in Kandy District

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Dairy farmers appear to have found four ways to increase their profit margin; (i) dilution (ii) extraction of valuable components, (iii) addition of harmful preservatives (iv) a combination of (i) and (ii) with addition of bulk additives. The adulteration of milk affects the constituents in milk. Hence knowledge on these specific constituents of milk would indeed help to safeguard against adulteration of milk with various adulterants. There are few published literature regarding the milk composition and quality in Kandy district over past two decades, this survey study was carried out around Kandy district to understand milk composition, screen and determine extent of various milk adulterants. Ten chilling centres associated with collecting points were selected for the study. A total of 300 samples were collected from chilling centres. Composition and adulterants (sugar, salt, starch, formalin, neutralizers, urea, and hydrogen peroxide) were analysed following AOAC procedures and laboratory manual at Dairy Technology Laboratory of Veterinary Research Institute, Gannoruwa. Accumulating evidence has shown that average composition of milk at significance ($P < 0.01$), fat percentage (4.4710.057), protein (3.1910.012), lactose (4.1410.019), solid non-fat (8.1410.046) and total solid (12.6110.063). Minimum and maximum ranges were varied considerably in all constituents. Potassium was the highest mineral in milk with average value of $151.4 \pm 6.62 \text{ mg/100ml}$ followed by calcium ($130.9 \pm 4.31 \text{ mg/100ml}$), phosphorus ($90.52 \pm 2.85 \text{ mg/100ml}$), sodium ($55.19 \pm 2.36 \text{ mg/100ml}$) and magnesium ($13.8711.44 \text{ mg/100ml}$). Among the other adulterants only water was found in majority of samples (91.60%) followed by sugar (13.7%) and salt (8.7%).

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