

Abstract

Milk is one of the most important, most complete and essential natural human foods that can be used as a variety of dairy products for different ages. Healthy, high-quality milk is important for both the health of consumers and the economy. One of the important indicators for assessing the quality and health of the milk is the number of somatic cells. The number of somatic cells represents the number of cells in the milk. This indicator is used to identify infections or mastitis. This research was carried out to determine the composition and number of somatic cells in milk from 5 dairy farms (3 industrial and 2 Semi-industrial dairy farms) in Zahedan. Sampling was carried out in 5 months May, June, July, August and September, and the amount of protein, fat, acidity, lactose and somatic cell count per month from each farm were measured. The results showed that there was no significant difference in acidity in sampling months. But milk acidity in semi-industrial dairy farms was higher than industrial dairy farms ($p < 0.05$). The amount of fat in May was the highest and in August it had the lowest amount and its value in industrial dairies was higher than semi-industrial dairies. The highest number of protein was observed in May, and the lowest amount was in August. Industrial dairy farms had higher protein content than semi-industrial dairy farms ($p < 0.01$). The highest amount of lactose was obtained in August. The highest number of somatic cells was obtained in July and August, and it was higher in semi industrial dairy farms than industrial dairy farms ($p < 0.01$). The highest number of somatic cells was obtained in July and August, and it was higher in semi industrial dairy farms than industrial dairy farms ($p < 0.01$). The results of the study showed that increasing the number of somatic cells decreases the amount of fat, protein and acidity.



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