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## Effect of Heating on Chemical Characteristics and Acceptability of Sudanese White Cheese made from Goat Milk

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### Abstract

Goats are an important animal for smallholders in the rural areas of the tropic. However, processing of goat milk never found much attention although goat cheese attains high prices especially in the western countries. In this study, Sudanese white cheese was processed with and without heating raw goat milk and the resulted cheeses were evaluated weekly during storage (8 weeks) for compositional quality and acceptability.

Cheese made from heated and raw milk contained 46.81 % and 46.31 % total solids, 22.13 % and 21.85 % fat, 15.02 % and 13.73 % protein and 2.44 % and 2.25 % ash, respectively. There was a significant ( $p < 0.001$ ) difference in protein content between the cheese made from the heat treated and raw milk. A similar significant ( $p < 0.001$ ) difference was reported for the acidity, which revealed 1.06 % and 1.21 %, respectively. Further, measurements showed highly significant differences ( $p < 0.001$ ) during storage. However, the sensory evaluation of goat cheese revealed general acceptability for both cheeses with better scores for the cheese made from the heated milk. The cheese from the raw milk showed a higher colour score, while its texture was reported as rough and the flavour of goat milk was noticed to be intensive. Moderate salt was reported for both cheeses and the acidity was less at the beginning of the storage and it increase significantly during storage especially in the cheese made from the raw milk.

It is concluded that goat milk processing can be a promising activity for smallholders. There is however an urgent need to focus on improving goat production, processing of the milk and marketing of the products.

**Keywords:** Evaluation, goat milk, heat treatment, Sudanese white cheese