

## ABSTRACT

In Asia the buffalo contributes over one third of the total milk production. Buffalo milk is rich and creamy because it has a higher proportion of fat, protein, lactose and minerals as compared to cow's milk.

In Sri Lanka there is an abundant of buffalo milk that is about 81 million liters / annum, but no one make an attempt to manufacture cheese from buffalo milk at commercial level except curd and yoghurt.

Therefore, the objective of this study was to produce one of the major types of cheeses, Gouda from buffalo milk that will be marketable in Sri Lanka.

After quality testing of raw buffalo milk the general procedure of cheese manufacturing was proceeded with suitable modifications to obtain required quality buffalo milk Gouda cheese. The production process was scaled- up using the cheese vat.

A sensory evaluation test was carried out for the final product with comparing commercially available cow milk cheese to for the consumer acceptability. The cost of the finished product was also calculated.

The cheese made from buffalo milk contain higher levels of fat, protein, lactose, minerals, and vitamins more than cheese made from cow's milk. Therefore, the nutritional value of the buffalo milk cheese is greater than cow milk cheese.

The moisture content of the final product was in acceptable level, 52.7% , which was in the range of normal semi – hard Gouda cheese from 45 – 55%.

The cost evaluation for the production process without ripening and final processing of the cheese is lower than cow milk cheese available in the market. There high nutritive, low cost buffalo milk cheese can be obtained by this manufacturing process.

According to the results of sensory evaluation, this product got similar consumer acceptability for colour and appearance, but aroma, flavour and texture were differed from the cheese made from cow milk, which are already available in the Sri Lankan market. But the prepared sample was an unripened and unprocessed one, which was not to ripened due to the time limitation for the study. If the product allowed ripening more than 2 months, appearance, texture, aroma and flavor will develop same as commercially available cheese, could be get more accurate results for the sensory evaluation process.

**Finally we can conclude that the preparation of cheese can be done using buffalo milk and the products could be obtained very much similar to the product available at the market after the ripening process.**