



Chemical composition of pineapple *chhana* whey beverage

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ABSTRACT

The *chhana* whey beverage was prepared by using different levels of pineapple juice @ 0, 10, 20 and 30 per cent with 13 per cent sugar. The overall acceptability of *chhana* whey beverage prepared with 20 per cent pineapple juice level was significantly superior and more acceptable than other levels of pineapple juice. The chemical composition showed that in term of percentage, fat as well as moisture were decreased while, protein, total sugar, total solids, ash, titratable acidity were increased with increasing levels of pineapple juice in *chhana* whey beverage.

KEY WORDS : *Chhana*, Whey, Pineapple, Beverage

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INTRODUCTION

Chhana is acid coagulated milk product produced as a base for *Sandesh*, *Rasogolla*, *Chhana Podo*, *Chhana murki*, etc. Therefore, large quantity of *chhana* whey would be available in dairy industries. It has been estimated that the whey production in India from organized sector was about 70 million litres (Bambha *et al.*, 1972). Whey is a serious source of environmental pollution in Indian dairy industries. Whey contains over half of the milk solids. *Chhana* whey contains most of the lactose, water soluble vitamins originally present in milk with little quantity of fat and proteins. Its Biological Oxygen Demand (BOD) is about 30,000 – 60,000 ppm which is on an average 200 times more as compared to domestic sewage (Singh *et al.*, 1994). Due to presence of high organic matter content in whey, its disposal process is a serious problem. Therefore, many dairy industries treat the whey before disposal which is very expensive (Gandhi, 1984).

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No proper attempts have so far been made particularly on small scale to exploit this byproduct. Considerable economic benefit can also be secured from prompt utilization of whey. By adding different fruit juices or pulps in whey, it can be converted into value added product. Thus, converting the whey into whey beverage will increase the profit of dairy industries. From the nutritional point of view, pineapple fruit is good source of vitamin A and B and is rich in vitamin C and calcium. It also contains phosphorus, iron, enzymes and bromine. The 3-methylpropionate esters comprise a significant fraction of the pineapple volatile components and have been adopted for use in pineapple flavours. Based on nutritional qualities of whey and pineapple, the present study was undertaken on production of pineapple whey beverage.

MATERIALS AND METHODS

Good quality fresh cow milk was procured and then strained through muslin cloth. The fat content in milk ranged from 4.1 – 4.4 per cent. The milk was transferred to stainless steel vessel and heated to about 90°C. The vessel was then removed from the fire and cooled to 72°C. The coagulant *i.e.* citric acid solution @ 1.5 per cent was added slowly till complete coagulation of milk. Then the mass was poured over stretched piece of clean muslin cloth over another vessel to drain the whey. The clear drained whey was collected in the vessel. The yellowish green whey was then used for the preparation of whey