



Studies on sensory quality of whey potato fermented product

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ABSTRACT: Whey a by product generated during manufacturing of *Paneer*, *Chakka*, *Channa* can be efficiently utilized for the preparation of whey fermented product. Among the whey system the whey potato fermented product prepared from *Channa* whey (T_2) was still more acceptable as compared to other treatment studied *i.e.* T_0 (control) T_1 (*Paneer* whey) T_3 (*Chakka* whey) T_4 (Equal quantity of *Paneer* + *Channa* + *Chakka* whey + Potato + Sugar). The whey potato fermented products developed in the present studies were sensorily acceptable and comparable with *Lassi* (traditional product) without any hesitation.

KEY WORDS : Whey, Sensory evaluation, Potato, *Lassi*

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INTRODUCTION

Whey is the watery part of milk that remains after separation of curd / coagulated products that results from acid or proteolytic enzyme mediated co-agulation of milk. It is the major by-product of dairy industry, manufacturing products like *Paneer*, *Channa*, *Chakka*, Cheese, Casein, etc. In the manufacturing of these products, about 10-20 per cent portion of milk is recovered as the desired end product and remaining 80-90 per cent liquid portion is the whey. Whey is considered as an important food medium. It is rich source of carbohydrates (lactose 4-5%), minerals 0.60 per cent (Ca, P, Na, Mg etc.) and whey protein (0.3-1%). Lactose, a unique sugar from the milk has distinct role as food additives as well as pharmaceutical is cheaply separated from whey. The lactose encourages utilization of calcium, sodium, potassium, from food. Lactose used as drug carrier in pharmaceutical application and also food component in infant formulae. Despite significant gains, more than 50 per cent of whey is being thrown away as waste in gutter, through which more than 50 per cent of milk solid losses as waste.

Current world production of whey is estimated at about 165 MT (Anonymous, 2010*). The cheese whey accounts for nearly 95 per cent of total whey. Considering huge production and disposal problem of whey, the efforts were made through present investigation to assess the possibility of utilization of whey for the manufacture of whey potato fermented product.

MATERIALS AND METHODS

Plain *Lassi* was prepared as per the procedure described by Matkar (2010). The composite milk was taken in a stainless steel container. It was preheated to 35°C, filtered and heat treated at 85°C for 10 minutes. Milk was cooled to room temperature. Then active *Dahi* starter culture (LF-40) was inoculated under sanitary conditions of @ 2 per cent and mixed thoroughly. The inoculated milk was incubated at 30±1°C temperature for 12 hrs. The plain *Lassi* was prepared by breaking coagulum, addition of sugar (8%), water (10%) and uniform mixing to have desired consistency (Fig. A).

Technique for preparation of whey potato fermented product:

The whey was obtained by manufacturing of *Panner*, *Channa* and *Chakka*. The pH of whey systems were adjusted at par of fresh whole milk pH (6.4) by using 2%, aqueous solution of sodium bicarbonate (NaHCO_3). Simultaneously, boiled potato paste was prepared. The total solids of whey potato systems were adjusted at par of milk solids (12.69%) by adding nearly 30g boiled potato paste per 100 ml of whey and blended properly. The blended mixture was heated at 85°C for

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