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RESEARCH PAPER

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Composition and economics of chhana whey based tomato soup

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ABSTRACT

An attempt was made to study the chemical composition and cost structure of tomato soup prepared from tomato pulp blended with different levels of chhana whey. Proximate analysis of finished product indicated the increase trend of total solids and proteins as the proportion of chhana whey increased in the tomato soup. It was also observed that as the proportion of tomato pulp in the soup increased, the energy value also increased. The chhana whey based tomato pulp prepared from the combination of 25 parts tomato pulp and 75 parts chhana whey (T_3) was most acceptable. The cost of production of tomato pulp for treatment for treatment T_0, T_1, T_2, T_3 and T_4 was Rs 11.53, 11.38, 12.37, 13.37 and 14.37, respectively. The cost of production for whey based tomato soup in laboratory was comparatively much less than market cost. By utilizing whey in the preparation of tomato soup, essential nutrients can be incorporated in food products.

KEY WORDS : Chhana, Cost of production, Tomato soup, Whey

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INTRODUCTION

India has emerged as the leading milk producer in the world. With this significant progress, large quantities of milk are being utilized for the production of cheese, *paneer*, chhana and casein, which are resulting in enormous quantities of whey as a byproduct.

Dairy technologists are engaged to utilize each and every constituent of milk properly. Whey constitutes about 20 per cent total milk proteins and contains most of water soluble vitamins, lactose and minerals (Rao and Ganeshkumar, 1999). Although whey has excellent nutritional value, proper solutions for their utilization have not been worked out and hence are being drained. There is increasing awareness all over the world on potential utilization of whey, not only because of its nutritive value, but also due to pollution prevention regulations (Jayaprakasha and Brueckner, 1999). The valuable nutrients of whey can be utilized in preparation tomato of whey soup, thus increasing the nutritive value of soup.

Tomato (*Lycopersicon esculentum*) is one of most popular and widely grown vegetable crops in world. During flush season tomato is available in abundance. Ripe tomato fruit is consumed fresh and utilized in the manufacture of range of processed products such as puree, paste, powder, ketchup, sauce, soup and canned whole fruits. A large variety of soups such as tomato, onion and mushroom are liked very much by different aged group population. Soups are used as appetizers before lunch or dinners. Attempt, therefore, was made to study the chemical composition and cost structure of chhana whey based soup.

MATERIALS AND METHODS

Cow milk required for study was obtained from C.C.B.P., M.A.U., Parbhani. The chhana whey was obtained as per the procedure described by De (1980). The tomato pulp was prepared as per the procedure described by Sangu (2004). The tomato pulp and whey was mixed as per the treatment details :

T_0 - 20 parts tomato pulp + 80 parts water
T_1 - 15 parts tomato pulp + 85 parts whey
T_2 - 20 parts tomato pulp + 80 parts whey
T_3 - 25 parts tomato pulp + 75 parts whey
T_4 - 30 parts tomato pulp + 70 parts whey

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