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Comparative Study of Developed Tomato Soup with Market Soup

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A B S T R A C T

Streetfood has popular in Indian market and consumed as convenient to eat with reasonable price but sold open dirt areas that found unhygienic, not free from microbial contamination and having low nutritional quality. The present investigation was carried out to develop vegetable tomato soup and compare with street tomato soups and assess their sensory quality and microbial study. Microbial parameters were used to affect the shelf life of the products. The developed tomato soups were acceptable in comparison to Street tomato soups. Hence, low cost nutritious developed tomato soup can be acceptable with good storage stability.

Introduction

Vegetables have important supplementary food crops which is an essential part of human diet. Tomato has second position in production in the world rank first the processed food. Tomatoes can be processed into different forms like ketchup, puree, juices, salads, pickles and soup etc. Tomato is consumed daily intake as vegetable and huge importance in human health due to its essential vitamins, antioxidant such as lycopene and minerals. Lycopene whose contain in tomatoes has many health benefits reducing risk of heart diseases and cancer etc. In India annual wastage of fruits and vegetables are Rs. 2500 crores. Processing is the good option to stop wastage of vegetables. Soups are mostly consumed for health and good source of nutrition for patients who's not intake of solid foods due to several obstructive or pathological problems. Soups are considered as the best source of protective compounds gives health benefits and to avoid the deficiency of nutrients as these contain vegetables. Now a day, focused on the development of ready to eat products with health claims on the label, which can result in value-added products for the producer companies. Foods are prepared and sold on

open places like streets, festival areas and consumed by the consumers on the way known as street food.

These street foods are highly demandable due to its their taste, easily available, low cost Barro *et al.*, (2002), Buscemi *et al.*, (2011) Kok and Balkaran, (2014). Consumer demands have new innovations in the food product development. The term 'instant food' means simple, fast and convenient food which is easy and fast to prepare besides being hygienic, free from microbial contamination and also convenient to eat.

Materials and Methods

Procurement of raw materials

Raw ingredients were procured in the local market of Kanpur, U.P and take two street soup randomly select in Kanpur city.

Processing of Developed Product

Simple techniques were used for the processing of tomato soup and other ingredients. Vegetable tomato, ginger, coriander leaves were sorted and washed under running water to remove damaged part, dust particles and other impurities. They were cut in small pieces, boil after boiling convert to puree added spice salt and heat 15 min. at the end to collect in sterile bottle.

Sensory Evaluation

Developed tomato soup were evaluated for sensory characteristics and comparison with street tomato soup. Sensory quality like colour, flavour, texture, taste and overall acceptability of products was evaluated by using 9 point hedonic. The data was statistically analysed. The product different ratio of soups was evaluated by panel members according to the flavour, texture, taste, colour and overall appearance on the basic of Hedonic rating scale.

Microbial Study

Microbial studies of tomato soup and street tomato soups were evaluated like a T.P.C, Coliform, yeast & moulds, *Staphylococci* and *Salmonella* & Shigella.

Statistical analysis

Data was analysed statistically using standard deviation technique.

Results and Discussion

Sensory Evaluation

Table 1 showed the result of appearance of tomato soup was 9.2. It was higher than street soup. The taste of developed tomato soup was 7.5, 6.6 street tomato soup-1 and 5.8street tomato soup-2Similarly, Butt *et al.*, (2004). The flavour was also higher in developed tomato soup. The texture and colour was good of developed tomato soup due to its colour of ripe tomato and no preservatives & no colour were added in developed tomato soups then gives good taste. Fg:1 showed the overall acceptability of mean score was higher of tomato soup who developed in laboratory in comparison to street tomato soup.

Storage Study

Table:2 showed the storage study the developed tomato soup whose prepared by the laboratory and street tomato soup. The total t.p.c showed lower c.f.u count in developed soup comparatively to street tomato soup. Staphylococci, Yeast & moulds, and coliform was also lower in developed soup. Salmonella and shigella both were not found in developed tomato soup and street tomato soup. These are pathogenic bacteria and create food infection.

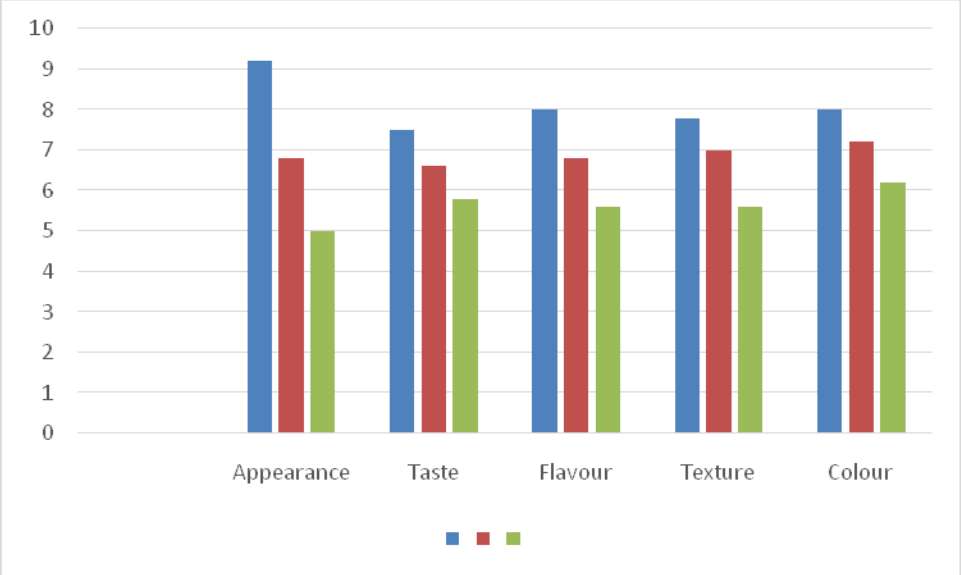
Table.1 Sensory Evaluation of the developed tomato soup with street tomato soup

Treatments	Attributes					
	Appearance	Taste	Flavour	Texture	Colour	Over all Acceptability
Developed Tomato Soup	9.2	7.5	8.0	7.8	8.0	7.8
Street Tomato Soup-1	6.8	6.6	6.8	7.0	7.2	6.6
Street Tomato Soup-2	5.0	5.8	5.6	5.6	6.2	5.2
CD at 0.05	2.10	0.85	1.2	1.11	0.90	1.30

Table.2 Comparative Microbial Study of developed tomato soup with street tomato soup

Treatment	T.P.C C.F.U gm×10^5	Staphylococci Count /gm	Yeast &Moulds gm×10^2	Coliform gm×10^2	Salmonella-Shigella
Developed Tomato Soup	5.00	34.00	28.00	21.00	(N.V)
Street Tomato Soup-1	5.75	90.33	72.00	61.00	(N.V)
Street Tomato Soup-2	5.90	105.00	89.00	68.00	(N.V)

Fig.1 Sensory Evaluation of the developed tomato soup with street tomato soup



It is concluded that it is safer to consume home prepared soups in comparison to street tomato soups and developed tomato soups has found free from various health hazards.

Developed tomato soup has more acceptable and less microbial contamination than street soups. Developed tomato soup has a suitable source of nutrients and may deliver a significant part of recommended daily nutrient and vegetable intake.

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