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Development of nutritional tomato wadi

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Tomato wadi (Toffee) was prepared at different treatments T_1 (Tomato pulp 50 g + fresh coconut 50 g), T_2 (Tomato pulp 60 g + fresh coconut 40 g) and T_3 (Tomato pulp 70 g + fresh coconut 30 g) with fixed quantity of sugar (70 g) in each treatment. The nutritional tomato wadi was developed by taking fresh and matured tomato fruit and blanched at 80°C for 10-15 min. Then tomato pulp was extracted and added in sugar and other ingredients. The whole mixture was mixed well and cooked upto final concentration of 75^0 Brix. Through adequate cooking of mass it is rolled into sheets of 4-6 mm thickness, cut into uniformly sized pieces and packed into polythene bags. According to chemical analysis and sensory analysis carried out by panel, the 70% tomato pulp and 30% fresh coconut incorporated waTomato wadi (Toffee) was prepared at different treatments T_1 (Tomato Pulp 50 g + fresh coconut 50 g), T_2 (Tomato Pulp 60 g + fresh coconut 40 g) and T_3 (Tomato pulp 70 g + fresh coconut 30 g) with fixed quantity of sugar (70 g) in each treatment. The nutritional tomato wadi was developed by taking fresh and matured tomato fruit and blanched at 80°C for 10-15 min. Then tomato pulp is extracted and adds in sugar and other ingredients. The whole mixture was mixed well and cooked up to a final concentration of 75^0 Brix. Through adequate cooking of mass it is rolled into sheets of 4-6 mm thickness, cut into uniformly sized pieces and packed into polythene bags. According to chemical analysis and sensory analysis carried out by panel, the 70% tomato pulp and 30% fresh coconut incorporated wadi is more acceptable. Due to its taste and flavour, it enjoys wide popularity and acceptance among the children.

Key Words : Tomato wadi, Tomato pulp, Fresh coconut, Blanching, Cooling, Polythene bags

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INTRODUCTION

Wadi (Toffee) is the chewable confectionery items containing sugar, fruit pulp as the, major ingredients and spices, vegetable fat as a minor ingredient. This popularity especially among children could be put to proper use by increasing the nutritive value of wadi in terms of proteins, minerals and vitamins. Incorporation of fruit pulp in wadi contributes towards improving the vitamin and mineral content of the wadi. Additionally a variety of flavours can be obtained with fresh fruit pulp in wadi.

Tomato is said to be the native of tropical America (Thompson and Kelly, 1957), its original home being probably in Peru or Mexico. Till 1695, the word tomato was not used and is said to be derived from the Aztec "xitomate" or "Xitotomate". It is supposed to have been eaten by the wild tribes of Mexico. From Tropical America it spread to other parts of the world in the 16 th century. The earliest available literature on tomato was by Mattiolus in Italy in 1544.

Tomatoes contribute to a healthy and well balanced diet. They are rich in minerals, vitamin, essential amino acid, sugar and dietary fibers. Tomato contains most vitamin B and C, Iron and phosphorus in abundance. Tomato fruits are consumed fresh in salad or cooked in sauce, soup and in meat or fish dishes. They can be processed into purees, juice and ketchup. Canned and dried tomatoes are economically important as processed products.

Yellow tomatoes have higher vitamin A content than red tomatoes but red tomatoes contain lycopene, and antioxidant that may contribute to protection against carcinogenic substances.

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content than Red tomatoes but red tomatoes contain lycopene, and antioxidant that may contribute to protection against carcinogenic substances.

METHODOLOGY

The present investigation on development of nutritional tomato wadi" was undertaken at the Department of Food Technology, Kharawate-Dahiwali, Tal-Chiplun, Dist. - Ratnagiri during 2010-2011.

Development of nutritional tomato wadi:

Preparation of tomato pulp:

Fresh and matured fruits were selected and were washed in water to remove undesirable foreign matter adhering to the surface. These whole fruits were then blanched in hot water at 80°c for 10-15 min. to arrest the activity of browning enzymes. The fruits were then manually peeled. The seed present in the central portion was scooped out with a knife or a spoon. The peripheral pulpy portion free from seeds was cut into small bits and pulped in a mixer grinder. The pulp containing embedded seeds was either scrubbed on a wire mesh screen to remove the seeds or lightly ground in a mixer grinder or screened through a finely woven muslin cloth to remove the seed grits. Thus, maximum amount of pulp was recovered from the whole fruits.

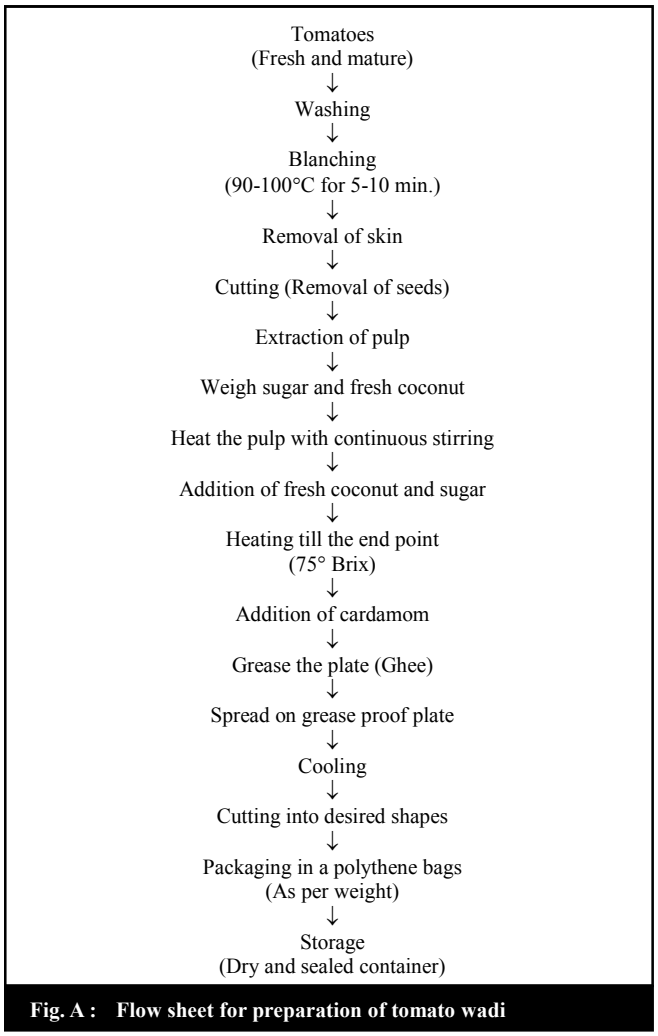

Fig. A : Flow sheet for preparation of tomato wadi

Preparation of tomato wadi:

The extracted pulp was heated to a concentration of about 1/3rd of its original volume. Sugar was then added and after proper heating fresh coconut was added. The whole mixture was mixed well and cooked up to a final concentration of 75°Brix. This cooked material was then spread on previously vanaspati greased stainless steel plates and allowed for surface cooling. After adequate cooling, the mass was properly kneaded to expose the hot interior for cooling. Through adequate cooling the mass was rolled into sheets of 4-6 mm thickness, cut into uniformly sized pieces and packed into polythene bags.

Recipe used:

Based upon the recipes derived from the earlier attempts to prepare wadi, the following recipe was used as tentative to prepare tomato wadi.

Tomato pulp	: Known quantity
Sugar	: 70% by weight of pulp
Fresh coconut	: 40% by weight of pulp
Cardamom	: 1-2% by weight of pulp

Treatments:

Ingredients	Control (T_0)	Treatment (T_1)	Treatment (T_2)	Treatment (T_3)
Tomato pulp	-	50 g	60 g	70 g
Sugar	70 g	70 g	70 g	70 g
Fresh coconut	100 g	50 g	40 g	30 g
Cardamom	1 g	1 g	1 g	1 g

OBSERVATIONS AND ASSESSMENT

On the sensory and chemical qualities of tomato wadi has been studied in the present investigation was carried out.

The wadi was prepared by using the tomato. The prepared tomato wadi had good texture, colour and taste. In the prepared tomato wadi, the lycopene was found to be higher.

It can be concluded that the prepared tomato wadi was

Table 1 : Chemical analysis of tomato wadi

Sr. No.	Parameters	Result (%)
1.	Acidity	0.3
2.	Moisture content	10
3.	Total soluble solid	75
4.	Carbohydrate	58
5.	Ash	0.80

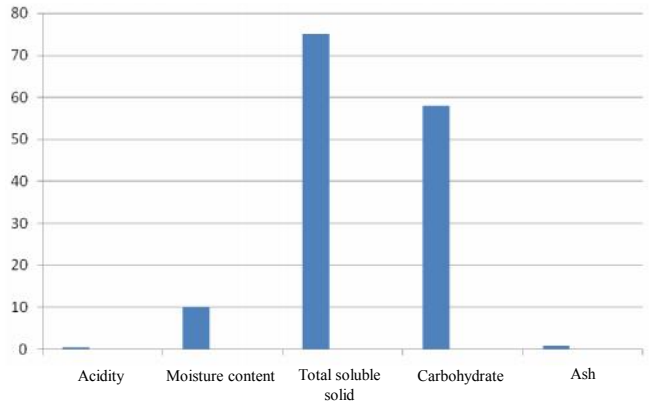

Fig. 1 : Cchemical analysis of tomato wadi

Fig. 2 : Tomato wadi

nutritionally valuable due to the large amount of minerals and vitamins present in the fruit itself. So, it had high nutritional value it is majorly accepted by the consumer.

The data present in Table 1 above stated that percent for acidity, moisture content, TSS, carbohydrate and ash content were found to be 0.3, 10, 75, 58 and 0.80 (Fig. 1).Therefore, it was accepted in the local market.

Conclusion:

From the above investigation result, it was concluded that the tomato wadi was prepared from different levels of minerals and vitamins content. Tomato wadi having satisfactory acceptable taste, texture and colour without affects on aroma and flavour can be prepared with incorporation of 70 % tomato pulp and 30% fresh coconut is the best one.

So, over all acceptability of the 70% tomato pulp and 30% fresh coconut incorporated in wadi are much better. This tomato wadi was sold in local market at reasonable price as per given quantity.

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