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Quality and organoleptic evaluation of amla pickle

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ABSTRACT

Experiment was designed to develop a recipe of pickle from amla fruit. Amla fruit had TSS of 11.2^{0}B, acidity of 2.34 per cent, pH of 2.7, ascorbic acid content of 436.6 mg/100 g, total sugars of 6.98 per cent, reducing sugars of 5.17 per cent, non-reducing sugars of 1.81 per cent, crude protein content of 0.58 g/100 g, crude fibre content of 3.15 g/100g, tannins content of 3.25 per cent and nitrogen content of 0.092 per cent. The prepared pickle was subjected to quality evaluation soon after preparation and at 3 months of storage. Throughout the storage period all the recipes of pickle were free from shriveling, softening, scum formation and colour changes. There was slight bitterness in all the samples when prepared, but at 90 days of storage no bitterness was observed. Product was free from spoilage during storage. Mixed oil pickle prepared by using amla fruit (35%), mango ginger (10%), green chilli (10%), ginger (10%), salt (12%), and other ingredients like chilli powder (8%), fenugreek powder (2%), turmeric powder (1%), coriander powder (5%), roasted mustard (4%) and gingily oil (25%) was rated the best with highest scores for organoleptic quality parameters like appearance, aroma and flavour, taste and overall acceptability.

Key words : Amla, Pickle, RecipEs, Organolyptic evaluation

The Amla ('Aonla') *(Phyllanthus emblica* or *Emblica officinalis* Gaertn), also known as Indian Gooseberry is a minor sub-tropical deciduous tree belonging to the family Euphorbiaceae (Kalra, 1988). Amla fruit contains 89 to 94% pulp, 0.8 to 2% fibre, 10 to 14% total soluble solids, 1.4 to 2.4% acidity, 700 to 900 mg vitamin C /100g pulp, 2.4 to 3.1% pectin and 2 to 3% phenols (Singh *et al*., 1993). Amla has been highly extolled for its medicinal and nutritional properties. Fruits during their peak harvesting season go as a waste due to limited usage. Therefore, development of value added products could find national and international markets and have great importance in alleviating malnutrition among rural population in addition to several health benefits. Hence, it is proposed to standardize recipes for development of commonly used products such as pickle. This would result in emerging suitable technology for utilization by the processing industries.

MATERIALS AND METHODS

The present experiment was conducted in Division of Horticulture, University of Agricultural Sciences, G.K.V.K., Bangalore (Karnataka). The amla fruits were collected from forest localities of Karnataka. Well matured fruits of uniform size and free from bruises were used for the experiment. Physical parameters and proximate composition of amla fruits were estimated (Table 1).

Table 1 : Physical parameters of Amla Fruits

Sr. No	Parameters	Observation
1.	Colour	Light greenish yellow
2.	Diameter	2.86 cm
3.	Height	2.21 cm
4.	Fruit weight	14.8g
5.	Seed weight	1.4g
6.	Moisture	82.1%

The pH of the fruits was measured using Toshniwal digital pH meter (Model DI 707). Total soluble solids content was recorded using Erma-hand refractometer. Titrable acidity (as citric acid) and ascorbic acid were estimated by methods suggested by Ranganna (1977). Total and reducing sugars were estimated by Shaffer-Somogyi method (Somogyi, 1945). Crude protein was calculated by multiplying per cent nitrogen content with the factor 6.25. Per cent nitrogen content was determined by Micro-Kjeldhal method described by (A.O.A.C., 1970). Crude fibre was expressed as grams per 100 g of sample (A.O.A.C., 1970). Tannin content was calculated by comparing the absorbance to that of standard curve (Ranganna, 1977).

Fruits were washed with tap water and cut into pieces with stainless steel knife. These pieces were immersed in the brine solution containing 10 per cent salt and 200 ppm of calcium chloride for five days.