

## DEVELOPMENT AND SENSORY EVALUATION OF “PRAPANAK” (GREEN MANGO SHERBET) AN EXCELLENT REFRESHING DRINK

Avdhoot Pandit\* Guided by- Prof. Dr. Abhijit Joshi and Asst. Prof. Supriya Joshi

Student of MSc Nutrition and Food Science, Department of Ayurveda, Tilak Maharashtra Vidyapeeth, Mukundnagar, Pune- 37.

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\*Corresponding Author

Avdhoot Pandit

Student of MSc Nutrition  
and Food Science,

Department of Ayurveda,

Tilak Maharashtra

Vidyapeeth,

Mukundnagar, Pune- 37.

### ABSTRACT

The research was undertaken to carry out a pilot study for developing this product for the community. The recipe “PRAPANAK” (Green Mango Sherbet) was selected from the *Ayurvedic* text as (*Bhojankutuhala*) with respect to its known benefits as it imparts taste, maintains equilibrium state of *Doshas*, confers strength and satiates the senses. The intention was to develop an innovative, nutritive, wholesome and traditional food product that can be used as an excellent refreshing drink during summer season. The product was prepared by taking in consideration the amount of ingredients and procedure mentioned in the *Ayurvedic* literature with slight changes as per practical application, further the product was analysed by sensory evaluation. The product exhibited an excellent overall acceptability with respect to its tangy flavour, sweet and sour taste, light yellow colour and was ranked excellent for its aroma and appearance. This product can benefit especially the sports persons due to its strengthening and refreshing effect over the body. In future the product can be analysed by microbial and proximate analysis.

**KEYWORDS:** PRAPANAK, Raw Mango, Green Mango Sherbet, *Panaka*, Refreshing Drink.

### INTRODUCTION

Ayurveda is an ancient medical science which helps to maintain the healthy lifestyle and treat the disease. It clearly emphasises the relationship between the food you take and the state of the body and mind. The word *Panaka* is defined as an appetizer which is beneficial in various treatments, like urine infection, piles, diabetes, for cooling, soothing and strengthening effects, also imparts taste, maintains the equilibrium state of *Tri-Doshas*, stimulates digestive fire, improves digestion, mitigates thirst and provides nourishment to the body.<sup>[1]</sup> *Prapanak* is the recipe made from fresh Green mangos (*Mangifera Indica*) which is also called as “*Aam Panha*” or “*Green Mango Sherbat*”. In ayurvedic terms it is called as “*Prapanak*”. The drink is very delicious and gives refreshing effect over the body. It is served as chilled beverage and garnished with mint leaves. Raw mangoes are the rich source of pectin, which gradually diminishes after the formation of stone. It has been well documented that mango fruits are an important source of micronutrients, vitamins and other phytochemicals. Moreover, mango fruits provide energy, dietary fibre, carbohydrates, proteins, fats and phenolic compounds, which are vital to normal human growth, development and health.<sup>[2]</sup> Raw mango is sour in taste because of the presence of oxalic acid, citric acid, and malic acid.

The product *Prapanak* is made by using Raw mangoes,

common salt, camphor, black pepper, sugar and cold water which quenches thirst and prevents excessive loss of sodium chloride and iron due to sweating. Green Mango Sherbat in India renowned for its heat resistant properties. It is consumed as a tasty and healthy beverage to fight against the intense Indian summer heat. It is mainly found in the Indian subcontinent.

Ingredients as camphor, candied sugar, black pepper, salt, also has great importance. Candied Sugar is very sweet, good for eyes, treats vomiting and cures skin disorders, wounds, vitiation of *kapha*, dyspnoea, hiccups and vitiations of pitta and blood.<sup>[1]</sup> It has proven beneficial outcomes for weight gain, relieving sour throat, imparting soothing effect post meal and provides an instant boost in energy.<sup>[3]</sup> Black pepper is a natural antioxidant. It acts as anti-inflammatory, anticancer, antiperiodic and antipyretic. It can help to lower body's cholesterol levels. It contains mainly vitamins A, C, E, K, niacin and  $\beta$ -carotene; and traces of minerals such as iron, calcium, phosphorus. The amino acids contained by black pepper, works for enhancing the bioavailability of nutrients. These acids constituents can be used in antimicrobial, antibacterial applications. All these values of black pepper make it a promising natural health promoting medicine as well as nutrient rich commodity.<sup>[4]</sup> Camphor, a natural product derived from the wood of the tree *Cinnamomum camphora*, has a long history of use as antiseptic, antipruritic and has

antispasmodic action.<sup>[5]</sup> According to *Ayurveda* It is cold in potency, bitter and pungent, treats vitiation of kapha and bleeding disorders and is useful in curing thirst, burning sensation, disorders of the throat and pain in the eyes.<sup>[1]</sup>

## MATERIALS AND METHODS

**Raw materials procurement-** All the raw materials required for the preparation of “*Prapanak*” are selected of Good Quality and these raw materials are procured from Pune local stock market. The materials are as-Medium Sized Raw Mango (*Apakwa Amraphala*), Candied Sugar Powder (*Sita Sharkara*), Black pepper (*Maricha*), Edible Camphor (*Karpoora*), Cold Water (*Sita Jala*), Mint Leaves- as per required.<sup>[1]</sup> (Please refer Table no-1)

**Methodology-** The product was prepared as per the reference given in the *Bhojankutuhalam* with some modifications in the formula. The materials were weighed as per the requirement. Raw mango was boiled in water till it softens and mashed properly with the help of bare hands and grinded in the mixer for uniform semi-solid consistency. Then 1 Tbsp of Candied sugar, 1 pinch of camphor powder, 1 pinch of black pepper powder and 200 ml of cold water was added and mixed properly to get uniform homogenous mixture and served chilled. Mint leaves are used for garnishing.<sup>[1]</sup> Further quality of

the food product was evaluated by sensory analysis.

**Table 1: Experimental Trials Details.**

Ingredients	Proportion	Units (gm/ml)
Raw Mango	1 Medium sized	150 gm
Candied Sugar	1 Table spoon	14.3 gm
Edible Camphor	1 Pinch	0.355625 gm
Black Pepper	1 Pinch	0.355625 gm
Cold Water	1 Glass	200 ml

### Sensory Analysis of *Prapanak*

Sensory evaluation was carried out by 5 semi-trained panelists on five point Hedonic scale in which each one has its own observation and remarks about the product. The product was scored for its characteristics like appearance, aroma, taste and overall acceptability on the scale. The product was ranked excellent for its Aroma, Appearance and Flavour. Please refer the sample chart of 5 point hedonic scale on Table no- 2.

### Five point Hedonic scale

Tray No-

Name of the Product- Name of the Panellist

In front of you is one sample. Taste the given sample and put a “Tick mark” on how much you like or dislike each of the characteristics. You can taste the sample more than once.

**Table 2: Sample of 5 point Hedonic Scale.**

Scores	Sensory Attributes				
	Appearance	Aroma	Taste/ Mouthfeel	Flavour	Overall acceptability
Like a Lot					
Like a Little					
Neither Like Nor Dislike					
Dislike a Little					
Dislike a Lot					

\**Like a Lot- 5 marks, Like a Little- 4 marks, Neither Like Nor Dislike- 3 marks, Dislike a Little- 2 marks and Dislike a Lot- 1 mark.*

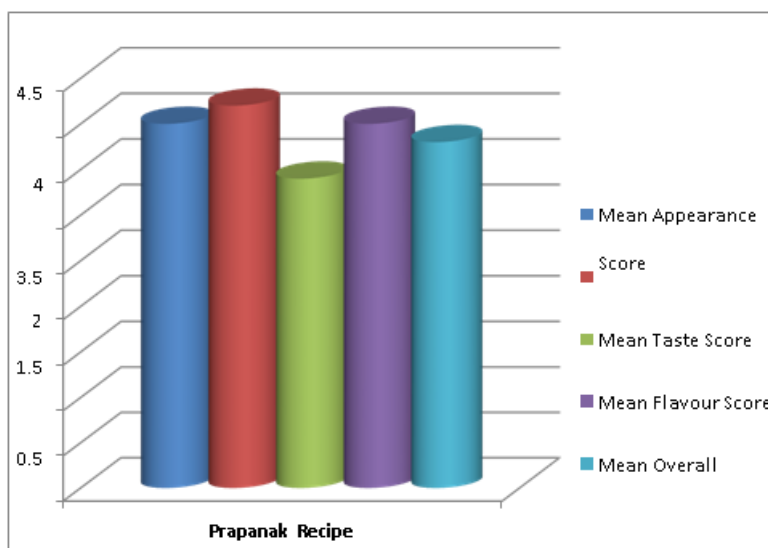
## RESULTS AND DISCUSSION

Product development was carried out as per the resources, materials, references found in the *Bhojankutuhala*. All ingredients that were used are of good quality and purchased from local stock market. Among sensory analysis the product “*PRAPANAK*” was ranked excellent for its Aroma, Appearance and Flavour. The product exhibited a fair result with respect to its taste as per the reference given in the *Bhojankutuhala*. The end product was exhibited slight yellow colour and has uniform consistency with sweet and sour taste, slightly pungent flavour, pleasant aroma and has good physical appearance. At last the product exhibited good overall acceptability with respect to sensory analysis. In the future this product can benefit all the people at large but especially more to the sports community due to its therapeutic benefits as specified in the Ayurvedic text.

This can be used as seasonal drink during summer season and if need be, it can be made available throughout the year by using natural preservatives to enhance the shelf life and maintain the quality of the product. Mango is a tropical and well known fruit so the drink can have global acceptance. And this can help our local to global initiative by patenting and promoting our indigenous drink. Please refer table 3 for mean score by panelists on five hedonic scale, graph no 1 shows mean values of the product and figure no 1 Shows the prepared final product.

**Table 3: Mean Score by Panelists on Hedonic Scale of *Prapanak*.**

Sr. No	Appearance	Aroma	Taste/ Mouth feel	Flavour	Overall acceptability
1.	4	5	5	5	5
2.	4	4	3	3	4
3.	4	4	2	4	2
4.	4	4	4	4	4
5.	4	4	3	4	4
<b>Total</b>	20	21	17	20	19
<b>Mean</b>	4	4.2	3.4	4	3.8



**Graph 1: Mean Values of *Prapanak***



**Figure 1: Final Product *Prapanak*.**

**CONCLUSION**

The product was prepared successfully as per mentioned in the *Ayurvedic* literature (*Bhojankutuhala*). The product exhibited excellent overall acceptability with respect to its tangy flavour, light yellow colour, sweet and sour taste and has pleasant aroma. This product can be recommended as excellent refreshing drink and can be considered as tonic especially for the sports community as marathon runners due to excessive sweating during summer season. This will benefit by pacifying thirst, provide instant energy and prevent excessive dehydration. The product can also be used in the

treatment of urine infection, gastrointestinal disorders and treatment of piles as per the properties mentioned in the *Ayurvedic* text.

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