

DEVELOPMENT AND SENSORY EVALUATION OF “LIMBU PACHAK (LEMON DIGESTIVE)”: RESEARCH ARTICLE

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ABSTRACT

Introduction: OBJECTIVES: To prepare the Limbu pachak by using functional ingredients. To evaluate and rediscover recipe by following the procedure stated in the Kshemkutuhul. **Method:** The product was prepared by taking in consideration the amount of ingredients given in the Kshemkutuhul, then the product was further carry forward to sensory analysis. **Results:** The product has exhibited excellent overall acceptability with respect to its appetizing nature, tangy flavor, sweet and sour taste. **Conclusion:** Finally it is concluded that the product has been accepted by the community and it would be really helpful for supportive benefits. The product can be carry forward for better detail analytical process.

KEYWORDS: Limbu pachak, Lemon, Digestive, Appetizer.

INTRODUCTION

Ayurveda is an alternative medicine system with historical roots in the Indian subcontinent. The theory and practice of Ayurveda is pseudoscientific. The Indian Medical Association (IMA) characterizes the practice of medicine by Ayurvedic practitioners as quackery. Ayurveda is heavily practiced in India and Nepal, where around 80% of the population report using it.

Ayurveda, also called Ayurvedic medicine, traditional system of Indian medicine. Ayurvedic medicine is an example of a well-organized system of traditional health care, both preventive and curative, that is widely practiced in parts of Asia. Ayurveda has a long tradition behind it, having originated in India perhaps as much as 3,000 years ago. Today it remains a favoured form of health care in large parts of the Eastern world, especially in India, where a large percentage of the population uses this system exclusively or combined with modern medicine.

Limbu pachak is very delicious and flavorful pachak from the book kshemkutuhul. Kshemasharma is the author of this book. This book got the name 'Kshemakutuhul' from his name. In kshemkutuhul the pachak is describe as the digestive. The recipe is made from lemon. Limbu pachak is the recipe which promotes digestion and it is good for heart health. Lemon is an excellent digestive, expectorant, fragrant, enhancer and flavor enhancer. Lemon also helps to loosen the toxins floating around the gastrointestinal tract.

Lemon is also called as Nimbuka and Jambira in Ayurveda. Lemon balances all the three doshas - Vata,

Pitta and Kapha. This citrus fruit is a great digestive and laxative. Also, it's saliva stimulating properties make it a potent remedy to many disorders. Further, lemon is a great immune booster and a complete panacea. The tastes sweet, sour, and salt balance vata, but sweet and salt are typically overconsumed, while sour is chronically underconsumed. Clinically, sour lemons are used as a digestive aid to boost digestive fire; as an anupan (carrier) to boost absorption of herbs, spices, and foods; and as a cleanser for the blood, lymph, and mouth.

Lemons, along with many other citrus fruit, are an integral part of an Ayurvedic seasonal diet. In fact, in addition to drying the pith and seeds for medicine and cooking with lemons, drinking warm lemon water in the morning is a part of ayurvedic Dinacharya, or daily routine, particularly during late winter and spring, when lemons are harvested.

Late winter and early spring-harvested lemons and other citrus (like amalaki) provide the perfect antidote for accumulation of vata (winter) and kapha (spring).

It is beneficial in cough and cold as it boosts immunity which helps fight various infections. Lemon can also assist in weight loss when taken regularly.

The sour and tangy lemon is a common appetizing agent of our meals.

Lemon comprises of 3.7 per cent of citric acid. It is also a rich source of vitamin C. The sour fruit contains vitamin A, calcium and iron. Moreover, lemon is a great instant energy booster and fatigue reliever. This citrus

fruit is very effective in maintaining the health of skin and gums.

Other nutrients like thiamine, riboflavin, Niacin and bioflavonoids are also found in lemon. Lemon contains a compound called Quercetin, which is an important bioflavonoid. It acts as a natural antihistamine and prevents allergies and inflammation.

Lemon is a common house-hold remedy in various day-to-day health issues. Modern medicine concurs with Ayurvedic claims of lemon as a health booster. Also, nutritionists and doctors are now recommending lemon in daily diet.

Lemon enhances the digestive power, relieves tastelessness and constipation. It is also a great remedy for morning sickness and fatigue. The citrus fruit improves the secretion of saliva and other digestive juices. Lemon is a cleansing and detoxifying agent. Including lemon in the diet boosts immunity. The tangy taste and aromatic smell improve mood. Further, lemon helps curb bad breath. The yellow medicine purifies the blood and improves blood circulation. It further promotes skin health. The tangy fruit supports weight loss.

MATERIALS AND METHOD

Materials

All the ingredients require for the preparation of "Limbu pachak" are fresh and of good Quality and these ingredients are collected from local vegetable market and local dry fruit shop. The materials are listed below-

- Lemon – 1 medium size lemon

- Candied sugar -50gm
- Cardamom powder – ¼ tsp
- Black pepper powder – ¼ tsp

METHODOLOGY

The preparation of the recipe as per the reference given in kshemkutuhal is as follows:

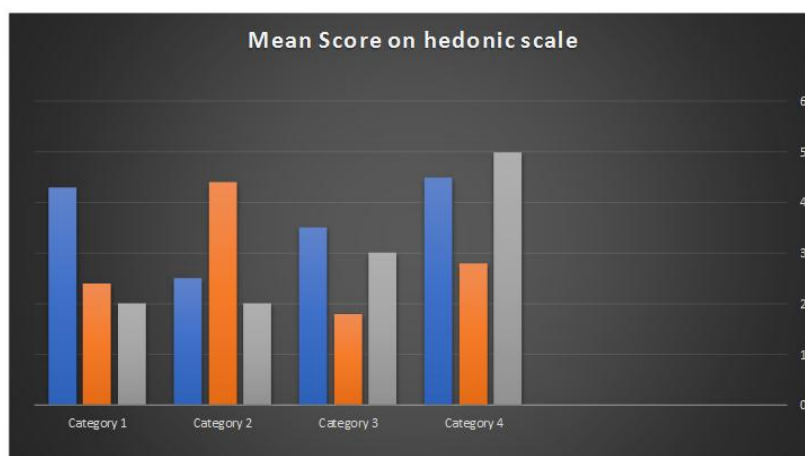
The first step in the preparation of limbu pachak is cleaning of lemon by washing it in the sink. In the second step we have to take the other 3 ingredients (candied sugar, cardamom powder and black pepper powder) and then we have to measure their weight (candied sugar- 50gm, cardamom powder- ¼ tsp and black pepper powder- ¼ tsp). After weighing of ingredients, the third step will be making a powder of candied sugar by grinding it in mixer. In fourth step we will mix all the 3 powder (candied sugar, cardamom and black pepper) together. After that, In fifth step we will take the lemon and cut it into small pieces. Last step will be sprinkling of all the mixed powder on lemon and limbu pachak is ready to serve.

Limbu pachak was scored for characteristics like appearance, aroma, taste and overall acceptability, by panel of five people on five points hedonic scale. Score of each characteristic had gone through sensory analysis based on hedonic rating scale.

- Like very much - 5
- Like a little - 4
- Not sure - 3
- Dislike a little - 2
- Dislike very much – 1

The sensory evaluation data of limbu pachak is as follows.

Sr. No.	Appearance/ Colour	Aroma/ smell	Taste	Sweetness	Texture/mouth-feel
1.	4	5	5	3	4
2.	5	4	4	4	5
3.	4	5	5	3	5
4.	5	4	4	3	5
5.	3	4	5	4	4





DISCUSSION

Preparation of the product is carried out as per the reference given in the Ayurvedic literature as Kshemkutuhal. The only study of Kshemkutuhal was carried out to understand the method of preparation of the "Limbu pachak" and further the product was analysed by the sensory evaluation. The sensory evaluation is carried out by 5 semi trained panelists on Five point Hedonic Scale. Ingredients used in the product are of good quality and are procured from the local stock market. It was observed that the recipe is not time consuming and was easy to prepare. About 10 min is required to prepare the product. Another thing that is observed is the Lemon is available for the whole year, so we can prepare this recipe anytime. It is very easy and convenient for all to prepare this recipe whole the year.

The main ingredient of limbu pachak is lemon. Lemon imparts taste. Lemon balances all the three doshas – Vata, Pitta and Kapha. It is a great digestive and laxative.

The fruit of Lemon, known commonly, is sour, pungent in taste, hot in potency, treats gulma, amavata, and increases digestive fire, healthy to the eyes, cough, vitiation of kapha and pain in the throat and cures vomiting.

Limbu pachak is a great digestive. The appearance of the recipe is excellent. The smell of the recipe is also very refreshing and mouth watering. Limbu pachak is very delicious in taste, Taste is a little sour and sweet with the magical flavour of cardamom and black pepper. Limbu pachak is also work as a mouth fresher.

RESULT

The product development was carried out as per the resources, materials, references found in KSHEMKUTUHAL. All the ingredients used in the preparation of this product are of good quality and purchased from local stock market. The product was prepared as per the reference and the end product was exhibited yellow colour with sweet and sour taste, slightly pungent flavour and pleasant aroma. Final product was served fresh as per mentioned in the procedure and exhibited good physical appearance.

Result of Sensory Evaluation- Sensory evaluation was conducted by 5 semitrained panelists to evaluate the colour, taste, aroma, sweetness, texture of the given product on Five point Hedonic Scale. Among sensory analysis the product ranked excellent for its Aroma and Appearance The product "LIMBU PACHAK" exhibited a fair result with respect to its taste, flavour and texture as per the reference. Then the colour of the product was ranked fairer and exhibited an excellent mouth feel Overall acceptability is ranked 5 (like a lot). At last the product exhibited good overall acceptability with respect to sensory analysis.

CONCLUSION

The recipe is chosen from the book "kshemkutuhal"

In the sensory analysis, the product was loved by the people very much.

We can recommend this product to balances all the three doshas – Vata, Pitta and Kapha.

It is a great digestive and laxative

We can also recommend Limbu pachak in the treatment of gulma, amavata, cough, vitiation of kapha, pain in the throat and cures vomiting.

Limbu pachak is also consume to increases digestive fire and it is healthy to the eyes.

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