

DEVELOPMENT AND QUALITY EVALUATION OF APPETIZER PREPARED FROM INDIAN GOOSEBERRY (AMALAK KSHUDHABODHAK) AS PER ANCIENT RECIPE TEXTS.

¹*Dr. Varsha B. Dhus and ²Dr. Abhijit Joshi

¹*PG Student M.Sc. Nutrition & Food Science. Tilak Maharashtra Vidyapeeth Pune.

²Professor & Head Dept of Ayurved Tilak Maharashtra Vidyapeeth Pune.

Received on: 02/08/2021

Revised on: 23/08/2021

Accepted on: 12/09/2021

*Corresponding Author

Dr. Varsha B. Dhus

PG Student M.Sc. Nutrition &

Food Science. Tilak

Maharashtra Vidyapeeth

Pune.

ABSTRACT

Introduction: The *Kshemkutuhalam* by Vaidya Kshemraj Sharma is a rare and valuable work compiled from various ancient texts and other ancient sources. The book is a compilation on dietetics and nutrition for all ages and which also contains the Ayurvedic preparation of most valuable ancient recipes of the scientific importance. This research contains the qualitative study of appetizer dish prepared from Indian gooseberry (Amla), as mentioned in *Kshemkutuh*. **Objective:** To prepare the Amalak kshudhabodhak by using functional ingredients. To evaluate and rediscover each recipe by following the procedure stated in the *Kshemkutuh*. To evaluate the product for quality assessment in term of proximate sensory analysis and nutritional evaluation. **Methods:** The recipes was made according to the ingredients and procedure mentioned in *Kshemkutuh*. **Result:** Aamalak Kshudhabodhak- The main ingredient is Indian Gooseberry (Ammala). Aamala Kshudhabodhak was scored for characteristics like appearance, aroma, taste and overall acceptability, by panel of five people on five point's hedonic scale. Score of each characteristic had gone through sensory analysis based on hedonic rating scale. **Conclusion:** Based on the observation it is proved that according to the characteristics of appearance, aroma, taste sweetness and overall acceptability, Aamalak Kshudhabodhak was mostly liked by all keeping it on the top of the hedonic scale.

KEYWORDS: Appetizer, Indian Goose berry, Ancient Ayurveda dish.

INTRODUCTION

Ayurveda is a healing science, based on studies and keen observation of intellectual seers from India. It is an ancient medical science which deals with to maintain healthy life style and treat the disease.

Every living and non-living beings in this universe is composed of five basic elements, the Pancha Mahabhootas, namely Earth (Prithvi), Water (Ap), Fire (Teja), Air (Vayu) and Ether (Akasha) the panchabhuta components of ingested food nourishes their respective tissue elements in the body. Ahara is the best of all medicines and is considered one among the three sub-pillars of Ayurveda (thrayo-upasthamba). The ahara (food) and vihara (lifestyle) which are congenial to the channels, constitution and strength of an individual is termed as pathya (wholesome) and that which is non-congenial is termed as apathya (unwholesome). The preventive and curative aspects of Ayurveda revolve around the central theme of pathya ahara and vihara. Ayurveda emphasizes basic dietary guidelines in terms of appropriate food, combinations of food, methods of cooking, storage, eating atmosphere, hygiene and

etiquette (ashtavidha ahara vidhi visesha ayatana)^[1] Ayurvedic dietary guidelines.^[2]

Nutrition is the science of foods, the nutrients and other substances therein, their action, interaction and balance in relationship to health and disease; the processes by which the organism ingests, digests, absorbs, transports and utilises nutrients and disposes the end products. In addition, nutrition is concerned with social, economic, cultural and psychological implications of food and eating. In short, nutrition science is the area of knowledge regarding the role of food in maintenance of health. Good nutrition is the foundation for good health.

Nutrients are the constituents in food that must be supplied to the body in suitable amounts. These include carbohydrates, fats, proteins, minerals, vitamins and water. Chemical substances obtained from food are used in the body to provide energy, structural materials and regulating agents to support growth, maintenance and repair of body's tissues. Nutrients may also reduce the risks of some degenerative diseases.

The *Kshemkutuhalam* by Vaidya Kshemraj Sharma is a rare and valuable work compiled from various ancient texts and other ancient sources. The book is a compilation on dietetics and nutrition for all ages and which also contains the Ayurvedic preparation of most valuable ancient recipes of the scientific importance.

This research contains the qualitative study of appetizer dish prepared from Indian gooseberry (Amla), as mentioned in *Kshemkutuhalam*. The data is analyzed by sensory analysis. Recipe is manufactured on domestic level (homemade). For recipe, the procedure is referred from *kshemkutuhalam*. The data is collected by testing the sample of the recipe by analyzer. For every recipe, the procedure is strictly followed through the book and additional ingredients are used if there is an absence of it and yet it is needed in the procedure.

MATERIAL AND METHODS

The recipes was made according to the ingredients and procedure mentioned in ancient *Kshemkutuhalam*. List of recipes is as follows.

INGREDIENTS for Aamalaka Kshudhabodhak (per serve).

- Amla Fruit- 2 no
- Ghee- 3 to 4 drops.
- Oil- 2 to 3 drops.
- Asafoetida (Hing) - 1 pinch.
- Turmeric powder (halad)- 1 pinch.
- Black pepper powder- 1 pinch.
- Long pepper powder- 1 pinch.
- Rock salt (Saindhav) - 1 pinch.
- Dry ginger powder (Sunth)- 1 pinch.

METHOD

First we had taken two Indian goose berry fruit (amla) which cut into pieces and then added into special metallic bowl which is layered with cow's ghee (butter).

In another metallic bowl asafoetida (hing) was taken which then roast with the help of ghee. This processed asofoetida is added into first bowl containing pieces of Indian goose berry. In similar manner turmeric powder was also roasted in metallic bowl with the help of ghee and added in first bowl. After few minutes 2-3 drops of ground nut oil along with pinch of rock salt were added in the first bowl.

In later part of this dish in another separate bowl three powders viz, black pepper (marich), dry ginger (sunth), long pepper (pimpli) were taken and then they churned into fine powder. This fine powder was added in primary bowl of Indian goose berry. Here dish was prepared which was kept for few days in air-tight container. After few days the aromatic Aamalaka fal kshudhabodhak is ready.

RESULT & ANALYSIS

Sensory analysis

Aamala Kshudhabodhak was scored for characteristics like appearance, aroma, taste and overall acceptability, by panel of five people on five point's hedonic scale. Score of each characteristic had gone through sensory analysis based on hedonic rating scale. (Refer table no).

Proximate Analysis

Proximate analysis was carried out according to standard methods of AOAC (1995) for evaluating ash, moisture, carbohydrates, proteins, fat, and calcium and magnesium.

Microbial Analysis

Pour plating method on Nutrient Agar was used for microbial testing. Total plate count was evaluated for control and test samples.

Statistical Evaluation

The original sensory panel data and other results were statistically analyzed using analysis of variance (ANOVA) and least significance difference at a significance of probability 5%.

Table no 1: The sensory evaluation data of Aamala Kshudhabodhak is as follows.

Sr. No.	Appearance	Aroma	Taste	Sweetness	Overall accept-ability
1.	4	4	4	3	4
2.	3	4	4	4	4
3.	2	3	4	3	3
4.	3	3	3	3	3
5.	4	4	4	3	4

Table no. 2: Microbial testing of Amalakkshudhbodhak.

Parameter	Result	Units	Test methods
Total Plate Count	2.1*10 ⁴	CFU/g	IS:5402:2012

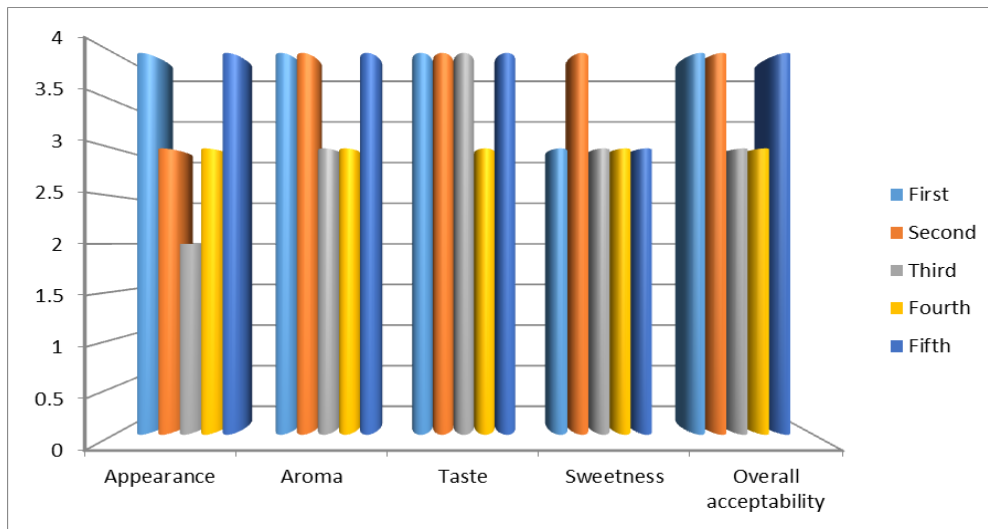


Chart 1: Diagrammatic representation Sensory evaluation data of Aamala Kshudhabodhak.

Table no 3: Proximate analysis of Amalakkshudhabodhak.

Sr.No.	Name of Dish	Aamalakkshudhbodhak
1.	Mean Appearance score	3.2
2.	Mean Aroma score	3.6
3.	Mean Taste score	3.8
4.	Mean Sweetness score	3.2
5.	Mean Overall acceptability Score	3.6

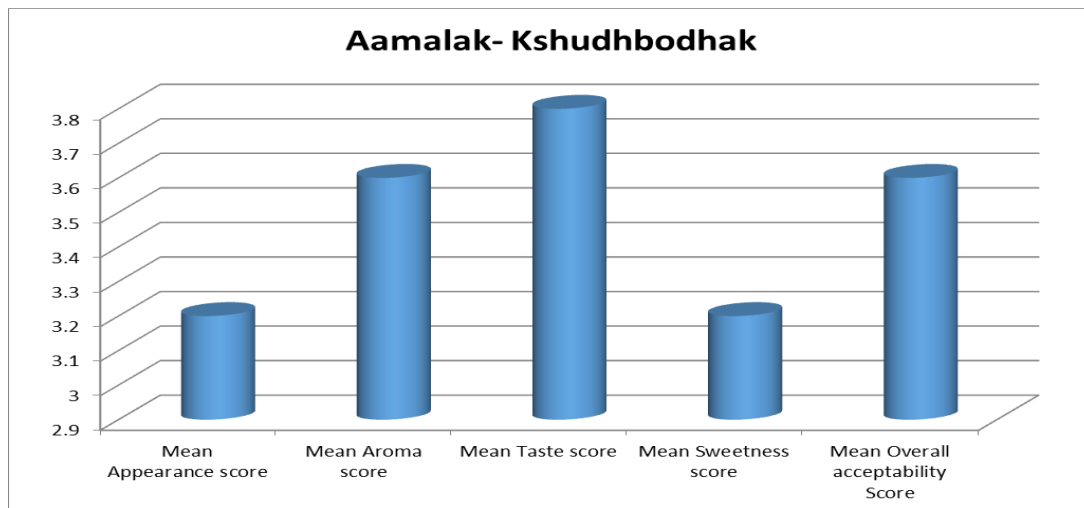


Chart 2.- Diagrammatic representation of Aamalaka-Kshudha-bodhak.



Aamalak Kshudhabodhak

DISCUSSION

Amalak Kshudhabodhak- The research work highlights the physical, nutritional and sensory analysis of Aamalak-Kshudhabdhak. can be useful for the product development as cool solid appetizer with a bit more of innovation in the characteristics so that it becomes more palatable as they have a lot of benefits which are mentioned in traditional and modern science. The main ingredient is Indian Gooseberry (Ammala). It stimulates the digestive fire, imparts taste, hence can be included as an appetizer in conditions like fever, indigestion, etc. Aamalak Kshudhabodhak- This appetizer acts as pitaghna (reduces pittadosha), Tikta, Kashay so reduces kaphadosha (Kaphaghna), and reduces aamla rasa (Vataghna). Aamalak Kshudhabodhak reduces or kill three doshas. Sensory evaluation- Following tabulated data give organo-leptic evaluation of amalakkshudhabodhak. It is observed that overall acceptability of this appetizer was good for majority (3 out of 5). Physicochemical evaluation was done as per following table which shows no statistical significant difference observed between different parameters.

CONCLUSION

Based on the observation it is proved that according to the characteristics of appearance, aroma, taste sweetness and overall acceptability, Aamalak Kshudhabodhak was mostly liked by all keeping it on the top of the hedonic scale.

ACKNOWLEDGEMENT

The author 1 thanks Head of the Dept. Dr. Abhjit Joshi for their meticulous guidance. The author is also thankful to Tilak Maharashtra Vidyapeeth for providing the necessary facilities in conducting the experiment.

REFERENCES

1. Agnivesa, Charaka samhita, sutrasthana 5/3-13, English translation by bhagwan Das and Sharma, Chaukhamba publications, Varanasi.
2. Vagbata, Astanga hridaya, sutrasthana 8/39, Chaukhamba sanskrit pratisthan, Varanasi
3. Handbook of Indices of Food Quality and Authenticity. Rekha S. Singhal, Pushpa R. Kulkarni. 1997, Woodhead Publishing, Food industry and trade ISBN 1-85573-299-8. More information about the composition, p. 395¹
4. Mahendra, P; Bisht, S (2012). "Ferula asafoetida: Traditional uses and pharmacological activity". *Pharmacogn Rev.* 6 (12): 141–6. doi:10.4103/0973-7847.99948
5. Asafoetida. Katrina Kramer. Royal Society of Chemistry Podcast. 22 June 2016. <https://www.chemistryworld.com/podcasts/asafoetida/1010150.article>.