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# Development and Sensory Evaluation of *Lavana-Ardrak* (Ginger with Rock Salt) and its Importance of Consumption before Commencement of Meal

Avdhoot Pandit<sup>1</sup>, Asst. Prof. Saloni Jadhav<sup>2</sup>, and Prof. Dr. Abhijit Joshi<sup>3</sup>

Research Associate, Tilak Maharashtra Vidyapeeth, Pune, Maharashtra, India<sup>1</sup>

Assistance Professor, Tilak Maharashtra Vidyapeeth, Pune, Maharashtra, India<sup>2</sup>

Professor, Dean and Registrar, Tilak Maharashtra Vidyapeeth, Pune, Maharashtra, India<sup>3</sup>

**ABSTRACT:** The research was undertaken to develop an innovative, traditional and wholesome food product for the benefit of community. The recipe named "*Lavana-Ardrak*" was selected from the ancient Ayurvedic classical texts as *Bhojankutuhalam* and *Kshemkutuhalam*. The intention behind this study is to portray the importance and benefits of consuming this recipe before commencement of meal. For this the product was prepared by taking in consideration the amount of ingredients and procedure mentioned in the Ayurvedic literature as *Kshemkutuhalam*. Further the product was analysed by sensory evaluation. Sensory evaluation was carried out by 5 Semi trained panellists on Five point Hedonic Scale. The product exhibited an excellent mouthfeel, appearance and ranked 5 for its taste. In future the product may get more importance for its therapeutic benefits as it imparts taste, increases appetite, improves digestion and maintains the equilibrium of *Tri- Doshas*. The product may also benefit to those who are suffering from indigestion, chronic cough, sinusitis, common cold and loss of appetite. For detail analysis in field of science in future the product may undergo chemical and proximate analysis.

**KEYWORDS:** *Lavana- Ardrak*, Appetizer, Rock Salt, Ginger (*ZingiberOfficinale*), Anti-inflammatory, Anti-microbial.

## I. INTRODUCTION

Ayurveda is an ancient medical science which focuses on maintaining the health in good condition and to treat the disease. It clearly emphasizes the relationship between the food you take and the state of the body and mind. The recipe "*Lavana-Ardrak*" is selected from the ancient Ayurvedic texts as *Bhojankutuhalam* and *Kshemkutuhalam*. *Bhojankutuhalam* and *Kshemkutuhalam* are the manuals of traditionally prepared recipes. They provide deep knowledge about ancient Indian dietetics. *Kshemkutuhalam* describes the method of preparation of the recipe where as *Bhojankutuhalam* describes the properties of ingredients used in the recipe.

*Lavana-Ardrak* is the recipe made from wet ginger and rock salt and is consumed before the commencement of meal. The reason is to increase the digestive fire in order to improve digestion. It is considered as wholesome in Ayurveda for its properties as it imparts taste, improves digestion, increases appetite, provides strength and maintains the equilibrium of *Tri- Doshas* (*Vata, Pitta and Kapha*).<sup>[2]</sup>

Ginger (*Zingiber Officinale*) is considered as best among all the spices with respect to its therapeutic properties as it has anticancer, anti-inflammatory and anti- microbial properties. Ginger has pungent flavour according to Ayurveda. Ginger is beneficial in the treatment of sinusitis, chronic cough, loss of appetite and indigestion, clearance of throat by reducing excessive mucus in mouth and has antioxidant property. Anti- inflammatory and antioxidant properties of ginger control the process of aging, treats inflammation and destroys the free radicals which are generated during energy production. Consumption of ginger before exercise might reduce the muscle fatigue during moderate intensity cycling exercise. This effect may be due to anti-inflammatory property but more investigation and research is needed to prove It.<sup>[1]</sup>



As per Ayurveda consumption of ginger is considered as wholesome with rock salt. Rock salt is known as *Saindhva* in Ayurveda. It comes under the category of salts. It has *lavana* rasa (salty taste) which alleviates vitiated *Dosha*. Rock salt is considered as best among all varieties of salts. It is aphrodisiac in nature, pure and healthy for eyes. It stimulates appetite and treat wounds. There are two types of rock salts they are red and white. Among them white variety is most effective and beneficial in treatment of diseases.<sup>[2]</sup> According to modern science it is the best source of sodium and other trace minerals as calcium, potassium and magnesium. The minerals present in rock salt maintain the electrolyte balance in the human body.

The recipe "*Lavana- Ardrak*" is considered as wholesome in ayurveda as it increases digestive fire improves digestion and clears tongue and throat from excessive mucus in mouth.<sup>[2]</sup> It is the first step prior to consumption of meal. A piece of ginger with 1 pinch of rock salt is sufficient to meet the benefits. Our ancestors discovered this product to attain well balanced body. This research clearly mentions the benefits and importance of *Lavana- Ardrak* in order to maintain good health.

## II. METHODOLOGY

**Raw Materials Procurement-** The materials required for the preparation of "*Lavana- Ardrak*" are selected of good quality and are procured from Pune local stock market. The materials are- Wet Ginger(1 small size) and Rock Salt(1 Teaspoon).

**Methodology-** The product was prepared as per the procedure mentioned in the ayurvedic text as *Kshemkutuhalam*. Materials were weighed as per the requirement. Wet ginger was washed properly and peeled. With the help of knife 15 grams of ginger was sliced into small pieces and 1 teaspoon of white rock salt powder was added. All the ingredients were mixed properly with the help of bare hands till the ginger absorbs the salt completely and served.<sup>[3]</sup> The quality of food product was analysed by sensory evaluation. Please refer table no- 2 for details of ingredients.

**Sensory Analysis of *Lavana- Ardrak*-** Sensory evaluation of the product was carried out by 5 semi-trained panellists on Five Point Hedonic Scale. Panelists have their own observation and remarks about the product. The product was scored for its characteristics like appearance, flavour, taste, mouth feel and overall acceptability on the scale. The product was ranked for its taste and flavour. Please refer to the table no- 1 for sample of five point hedonic scale.

**Significance of Sensory Evaluation-**Sensory evaluation is the scientific method which plays an important role in new product development in food industry. The major role of sensory evaluation is to provide valid information to the research department. It facilitates communication between consumer and industry and supply partner to increase the productivity and to speed up the process of marketing.

**Importance of Hedonic Scale in sensory evaluation-** Hedonic Scale was invented by David Peryam and Pilgrim in 1957. It was developed to measure the acceptability of food products. It is an essential tool to carry out the sensory analysis. It gives approximate results relating to acceptability level of the sample and product attributes. Hedonic rating test has three types they are 5 point, 7 point and 9 point hedonic scale. The most common scale used for organoleptic evaluation is 5 point hedonic scale. Ranking is done as per the following scores-

- Like a Lot- 5 marks
- Like a Little- 4 marks
- Neither like nor Dislike- 3 marks
- Dislike a Little- 2 marks
- Dislike a Lot- 1 mark

**Table 1: Sample of Five Point Hedonic Scale****Five Point Hedonic Scale**

Name of the Product-					
Name of the Panellist-					
Date of Evaluation-					
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.					
<b>Sensory Attributes</b>					
Scores	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.*

**Table 2: Experimental Trial Details**

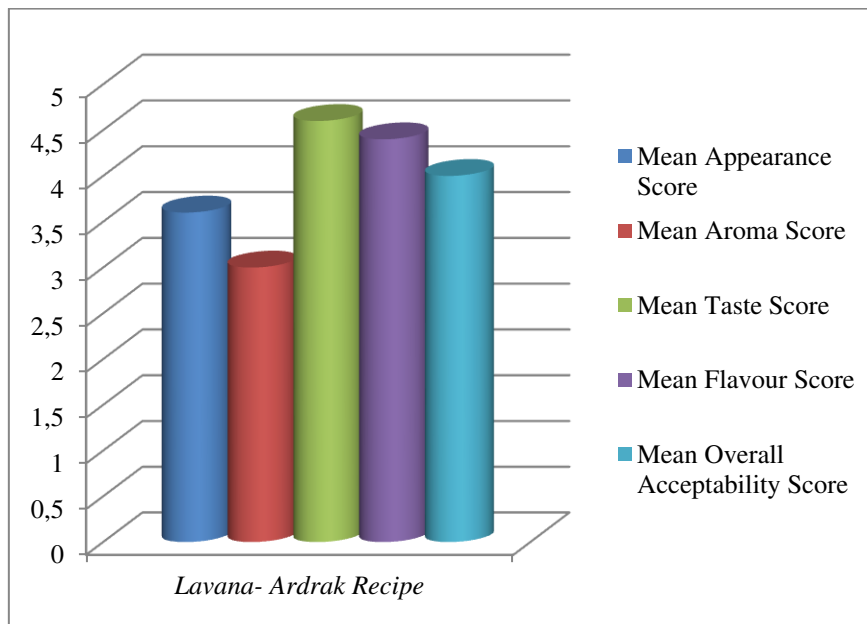
Sr. No	Ingredients	Proportion	Units (grams)
1.	Fresh Wet Ginger	1 Small Size about (1 Inch)	14.17 grams
2.	White Rock Salt	1 Teaspoon	5.9 grams

**III. RESULTS AND DISCUSSION**

The product was developed as per the resources, materials and references found in the *Kshemkutuhalam*. All ingredients which were used in the preparation of the product are of good quality and purchased from Pune local stock market. Among Sensory analysis the product *Lavana- Ardrak* was ranked for its pungent flavour and taste. The product exhibited an excellent mouthfeel, flavour and appearance as per mentioned in the *Kshemkutuhalam*. At the end the product exhibited good overall acceptability with respect to the sensory analysis. In future this product may benefit to those suffering from sinusitis, chronic cough, common cold and indigestion due to presence of ginger and rock salt. This product can be used as an excellent appetizer to increase the digestive fire in patients with loss of appetite. But excess consumption of this product may lead to ulcers as it is pungent in taste, gas formation, stomach-ache and heartburn. Also due to presence of rock salt excessive consumption will lead to high blood pressure, fatigue and muscle weakness. Consumption of the product must be in trace amounts. As per Ayurveda this recipe is consumed ½ hour before commencement of a meal to obtain good health and to improve digestion. Please refer table 3 for mean score by panellists on five hedonic scale, graph no 1 for the mean values of the product and figure no 1 for the prepared final product.

Table 3: Mean Score by Panelists on *Lavana- Ardrak-*

Sr. No	Appearance	Aroma	Taste/ Mouthfeel	Flavour	Overall Acceptability
1.	4	3	5	5	4
2.	4	3	5	5	4
3.	3	3	5	4	4
4.	3	3	4	4	4
5.	4	3	4	4	4
Total	18	15	23	22	20
Mean	3.6	3	4.6	4.4	4

Graph 1: Mean Values of *Lavana- Ardrak*

#### IV. CONCLUSION

The product named "*Lavana- Ardrak*" was prepared successfully as per the reference, resources and materials mentioned in the *Kshemkutuhalam*. The product was exhibited fair results with respect to its aroma and appearance and exhibited excellent for its mouth feel and flavour. Overall acceptability was found good as per mentioned in the Ayurvedic text. The product can be recommended in the treatment of sinusitis, chronic cough, diarrhoea, common cold, for clearing throat and to improve the voice. In future the product will benefit the patients suffering with indigestion, loss of appetite and tastelessness in order to cure the disease. Due to its anti-inflammatory and anti-microbial property it will be beneficial in treating worm infestation, destruction of free radicals and to reduce the signs of aging. This may get more importance in future as it is easy to prepare, therapeutic and effective for curing many diseases as per the properties mentioned in the Ayurvedic literature. It is a small attempt to create awareness about wholesome foods which are conducive, suitable and agreeable for maintaining the health in good condition.



**Figure 1: Final Product *Lavana- Ardrak***

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ijmrset@gmail.com

[www.ijmrset.com](http://www.ijmrset.com)