

आयुर्वेदे-संस्कृतसाहित्ये स्थित आहारविषयमेकमध्ययनम्

**COMPENDIUM OF DIETARY (AHARA) ASPECTS
IN SANSKRIT AND AYURVEDIC LITERATURE;
AN ONTOLOGICAL KNOWLEDGE BASE
FRAMEWORK FOR AYURVEDIC RECIPES**

(Ref. RUSA award UNMRP-325/2019(MRP/RUSA2.0-STC)Link No.1-19/5, Dt.June 2019)



2020

SUBMITTED BY

Dr. K.V.R.B.VARA LAKSHMI

M.A., (San.), M.A., (Tel.), M.Phil., Ph.D.,

PRINCIPAL INVESTIGATOR

RUSA Minor Research Project In Sanskrit

DEPARTMENT OF SANSKRIT

SRI Y.N. COLLEGE (A),

Thrice accredited by NAAC with "A" Grade

NARSAPUR - 534275

Declaration

I declare that this Minor Research Project has been composed by me has not previously formed the basis for the Award of any Degree, Diploma or Other similar title of any other University.

*(K.V.R.B. Varalakshmi)
Principal Investigator*

Narsapur,

Dt:

PREFACE

Persons who are desired to endeavor philosophical outlook depend upon the food they take. So the role of food in our life is essential. Personality of a person, character, mental balance all these are induced through the substances what we take. So mental purity influences the society.

In olden days people lived on their available resources of food with satisfaction. They happily maintained the coexistence in the society with other people.

But now a days the transport facilities are developed and we are getting what we desire throughout the year. The culinary art is well developed and people are giving more preference to taste that's why they are taking less nutrition food rather impure food. This process make their body weak and nonresistance to diseases.

So I want to provoke in my project to make to person sustain the body and develop resistance. This is comes only due to change of food habits according to his body condition.

In this way he can change his outlook to stand as a wellbeing in the society. It all depends upon the food. So the necessity of revising food habits makes the life of person better. So I want to stress on this point.

Organization of the project report

In first chapter, the information about food concept is collected from Sanskrit and Ayurveda literature and and shown the hierarchical relationship based on the Paanchaboutika theory model. The panchakosha level of understanding on food is also presented in pictorial manner.

The second chapter provides the periodical description related to cultural developments and cross-cultural interventions of food stuffs and various food articles is mentioned in Sanskrit literature.

The third chapter consists various food articles and along with their medical properties (*rasapanchaka*) from Ayurveda prospective by referring to *Bhojana kutuhalam*, *kshema kutuhalam* and *Bhavaprakasha Nighantu* texts.

In fourth chapter, provides the detailed description of *Rasa*, *Guna*, *Virya*, *Vipaka* and *Karma*.

The fifth chapter contains description about seven types of food and six types cooking methods in detail. There is an arrangement of ontological frame-work of recipes. In this context, the *ahara dravya* classification is mentioned and linked to seven types of food in a tree table manner.

The conclusion part provides the summary of the work and gives the scope for further study in this direction.

OBJECTIVES ACHIEVED

Persons who are desired to endeavor philosophical outlook depend upon the food they take. So the role of food in our life is essential. Personality of a person, character, mental balance all these are induced through the substances what we take. So mental purity influences the society.

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CONTRIBUTION TO THE SOCIETY

“आहार शुद्धौ सत्त्वशुद्धिः सत्त्वशुद्धौ ध्रुवा मतिः” इति श्रूयते।” When we are taking purified food, we get concentration of mind and good health also. The food had occupied a prominent place in the ancient and modern Indian society. The purity and qualities of food explain in Vedas, *Suthras*, Mahabharata and Ramayana etc.

According to Bhagavad Gita the food divided into three types i) *sathvika*, ii) *rajasika* and iii) *rajasika* Qualities of food also mentioned in the same place.

“आरोग्यं भास्करादिच्छेत्” We are getting health from God Surya. Now-a-days Surya Namaskars are also very popular to get good health. Good food gives us good health.

Ayurveda means science of life, but not the science of body. Ayurveda is different and special from all medicinal books. Ayurveda shows input on philosophical, intellectual, emotional environmental and social relations. We all know ‘prevention is better than cure’. Ayurveda promotes health. “शरीरमाद्यं खलु धर्मसाधनम्” Kalidasa says in ‘*Kumarasambhava*’ good health is necessary to gain *dharma*, *artha*, *Kama* and *moksha*. Ayurveda tells the precautionary way of dealing health it elaborates food we take and it changes physical and mental health.

So people are advised to take natural food mostly than to the cooking methods. This depends upon the selection of the food according to the Ayurvedic medicinal knowledge. After the civilization and culture is growing they have divided many types of food preparations and they are also learned preserve the food years together. They also learned transport the food items in preserved form when they are not available.

Thus transport is depend upon the speed of the supplying products and their *Gunadoshas* along with their medical properties.

When a man becomes healthy family and the society also growing healthy conditions. Man will get good health through good thoughts when we take purified food we will get good thoughts. Don't eat impurities food we should give purified food with purified heart. Man needs not only physical health, mental health is also important. These all are without stress. Man can get good health.

Who have positive attitude they get more good qualities. They use their energy and ability in positive way. They become strong psychological. Man can get happiness through his way of thinking

ACKNOWLEDGEMENTS

I am very grateful to a number of individuals and institutions whose help and encouragement is a great source and motivation to complete this research work without which this study would not have seen the light of the day.

I am acknowledge our profound sense of gratitude and thanks to Rashtriya Uchchatar Shiksha Abhiyan (RUSA), St. Therissa College, Eluru for their financial assistance to complete this Minor Research Project (MRP). It is our profound duty to express our sincere thanks and deepest gratitude to **Dr.K.Venkateswarlu** Principal, Sri Y.N. College (Autonomous), for his perennial inspiration and support extended for the completion of this MRP.

I am highly thankful to **Dr. C. Satyanarayana Rao**, Secretary& Correspondent of Sri Y N College, and his team of Management Committee Members for their inspiration in the matter of completion of this research work. My indebted thanks to **Sri GV K. Rama Rao**, Vice President of Sri Y N College who extended his enthusiastic support.

I also express my grateful thanks to **Sri Surya Chandra Rao**, Librarian, Sri Y N College (Autonomous), Narsapur for giving the information regarding write this project and successful complete my research project.

Professor G.A.Sarma, Prof. Neelakantam and S. Surya Kumari a big thanks to all these people who read the final draft and provided valuable input in this project work.

The veterans and authorities who know about my ongoing endeavor gave me a boost of support in this venture.

I am grateful to my family members also who stood always by me even though my professional life leaves me little time to spend at home.

I am grateful to each person for their contribution towards its writing.

I am very grateful to **Panuganti Siva**, Assist Professor helped me to collecting material for this Project.

Last but not least I would like to thank **Dr. Ch. Suryanarayana**, B.Sc., M.A., M.A., Ph.D for his help in stages making my project work stand in the lamplight.

Dr. K.V.R.B. VARA LAKSHMI

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ACHIEVEMENTS FROM THE PROJECT

The glory of Indian scientific knowledge is preserved in Sanskrit and Ayurvedic literature. In Sanskrit texts like *brihat samhita*, *arthashastra*, *manasollasa*, *vaimanika shastra* etc., a number of food aspects and various recipes are described. In Ayurvedic classics like *charaka samhita*, *sushruta samhita*, *astanga hridaya* also mentioned various concepts regarding diet. In Ayurveda, a few texts like *kshemakutuhala*, *bhojanakutula* are purely dedicated to Ayurvedic dietary concepts. Similarly, in some ayurvedic lexicons *bhavaprakasha*, *rajanighantu* etc., also stated a few ayurvedic recipes.

According to Ayurveda, diet is one of the main pillars of physical and also mental health. In Ayurveda, foods are categorized in several ways, one being according to taste Ayurveda describes six tastes such as sweet, sour, salty, pungent, bitter and astringent respectively. Pungent foods are spicy hot and astringent foods have a drying effect. Therefore, one should eat foods that are suitable to his/her appetite depends on the food not what they prescribed, but what they need actually. Psycho-physiologic constitution or *prakriti* to maintain balance in the system. If the system is out of balance, foods can be used in a therapeutic manner to restore balance to the *doshas*. For example, sweet, bitter, and astringent foods reduce or pacify Pitta. Foods that are pungent, salty, and sour increase Pitta. If a patient has vitiated Pitta that is causing a certain disorder, it is recommended that he/she favour foods that decrease Pitta and avoid foods that increase it.

Another factor to consider for dietary recommendations is the season. Different *doshas* predominate during different seasons. The *dosha* predominance varies depending on climatic conditions and geographic location, so it will not be the same in every region of the world. The Indian subcontinent has six seasons such as spring, summer,

rainy season, autumn, early winter, and late winter. *vata* accumulates during summer and is vitiated during the rainy season. Pitta accumulates during the rainy season and is vitiated during autumn. *kapha* accumulates during late winter and is vitiated during spring.

So far, there is no any consolidated data regarding Indian dietary concepts. The methodologies for preparing ayurvedic recipes are also neglected. Not commonly used even we know crystal salt is better, because it contains minerals we use commonly powder salt instead of it. In current times, a number of junk foods came into existence and causing to get various diseases. So, there is an urgent need to prepare an ontological knowledge base system for Indian dietary concepts by consolidating the data from Sanskrit and Ayurvedic literature.

Aims & objectives of the project

- ✓ To collect the dietary data from Sanskrit and Ayurvedic literature
- ✓ To consolidate and structure the collected data
- ✓ To provide pharmaco-dynamics to each recipe.
- ✓ To present ontological frame-work for food articles.

Previous efforts

No work has been attempted in this direction. Only the text ‘foods and Drinks in Ancient India’ provides the archeological information regarding food. A few texts like *Bhojana Kutuhalam* and *Kshema Kutuhalam* are available on diet concept in Ayurveda. Certain list of food articles and food stuffs in *Ayurveda Nighantus*. In Sanskrit literature, the concept of food is appeared contextually. There are number of articles are available on individual food concepts. This is the first attempt in holistic approach to food concept and its application on find the physical and mental health linkage regarding recipes to choose right food item and maintain one’s own bodily, psychological and metaphysical equilibrium.

Methodology

The relevant data is collected by referring to the literature of Sanskrit (Manasollasa and Shivatattva Ratnakara texts) and Ayurveda (Bhojana kutuhalam, Kshema kutuhalam and Bhavaprakasha Nighantu texts). regarding recent works, the text Foods and Drinks in Ancient India is referred to and relevant articles are also referenced. The referred to data is study thoroughly and presented in logical way. The concept of *ahara dravya* classification is studied for establishing the ontological frame-work of recipes in hierarchical diagram model.

CHAPTER – I

1.1. Concept of आहार (food) in Sanskrit and Ayurveda

The primary requirements of any human being are food, cloth and house. Out of which the first and foremost is food. Humans also show the intense efforts of this food every day. The person's maximum effort is for his survival and the main role is to feed life. human health, age, and wellbeing is based on the quality of food. Hence it is essential that we understand the importance and utility of food.

What is life? Like non-stop breathing? Not at all. In Indian tradition, the well-being of body, mind and soul is considered to be life, and food is an important means of achieving this blissfulness.

Today, we consider food as a substance for providing energy and nourishment to the body and we only gives importance to that form, whereas in Indian tradition, apart from nourishment, other forms are also seen and its interpretation is found on philosophical backgrounds.

In Sanskrit literature, the food concept is explained in various ways. In Vedas, the source of food is stated fundamentally by providing hierarchical linkage of Universe evolution. Whereas, in पुराणs (including काव्यs and नाटकs), the praise of food is happened contextually in the way of providing various dishes and drinks. In स्मृतिग्रन्थs (like मनुस्मृति), the main focus is on providing the instructions to have food for all four आश्रम people (ब्रह्मचर्य, गृहस्थ, वानप्रस्थ and सन्यास). Interestingly, in भगवद्गीता, there is a psychological approach to food and it is classified into three kinds such as सात्विक, राजसिक and तामसिक. सात्विक is the best kind among them. So, in Sanskrit literature, the आहार concept is explained in material level, philosophical level and psychological level.

In Ayurveda, all above three levels are explained in practical way. Ayurveda starts the आहार concept with पाञ्चभौतिक theory. Frist it describes the physiological basis of the human body through त्रिदोष (कफ, वात, पित्त) evaluation. The त्रिदोष concept is the manifestation of पाञ्चभौतिक theory. The आहार influences त्रिदोष in human body on its biological, mental and spiritual conditions. Because of this, आहार is described one of main pillars of Ayurveda.

But, in present world, the आहार or food is being treated as only an edible and nitrified substance is taken the result will be negative and leads to more complications and then to death. Substance without knowing its importance. Because of that, people are being affected by uncured diseases in young age. To prevent this, one should aware of this whole concept of food to lead sound life. So, in this chapter a lucid discussion is provided on आहार.

1.2. Definition of food (आहार) and its origin

अन्नं, भोजनं and आहारं are generally synonymous for the word food in Sanskrit. आहार means that food is edible substances for living beings but the Indian sages have also used the word extensively to describe its sublime nature whose consensus is also confirmed on the basis of philosophy and science.

In तैत्तिरीयोपनिषद्, the etymology (निर्वचन) of food is stated as अद्यतेऽति च भूतानि तस्मादन्नं तदुच्यते इति।¹

This states that “living beings eat food (आहार) while the आहारs (foods) also eat the living beings”.

According to भगवद्गीता, the origin of food is described as - अन्नाद्भवन्ति भूतानि पर्जन्यादन्नसम्भवः।²

This states all living beings are born out of food while food is produced from rains. According to this statement, it is known that the food is directly originated from water. Whereas, in तैत्तरीयोपनिषद्, the food origination is described hierarchically³ from the seat of आकाश.

Hierarchy of आहार (food) origination



This hierarchy clearly indicates that food (अन्नं) is having all collective nutritional values acquired through priory grass elements. By consuming the food, all that nutritional values nourish⁴ the physical body of living being.

The same concept is reflected in Ayurveda as— “पुरुषोऽयंलोकसम्मितः।”⁵ (the पुरुष is an epitome of the लोक). So, there is an inseparable connection between living being and *panchabhoutika* universe. So, if we spoil the nature by applying pesticides and plastic kind of unwanted stuff, the universe also provides the bad results. For instance, ‘global warming’ is one of such results.

1.3. Philosophy of आहार

In general, while have food unconsciously, everybody first salutes to food and proceeds. Because, culturally, there is a believe that the food is manifestation of lord ब्रह्म (अन्नं ब्रह्मेति⁶). The believe stands alone through ages. If we observe this, one thing can be stricken that the food only gives the ultimate satisfaction or happiness than others. So, having proper food matters for anyone’s physiological and psychological states. According to Indian philosophy, the entire universe is endowed with त्रिगुणs (functional faculties). Those are सत्त्व, रजस् and तमस् respectively. Every grass element is endowed with certain गुण⁷.

आकाश — सत्त्वगुण

तेजस् — रजोगुण

पृथिवी — तमस्

जलम् — तमस्

When, the physical body is manifested from these five grass elements, automatically, the त्रिगुणs will also be endowed. Similarly, the endowment of त्रिगुणs is there in food also. Those influence the one's physical and mental conditions.

The same concept⁸ is described in भगवद्गीता also. Further, explain the mental characteristics of each गुण. सुश्रुतसंहिता of Ayurveda also explained about the psychological characteristics of गुणs as similar as भगवद्गीता. But in भगवद्गीता तामसिक related to mental characteristics are not clearly stated. The consolidated information is provided below form both (भगवद्गीता & सुश्रुतसंहिता) as follows -

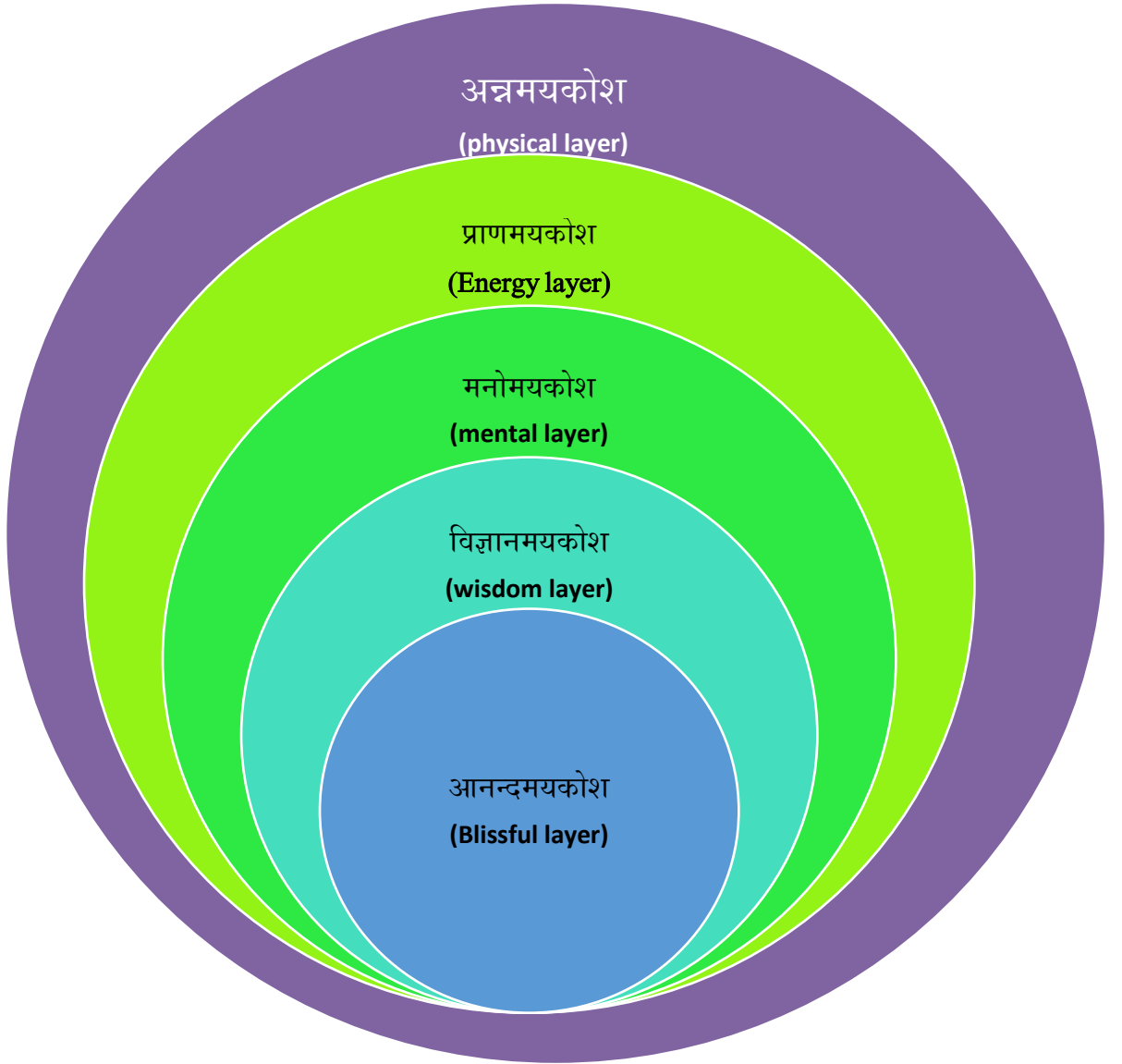
सात्विकम्⁹ - Mercy, sharing nature, Endurance, Truthfulness, Good conducts, Belief in God, Knowledge, Intellect, Capacity to learn, Memory, Self-control, and Selfless service.

राजसिकम्¹⁰ -Excess grief, moving habit, lack of self-control, inflated self-esteem, Lying nature, Cruelty, Wickedness, Pride, Excitation, Attachment and Anger.

तामसिकम्¹¹ - Depressed mood, lack of faith in God, lack of good conducts, intellectual deficits, ignorance, crookedness, laziness and sleepiness.

सात्विकम् is the best characteristics of mind out of three. One should aware this त्रिगुण model to prevent psychological disturbances. According to Ayurveda, who has सत्त्वात्म (healthy mental state) and प्रसन्नत्मेन्द्रियमनः (delighted soul with proper functioning of sense organs) he is called the healthy person (स्वस्थ).

पञ्चकोश MODEL



How can anybody be evaluated whether he is in healthy state or not? In Indian philosophy, there is a पञ्चकोश model¹² (five sheaths) which provides us a road map for better understanding of our psychological and spiritual development.

In this model, the food related layer (अन्नमयकोश) is the base for all other remaining layers. So, Food is the main factor for all cases (physical, mental and spiritual). So, everybody should have proper understanding of philosophy of food (आहार), then only anybody can prevent bodily, psychological disorders.

1.4. Importance of आहार

Physical body is the main instrument to full fill all kinds of activities.¹³ To have sound body, sound food is necessary. Because, “sustenance of living beings is dependent on food. There is nothing other than food that supports the life of living beings. There is no medicine that is comparable to food. It is possible to free a man of ailments solely through diet. On the contrary one cannot free a man of ailments even through medication if diet is ignored. It is therefore rightly said by physicians that food is the greatest medicine”.¹⁴

In तैत्तिरीयोपनिषद्, it is stated that the food should not be wasted¹⁵, this indicates the social importance of food. Because, if we waste the food, in crisis, food won't be available. So, to maintain the essence of food (as manifest of god), it needs to be served properly to actual needy instead of spoiling.

In Ayurveda, the body constituent (प्रकृति) will be evaluated through त्रिदोष model (वात, पित्त and कफ). If anything went wrong inside (as food), anyone of three will be aggravated and will be resulted as discomfort externally that influences mentally also. So, one should have proper knowledge on right combination of food.

By ignorance, if the wrong combination of food (विरुद्ध-आहार) is swallowed the result will be negative and sometimes leads death.

Charaka has mentioned 18 such conditions and those types of wrong combinations can lead to even death. All such information is discussed in context of भोजनविधि of दिनचर्य.

1.5. Instructions to take आहार

While taking the food we must not be angry or hasty or depression. One should take the food with respect and whole heartily.

In तैत्तरीयोपनिषद्, it is stated that the food should not be insulted¹⁶, it suggests that while having food, the mind should in settled level and with concentration one should take the food. Then, the food will be enjoyed and digested well.

In दिनचर्य of Ayurveda, there are three main pillars such as आहार (food) and विहार (lifestyle) and चेष्टा (activities) respectively. among them, आहार (food) and विहार (lifestyle) which are congenial to the channels, constitution and strength of an individual is termed as पथ्य (wholesome) and that which is non-congenial is termed as अपथ्य (unwholesome). The preventive and curative aspects of Ayurveda revolve around the central theme of पथ्य आहार and विहार. Ayurveda emphasizes basic dietary guidelines in terms of appropriate food, combinations of food, methods of cooking, storage, eating atmosphere, hygiene and etiquette, Ayurvedic dietary guidelines include¹⁷:

- ✓ Intake of food in time (काल भोजनम्).
- ✓ Food intake as per suitability (सात्म्य भोजनम्)
- ✓ Food intake as per the प्रकृति of individual (हित भोजनम्)
- ✓ Proper hygiene (शुचि भोजनम्)

- ✓ Intake of food which is unctuous (स्निग्ध भोजनम्)
- ✓ Intake of food which is warm (उष्ण भोजनम्)
- ✓ Intake of food which is easy to digest (लघु भोजनम्)
- ✓ Eat while there is interest to food and while eating concentrate on food and the process of eating (तन्मन भोजनम्)
- ✓ Eat food with six taste components (षड्रसयुक्त भोजनम्)
- ✓ Food should be primarily sweet in nature (मधुररस भोजनम्)
- ✓ Food should be ingested calmly, neither too slow nor too fast (नातिदृढ विलम्बितम्)
- ✓ After bathing (स्नातः)
- ✓ Food intake only when there is sufficient hunger (क्षुद्यन्)
- ✓ Proper washing of hand, feet and face should be done before food intake (दौत पद-कर-आननम्)
- ✓ After offering prayers and paying obeisance to gods and forefathers (पितृदेव तर्पणम्)
- ✓ After offering food to guests, teachers and children (अथिदि बालकगुरु तर्पणम्)
- ✓ Without disgracing food (अनिन्द भुजान)
- ✓ Silently (मौनेन)

In this chapter Nature of food, importance of food and necessity to take food are discussed.

Endnotes:

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2. भगवद्गीता 3/14
3. आकाशाद्वायुः । वायोरग्निः । अग्नेरापः । अभ्यः पृथिवी । पृथिव्या ओषधयः । ओषधिभ्योन्नम् । अन्नात् पुरुषः । तैत्तिरीयोपनिषद्, अनुवाक 1
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यज्ञस्तपस्तथा दानं तेषां भेदमिमं शृणु ॥ भगवद्गीता 17.7 ॥
9. आयुःसत्त्वबलारोग्यसुखप्रीतिविवर्धनाः । भगवद्गीता 17.8
10. आहारा राजस्येष्टा दुःखशोकामयप्रदाः ॥ भगवद्गीता 17.9
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कोशास्तैरावृतस्स्वात्मा विस्मृत्य संस्मृतिं व्रजेत् ॥३३॥
वेदान्तपंचदशी_(कल्याणपीयूषव्याख्यासमेता), प्रकरणम् 19

13. शरीरमाद्यं खलु धर्मसाधनम् ॥ कुमारसम्भवम् ५.३३ ॥

14. अतश्च सर्वभूतानामाहारः स्थितिकारणम्।

न त्वारादृतेऽस्त्यन्यप्राणिनां प्राणाधारम्॥

न चाहारसमं किञ्चिद्भैषज्यमुपलभ्यते।

शक्यतेऽप्यन्नमात्रेण नरः कर्तुं निरायमः॥

भैषजेनोपपन्नोऽपि निराहारो न शक्यते।

तस्मारद्भिषग्भिराहारो महाभैषज्यमुच्यते॥

काश्यपसंहिता, किलस्थानम्, अध्याय 4, श्लोक 4-6॥

15. अन्नं न परिचक्षीत । तद्ब्रतम् । अष्टमोनुवाकः 1

16. अन्नं न निन्द्यात् । तद्ब्रतम् । सप्तमोनुवाकः 1

17. Ayurveda Based Dietary And Lifestyle Advocacy For Mental

Health & Psychiatric Disorders, page 15

INVESTIGATION OF VARIOUS AHARA (FOOD) ASPECTS IN SANSKRIT LITERATURE

The importance of food (ahara) is identified right from the creation. Every living being on the earth is needed food to survival. If we observe, there is a gradation of development of food historically. Initially, the man used to have raw meat by hunting animals. Later, he found fire and had fried meat. Gradually, he learnt how to cultivate vegetarian food sources. Thereafter, different dishes are created. In medieval period, the cooking became an art and kings used to employ royal cook (सूदः). At present, food technology, food science, curricular art etc. courses are getting popular. Every day, in every corner of the world, a new kind of dish is being created by the professional cooks estimating the caloric value.

2.1. According to the Vedic Literature

Consumption of food substances depending on their availability. In Sanskrit literature, the references of food aspects can be observed periodically. In Vedic period, people used to have rice and barley which were considered as two sons of heaven.¹ Wheat (गोधूम) is mentioned in all संहिताs except ऋग्वेद.² There is no any direct reference about rice in ऋग्वेद.³ There are five varieties of rice mentioned in यजुर्वेद⁴. In Vedic period, pulses like मुद्ग, मसूर, माषाs etc. are used as food. Because of some reasons माषाs are indicted in ritual activities.⁵ There is a usage of buffalo milk and cow milk in the period of ऋग्वेद.⁶ People used to use all milk products like curd, ghee etc. There is a popular preparation of curds with boiled milk that is called आमिक्षा and the liquid part is called as वाजिना.⁷

The usage of meat is mentioned in early ऋग्वेद.⁸ Majority of people used animals like ox, cow, goat or big goat for meat and used fishes also as see food. In the later Vedic period, the list of animals is increased for meat. Actually, in this period, most of the animals are killed for the sacrificial purposes. As a result, the meat will be shared and served to the participants.⁹

Regarding sweets, honey (मधु) is the first sweet item identified in the Vedic period.¹⁰ The sugarcane (इक्षु) not directly expressed in ऋग्वेद.¹¹ But, chewing of sugarcane is mentioned in अथर्ववेद.¹² अपूप is one of the popular sweets in referred in ऋग्वेद, which in the form of round cake made up of barely or rice flour baked in clarified butter on slow fire¹³ and honey is used to sweeten अपूप.

The usage of salt is mentioned in Vedic literature except in ऋग्वेद.¹⁴ a few spices like बज (brassica), जम्बील (citrus aurantium) and हरिद्रा (turmeric) and long pepper are used in the preparation food articles.¹⁵ Regarding oils, sesame oil (तिलतैल) is used for cooking. This is referred in अथर्ववेद¹⁶, but it is missing in ऋग्वेद. The usage of mustard is appeared in उपनिषद्s and ब्राह्मणs.¹⁷

In this period, people used various kinds of fruits and vegetables. In ऋग्वेद, flowering and fruit bearing plants are mentioned.¹⁸ But, the names of different fruits can be observed in later संहिताs and आरण्यकs. for instance बिल्व, आमलकी, आम्र etc.¹⁹ In vegetables, cucumber (उर्वारुक) is popularly used in ऋग्वेद time.²⁰ Regarding beverages, सोम juice is the

most important one.²¹ The used to available in mountains of मौञ्जवन्त. This सोम juice sweet in nature and delicious in taste.

2.2. Sutra Literature

In sutra period, the usage of barely and rice is continued and an inferior variety of barely is mentioned in addition to common barely.²² Some new variety of preparations are mentioned by Panini. For instance, यवागु prepared by barely²³ and यवाक is another preparation with barely and milk.²⁴ Wheat (गोधूम) does not popular in this period. A fine variety of rice (शालि) is mentioned by Panini.²⁵ In sutra time, boiled rice is taken with curds, honey, meant and milk.²⁶ Used पिष्टिकाs a variety of cakes made up of rice flour.²⁷ Some varieties of wild rice like निवार, पियङ्गु and श्यामाक are used by tribals.²⁸ Similarly pulses like माषा, मुद्ग, कुलत्थ etc used for soup preparations.²⁹ In this period cow milk and its products are used commonly (गव्य or पयस्य).³⁰ The usage of ox or goat meat is meritoriously used in this sutra period to feed the guest.³¹ In this period, it clearly stated that the killing of animals for meat is only for serving the guests and ritual activities, otherwise, those should not be killed.³² Season wise, in addition to salt, some species like long pepper, black pepper etc. are also suggested in food.³³ In this sutra period the usage of honey is happened extensively in many ceremonies. Similarly. In sutra literature, there is no much list of fruits and vegetables. In this period, उदुम्बुर (Indian fig.) is the common fruit and Panini also mentioned rose apple (जम्बू)³⁴ and mango (आम्र).³⁵ Regarding beverages, the usage of आसव्य (a fermented drink)³⁶ and चिनीय (a sediment drink)³⁷ are mentioned Panini.

These kinds drinks are forbidden for Bramhanas and students in Dharmasutras.³⁸ Because they gives sedation.

In both Vedic and Sutra periods there are some common usage of food articles like rice barely, honey etc. and some new articles like नीवार, पियङ्गु. But the medicinal and nutritional information of those is missing there. Similarly, it is observed that the description about food articles is not mentioned at one place.

2.3. Buddhism and Jainism literature

Buddhism and Jainism periods, the utmost importance is given to the medicinal utility of food articles. In this period, three new varieties of rice (शालि) such as रक्तशालि, कलमशालि and महाशालि are brought in use extensively.³⁹ The preparation of यवागु is highly preferred by both (Buddhists and Jains).⁴⁰ Some people who are not able to get they depend on cereals like कोद्रव, श्यामक, चीनाक and पियङ्गु are used by poor people.⁴¹ For preparation of soups, pulses such as मुद्ग, माषा, मसूर, कुलत्थ, कलाय and आढकी are used.⁴² Milk is the common diery food article for Buddhists and Jains.⁴³ For curing cold etc. they used to add pungent drugs in milk.⁴⁴ The usage of butter milk is also there in this period.⁴⁵

In this period common people used to take meat. It is strictly forbidden for both followers.⁴⁶ But in extreme distress, there is no objection to have meant.⁴⁷ fix kinds of salt are mentioned in Buddhist literature (Vinaya pethika) such as sea salt, rock salt, black salt, kitchen salt and red salt. Other two varieties (सौवर्चला & पांशुक्षार) are added to those in Jain works.⁴⁸ There is continuation of usage of oils, fruits and vegetable in this period which are mentioned in sutra period.

2.4. Gupta period

In this period, some food related aspects can be gleaned thru a few works Kalidasa works, some Sanskrit dramas like Mricchakatikam and Brihatsamhita etc. the Puranic literature also thrown some light on food articles.⁴⁹ In Kautilya's work also one can find various vegetable and meat food articles. In addition, he mentioned 20 kinds of beverages. Because of the development of Ayurveda, medicinal awareness of food is increased in this period. By the different travelers for various countries there are some new food articles are introduced in India.⁵⁰ In interestingly, there is a discussion about some food articles in *Vaimanika shastra* also. The whole discussion is happened in the context of 'aharadhikarana', in this part, certain list of food objects⁵¹ is mentioned. those are provided in below table.

List food objects
गोधूम
मुद्ग
यव
दुर्वा
मञ्जु
कश
शौण्डीर
अश्वकर्ण
अतिमूल
करुवल्ली
चन्द्रवल्ली
मधुवल्ली
वर्चुवल्ली
माकुटीवल्ली

सुगन्धा
सूर्यवल्ली
सोमवल्ली
चक्रिका
तुम्बिका
रसवल्लिका
कुष्माण्डवल्लिका
इक्षुवल्लिका
पिष्टवल्लरी
सूर्यकान्ता
चन्दकान्ता
मेघनाथ
पुनर्नवा

2.5. Mideval period

During this period, India faced a number of exiles by invaders from all over the world. Due to this, there are new interventions of food articles, which are adopted and owned culturally. That kind of information is available in some Sanskrit literature. tried to present the such information in brief by taking *Manasollasa* and *Shivatattva Ratnakara* are as sample.

2.6. Manasollasa (1129 AD)

In the mideval period, Manasollasa is a land mark work on administration written by king Someswara. This text is considered as a treasury of ancient recipes. While providing the entire information available in the king's time, he also created a chapter on recipes is called as '*Annabhoga*' chapter. As the king Someswara belongs to Karnataka region, most of the recipes or food articles are pertained to South India.

This text is one of main Sanskrit literary sources for historians to know the South Indian food culture during the mideval time.

Rice (शालि)

In South India the main food article is rice. So, the chapter begins with description of eight varieties of rice⁵². In addition to, there is a description to identify the individual rice variety.

Rice variety	Identification
रक्तशालिः	रक्तवर्णः (red colour)
महाशालिः	महाकृतिः (large in shape)
गन्धशालिः	सुगन्धः (good odour)
कलिङ्गकः	कलिङ्गोत्थः (originate in Kalinga place)
मुण्डशालिः	शूकशून्यः (cover less)
स्थूलशालिः	स्थूलाकृतिः (big in size)
सूक्ष्मशालिः	सूक्ष्माकृतिः (small in size)
षष्टिकः	द्विमासः (two months' paddy)

2.7. Method of cooking rice

He directs that the cleaned rice needs to be boiled in either a copper or earthen vessel with 3 times on low flame sufficient water. The vessel needs to be covered with either lid or a piece of cloth. When steam comes out, the lid needs to be removed and the vessel stirred. If the grains are a bit hard, milk or ghee was added and removed from the fire and the excess water should be removed.⁵³ This is the popular method of cooking rice in that period. This method still practiced in south India.

2.8. Pulses for soups

To prepare soups, there are seven varieties of pulses⁵⁴ mentioned in this chapter such as -

Pulses
राजमुग्दा
पीता निष्पावा
चणका
कृष्णाढक्यः
माषा
राजमाषा
मसूर

2.9. Preparation of Soups

Different kinds of pulses are used (either as whole or split) for soups in this period. To prepare soups, the pulses need to be put into water and cooked with low flame. While cooking, water should be added in frequently. After the pulses are well boiled, then the asafetida water (हिङ्गुतोयम्) and turmeric need to be added. Salt can be added at end based on the taste.⁵⁵ Someswara also provides information about cooking pulses with meat. Pieces of flesh or fat or liver of sheep can be added to pulses and black pepper powder also needs to be put. The ginger powder can be added at the end. Before serving, this preparation can be mixed with Gandhasali or any type of millet.⁵⁶

2.10. Pulses for Snacks

Purika (पूरिका)

For the preparation of Purika, Indian chick peas need to be grounded along with water. Later, salt, sugar, black pepper, cardamom and asafetida (हिङ्गु) should be added to this and shaped into balls. After that the balls need be expanded using the hands and cooked.⁵⁷

Vestika and Dosaka (वेष्टिक & दोसक)

For preparing Vestika and Doshaka, the crushed Indian chickpeas should be mixed with cumin, asafoetida, ginger, salt, and turmeric and made as a thick mixture. With that mixture, small balls should be made and cook on a pan, this is called vestika. If the water is added more to that mixture and pour on the pan with oil, this is called dosaka. Dosaka can also be made with pulses like urad dal, red beans, dried green peas etc.⁵⁸

Katakarna (कटकर्ण)

To make Katakarna, chick peas need to be powdered and mixed with salt, water, ghee and powder of Indian bean. If this mix is deep fried in hot oil is katakarna.⁵⁹

Vatika (वटिका)

To make Vatika, urad dal should be soaked in water to remove the skin. Then, those need to be grinded as smooth paste. The paste should be kept it in a bowl for a full day until it's getting fermented. Then the paste should be kept in a cloth and tied. There should be a hole in the cloth, so that, the paste slowly dripped down. The cloth bundle need be put above heated oil and let the paste slowly fall into the oil. It should be deep fried and removed from oil. After getting it's cooled, that need to be seasoned with a mixture black pepper powder, asafoetida fried in ghee and cumin powder, this is called vatika.⁶⁰

Iddarika (इड्डरिका)

For the preparation of Iddarika (ildy) same urad paste should be spread into lumps and cooked to make tender white idarikas.⁶¹ This one of the popular south Indian breakfasts.

Gharika (घरिका)

For Gharika preparation, urad dal paste need to be shaped into round curved cakes with five or seven holes and cooked in hot oil till they get brown colour. There is another way of preparation of Gharika, which are made without holes are soaked in sugar syrup to make sweet gharikas.⁶² This recipe appears similar to today's jangiri or jilebi.

Sweet dishes

The king Someshwara mentioned various kinds of sweet items. We can find similar kind of preparations in present times. For instance, some of them are mentioned below.

A Kind of sweet (similar to gulab jamun)

For making this kind of sweet item, one should add buttermilk to slightly warm milk and then the whole separated milk needs to be poured into a cloth. Then, should tie it and hung until all the water drips down and the residue of fresh cheese remains in the cloth. The cheese needs to be mixed with rice flour and made as paste. From that paste, small balls need to be made and cook in ghee and soaked in sugar syrup (for preparing sugar syrup copper vessel should be used). After that garnish with powdered cardamom should be added. This recipe appears similar to today's gulab jamun.⁶³

Varshalaka (वर्षला)

To Make this Varshalaka, purified sugar should be added to milk and cooked until it thickens. Later, one needs to mix the powders of saffron, green camphor, dried ginger and cardamom to this paste Make

small pieces of the paste into different shapes. It is called varshalaka.⁶⁴
This recipe appears as today's paalkova.

Meat preparation

The preparation of meat is mentioned and used different animals for the preparation. As mentioned in Manasollasa, meat ought to be consumed along with sour taste dishes, salt with acidic foods and acidic with salty dishes.⁶⁵

Seasonal direction for intake food (based on the taste)

Manasollasa provides seasonal food directions for quicker digestion. Seasonally, one should consume pungent and astringent dishes in spring, sweet and cooling ones in summer, sweets in winter, salty food during rainy season, oily and hot preparations during winter, and hot and acidic in autumn.⁶⁶

2.11. Sivatatva Ratnakara (1694 to 1714 AD)

'Sivatattva Ratnakara' is an encyclopediac work in post medieval period. This is written by Keladi Basavaraja in the form of dialogue between Basavaraja and his son. This text contains around 13,000 Sanskrit verses and segregated in 6 chapters (called as कलोलs). Each chapter consists certain subdivisions (called as तरङ्गs). The 6th chapter contains 27 subdivisions (tarangas) which reveals about fundamental concepts of food and various food articles in the name of upabhogas (divisions of royal enjoyments). In addition, this chapter provides the information about Medicine and Veterinary Sciences. Similarly, it provides the properties of milk and milk products and properties of cooked rice etc.

2.11.1. Rice (शालि) in Shivatattva Ratnakara

The author Basavaraja took the reference of eight kinds of rice along with rice preparation method⁶⁷ from Manasollasa and the verses are also copied as it is. To present the details of rice, the same table is mentioned below, which is provided previously.

Rice variety	Identification
रक्तशालिः	रक्तवर्णः (red colour)
महाशालिः	महाकृतिः (large in shape)
गन्धशालिः	सुगन्धः (good odour)
कलिङ्गकः	कलिङ्गोत्थः (originate in Kalinga place)
मुण्डशालिः	शूकशून्यः (cover less)
स्थूलशालिः	स्थूलाकृतिः (big in size)
सूक्ष्मशालिः	सूक्ष्माकृतिः (small in size)
षष्टिकः	द्विमासः (two months' paddy)

2.11.2. Eight defects of cooked rice and its impact on health

In Manasollasa, the medicinal utility of rice not mentioned, whereas in the present text, Basavaraja in one hand mentioned the details of rice and other hand provided its medicinal utility in detail. In context, he described eight defects of improper rice preparation⁶⁸. That information is mentioned below:

Type of defected rice	Wrong preparation	Causes to
अस्त्रुत (astuta)	gruel is not filtered properly	Skin disease
पिच्छिल (picchila)	rice that is overcooked	Indigestion
अशुचि (ashuchi)	Cooked rice containing insects and hair	Indigestion
क्वथित (kvathita)	cooked in excess water	Unhealthy
शुष्कित (sushkita)	kept for a long time	Unhealthy
दग्ध (dagdha)	burnt rice due to excessive heat	dries up the tissues
विरुप (virupa)	shape of unboiled rice	diminishes years of one's life
अन्तर्तुज (antarjuta)	cooked rice that is more than three hours old	sleep and cold related disorders

2.11.3. Different cooking vessels and their medicinal utilities

Interestingly, Basavaraja provides information about various cooking vessels and their medicinal impact on health. This indicates that the Basavaraja adopted the Ayurveda principles and applied on vessels to identify the medicinal benefits based on their internal chemical reactions. This kind of detailed description is not appeared in Manasollasa. All vessels and their curative effects described in Shivatattva Ratnakara⁶⁹ are mentioned in below table.

Cooking Vessel	Curative effect
Copper (ताम्र)	Cures rheumatism, and colic
Iron (लोह)	Increases blood in the body and also cures lung disease
Bronze (कांस्य)	Cures bile and phlegm
Silver (रुप्य)	Cures bilious and phlegmatic constitution
Gold (कनक)	Proves an antidote to poison and cures indigestion and lividness, nervous system
Earthenware (मृण्मय)	cools the system, purifies blood and cures bile
Utensils (made of red, black and white clay)	Having different curative effects

2.11.4. Pulses for Soups

Like in Manasollasa, Basavaraja also mentioned the seven kinds of pulses for soup preparation, such as राजमुद्ग, निष्पाव, चणका, मसूर, कृष्ण-आढका, माषा and राज-माषा.⁷⁰ the method of cleaning and soup preparation is also mentioned same as in Manasollasa.

2.11.5. Vegetables

In Sivatatva Ratnakara, various kinds of vegetables are mentioned such as – पलशाक (fruit vegetable), पत्रशाक (leaf vegetable), कण्डशाक (stem/root vegetable), पुष्पशाक (flower vegetable) and शिम्बिशक (seed vegetable).⁷¹ Similarly, certain list of vegetables also described along with their medicinal properties.

Snacks with pulses

Basavaraja mentions preparation of various snacks by using pulses same as described in Manasollasa. in addition, he meitoned their medicinal utilities too.

Miscellaneous

Basavaraja describes various sweet items as mentioned in Manasollasa and given their medicinal information additionally. Similarly, using oils and milk products are also described well in contextually. He took the references from Ayurvevda about maintaining healthy body and presented nicely in end of this chapter. Similarly, he mentioned various kinds of water along with place of availability and medicinal properties.

In this entire chapter, it is tried to give a glance of historical evaluation of food and various articles of food based on the available references in Sanskrit literature. from this overview, one thing can be known that, when the creation is commenced, food was a survival factor. Later it became survival, social, and cultural factor in Vedic and Sutra period. In Budha and Jaina period, by the influence of Ayurveda, the medicinal approach is added to the food additionally. In the medieval time (Manasollasa time), cooking food became an art and practiced various food articles with different food objects or ingredients tastily. In addition to Manasollasa, the detailed medicinal approach to the food is mentioned in Shivatattva Ratnakara. In modern period we see the nutrition values of food substances and energy levels they cause according to the calories.

In the mideval period there are a few Ayurveda related works which are purely dedicated to food and in some of the Ayurvedic nighantus also described various kinds of food articles. This part will be discussed in next chapter in detail.

ENDNOTE :

1 दिवस्पुत्रावमत्यौ AvVIII 7.20.

2 Foods and Drinks in Early India, p9

3 Foods and Drinks in Early India, p9

4 Foods and Drinks in Early India, p10

5 न माषाणामश्रीयादयज्ञिया वा माषाः। मै.सं.I.4.10

6 सखा सख्ये अपचतूयमग्निरस्य क्रत्वा महिषा त्रि शतानि। Rv.V.29.7.

7 Foods and Drinks in Early India, p14

8 Foods and Drinks in Early India, p15

9 Foods and Drinks in Early India, p16

10 Foods and Drinks in Early India, p18

11 Foods and Drinks in Early India, p19

12 परित्वा परित्नुनेक्षुणागाम विद्विषे।e

यथा मां कामिन्यसो यथा मन्नापगा असः॥ Av.1.34.3

13 यवमयमपूपं कृत्वा यत्राहवनीयमाधान्याभवति तन्निदधाति।

Sat.Bra.II.2.3.13

14 Foods and Drinks in Early India, p19

15 Foods and Drinks in Early India, p20

16 यः कुमारी पिङ्गलिका वसन्तं पीवरी लभेत्। तैलकुण्डमिमाङ्गुष्ठं रोदन्तं
सुदमुद्धरेत्॥ Av XX.136.16.

17 Foods and Drinks in Early India, p20

18 याः फलिनीर्या अफला अपुष्पा याश्च पुष्पिणी। बृहस्पति प्रसूतास्तानो

मुञ्चन्त्वंहसः॥ Rv. X.97.15

19 Foods and Drinks in Early India, p21

20 उर्वारुकमिव बन्धनान्मृत्योर्मुक्षीय मावृतात्। Rv.VII.59.12

21 नित्यस्तोत्रो वनस्पतिर्धीनामन्तः सबर्दुधः हिन्वानो भानुषा युगा। Rv.IX.12.7

22 यव. पाणिनि V.1.7.

23 पाणिनि IV.2.136

24 पाणिनि V.3.25

25 पाणिनि V.2.2

26 ओदनं दध्ना मधुना घृतेनाद्भिरिति समुदायुत्य हिरण्येनौषधेन कुमारं

प्राशयति। Baudh.Gr.Su.II.3.5

27 पाणिनि.IV.3.147.

28 Foods and Drinks in Early India, p37

29 Foods and Drinks in Early India, p37

30 पाणिनि.IV.3.160.

31 Foods and Drinks in Early India, p38

32 मधुपर्के च यज्ञे च पितृदैवतकर्मणि।

अत्रैव पशवो हिंस्यान्नान्यथत्येब्रवीन्मनुः॥ Vas.Dh.Su.IV.6.

33 Foods and Drinks in Early India, p41

34 पाणिनि.IV.3.165

35 पाणिनि.VIII.4.5

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- 36 पाणिनि.III.1.126
- 37 पाणिनि.III.1.117
- 38 मद्यं नित्यं ब्राह्मणः। Gau.Dh.Su.II.25.
- 39 Foods and Drinks in Early India, p58
- 40 Foods and Drinks in Early India, p58
- 41 Foods and Drinks in Early India, p60
- 42 Foods and Drinks in Early India, p61
- 43 सेय्यथापि चित्तगवा खीरं, खीरम्हादधि, दधिम्हा नवनीतं, नवनीतम्हा सप्पि,
सप्पिम्हा सप्पिमण्डो। Digh.N. Pottapada Sutta.54
- 44 तिखिणभेसज्जपरिवारितं खीरं पिबन्ति। J.127.
- 45 Foods and Drinks in Early India, p63
- 46 Foods and Drinks in Early India, p67
- 47 Foods and Drinks in Early India, p67
- 48 Foods and Drinks in Early India, p69
- 49 Foods and Drinks in Early India, p170
- 50 Foods and Drinks in Early India, p168
- 51 वैमानिकशास्त्रम्, अध्याय 01, आहाराधिकरणम्, श्लोक 25-75, p28-38
- 52 मानसोल्लास, विंशति 3, अन्नभोग, श्लोक 45-48, p115
- 53 मानसोल्लास, विंशति 3, अन्नभोग, श्लोक 49-57, p116
- 54 मानसोल्लास, विंशति 3, अन्नभोग, श्लोक 57-58, p116
- 55 मानसोल्लास, विंशति 3, अन्नभोग, श्लोक 59-70, p117

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- 56 मानसोल्लास, विंशति 3, अन्नभोग, श्लोक 71-75, p118
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- 59 मानसोल्लास, विंशति 3, अन्नभोग, श्लोक 94-96, p119
- 60 मानसोल्लास, विंशति 3, अन्नभोग, श्लोक 97-4, p119-120
- 61 मानसोल्लास, विंशति 3, अन्नभोग, श्लोक 97-1, p119-120
- 62 मानसोल्लास, विंशति 3, अन्नभोग, श्लोक 3, p120
- 63 मानसोल्लास, विंशति 3, अन्नभोग, श्लोक 5-10, p120
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- 67 शिवतत्त्वरत्नाकरः, 6 कल्लोल, तरङ्ग 18, श्लोक 29-41, p66-67
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INVESTIGATION OF FOOD ARTICLES BASED AYURVEDA LITERATURE

The concept of food and various food articles are widely described in Ayurveda classics like Charaka Samhita etc. In the medieval times, certain list of recipes is also documented in various Ayurvedic Nighantus like Bhavaprakasa etc. simultaneously, there are certain texts dedicated food composed in Ayurveda such as, Bhojana kutuhalam and Kshemakutuhalam. In this chapter, a brief discussion has provided about Bhojana kutuhalam and kshemakutuhalam and Bhavaprakasha.

3.1. Bhojana kutuhalam

Bhojana kuthuhalam (curiosity about food) is an important 17th century dietary text in Sanskrit by Raghunatha Suri. Like other texts, it is a compilation work available on the subject from ancient Ayurvedic texts in the medieval texts such as Raja Nighantu, Bhavaprakasa, Ashtangahridaya, Dhanvantari Nighantu, and Hridayadipaka. It discusses the varieties of food and drink, their characteristics, and their nutritional value constituting both vegetarian and non-vegetarian food.

This text is segregated in three parts. The first part describes dravyagunas (properties of ingredients) and cooked food in a scientific manner in detail. The other two parts discuss edible and non-edible ingredients in dharma sastra perspective.

Raghunatha Suri never specify exact amounts of ingredients in any recipe. While he was particular about the detailed procedures, often he left out the common ingredients like salt etc. Probably he may think that the cook will decide on his own on individual tastes and preferences.

Recipes and culinary techniques described in Bhojanakuthuhalam. A variety of beverages made with tart fruits and leaves and fermented drinks called kanjikas made from cereals, legumes, fruits, vegetables, leaves and roots are described in Bhojana Kuthuhalam.

3.2. Beverages (panakas)

Beverages constitutes health drink and various types of *madhura rasa*. In Bhojana kutuhalam, there are certain beverages¹ (panakas) created with the addition of sugar, spices, tart liquids such as lemon juice, tamarind juice and yogurt.

Panakas depicted from Bhojana kutuhalam

Cool drink (panaka)	Ingredients and procedure	Health benefits
Sharkarodaka	Pure sugar soaking in cool water and adding cardamom, cloves, edible camphor and pepper.	It alleviates vata and kapha and treats dyspnea, bodyache, heartburn, painful urination and toxicity.
Nimbuphala panaka	Six parts of sarkarodaka mixed with one part of lemon juice	Improves digestive fire and imparts taste.
Amlikaphala panaka	Ripe tamarind is mixed with water and squeezed. This extracted liquid is mixed with sugar, edible camphor, cloves and black pepper.	It alleviates vata and slightly aggravates pitta and kapha. It imparts taste and stimulates digestive fire.
Dhaniya panaka	Coriander leaves macerated properly on a stone and filtered through a cloth and mixed with sarkarodaka	It alleviates pitta and improves digestive fire.
Takrapanaka	Buffalo curd with the	Imparts taste, stimulates

	addition Fried asafetida cumin seeds, mustard seeds and salt.	fire and nourishes the body.
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3.3. Kanjikas (cereal and legume)

It is consigned a form of soup now a days. Before Christ the Europeans also consigned a form of stew in the morning. The liquid from cooked cereals or vegetables is to fermented, then that is called kanjika. The Kanjika prepared with fried balls of ground urad dal is the best one according its properties. They are other kanjikas prepared It is having hot and light and imparts taste. It improves digestion and alleviates diseases of the stomach. They are various kanjikas² mentioned in Bhojana kutuhalam.

Kanjika	Ingredients and procedure	Health benefits
Tusodaka	Raw barley with husk is cut into small pieces and gruel is prepared and allowed to ferment	It imparts teste and improve digestive fire.
Sauvira	Gruel is prepared from de-husked barley.	Supports digestion and allevieates vata.
Aranala	Gruel made with de-husked wheat.	It alleviates kapha and improves digestion.
Dhanyamla	Fermented gruel prepared from rice flour or a variety of millet called kodrava.	It pacifies kapha and vata. It is cordial and imparts taste.
Jhali	Unripe mango is ground along with water, mustard	It improves digestive fire and alleviates vata.

	and salt. It is filtered through a clean cloth and garnished with fried asafetida.	
Sandaki	Juice extracted from the leaves of radish is mixed with mustard and allowed to ferment	It cools the body and alleviates vata and pitta. It is good for heart.
Sukta	It is made by fermenting the gruel made with root vegetables or fruits. Salt and oil should be added to it before consumption	It nourishes the body and it purifies blood. It is cordial.
Katika	It is made with buttermilk, butter, ten different spices, three types of fruits (black myrobalan, pomegranate and Indian gooseberry), rock salt and elemental pure sulphur. The spices include black pepper, wild pepper, dry ginger, long pepper, roots of long pepper, asafetida, coriander, cumin and rosy leadwort flower (plumbago indica L). To prepare this drink grind all the spices and fruits along with sulphur and rock salt.	It alleviates vata and kapha. It is cordial, and imparts taste.

	Mix it with butter and stir into buttermilk. Boil the buttermilk for ten minutes and then remove from the fire. Cool and serve	
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In addition to, there are recipes pertain to non-veg. Regarding snacks, some vadas also mentioned in this text along with their medicinal properties.

3.4. Kshema kutuhalam

Kshema kutuhalam (curiosity about wellbeing) is a famous work in the 16th century text in Sanskrit by Kshema Sarma, a poet in the court of king Vikramasena. Virkamasena was one of the Rajput rulers. It is a compilation work based on the available information on the subject. Kshema kuthuhalam is composed in metrical Sanskrit and is segregated into 12 chapters (called Utsavas). It discusses varieties of food and drink, vegetarian and non-vegetarian food, their characteristics, and their nutritious value. In addition to these elaborate descriptions the book gives details on several related topics.

3.4.1. Types of food and culinary techniques

This text begins with the description of four types of foodstuffs – food to be swallowed (bhojyam), chewed (bhakshyam), licked (lehyam) and drunk (peyam) and their association with the six tastes – Sweet, Sour, Salty, Bitter, Pungent, and Astringent.³ Further, he lists the seven types of cooking food- frying, floating in oil, vaporizing, cooking to ripen, boiling, roasting on a spit, and cooking in a pit after wrapping in leaves. He warns the reader that oil, salt and asafoetida must be added to dishes when necessary, even though they are left unsaid in the descriptions. He

mentions that food is colored with the use of saffron, red sandalwood and betel leaf.⁴

3.4.2. Vesavara (a type of flavoring agent)

A mixture of spices is called vesavara is used in meat preparations. It is made by combining asafoetida, wet ginger, cumin seeds, black pepper and coriander seeds. After combining this mixture with water and then filtered with a cloth. It is also good for suppressing cough, for which it should be cooked in hot sesame oil.⁵

Cardamom, cloves, cinnamon, black pepper and musk are powdered and sprinkled over foods prepared with milk and sugarcane as well as in all dishes made with vegetables and rice. This power is also used to garnish broths, and meat and fish dishes.⁶

In cooking meat and fish dishes, asafoetida should be first dissolved in water and stirred into hot oil. After asafoetida, vesavara is added to meat dishes along with salt. When the meat is half cooked butter milk and pomegranate extract should be stirred in. Final garnish is with spice powder described above.⁷

Then he describes extracting juice from pomegranate by first cooking the seeds in ghee and then adding buttermilk and then straining through a cloth.⁸

3.4.3. Culinary Measurements

Droni, dronadhaka, prastha, kudava, pala, picu, sankha and masaka are the measurements used in cooking at this time. These measurements are in multiples of four - four masaka equals one sankha, four sankha equals one picu and so on.⁹

3.4.4. Basic Cooking Instructions

He instructs that all food should be cooked over low to medium heat. One should never cook milk on high heat unless mixed with rice or

a decoction. Four measures of water should be added to one measure of rice before cooking. For soup made with mung beans one should add thrice the amount of water, for urad dal soup a bit more water is required. When making porridges water should be less than what is used for soups. Harder foodstuffs need more water to cook. Ten pala of meat requires one pala of oil to cook. Salt requires half pala oil and vesavara requires one picu of oil. When cooking fish one should use a fourth of the quantity of spices and oil used in cooking meat.¹⁰

To cook six varieties of edible plant products same quantities used for meat may be used. Slightly less quantity should be used for rice dishes. When making the soothing drink called rasala, mix two measures of thick yogurt to one measure of sugar and this should be added atop the rasala drink. Fruits from trees vary in their sourness. Hence sugar should be added according to taste in fruit drinks.

3.4.5. Arrangement of Kitchen

The kitchen should be arranged in the southeast quarter of the house, its walls should be half-whitewashed and it should have latticed windows.¹¹

Food Articles in Kshema kutuhalam

In Kshema kutuhalam, there is a wide range of list of recipes like soups, snacks, sweet dishes, meat dishes, beverages etc. To express the significance of this treatise, here a small list of recipes¹² is mentioned below:

Food Article	Medicinal benefits
Mugdasupa	Diseases pitta and khapa
Barkari	Useful in sinusitis and dry cough
Cilodhia	Increases kapha and develops mamsa dhatu.
Mrigi	Useful in fever arising from the imbalance of all doshas also useful in dyspnoea
Korvata	Increases pitta
Golavataka	Cures sight
Navanitaphenika	Causes obesity
Masaphenika	Cures burning sensation
Suranamodaka	Good for throat, treats dyspnoea and cough
Polika	Decreases vata
Lapsika	Increases medas
Dadhivatika	Increases kapha

3.5. Bhavapraksha

'Bhavaprakasha' been considered one of the integral components of 'small triad' (*laghu trayi*) that helps in understanding the Indian Materia Medica in a better way. Bhava Mishra (16thC.) is the author of this popular Ayurvedic *nighantu*. He is an important landmark in the history of Indian medicine as he stands at the junction of the medieval and modern periods which is the turning point for its future course and also because of the fact that he had revived the style of Samhitas and

contributed a good deal to various aspects of indigenous medical portfolio by adding new ideas and information on contemporary drugs.

The author has given clue about his identity in the introductory verse itself. He was humble in saying that the book is a compilation of ideas from his predecessors to dispel darkness of ignorance of medical knowledge. From colophon it appears that he was the son of one Sri Latakana Mishra.

He has not mentioned his native place anywhere in the text. Some scholars said that he belonged to the region of Varanasi or Kanyakubja, but they have not given any reason for the same. He has mentioned '*vishnu pada*' by indicating '*sripati pada*' which indicates his connection with Gaya which is the seat of the famous temple of *vishnu pada*. He has also used regional names prevalent in Magadh. He has also described types of banana such as Swarna, Champaka etc. which are commonly grown at Hajipur in Bihar.

The text has about 10,268 verses in total, distributed among three sections, seven parts and 80 chapters. The following are the main three sections:

Purva khanda (has seven chapters and deals with principles, groups of drugs and articles of diet.)

Madhyama khanda (has seventy one chapters dealing with etiology, symptomology, Pathogenesis, prognosis, treatment (*kāyacikitsa*), vegetable formula, mercurial and mineral formulations, advises surgery for tumors not cured by medicines.)

Uttara khanda (has only two chapters dealing with virilization (*vājīkarana*) and *rasāyana* therapy.)

Some of the recipes are depicted from Ayurveda

3.5.1. Food Articles in Bhavaprakasha

In Nighantu part of Bhavaprakasha, there are around 73¹³ different recipes mentioned along with their medicinal properties and medicinal benefits. For instance, some of the recipes stated below.

Dal	Rasa-Madhura Guna-Ruksha (Rough) Virya-Sita (Cold) Vipaka-NA Karma-NA
Pulses (Simbi dhanya)	Rasa-Madhura (Sweet) and Kashaya (Astringent) Guna-Ruksha Virya-Sita Vipaka-katu (Pungent) Karma- Pacifies Kapha and Pitta but aggravates Kapha.
Water	Rasa-Avyakta (Not identified) Guna-Laghu (Light) Virya-Sita (Cold) Vipaka- NA Karma- NA
Salt	Rasa-Light Sweet Guna-Laghu Virya-Light Hot Vipaka-Sweet Karma-Good for eyes, Good for heart, deepaniya, pacifies all three doshas

Ginger	Rasa-Katu (Pungent) Guna- Guru (hevy) and Tikshna (Sharp) Virya- Ushna (Hot) Vipaka-Madhura (Sweet) Karma- Pacifies vata and Kapha, Appetizer
Hingu (<i>Ferula asfoetida</i>)	Rasa-Katu (Pungent) Guna-Laghu and Snigdha Virya-Ushna Vipaka-Katu Karma-Pacifies vata and kapha, Appetizer

Krsara	Rasa-Madhura Guna-Guru Virya-Sita Vipaka- NA Karma- Aggravates Kapha
Rice	Rasa-Madhura and Kashaya (Astringent) Guna-Laghu and Snigdha Virya- NA Vipaka- NA Karma-Aggravates Kapha and Vata but Pacifies Pitta
Pulses	Rasa-Madhura (Sweet) and Kashaya (Astringent) Guna-Ruksha Virya-Sita

	Vipaka-katu (Pungent) Karma- Pacifies Kapha and Pitta but aggravates Kapha.
Water	Rasa-Avyakta (Not identified) Guna-Laghu (Light) Virya-Sita (Cold) Vipaka- NA Karma- NA
Ginger	Rasa-Katu (Pungent) Guna- Guru (heavy) and Tikshna (Sharp) Virya- Ushna (Hot) Vipaka-Madura (Sweet) Karma- Pacifies vata and Kapha, Appetizer
Salt	Rasa-Light Sweet Guna-Laghu Virya-Light Hot Vipaka-Sweet Karma-Good for eyes, Good for heart, deepaniya, pacifies all three doshas
Asafoetida	Rasa-Katu (Pungent) Guna-Laghu and Snigdha Virya-Ushna Vipaka-Katu Karma-Pacifies vata and kapha, Appetizer

Tapahari	Rasa-Madhura Guna-Guru Virya-Sita Vipaka- NA Karma-Aggravates Kapha bit pacifies Pitta
Masa	Rasa-Madhura Guna-Guru and Snigdha Virya-Sita Vipaka-Madhura Karma-Pacifies Kapha and Pitta but aggravates Vata
Rice	Mentioned above
Water	Mentioned above
Salt	Mentioned above
Ghee	Rasa-Madhura Guna-Guru Virya-Sita Vipaka-Madhura Karma-Pacifies Vata and Kapha
Ginger	Mentioned above
Haridra	Rasa-Katu and Tikta (Bitter) Guna-Ruksha Virya-Ushna Vipaka- NA Karma-pacifies Pitta

Krisika – milk pudding / Payassa	Rasa-Madhura Guna- NA Virya-Sita Vipaka- NA Karma- Pacifies Vata and Pitta
Milk	Rasa-Madhura Guna-Guru and Snigdha Virya-Sita Vipaka-Katu Karma-Pacifies Vata and Pitta
Ghee	Mentioned above
Rice	Mentioned above
Sugar	Rasa-Madhura Guna- NA Virya-Sita Vipaka- NA Karma-Pacifies Vata and Pitta

Narikela Krisika	Rasa-Madhura Guna-Guru and Snigdha Virya-Sita Vipaka- NA Karma- pacifies Vata
Coconut pulp	Rasa-Madhura

	Guna- NA Virya-Sita Vipaka- NA Karma- Pacifies Pitta and Vata
Cow milk	Mentioned above
Sugar	Mentioned above
Cow ghee	Mentioned above

Sevika – Vermicelli	Rasa-Madhura Guna- NA Virya-Sita Vipaka- NA Karma- Pacifies Pitta and Vata
Dried Wheat Strands – vermicelli	
Ghee	Mentioned above
Milk	Mentioned above
Sugar	Mentioned above

Samita – wheat flour	Rasa-Madhura Guna-Guru and snigdha Virya-sita Vipaka-Madhura Karma- pacifies Vata and Pitta
Powdered wheat	Rasa-Madhura Guna-Laghu, abhisyandi, Picchila and Ruksha Virya-Sita Vipaka-Katu Karma- pacifies Vata and Pitta but aggravates Kapha
Godhuma	Rasa-Madhura Guna-Laghu, abhisyandi, Picchila and Ruksha Virya-Sita Vipaka-Katu Karma- pacifies Vata and Pitta but aggravates Kapha

Mandaka – pot cake	Rasa-Madhura Guna-Laghu, Virya-Sita Vipaka-Madhura Karma- pacifies Vata and Pitta
Wheat flour	Rasa-Madhura Guna-Laghu, abhisyandi, Picchila and Ruksha Virya-Sita Vipaka-Katu Karma- pacifies Vata and Pitta but aggravates Kapha
Water	Mentioned above

Polika – cake fried in oil/ghee	Rasa-Madhura Guna-Laghu, Virya-Sita Vipaka-Madhura Karma- pacifies Vata and Pitta
Wheat	Rasa-Madhura Guna-Laghu, abhisyandi, Picchila and Ruksha Virya-Sita Vipaka-Katu Karma- pacifies Vata and Pitta but

	aggravates Kapha
Water	Mentioned above

Lapsika – halwa	Rasa-Madhura Guna-Laghu, Virya-Sita Vipaka-Madhura Karma- pacifies Vata and Pitta
Wheat flour	Rasa-Madhura Guna-Laghu, abhisyandi, Picchila and Ruksha Virya-Sita Vipaka-Katu Karma- pacifies Vata and Pitta but aggravates Kapha
Ghee	Mentioned above
Milk	Mentioned above
Sugar	Mentioned above
Lavanga	Mentioned above
Marica	Rasa-Katu Guna-Laghu, Ruksha and Tikshana Virya-Ushna Vipaka-Katu Karma- pacifies Vata and Kapha

Rotika – pan cake	Rasa-Madhura Guna-Guru Virya-Sita Vipaka- NA Karma- pacifies Vata but aggravates Kapha
Traditional roti (Angara karkati)	Rasa-Madhura Guna-Laghu Virya- NA Vipaka- NA Karma- Aggravates Kapha
Wheat flour	Mentioned above
Water	Mentioned above

Yava rotika – barley roti	Rasa-Madhura Guna-Laghu and Vishada Virya- NA Vipaka- NA Karma- Pacifies Vata and Kapha
Balabhadrika – camasi	Rasa-Madhura and kashaya Guna-Laghu and Ruksha Virya-sita Vipaka- NA Karma- Aggravates Vata

Flour of dry masa	Rasa-Madhura Guna-Guru and Snigdha Virya-Sita Vipaka-Madhura Karma-Pacifies Kapha and Pitta but aggravates Vata
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Dhumasi – jharjhari	Rasa-Madhura Guna-Guru Virya-Sita Vipaka-Madhura Karma-Pacifies Kapha and Pitta but aggravates Vata
Dal of masa	Rasa-Madhura Guna-Guru and Snigdha Virya-Sita Vipaka-Madhura Karma-Pacifies Kapha and Pitta but aggravates Vata
Water	Mentioned above
Canaka rotika	Rasa-Madhura Guna-Guru and Ruksha Virya- NA Vipaka- NA Karma-Pacifies Kapha and Pitta

Canaka flour	Rasa-Madhura and Kashaya (Asringent) Guna-Guru and Ruksha Virya-Sita Vipaka- NA Karma-Pacifies Kapha and Pitta

Pistika	Rasa-Madura Guna- NA Virya-Sita Vipaka- NA Karma- NA
Dough of dal	Mentioned above
Bedhamika	Rasa-Madhura and katu Guna-Guru and Ruksha Virya- NA Vipaka- NA Karma-Pacifies Pitta
Wheat flour	Mentioned above
Water	Mentioned above
Masa	Mentioned above

Papad (Dried and then fried/roasted)	Rasa-Madhura Guna-Guru and Ruksha Virya-Sita Vipaka-Madura Karma- Appetizer and digestive
Black gram- masa	Mentioned above
Water	Mentioned above
Asafetida (Hingu)	Mentioned above
Turmeric(Haridra)	Mentioned above
Lavana (salt)	Mentioned above
Jiraka	Rasa-Katu Guna-Laghu and Ruksha Virya-ushna Vipaka-Katu Karma-Pacifies Kapha
Svarjika (<i>Vateria indica</i>)	Rasa-Katu and Kashaya Guna- Laghu Virya-ushna Vipaka- NA Karma-Pacifies Kapha

Poori	Rasa-Katu Guna- NA Virya-Ushna Vipaka- NA Karma- NA
Pistika	Rasa- NA Guna- NA Virya- NA Vipaka- NA Karma- NA
Salt	Mentioned above
Ginger	Mentioned above
Asafetida	Mentioned above
Samite	Mentioned above
Oil	Rasa-Kashaya and tikta (bitter) Guna-Guru, Vikasi, Vishada, Suksma Virya-Ushna Vipaka- NA Karma-Pacifies Vata and Kapha

Vataka – vada	Rasa-Madura and Katu Guna-Guru and Ruksha Virya-Sita Vipaka- NA Karma-Aggravates Kapha
Pistika	Mentioned above
Salt	Mentioned above
Ginger	Mentioned above
Asafetida	Mentioned above

Kanjika vataka fermented vada (Soaked in butter milk, added with jiraka, hingu, lavana)	Rasa-Madhura and Amla Guna-Guru Virya-Sita Vipaka- NA Karma-Aggravates Kapha
Mustard oil	NA
Water	Mentioned above
Rajika	NA
Jiraka	Mentioned above
Lavana	Mentioned above
Asafetida	Mentioned above
Sunthi	Mentioned above
Nisa	NA
Vada	NA

Amla Vataka	Rasa-Amla and Madhura Guna-Guru Virya-Sita Vipaka- NA Karma-Aggravates Kapha
Amla	Rasa-Kashaya Guna-Laghu and Ruksha Virya-Ushna Vipaka-Madhura Karma-Pacifies Pitta and Kapha
Jiraka	Mentioned above
Lavana	Mentioned above
Asafetida	Mentined above
Nisa	NA
Vada	Mentioned above

kvatitha – bolied spiced buttermilk	Rasa-Madhura and Katu Guna-Guru Virya-Sita Vipaka- NA Karma-Aggravates Kapha
Turmeric	Mentioned above
Asafetida	Mentioned above
Ghee	Mentioned above
Buttermilk	Mentioned above
Pepper	Mentioned above
Salt	Mentioned above

Takra mamsa	Rasa-Madhura, Katu Guna-Laghu Virya-Ushna Vipaka-NA Karma- Pacifies Vata and Kapha
Ghee	Mentioned above
Goat meat	Rasa-Madhura Guna- NA Virya- NA Vipaka-Madhura Karma-Pacifies Pitta and Kapha
Haridra	Mentioned above
Asafetida	Mentioned above
Water	Mentioned above
Buttermilk	Rasa-Madhura Guna-Laghu, Vikasi and Ruksha Virya-Ushna Vipaka-Madhura Karma-pacifies Vata, pitta and Kapha
Jiraka	Mentioned above

Harisa	Rasa-Madhura and Katu Guna-Guru and Snigdha Virya-Sitoshna Vipaka- NA Karma- pacifies Vata and Pitta
Meat	Rasa-Madhura Guna-Guru Virya- NA Vipaka-Madhura Karma-Pacifies Vata
Water	Mentioned above
Ghee	Mentioned above
Asafetida	Mentioned above
Jiraka	Mentioned above
Haridra	Mentioned above
Ginger	Mentioned above
Sunthi	Rasa-Katu Guna-Guru and Ruksha Virya-Ushna Vipaka-Madhura Karma-Pacifies Vata and Kapha
Lavana	Mentioned above

Marica	Mentioned above
Rice	Mentioned above
Wheat	Mentioned above
Lemon juice	Mentioned above

Talita mamsa	Rasa-Madhura and Katu Guna-Laghu Virya-Sitoshna (Sita and Ushna) Vipaka- NA Karma- Pacifies Vata and Pitta
Suddha mamsa	Mentioned above
Ghee	Mentioned above
Sulya Pala	Rasa- NA Guna-Laghu Virya- NA Vipaka- NA Karma-pacifies Vata and Kapha
Liver meat	NA
Ghee	Mentioned above
Salt	Mentioned above

Mamsa Sringataka	Rasa-Katu and Madhura Guna-Guru Virya-Ushna Vipaka- Karma-Pacifies Vata, Pitta and Kapha
Suddha mamsa	Rasa-Madhura Guna-Guru Virya- Vipaka-Madura Karma-Pacifies all three doshas
Water	Mentioned above
Lavanga	Rasa-Katu and Tikta Guna-Laghu Virya-Sita Vipaka- Karma-pacifies Pitta and Kapha
Asafetida (Hingu)	Mentioned above
Lavana	Mentioned above
Marica	Mentioned above
Ginger	Mentioned above
Ela	Rasa-Katu Guna-Laghu Virya-Sita

	Vipaka- NA Karma-Pacifies Pitta and Kapha
Jiraka	Mentioned above
Dhanyaka (Coriander sativum)	Rasa-Katu and Kasaya Guna-Laghu and Snigdha Virya-Ushna Vipaka-Madhura Karma-Pacifies Vata and Kapha
Lemon juice	Rasa-Amla (Acidic) Guna-Tikshna Virya-Ushna Vipaka- NA Karma-Pacifies Vata, Pitta and Kapha
Ghee	Mentioned above
Samite	Mentioned above
Ghee for frying mamsa enclosed samita balls	NA

Siddha mamsa rasa – meat soup	Rasa-Madhura and Katu Guna- NA Virya-Sita Vipaka- NA Karma- Good for Spermoprotic, immune-boosting, Noor tropic, tonic and nutritive
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Saka Paka Vidhi – process of cooking all kinds of vegetables	NA
Saka (vegetable)	Rasa-Madhura and Kashaya Guna-Guru and Ruksha Virya- NA Vipaka- NA Karma-Aggravates Kapha and Vata but Pacifies Pitta
Asafetida	Mentioned above
Jiraka	Mentioned above
Lavana	Mentioned above
Powder of spices	Mentioned above for Marica
Oil	Mentioned above
Water	Mentioned above

Snacks

Manthaka	Rasa-Madura Guna-Guru Virya-sita Vipaka-Madhura Karma- Pacifies pitta and Vata
Samita	Mentioned above
Ghee	Mentioned above
Sitapaka (sugar syrup)	Rasa-Madhura Guna- NA Virya-Sita Vipaka- NA Karma-Pacifies Vata and Pitta
Ela	Mentioned above
Karpura	Rasa-Madhura and kathu (pungent) Guna-Laghu Virya-sita Vipaka-Madhura Karma- Pacifies pitta and Kapha
Marica	Mentioned above
Lavanga	Mentioned above

Rasala	Rasa-Madhura Guna-Laghu and snigdha Virya-sita Vipaka-madhura Karma-Pacifies Vata and Pitta
Sour curd prepared from buffalo milk	Rasa-Amla Guna-Guru, abhisyandi and snigdha Virya-Ushna Vipaka- NA Karma-Pacifies Vata and Pitta but aggravates Kapha
Powdered sugar	Rasa-Madhura Guna- NA Virya-Sita Vipaka- NA Karma-Pacifies Vata and Pitta
Ela	Mentioned above
Lavanga	Mentioned above
Candra – karpura	Rasa-Madhura and kathu (pungent) Guna-Laghu Virya-sita Vipaka-Madhura Karma- Pacifies pitta and Kapha
Marica	Mentioned above

Prapandaka (amraphala panaka) – mango syrup	Rasa-Amla and kashaya Guna-ruksha Virya-Ushna Vipaka-katu Karma-Pacifies Vata and Kapha
Unripe mango	Rasa-Amla and kashaya Guna-ruksha Virya-Ushna Vipaka- NA Karma-Pacifies Vata and Kapha
Sugar	Mentioned above
Karpura	Mentioned above
Marica	Mentioned above
Dhanyaka panaka	Rasa-Madura Guna- NA Virya-Sita Vipaka- NA Karma-Pacifies Pitta
Dhanyaka	Rasa-katu and kashaya (astringent) Guna-laghu and snigdha Virya-ushna Vipaka-Madura Karma-Pacifies Pitta, Kapha and Vata
Sugar	Mentioned above

Water	Mentioned above
Unripe mango	Mentioned above
Rajika	Rasa-katu and kashaya Guna-Ruksha and Tikshna Virya-Ushna Vipaka-katu Karma-Pacifies Kapha and Pitta
Lavana	Mentioned above
Fried hingu	Mention above (Hindu and fried hingu can be considered as one)

Takra – buttermilk	Rasa-Madhura and Amla Guna-Guru, Abishyandi and snigdha Virya-sita Vipaka-madhura Karma-Pacifies Vata and Pitta
Buffalo milk sour curds	Mentioned above
Water	Mentioned above
Fried hingu	Mentioned above
Jiraka	Mentioned above
Lavana	Mentioned above

Note: NA stands for ‘Not Available’

In this Chapter, a brief detailing is given about Bhojana kutuhalam, kshema kutuhalam and Bhavaprakasha. Similarly, from each text, certain list of recipes and other cooking related to information is mentioned. The Pharmacological properties such as such as ‘Rasa’, ‘Guna’, ‘Virya’, ‘Vipaka’ and ‘Karma’ are provided for the list of recipes collected from Bhavaprakasha. These properties plays a prominent role in deciding taste and medicinal efficacy of certain recipe. So, the next chapter provides a detailed description of ‘Rasa’, ‘Guna’, ‘Virya’, ‘Vipaka’ and ‘Karma’.

ENDNOTE :

- 1 Bhojana Kutuhalam, appendix, 32-38
- 2 Bhojana Kutuhalam, appendix, Page 1-
- 3 Kshemakutuhalam, Utsava 1, Sloka 36, p16
- 4 Kshemakutuhalam, Utsava 1, Sloka 38-41, p16-17
- 5 Kshemakutuhalam, Utsava 1, Sloka 42-44, p17-18
- 6 Kshemakutuhalam, Utsava 1, Sloka 46-47, p19
- 7 Kshemakutuhalam, Utsava 1, Sloka 48, p19
- 8 Kshemakutuhalam, Utsava 1, Sloka 48, p19
- 9 Kshemakutuhalam, Utsava 1, Sloka 50, p20
- 10 Kshemakutuhalam, Utsava 1, Sloka 51-57, p20-22
- 11 Kshemakutuhalam, Utsava 2, Sloka 8, p29
- 12 Kshemakutuhalam, appendix 5, p456-466
- 13 Bhavaprakasha Nighantu, Kritanvarga, Sloka 1-184, p328-355

4.1. CONCEPT OF RASA, GUṆA, VĪRYA, VIKĀKA AND KARMA

In Ayurveda, substances (*dravyas*) of natural origin, including whole plants or their parts, animal parts and minerals, are used as medicines, either alone or in combinations. In addition, various other measures are used in an attempt to maintain health in a healthy person and alleviate disorders of the body and mind in the sick. In the beginning of this chapter, classifications of *dravyas* are discussed. Each *dravya* has five properties as **Rasa, Guṇa, Vīrya, Vikāka, Karma**. These five properties are called '**Rasapañcaka**'. The functioning of *Rasapañcaka* has been stated in *Bhadanta Nāgārjuna's Rasavaiśeṣika* thus – 'द्रव्यमाश्रयलक्षणं पञ्चानाम्'¹ (*dravya is the locus of Rasapañcaka*) So, this statement attests that a *dravya* acquires five properties and not more or less than that. But, in some texts of *Dravyaguṇa vijñāna*, '*prabhāva*' was added as the sixth one. It is briefly described further.

Rasa (taste):

Rasa is taste. 'रसलक्षणमास्वादः'² - “the characteristic of *rasa* is taste,” is the definition offered in *Rasavaiśeṣika*. It is the property of a medicine identified by the tongue. Though *rasa* is taste, the word itself is polysemous. What follows here is the description on various meanings of *rasa*.

There are six varieties of tastes accepted in *Śāstras*. i.e. sweet, sour, salt, pungent, bitter and astringent. In a medicine, when certain *rasa* is predominant, that acquires an inherent property to enhance such property in the body and decreases its opposite. Now the types of *rasa* are being explained as per Ayurveda and *darshanas*.

Madhura³ (sweet):

Cakrapani stated *madhura* to be 'सोमगुणातिरेकान्मधुरः'⁴ | *Madhura rasa* will coat entire oral cavity with its sweet taste, a feeling of

generalized well-being and promotes pleasure and strength to body organs. It naturally attracts ants and flies.

***Āmla*⁵ (sour):**

It washes or cleanses the oral cavity, it results in secretion, tingling sensation of teeth, blinking of eyes due to its sour taste. It is one of the *trirasa*s⁶.

***Lavaṇa*⁷ (salt):**

It spreads all over the oral cavity and causes dryness due to osmosis (*syandana*). It also results in burning sensation in the buccal cavity and throat. *Vāgbhaṭa* in *Aṣṭāṅgahṛdaya* while narrating the quality of *lavaṇa* says - 'तत्राद्या मारुतं घ्नन्ति... '. Which means the '*mathura*', '*āmla*', '*lavaṇa*' have an inherent capacity to alleviate the *Vāta*.

***Kaṭu*⁸ (pungent):**

It stimulates the tip of the tongue, causes burning sensation over the tongue and oral cavity, results in watering the eyes, mouth, and nose. It also produces burning in the buccal cavity. *Kaṭu* alleviates the *kapha* related problems in the body.

***Tikta*⁹ (bitter):**

It constricts the entire oral cavity and disallows other taste receptions. It reduces the desire to eat, causes burning in the throat. *Tikta* alleviates *kapha*.

***Kaṣāya*¹⁰ (astringent):**

It produces a feeling of stiffness of tongue, dryness and stiffness in the throat and other channels of the body. It results in catching pain in the throat. *Kaṣāya* also alleviates *kapha*.

Guṇa:

These Gunas are linked with the food and also influenced by them.

In *Rasavaiśeṣika*¹¹, characteristic features of *guṇa* are mentioned as - 'विश्वलक्षणाः गुणाः।' ¹² (*guṇas are endowed with universal characteristics*) *guṇas* can be understood as the attributes or properties of *dravyas*. They inherently reside in *dravyas* but do not directly produce any actions. But they provoke to produce specific actions in the drugs. As per *Rasapañcaka* theory, *guṇa* and *karma* both exist in a drug. They are not independent of the *dravya*¹³. The relation that *dravya* shares with *guṇa* is called *samavāya* (inherence). From the Ayurvedic perspective, a single *dravya* may have several properties. Incidentally, a specific property can be found in many drugs. The Ayurvedic concept of *guṇa* is similar in many ways to that of *Sāmkhya* and *Vaiśeṣika* schools of philosophy.

Some of the *guṇas* in Ayurveda do have a striking similarity with the 24 *guṇas*¹⁴ enumerated in Kaṇāda's *Vaiśeṣika Sūtra*. Generally, *guṇa* in Sanskrit means 'string' or a single thread it may mean a subdivision, species, kind, quality or an operational principle of tendency.”¹⁵ *Guṇa* is a school specific technical term in Indian philosophy. In the Indian grammatical tradition, (*vyākaraṇa*) *guṇa* stands for a function that is applied in the context of euphonic combinations. In *Sāmkhya* school of philosophy and *Śrīmad Bhagavadgīta*, *guṇa* implies *triguṇas* (trio of tendencies) which are *Satva* (creation), *Rajas* (preservation), and *Tamas* (destruction). The *triguṇas* delude world¹⁶. However, this concept is important in view of its function in therapeutics in Ayurveda. Whereas *Vaiśeṣika guṇas* are a list of properties that *dravyas* are attributed with. In Ayurveda, total of 41 *guṇa* s have been listed in four groups.

'सार्थाः गुर्वादयो बुधिप्रयत्नान्तः परादयः गुणाः प्रोक्ताः।' ¹⁷

That means, *Gurvādi* or physico-pharmacological *guṇas* includes twenty (1.guru, 2.laghu, 3.śīta, 4.uṣṇa, 5.snigdha, 6.rūkṣa, 7.manda,

8.tīkṣṇa, 9.sthira, 10.sara, 11.mṛdu, 12.kāṭhina, 13.viśada, 14.picchila, 15.ślakṣṇa, 16.khura, 17.sthūla, 18.sūkṣma, 19.sāndra, 20.drava), Parādi or pharmacological includes ten, (1.para, 2.apara, 3.yukti, 4.saṃkhyā, 5.saṃyoga, 6.vibhāga, 7.pṛthaktva, 8.pārimāṇa, 9.saṃskāra, 10.abhyāsa), Viśeṣa or specific (those related to sensory organs) includes five (1.śabda, 2.sparśa, 3.rūpa, 4.rasa, 5.gandha) and Ādhyatmika or psychological/mental guṇa s are six (1.budhi, 2.icchā, 3.dveṣa, 4.sukha, 5.duḥkha, 6.prayatna), hence, the sum of the guṇas is forty one.

Suśṛta has added two more guṇa s to the list of 41, Vyavāyi and Vikāsi respectively. Bhadantha Nāgārjuna mentioned two more guṇa s in his text Rasavaiśeṣika namely, 'Surabhi' and 'Asurabhi'. Nonetheless, it will be separate discussion on the number of guṇas.

The Gurvādi guṇas are the most important from the medicine point of view. They are a set of twenty¹⁸ guṇas with ten of these being the opposite attribute to the other. As per Ayurveda principles, Sāmānya or generality is the logic behind increase and Viśeṣa or particularity is the reason behind decrease for several factors. These twenty guṇas listed below stem out of the pañca mahābhūta theory. They are important factors, inherent in dravyas, and are responsible for their selection for further action. An action cannot take place without the guṇas responsible for that action being a loci.

Gurvādi Guṇa

As stated in Caraka samhita, Rasa is the primordial cause in the genesis of various types of guṇas. “Prakṛti indicates the nature of the substance, i.e. inherent attributes (heaviness etc.) of diets and drugs. E.g. masha (*Phaseolus radiatus* Linn.) is heavy and mudga (*Phascolus mungo* Linn.) is light and meat of sukara (Boar) is heavy and that of ena (Deer) is light¹⁹.” Ingredients which are heavy in nature, aggravates the kapha²⁰. For instance, when a mother's Vāta lost its homeostasis due to the

heaviness of the food items that she has consumed, it afflicts her breast milk. “The child feeding on this breast-milk suffers from vomiting, gripping pain and excessive salivation²¹.” The following table 2.3 describes the opposite qualities of discussed *guṇas*

S. No.	<i>Guṇa</i>	English Equivalent	Indication
1&2	<i>Guru X Laghu</i>	Heavy X Light	Weight
3&4	<i>Manda X Tīkṣṇa</i>	Sharp X Dull	Intensity
5&6	<i>Uṣṇa X Śīta</i>	Hot X Cold	Temperature
7&8	<i>Rūkṣa X Snigdha</i>	Dry X Moist	Emollience
9&10	<i>Ślakṣṇa X Khara</i>	Smooth X Rough	Texture
11&12	<i>Drava X Sāndra</i>	Liquid X Dense	Viscosity
13&14	<i>Kaṭhina X Mr̥du</i>	Hard X Soft	Compressibility
15&16	<i>Sara X Sthira</i>	Mobile X Static	Fluidity
17&18	<i>Sūkṣma X Sthūla</i>	Subtle X Gross	Density
19&20	<i>Viśada X Piccila</i>	Clear X Sticky	Adhesion

Table 2.3

***Guru* (Heavy)**

Jala and *Pṛthvī* are responsible for making things heavier. The *Guṇa* that makes things heavier is known as *Guru*. This *guṇa* increases the *Kapha doṣa* and decreases the *Vāta doṣa*. *Guru dravyas* tend to increase bulk and weight of the body. On the other hand, in *Caraka Saṃhitā*, it has been said that sudden intake of substances that are exceedingly heavy in nature leads to endogenous swelling.

***Laghu* (Light)**

Agni, *Ākāśa* and *vāyu* are responsible for making things lighter and the *guṇa* (property) that makes things lighter is known as *laghu* (light). “Whatever is capable to reduce the body is know as '*laṅghana*²²’.

Laṅghana is based on *laghu guṇa*.” this *guṇa* suppresses the '*kapha*' *doṣa* in the body and aggravates the *Vāta doṣa*. The purification of the body *srotas* (channels) and aggravation of *agni* (appetizer) in the body is due to this *guṇa*.

***Manda* (dull)**

Mandatva or dullness is the *guṇa* that is responsible for developing dullness or depression in the body. Excess of *jala* is responsible for the generation of this *guṇa* having slow activity and weak strength of action. *Mandtva* (dullness) also aggravates the *kapha doṣa* and suppresses *pitta doṣa* in the body. The main function of this *guṇa* is *Śamana* (suppression) apart from being responsible for *gatyavarodha* (retardation), *Śaithilya* (dullness), *Alpakriyata* (weak action) and *Cirkarita* (slow action). Foods that are incompletely formed, like curds, are *manda* in nature. Such foods obstruct the channels of circulation.

***Tikṣṇa* (sharp)**

It is the opposite of *mandatva* (dullness) in context of its functioning, property and speed of reaction. This *guṇa* is fast in action, helps in *śodhana* (evacuation) of the body, aggravates *pitta doṣa*, suppresses *kapha doṣa* in the body and is responsible for *Dāha* (burn), *Pāka* (digest), *Sravakara* (to secrete) and *Lekhana* (scraping). *Tikṣṇa* (sharpness) is found in *Agni*. *Tikṣṇa* is desirable properly in taking food.

***Uṣṇa* (Hot)**

Warmth or hotness it is the opposite of *sūta guṇa*. *Uṣṇa* (heat) increases the body heat and aggravates the *pitta doṣa* while suppressing *vāta* and *kapha doṣa* in the body. *Agni* is responsible for it. The main function of this *guṇa* is to induce sweat, *Tikṣṇa* (thirst) and *Dāha* (burning sensation). The food which causes *Uṣṇa* activate the body and mind.

***Śīta* (Cold)**

This *guṇa* is responsible for decreasing the warmth (*uṣṇata*) of the body and increasing the coldness. *Jala* is responsible for this *guṇa*. This *guṇa* has the property of curing *mūrchā* (syncope), *Trṣṇa* (thirst) and *Dāha* (burning sensation) in the body. The food which contains *Śīta guṇa* is not desirable to the body.

***Rūkṣa* (dryness)**

This *guṇa* is responsible for generating dryness in the body. Found in *Prthvī* and *Vāyu*. It aggravates *vāta doṣa* and suppresses *Kapha doṣa* in the body. The main function of this *guṇa* is *Śamsana* (to absorb) besides developing roughness and reduction of strength and complexion

***Snigdha* (Moist)**

It is the main *guṇa* of *Jala* (water). *Snigdhatā* is responsible for *piṇḍībhāvana* (clinging). It is also responsible for the development of softness and smoothness. Apart from the main function of generating *bala* this *guṇa* generates *Mṛdutva* (soften), *Bala* (strengthen), *Varṇa* (skin complexion). It aggravates *kapha doṣa* while suppressing the *vāta doṣa* in the body. *Snigdhatā* shows healthiness of the body and skin.

***Ślakṣṇa* (Smooth)**

Main function of this *guṇa* is *Ropaṇa* besides the other functions that are mentioned in *piccila guṇa*. *Ślakṣṇa* (smoothness) is produced when stone or metal are rubbed on. The difference between *piccila guṇa* and *Ślakṣṇa guṇa* is that the former has smoothness due to *Sneha* (viscosity) and latter has smoothness due to lack of *Sneha* (viscosity).

***Khara* (Roughness)**

Found in *Vāyu mahābhūta*, it aggravates *vāta doṣa* in the body and has the main function of *Lekhana* (to scrap) besides the functions to decrease the quantum of *Dhātus*.

Drava (Liquid)

It has the capability of *Pravāhī* (flowing) and increases *Rasādi dhātu* and the quantum of *Mala*. Khara and drava cases of opposite qualities in the body.

Sāndra (Dense)

This *guṇa* is the property of *Pṛthvī* and aggravates *kapha* in the body. The main purpose of this *guṇa* is *Prasādana* (replenishing) and *Dhātu vardhana* (increase tissues) apart from *sthūlatā* and *bṛmhaṇa* (growth). If we take food more *Sandra* sometime it causes of death.

Kaṭhina (Hard)

This *guṇa* makes the body firm and hard. It is present in *Pṛthvī* it increases the *dhātu* in the body and dries the excretory wastes. *Vāta doṣa* is aggravated by this *guṇa* (property). The main function of this *guṇa* is *Dṛdhīkaraṇa* (strengthening) and to make *dhātus* firm and dry the *Mala* (excretory product). The food which contains *kathina* make the excretory process hard.

Mṛdu (Soft)

Found in the *Ākāśa* (space) and *Jala* (water), *mṛdutva* aggravates *kapha doṣa* in the body. The purposes of this *guṇa* are preventing *Dāha* (burn), *Pāka* (suppurating), *Srāva* (secretions) and developing *mṛdutā* (softness).

Sara (Mobile)

The purpose of this *guṇa* is mobility it scrapes the *dhātus* of the body and aggravates *vāta doṣa* in the body. It is found in *Vāyu* and *Agni*. This *guṇa* is responsible for releasing *Mala* (excretory product) from the body. It is useful in *śodhana cikitsa* (evacuation therapy). This *guṇa* is responsible for releasing excretory producing from the body. The lack of this *guṇa* cases constipation.

***Sthira* (Static)**

This is present in *Pr̥thvī*. *Sthira* (static) aggravates the *kapha doṣa* and suppresses the *vāta doṣa* in the body. The purpose of this *guṇa* is *Dhāraṇa* (to hold) apart from *Gatīśaithilya* (immobility), *Sthirata* of *dhātus* (stabilize *dhātus*) and *Sthambhana* (cease secretion). *Avarodha* (obstruction) is created by this *guṇa*. lack of *sthira* *guṇa* causes ultimately release of excretive product sustain.

***Sūkṣma* (Subtle)**

Found in *Vāyu*, *Agni* and *Ākāśa*, this aggravates *vāta doṣa* in the body and has the main function of *Vivarṇa* (discoloration). This is also responsible for *Sūkṣma srotogamī* (micro-circulation), absorption of *Mala* (excretory product) and *laghupāka* (easy digestion).

***Sthūla* (Gross)**

This *guṇa* is the property of *Pr̥thvī*. This *guṇa* is responsible for the functions of *samvarṇa* (promote complexion). Promotes bulk, *Srotorodha* (obstructs channels of circulation), *Sandhidardhya* (strengthens joints), and *Śakti* (strength). *Sthūla* *guṇa* in the food implies promotion of complexion obstructs channels of circulation and strengthen the joint and gives strength.

***Viśada* (Clear)**

It is the *guṇa* of *Pr̥thvī*, *Vāyu*, *Tejas* and *Ākāśa*. It has the capacity of *Prakṣāḷana* (cleansing), which removes *Piccilata* (stickiness). It is *Kledaśoṣaṇa* and *Vraṇaropaṇa* (healing). This *guṇa* in the food suppresses the *vata* and *kapha dosha* in the body.

***Piccila* (Sticky)**

It is the *Sāṃsiddhika Guṇa* of *Jala*. This *guṇa* aggravates *kapha doṣa* and suppresses *vāta doṣa* in the body. It is important for the joining of two elements, increase of the *dhātus* and strengthening the body.

The discussed twenty *Guṇas*, so far, contribute towards specific actions through the *dravyas* they reside in. All these physical properties and their manifestation as pharmacological action can be summarized as follows.

S. No.	Guna (Attribute)	Karma (Pharmacological Action)
1.	<i>Guru</i>	Tonic
2.	<i>Laghu</i>	Reduces
3.	<i>Manda</i>	Pacifies
4.	<i>Tīkṣṇa</i>	Cleanses
5.	<i>Uṣṇa</i>	Induces Perspiration
6.	<i>Śīta</i>	Condenses
7.	<i>Rūkṣa</i>	Dries
8.	<i>Snigdha</i>	Produces Moisture
9.	<i>Ślakṣṇa</i>	Stimulates Growth
10.	<i>Khara</i>	Ratifies
11.	<i>Drava</i>	Dissolves
12.	<i>Sāndra</i>	Nourishes
13.	<i>Kaṭhina</i>	Fastens, Hardens
14.	<i>Mṛdu</i>	Relaxes
15.	<i>Sara</i>	Excites
16.	<i>Sthira</i>	Supports
17.	<i>Sūkṣma</i>	Penetrates
18.	<i>Sthūla</i>	Covers or protects
19.	<i>Viśada</i>	Cleanses
20.	<i>Piccila</i>	Forms a coating

Table 2.4

Vīrya:

The verbal root for *Vīrya* is '*vīr*(=*vikranta*)', means that which is powerful or potent in nature. The term signifies the potency of the medicine. In *Rasavaiśeṣika*, *Vīrya* has been described as - 'कर्मलक्षणं

वीर्यम्²³, which means it produces *karma* (action). *Vīrya* is interpreted differently in terms of *guṇa*, *karma* or *dravya* but the first view (*guṇa-vīryavāda*) is accepted in practice. According to this view, *guṇas* are potent enough to produce action are termed as '*Vīrya*'. Eight *Vīryas* are mentioned out of twenty *guṇas* having potentiality to attain the state of *Vīrya*, as 'गुरु, लघु, स्निग्ध, रुक्ष, तीक्ष्ण, मन्द, शीत, उष्ण'²⁴ Again on the basis of traditional style of generalization, *Vīryas* have been grouped into two broad categories which represent the primordial factors of *Soma* and *Agni*, initiators of creation of the living world. Namely they are - *Sīta* (cooling) and *Uṣṇa* (heating).

Drugs and diets which are sweet in taste do normally have a cooling effect. Those with sour or pungent taste are potentially hot. Similarly, rock salt having saline taste and *Āmalaka* (*Emblīca officinalis*) having sour taste are hot (*Uṣṇavīrya*). *Arka* (*Calotropis gigantea*), *Agaru* (*Aquilaria agallocha*) and *Gudūci* (*Tinospora cordifolia*) – the three herbs at the end of the list would be bitter in taste are hot in potency²⁵.

Vipāka:

In *Rasavaiśeṣika*, the definition of *vipāka* has been told thus - 'परिणामलक्षणः विपाकः'²⁶, which means '*vipāka* possesses change as its characteristic would be brought by digestion and assimilation. The concept of *vipāka* has been proposed and delineated by sages like *Caraka*, *Vāgbhaṭa*, *Parāśara* etc. The *rasas* undergo a transformational process due to *vipāka*. There are three *vipākas* attributed to the six *rasas* - *Madhura* and *Lavaṇa* become *madhura vipāka* in taste.

“Cow ghee is the best of all the unctuous substances. It is auspicious, cold in potency and sweet both in taste as well as *vipāka*.

When administered according to the prescribed procedure, it increases, thousand times in potency and develops manifold utilities²⁷.”

Āmla guṇa becomes *āmla vipāka* in taste.

“*Kulatta (Dolichos biflorus)* is hot in potency, astringent in taste and sour in *vipāka*. It reduces semen and alleviates the vitiated *kapha* as well as *vāta*. It is constipative and is useful for patients suffering from coughing, hic-cup, dyspnoea and piles²⁸.” Similarly, “curd is appetizer, digestive stimulant, aphrodisiac, unctuous, strength promoting, alleviator of *vāta*, auspicious and nourishing. It is sour in *vipāka* and hot in potency.”

Kaṭu, Tikta and *Kaṣāya* become *Kaṭu vipāka* in taste.

“*Kaṭu vipāka* aggravates *vāta*, reduces semen and obstructs the passage of stool and urine²⁹.” Both *citraka (plumbago zeylanica Linn)* and *danti (Balisspermum montanum Muell-Arg)* are pungent in taste as well as *vipāka*³⁰.” Hence, there are only three *vipākas* that are possible on the whole combination of *rasas*.

Karma:

The definition of *Karma* is- 'क्रियालक्षणं कर्म'³¹ which means 'action is the definition of *Karma*. *Karma* as special property of the drugs, cannot be explained by their elemental composition. But is inferred.

As mentioned earlier, in the context of *dravyaguṇa*, *karma* is a property of *dravya*. *Karma* is inferred by the action of a drug. *Karma* do not inherit any special classification as reflected in the Ayurveda texts, but based on its pharmacological action, a number of classifications are explained in *dravyaguṇa* texts. The following list narrates several such classifications. *dīpana, pācana, śamsana, anulomana, sraṁśana, bhedana, recana, lehana, chedana, grāhī, sthambhana, madakarī, pramatī, vyavāyī, vikāśī, abhisyandī, asurī, yogavāhī, sūkṣma, prāṇahara,*

vidāhī, jīvanīya, bṛṃhaṇa, balya, sandhānīya, vayah sthāpana, rasāyana, hṛdya, kaṇṭhya, vamaṇa etc.

ENDNOTE :

- 1 Rasavaisheshika.1.84
- 2 Rasavaisheshika.1, p.85
- 3 मधु - माधुर्यमस्यास्ति इति मधुरः । Amarakosha.1.5.9, Pp.58-59
- 4 Chakrapani on Charaka Samhita 1.26.24
- 5 अम्ब्यते शब्दते भोक्तृभिः इति अम्लम् । Amarakosha.1.5.9, Pp.58-59
- 6 मधुराम्लकषायं च विष्टम्भि गुरुशीतलम् । पित्तश्लेष्महरं भव्यम् । Charaka Samhita.1.27
- 7 लुनाति जाड्म् इति लवणम् । Amarakosha.1.5.9, Pp.58-59
- 8 कटति आवृणोति इति कटुः । Amarakosha.1.5.9, Pp.58-59
- 9 तेजयति इति तिक्तः । Amarakosha.1.5.9, Pp.58-59
- 10 कषति कण्ठम् इति कषायः । Amarakosha.1.5.9, Pp.58-59
- 11 A text written by *Bhadanta Nāgārjuna* in 7th A.D.
- 12 Rasavaisheshika.1, p.85
- 13 क्रिया-गुणवद् द्रव्यम् । Tarka Sangraha., p.1
- 14 रूप-रस-गन्ध-स्पर्श-सङ्ख्या-परिमाण-पृथक्त्व-संयोग-विभाग-परत्व-
अपरत्व-गुरुत्व-द्रवत्व-स्नेह-शब्द-बुद्धि-सुख-दुःख-इच्छा-द्वेष-प्रयत्न-धर्म-
अधर्म-संस्काराः । Tarka Sangraha, Pp.2-3
- 15 <http://en.wikipedia.org/wiki/Gu%E1%B9%87a>
- 16 त्रिभिर्गुणमयैर्भावैः सर्वमिदं जगत् ।
मोहितं नाभिजानाति मामेभ्यः परमव्ययम् ॥ Srimad Bhagavad Geeta.
7.13
- 17 Charaka Samhita.1.1.48

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- 18 गुर्वादयस्तु गुरुलघुशीतोष्ण स्निग्धरूक्षमन्दतीक्ष्ण स्थिरसरमृदुकटिन
विशदपिच्छिलश्लक्ष्णखर स्थूलसूक्ष्मसान्द्रद्रवा विंशतिः । Chakrapani on
Charaka Samhita.1.1.48
- 19 C.S. 3.1.22
- 20 गुर्वादिभिर्हेतुभिश्च पूर्ववत् कुपितः कफः । C.S.6.30.217
- 21 C.S. 6.30.246.
- 22 Charaka Samhita. 1.22.9
- 23 Rasavaisheshika.1, p.85
- 24 वीर्यं तु केचित् गुरुलघुस्निग्धरूक्षतीक्ष्णमन्दशीतोष्णभेदेनाष्टविधमाहुः ।
Rasavaisheshika.1.17, p.165
- 25 लवणं सैन्धवं नोष्णमम्लमामलकं तथा ।
अर्कागुरुगुडूचीनां तिक्तानामुष्णमुच्यते ॥ Charaka Samhita.1.26.49
- 26 R.V.S.1, p.85
- 27 सर्वस्नेहोत्तमं शीतं मधुरं रसपाकयोः ।
सहस्रवीर्यं विधिभिर्घृतं कर्मसहस्रकृत् ॥ Charaka Samhita.1.27.232
- 28 उष्णाः कषायाः पाके म्लाः कफशुक्रानिलापहाः ।
कुलत्था ग्राहिणः कासहिक्काश्वासार्षसां हिताः ॥ Charaka
Samhita.1.27.26
- 29 शुक्रहा बद्धविण्मूत्रो विपाको वातलः कटुः ।
मधुरः सृष्टविण्मूत्रो विपाकः कफशुक्रलः ॥ Charaka Samhita.1.27.61
- 30 कटुकः कटुकः पाके वीर्योष्णश्चित्रको मतः । Charaka Samhita.1.27.68
- 31 Rasavaisheshika.1, p.86

CLASSIFICATIONS OF FOOD AND DIFFERENT COOKING METHODS

5.1. Classifications of Food

In mandane meal, generally, we have various dishes and we have our own nomenclature (like rice, dal, fry, rasa, pickle, powder etc.) to name them. But traditionally there is a certain classification of food by which all kinds of recipes can be segregated.

According to Bhagavdgeeta, the food is classified into four kinds¹ such as *Bhojyam* (eatable), *Bhakshyam* (chewable), *Lehyam* (lickable) and *Chusyam* (drinkable). The Smilar classification can be seen in Ramayana, Manusmriti and Kshema kutuhalam also.

Acharya Charaka has classified the *Ahara Dravya* (food articles) in different ways. Diet is one, from the view point of intake, of two types according to source, animal origin and plant origin, *Hitahara* (wholesome) and *Ahitahara* (unwholesome)² depending upon its effect on biological system. These are further classified into four categories depending upon way of intake which are *Pana* (drinkables), *Asana* (eatables), *Bhakshya* (chewable) and *Lehya* (lickable).³ *Acharya Kashyapa* classified food articles into five categories based on the *Panchamahabhutas* which are *Akasheeya*, *Vayavya*, *Agneya*, *Apya* and *Parthiva*. *Acharya Sharangadhara* and *Bhavaprakasha* further classified food articles into six types such as *Bhojya*, *Bhakshya Charvya*, *Lehya*, *Chusya*, *Peya*.⁴ The same list is appeared in *Shivatattva Ratnakara* and *bhajana kutuhalam*.

Consolidated list of food classifications depicted from various sources

Food type	BG	SR	CS	BK	KK
<i>Bhojya</i> (palatable)	+	+	+	+	+
<i>Bhakshya</i> (chewable)	+	+	+	+	+
<i>Charvya</i> (crushable with teeth)	-	+	-	+	-
<i>Lehya</i> (lickable)	+	+	+	+	+
<i>Chusya</i> (swallowable)	+	+		+	-
<i>Peya</i> (drinkable)	-	+	+	+	+

Note: BG – Bhagavad Geeta, SR- Sivatatvaratnakara, CS- Charaka Samhita, BK- Bhojana kutuhalam, KK- Kshema kutuhalam

Different methods of cooking

Each type of food has certain method of cooking. In general, we don't have habit of observing any cooking method. But traditionally there are seven types of cooking⁵ method such as –

1. भर्जन (frying)

E.g. aalu fry, brinjal fry etc.

2. तलन (floating in oil)

E.g. puri, bajji, bonda etc.

3. **स्वेद (vaporizing)**

E.g. All steamed food articles.

4. **पाचन (cooking to ripen)**

E.g. cooked rice and other curries

5. **क्वथन (boiling)**

E.g. All rasam or sambar type of curry items

6. **तन्दूर (roasting on a spit)**

E.g. All types of rothis. Because, this method, tandoor rothi got it's unique name and became famous.

7. **पुटपाक (cooking food stuff in a pit after wrapping)**

E.g. Any rothi, after roasting on a spit, again it is wrapped on a separate on pit. This type of cooking method can be in Maharastra region.

In each of above method of cooking, chopping of vegetables is totally unique. This can be practiced based on the food item.

Classification of Dravya in Ayurveda and Ontological Frame-Work of Recipes

All kinds of recipes are prepared by the plant origin and animal origin material. According to Ayurveda, there are certain sub-classifications under plant origin and animal origin in the context of dravya concept. Before structuring the ontological frame-work of recipes, one should know the hierarchical linkages of source material.

In *Ayurveda*, the *dravya* was classified into three types such as *Jāṅgama*, *Audbhid*, *pārthiva*⁶ respectively. As per the present context, the sub-classifications of *Jāṅgama* and *Audbhid* will explained. The discussion on these categories is as follows.

Jāṅgama category

As discussed earlier, a living being which motiles is called *Jāṅgama*. *Suśṛta* has classified *Jāṅgama* category into four groups – 1. *Jarāyuja* 2. *Aṇḍaja* 3. *Svedaja* and 4. *Udbhijja*. This is a popular classification in *Samhitās* and *Kośas*. Special characteristics of each group are described in what follows.

***Jarāyuja* :- पशु-मनुष्य-व्यालादयो जरायुजाः।⁷** Living beings that have reproductive organs with placenta are *Jarāyujas*. *Suśṛta* includes man, lion, tiger and other animals in this category.

***Aṇḍaja* :- खग-सर्प-सरीसृप-प्रभृतयोऽण्डजाः।⁸** *Aṇḍajas* are those which originate from eggs. Aves (birds), reptiles. crows, snakes, lizards, fish etc.

***Svedaja* :- कृमि-कीट-पिपीलिकाप्रभृतयः स्वेदजाः।⁹** *Svedajas* are the living creatures that born out of sweat. Ants, mosquitoes, insects etc., are considered in this category.

***Udbhijja* :- इन्द्रगोप-मण्डूकप्रभृतयः उद्भिज्जाः।¹⁰** The cochineal insect of various kinds is called *indragopa*. A fire-fly is also an *indragopa*. Also, frogs and similar animals come under *Udbhijja* category.

They consumed as food steps every day who preferred non vegetarian.

Audbhid category

The *Audbhid* category was classified into four groups as- *Vanaspati*, *Vānaspatya*, *Vīrudh* and *Oṣadhis*. This classification is similar in allied Ayurvedic texts. In these texts, their features were also mentioned namely -

i. ***Vanaspati* :-** 'plants do not possess visible flowers'¹¹ are vanspatis.

Hence, they are *apuspas* (flowerless). For Instance, *aśvattha*, *agaru*, *devadāru*, *arjuna* etc.

ii. ***Vānaspatya* :-** 'plants bear both flowers and fruits'¹² are vanspatyas.

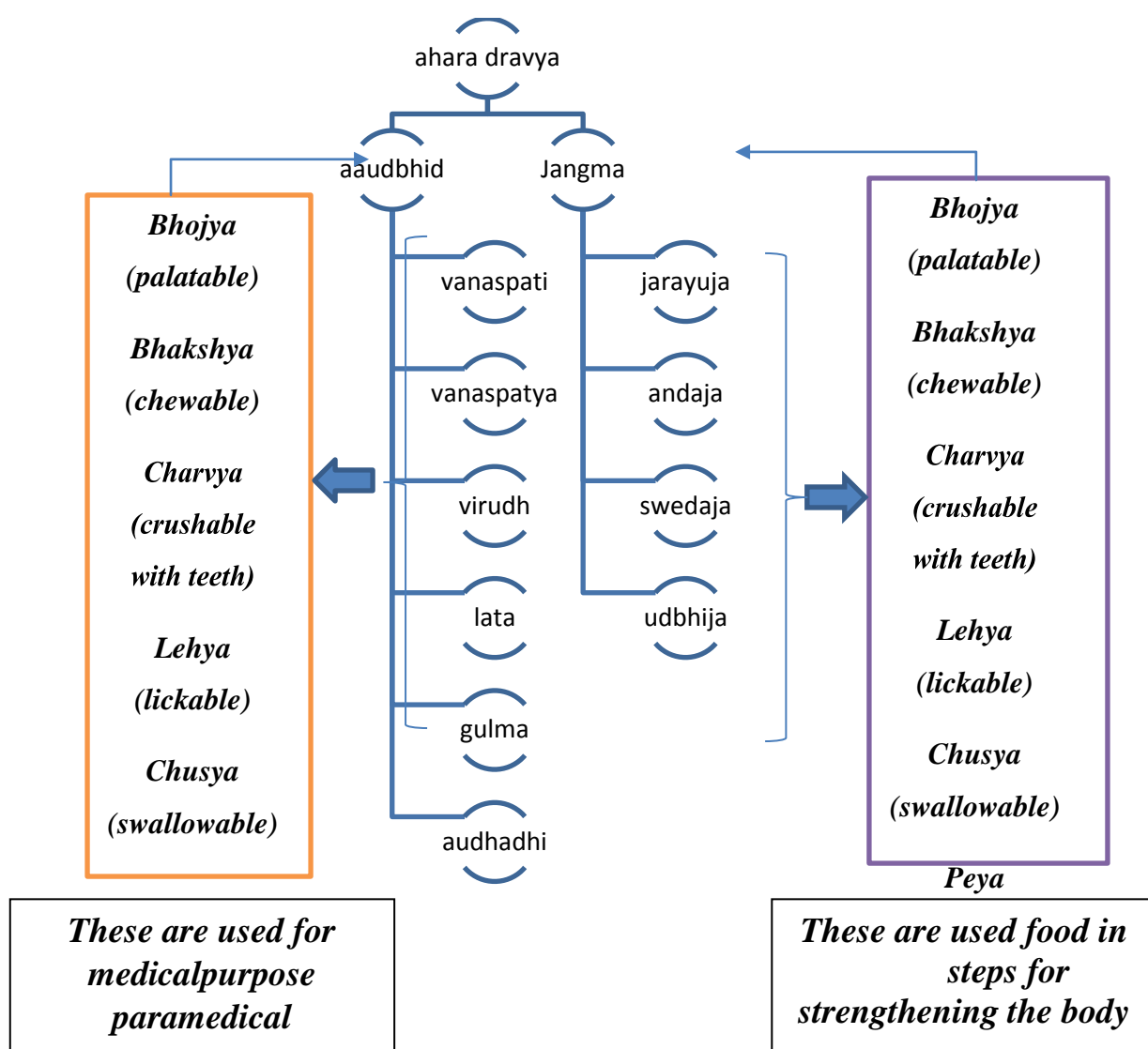
For Instance, *āmra*, *harītaki* etc.

- iii. ***Vīrudh*** :- Those plants which twine crawl or climb up are known as *Vīrudhs*. Also, '*Pratāna*'¹³ are called virudhs. *Pratāna* or virudh was further sub-categorized as- 'a) *Latā* and b) *Gulma*'¹⁴ |
- iv. ***Latā*** :- Climbers are called '*Latā*' and also they are otherwise called *Vallī*¹⁵ *vidārī*, *kapikaccu* etc., are climbers.
- v. ***Gulma*** :- Shrubs are *gulmas*. These are also climbers. But, cannot crawl/or to up as lengthy as the *Latās*. '*Atibala*', '*Śālīparṇī*' etc., are *gulmas*. The *gulma* category consists a cluster of trees.
- vi. ***Oṣadhi*** :- In Ayurveda, the word *Oṣadhi* comes under *Audbhid* category. Those plants which 'whether away after yielding the fruits or after harvest'¹⁶ are known as *Oṣadhis*. Perennial crops like paddy, pulses, wheat, maize etc., are *Oṣadhis*.

Ontological frame-work of recipes

The term 'ontology' is originated from the Greek. It means 'study of being or existence or reality.' The study of existence of entities, their classification based on similarities or differences, the hierarchy involved in it come more closer to the philosophical studies.

Hierachy of Ahara dravyas along with food classifications



Ontology also plays an important role in showing the heirachical linkage of certain food article. The basic build block will be पदार्थ. Based on the ontological linkage, one can aware of root source and food type of certain food item.

For instance, the ontological linkage of ‘ओदनम् (cooked-rice)’ is shown below :

पदार्थ → द्रव्य →

पदार्थ → द्रव्य → औद्भिद् →

पदार्थ → द्रव्य → औद्भिद् → ओषधि →

पदार्थ → द्रव्य → औद्भिद् → ओषधि → भोज्यम् →

पदार्थ → द्रव्य → औद्भिद् → ओषधि → भोज्यम् → ओदनम्

ENDNOTE:

1. अहं वैश्वानरो भूत्वा प्राणिनां देहमाश्रितः ।
प्राणापानसमायुक्तः पचाम्यन्नं चतुर्विधम् ॥
अहम् एव वैश्वानर उदरस्थः अग्निः भूत्वा ‘अयम् अग्निर्वैश्वानरो योऽयमन्तः
पुरुषे येनेदमन्नं पच्यते’ [1] इत्यादिश्रुतेः वैश्वानरः सन् प्राणिनां प्राणवतां देहम्
आश्रितः प्रविष्टः प्राणापानसमायुक्तः प्राणापानाभ्यां समायुक्तः संयुक्तः पचामि
पंक्तिं करोमि चतुर्विधं चतुष्प्रकारम् अन्नम् अशनं भोज्यं भक्ष्यं चोष्यं लेह्यं च ।
श्रीमद्भगवद्गीता, शांकर-भाष्यम्, अध्याय 15, श्लोक 14 p551
2. तमुवाच भागवानात्रेयः- हिताहारोपयोग एक एव पुरुषस्याभिवृद्धिकरो भवति ।
अहिताहारोपयोगः पुनर्व्यधीनां निमित्तमिति । Charaka Samhita,
Adhyaya 25, vakyam 30, p197
3. Charaka Samhita, Adhyaya 25, vakyam, 35, p197
4. Triveni Raina, Brij Kishor, Swapnil Saini, Dalip Sharma. Role of
Ahara as a Prime Etiological Factor in the Manifestation of Disease.
International Journal of Ayurveda and Pharma Research.
2018;6(6):60-65.
5. Kshema kutuhalam, utsava 1, shloka 37-38, p16
6. तत् पुनस्त्रिविधं प्रोक्तं जाङ्गमौद्धिदपार्थिवम् । Charaka Samhita.1.1.68, p.9
7. S.S.1.1, Pp.7-8
8. S.S.1.1, Pp.7-8
9. S.S.1.1, Pp.7-8
10. S.S.1.1, Pp.7-8

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11. i) फलैर्वनस्पतिः। C.S.1.72, p.9
ii) अपुष्पाः फलवन्तो वनस्पतयः। S.S.1.1, Pp.7-8
iii) तत्र फलिनो वनस्पतिः। A.S.1.12, Pp.137
iv) तैरपुष्पाद्वनस्पतिः। Amara.2.4.6, Pp.129
v) वनस्पतिः फलतिः यः पुष्पैर्विना। R.N.1.29, Pp.13
12. i) पुष्पैवानस्पत्यः फलैरपि। C.S.1.72, Pp.9
ii) फलपुष्पवान्वानस्पत्यः। A.S.1.12, Pp.137
iii) पुष्पफलवन्तो वृक्षाः। S.S.1.1, Pp.7-8
iv) वानस्पत्यः फलैः पुष्पात्। Amara.2.4.6, p.129
v) तैः फलं वानस्पत्यः। R.N.1.29, p.13
13. प्रताने वीरुधः स्मृताः। C.S.1.72, p.9
14. प्रतान शब्देन लता गुल्माश्च गृह्यन्ते। C.S.1.72, चक्रपाणि, p.9
15. वल्ली तु व्रततिर्लता। Amara.2.4.6, p.130
16. i) ओषध्यः फलपाकान्ताः। C.S.1.72, p.9
ii) फलपाकान्ता त्वौषधिरिति। A.S.1.12, p.137
iii) फलपाकनिष्ठा ओषधय इति। S.S.1.1, Pp.7-8
iv) ओषधिः फलपाकान्ता। Amara.2.4.6 p.129
v) फलपरीपाकावसानान्विता। R.N.1.29, p.13

SUMMARY OF FINDINGS

In this work a survey has been done on food concept and its various food article in Sanskrit and Ayurveda literature. Similarly, as a sample, certain list of food articles is mentioned contextually. Based on this study, it is observed that in Sanskrit literature, the list of certain food articles only documented without their pharmacological properties and health benefits. Whereas in Ayurveda, there is a detailed information about food.

As the *Rasapanchaka* (*rasa, guna, virya, vipaka and karma*) plays a prominent role in deciding the taste and medical utilities of a recipe, there is a detailed chapter on the Rasapanchaka, by which one can able to understand the Ayurvedic way mechanism of changing properties of various ingredients when get mixed together as a recipe and how it is medicinally valid and suitable to certain body constituent.

In addition to, an ontological knowledge base frame-work is provided for Ayurvedic recipes. For this, *ahara dravya* classification is provided in Ayurvedic prospective. Similarly, there are seven types of food mentioned in Ayurveda diet texts. These seven types also linked to the hierarchy of *ahara dravya* based on the Ayurveda therapy. In general, any combination of food stuff can be cooked in these seven types. Based on certain cooking method, the medicinal properties and medicinal utilities also will be varied recipe to recipe with same combination of ingredients. So, according to this hierarchical linkage one can find root level source and choose certain recipe based his body condition.

In general, there number of unclassified food items in present day hotels and restaurants which are causing for choosing unsuitable and unhealthy food without knowing their food type frame-work, the current restaurant food items can be classified by one can avoid unsuitable food items to maintain sound body and mind.

In this work, a limited study is done in this direction, there are other texts on diet or *ahara* in Kannada literature also like *Lokopakarakā*, *Supashastra* etc. For further study, all the diet related texts need to be collected and analyzed in constructive manner by providing the clear-cut information of *virudh ahara* concept. Through this, a food map can be created and added to current food items for providing a facility for the consumers to select any food item based on the condition of body, time, place and season.

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