



CRITICAL APPRAISAL OF INDIAN CULINARY SCIENCE W.S.R. TO KSHEMAKUTUHALA

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ABSTRACT

Kshemakutuhala is one of the excellent works related to diet and dietetics. It was written by Kshemasharma, the Royal physician of King Vikrama during 16th century A.D. The author describes different types of food articles, their preparatory techniques along with properties elaborately in this work. The entire compendium is divided into 12 chapters and artistically named Utsavas for the chapters. In the first six Utsavas the author elucidated the principles of dietetics, kitchen plan, and best qualities of a chef, vessels useful for cooking, features of poisonous food and the methods employed for its detection etc. in a lucid manner. The remaining six Utsavas are devoted for the description of different vegetarian and non-vegetarian food items including fish. Primary processing of washing and dipping in oil is suggested to reduce the odor of meat and fish. Specific food substances useful for the preservation of health according to seasons are also described in this compendium. By thorough study of this work it is observed that Kshemakutuhala is the unique compendium on Indian culinary science.

Keywords: Kshemakutuhala, Utsavas, Indian culinary science.

INTRODUCTION

Ayurveda, the science of life not only explains the treatment of diseases but also maintenance of health, strength and longevity of a healthy person. For the prevention of diseases many aspects such as regimen of diet, *Achara Rasayana*, *Dinacharya* and *Rutucharya* etc. are explained. Diet and dietetics plays an important role in the prevention of diseases, maintenance of *Doshic* equilibrium and nutrition of *Dhatus* etc. Though many a number of food recipes and the information about food stuffs and their properties are available in the classics, they are in a scattered form. On a thorough inquiry about the dietetics, astonishingly *Kshemakutuhalam* of Kshema Sharma a 16th century work is observed as a unique compendium on Indian culinary science, which gives the complete information about the method of preparation of different food substances along with their medicinal properties.

Aim of the Study

The aim of the present study is to explore the lore of Indian culinary science and to elucidate the beauty of this compendium to the modern world.

MATERIAL & METHODS

A critical study has been taken up to reveal Indian culinary science by consulting *Brihatrayi* and other available Ayurvedic literature as well as *Kshemakutuhalam* and documented the information for fulfilling the aim of the study.

Observations

In Ayurveda, 28 *Yavagus*^[1] (rice cooked in 6 parts of water), 24 *Sneha Kalpanas*^[2], *Peya* (thin gruel), *Vilepi* (thick gruel), *Vesavara* (bone free meat), *Shaskuli* (prepared from rice flour by frying in oil), *Kambalika* (sour soup prepared from curd, salt and sesame) and variety of preparations are revealed by considering the needs of healthy as well as diseased persons. The qualities and effects of different foods on human body are also elaborately described in many Ayurvedic classical texts. The *Pathya* and *Apathya* in the form of food are also explained in Ayurveda. This shows the importance of *Ahara* and preparatory methods in the human life as it is included in three secondary supporters of the life (*Trayopasthambha*).

Kshemasharma, the author of *Kshemakutuhalam* had thoroughly gone through the works of Charaka, Sushruta, Vagbhata, Bhima, Harita and principles of dietetics propounded by Ravi before writing this book^[3]. This work is divided into 12 chapters and named as *Utsava*^[4]. The subject matter described in these *Utsavas* are as follows-

Utsava	Subject matter
First	Author's ancestry and explanation of the technical terms related to the seven fold division of cooking.
Second	Ideal <i>Bhojanaghriha</i> (Kitchen), the means to store and protect food items, utensils fit for cooking and other related instruments, <i>Vishaahara</i> (poisoned food) <i>Lakshanas</i> (symptoms) etc.
Third	Qualities of physician and head cook (<i>Sudapati</i>), <i>Uttama bhojana</i> (good food) properties, symptoms and effects of eating

	of <i>Viruddhaahara</i> and <i>Adhyashana</i> (overeating).
Fourth	Description of <i>Rutucharya</i> (seasonal behaviour).
Fifth	Description of <i>Dincharya</i> , <i>Ratricharya</i> , <i>Sadvritta</i> .
Sixth	Various methods of preparation of meat food, Utensils required for eating etc.
Seventh	Various methods of preparations of fish meat.
Eighth	Various methods of Six types of vegetables preparations.
Ninth	Preparations of pickles, <i>vadas</i> , <i>vaticas</i> etc.
Tenth	Various preparations from rice and other flours.
Eleventh	Various appetizers preparation.
Twelfth	Various milk preparations, cool drinks, beverages, buttermilk etc.

The Culinary science means the art and science of cooking methods. In *Kshemakutuhalam* 6th, 7th, 8th, 9th, 10th, 11th and 12th *Utsava* gives the information about cooking procedures while in 4th and 5th *Utsavas* - *Rutucharya*, *Dincharya*, *Ratricharya*, *Sadvritta* are dealt and in 2nd and 3rd *Utsava Ahara Sevana Vidhi*, physician & *Sudapati Lakshanas* are elaborated. The 4 types of *Ahara (Bhojana)*, i.e. *Bhakshya*, *Bhojya*, *Lehya* and *Peya* are explained like other *Samhitas* along with the 7 ways of cooking methods (*Saptavidha paka*) are also enumerated. [5]

The 7 ways of cooking are –

1. *Bhrajana / Bhrusthakam* (Frying)
2. *Talana / Talitam* (Frying or floating in oil)
3. *Sweda / Swinnam* (Cooking with the help of vapours)
4. *Pachana* (Cooking to ripen)
5. *Kwathana* (Boiling)
6. *Tanduram* (cook directly on fire)
7. *Putapaka* (cook in an underground device)

In the 6th *Utsava* some different ways of cooking are given for meat preparations such as *Vantitam* (grinding with stone), *Bahurasam* (cooking with more liquid), *Shulyam* (Roasting on spit) and *Shushka* (cooking dry) are mentioned. In this work, the prime importance is given to clay pots for cooking but if they are not available, iron vessels can also be used. The food cooked in these utensils help to cure eye diseases and piles. If bell metal (*Kamsya*) vessels used for cooking, the food improves intellect and food cooked in copper (*Tamra*) vessels reduces appetite and cause *Amlapitta*.^[6] The long list of utensils required for cooking food as well as specific type of utensil useful for the preparation of specific food item is also elaborated.^[7]

Food items	Type of utensils/ vessels to be used
Ghee	Wooden / Iron
Meat and its juice	Silver/ Golden/ Wooden / Iron
Leafy vegetables and edible plants	Wooden / Iron/ Stone
Water, Milk dishes and buttermilk	Earthen containers
<i>Raita</i> , <i>Khadava</i> powder and <i>Sattaka</i>	Glass / Crystal(<i>Sphatika</i>) / Studded (<i>Vaidurya</i>)

Procedure of cooking rice

Initially dehusked rice grains should be washed several times and then drenched with buttermilk and then put the rice in water containing vessel to boil. Afterwards add milk, ghee and cook a lot and then remove excess water. This is the method of cooking rice and the same is also applicable for cooking other varieties of grains.^[8]

Properties and medicinal uses: - *Vahnikara* (stimulates digestive fire), *Pathya* (wholesome), *Tarpana* (nurtures the dhatus), *Mutrala* (increases urine production), *Laghu* (light) etc.

While cooking rice 4 times of water is to be added. For preparing soup with green gram 3 times of water is essential, whereas some more quantity of water is required for the preparation of soup with black gram.^[9]

Soup of green gram: Ground the green gram in curd and add salt and fragrant substances to it. ^[10]

Properties and medicinal uses: *Laghu, Grahi, Vatapittahara* (alleviates Kapha and Pitta), good for eyes, *Shukravardhana* (increases semen quantity).

Properties and medicinal uses of black gram soup: Unctuous, *Vrishya* (increases semen), *Anilahara* (alleviate vata), *Ushna* (hot), *Santarpana* (nurturing), *Swadu* (tasty), *Balya* (strengthening), *Ruchikarak* (appetizing). ^[11]

Along with these, the recipes of *Krishara* with the quantity of rice (12 parts) and *Mudga* (green gram - 8 parts), *Papadum*, *Tahadi* (made from boneless meat), *Karchari* (made from *Amla* drugs), *Mulakam* (radish recipe), *Adrakam* (ginger recipe), *Harisa* (made from boneless meat) are also explained along with their properties. ^[12]

General procedure of meat preparation

While preparing meat recipes, initially cut it into thin or thick pieces and then wash with water containing *Dhanyaka* (coriander) and *Hingu* (asafetida). Again cook with water containing asafetida or *Vesavarakam* i.e. mixture of *Hingu*, *Ardraka*, *Jiraka* (cumin seeds), *Maricha* (black pepper). Then cook it with oil or ghee and when it is half cooked, must add buttermilk or *Dadimarasa* (liquid pomegranate extract). When it is fully cooked, sprinkle the powder of *Uddhulana* (sprinkling powder) i.e. *Ela* (cardamom), *Lavanga* (clove), *Maricha*, *Karpura* (camphor), *Kasturi* (musk) and *Twak* (cinnamon). The mixture of *Kuthera* (*Ocimum basilicum*), *Pruthu* (*Nigella sativa*), *Karchura* (*Curcuma zedoaria*), *Gunja* (*Abrus precatorius*), *Apamarga* (*Achyranthus aspera*) is used for giving fragrance. ^[13]

The amount of oil required to cook ten *Palas* (480gms) of meat is one *Pala* (50ml), salt and *Vesavara* are required in half *Pala* (25gm) and in 1 *Pichu* quantity respectively. The same quantity of oil and others are required to prepare vegetable dishes and somewhat less for rice dishes. ^[14]

The different varieties of animal meat and bird meat recipes are elaborately described by the author in this text with their medicinal uses and properties like *Ajamamsam* (goat), *Bakari* (she goat), *Kacchapa* (tortoise), *Tittiri* (black partridge), *Lavaka* (common quail), *Mayura* (peacock) etc.

The different recipes of meats are *Praleha* (broth) eg. *Gaura praleha* (), *Pattala praleha*, *Dhananjaya praleha* (), *Gaudadeshiya praleha* (), *Shuklavarna praleha* (), *Pitavarna praleha* (), *Haritavarna praleha* (), *Raktavarna praleha* () etc., *Samosa*, *Bhrishtamamsam* () (fried meat), *Yakritabhrishtam* () (liverfry), *Tanduram* () eg. *Suswadu tanduram* (), *Shulapakwata tanduram* () etc., *Putapaka*, *Mamsendari* () (meat idli), *Kuttita mamsa* () (mashed meat), *Madhuramamsa paka*, *Antrrandhanam* () (procedure to cook intestines), *Rajikamamsam* (meat Raita), *Mamsapuritavartakam* () (filling of meat in Brinjal) etc.

In this text, one complete chapter is allocated to the preparations of *Matsya* (fish) *mamsa*. The whole procedures of fish preparations are given here. The specific fishes such as *rohita*, *palashi*, *pathina*, *magurika*, *gundi* with their recipes are discussed. Season wise sources for fishes are also described.^[15]

Season	Sources of fish
<i>Hemanta</i>	<i>Kupa</i> (well)
<i>Shishira</i>	<i>Sarasa</i> (lake)
<i>Grishma & Madhu</i> (spring and summer)	<i>Nadeya</i> and <i>Chaundya</i> (river and large lake)
<i>Sharada</i> (autum)	<i>Naizara</i> (waterfall)
<i>Varsha</i> (rainy)	All fishes are <i>Doshakarak</i> of any source

Before describing the fish preparation, the importance is given to *Gandhanashana* (Removal of odour of fish) procedure. In this the fish pieces should wash with water and then again dip and wash them with *besan* (flour of Bengal gram) and buttermilk several

times. After that press the pieces with turmeric, dry ginger, coriander and mustard oil and again wash & smear with asafetida which helps to overcome the odour of fish.^[16]

Common procedure of Matsya recipe: Put the coriander, *Kasamarda* and asafetida in heated oil. Then add fried fish, salt, buttermilk into it. When it is half cooked, add mango powder, dry ginger and asafetida and then allow for cooking.^[17]

The different preparation of fish's are-

1. *Matsya Praleha* (fish broth)
2. *Matsya Khanda Praleha* (broth of fish pieces)
3. *Matsya Pishtika* (crushed fish recipe)
4. *Matsya Purana* (fish filling)
5. *Matsya Putapaka*
6. *Margala Matsya* (fried fish)
7. *Matsya Mandaka* (fish cake)
8. *Mastyendari* (Fish idli)
9. *Sukshma Matsya* (minute fish)

Similarly one whole *Utsava* is allocated for appetizers. The appetizers with their properties described in this chapter are as follows-^[18]

S. No.	Appetizers	Recipe	Medicinal properties
1.	<i>Kshushtodhaka</i> ()	Boil buttermilk with ginger for long time and then seasoned with <i>Hingu</i> , <i>Saindhava</i> and <i>maricha</i> . Add <i>ela</i> for fragrance.	<i>Hridya</i> (good for heart), <i>Laghu,Ruchya</i> (enhances appetite), <i>KaphaVatahara</i> , <i>Vibandha hara</i> etc.
2.	<i>Narangakshushtodhakam</i> (, Orange based appetizer)	Take the pulp of orange without seed and add pepper powder	<i>Ruchya</i> , <i>Vatahara</i> , <i>Kaphakara</i> (aggravates <i>Kapha</i>) , <i>Pittahara</i> , appetizing, <i>Vishada</i> etc.
3.	<i>Jambirabhavam</i>	Pulp of lemon mixed with sugar, <i>maricha</i> and <i>ela</i> .	<i>Pachana</i> (digestive), <i>Hridya</i> ,

	(, Lemon based appetizer)		<i>Kaphavatahara, Agnivriddhikara</i> (enhances digestive power), <i>Mukhavaisha dyakara</i> (remove bad taste of mouth), <i>Ruchya</i> etc.
4.	<i>Bijapurakam</i> (, Citron based appetizer)	Citron mixed with <i>Saindhava</i> and <i>adraka</i>	<i>Laghu, Rochana, Hridya, Dipana, Kaphavatahara, Gulma, Shoola, Arshahara.</i>
5.	<i>Tilakalkasamskara</i> (, Sesame paste appetizer)	<i>Kalka</i> (paste) of sesame mixed with lemon, rock salt and <i>adraka</i>	<i>Ruchya, Vatahara, Balya, Agnivardhaka.</i>
6.	<i>Sattakam</i> (, Pramoda) (Described by Nala)	Churned and distilled curd with <i>lavanga, vyosha</i> pieces, <i>dadimabija</i> (seeds of pomegranate) and sprinkled camphor powder.	<i>Hridya, Madhura</i> (sweet), <i>Sugandhi</i> (fragrant), <i>Snigdha, Vatahara, Pittahara, Balya, Laghu.</i>
7.	<i>Vishyandana</i> ()	Make mixture of equal quantity of buttermilk and milk and reduced to half after boiling. Then add 1/8 th qty. of rice and sesame seed, equal qty. of pulp of <i>Priyala, Panasa</i> & lotus, milks half quantity of ghee and sugar. When cooking complete	<i>Hridya, Brimhana, Guru, Ruchya, Shukrakara</i> etc.

		add <i>Trikatu</i> and <i>Karpura</i> for fragrance.	
8.	<i>Amrapallavamukala</i> (Appetizer derived from flowers and sprouts of mango)	Mango bud cut into pieces and mixed with rock salt and then seasoned with <i>Dadhi</i> (curd) and <i>Maricha</i> .	<i>Kaphapittahara</i> , <i>Hridya</i> , <i>Vahnikara</i> , <i>Ruchya</i> , <i>Mukhavairsyanashana</i>
9.	<i>Mrinalakshushtodhakm</i> (Appetizer derived from lotus fibre)	Lotus fibres treated with <i>Saindhava</i> and <i>Nimbu</i> (lemon) and then soaked with ginger water,	<i>Kashaya</i> (astringent), <i>Hridya</i> , <i>Kapha</i> , <i>Pitta</i> , <i>Rakta hara</i> , <i>Swadu</i> etc.
10.	<i>Shigrumulajam</i> (based appetizer)	Wash <i>Shigru</i> (<i>Moringa oleifera</i>) and then cooked with <i>Saindhava</i> , oil, <i>haridra</i> and <i>maricha</i> .	It is <i>Vatahara</i> , <i>Pittakara</i> , <i>Kaphahara</i> . It is a good remedy for <i>Arsha</i> , <i>Snayu roga</i> .
11.	<i>Amalakaphalam</i> (based appetizer)	In <i>Amalaki</i> fruit smeared with oil, add fried asafoetida, oil, rocksalt, <i>Vyosha</i> (<i>Maricha</i> , <i>Pippali</i> and <i>Sunthi</i>) keep it for few days by which it gets fragrance.	<i>Tridoshahara</i> (Alleviates <i>Vata</i> , <i>Pitta</i> and <i>Kapha</i>)

While describing the vegetable preparations, the author had given very much importance to *Vartaka* (Brinjal) and further he also quoted that the meal without brinjal is incomplete and brinjal with stalk should used for eating which is prepared in oil with asafetida.

[19]

General method of preparation of vegetables^[20]

Initially wash the vegetables and then add oil containing *Hingu* and *Jiraka* with salt, mango powder etc. when it is cooked add *Hingudaka* (water mixed with asafoetida) to it. Add the cut pieces of *Vastuka* or other vegetables in heated oil and when it is half cooked add salt and little qty. of water to it. Then add buttermilk with coriander and also *Shunthi*, *Jiraka* and *Hingu*.

The various preparations of each vegetable according to edible parts of the plant are described in this text. The edible plant parts are divided into six types i.e. *Patra* (leaf), *Pushpa* (Flower), *Phala* (Fruit), *Nala* (Stalk), *Kanda* (Bulb), *Mula* (Root). The vegetables and their edible parts are mentioned as follows-

Edible part	Name of the Vegetable
Fruit	<i>Vrintaka</i> (Brinjal), <i>Bimba</i> (Ivy gourd), <i>Torai</i> (Ridge gourd), <i>Chacheda</i> (Big size snake gourd), <i>Tumbi</i> (Bottle gourd), <i>Bilva</i> (Bengal Quince), <i>Kushamanda</i> (Ash gourd), <i>Kantakari</i> (Solanum xanthocarpum), <i>Amalaka</i> (Indian Gooseberry), <i>Karavella</i> (Bitter gourd), <i>Harita Chanaka</i> (Green Bengal gram), <i>Karira</i> (Capparis deciduas), <i>Vishani</i> (<i>Tropa bispinosa</i>), <i>Udumbara</i> (Fig fruit), <i>Karkati</i> (Cucumber), <i>Shami</i> (<i>Prosopis spicigera</i>), <i>Kutaja</i> (<i>Holarrhina antidysenterica</i>), <i>Kadali</i> (Plantain), <i>Raja masha</i> (Cow peas), <i>Eranda</i> (Castor) etc.
Leaves	<i>Vastuka</i> (White goose feet), <i>Kasoundi</i> (Roundpodded cassial), <i>Devadali</i> (Bristly luffa), <i>Patha</i> (<i>Cissampelos pareira</i>), <i>Poyika</i> (Indian Spinach), <i>Shatapushpa</i> (Indian sweet fennel), <i>Methika</i> (Fenugreek), <i>Kakamachika</i> (Black night shade), <i>Sehunda</i> (<i>Euphorbia lingularia</i>), <i>Pavada</i> (Oval leaved cassia), <i>Luniyashakam</i> (Purslane), <i>Chanaka</i> (Bengal gram), <i>Chanchu</i> (<i>Corchorus aesterans</i>), <i>Nadishakam</i> (<i>Ipomoea aquatica</i>), <i>Palikya</i> (Spinach), <i>Maricha</i> (Black pepper), <i>Vellaja</i> (<i>Embelia ribes</i>), <i>Chuka</i> (Tamarind), <i>Punarnava</i> (Spreading Hogweed), <i>Chitravali</i> (Rose coloured leadwort), <i>Kausumbha</i> (Safflower), <i>Jivanti</i> (<i>Leptodenia reticulata</i>).
Flowers	<i>Karira</i> (Capparis deciduas), <i>Kutaja</i> (<i>Holarrhina antidysenterica</i>), <i>Shobhanjana</i> (Drumstik), <i>Kanchanara</i> (Mountain ebony), <i>Shiradula</i>

	(Common indigo), <i>Agasthi</i> (<i>Sesbania grandiflora</i>), <i>Arani</i> (<i>Premna integrifolia</i>), <i>Shanapushpa</i> (Hemp flower), <i>Madhuka</i> (Indian butter flower)
Sprouts (<i>Pallava</i>)	<i>Torai</i> (Ridge gourd), <i>Amra</i> (Mango), <i>Nimba</i> (Neem).
Stem (<i>Danda</i>)	<i>Kadali</i> (Plantain), <i>Sarshapa</i> (Mustard), <i>Mulakam</i> (Raddish).
<i>Kanda</i>	<i>Kadali</i> (Plantain), <i>Suranam</i> (<i>Amorphophallus campanulatus</i> , Lotus fibre.

Precautions while cooking the vegetables^[21]

The vegetables such as *Chunchuka*, *Nalika*, *Patha*, *Vastuka* (*Chenopodium album*), *Kakamachi* (*Solanum nigrum*), *Tanduliya* (*Amaranthus*), *Punarnava* (Spreading hogweed) etc. have to be cooked with Amla Dravya like tamarind. *Kasamarda*, *Methi* leaves, *Punnata* (*Cassia tora*) and Bengal gram should be cooked without adding Amla dravya. This can also follow even cooking *Vartaka* (Brinjal), *Kushamanda* (Pumpkin) etc. fruit vegetables. Any vegetable that is hard, astringent, bitter or pungent in taste must boil in water initially and then in buttermilk and after that cook it in oil.

While preparing the Surana recipe, its bulb should be boiled or decocted in water or sour gruel with tamarind leaf which helps to lose its acidity. He also advice to avoid the vegetables which are too old (*Atijirna*), out of season (*Akalotham*), dry (*Rukasham*), improperly cooked (*Asiddham*), non terrestrial (*Abhumijam*), too soft or ripe, those that grows in cold weather or at places inhabited by poisonous animals.

Other than different varieties of meat, fish and vegetable preparations, the other recipes which are also consumed by human being in daily routine are also elaborately explained in this compendium. Pickles, *Vadas*, *Vatak*, *Laddu*, *Modaka*, preparations from different flours eg. Rice flour, Maida etc., Sweet preparations of milk, *Pupakam*, cool drinks preparations (*Panaka*) are explained in depth in Kshemakutuhalam.

Recipes	Preparation method	Different varieties	Properties
Pickles ^[22]	The appropriate fruit, root or flower mixed with mustard oil, cumin seed, salt and turmeric should place in the sun for 3 days to attain sour taste.	<i>Nimbu, Amra, Bimbi, Vartaka, Adraka, Trapusha, Kushamanda, Bilva, Pippali, Tinduka, Sunthi, Surana, Mulaka, Vamsha, Matsya mamsa, Tittira, Lava</i> etc.	<i>Pittakara, Vatahara, Ruchikaraka</i>
<i>Panaka</i>	Drink prepared from different fruits by adding sugar depending upon their sourness.	<i>Apakvaamraphala panaka, Pakvaamra phala panaka, Amlika phala panaka, Jambuphalapanaka, Bijapurapanaka, Hemakiranapanaka, Nimbuphalapanaka, Karmarda panaka, Narangaphala, Jambira, Badaraphala, Charodbhavam</i>	Most of the drinks are <i>Vatahara, Pittaghna, Hridya</i> . and <i>Ruchikara</i> . But other than this, the medicinal properties are depend upon the ingredient used.
<i>Rasala</i>	It is a drink prepared by mixing sugar with curd, flavouring the mixture with <i>Madhu, Ghrita, Maricha, Ela</i> and adding fragrance of <i>Karpura</i> after churning.	<i>Mochaphala Rasala, Kharbujeya Rasala</i>	<i>Pittahara, Hridya, Kaphakara, Madhura, Vishtambhi</i> etc.

<i>Vataka/ Vada / Vati</i>	Prepare the ball of ground black gram/ green gram and cook them in boiling oil. After proper cooking immerse them in Buttermilk.	<i>Bhima vataka, Ghola vataka, Kanjika vataka, Chinchavataka, Dhvansi vati, Pakva vati, Adrapishtavati</i>	Most of them are <i>Brimhana, Vatahara, Balya, Pittakara</i> etc. (As per ingredients used)
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Milk preparations	Medicinal properties
<i>Chandraprabha Kshirika</i> : - Add rice grain smeared with ghee in the partly boiled milk and then add honey.	<i>Raktapittahara, Vishtambhi, Balya, Dhatupushtikara</i> (nourishes the dhatus) etc.
<i>Narangakshirini</i> : - Cook the Orange <i>Majja</i> (pulp) with sugar in the heated ghee. When it gets cool down add appropriate quantity of half boiled milk in it. This is orange milk dish.	<i>Vishtambhi, Vatapittahara, Guru</i> (heavy).
<i>Hamsini</i> : - Strain the water free milk with the curd and then add sugar, <i>Maricha, Ela</i> in it.	<i>Kaphapittahara, Ruchikaraka, Vahnikaraka, Shitakaraka</i> etc.
<i>Shashirekha</i> : - Boil the milk with sugar and rice and then allow cooling it. This is <i>Shashirekha</i> .	<i>Hima, Balya, Ruchya, Vatapittahara, Dahahara</i> etc.

The coloring agents i.e. *Kumkum, Raktachandana*^[23]; *Uddhulanam* (sprinkling spices) i.e. *Ela, Lavanga, Kasturi, Karpura, Twacha, Maricha*^[24]; *Vesavaram* mixture of *Hingu, Ardraka, Maricha, Jiraka, Haridra, Dhanyaka*^[25] in increasing orders are described in this text which are very much useful while preparing various recipes. All the recipes should have to cook on a mild fire also cited in this text.

DISCUSSION AND CONCLUSION

By going through the book Kshemakutuhalam, it is observed that many a number of food preparations of daily regimen are explained in this compendium. Before preparation of meat or fish or vegetable recipes, prime importance is given for washing of these substances and for which water or water mixed with *Hingu* (Asafetida) is mentioned. In many recipes, *Saindhava* (rock salt), *Haridra*, *Vyosha* (Trikatu), *Hinga* (asafoetida), *Jiraka* (cumin seed), *Maricha* (black pepper), *Lavanga*, *Adraka* or *Sunthi*, *Karpura* etc. are mentioned which are mainly having properties like *Dipana*, *Pachana* etc. which helps in proper digestion of food. In most of the dishes, buttermilk is also added. *Katu taila*, *Tila taila* or ghee is mentioned for the preparations of dishes. The quantity of ingredients, oil and water etc. according to the recipes is also mentioned. The recipes should have to cook on mild fire so that the nutrient value of the food should not be gets affected.

Not only the recipes with their medicinal properties but also the utensils required for kitchen and their importance, *Lakshanas* of good cook (*Sudapaka*), kitchen (*Bhojanaghriha*), rule of dietetics, *Rutucharya*, *Dincharya*, *Ratricharya* etc. are also covered in this compendium. The book Kshemakutuhala gives us a comprehensive idea about the Indian culinary science which is well known for different spices, array of ingredients and diversity yet having simple cooking methods, which helps in fulfilling objectives of Ayurveda by maintaining positive health in healthy individuals and cure of diseases in the diseased. That's why Indian culinary science has occupied a unique position in the world of diet and dietetics.

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