



# Review of Ayurvedic Health Drinks and Liquid Nutrition Explained in *Kshemakutuhala*<sup>†</sup>

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**Abstract:** *Kshemakutuhala* is a remarkable text by Kshema Sharma, the Royal physician of King Vikrama during the 16th century A.D., based on culinary science. This text is a compilation of varieties of foods and drinks, both vegetarian and non-vegetarian, and their characteristics and nutritional value. This work is divided into 12 chapters, and each chapter is named an Utsava. The author has also given importance to liquid nutrition and dedicated two separate Utsava to that. The 11th Utsava describes various appetiser preparations. Different types of appetisers are prepared with main ingredients such as orange, lemon, citron, sesame paste, mango and lotus fibre. The explanation had been given where all of these ingredients have been proven to be a good carminative. In the 12th chapter, he mentioned various milk preparations, cool drinks, beverages, buttermilk etc. Different types of *Panaka* (sweet drinks) were prepared out of the main ingredients like raw mango, ripened mango, lemon, tamarind, and the fruits of *Syzygium cumini*, which balance taste and health, were included in it. He mentioned the natural colouring agents like saffron, red sandalwood, and sprinkling spices like cardamom, clove, camphor, Indian bay leaf, black pepper so on, which are used to add flavours to food and drinks. This review helps to explore the scientific aspect of Ayurvedic health drinks and their indication to the modern world. Unhealthy drinks are common in the present time, and it is necessary to trace back to the ancient classical Ayurvedic text, which explains healthy, nutritious drinks. By adopting these healthy drinks and liquid preparation, we can maintain and enhance human health. However, further research is needed to confirm this.

**Keywords:** *Kshemakutuhala*; culinary science; ayurvedic health drinks; liquid nutrition; *Panaka*



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## 1. Introduction

Ayurveda says that “*Sarvam Dravyam Pacha Bothikam*”, which means everything in the universe is made up of five basic elements. And they are *Prithvi* (Earth), *Agni* (fire), *Jala* (water), *Vayu* (air), and *Akasha* (atmosphere). Our body, as well as the food we consume, is made up of these elements. If any of these elements move out of normalcy, then it leads to imbalance. So, it is important to maintain the balance of these elements to balance our universe as well as our body. It is said that the stomach is divided into three parts on behalf of food intake. The first part should be filled with solid (*Prithvi*), the second to be filled with water (*Jala Mahaboortha*), and the third part should be left free (*Akasha*); this helps digestion. Diet plays an important role in the prevention of diseases and the maintenance of normal body physiology. Ayurveda explains the preparation and use of different types of liquid nutrition that act as both nutrition and medicine. This information is scattered in the classical textbooks of Ayurveda, and one of those books is ‘*Kshemakutuhala*’.

The title *Kshemakutuhala* could be explained as a compound of the two Sanskrit words, 'Kshema' and 'Kutahalam,' meaning 'well-being' and 'curiosity', respectively, the curious enquiry into the nature of well-being of humans, both physical and mental, based on Ayurveda. The author describes various delicious dishes by adding notes on their Ayurvedic properties.

## 2. Methods

### *Sources of Data Collection*

This work reveals so much information about liquid nutrition along with its indications. *Kshemakutuhala* has been analysed and reviewed. Forty-six other articles regarding ingredients in the preparations, which are explained in this article, were downloaded from the internet and reviewed.

## 3. Results & Discussion

Green gram and Black gram gruel (*Mudgakulmasha Yusha*) [1] (p. 25)

The gruel was prepared by adding adequate water, rock salt and asafoetida to the sprouted grains of green gram and black gram that are cooked till they become soft and semisolid consistency. This preparation will have the benefits of those ingredients that are added to it. The book *Bhaishajya Ratnavali* includes green gram as a padhyahara (wholesome food) for medoroga (obesity), and black gram is considered to have Shoshana [2] properties (causes the depletion of the body). Thus, this preparation can be useful in *medoroga* (obesity). Some studies point out the suppression of weight gain and fat accumulation action of black gram and green gram [3,4]. The Green gram is rich in proteins, carbohydrates, dietary fibre, vitamins, and minerals [5]; thus, it provides adequate nourishment to the body.

Rock salt is considered the best among all salts. It is advised for daily use as per Ayurveda. It contains trace elements required by the body, including calcium, iron, zinc, potassium, magnesium, copper, and so on. It improves appetite, removes gas, and soothes heartburn [6]. Asafoetida is carminative and reduces bloating and other stomach problems [7].

*Krishara* [1] (pp. 45–46)

Twelve parts of unbroken and broken rice grains of the sasti variety (*Oryza sativa*) were mixed with eight parts of green gram. Water was added and cooked into a thick consistency. It was added with wet ginger, asafoetida and turmeric. This preparation is good to have during the winter, as it is difficult to digest, is heavy, provides strength, and is nutritious [1] (p.47). *Oryza sativa* has a high nutritional value and includes carbohydrates, fat, fibre, protein, vitamins, minerals, and fatty acids [8]. This preparation provides strength to the body.

### 3.1. Appetisers

*Preparation using buttermilk* [9] (pp. 1–3)

Ginger was added to the buttermilk, which was boiled for a long time and seasoned with the powdered mixture of asafoetida, rock salt, cardamom, and pepper. This drink instantly strengthens the dormant digestive fire. Boiled buttermilk acts as nectar and is indicated in chronic cold, cough in the cold season, breathlessness, indigestion, and loss of taste [10].

*Vishyandana* [9] (pp. 15–19)

Buttermilk and milk were taken in equal quantities and heated. When they were reduced into half, one-eighth part of unhusked rice and sesame seeds, equal quantities of the seeds of *Buchanania Latifolia* and *Nelumbo nucifera*, half part of ghee, and sugar were added to it. After cooking, dried ginger, pepper, long pepper, camphor, and ghee were added to it. This is a good appetising, tasty drink that helps to promote the growth of the body and strengthen it.

Buttermilk has a fair amount of acid in it and helps to clear the stomach and improve digestion. Ginger, pepper, and asafoetida all have excellent digestive properties. When consumed together with buttermilk, they have a cooling and digestive effect on the gastrointestinal tract [11].

Appetiser derived from the new sprouts of mango (*Amrapallava Kshudotakam*) [9] (pp. 20,22)

The new sprouts of mango that are brownish red in hue should be cut into pieces, mixed with salt and made into balls. This should then be sprinkled with asafoetida and cooked in ghee and milk. It removes the chronic loss of appetite.

Appetiser derived from flowers of mango (*Amramukula Kshudotakam*) [9] (pp. 21–22)

Mango buds, along with branches, are cut into small pieces and mixed with rock salt, pepper and curds. This can be given to a person suffering from chronic loss of appetite. The flower and sprout of the mango tree remove bad tastes in the mouth, stimulate the digestive fire, and improve the appetite. There is an in vivo study that shows the gastroprotective property of decoction prepared from *Mangifera indica* flowers by reducing gastric juice volume and acidity [12].

Appetiser derived from Lotus stem (*Mrinala Kshudotakam*) [9] (pp. 23–24)

Lotus stem was treated with rock salt and lemon and soaked in water, to which pieces of ginger were added. Lotus stems are high in fibre, which adds bulk to the stools and prevents constipation. It also aids good digestion and cures stomach-related problems [13].

### 3.2. Milk Preparation

*Candraprabha* [14] (pp. 1–3)

The milk was boiled partially, and rice grains smeared with ghee were added and cooked until the rice grains completely became soft. For imparting colour, saffron was added to it. This can be consumed along with honey. It imparts strength to the body. Milk is an excellent source of vitamins, minerals, and protein [15] required for the growth and nourishment of the body.

*Sasirekha* [14] (pp. 39–40)

The drink *Sasirekha* was prepared by adding boiled milk with sugar and rice and cooked until the rice became soft. It imparts strength, enhances appetite, cures even severe burning sensations, and provides nourishment.

Orange-based milk dish [14] (pp. 5–7)

The fleshy portion of the orange was cooked, adding ghee and sugar. After cooling, it was added with half-boiled milk in the appropriate quantity along with *Ela* (*Elettaria cardamomum*) to impart fragrance. Even though this dish is delightful, it is heavy to digest and produces stomach upset when consumed.

Coconut-based milk dish [14] (pp. 7–9)

The fleshy portion of coconut was cut into small pieces and cooked in milk along with sugar. Milk was boiled for some time to extract the essence of coconut into milk. Then it was strained and fumigated with *Aquilaria malaccensis* resin. Coconut kernels contain trace minerals and nutrients essential for human health [16]. It is a nutritious, sweet drink that improves appetite and provides coolness to the body.

Buttermilk Preparation [14] (pp. 28–29)

Sour curd from buffalo milk was mixed with the four parts water and placed in a clean earthen vessel. It was churned in the morning, and the supernatant portion was removed. Then a powdered mixture of fried asafoetida, cumin seeds, salt and black mustard in small quantities was added to it. Buttermilk enhances appetite, stimulates the digestive fire, helps digestion, destroys abdominal diseases, and nourishes the body

### 3.3. Curd Preparation

Curd is one of the greatest probiotic food sources, intake of curd develops taste in food, promotes strength, is a good appetiser, stimulates digestive fire, and nourishes the body [17].

‘Hamsini’ [14] (pp. 35–36)

The thick water-free milk of a cow was mixed with curd and strained. Sugar, cardamom, and black pepper were added to it, which stimulates and improves the digestive fire.

Lassi (Rasala) [14] (pp. 43–44)

*Rasala* was prepared by mixing sweet curd, sugar, ghee, honey, black pepper and cardamom. Then it was churned along with the addition of camphor. It provides strength, improves appetite, is unctuous, and is good to consume during summer.

Watermelon-based Lassi (*Kharabuja Rasala*) [14] (pp. 48–49)

This was prepared by mixing sweet curd and small pieces of watermelon. The mixture was endowed with fragrance by the addition of a handful of lemongrass. This drink restores the weakened digestive fire, stimulates appetite, and increases urine output.

Watermelon and mango-based (*Kharabuja Rasala*) [14] (pp. 50–51)

This was prepared by mixing pieces of watermelon, sugar, camphor and wet ginger into the juice of ripe mangoes. This drink can be given to a person exposed to excess sunlight.

### 3.4. Sweet Drinks (Panaka)

Drink prepared from unripe mango (*Apakva Amraphala Panaka*) [14] (pp. 52–53)

Unripe mango was cooked and pressed to obtain its juice. Milk mixed with sugar, black pepper, and water (half the quantity of milk) was added to prepare *Apakva Amraphala Panaka*. Unripe mangoes have powerful antioxidants and stimulate the digestive tract to secrete digestive enzymes and help in digestion [18].

Drink prepared from ripe mangoes (*Apakva Amraphala Panaka*) [14] (pp. 54–55)

Fully ripe mango fruit juice was mixed with sugar, cardamom, cloves, wet ginger, and saffron. This is an appetiser, a good aphrodisiac, and helps in strengthening the body. The ripe mango juice is a restorative tonic and is used for heat stroke [19].

Drink prepared from the Tamarind fruit (*Amlika Phala Panaka*) [14] (pp. 56–58)

The ripe fruit of tamarind was crushed in water to draw out its juice, which was then mixed with sugar and black pepper and rendered fragrant using cloves and camphor. It acts as an appetiser and stimulates the digestive fire.

Drink prepared from Jamun fruit (*Jambu Phala Panaka*) [14] (pp. 59–60)

The seedless fruit of Jamun was crushed along with sugar and water to extract its juice. It was then added with pepper and the leaf of Bhringaraja (*Eclipta prostrata*). This drink acts as a good appetiser. Jamun (*Syzygium cumini*) is a good source of iron, antioxidants, and vitamin C and is used as an effective medicine against diabetes, hypertension, obesity, and hyperlipidemia [20].

Lemon-based drink (*Nimbu Phala Panakam*) [14] (pp. 65–66)

This was prepared with one part lemon juice to six parts sugar syrup, mixed with black pepper and cloves. It is relishable and acts as a good appetiser. Lemon is rich in vitamin C, which has anti-inflammatory, antimicrobial, anticancer, and antiparasitic activities [21].

Orange-based drink (*Narangi Phala Panka*) [14] (pp. 69–70)

Ripened orange juice was mixed with sugar, wet ginger, and powdered camphor to make this drink which enhances the appetite. Orange eliminates toxins from the body, maintains hydration, improves appetite, and removes constipation [22].

#### 4. Conclusions

Reviewing the book *Kshemakutuhala*, it was observed that many food preparations of the daily regimen are explained in this textbook. It gives us a comprehensive idea about Indian culinary science, which is well known for different spices, with a variety of ingredients and simple cooking methods.

There are so many liquid preparations explained in the different *Utsav* of this book. Some of them highlighted in this review can be easily prepared and used in our daily lives. This review gives preliminary information about liquid preparation, and further studies like clinical and observational studies are needed to confirm the health benefits and mode of action of these preparations. By knowing their health benefits and importance, we can lead a healthy life by enriching our bodies with soulful food.

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