

Ancient Vessels in Ayurveda: A Review Based on Traditional Nomenclature and Health Benefits

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ABSTRACT

Food is the most fundamental requirement for the sustenance of human life. According to Ayurveda, *Ahara* plays a pivotal role in the promotion, preservation, and restoration of health. The consumption of wholesome and properly prepared food has a profound influence on present health as well as long-term well-being. Food fulfills both nutritional and sensory needs, and its effectiveness depends not only on the quality of raw ingredients but also on the methods of preparation and the utensils used for cooking. Traditional Ayurvedic wisdom emphasizes that cooking vessels significantly influence the properties of food by interacting with *Agni* and enhancing its therapeutic value. Ancient civilizations extensively used vessels made of metals such as gold, silver, copper, iron, brass, and earthenware. These materials were believed to impart specific health benefits to the food prepared in them. For instance, food cooked or stored in gold vessels was considered beneficial for enhancing vitality and immunity, while silver vessels were known for their antimicrobial properties. Cooking in iron vessels increases the iron content of food, thereby aiding in the prevention of iron-deficiency conditions. Copper vessels support tissue nourishment and metabolic functions, whereas earthenware utensils are valued for their ability to retain nutritional integrity and preserve the natural taste of food. In contrast, the widespread use of modern cookware made from aluminum, plastic, stainless steel, and synthetic metal alloys poses potential health risks due to chemical leaching and loss of nutritional quality. These materials lack the inherent therapeutic attributes described in Ayurvedic literature and may interfere with normal digestive and metabolic processes. Therefore, revisiting and reintroducing traditional cooking, storage, and serving vessels aligns with Ayurvedic principles of preventive healthcare and *Rasayana*. The conscious adoption of ancient culinary practices can enhance the nutritional value of food and contribute to holistic health. This article attempts to highlight the importance of traditional cooking utensils and advocates their revival for promoting sustainable health and well-being.

KEYWORDS: Ancient vessel, Patra, Food, Ayurveda.

INTRODUCTION :

Ayurveda is one of the most ancient and widely trusted systems of medicine, and it accords significant importance to cooking as an integral aspect of daily life. In *Ayurveda*, the preparation of food is not merely a mechanical process but a vital determinant of its nutritional and therapeutic value. In the contemporary era, however, traditional methods of cooking using Ayurvedic metal utensils are increasingly being replaced by modern glassware and non-stick cookware.

According to the fundamental principles of *Ayurveda*, the material of the cooking vessel plays a crucial role in influencing the quality and effect of food on the body. Metals such as copper, bronze, and brass are highly valued in *Ayurveda* due to their ability to preserve and enhance the nutritional attributes of food. Cookware prepared from these metals is believed to impart beneficial properties to the food, thereby supporting digestion, metabolism, and overall health. Despite growing awareness regarding the selection of healthy food, modern society often overlooks the impact of cooking utensils on health. Scientific guidelines, including those issued by regulatory authorities, emphasize that materials used for cookware should not leach harmful substances into food. Traditional metal vessels, on the other hand, are known to enrich food and beverages by releasing beneficial mineral ions, thereby improving their quality.

In *Ayurveda*, the factors influencing food intake and its effects on the body are elaborately described under *Ashta Ahara Vidhi Visheshaayatana*. The significance of cooking utensils (*Bhajana*) is explained under *Karana*, which refers to food processing methods. Thus, the selection of appropriate cooking vessels is an essential consideration for ensuring wholesome nutrition and maintaining health in accordance with Ayurvedic dietary principles.¹

OBJECTIVES

- To reintroduce the use of traditional cooking vessels in society for the preparation, storage, and serving of food, in order to promote health and preserve nutritional quality in accordance with classical principles.
- To create awareness among the public regarding the potential health hazards associated with the use of modern cooking utensils, and to emphasize the importance of selecting cookware in accordance with *Ayurveda* principles.

STUDY TYPE: - Conceptual literary study.

METHODOLOGY :

The study is mainly based on secondary source which has been collected from relevant Ayurvedic Samhitas and modern literature, available information on internet, journals etc.

REVIEW OF LITERATURE

Food, being indispensable for human survival, possesses a distinct historical and cultural significance. The food culture of India is remarkably rich, diverse, and refined, reflecting the traditions, customs, and lifestyle practices of its civilization. Food serves as an important medium for understanding the cultural ethos and social practices of a region. The art of cooking in ancient India can be traced back to the period of the *Rig Veda*, during which culinary practices evolved into a well-organized and systematic discipline marked by precision and skill. In the classical texts of *Ayurveda*, several scattered references are available regarding the use of various utensils for cooking, storing, and serving food. These references highlight the influence of utensils on the qualitative and therapeutic attributes of food. Notably, the storage of water in vessels made of *Hema* (gold), *Trapusha* (tin), *Ghoshapatra* (brass), *Tamra* (copper), *Pittala* (brass), *Loha* (iron), *Madhudumbara* (wood derived from the sap of *Ficus religiosa*), and earthenware is described as possessing medicinal properties.

Such descriptions are documented in *Ayurveda Mahodadhi*, authored by *Vaidya Sushena*, which underscores the significance of vessel material in enhancing the health-promoting qualities of food and water. These classical references emphasize the integrative approach of *Ayurveda* in considering not only dietary substances but also the means of their preparation and storage for maintaining optimal health.²

Qualities of water stored in different vessels –

Sr. no.	Name of vessel	Qualities
1.	Hema(Gold)	Sweet in taste, cold in potency, Madhura vipaka, Tridosha shaman, Veeryakara, Balakara, Medhakara, Shubha(auspicious).
2.	Trapusa(Tin)	Picchila (sticky), Madhura(sweet), Increase veerya and Kapha Dosha,and Increase the bulk of feces and urine.
3.	Ghosha (Brass)	Katu in taste and vipaka, Guru, Increase Kapha and Pitta Dosha when used for a longer period of time.
4.	Tamra (Copper)	Ushna ,Swadu, katu in taste and vipaka,Increase Pitta and Vata Dosha, Decrease quantity of feces and flatus.
5.	Pittal/Reetika (Brass)	Katu in taste and vipaka, decrease Kapha Dosha and Increase the Pitta, Ushna,Increase Meha roga (urinary disease).
6.	Loha (Iron)	The water stored in iron vessels is spoiled (Dushita) and is unfit for drinking purpose, if consumed,it results in raktapitta,itching and diminished agni. The water heated or boiled in a iron vessel when taken results in itching and purges the malas and cleanses stomach.

7.	Wood of Udumbara (Ficus racemosa)	Ideal for the body, increase the luster and alleviates the Pitta.
8.	Earthen vessel	Useful to cleanse out waste products (malas), Dhatu samyakara, improves veerya, Balaojaskara (improve immunity) and strength.

Similarly, *Acharya Sushruta* has described specific types of vessels (*Patra*) intended for serving food, emphasizing their influence on health. He has also elaborated on the effects of various metals on the human body³, highlighting their role in modifying the properties and therapeutic value of food served in them.⁴

Specific use of vessels for serving foods –

Food Item	Vessels best for storage
Ghrita (Ghee)	Khrushnalouhaputra (Iron vessel)
Peyapadartha (Drinks)	Rajatapatra (silver vessel)
Phala & Bhakshya (fruits)	Leave of Banana etc.
Parisuska and Pradigdha	Hema (Golden vessel)
Katvara and Khada (Curd preparation)	Stony vessel
Boiled and Cooled Water (Drinking water)	Tamrapatra (Copper vessel)
Madya & Panaka (wines, beverages)	Mrittika Patra (Earthen pots)
Ragashadava & Sattaka (Sour preparations)	Vaidurya Patra (Vessels made of precious stones)

Effects of different metal on Human Body :

Metal	Effect on body
Gold	Sweet, cardio tonic, nourishing and a restorative, alleviates all the three Doshas, cool and beneficial for the eyes and eliminates poisons.
Silver	Sour, laxative, cool, demulcent, alleviates Pitta and Vata
Copper	Astringent, sweet Lekhana property (antiobesic), cool and laxative
Iron	Iron increase Vata and is cool, pacifies thirst, Pitta and Kapha
Bell-metal (Kamsya)	Bitter, antiobesic (Lekhana), beneficial for eyes and pacifies Kapha and Vata.
Tin and lead (Trapa & Sisa)	Katu, eliminate worms, saltish and antiobesics.
Precious stones (Pearl, Coral, Diamond, Ruby etc.)	Cool, eliminate poisons, beneficial for eyes, anti-obesitics, sacred and worth wearing, eliminate effects of sin, ill luck and Malas (Doshas).

COMMONLY USED METELS FOR MAKING VESSELS

Swarna (Gold)

Swarna (gold) is described as the foremost among the *Śuddha Loha*⁵ in *Ayurveda*. It is characterized by properties such as density, softness, brightness, malleability, ductility, and a distinctive yellow lustre. From a physical perspective, gold is an efficient conductor of heat and electricity and possesses a high capacity to reflect infrared radiation. Chemically, it remains unaffected by air, moisture, and most corrosive agents, which accounts for its stability and long-standing use in ornaments, coins, and protective coatings for other metals. In ancient times, food prepared or served in golden vessels was believed to enhance immunity and promote vitality. Classical Ayurvedic texts attribute significant therapeutic properties to *Swarna*. According to *Rasa Tarangini*, *Swarna* acts as a *Vṛṣya* (aphrodisiac), improves overall quality of life, enhances bodily radiance (*Varṇa*), and increases physical strength. It is considered beneficial in conditions such as *Viṣama Jvara* and *Antrakṣaya*, helps delay degenerative changes in bones, and supports improved cerebral circulation⁶. *Acharya Charaka* states—
“*Na sajjate Hema-panke Viṣam Padmadale Ambuvat*”—
which implies that an individual habituated to *Hema* (gold) develops resistance to toxins, just as a lotus leaf remains unaffected by water.⁷

Rajata (Silver)

Rajata (silver) is recognized as the second among the *Śuddha Loha* described in *Ayurveda*. It is a soft, white, lustrous metal known for its cooling (*Śīta*) and soothing properties. Traditionally, silver has been valued for its antimicrobial and purifying actions, making it suitable for storing water, milk, and other consumables.

Ayurvedic texts describe *Rajata* as beneficial for maintaining bodily balance, enhancing strength, and promoting mental clarity. The use of silver vessels for serving food and drinks is believed to impart health-protective effects by preventing microbial contamination and preserving the purity of the contents. Thus, *Rajata* plays a significant role in dietary practices aimed at sustaining health and preventing disease. *Rajata* (silver) possesses the highest electrical conductivity among all elements and the highest thermal conductivity among metals. In *Ayurveda*, *Rajata* is considered *Śīta* (cooling) in nature and is traditionally associated with the lunar principle. It exhibits potent antimicrobial activity and has been shown to exert toxic effects on various microorganisms, including bacteria, viruses, algae, and fungi. In ancient practices, milk was preserved by placing silver coins in it, as *Rajata* was believed to destroy pathogenic organisms and maintain purity. Classical Ayurvedic texts describe *Rajata* as one of the superior *Medhya* substances, contributing to the enhancement of intellect and mental clarity. It is also regarded as a *Rasayana*, capable of slowing the ageing process, improving physical strength, and promoting overall vitality. These rejuvenative properties make *Rajata* valuable in sustaining both physical and mental health.⁸ Culturally,

the gifting of silver utensils to a newborn child and the mother by elders is a long-standing tradition in Indian households. This practice aligns with both Ayurvedic and scientific perspectives, as consumption of water or milk from silver utensils is believed to enhance immunity in infants and protect them from various diseases, thereby supporting healthy growth and development.

***Tamra* (Copper)**

Tamra (copper) is described as the third among the *Śuddha Loha* in *Ayurveda*. It is a ductile metal possessing high thermal and electrical conductivity and is widely used as a constituent of alloy metals such as brass and bronze. In Ayurvedic philosophy, *Tamra* is associated with the solar and fiery principle, thereby enhancing *Agni*. It possesses *Lekhana* property, making it effective in reducing obesity and beneficial in the management of various abdominal disorders.⁹

The classical text *Rasaratna Samuccaya* (Chapter 5, Verse 46) elaborates on the medicinal benefits of *Tamra*, particularly highlighting that water stored in copper vessels acquires therapeutic properties due to the gradual leaching of copper into the water. Consumption of such water is considered beneficial for maintaining health and preventing disease.¹⁰ From a scientific standpoint, when water is stored in a copper vessel for more than eight hours, trace amounts of copper dissolve into the water. This phenomenon, known as the oligodynamic effect, enables copper to destroy a wide spectrum of harmful microorganisms, including bacteria, fungi, molds, and viruses, by exerting toxic effects on their cellular structures. According to guidelines, the human body requires approximately 12 mg of copper per day, and drinking two to three glasses of water stored in a copper vessel can help meet this requirement.

Traditionally, widespread use of copper vessels was associated with a lower incidence of conditions such as cardiovascular disorders, hypertension, and sleep disturbances. In contrast, modern lifestyles often rely on pharmacological interventions, which may produce adverse effects. *Ayurveda* emphasizes the detoxifying nature of *Tamra*, describing its role in eliminating harmful substances from the body. Copper is essential for several physiological processes, including red blood cell synthesis, protein metabolism, enzymatic activity, and the proper functioning of the nervous and circulatory systems, as well as maintaining bone health.

***Loha* (Iron)**

Loha (iron) is regarded as the fourth *Śuddha Loha* in *Ayurveda*. Classical texts describe three varieties of *Loha*, namely *Muṇḍa* (cast iron), *Tikṣṇa* (wrought iron), and *Kānta Loha* (magnetic iron).¹¹ Among these, cast iron vessels are particularly recommended for cooking due to their thickness and weight, which facilitate uniform heat distribution and enhance the nutritional quality of food. The use of iron cookware is

traditionally advocated for improving strength and preventing conditions related to iron deficiency. *Loha* is extensively utilized in various pharmaceutical procedures described in *Ayurveda*, particularly in *Charaka Chikitsa Sthana* (1–3/43, 15/187, 16/83, 26/250, 26/274, etc.). Classical texts attribute numerous therapeutic benefits to *Loha*, stating that it is beneficial for the eyes and vision, enhances physical strength, acts as a *Vṛṣya* (aphrodisiac), and is effective in the management of *Udara Roga* as well as *Kapha-Pittaja Roga*. It also improves complexion (*Varṇa*) and promotes intellect (*Medhā*).¹² From a nutritional perspective, the use of iron cookware contributes less than 20% of the total daily iron requirement, remaining well within safe limits. Iron deficiency anaemia can be effectively managed through the regular use of cast iron utensils for cooking.¹³ The American Dietetic Association has reported that cast iron cookware can leach significant amounts of dietary iron into food, thereby serving as a simple and effective method of iron fortification for the prevention of iron deficiency anaemia. Biologically, iron plays a crucial role by forming complexes with molecular oxygen in haemoglobin and myoglobin, which are essential oxygen-transport proteins in the human body. Additionally, cast iron cookware helps reduce the emission of harmful synthetic compounds such as perfluorocarbons (PFCs), which are released when certain modern metals are heated. Cast iron possesses excellent heat-retention capacity, enabling efficient cooking with reduced fuel consumption, thereby making it both health-promoting and energy-efficient.

***Pittala* (Brass)**

Pittala is an important *Miśra Loha* (alloy metal) described in *Ayurveda* and has been in use since the *Samhita Kāla*. It is an alloy primarily composed of copper and zinc, typically containing approximately 70% copper and 30% zinc. In ancient India, a majority of household utensils were traditionally made of brass, reflecting its widespread acceptance and utility. Brass is a valuable source of both copper and zinc, minerals essential for various physiological functions. One of the notable advantages of using *Pittala* utensils is their ability to preserve the natural taste, aroma, and quality of food and milk prepared or stored in them. This property aligns with Ayurvedic principles that emphasize maintaining the inherent qualities (*Guṇa*) of food for optimal digestion and nourishment. The use of *Pittala* (brass) utensils for cooking is associated with minimal nutritional loss, with studies indicating that only a small proportion of nutrients are lost during the cooking process. Brass utensils are also traditionally believed to prevent worm infestations and contribute to the improvement of blood quality by supporting haemoglobin levels in the body.¹⁴ Another significant advantage of *Pittala* is its high resistance to corrosion, which ensures durability and reduces the risk of harmful metal degradation during cooking and storage. The zinc content present in brass plays an essential role in enhancing immunity, supporting enzymatic functions, and maintaining overall metabolic balance. Thus, the regular use of *Pittala* utensils aligns with Ayurvedic principles of preserving the nutritional integrity of food while promoting health and disease prevention.

***Kāmsya* (Bronze)**

Kāmsya is another important *Miśra Loha* described in *Ayurveda*. Commonly referred to as bell metal in the Indian context, *Kāmsya* is a hard alloy, typically a form of bronze composed of copper and tin in an approximate ratio of 4:1. Traditionally, *Kāmsya* has been extensively used for cooking, serving, storing, and consuming food. According to the descriptions found in *Ayurveda Prakāśa*, utensils made of *Kāmsya* are known for their therapeutic properties. The classical Sanskrit expression “*Kāmsya Buddhivardhakam*” signifies that the use of *Kāmsya* enhances intellect and mental clarity. The long-standing practice of using bronze utensils is attributed to their superior resistance to corrosion when compared to pure copper. *Kāmsya* utensils are also valued for their ability to retain the alkalinity of food, thereby reducing excessive acidity and supporting digestive health. However, classical texts caution against the use of *Ghṛta* (ghee) in bronze vessels, as it is considered incompatible.¹⁵ The recommendation of *Kāmsya* vessels by the *Āchāryas* is the result of prolonged observation and empirical understanding of their health-promoting effects.

DISCUSSION

In the present era, the use of vessels made from precious metals such as gold and silver has become impractical due to their high cost and limited availability. Hence, *Ayurveda* strongly advocates the use of earthen vessels (*Mṛttikā Pātra*) for cooking, owing to their wide range of health benefits. Food prepared in clay pots is naturally enriched with essential minerals such as iron, calcium, magnesium, and sulphur, which are vital for maintaining physiological balance. The alkaline nature of clay helps neutralize the acidic components of food, thereby enhancing its taste, digestibility, and safety.¹⁶ Contrarily, the increasing prevalence of lifestyle-related health disorders in modern times can be partially attributed to the extensive use of contemporary cookware materials such as plastic, aluminium, stainless steel, and non-stick utensils. Aluminium utensils, in particular, pose significant health risks when used for cooking acidic foods such as tomatoes and citrus-based preparations, as they facilitate the leaching of aluminium into food. Several studies have reported elevated aluminium levels in food cooked using aluminium vessels, which may be especially harmful to individuals suffering from chronic renal failure.¹⁷ Research has further identified aluminium as a neurotoxic agent, with high concentrations detected in the brain tissues of patients with Alzheimer’s disease, Parkinson’s disease, and dialysis encephalopathy.¹⁸

Stainless steel cookware, though widely used due to its aesthetic appeal, durability, and perceived non-reactive nature, is not entirely devoid of health concerns. Toxicological studies suggest that increased exposure to metals such as nickel and chromium, which are components of stainless steel, can lead to adverse reactions including dermatitis. Additionally, stainless steel is susceptible to corrosion when exposed to organic acids, particularly during prolonged storage of food.¹⁹

Non-stick cookware is commonly coated with Teflon, a polymer composed of polytetrafluoroethylene (PTFE) and polyfluorooctanoic acid (PFOA). Although Teflon remains stable under normal conditions, exposure to temperatures exceeding 300°C can cause degradation of the coating, releasing toxic fumes into the air.²⁰ Inhalation of these fumes may result in polymer fume fever, commonly referred to as “Teflon flu.” Plastic utensils and containers are also considered unsuitable for cooking and food storage, especially when exposed to heat. Numerous studies have demonstrated that harmful chemicals present in plastic can

leach into food and beverages. When plastic is exposed to high temperatures or direct sunlight, it may release dioxins, which have been associated with an increased risk of breast cancer. Bisphenol A (BPA), an estrogen-mimicking compound found in plastics, has been linked to obesity, diabetes, cancer, asthma, fertility disorders, and premature puberty in girls. Additionally, phthalates used to increase plastic flexibility are known to adversely affect the male reproductive system by reducing sperm quality and disrupting hormonal balance.²¹

Conclusion

From the descriptions available in the classical texts of *Ayurveda*, it is evident that ancient cooking, storing, and serving vessels were carefully selected based on their qualitative and therapeutic attributes. These traditional vessels were not merely utensils but played a significant role in preserving the nutritional value of food and promoting overall health. The gradual replacement of such vessels with modern cookware has contributed to several health concerns due to the potential leaching of harmful substances. Therefore, it becomes imperative to reconsider and revive the use of traditional vessels recommended in *Ayurveda* for daily culinary practices. Conscious selection of appropriate cooking utensils that are safe, natural, and health-promoting can significantly contribute to disease prevention and maintenance of well-being. Adopting these time-tested principles can serve as a practical approach toward achieving holistic health in the present era.

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