

HALLUCINATION WITH EUPHORIA THROUGH RICE BEER: A HOLISTIC FERMENTED UNIT

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Article Received on 21/08/2023

Article Revised on 11/09/2023

Article Accepted on 01/10/2023

ABSTRACT

Handia (Also handi or hadiya) is a rice beer originating from the Indian subcontinent, popular in the Indian states of Assam, Jharkhand, Bihar, and Odisha. As the name implies, rice beer is a beer that contains rice as an ingredient, whether it is the husk or the grain of the rice or any rice-based products. These days, you will find modern-day brewers using whole rice, rice syrup or rice flakes. Popular in the northern and eastern parts of India like Bihar, Jharkhand and Odisha, Handia is a kind of rustic rice beer made by boiling rice and some locally produced tablet that supposedly contains herbs to help with physical pain. The total alcohol content of the rice beer (gora bwtwk) ranged from 6% v/v to 10% v/v and that of the distilled alcohol (chuwak) ranged from 26% v/v to 35% v/v. Chuwak bwtwk is basically a beer fermented of rice, and the Chuwark is a distilled variety of alcohol. Chuwak Bwtwk and Chuwarak are basically the two main varieties of traditional beverages prepared by the Tripuris, where the former is a kind of beer made with fermented rice and the latter is a distilled variety of alcohol. In today's beer brewing industry, rice is primarily used as an adjunct in combination with barley malt. As a brewing adjunct, rice has a very neutral flavor and aroma, and when properly converted in the brew house, it yields a light clean-tasting beer.

KEYWORDS: Rice beer, Handia, Fermentation, Tribal, Alcohol by Volume, Ranu Tablets.

Origin: Rice beer is believed to be Mother Nature's elixir because it is enriched with probiotics. It is a rich source of nutrients which makes it a natural antioxidant. Rice beer is known for its wide array of medicinal properties as well as health benefits. Rice beers don't have any health benefits compared to regular beer because they are only used for fermentable sugars. After the initial creation of the wort, the barley and rice grits are filtered out, which means only the sugars are left behind. That means beer and rice beer are different. Rice wine is a highly nutritious beverage that contains an abundance of essential amino acids, sugars and organic acids, as well as vitamins and minerals. Handia, in fact, is considered a sacred drink among Munda and Santhal

tribes. The tribals, who have inherited its recipe from their forefathers, consume handia at breakfast, lunch and dinner. One can manage for 10 to 15 days without any other food. During the summer season, Handia saves the body from sunstroke. The beverage has acidic pH (4.44±0.97). The lower nutrient quality (protein and carbohydrate content) is compensated by the cost factor (Rs. 7/- per L) which matters much for the poor tribals. Its lower alcoholic content (1.21±0.98%) does not make the consumer alcoholic even after repeated consumption. Handia (Also handi or hadiya) is a rice beer originating from the Indian subcontinent, popular in the Indian states of Assam, Jharkhand, Bihar, Odisha, Madhya Pradesh, Chhattisgarh and West Bengal.^[1]

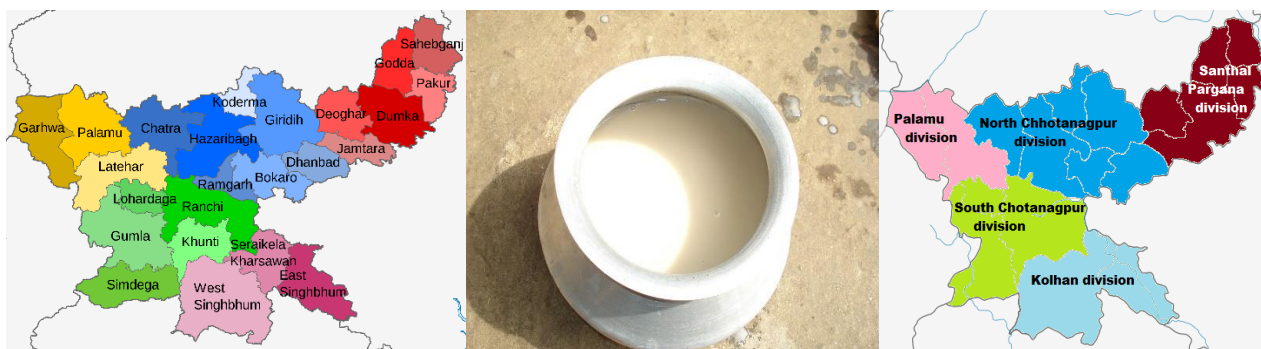


Figure-1: Handia origin [Jharkhand].

After drying, the rice is mixed with required amount of powdered ranu tablets (approximately 10 tablet per kg rice), kept in a large earthen pot or handi (hence the name of the product) followed by addition of required amount of water. The mixture is kept untouched for 3-4 days for fermentation. This is the most famous beverage in Jharkhand. It's a rice beer made by the people of the area. It's produced with a ranu tablet, which is a mixture of 20-25 herbs that are combined with boiling rice and fermented. Its alcohol content can be in the range of 18% to 25%. In comparison, regular wine usually contains 10% to 20% alcohol, where beer ranges 4% to 8% alcohol. Therefore, it is natural to assume that drinking too much of this wine — or any other alcoholic beverage for that matter — might not be beneficial for the body. Rice wine typically has an alcohol content of 18–25% ABV. Alcohol by volume (abbreviated as ABV, abv, or alc/vol) is a standard measure of how much alcohol

(ethanol) is contained in a given volume of an alcoholic beverage (expressed as a volume percent). It is defined as the number of millilitres (mL) of pure ethanol present in 100 mL (3.5 imp fl oz; 3.4 US fl oz) of solution at 20 °C (68 °F). The number of millilitres of pure ethanol is the mass of the ethanol divided by its density at 20 °C (68 °F), which is 0.78945 g/ml (0.82353 oz/US fl oz; 0.79122 oz/imp fl oz; 0.45633 oz/cu in). The ABV standard is used worldwide. Rice wines are used in East Asian, Southeast Asian and South Asian gastronomy at formal dinners and banquets and in cooking. Handia is a traditional rice beer, fermented drink made from rice, water and a special ingredient called ranu that is popular in many parts of India especially in the eastern and north-eastern regions. Ranu is a cake of herbs and spices that helps the fermentation process and gives the beer a distinct flavor and aroma.^[2]



Figure-2: Handia marketing by tribal.

Ranu composition

Name of the plant	Family	Parts of the plant	Usage
<i>Plumbago zeylanica L.</i>	Plumbaginaceae	Leafy branches	Process enhancer
<i>Stephania japonica (Thunb.) Miers</i>	Menispermaceae	Tuberous root	Preservative
<i>Stephania glabra (Roxb.) Miers</i>	Menispermaceae	Tuberous root	Preservative
<i>Oroxylum indicum L.</i>	Bignoniaceae	Bark	Imports bitter taste

Different parts of 20 plant species are utilized for the preparation of ranu or bakhar tablets which act as starter cultures for preparing handia. De-husked rice after boiling is fermented with required amounts of bakhar tablets for a specific period for handia production. Rice-beer is probably the oldest manufactured drink in the world. Many ancient civilizations have Gods assigned specifically to the task of brewing beer. Over the years, beer has grown into types and styles; Indian rice beer is one such type of beer. Handia is one such too. The term

“Handia” is used in the Chotanagpur plateau for local consumption. It is known as saki in Japan, lao-chao in China, tape ketan in Indonesia, khao-mak in Thailand. Alcohol has played a central role in almost all human cultures since Neolithic times (about 4000 BCE). All societies, without exception, make use of intoxicating substances, alcohol being by far the most common. Handia is accepted as a most sacred drinking the Munda and Santhal tribes. Both Munda and Santhal claim to be the inventor of it.



Figure-3: Plant source of Ranu.

Social Acceptance: Handia is often prepared for festivals, weddings, rituals and other occasions, and is enjoyed by people of all ages and genders. It is usually consumed during festivals, ceremonies, and social gatherings. It is also believed to have medicinal properties and health benefits. Any tribal festival is incomplete without the rice-beer called *Handia*, an indigenous alcoholic-fermented beverage. The word ‘Handia’ probably owes its origin to *Handi*, a deep, wide-mouthed cooking vessel used in Indian cooking. Handia occupies a pivotal role in the tribal community, socially, culturally and economically. The origin of the traditional drink Handia among Santals is

very much connected with their creation story. It is the most sacred and indispensable drink of the Santals. Santals believe in one “supreme being” whom they call Thakur Jiu (Life Giver) or Marangburu (Great Mountain) who is considered to be the “supreme” among all the “religious beings”. According to a myth, the Supreme deity, ‘Maran Buru’, taught the first human pair of Pilchu Haram and Pilchu Budhi to prepare handia. Maran Buru brought the Soma to be with man; the first parents then they made a bowl of green leaves and offered a drink to ‘Maran Buru’. It is, therefore, a very sacred drink to them.



Figure-4: Fermentation process.

Fermented foods and beverages have been very popular since ancient times all over the world. Historically the fermentation technique was used as a way of preserving foods and drinks long before the days of refrigeration. During the process of fermentation, microorganisms such

as bacteria, yeast or fungi convert organic compounds — such as sugars and starch — into alcohol or acids. Fermented milk products, alcoholic beverages from fruits and cereal grains, and leavened breads were very popular among the early civilisation in the Indus Valley and in

the Middle East and later among the Egyptians, Greeks, and Romans. It is presumed that fermented foods probably originated during 7,000–8,000 BCE in the areas of Indus Valley. It is evident from the annals of the Harappan civilisation (Vedic period) that people used different clay pots for preparing fermented foods and drinks. On the Indian subcontinent, fermented foods and beverages are an integral part of cultural heritage, even today. These have been developed throughout the history of human civilisation for sustained nutrition and food preservation. The consumption of foods and drinks that have undergone fermentation contain benefits to health

that stretch beyond food preservation. The transformation of sugars and starches enhances the natural, beneficial bacteria in food. Fermented foods are rich in probiotic bacteria so by consuming fermented foods you are adding beneficial bacteria and enzymes to your overall intestinal flora, increasing the health of your gut microbiome and digestive system and enhancing the immune system. The health-beneficial effects of fermented food were first advocated as far back as 76 CE by the Roman historian Pliny, who mentioned the use of fermented milk for treating gastrointestinal infections.^[3]



Figure-5: Tribal folk dance.

Mythology: Fermented food preparation, as mentioned in literary texts, is more than 3,000 years old in India. The *Rigveda* (ca. 1,500 BCE) shows that fermentation technology took its first step in connection with the preparation of *Soma* juice (alcoholic beverage). There is also another drink, known as *sura* (wine/beer), prepared by fermentation of boiled rice/barley. It is known from different sources that during the post-Vedic period (600 BCE to 100 CE) many beverages like *medaka* (spiced rice beer), *prasanna* (spiced barley or wheat beer), *asava* (sugarcane beer), etc., were some of the most popular drinks. Tribal women play a key role in the preparation and sale of handia. It also generates significant income for the household. By promoting Handia preparation and sale, the tribal women have been able to make economic gains. Handia has a milky white color and a sour taste. It can be consumed fresh or stored for later use. It is usually served in small bamboo cups or bowls. It can be mixed with water, sugar, or fruit juice to adjust the taste and alcohol content. Some people also add spices like ginger, cardamom, or pepper to enhance the flavor. Handia is not only a delicious beverage, but also a part of the culture and history of many tribes and communities in India, especially in the eastern and northeastern regions. It is also believed to have medicinal properties and health benefits, such as improving digestion, boosting immunity and relieving stress. Handia is a symbol of hospitality, friendship, and celebration. It is

also a source of income for many rural households who sell handia in local markets or roadside stalls. Handia is a drink that connects people with their roots and their history.

CONCLUSION

Evidence of fermentation and alcoholic beverages has been found in the Indus valley civilization during the Chalcolithic Period from 3000 BC to 2000 BC in India. In Ancient India, the Vedas mention a beer-like drink called *sura*. It was the favourite of the god Indra. Kautilya has mentioned two intoxicating beverages made from rice called *Medaka* and *Prasanna*. Megasthenes, the Greek Ambassador to Maurya Emperor Chandragupta Maurya mentioned about rice beer in his book *Indica* where he mention Indian make wine from rice instead of barley. He mentioned Indian never drink rice wine except during sacrifice. Rice is fermented to make Handia. A nagging worry is the unsustainable collection of plant ingredients that go into the making of bakhar (*ranu*), the fermenting agent. In marriages, festivals and in the daily life of the adivasis of Mayurbhanj, Odisha, handia takes the centre stage, both as food and drink. In the adivasi heartland of eastern India women selling handia in weekly haats by roadsides is a very common sight. Rice is fermented with the aid a yeast comprising a few plants, known as bakhar, to produce handia and raksi. Handia is the thicker gruel and raksi is the liquid

top layer. Raksi or Rakshi is the Nepali term for a traditional distilled alcoholic beverage in Nepal, India (Darjeeling, Sikkim) and Tibet. Formerly, bakhar or ranu was prepared with more than 20 plants but the depletion of many species it is now limited to less than 10. These are roots of samarkani, ankanadi, chaulia, kanga alu, patal garuda, habin jhad and bark of sal bisal, kuluchi with the whole plant of kalibahu. Equal quantities of these ingredients are ground together and sun-dried for an hour; the mixture is then dried in shade for few days, after which small tablets are prepared. The first step in making handia is to cook rice in water in 1:2 ratio; the cooked rice is then sun-dried, then stored in an earthen pot. Then 2-3 bakhar tablets are added to per kilogram of rice in the pot, the pot closed and left in semi-darkness. In a few days, depending on the weather, the content of the pot ferments, making a hissing sound, then settles down, signaling that the process is over.

The liquid layer, the rasi is separated and consumed directly or diluted, depending on the preference. The semi-solid handia is filtered using a bamboo or metal filter and served, again adding water if required. Handia is best accompanied by a chutney of tamarind, chilli and salt. Bakhar is reputed to have several medicinal properties, especially against malaria, against liver ailments, blood pressure and dysentery. Both handia and rasi are health drinks and the adivasi people believe that it keeps them cool and protects them from jaundice. Incidentally, the production and consumption of handia creates employment for many and is quite remunerative and supports many adivasi families. A nagging worry is the unsustainable collection of the plant ingredients that go into making bakhar. No such conscious effort has been made for the propagation or conservation of these important plants. In the regions without forests the adivasi people now consume handia that has been prepared by using adulterated bakhar; in some places the plants used for bakhar are smuggled out. With the increasing amount of adivasis moving to cities the knowledge about bakhar and handia is further threatened. It is time that these serious threats, to a cultural and health drink of the adivasi, are given immediate attention.

ACKNOWLEDGEMENT

The idea of rice beer has been originated from [অরণ্যের দিনরাত্রি] *Aranyer Din Ratri* movie (Days and Nights in the Forest) is an Indian Bengali adventure drama film released in 1970, written and directed by Satyajit Ray [2 May 1921 – 23 April 1992]. It is based upon the Bengali novel of the same name by Sunil Gangopadhyay [7 September 1934 – 23 October 2012]. The legend Satyajit Ray [Padma Shri: 1958, Padma Bhushan: 1965, Padma Vibhushan: 1976, Academy Honorary Award: 1992,

Commander of the Legion of Honour: 1987, Bharat Ratna: 1992] was an Indian director, screenwriter, documentary filmmaker, author, essayist, lyricist, magazine editor, illustrator, calligrapher, and composer. Widely considered one of the greatest film-makers of all time. This film shooting was done at Palamu district of Daltonganj of Jharkhand.

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