

## Chhurpi – The Himalayan Cheese

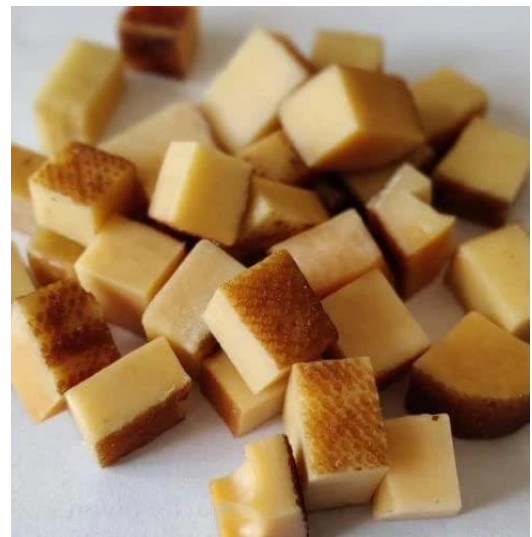
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### Introduction

The Himalayan region in India is home to one of the most bio-diverse ecosystem ranging from Jammu and Kashmir to Arunachal Pradesh. In these regions preparation and consumption of traditional fermented milk products are very common. The ethnic population of Himalayan region prepare various traditional naturally fermented artisan dairy products which are both nutritious as well as shelf-stable. One of such product is chhurpi, which is a protein-rich cheese product that has a smoky flavor and hard consistency. It is a very popular traditional cheese in some pockets of eastern India, Nepal, Tibet and Bhutan. It is also known as Himalayan chewing gum as it becomes gradually softer the longer we chew it. People living in Himalayan regions have the habit of chewing it during winter mornings to keep their mouths busy so that they can keep themselves warm and bear the extreme cold climate. Chhurpi is traditionally made from yak milk, chauri (a cross between male yak and female cow) or from cow milk.



**Fig. Chhurpi Churpi cheese making process**

In general, two types of churrpi are prepared – Hard and soft chhurpi. Hard chhurpi is mainly prepared from yak milk and has a harder and chewier consistency and can be used as a snack, whereas, soft chhurpi is prepared fermented cow milk and has a slightly sour taste and softer texture.

Soft chhurpi is prepared by making curds from whey. These white and soft curds are left to ferment by wrapping them in soft clothes and hanging them in room temperature to drain out water. Soft chhurpi is used as a substitute to vegetables in the mountainous regions where the availability of fresh vegetables is scarce. It is also used in curries or pickles and is an excellent source of protein. In case of hard chhurpi or dudh chhurpi, the cooked curds are cured for 2-3 days at room temperature by pressing them and then cutting them into rectangular pieces. These pieces are then sun dried or under wood fire in a low temperature for 5-7 days. Hard chhurpi can be kept for many years without spoilage and can be kept up to 20 years if stored properly in yak skin. This higher keeping quality of hard chhurpi is attributed to its low moisture content. This property is mainly beneficial to yak herders of remote Himalayan highlands while they travel long distances to transport or market these products. These cheeses are sold as rectangular pieces having a hard and compact body. It is known as one of the world's hardest cheese. There is a wide variation among the chemical composition and sensory qualities of chhurpi prepared in different parts of the Indian subcontinent as preparation of chhurpi is an age-old family tradition and its preparation varies according to the culture of that region.

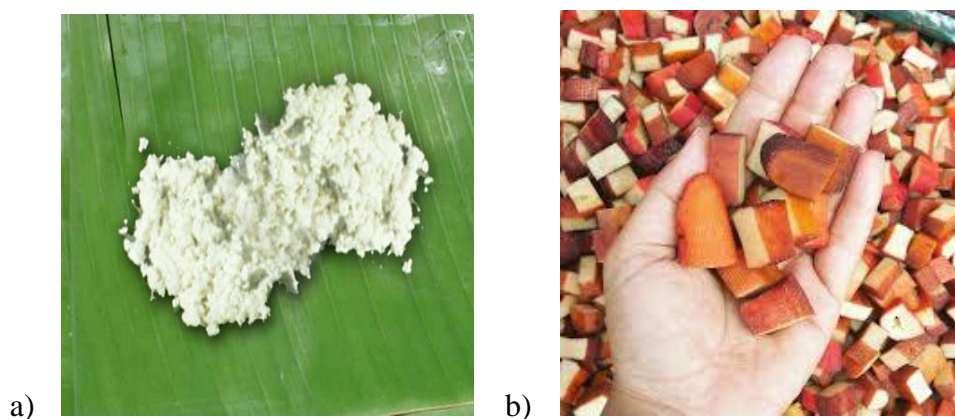


Fig. a) Soft chhurpi b) Hard chhurpi

### **Health benefits of chhurpi**

According to several researches, fermented milk products have different health promoting properties such as antimicrobial, immunomodulating, anticarcinogenic and cholesterol-lowering effects. Traditional fermented milk products such as chhurpi has a huge influence on the health and economy of the rural regions where they are prepared and consumed. Chhurpi is very healthy as well as nutritious milk product due to its low fat and high protein level, which makes it perfect for people trying to control diabetes or build muscle tissues. It also has a very high Vitamin A content as well



as around 15% higher amino acid content than cheese made from cow milk. It is also a good source of calcium, phosphorus, magnesium, zinc, omega 3 fatty acids and antioxidants.

The production of chhurpi is also organic as the yak or chauri from which these products are prepared grazed exclusively on herbs and grasses in the high alpine regions. Also, the traditional preparation methods do not use any preservatives or additives. The microbes mostly found during fermentation process are the LABs (Lactic acid bacteria), which have several health benefits such as ability to produce bioactive peptides during fermentation process. They also induce antimicrobial effects and produce distinct sensory qualities. Hard chhurpi is beneficial in removing plaque and tartar and keeping the gums strong.

### **Culinary uses of chhurpi**

*Churrpi* is one of the most popular traditional fermented milk products consumed by the people of Himalayan region of Darjeeling, Sikkim, Nepal, Bhutan, and Arunachal Pradesh. Average per capita consumption of Chhurpi is 6.9 g/day in Darjeeling hills, and 9.9 g/day in Sikkim. Soft chhurpi is immediately consumed after processing. It is used as a filling for momos or as soups. It is also used in preparation of various vegetables, curries, pickles and other regional delicacies. It has a white, soft, mild to strong flavor and consumed with boiled rice meals. Hard churrpi is usually used a snack or chewing gum to provide energy. It can also be used as a dog treat to provide them healthy fats and essential nutrients.

### **Conclusion**

Ethnic fermented foods are produced by the ethnic people using their native knowledge of food fermentation from locally available raw materials of plant or animal sources either naturally/spontaneously or back-slopping or by adding starter culture(s) containing functional microorganisms which modify the substrates biochemically and organoleptically into edible products that are culturally and socially acceptable to the consumers. The preparation processes of these traditional fermented foods such as chhurpi come from earlier generations and have been passed down from generation to generation. Therefore, registration of different information about traditional food is part of the preservation of a nation's culinary heritage and culture. Traditional fermented foods have achieved an important place in human society as fermentation enhances the shelf life, texture, taste, aroma, and nutritional value of food. Churrpi is a traditional milk fermented cheese product having high nutritional quality. Local people consume this product by cooking with vegetables, meat, or by adding it into soups to get its health benefits as well as to enjoy its



characteristic flavor. Therefore, *chhurpi* is not only a food product but also an integral part of their life. However, a very few scientific research have been done on these products. The production process is also not standardized as every ethnic community of the Himalayan highlands has their own traditional way of preparing *chhurpi*. So, efforts should be made to popularize this ethnic product. With its rich history dating back centuries, *chhurpi* offers a captivating story of traditional cheese-making techniques, unique microbial cultures and the preservation of food in challenging environments. Along with its growing popularity in international markets, there is a potential for further research and innovation in the field of *chhurpi* cheese making.

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