

# *Cannabis Consumption in the SCA Period: Bhang*

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## 0. Introduction

Bhang is a traditional Indian beverage prepared from the fresh green leaves and flowers of the cannabis plant. The plant material is steeped in hot water and drained; then it is repeatedly pounded with warm creamy milk, and strained through a cloth. Bhang is typically served as a sweet dairy drink flavored with nuts and spices ~ a cannabis lassi.

Our project is to introduce bhang to the SCA research and brewing communities. We will survey the history of bhang and the contexts in which it was and still is made and used.

Bhang should be thought of as a category of beverages, like mead; the precise ingredients and flavoring agents vary according to taste and local custom. We have not found an extant period recipe with measured quantities in the modern sense, so we introduce a modern recipe and compare it with period descriptions and images of bhang and its preparation.

## 1. The cannabis plant

*Cannabis* is a genus of annual dioecious flowering plants in the family Cannabaceae, which also includes hops. The ripe seed-bearing flowers of the female plants are covered with tiny beads containing a sticky resin, which contains the medicinal stuff.

*Cannabis sativa*: species name originally given to European hemp.

*Cannabis indica*: the variety native to India (sometimes considered a subspecies of *sativa*).

*Cannabis ruderalis*: a third possible subspecies, from central Asia. Modern cannabis strains are usually hybrids.

Common Western names for cannabis include hemp and marijuana. The word cannabis derives from a Greek word borrowed from Scythian or Thracian, and ultimately from Sanskrit.

Cannabis is etymologically related to the English word canvas, reflecting the importance of hemp for furnishing sailing ships.

In Indian languages, the word bhang can refer to several things at once: the cannabis plant, a paste consisting of the pounded green leaves and flowers of the plant, and a milky drink made from the pounded plant material. Cannabis is also called ganja; the word is a cognate of the name of the river Ganges. In this document, we call the plant cannabis, and use the word bhang only for the beverage. Other (less common) edible cannabis preparations of India will not be discussed here, but may be of interest for future research.

## 2. History of bhang

Cannabis was first domesticated as hemp, a bast fiber plant, around 12,000 BCE. It was also used for medicinal purposes from ancient times in many cultures, as attested by archeological evidence [Clarke and Merlin]. Herodotus wrote of the use of cannabis by the Scythians as an intoxicant in funeral ceremonies circa 440 BCE; it was consumed by inhaling smoke fumes from a censer under a small tent.

In the Vedas, the deified plant *soma* is used to prepare an intoxicating beverage (further discussion below). The identity of the Vedic *soma* plant is disputed. Some scholars identify *soma* with cannabis, but there are several other candidates, including ephedra and mushrooms.

Cannabis used as an intoxicant in India can be firmly dated to its use by Sufi Muslims circa 1000 CE. A 13th-century compendium of teachings of Matsyendra, the first guru of an important order of yogis, calls cannabis *siddhi-mulika*, 'the root of spiritual success' [Losty].

Bhang was and still is widely used by Moslems, Sikhs, and Hindus. Bhang is particularly associated with the Hindu god Shiva, who is called the Lord of Bhang; he is said to have given bhang to humankind.

Alcoholic beverages (fermented from rice, sugar cane products, fruit, and/or flowers) were known and made in SCA-period India, but they were held in low regard compared to bhang [Prakash]. Alcohol was purely a recreational beverage, whereas bhang had spiritual and religious associations.

## 3. Consumption of bhang

Cannabis products in the SCA period were usually consumed by oral ingestion ~ that is, as a food or drink. Smoking in the modern sense was not practiced until after the introduction of tobacco; for more details, see our paper [Hashish in medieval Muslim cultures].

In India, the drink described in this document is so common that its name, bhang, is synonymous with the cannabis plant. Bhang is also made into other edible preparations, such as majoun. Majoun was studied by the authors in a previous project [Hashish].

Bhang was (and still is) widely consumed at Hindu religious festivals, such as Holi, Diwali, and Durga Puja. Families traditionally offered it to their guests, and everyone was expected to accept at least a token amount [Chasteen, RIHDC].

Post-period (18c) images in the Habinghorst collection show both yogis and groups of dissolute opium-eaters making bhang. One painting shows the god Shiva and his wife Parvati sitting on the bank of the Ganges making bhang; their small children, the gods Ganesh and Karttikeya, eagerly hold out bowls in their many hands to receive some [Losty].

The use of bhang was so embedded in Indian cultural and religious traditions that the British relented on their attempts to suppress it during their colonial rule, based on the findings of the Report of the India Hemp Drugs Commission of 1893-4 [RIHDC]. Bhang is prepared and sold in government-licensed shops to this day.

#### 4. Recipe research

Whether Vedic soma was the same plant as bhang is disputed. Soma may have been bhang, or a mix of plants that included bhang, or something else altogether. Bhang may also have been substituted for soma when soma was unavailable [Chasteen].

In his monograph *Food and Drinks in Ancient India*, [Prakash] outlines the process of making *soma* as described in the ancient texts. The Vedic process for making the soma drink is authentically ancient, and it is effectively the same as both the traditional method and modern recipes for making bhang. So this description of Vedic soma-making is instructive for our purposes, regardless of whether the soma plant was actually bhang.

To make Vedic soma, the plant matter was washed in water and crushed between two stones, then pounded in a mortar and pestle; finally it was strained to remove impurities. Women sang songs while they squeezed the juice from the plant with their fingers. Soma was produced in large quantities, and stored in jars or wooden tubs. Milk, butter, or curds were added to improve the taste, as well as water and honey. Soma was said to be sweet and delicious ([Prakash], pp. 22 - 24).

According to [McHugh] and [Wujastyk], unambiguous references to cannabis as a medicine and/or intoxicant appear in Indian texts from about 1000 CE, and are common after the 14th century. Early examples include the *Cikitasasarasamgraha* of Vangasena (1050 - 1100) and the *Lexicon of Dhanvantari* (11th century). The Arurvedic text *Anandakanda* (12th-13th century) recounts a story of how Shiva gave bhang to humankind, and then describes several kinds of cannabis-based medicines, as well as preparations like sarbat, barfee, and majoun. The 15th-century *Sarvollasa Tantra* is said to contain cannabis recipes containing milk and jaggery (date sugar). These source texts, in Sanskrit and Bengali, are not available to us in translation.

In his 1563 book on the simples and drugs of India, Goan Portuguese-Jewish physician Garcia de Orta describes the "bangué" plant and its use. [De Orta] first compares bangué to European hemp and flax; he believes hemp and bangué to be different plants. He describes how the leaves and seeds of bangué are pressed into a powder and made into a drink, to which some people add areca verde (betel), opium, cloves, nutmeg or mace, and other substances. As a physician, De Orta's chief concern is to describe the intoxicating effects of various preparations of bangué.

The 18c images in [Losty] show people pounding bhang in large mortars, straining the green liquid through a cloth into a large bowl, mixing in other ingredients, and serving it in small bowls. The quantity being processed in most of the images appears to be between a quart and a gallon. One image shows bhang being served from a large animal skin that must hold well over a gallon.

In the beverage section of her 1972 cookbook *Flavors of India*, [Sacharoff] gives a detailed recipe for making bhang, in its usual form of a sweet milky drink flavored with nuts, rosewater, and spices. Her recipe is modeled on one of the many bhang preparations made in the holy city of Benares and used in the worship of Shiva. Sacharoff's recipe is attached in an appendix; it makes about 1.5 quarts.

Most of the bhang recipes floating around the internet appear to be unattributed copies of Sacharoff's recipe. Other modern recipes are similar in methods and materials. Sacharoff's

recipe does not contain yogurt, which is sometimes used in bhang. While proportions of ingredients vary, as do the spices and flavoring agents, the basic method and main ingredients are common across modern recipes and historic descriptions.

Bhang is pretty simple to make, compared to beverages like beer and wine. Like modern chai or lassi drinks, it has just a few ingredients, the amounts of which may be varied to taste, so we doubt that written recipes for bhang were used or needed historically.

We use Sacharoff's recipe to make our bhang. It is representative of a modern recipe for home use. While no SCA-period bhang recipe in the modern sense is known to us, Sacharoff's recipe aligns with the period and post-period descriptions of bhang-making that we have found.

## 5. Sourcing ingredients

The main ingredients of bhang are green cannabis leaves and flowers, creamy milk, and cane sugar. Other ingredients may include nuts, rosewater, and spices; these may be varied to taste. Some preparations include yogurt and even butter.

### a. Cannabis

Now that marijuana is legal in Massachusetts, there are many retail cannabis dispensaries in the Boston area, and many growers in Massachusetts and Vermont. However, these vendors don't sell green plant material. So to make bhang, we had to grow cannabis plants from seed.

To comply with site restrictions and interstate transport laws, the cannabis used for this presentation is federally-legal CBD hemp. Our hemp plant was grown from seed by Ysabel under lights in her basement.

### b. Milk and other dairy ingredients

Consumption of dairy milk in India dates back to the Vedic period or earlier (before 3000 BCE). Milk was boiled, curdled, cultured into yogurt, and used to produce ghee.

The most common Indian dairy animal is the domestic water buffalo, with zebu cattle a close second. Buffalo milk has more than twice the fat content (7 - 7.5%) of American commercial cow's milk (3.25%), and slightly higher lactose content. Milk of zebu cattle also has a higher fat content (4.5 - 5%) than commercial whole milk.

Some of the psychoactive chemicals in cannabis are soluble in fat but not water, so it's important to use a creamy milk when making bhang [Clarke and Merlin]. There are a few places in the East Kingdom where one can reportedly purchase buffalo milk, which is used to make mozzarella cheese. But buffalo milk is hard to come by, and for this project, we wanted to make bhang in a way that can be replicated by others. So we used commercial cow's milk, with cream added to approximate the fat content of buffalo milk.

A quart of milk with fat content of around 7% can be produced by mixing 3 1/4 cups skim milk (0% to 0.5% fat) with 3/4 cup heavy cream (36% fat). One could also combine 3 1/2 cups whole milk and 1/2 cup heavy cream. (Calculation for other combinations of dairy products is left as an exercise for the reader.)

Grocery-store milk is pasteurized and homogenized. Since fresh milk is traditionally boiled before drinking in India, we are not concerned that pasteurization will adversely affect the flavor of

our beverage.

### c. Sugar

Sugar cane is an ancient crop of the Austronesian and Paupauan people. *Saccharum officinarum* was introduced to the Indian subcontinent before 1000 BCE, where it hybridized with the native Indian plant *saccharum barberi*.

Granulated sugar was invented in India. It is firmly documented from the Gupta dynasty (c 350 CE), but was probably produced earlier. The word "sugar" itself is thought to derive from the Sanskrit word "sakara", meaning "gravel" or "sand". Sugar cane was also used in other forms, such as fresh cane juice, "gur" or "guda" (boiled-down cane juice, also called treacle or jaggery), and "khandā" (from which the word "candy" derives) [Prakash]. In the 16th century, sugar was exported from Bengal by the Portuguese in bales [Subrahmanyam], which implies that it was in a dry form such as blocks or granules. One 18th-century image depicts cane juice being pressed for use in the preparation of bhang [Losty, p. 88].

For this project, we use unrefined granulated cane sugar.

### d. Other ingredients: nuts, spices

Modern recipes for bhang include nuts such as almonds or pistachios, which are pounded together with the cannabis leaves. After the extracted plant liquids are mixed with sugar and dairy ingredients, spices and flavoring agents are added. The spices can vary according to taste and custom. Sacharoff's recipe is representative; it includes garam masala, ginger, and rose water. Garam masala is a variable blend of spices that usually includes black pepper and sweet spices such as cardamom, cinnamon, and cloves. Garam masala is available at Indian specialty markets and most supermarkets that sell spices. Auntie Arwen's carries at least 7 different garam masala blends.

## **6. Process and equipment**

### a. Grinding or pounding the cannabis

The method of processing the plant material is generally described as pounding rather than grinding. The mortar must be large to contain the quantity of ingredients involved. Some post-period images show bhang being pounded in what appears to be a brass-colored metal vessel. We used a large wooden mortar and pestle.

### b. Straining the pounded cannabis

We strained our bhang in a loosely-woven cotton cloth, in keeping with historic images and descriptions and traditional practice.

### c. Other preparation vessels

Traditional Indian cooking pots are metal, either shallow bowl-shaped pans or deeper kettles. We used modern stainless steel cookware to boil the water and warm the milk. For the sake of food safety, we stored the finished bhang in a glass jar, which was rinsed with boiling water prior to use.

### d. Serving and drinking vessels

The earliest images of bhang consumption that we found date from the late 18th century. They

show bhang being prepared in large bowls; one image shows bhang being served from something like a wineskin. In these images, bhang is drunk from fairly shallow small bowls, resembling dessert or cereal bowls, that appear to have a capacity of about one cup. Some of the bowls appear to be plain wood, metal, or crockery; others are painted in geometric patterns. One picture clearly shows bowls of white china with blue decorations (however, this is a late image). A small shallow bowl of any material would be suitable for serving bhang.

In modern Maharashtra, bhang is traditionally served together with jalebi [Dr. Aditya Karnataki, personal communication to Ysabel]. Jalebi are small pretzel-shaped sweets, like tiny funnel cakes, made of a wheat or gram flour dough that is deep-fried and dipped in sugar or honey syrup. Recipes for jalebi are extant from 10th-century Baghdad and 13th-century Persia; there is a Jain recipe dated 1450 and a recipe in Sanskrit circa 1600.

## **7. Health and safety issues**

### **a. Psychoactive potency**

Bhang is made using the whole cannabis plant, leaves as well as flowers. This plant material is steeped in boiling water, but it is generally not actually boiled.

Cannabis is covered with resinous trichomes, concentrated mostly on the female flower clusters, but also present to a lesser degree on the leaves. These trichomes contain a precursor chemical called THCA, which is not itself psychoactive. THCA is converted to psychoactive THC by applying heat of over 200F in a process called decarboxylation. The steeping method used to prepare bhang doesn't heat the plant material sufficiently to completely decarboxylate it. In addition, the leaves included in bhang are less potent than the flowers.

Modern cannabis hybrids have much higher THC content than historic cultivars, or even strains from just 40 years ago, and modern bhang can be quite potent [Juskalian]. The traditional bhang recipe documented in this article would need to be modified to produce a really potent beverage.

As mentioned above, the cannabis used for this presentation is federally-legal CBD hemp, which contains less than 0.3% THC and is not psychoactive.

### **b. Food safety concerns**

In the SCA period, bhang was apparently served immediately after it was prepared, at room temperature. In modern India, bhang is served chilled. For practical and food-safety reasons, the bhang for this project was prepared in advance, and stored under refrigeration. It will be transported on ice and served chilled. If people want to let their servings warm to room temperature before tasting, it should be safe to do so.

### **c. Other concerns**

Until quite recently, it was illegal to possess or consume marijuana in the lands of the East Kingdom. Cannabis has now been legalized in much of our territory, and its consumption is permitted by SCA rules wherever it is mundanely legal.

Note that we are consuming bhang out of its historic religious and social context(s).

## 8. Summary of results and areas for further research

Further research: almost every topic in this paper could be explored in more depth and greater detail. It would be of particular relevance to identify additional historic descriptions or depictions of the ingredients and additives of bhang, and of the bhang-making process. There is a lot of room to experiment with recipes, spices, alternative dairy ingredients, and different cannabis cultivars and growing methods.

The authors have previously presented a project on majoun, a medieval Islamic cannabis edible confection, which was also consumed in SCA-period India [Hashish]. One could also study the use of cannabis as an intoxicant or medicine in other SCA-period cultures, including central Asia, Greece and Rome, China, and southern Africa.

Bhang can just be enjoyed as a period-correct recreational beverage. Compared to beer and wine, it is fairly easy to make, once you have the plant material. The reader may consult other lassi recipes to get ideas for ingredient variations, and may also wish to explore modern methods designed to amplify the psychoactive potency of the principal ingredient. Some modern recipes even use commercially-available dried cannabis.

We hope you enjoy researching, making, and drinking bhang!

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### **Sources for seeds to grow your own cannabis and federally-legal CBD hemp**

- Grow It From Home (<https://growitfromhome.com>): seeds and seedlings for growing your own CBD hemp; also bulk "culinary-grade" dried hemp flower
- Homegrown Cannabis Co. (<https://homegrowncannabisco.com>): cannabis seeds, including some CBD hemp varieties
- Atlas Seeds (<https://atlasseed.com>): cannabis seeds, including some CBD hemp varieties

### **Appendix: Legal Issues**

- The SCA, Inc. allows the possession and use of cannabis where it is permitted by local law.
- One should consult the local seneschal and autocrat when planning to openly present cannabis derivatives at an event. Just as some event sites are "dry" for alcohol, there will be situations in which cannabis is locally legal, but our site does not permit it. Note that site rules often assume that cannabis will be smoked and forbid it for that reason, whereas SCA-period cannabis edibles may indeed be permissible.
- The cultivation and sale of low-THC, non-psychoactive hemp and hemp products were legalized in the U.S. in the 2018 Farm Bill. Hemp leaves and flowers are simply food ingredients, and edibles made with them are subject to no U.S. legal or site restrictions. Hemp is also legal in Canada; however, Canadian law does not allow hemp to be carried across the U.S.-Canada border.
- As of this writing (Fall 2023), so-called recreational cannabis is legal for adults 21 and over in much of the East Kingdom. Check your local laws, as the legal situation is changing rapidly.
- The number of plants that may be raised, and the amounts of cannabis and its derivatives that a person may possess, differ from state to state. In states where it is legal, cannabis generally may not be consumed in public or while driving, and it cannot be smoked where tobacco smoking is disallowed.