

Introduction to Japanese sake

People throughout the world enjoy a wide variety of alcoholic beverages, from wine to beer to whisky and beyond. In Japan there is Japanese sake, or rice wine. Sake has gained popularity around the world in recent years in conjunction with the rise of Japanese food culture as a global phenomenon.

Even within the realm of sake there exists a number of varieties, with tastes running from "sweet" to "dry" and everything in between. Additionally, there are also many types of sake, such as "*ginjo*," which has fruity aroma, and "*namazake*," which refers to unpasteurized sake, thus maintaining the fresh flavor. Each type of sake can be enjoyed either hot or cold, each temperature variation bringing its own charm. Now, let us introduce the sake brewing process and the sake culture that has arisen therein.



Rice culture takes root in Japan

In the late Jōmon period (after around 1000 B.C.), Japan was an agricultural civilization where rice was regarded as the most important food, as well as a symbol of affluence. Sake began being made from rice shortly after rice-cropping techniques were introduced to Japan, and was soon used in rituals, which were important for people of that time, and ceremonies in the imperial court.

In the Nara period (8th century) the government even had an office for producing sake. By the Kamakura period (12th century), sake production had been expanded nationwide. Eventually, well known sake production areas began to appear in many cities, such as Kyoto, Hakata (Fukuoka Prefecture), Kaga (Ishikawa Prefecture), and Nishinomiya (Hyogo Prefecture).

The Edo period (1603-1868) saw the first production of "*seishu*" or clear refined sake. The production process for *seishu* is technically different from that of the unrefined sake ("*nigorizake*") that had been produced in previous eras, though both are made from rice. *Seishu* brewing also began in Nishinomiya at the beginning of the 17th century, but the majority of the sake produced was consumed in Edo (present-day Tokyo). As sake is made from rice, the main staple of the Japanese diet, its production could be strictly limited by the Tokugawa shogunate (also known as Edo *Bakufu*, the last feudal Japanese government) depending on the rice crop yield for any given year. However, in response to the popularity of sake in Edo, sake production in Nishinomiya had been gradually increasing. During the Meiji period (1868-1912), importing techniques from Britain and Germany, Nishinomiya sake brewers further improved the quality of the sake they produced, thus setting up the Hanshin region (the area between Osaka and Kobe, including Nishinomiya) to develop in to the largest sake brewing region in Japan.



The characteristics of and raw materials used in Hanshin region sake

The Hanshin region, which has grown into the largest sake brewing region in Japan, has a number of advantages compared to other regions. One such advantage is its geographic location, where good rice and water for the sake-brewing were easily obtained. Even in the early modern period, it was thought that careful selection of ingredients would influence the quality of the sake produced. Therefore, sake is made from high-quality rice and water. Particularly famous is the use of infiltrated water known as "*Miyamizu*," which is only available in certain parts of Nishinomiya. Well known as containing the suitable components for sake brewing, the water was even sold to sake breweries in other areas on occasion. In Nishinomiya, sake brewing using *Miyamizu* continues to this day. Efforts to protect this precious resource are also in progress.



Nada-Go-Gō (The "Five Gō" of Nada, The production areas for Nada sake)
The word gō indicates an administrative group of villages

Another reason for the development of Nishinomiya as a sake brewing region is the other important ingredient used in brewing sake: rice. Among the many varieties of rice, the ones suitable for brewing sake are known as "*sakamai*" (sake rice), meaning "rice for brewing sake". *Sakamai* has been in production around Nishinomiya since the Edo period. After the Meiji period, improvement to certain varieties of *sakamai* was actively promoted in Hyogo Prefecture, leading finally to the development of "*Yamada Nishiki*", known as the king of *sakamai* even now. *Yamada Nishiki*, harvested in the Kita-Harima area (the northern part of the south-west area of Hyogo Prefecture) where the soil and climate are suitable for growing it, is particularly suited to sake brewing because of its large grains and white starchy core, known as "*shinpaku*". These are the characteristics of good sake rice. Thus, Nishinomiya, rich in high-quality raw materials, became a sake brewing center.

As one might expect, special skills are needed for brewing sake. In Japan, there are professional groups of sake brewers called "*toji*". *Toji* are located in many regions of Japan, each brewing the sake of their own regions. In the Hanshin region in particular, people known as "*Tanba Toji*" have long made sake. These *Tanba Toji* historically came to the Hanshin region as migrant workers from the mountainous areas in the northern part of the Hanshin region, making use of the agricultural off-season in winter. The elite skills of *Tanba Toji* have been long appreciated nationwide. *Toji* working in other regions often came to learn these skills; *Tanba Toji* also often traveled to other regions to teach their skills.

In this way, the Hanshin region grew its current standing as a center of sake brewing thanks to the combination of excellent raw materials, such as *Miyamizu* and *Yamada Nishiki*, and the highly skilled *Tanba Toji*.



Japanese sake production process

The rice used for sake brewing is polished and the outer of the grain is removed leaving the central starch part, which helps enhance sake quality. Thus, the process in a brewery starts by washing the polished rice in water to remove the bran. Traditionally, sake brewers working in breweries ("*kurabito*") used to wash the rice with their feet in a wooden tub in severe winter weather. Then, the well-washed rice is left to steep in water. When the rice absorbs enough water, it is steamed in a traditional steamer called a "*koshiki*" that is placed on top of a big iron pot found in a room called the "*kamaba*". After the *toji* confirms that the rice is well steamed it is taken out of the *koshiki* and cooled on a straw mat. In this process, the cold and dry wind that flows down from Mt. Rokko through the Hanshin region, known as "*Rokko-oroshi* ", is utilized to cool the rice swiftly.

The steamed rice is used for several separate processes. "*Koji*" (rice malt) making is one of those processes. This is said to be the most important process throughout the sake brewing. There is a special room to make *koji*, known as the "*koji-muro*". *Koji* mold spores, or *Aspergillus oryzae*, are sprinkled onto the steamed rice, which is then incubated for two days to produce *koji*. The *koji-muro* is designed to be kept warm so that the mold can actively work.

The next step is the "*shikomi*". Water is added to the *koji* and steamed rice. The mixture is placed in a shallow wooden vat and mashed up to produce a mash called "*moto*" (yeast starter).

This operation produces lactic acid, which contributes to the incubation of the pure yeast that is essential for sake brewing, suppressing the development of bacteria.

In the past, this process of making *moto* took over one month. However, the technology to shorten this period was developed in the late Meiji period.



Traditional way of rice steaming

When the *moto* is completed, the brewers start to make "*moromi*" (main mash). In general, a method known as "*sandan shikomi*" (three-step fermentation process) has been adopted. In this method, *Koji*, steamed rice, and water are added to the *moto* on the first, third, and fourth days. This process of making *moromi* is unique to Japanese sake. During this process, *koji* converts the starch from the rice into sugar while the yeast ferments the sugar into alcohol at the same time. In this way, *moromi* is completed in about 20 days. Usually, the alcohol content reaches around 20%.

Once the *moromi* is ready to be pressed, it is placed in a cloth bag made of cotton dyed with persimmon tannin called a "*sakabukuro*", then the sake is pressed and stored in a pot while the leftover material from the process remains in the *sakabukuro*. This leftover is called "*sakekasu*" ("sake cake" or "sake lee"), and is now broadly put to various uses, such as in Japanese cuisines. The pressed sake is moved to a large wooden vat, pasteurized, and stored for maturation for about six months before being put in a cask and shipped to various regions in autumn.

Culture and merits of drinking sake

The first half of 17th century marked the emergence of refined sake. Almost all sake made in the Hanshin region was shipped to Edo (present-day Tokyo) where it was called "*kudarizake*" and quickly gained popularity. At the beginning of 19th century, the amount of sake brought to Edo from other regions, including Nishinomiya, exceeded one million barrels annually. Among the books published at that time, there were many books regarding sake, making evident the extent to which sake was deeply rooted in the lives of the people of Edo. During this period, Japanese food culture had also developed and at banquets Japanese cuisine that paired well with sake became essential.

The way in which sake is consumed has also evolved over time. A variety of vessels have been used over the years in order to heighten the enjoyment of *seishu*. Originally sake was heated over direct flame in a metallic container but in the recent era, a pottery vessel called a "*tokkuri*" has replaced the metallic one and sake is warmed in hot water, enabling temperature control.

Shortly thereafter a small pottery cup called a “*choko*” appeared, and not only were *choko* used for drinking sake, but they were also occasionally floated on a basin called a “*hachi*” or a “*haisen*,” which was filled with water, for an extra layer of enjoyment to sake drinking. This was considered a kind of “*furyu*,” or one of the aesthetic values in Japan.



Era	Japan
Late Jōmon Period (around B.C. 1000)	Rice-cropping techniques introduced to Japan
Nara Period (around 8 th century)	Sake brewing office was set up in the Imperial court of Japan
Kamakura Period (around 13 th century)	Sake brewing became popular nationwide
Muromachi Period (around 14 th century)	Sake brewing became taxable
Early Edo Period (early 17 th century)	<i>Seishu</i> (refined sake) production began
Middle Edo Period (17 th - 19 th century)	Sake brewing was repeatedly limited in accordance with rice crop yield
Late Edo Period (19 th century)	Suitability of “ <i>Miyamizu</i> ” for sake brewing was discovered
Meiji Period (19 th - 20 th century)	Sake was introduced to the world at the World’s Fair, etc.

Thank you very much for reading to the end. While this was a short introduction to the charm and culture of Japanese sake, further information about sake brewing culture is available at the Hakushika Memorial Museum of Sake (白鹿記念酒造博物館) in Nishinomiya city, Hyogo Prefecture. Please don’t forget to drop by our museum—we are looking forward to welcoming you!

Hakushika Memorial Museum of Sake

ADDRESS
8-21, Kurakake-cho, Nishinomiya, Hyogo 662-0926

TEL
81 (0)798 33 0008

URL
<https://sake-museum.jp/en/>

HOURS
10:00 a.m. - 5:00 p.m. (Admission until 4:30 p.m.)

ADMISSION
¥200 - ¥500 (Admission fee varies depending on the exhibition)

HOLIDAY
Every Tuesday, the Year-end & New Year holidays, and summer vacation (3 days)

ACCESS
From Hanshin Nishinomiya Sta., 15 min walk to the south along Fudabasuji Route. [Nishinomiya Sta. is approx. 15 min away from both Umeda (Osaka) Sta. and Kobe-Sannomiya Sta. on Hanshin main line.]

