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# How to Make Honkaku Shochu and Awamori

## 1

### Principles of Production

The main ingredients of Honkaku Shochu are starchy foods, such as rice, barley and sweet potatoes. *Koji* is always used in the making of Honkaku Shochu in order to break down the starches contained in the main ingredients into sugar. While yeast can produce alcohol by digesting sugars through the process of fermentation, yeast itself has no ability to break down starches. If only starches were used, it would be impossible to cultivate yeast or ferment the starches to produce alcohol. Therefore, when

producing Honkaku Shochu or Awamori, black or white *koji* fungus is sprinkled over steamed rice or barley to allow the *koji* to cultivate for about two days. *Koji* contains enzymes that can break down starches into sugar, and the yeast with the *koji* goes through the fermentation process to produce alcohol.

Generally, the ingredients go through the *shikomi* process (\*1) twice during Honkaku Shochu production. In the first *shikomi*, conducted mainly to cultivate yeast, approximately the same amount of *koji* and water is added to a fermentation tank to grow the yeast for about a week and then to form the first *moromi* (fermentation mush). In the second *shikomi*, the main ingredient, such as rice, barley or sweet potatoes, and water



are added to the first *moromi* to decompose the starches with the enzymes contained in the *koji* and ferment along with the yeast to produce alcohol.

The variety of Honkaku Shochu is determined according to the main ingredient added in the second *shikomi* process (rice Shochu, barley Shochu, sweet potato Shochu, etc.), which takes one to two weeks, depending on the main ingredient. The alcohol content of the second *moromi* at this stage is about 14–20%. Following this, the second *moromi* mash is transferred to pot stills in preparation for the distillation process.

One variety, Awamori, is produced only by use of the first *shikomi* process, in which

rice *koji* cultivated by black *koji* fungus, water and yeast are mixed and fermented to produce alcohol and then distilled. The alcohol content of *moromi* for Shochu is higher than that of other spirits so it is possible to make a product with a high alcohol level after only one distillation process. Therefore, a number of volatile compounds, including alcohol, are retained to keep the rich aroma and taste of the ingredients. For the final Honkaku Shochu product, it is stored and matured, with the alcohol level adjusted through adding water before bottling and shipping.

\*1 *Shikomi* is the process to put ingredients/materials into tank.

## 2

### Characteristics of Honkaku Shochu and Awamori

It is very important to protect the *moromi* mash from bacteria in the alcohol production process. Therefore, black and white *koji* fungi are used in the making of Honkaku Shochu and this generates a good amount of citric acid, which makes *moromi* strongly acidic. In this way, the growth of bacteria is controlled and *moromi* is protected from its effects.

The actual origins of the various kinds of spirits found around the world have never been fully clarified, but it is said that a still for single distillation called an “alembic” was developed in the Arab world during the 5th century and spread both east and west. Certain spirits were produced in Asia in the 13th or 14th century, and in Japan, it is generally believed that the distillation technology was brought from Siam (present Thailand) to the Ryukyu Kingdom (present Okinawa), which was actively trading with Southeastern Asian countries during the 15th century. However, there is no widely accepted theory of how and from where the Shochu production technology



came to Kyushu, although some have suggested Ryukyu, Korea, China, and Europe. There are actually records that state Shochu was produced in Kagoshima in the 16th century, so it is likely it probably spread gradually all over Japan via Miyazaki and the Kuma region, finding a home in different regions as a local specialty.

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### 3

## Types of Distillation

Honkaku Shochu or Awamori makers use two different single distillation methods: atmospheric distillation and vacuum distillation. In the atmospheric distillation method, as the pressure inside the still is 1 atm, the same as that of the outside atmospheric pressure, the temperature of the *moromi* mash rises to approximately 85-95°C. Shochu *moromi* is strongly acidic, so when it is heated to a high temperature, the substances in it undergo certain chemical reactions, which result in the generation of new volatile compounds, creating a rich aroma. On the other hand, in the vacuum distillation method, the pressure inside the still is reduced to allow the temperature of the *moromi* to rise to just 45-55°C. Therefore, chemical reactions are not as much in evidence as in the other method, which creates a light and subtle flavor in the final product. At many distilleries, a variety of flavors are created by utilizing these two types of distillation stills.

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