1. This booklet was produced by the National Research Institute of Brewing to help consumers understand the specific nomenclature that appears on sake bottle labels.

2. You can download a PDF of this booklet from our website.

3. If you decide to make a printed booklet from the downloaded PDF, please read and observe the cautions on our website (‘Use of this material’ and ‘Conditions of use’).

4. For inquiries about this booklet, please contact the ‘Information Technical Support Department’ of the National Research Institute of Brewing (TEL: 81-3-3910-6237)
What is written on sake bottle labels?

Japanese regulations require that points 1 thru 9 below must be printed on the labels of sake bottles.

1. Alcohol content
2. Raw ingredients (as a rule, it is not necessary to list water)
3. Seimai-buai (Degree of rice polishing)
4. Variety of raw rice and locations grown
5. Product name (e.g.: Both 日本酒 (nihonshu) and 清酒 (seishu) are correct Japanese terms for sake.)
6. Net volume
7. Date produced
8. Name and address of the brewery
9. Caution: not to be sold to or consumed by minors

Some sake bottles have another label on the back of the bottle. It will include more information about the product and other information about quality.

10 thru 12 are only listed when required by regulation. Additional information is also specified, including the number of years aged, the quality, and the use of organic rice.

This booklet includes terms that are often used on sake labels in order to provide aids so the consumer can choose wisely when selecting a bottle of sake.
**Sake bottle label terminology**

**Raw ingredients**

**Shuzo kekimasu** (酒造好適米)
Types of rice that are very good for brewing sake. These types have larger grains than the ordinary rice eaten by the Japanese. Normally, rice has an internal core called Shinpaku which contains lots of starch. Among these varieties, Yamadanishiki may be the most popular. But these days, new types of sake rice are being developed and older types are being revived in many areas of Japan. In 2010, at least 95 different types of rice for brewing sake were being grown in Japan.

**Shinpaku** (心 白)
The opaque white core of a rice grain. Rice with a shinpaku is preferable for producing excellent sake.

**Yamadanishiki** (山田錦)
The most popular sake rice. Especially suitable for producing delicious and very fragrant daiginjo-shu. Designated in 1936.

**Gohyakumangoku** (五百万石)
A famous sake rice from Niigata prefecture and from the Hokuriku districts. Designated in 1957.

**Miyamanishiki** (美山錦)
This rice is grown in the northern part of Japan because it is hardy and survives cold climates. Designated in 1978.

**Omachi** (雄町)
One of the oldest sake rice varieties, and still very popular, as it produces a specific sake having a rounded flavor. Designated in 1924.

**Seimai-buai** (精米歩合)
Degree of polishing
A figure that express the percentage of polished rice (in weight) relative to the brown rice (unpolished). For example, seimai-buai 40% means 40 kg of polished rice is derived from 100 kg of brown rice.

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**What is the best way to store sake at home?**

**A** Namazake (page 9) should be kept in the refrigerator and consumed as soon as possible. Heat-pasteurized sake should be kept in a cool, dark place. Once opened, sake will be oxidized and its quality will be reduced. We recommend storing a bottle of sake in the refrigerator once it has been opened.
Koji mai (麹米)
Rice from which koji is made.

Kake mai (掛米)
A term paired with koji mai. Kake mai is added to shubo or moromi (page 11) after being steamed.

Koji (麹)
Koji is steamed rice inoculated with koji mold. This mold’s enzymes convert the rice starch to sugar, which is food for the kobo (sake yeast) (page 11).

Jozo-alcohol (醸造アルコール)
Distilled alcohol, fermented from sugar cane, is used to adjust the flavor of sake in some cases.

Date produced

Seizo nengetsu (製造年月)
Date produced
In principle, the month and year the sake is bottled should be indicated.

Constituents

Alcohol content
Indicates the number of milliliters of alcohol in 100 milliliters of sake.

Nihonshu-do (日本酒度)
Sake meter value
Provides an easy indicator of the sweetness or dryness of sake as a number (positive numbers (+) mean dry and negative numbers (-) mean sweet).

San-do (酸度)
Acidity
Acidity makes sake taste strong, which masks its sweetness. This element of sake’s flavor is as important as nihonshu-do.

Aminosan-do (アミノ酸度)
Amino acid value
Sake with more amino acids tastes richer, with less amino acids tastes lighter.

Nihonshu-do and sweetness/dryness of sake

Nihonshu-do is unique measure to indicate the specific gravity of the sake and is specified by the Measurement Law. If the sake at 15˚C weighs the same as water at 4˚C, its nihonshu-do is 0; a lighter specific gravity is indicated by a + (plus), a heavier one is indicated by a – (minus). Heavier sake contains more sugar, thus - sake is sweet. On the other hand, + sake is dry. However, the alcohol content will change the specific gravity, so we must also note the alcohol content of the sake question. Moreover, the acid content will mask the sweetness, which indicates the acidity or the dryness. It is difficult to identify sweet/dry only by the nihonshu-do. There is another index to indicate the sweet/dry balance of sake, by calculating the nihonshu-do and sando (acidity), or the amount of glucose in the sake and its acidity.

Nihonshu-do = ([1 / Specific gravity] − 1) × 1443

The specific gravity of the sake in question is measured on a scale weighing the same mount of water at 4˚C and sake at 15˚C.

The constituents of sake (on average)

<table>
<thead>
<tr>
<th></th>
<th>Ordinary sake</th>
<th>Ginjo-shu</th>
<th>Junmai-shu</th>
<th>Honjozo-shu</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of samples analyzed</td>
<td>543</td>
<td>489</td>
<td>462</td>
<td>462</td>
</tr>
<tr>
<td>Alcohol content</td>
<td>15.4</td>
<td>15.9</td>
<td>15.5</td>
<td>15.5</td>
</tr>
<tr>
<td>Nihonshu-do</td>
<td>+3.8</td>
<td>+4.6</td>
<td>+4.1</td>
<td>+5.0</td>
</tr>
<tr>
<td>San-do (acidity)</td>
<td>1.2</td>
<td>1.3</td>
<td>1.5</td>
<td>1.3</td>
</tr>
<tr>
<td>Aminosan-do (amino acid value)</td>
<td>1.3</td>
<td>1.3</td>
<td>1.6</td>
<td>1.4</td>
</tr>
</tbody>
</table>

Data: All-Japan market sake study by the National Tax Agency, in 2009
### Tokutei meisho

**Tokutei meisho** (特定名称)

**Specific designation**
*(Ginjo-shu, junmai-shu, honjozo-shu)*

The classification system determined by the National Tax Agency designates sake as *ginjo-shu, junmai-shu, or honjozo-shu.* The standards for categorizing sake into these classifications are shown in the table on page 10. These are the standards specified by the Japanese government.

**Ginjo-shu** (吟醸酒)

Sake brewed from highly polished rice and fermented at a low temperature for a long time. Since *ginjo-shu* was brewed by expert brewers with vast knowledge and experience, it was considered the epitome of the 'Art of Sake' and was rarely marketed in the past. Its distinctive characteristics are its aroma, fruitiness and delicate flavor. Best served chilled to retain its flavor.

**Junmai-shu** (純米酒)

Made simply from rice and *koji* (page 5). Each product has its own unique rich flavor. Can be enjoyed in various ways; *Kan* (warm sake: page 13), chilled, on the rocks, or mixed with hot water.

**Honjozo-shu** (本醸造酒)

An amount of *jozo-alcohol* is added before filtering the moromi mash (page 13) to create a smoother and lighter flavor. It is delicious served *kan* (warm sake), for example.

### Grades

**Josen** (上撰)

A commonly used category to identify the grade of sake that might have been equivalent to *ikkyu* (first class) in the past.

**Shinshu** (新酒)

Sake brewed during the current year. It has fresh flavor and aroma.

**Koshu** (古酒)

Sake brewed during previous seasons or in the past. It has a mature flavor and smooth quality.

**Chouki-chozo-shu** (長期貯蔵酒)

Matured sake stored for a long time. Years ago, it was believed that sake should not be stored for a long time. However, the brewing process has been improved, thus producing a new variety of sake. Now brewers maintain their matured sake can come in various types with different tastes and qualities.

**Genshu** (原酒)

Undiluted sake

Genshu will have a high alcohol content and a strong flavor because no water was added after it was pressed. To serve, hot or cold water may be added.

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**Questions and Answers**

**Q** Should we buy the most recently bottled sake according to the bottling month on the label?

**A** You don't need to worry about the month it was bottled. Under general conditions, the quality of pasteurized sake is not affected during the first 3 months. On the other hand, *namazake* with the most recent date is preferable, as with beer.
Tezukuri (手造り)
Hand-crafted
Junmai-shu or honjozo-shu is brewed in a traditional method.

Namazake (生酒生酒)
Nama-chozo-shu (生貯蔵酒)
Namazume-shu (生詰酒)
Sake is usually pasteurized twice before being marketed (before and after bottling). Namazake is not pasteurized. Nama-chozo-shu and namazume-shu are only pasteurized once either after or before maturation, respectively. These 3 types of sake have a fresh aroma and are best served chilled.

Ki-ippo (生一本)
This term refers to junmai-shu that is brewed at only one brewery.

Taruzake (樽酒)
Cask sake
When sake is stored in a cedar cask, it develops its own special aroma. This improves the sake’s flavor.

Hiya-oroshi (冷やおろし)
This is an old way of selling namazume-shu. It refers to sake that was pasteurized once (after brewing), matured until the following autumn, then bottled without pasteurization. This type of sake is usually stored in a refrigerator at the shop to preserve its quality, but it is best served at room temperature.

Nigorizake (にごり酒)
Nigorizake is a cloudy sake produced by moromi (page 13) filtered through a coarse cloth. In the past, it was not pasteurized and contained living yeast but recently it has come to be pasteurized to preserve its quality.

Ki-ippo (生一本)
This term refers to junmai-shu that is brewed at only one brewery.

**Tokutei meisho and their specifications**

<table>
<thead>
<tr>
<th>Designation</th>
<th>Materials used</th>
<th>Seimai-buai (1)</th>
<th>% koji rice</th>
<th>Other features, including flavor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ginjo-shu (吟醸酒)</td>
<td>Rice, koji, Jozo-alcohol</td>
<td>Up to 60%</td>
<td>15% or more</td>
<td>Ginjo-zukuri method, characteristic flavor, high clarity</td>
</tr>
<tr>
<td>Daiginjo-shu (大吟醸酒)</td>
<td>Rice, koji, Jozo-alcohol</td>
<td>Up to 50%</td>
<td>15% or more</td>
<td>Ginjo-zukuri method, characteristic flavor, best clarity</td>
</tr>
<tr>
<td>Junmai-shu (純米酒)</td>
<td>Rice, koji</td>
<td>--</td>
<td>15% or more</td>
<td>Good flavor, high clarity</td>
</tr>
<tr>
<td>Junmai-ginjo-shu (純米吟醸酒)</td>
<td>Rice, koji</td>
<td>Up to 60%</td>
<td>15% or more</td>
<td>Ginjo-zukuri method, characteristic flavor, high clarity</td>
</tr>
<tr>
<td>Junmai-daiginjo-shu (純米大吟醸酒)</td>
<td>Rice, koji</td>
<td>Up to 50%</td>
<td>15% or more</td>
<td>Ginjo-zukuri method, characteristic flavor, best clarity</td>
</tr>
<tr>
<td>Tokubetsu-junmai-shu (特別純米酒)</td>
<td>Rice, koji</td>
<td>Up to 60%, or specially processed</td>
<td>15% or more</td>
<td>Good flavor, best clarity</td>
</tr>
<tr>
<td>Honjozo-shu (本醸造酒)</td>
<td>Rice, koji, Jozo-alcohol</td>
<td>Up to 70%</td>
<td>15% or more</td>
<td>Good flavor, high clarity</td>
</tr>
<tr>
<td>Tokubetsu-honjozo-shu (特別本醸造酒)</td>
<td>Rice, koji, Jozo-alcohol</td>
<td>Up to 60%, or specially processed</td>
<td>15% or more</td>
<td>Good flavor, best clarity</td>
</tr>
</tbody>
</table>

*1. The rice quality should be level 3 or better as determined during the agricultural produce inspection.
*2. There should be no more than 10% jozo-alcohol relative to the rice by weight.
*3. Label must indicate seimai-buai, according to the sake regulations.
*4. There is no clear definition of the ginjo-zukuri method. However, it usually means the process of using low seimai-buai rice and fermenting at a low temperature to create the characteristic fragrance.

Q Why is jozo-alcohol ever blended into premium daiginjo-shu?

A The jozo-alcohol is added to enhance the flavor. In particular, when jozo-alcohol is added to ginjo-shu, it heightens the flavor. In the National New Sake Awards in 2009, approximately 92% of the 920 entries contained jozo-alcohol.
Shubo (酒母)
Seed mash
In Japanese, shubo means ‘mother of sake.’ It is also called moto. Shubo is a yeast mash made from a nutritious mixture of rice, koji and water. It looks like moromi (page 13) but shubo has a strong sour taste and moromi does not. The sake yeast is tolerant of acidity, thus increasing the sake’s yeast content. Undesirable bacteria cannot survive in shubo acidity.

Ki-moto method (生酛)
A traditional method of making shubo. Lactic acid is derived from lactobacilli, over a long period of time and through the attentive care of the brewers. This assists in increasing the sake’s yeast content. This starter contains a lot of amino acid and is helpful in producing a dry sake with a rich flavor.

Yamahai-moto method (山廃酛)
The laborsaving ki-moto method was developed in the Meiji era (1868-1912). This method also developed in the Meiji era (1868-1912). Lactic acid is produced during the previous methods, but in this method, lactic acid is added, thus shortening the production time. These days, this is one of the most popular methods, as it can produce any type of sake.

Kobo (酵母)
A yeast, called Saccharomyces cerevisiae, converts sugar to alcohol in the process of sake brewing. Both the Latin word cerevisiae and Japanese term kobo mean 'mother of fermentation.' There are over 700 species of wild and domesticated yeast but most of them have nothing to do with sake brewing. S. cerevisiae is 5 to 10 µm in size and is milky white and egg shaped. This yeast is used for producing sake and is cultured by human beings.

Kyokai-kobo (協会酵母)
Yeast strain distributed by the 'Brewing Society of Japan.' In the Meiji era (1868-1912), after the distribution of kyokai-kobo was started, the quality of sake improved dramatically at breweries that previously did not have yeast that performed well.

Yamaoroshi
One step in making shubo
In the traditional method of making shubo, brewers had to mash the rice and koji together well for better fermentation. They put steamed rice, koji and water in a shallow barrel. After the mixture had cooled down for 15 to 20 hours, it was mashed with a tool called kabura kai. This yamaoroshi process required patience and manpower, and was very strenuous work performed in the winter during the very cold night hours.
Moromi (もろみ)
The main mash
Moromi is a mixture of shubo, koji, steamed rice and water. In a tank, rice starch is converted to sugar and fermentation occurs. Well-fermented moromi is filtered and the collected liquid is sake.

Kasu-buai (粕歩合)
Indicates how much sake cake remains after the sake has been filtered from the moromi. For example, from 100 kg of sake rice, a kasu-buai of 25% indicates there is 25 kg of remaining residue. For the josen class, the kasu-buai percentage may be 30% or less. For the daiginjo-shu class, the kasu-buai percentage is usually from 50 to 60%.

Orisage (澱下げ)
Removing the sediment
Sake sometimes loses its clarity during a long period of storage. This is because protein in the sake precipitates out as sediment. To remove this sediment, brewers traditionally use some kind of remover such as persimmon juice tannin. This process is referred to ‘orisage’ and often used for other jozo-shu, as well.

Other terms

Kasseitan (活性炭)
Activated carbon
To stabilize quality, brewers sometimes add kasseitan (powdered activated carbon) to sake. Activated carbon absorbs the impurities and is then filtered out. Each brewery has its own method of using activated carbon, which controls its own particular sake characteristics.

Kan (燗): Warm sake
Kan is the traditional way to drink sake. It is normally heated to around 42 to 45°C.

Kuramoto (蔵元) / Toji (杜氏)
Kuramoto refers to the brewery or the brewery owner. Toji means an expert in sake brewing (as a brew master is for beer) and a toji is regarded as the leader of the brewery workers.

National New Sake Awards
(全国新酒鑑評会)
This is the biggest competition in Japan for ginjo-shu produced during the previous winter season. It started in 1911. The contest is now held jointly once a year by the ‘National Research Institute of Brewing’ and the ‘Japan Sake and Shochu Makers Association’. Each brewery is allowed to send only one ginjo-shu to the exhibition. Gold prizes are awarded to excellent sakes. There were 920 entries from all over Japan in 2009.

The major kyokai-kobo (sake yeast strains) and their features

<table>
<thead>
<tr>
<th>Varieties</th>
<th>Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. 6</td>
<td>Strong in fermentation, produces a mellow flavor, and is suitable for creating a light taste.</td>
</tr>
<tr>
<td>No. 7</td>
<td>Vivacious flavor, suitable for producing ginjo-shu and ordinary sake</td>
</tr>
<tr>
<td>No. 9</td>
<td>Vivacious flavor and fruity aroma of ginjo-shu</td>
</tr>
<tr>
<td>No. 10</td>
<td>Low acidity, and notably fruity aroma of ginjo-shu</td>
</tr>
<tr>
<td>No. 11</td>
<td>Low amino acid content</td>
</tr>
<tr>
<td>No. 14</td>
<td>Kanazawa kobo: Low acidity, suitable for producing ginjo-shu.</td>
</tr>
</tbody>
</table>

Non-foaming yeast

After starting moromi, most sake yeast foams for 4 to 10 days. One of the good points about using a non-foaming yeast is that workmen are relieved of the hard task of removing the foam, thus easily providing more space available in the tank for making sake. Furthermore, they do not need to worry about moromi causing an overflow from a tank because of active fermentation of the kobo. Non-foaming yeasts are new types bred by the National Research Institute of Brewing.