

Glossary of Terms on Sake Bottle Labels

Guide for Selection of
Good Tasting Sake



What does the label say?

By law and regulations in Japan, all Sake labels must state the ingredients of the sake. Also, states place of origin and advice how to store and enjoy the sake.

1 Alcohol content

アルコール分
16.0度以上
17.0度未満

2 Raw ingredients

(Except water)

原材料名
米・米こうじ・
醸造アルコール

3 Seimai-buai

(Degree of polishing)

精米歩合60%

4 Product name

(e.g. 日本酒 *nihon shu* or 清酒 *sei shu* both identifies Sake in Japanese.)

清酒
1.8r詰

5 Net content

6 Bottled date

製造年月
16.3

7 Brewery's name and address

酒類総合研究所
広島県東広島市鏡山3-7-1

未成年者の飲酒は法律で禁止されています

8 Prohibited by law: Sake sold to and/or consumed by a minor person.

9 Tokutei meisho
(Special Designation)

10 Identifies Sake rice variety

9-12 are indicated only when required by law and regulations. Additional information describes aging period, high quality, and usage of organic rice ingredient.

11 Identifies locality of Sake production

本醸造 酒総研

東広島市の酒樽酒

12 Characteristics of Sake
(i.e. *gen shu*, *nama sake*, *nama chozo shu*, *ki ippon*, *taru sake*)

13 Brewery assigns grade rating.

上撰

At times, there are labels on the Sake bottle guiding more information about the product, quality and other data.

製品の特徴

酒造好適米を贅沢に使用した
伝統の生もとを採用、手造りにこだわりました
旨味に富んだ辛口本醸造酒です

原料米 山田錦 精米歩合 60%

使用酵母 協会701号

成分	日本酒度	+5
	酸度	1.6
	アミ/酸度	1.6

Indication of sweetness/dryness

甘口 やや甘口 やや辛口 辛口

Recommendation of serving

冷やして	室温	ぬる燗	熱燗

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This booklet provides aid for consumer's wise choice when selecting a bottle of Sake.

Sake Terminology

(Raw ingredients)

Shuzo kotekimai (酒造好適米)

Some types of rice are very good for brewing Sake. The grain is larger than ordinary rice eaten by the Japanese. Usually the rice has a starch component called *Shinpaku* (see below). Among such rice, *Yamadanishiki* rice may be the most popular, but these days, new types of Sake rice are developed and old types are revived in many areas of Japan. Survey taken in 2003, there were at least 83 types of rice grown in Japan.



Shinpaku (心白)

The white core is required to produce very good Sake.

Yamadanishiki rice (山田錦)

Is the most popular Sake rice. Especially suited to produce delicious high fragrance of *daiginjo shu*. Registered in 1936.

Gohyakumangoku rice (五百万石)

Is famous Sake rice from Niigata prefecture and from the Hokuriku districts. Registered in 1956.

Miyamanishiki rice (美山錦)

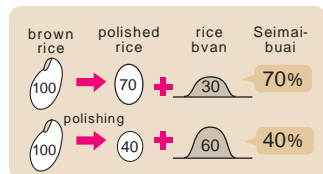
This rice is grown in the northern part of Japan because of its hardy survival nature. Registered in 1978.

Omachi rice (越前)

One of the oldest Sake rice and is still very popular. Registered in 1922

Seimai-buai (精米歩合)

Degree of polishing. For example, *seimai-buai* 40% means 40kg of polished rice is derived from 100kg of brown rice.



From left to right, brown rice, polished rice *seimai-buai* 70% and polished rice *seimai-buai* 40%

Koji mai (麹米)

Rice from which *koji* (page 5) is made.

In year 2003, Top 10 of the Sake rice acreage chart

2003	name	area(a.)	share(%)	main prefecture
1	<i>Yamadanishiki</i>	12,847	32.3	Hyogo
2	<i>Gohyakumangoku</i>	12,335	31.0	Niigata
3	<i>Miyamanishiki</i>	3,592	9.0	Nagano
4	<i>Omachi</i>	860	2.2	Okayama
5	<i>Hyogoyumenishiki</i>	803	2.0	Hyogo
6	<i>Hattannishiki no.1</i>	731	1.8	Hiroshima
7	<i>Ginpu</i>	581	1.5	Hokkaido
8	<i>Hanafubuki</i>	511	1.3	Aomori
9	<i>Dewasansan</i>	507	1.3	Yamagata
10	<i>Tamasakae</i>	460	1.2	Shiga
Total		33,227	83.5	

(Data from Agriculture, Forestry and Fisheries Ministry 2003)

There is big gap between top ranking 3 and others.



Q At home, what is the best storage condition?

A Unpasteurized *Nama sake* (page 9) should be kept in refrigerator and consumed as soon as possible. Sake pasteurized by heat should be kept in a cool place preferably under 15°C. Once uncorked, Sake will be oxidized thus its quality will be reduced, but rarely is the aroma altered. To prevent the lactic acid bacteria (*Hiochi-kin*) from altering the aroma, refrigeration is recommended.



Koji (麹)

Koji is steamed rice having *koji-kin* mold. *Koji* converts rice starch into sugar, which is food for Sake yeast (page 11).



Jozo-alcohol (醸造アルコール)

Distilled alcohol, fermented from sugar cane is used to adjust the Sake flavor in some cases.

(Date of product)

Seizo-nengetsu (製造年月)

Date of product
Indicates bottled date.

We, yeasts, are responsible for producing *Jozo-alcohol*!



(Constituent)

Alcohol content

Indicates by degrees how much milliliters of alcohol is in 100 milliliters of Sake.

Nihonshu-do (日本酒度)

Sake Meter Value.
Provides an easy indication of sweetness or dryness of sake by numerals (+ means dry and - means sweet).

San-do (酸度)

Acid degree.
Acid makes Sake taste strong which masks its sweetness. This is as important an element of Sake taste as *nihonshu-do*.

Aminosan-do (アミノ酸度)

Amino acid degree.
Sake with more amino acid tastes rich, less amino acid tastes light.

Nihonshu-do and sweetness/dryness of Sake

The *nihonshu-do* indicates the specific gravity of the sake and its standard is ruled under the Measurement Law. If Sake at 15 weights the same as water at 4, *nihonshu-do* is 0; when lighter specific gravity is +, heavier one is -. Heavier Sake has more sugar content, thus - Sake is sweet. On the other hand, + Sake is dry. However, the alcohol content will change the specific gravity, so we must note the alcohol

content in the Sake in 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 *Nihonshu-do*.



Nihonshu-do = $([1/\text{Specific gravity}]-1) \times 1443$

Specific gravity of Sake in question is measured on a scale weighing the same amount of water at 4 and Sake at 15.

Constituents of *tokutei meisho shu* (average)

	Ordinary	Ginjo	Junmai	Honjozo
Sample number	490	372	312	291
Alcohol content	15.3	15.8	15.4	15.4
<i>Nihonshu-do</i>	+2.5	+4.5	+3.7	+3.9
Acid degree	1.2	1.3	1.5	1.3
Amino acid degree	1.3	1.3	1.5	1.3

(Data from National Tax Administration Agency, Year 2002)

(Tokutei meisho)

Tokutei meisho (特定名称)

Classification set by the National Tax Agency, and designates Sake as *ginjo shu*, *junmai shu*, and *honjozo shu*. Standards are shown on table, page 10.

Ginjo shu (吟醸酒)

Brewed with highly polished rice and fermented at low temperature for long period of time. This type of Sake had been a special Sake seldom marketed, called an "Art of Sake", that was brewed by experienced brewers using their knowledge and high technique. The superb characteristic is its aromatic, fruity, and delicate flavor which can be damaged when it is warmed before serving.

Junmai shu (純米酒)

Only made with rice and *koji* (page5). Each variety has its own rich flavor, and is suitable for any type of serving--warmed, cooled, on the rocks even hot water stirred in.

Honjozo shu (本醸造酒)

There are many variations. A very small amount of *Jozo-alcohol* is added to adjust the individual taste. It becomes light beverage served, well warmed.



(Grade rating)

Josen (上撰)

Previously, this class of Sake was ranked as being in the first class rank.

(Types)

Shin shu (新酒)

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

Ko shu (古酒)

Sake brewed during previous seasons. It is smooth with mature flavor and taste.

Chouki chozo shu (長期貯蔵酒)

Matured Sake has been stored for a long time. Years ago, it was believed Sake should not be kept for a long time, however, the brewing process has been improved thus producing a new variety of Sake. Now brewers state matured Sake possesses various types with different tastes and flavors.

Gen shu (原酒)

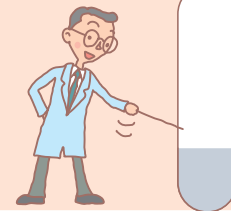
Undiluted sake. Many *gen shu* have high alcohol content and have strong taste because water has not been added after being pressed. When being served, hot or cold water may be added.

! By law, Sake had been ranked as *tokkyu* (special), *ikkyu* (first) or *nikyū* (second) class. In 1992, this ranking was abolished and Sake brewers introduced new categories to identify various Sake grades. There are several categories; however, most popular Sake is classified as *tokusen*, *josen*, or *kasen*. As a result of a recent survey, 70% of the *Ikkyū* class is now ranked as *Josen*. But, some brewers have other rankings, i.e. gold or silver, black or blue labels, etc.

Measuring of *Nihonshu-do*

+20
+10
+0
-10
-20

Nihonshu-do is measured by hydrometer like this.



Q Should we buy the most recently bottled Sake?



A You need not be so sensitive about the bottled date. Under general conditions, pasteurized Sake quality is not affected during the first 3 months. On the other hand, unpasteurized *nama zake* showing the most recent date is preferable.



Te dzukuri (手造り)

Hand-made

Junmai shu or *honjozo shu*, brewed in a certain traditional method.

Nama shu (生酒)

Nama chozo shu (生貯蔵酒)

Nama dzume shu (生詰酒)

Usually, Sake is pasteurized twice before being marketed. *Nama shu* (or *nama zake*) is never pasteurized. *Nama chozo shu* is bottled Sake pasteurized once after reaching maturation stage. *Nama dzume shu* is bottled Sake pasteurized once before reaching maturation stage. All three Sake have fresh flavor and are best served cooled.



Kijo shu (貴醸酒)

This Sake was invented by the previous National Research Institute of Brewing. The term was derived from ancient Japanese book *Engishiki*, in which they recorded a unique mixing process, *Shiori*, using Sake instead of water. There are some varieties such as aged sake, *nama shu*, etc.

Ki ippon (生一本)

The term means *junmai shu* brewed at only one factory.

Taru zake (樽酒)

Barrelled Sake.

Sake, once kept in a cedar barrel, has its own special aroma. It improves the Sake flavor.

Hiya oroshi (冷おろし)

This is an old-style marketing *nama dzume shu*. Brewer used to age Sake from the winter months to the following fall months for marketing. This type of Sake is usually refrigerated at the liquor shop, but is best served at room or slightly warm temperature.

Nigori zake (にごり酒)

Kassei seishu (活性清酒)

Moromi (page 13) is filtered through a coarse cloth which produces cloudy Sake, called *nigori zake*. Before, it was unpasteurized and contained living yeast. However, these days, much of the *nigori zake* is pasteurized to stabilize the quality.

Tokutei meisho (Special Designation) and Sake specifications

Designation	materials ¹ ₂	³ <i>seimai-buai</i>	% of koji rice	other features ⁴
<i>Ginjo shu</i> (吟醸酒)	rice, <i>koji</i> <i>jozo alcohol</i>	up to 60%	15% and over	<i>ginjo-tsukuri method</i> , characteristic flavor color clarity
<i>Daiginjo shu</i> (大吟醸酒)	rice, <i>koji</i> <i>jozo alcohol</i>	up to 50%		<i>ginjo-tsukuri method</i> , characteristic flavor high color clarity
<i>Junmai shu</i> (純米酒)	rice, <i>koji</i>			good flavor color clarity
<i>Junmaiginjo shu</i> (純米吟醸酒)	rice, <i>koji</i>	up to 60%		<i>ginjo-tsukuri method</i> , characteristic flavor color clarity
<i>Junmai daiginjo shu</i> (純米大吟醸酒)	rice, <i>koji</i>	up to 50%		<i>ginjo-tsukuri method</i> , characteristic flavor high color clarity
<i>Tokubetsu junmai shu</i> (特別純米酒)	rice, <i>koji</i>	up to 60% or special process		good flavor high color clarity
<i>Hanjozo shu</i> (本醸造酒)	rice, <i>koji</i> <i>jozo alcohol</i>	up to 70%		good flavor color clarity
<i>Tokubetu hanjozo shu</i> (特別本醸造酒)	rice, <i>koji</i> <i>jozo alcohol</i>	up to 60% or special process		good flavor high color clarity

- At the time of agricultural produce inspection, quality of rice should be at least ranked 3 or over.
- Quantity of *jozo-alcohol* is not more than 10 % of rice weight.
- Label must indicate that true *seimai-buai* meets Sake regulation.
- Definition of *ginjo-tsukuri method*. It usually means the process of using low *seimai-buai* rice and fermented at cold temperature to create its characteristic fragrance.

Q Why is *jozo-alcohol* added even to expensive *daiginjo shu*?



A The *jozo-alcohol* is added to enhance the flavor. Especially, when *jozo-alcohol* is added to *ginjo shu*, the flavor is heightened. In the year 2001, the Fresh Sake Contest of National Research Institute of Brewing, approximately 95% of the 1,094 entries contained *jozo-alcohol*.



Shubo (酒母)

Moto (飯)

Starter.

In Japanese, *shubo* means 'mother of Sake'. *Shubo* is a yeast mash made from nutritious mixture of rice, *koji* and water. It looks like *moromi* (page 13) but *shubo* has strong sour taste and *moromi* does not. The Sake yeast is tolerant to acidity thus increasing the Sake yeast content. Undesirable bacteria cannot survive in *shubo* acidity.

Kimoto method

A traditional method in making *shubo*. Through long period of time under great care of workers, from natural lactobacilli, lactic acid is derived, which assists in increasing Sake yeast content. This starter contains much amino acid and is helpful in producing dry Sake with rich taste.

Yamahai moto method

Labor-saving style of Kimoto method was developed in the Meiji era. This method omits the troublesome process called *yama oroshi* (page 12).

Sokujo moto method

This was developed in the Meiji era. In previous methods, lactic acid is made, but in this method, lactic acid is added thus shortening the production time. These days, this type is one of the most popularly used method.

Kobo (Yeast)

Some yeast, called *Sacchromyces cerevisiae*, the convert sugar to alcohol in process of Sake brewing. Both Latin word *Cerevisae* and Japanese term *kobo* mean 'mother of fermentation'. There are over 700 species of wild and domesticated yeasts but most of them have nothing to do in Sake brewing.

Kyokai kobo (Common yeast strains)

In the Meiji era, Brewing Society of Japan started to distribute good yeast to breweries, who did not have any good yeast. Since then, the quality of Sake throughout Japan has been highly improved.

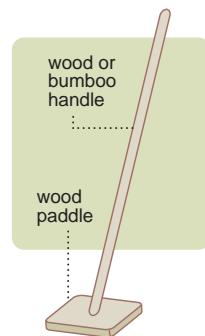
Moromi (Fermenting mixture)

Moromi is a mixture of *shubo*, *koji*, steamed rice and water. In the tank, rice is converted to sugar and fermentation occurs. Well-fermented *moromi* is filtrated and the collected liquid is Sake.

Yama oroshi-one step of making starter

In the traditional method of making *shubo*, brewers had to mash rice and *koji* well for better fermentation. They put steamed rice, *koji* and water in a shallow barrel. After cooling the mixture down for 15 to 20 hours, it was mashed with a tool called *kabura kai*. This process is *Yama oroshi* and required patience, manpower, and was very strenuous work performed in winter during the very cold night hours.

kabura kai



Kasu-buai

Indicates how much Sake residue remains after sake has been filtrated from *moromi*. For example, from 100kg of Sake rice, *kasu-buai* 25% indicates 25kg of remaining residue. For *josen* class, *Kasu buai* percentage may be up to 30. For *daiginjo shu* class, *kasu buai* percentage is usually 40 to 60.

Orisage

Removing sediment. Sake sometimes loses its clarity during the long storage time. This is because protein in Sake becomes sediment. To remove this sediment, brewers traditionally use some kind of remover such as persimmon tannin juice.

Activated carbon

To stabilize the quality, brewers sometimes add activated carbon powder in Sake. Activated carbon absorbs the impurities and is filtered out. Each brewery has its own method of using activated carbon which controls its own characteristic.

Kan

Heated Sake. According to the type of Sake, a Sake connoisseur enjoys Sake served at temperatures ranging from slightly warm to very hot.

Kanpyo kai

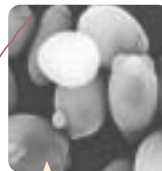
Connoisseur contest. In this contest, experts not only judge the Sake quality, but also give opinion and technical advice how to improve the brewer's Sake quality.

New brew contest

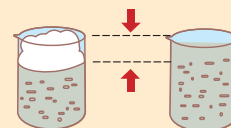
The contest for good fresh Sake is conducted by National Research Institute of Brewing. The first contest was held in 1911. Aiming for the gold prize, many breweries nationwide participate in this contest.

Major *Kyokai-kobos* (Common Sake yeast strains)

Varieties	Characteristics
Foaming Yeast	no.6 strong in fermentation, mellow flavor, and suitable to create light taste.
	no.7 vivacious flavor, suitable for producing <i>ginjo shu</i> and ordinary Sake
	no.9 vivacious flavor and characteristic aroma of <i>ginjo shu</i>
	no.10 low acidity, and characteristic aroma of <i>ginjo shu</i>
Non-foaming Yeast	no.11 pleasant after-taste, low amino acid content
	no.14 low acidity, suitable for producing <i>ginjo shu</i>
	no.601 same as no.6
	no.701 same as no.7
	no.901 same as no.9
	no.1001 same as no.10
	no.1401 same as no.14
no.1501 low acidity, suitable for producing <i>ginjo shu</i>	



Foamless yeast creates more open space in tank.



Moromi-foaming yeast Moromi-foamless yeast

Non-forming yeast

After starting *moromi*, most Sake yeast foams for 4 to 10 days. Foamless yeasts are new types of yeast bred by the National Research Institute of Brewing. One of the good points of using non-forming yeast is that workmen are relieved from the hard task of removing the foam, thus making more space available in the tank to make Sake.

- 1 This booklet is produced by the National Research Institute of Brewing enlightening the consumer to understand the specific nomenclature used in Sake manufacture.
- 2 Through our homepage, copy of this booklet can be obtained by downloading the pdf file. Please read the direction on our homepage.
- 3 Also inquiries regarding this booklet, contact us at our Tokyo office, National Research Institute of Brewing.



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