

Sake labeling

Learning outcomes

- Knowledge of labeling based on brewing method
- Knowledge of *nihonshu-do* (sake meter value), *san-do* (acidity), *aminosan-do* (amino acid value)
- Understanding of sweetness or dryness and nihonshu-do

7.1 Labeling of specially designated sake

Japanese law recognizes the following designations: ginjo-shu, daiginjo-shu, junmai-shu, junmai ginjo-shu, honjozo-shu (Appendix II).

Table 7.1 Specially designated sake

designation	ingredients ^{1,2}	seimai-buai ³	% of koji-mai	other features ⁴
Ginjo-shu	rice, koji, jozo-alcohol	up to 60%	15% and over	ginjo-zukuri ⁵ method, characteristic flavor color clarity
Daiginjo-shu	rice, koji, jozo-alcohol	up to 50%	"	ginjo-zukuri method, characteristic flavor high color clarity
Junmai-shu	rice, koji	–	"	good flavor color clarity
Junmai ginjo-shu	rice, koji	up to 60%	"	ginjo-zukuri method, characteristic flavor color clarity
Junmai daiginjo-shu	rice, koji	up to 50%	"	ginjo-zukuri method, characteristic flavor high color clarity
Tokubetsu junmai-shu	rice, koji	up to 60% or special process	"	good flavor high color clarity
Honjozo-shu	rice, koji, jozo-alcohol	up to 70%	"	good flavor color clarity
Tokubetsu honjozo-shu	rice, koji, jozo-alcohol	up to 60% or special process	"	good flavor high color clarity

*1 Rice quality should be certified as Grade 3 or higher during agricultural produce inspection.

*2 Amount of jozo-alcohol (ethyl alcohol of agricultural origin) should not exceed 10% of rice weight.

*3 Label must indicate that actual seimai-buai conforms with sake regulations.

*4 Koji-mai: polished rice used in the production of koji.

*5 Ginjo-zukuri: usually refers to the process of using rice with a low seimai-buai (highly polished rice) and cold-temperature fermentation to create the characteristic fragrance of ginjo-shu (Sec. 8.5).

7.2 Other labeling based on brewing process

Shinshu

Sake brewed during the current year.

Koshu

Matured sake that has been stored for a long time.
Period of maturation can be authenticated.

Genshu

Undiluted sake. Many genshu have a high alcohol content and strong taste because there is no addition of water after mash filtration.

Tezukuri

Handmade
Junmai-shu or honjozo-shu
Sake that has been brewed using certain traditional methods.

Namazake (Nama-shu)

Usually, sake is pasteurized twice before being bottled.
Namazake (nama-shu) is unpasteurized.

Nama-chozo-shu

Nama-chozo-shu is sake pasteurized once at bottling after maturation.

Namazume-shu

Namazume-shu is sake pasteurized once before maturation.

Kijoshu

This term derives from the ancient Japanese book *Engishiki*, which records a unique mixing process, *shiori*, using sake instead of water in the brewing process. There are some sub-varieties of *kijoshu*, such as *koshu*, *namazake*, etc.

Ki-ippou

This term refers to junmai-shu brewed at only one brewery.

Taruzake

Cask sake. Sake that has been kept in a cedar cask has its own special aroma.

Hiyaoroshi

This is an old-style way of marketing *namazume-shu*. It refers to sake that has been pasteurized once and aged from the winter until the following fall before distribution.

Nigorizake

Cloudy sake. The moromi (main mash) is filtered through a coarse mesh which leaves rice solids and yeast in the sake. In the past, it was unpasteurized and contained living yeast. These days, however, much nigorizake is pasteurized to stabilize the quality.

7.3 Labeling related to other brewing processes

Sake rice varieties	Sec. 8.1
Shubo (seed mash) method	Sec. 8.4
Yeast varieties	Sec. 8.4
<i>Arabashiri</i> , <i>shizuku sake</i> , <i>muroka</i>	Sec. 8.7

7.4 Labeling of technical information

Some types of sake have labels referring to technical specifications other than alcohol content.

Nihonshu-do, sake meter value

The sake meter value indicates the specific gravity, or relative weight compared to water, of the sake. The standard of measurement is governed by the Japanese Measurement Law.

If sake at 15°C weighs the same as water at 4°C, the sake meter value is 0. Sake that is lighter compared to water is indicated with a positive meter value, such as +2, and sake that is heavier than water is indicated by a negative meter value, like -3. Higher sugar content is what makes some sake heavier than water, so negative meter values can indicate sweeter sakes, and positive meter values can indicate drier sakes (Fig. 7. 1).

However, the alcohol content also changes the specific gravity, so the alcohol content of the sake should also be taken into consideration. Furthermore, some sugars, such as oligosaccharide, are not sweet, and the acid level can also mask the sweetness. Therefore, it is difficult to identify sake as sweet or dry relying solely on the sake meter value.

San-do, acidity

Acid makes sake taste strong, masking its sweetness. This is an important element of the taste of sake.

Acidity of sake and acidity of wine

The *san-do* (acidity) of sake is measured using 0.1 N sodium hydroxide and neutralization titration (pH 7.2) of 10 ml of sake. The acidity of wine is similarly measured using 0.1 N sodium hydroxide and neutralization titration (pH 8.2). This value is multiplied by 0.075 to indicate the level of tartaric acid (g/100 ml). Expressed in terms of tartaric acid, the acidity of white wine is 0.5–0.9 (g/100 ml) and that of sake around 0.1–0.2 (g/100 ml).

Aminosan-do, amino acid value

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

Aminosan-do (amino acid value) is measured using formol titration.

Amakara value

Amakara refers to the sweetness or dryness of sake. Instead of the sake meter value, the sweetness or dryness of sake can be expressed more accurately in terms of the relationship between its glucose content and acidity.

This is expressed as:

Amakara value = Glucose (g/100ml) – Acidity

Dry: value of less than 0.3

Medium dry: value of between 0.3 and 1.0 inclusive

Medium sweet: value between 1.1 and 1.8 inclusive

Sweet: value greater than 1.8

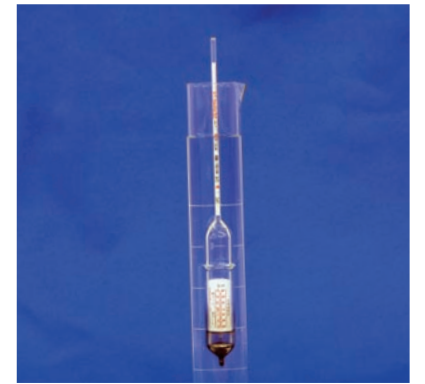


Figure 7.1 Sake meter

Table 7.2 Average technical values (2009)

	Ginjo-shu, including junmai ginjo-shu	Junmai-shu	Honjozo-shu	Futsu-shu
Alcohol (%)	15.94	15.52	15.54	15.41
Sake meter value	4.6	4.1	5.0	3.8
Glucose (g/100ml)	1.85	1.64	1.78	2.17
Acidity	1.30	1.47	1.25	1.18
Amino acid value	1.28	1.59	1.41	1.31
Amakara value	0.55	0.17	0.53	0.99