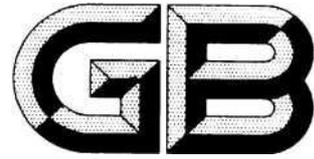


ICS 67.160.10  
CCS X 63



# National Standards of People' s Republic of China

GB/T 27588—202X

Replace GB/T 27588—2011

---

## Quality Requirements for Integrated Alcoholic Beverages and Lujiu

### 配制酒和露酒的质量要求

*(Draft for approval)*

*(English Translation)*

Issue date: XX - XX - XXXX      Implementation date: XX - XX - XXXX

---

Issued by      State Administration for Market Regulation  
Standardization Administration of the People' s Republic of China

## Foreword

SAC/TC471 is in charge of this English translation. In case of any doubt about the contents of English translation, the Chinese original shall be considered authoritative.

This document is drafted in accordance with the rules given in the GB/T 1.1-2020 *Directives for standardization—Part 1: Rules for the structure and drafting of standardization documents*

This document replaces GB/T 27588-2011 Lujiu. Compared with GB/T 27588-2011, the main technical changes are as follows:

- a) The name of the Standards has been revised;
- b) Terms and definitions of “Integrated alcoholic beverage”, “immersion and fermentation” and “immersion and distillation” (see 3.1, 3.9 and 3.10) have been added;
- c) Definition of lujiu has been revised (see 3.2, or 3.1 of the 2011 edition);
- d) Product classification has been revised (see Chapter 4, or Chapter 4 of the 2011 edition);
- e) The sensory requirements on lujiu have been revised (see 5.3.1, or 5.2.1 of the 2011 edition); the sensory requirements on integrated alcoholic beverages have been added (see 5.2.1);
- f) The physical and chemical requirements on alcohol content, total acid and total sugar of lujiu have been revised (see 5.3.2, or 5.2.2 of the 2011 edition); the physical and chemical requirements on total acid + total ester (see 5.3.2) have been added; the physical and chemical requirements on total esters and sugar free extracts have been deleted (see 5.2.2 of the 2011 edition);
- g) The physical and chemical requirements on integrated alcoholic beverages have been added (see 5.2.2);
- h) The test methods for sensory requirements have been revised (see 6.1, or 6.1 of the 2011 edition); the test methods for total acid + total ester and non-sugar solids have been added (see 6.2.4 and 6.2.5);
- i) The sanitary requirements have been deleted (see 6.4 of the 2011 edition);
- j) Judgment rules have been revised (see 7.4, or 7.4 of the 2011 edition);
- k) The requirements on sign have been revised (see Chapter 8, or 8.1 of the 2011 edition);

Attention is drawn to the possibility that some of the elements of this standard may be the subject of patent rights. The issuing body of this document shall not be held responsible for identifying any or all such patent rights.

This standard was proposed by China National Light Industry Council.

This standard was prepared by SAC/TC 471 the National Technical Committee 471 on Brewing of Standardization Administration of China.

The release of previous versions of this document and the documents it replaces are as follows:

—GB/T 27588-2011;

—This is the first revision.

# Quality Requirements for Integrated Alcoholic Beverages and Lujiu

## 1 Scope

This document specifies the quality requirements of integrated alcoholic beverages and lujiu, including terms and definitions, product classification, requirements, test methods, inspection rules and sign, packaging, transport and storage.

This document applies to the production, inspection and sales of integrated alcoholic beverages and lujiu.

## 2 Normative References

The following documents contain provisions which, through reference in this text, constitute indispensable provisions of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

GB/T 191 *Packing—Pictorial marking for handling of goods*

GB 5009.225 *National food safety standard – determination of ethanol concentration in wines*

GB/T 10345 *Methods of analysis for Chinese spirits*

GB/T 12456 *Determination of total acid in foods*

GB/T 13662 *Huangjiu*

GB/T 15038 *Analytical methods of wine and fruit wine*

GB/T 17204 *Terminology and classification of alcoholic beverages*

JJF 1070 *Rules of Metrological Testing for Net Quantity of Products in Prepackages with Fixed Content*

*Measures for the metrological supervision and administration of quantitatively packed commodities* (Decree No. 75 [2005] of the General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China)

## 3 Terms and Definitions

For the purpose of this document, the terms and definitions given in GB/T 17204 and following apply

### 3.1

**Integrated alcoholic beverage**

Alcoholic beverage integrated and/or reprocessed with fermented alcoholic drink, distilled liquor or edible alcohol as its base, added with edible raw materials and ingredients and/or food additives

[Source: GB/T 17204—202X, 3.1.3]

### 3.2

#### **Lujiu (Alcoholic beverage mixed with essence)**

Alcoholic beverage with specific style prepared with yellow rice wine or liquor as its base, added with what is traditionally both foods and TCM materials or raw materials and ingredients of specific foods or other substance meeting relevant standards, which then goes through processes such as immersion and extraction (3.7) and/or re-distillation (3.8) or is directly added with specific ingredients extracted from foods

Note 1: The base does not include flavored liquor.

Note 2: Small amount of other fermented alcoholic drink made of grain can be added to the base.

[Source: GB/T 17204—202X, 3.24]

### 3.3

#### **Lujiu made from plants**

Alcoholic beverage with specific style prepared with reprocessing of edible plants and plant products or what is traditionally both foods and TCM materials (or plants and plant products meeting relevant standards)

### 3.4

#### **Lujiu made from animals**

Alcoholic beverage with specific style prepared with reprocessing of edible animals and animal products or what is traditionally both foods and TCM materials (or animals and animal products meeting relevant standards)

### 3.5

#### **Lujiu made from plants and animals**

Alcoholic beverage with specific style prepared with reprocessing of animals and animal products as well as plants and plant products simultaneously

### 3.6

#### **Lujiu made from other materials**

Alcoholic beverage with specific style prepared with materials other than animals and animal products or plants and plant products; or with animals and animal products, plants and plant products as well as other materials simultaneously, which is then reprocessed

### 3.7

**Immersion and extraction**

The process of extracting specific components from raw materials with a food-grade solvent

Note: Common methods include immersion, percolation, decoction, reflux, etc.

3.8

**Re-distillation**

The process of distillation by adding aromatic and flavoring substances in the wine base

3.9

**Immersion and fermentation**

The process in which one part of the raw materials is immersed and extracted with wine base, the other part is used for fermentation, and then both parts are integrated and reprocessed

3.10

**Immersion and distillation**

The process in which one part of the raw materials is immersed and extracted with wine base, the other part is used for fermentation and distillation, and then both parts are integrated and reprocessed; or all of the raw materials are immersed and extracted with wine base and then distilled, and the resulting distillate is integrated and reprocessed

**4 Product Classification****4.1 Integrated alcoholic beverages****4.1.1 Classification by wine base**

Classified by the wine base used:

- Single wine base;
- Mixed wine base.

**4.1.2 Classification by production process**

Classified by production process:

- Directly integrated;
- Immersed and extracted;
- Redistilled;
- Immersed, extracted and fermented;
- Immersed, extracted and distilled;
- Other.

### 4.1.3 Classification by product feature

Classified by product feature:

- Special wines: liqueur wine, flavored wine, etc.
- Special beers: fruit and vegetable juice beer, etc.
- Fruit wine (integrated): liqueur fruit wine, etc.
- Flavored liquor;
- Other.

## 4.2 Lujiu

### 4.2.1 Classification by wine base

Classified by the wine base used:

- Huangjiu (yellow rice wine);
- Liquor;
- Mixed wine base.

### 4.2.2 Classification by raw material

Classified by raw materials used:

- Animals;
- Plants;
- Animals and plants;
- Other.

### 4.2.3 Classification by production process

Classified by production process:

- Immersed and extracted;
- Redistilled;
- Other.

## 5 Requirements

### 5.1 Raw materials and ingredients

- 5.1.1 The wine base used shall comply with requirements in relevant standards.
- 5.1.2 The variety and quality of what is traditionally both foods and TCM materials or raw materials and ingredients of specific foods shall comply with relevant requirements.
- 5.1.3 The quality of other raw materials and ingredients shall comply with

relevant standards and requirements.

## 5.2 Integrated alcoholic beverages

### 5.2.1 Sensory requirements

Shall comply with the requirements specified in Table 1.

**Table 1 Sensory requirements**

Item	Requirement
Appearance and color	The wine shall be clear, free of suspended matter or precipitation <sup>a</sup> or have the proper appearance <sup>b</sup> and color of the product
Aroma	It shall have the special aromas of the product, which shall be harmonious
Taste and flavor	It shall have the special taste and flavor of the product, and the wine shall be full-bodied
Style	It shall have the typical style of the product
<sup>a</sup> A small amount of precipitation is acceptable three months after the production date.	
<sup>b</sup> Applicable to products with particular form of the wine body.	

### 5.2.2 Physical and chemical requirements

Shall comply with the requirements specified in Table 2.

**Table 2 Physical and chemical requirements**

Item		Requirement
Alcohol content <sup>a</sup> (20° C)/(°vol)		0.5~68.0
Total acid <sup>b</sup> / (g/L)	Distilled liquor as base (expressed as ethanoic acid) $\geq$	0.10
	Fermented alcoholic drink as base (expressed as tartaric acid) $\geq$	2.00
	Other base (expressed as ethanoic acid) $\geq$	0.20
Total sugar <sup>c</sup> / (g/L) $\leq$		260.0
Fe <sup>d</sup> (mg/L) $\leq$		8.0
Cu <sup>d</sup> (mg/L) $\leq$		1.0
<sup>a</sup> When the alcohol content of the product $\geq 4\%$ vol, the allowable difference between the label value and the actual measured value is $\pm 1\%$ vol; when the alcohol content of the product $< 4\%$ vol, only a positive deviation of 1%vol is acceptable.		
<sup>b</sup> Not applicable to edible brewing alcohol or vodka-based products.		
<sup>c</sup> A difference of $\pm 10\%$ between the label value and the measured value is acceptable.		
<sup>d</sup> Applicable only to wine-based products.		

## 5.3 Lujiu

### 5.3.1 Sensory requirements

Lujiu shall comply with the requirements specified in Table 3.

**Table 3 Sensory requirements**

Item	Requirement
Appearance and color <sup>a</sup>	The wine shall be clear, free of suspended matter or precipitation <sup>b</sup> and have the proper color of the product
Aroma	It shall have the special aromas of the product, which shall be harmonious

Taste and flavor	It shall have the special taste and flavor of the product, and the wine shall be full-bodied
Style	It shall have the typical style of the product
<sup>a</sup> Not applicable to products that the wine has the form of the raw material.	
<sup>b</sup> A small amount of precipitation is acceptable three months after the production date.	

### 5.3.2 Physical and chemical requirements

Lujiu shall comply with the requirements specified in Table 4

**Physical and chemical requirements**

Item		Requirement
Alcohol content <sup>a</sup> (20° C)/( %vol)		4.0~68.0
Total acid/ (g/L)	Yellow rice wine as base (expressed as lactic acid) $\geq$	3.00
	Mixed base (expressed as ethanoic acid) $\geq$	1.00
Total acid + total ester <sup>b</sup> / (g/L) $\geq$		0.30
Total sugar <sup>c</sup> / (g/L) $\leq$		260.0
Non-sugar solids (g/L) $\leq$		0.1
<sup>a</sup> A difference of $\pm 1\%$ vol between the label value and the measured value is acceptable.		
<sup>b</sup> Applicable to liquor-based products.		
<sup>c</sup> A difference of $\pm 10\%$ between the label value and the measured value is acceptable.		

### 5.4 Net quantity

The net quantity shall comply with the requirements of *Measures for the metrological supervision and administration of quantitatively packed commodities*

## 6 Test Methods

### 6.1 Sensory requirements

#### 6.1.1 Preparation of wine samples

Code the wine samples, place them in a water bath, and adjust the temperature to 20 ° C ~ 25 ° C. Pour appropriate amount of the wine samples to clean and dry tasting glasses corresponding to the code numbers of the wine samples.

#### 6.1.2 Appearance and color

Place the tasting glass with wine sample in a bright place. Raise the glass to the eyebrow. Observe with naked eye the color, transparency and clarity of the wine, as well as the presence or absence of precipitation and suspended matter.

#### 6.1.3 Aroma

Hold the glass and slowly place the glass under your nostrils to sniff the volatile aroma. Then slowly swirl the glass and sniff the aroma as the air enters. Cover the glass and hold the body of the glass with your hand for 2 minutes. Swirl the glass, sniff the aroma, and write down the characteristics of the smell.

#### 6.1.4 Taste and flavor

Take a sip of the wine sample in your mouth and distribute it as evenly as possible

in your gustatory area. Taste carefully and swallow it after getting a clear impression. Then taste the aftertaste and write down the characteristics of the taste and mouthfeel.

### 6.1.5 Style

Conduct a comprehensive analysis and evaluation of the wine's style and typical degree of strength according to the appearance, color, aroma and taste characteristics, and write a conclusion.

## 6.2 Physical and chemical requirements

### 6.2.1 Alcohol content

In accordance with GB 5009.225.

### 6.2.2 Total acid

In accordance with GB/T 12456, in g/L.

### 6.2.3 Total sugar, Fe and Cu

In accordance with GB/T 15038.

### 6.2.4 Total acid + total ester

6.2.4.1 Obtain the total acid in the sample  $x_1$  using the method specified in GB/T 10345.

6.2.4.2 Obtain the total ester in the sample  $x_2$  using the method specified in Appendix A.

#### 6.2.4.3 Calculation

Calculate the total acid + total ester in the sample according to formula (1):

$$x = x_1 + x_2 \dots \dots \dots (1)$$

Where:

$x$ —Total acid + total ester in the sample (in g/L);

$x_1$ —Total acid in the sample (in g/L);

$x_2$ —Total ester in the sample (in g/L);

The result of the calculation shall be rounded to the nearest two decimal places.

### 6.2.5 Non-sugar solids

In accordance with GB/T 13662.

## 6.3 Net quantity

In accordance with JJF 1070.

## 7 Inspection Rules

## 7.1 Batches

The products with the same quality of the same variety and specification from the same shift shall be regarded as a batch.

## 7.2 Sampling

7.2.1 Draw samples (cases) according to Table 5, and then draw samples (bottles) from any place of each case. If the net quantity of a single package is less than 500mL and the total sampling amount is less than 1 500mL, the sampling amount can be increased proportionally.

**Table 5 Sampling table**

Scope of sampling (cases)	Number of samples (cases)	Number of samples per case (bottles)
≤50	3	3
51~1 200	5	2
1 201~35 000	8	1
≥35 001	13	1

7.2.2 Labels shall be affixed immediately after sampling, indicating the sample name, variety and specification, quantity, manufacturer's name, sampling time and place as well as sampler. Two bottles of the sample shall be sealed and kept for two months for future reference. Other samples shall be immediately sent to the laboratory for testing.

## 7.3 Inspection and classification

### 7.3.1 Delivery inspection

7.3.1.1 Before delivery, the products shall be inspected batch by batch by the inspection department of the manufacturer according to the provisions of this document. Only when the inspection results meet the requirements specified in this document can the products be delivered.

7.3.1.2 Classification of inspection items:

—Integrated alcoholic beverages: sensory requirements, alcohol content, total acid, total sugar and net quantity;

—Lujiu: sensory requirements, alcohol content, total acid or total acid + total ester, non-sugar solids, total sugar and net quantity.

### 7.3.2 Type inspection

7.3.2.1 Inspection items include all items specified in this document.

7.3.2.2 In general, the type inspection of the same type of products shall be carried out annually, but it shall be carried out under any of the following conditions as well:

- a) Significant changes in raw materials or ingredients;
- b) Revision of key processes or devices;
- c) Trial-production of new products, or production of normally manufactured

products resumed after six months of suspension;

- d) Any major difference between the results of delivery inspection and those of previous type inspection;
- e) inspection required by state supervisory organizations according to relevant provisions.

#### **7.4 Judgment rules**

7.4.1 If there are one or more non-conforming item(s) in the inspection results, the nonconforming items shall be re-inspected by taking twice the amount of samples from the same batch of products, and a re-inspection shall be conducted for the non-conforming items, and the results of the re-inspection shall prevail.

7.4.2 If there are one or more non-conforming item(s) in the re-inspection, this batch of products shall be judged as not in conformity with this document.

### **8 Sign**

8.1 The type of base used in the pre-packaged integrated alcoholic beverages and lujiu as well as the sugar content shall be indicated. When the total sugar content  $\leq 5.0$  g/L, the sugar content may not be indicated; when  $5.0\text{g/L} < \text{total sugar} < 60.0\text{g/L}$ , the range of sugar content can be indicated; when the total sugar content  $\geq 60.0$  g/L, the accurate value shall be indicated.

8.2 In addition to the name of the product as well as the name and address of the manufacturer (or distributor), the net content per package and the specification shall also be marked on the outer carton.

8.3 Pictorial marking for handling of the products shall comply with the requirements specified in GB/T 191.

### **9 Packaging, Transport and Storage**

9.1.1 The packaging containers shall be clean, tightly sealed and without leakage, and comply with the corresponding standards.

9.1.2 The outer packaging shall comply with the corresponding standards.

9.1.3 During transport and storage, the products should be kept clean, and handled with care during loading and unloading. Strong oscillation, sun, rain, and freezing shall be avoided; the storage location shall be protected from light and well ventilated; and fire shall be strictly prohibited.

9.1.4 The finished products shall not come into direct contact with wet ground.

9.1.5 The temperature for storage and transport shall be kept at  $5^{\circ}\text{C}$ – $35^{\circ}\text{C}$ .

## Appendix A

### (Normative)

#### Method for measuring the total ester in lujiu

##### A.1 Principle

The total ester content can be calculated from the amount of alkali consumed by neutralizing the free acid in the sample with alkali, adding an accurate amount of alkali, and saponifying the ester by heating reflux.

##### A.2 Preparation of the sample

A.2.1 Take an accurate amount of 100 mL sample at 20° C and place it in a 500 mL distillation flask. Rinse the volumetric flask with 50 mL distilled water for three times, and the put the rinsing liquid into the distillation flask; add a few anti-bumping granules or glass beads to the flask, connect the condenser, and turn on the circulating water (the temperature of which should be lower than 15° C); distill the sample by slowly heating and collect the distillate in a 100 mL volumetric flask.

A.2.2 After boiling of the sample, complete the distillation within 30 to 40 minutes. When the amount is close to the scale mark of the volumetric flask, remove the volumetric flask and cover it with a stopper, keep it in a water bath of 20° C for 30 min, add water for constant volume, and mix it well for future use.

##### A.3 Test procedures and calculation of results

In accordance with GB/T 10345.

##### A.4 Precision

The absolute difference between the two independent measurements obtained under the condition of repeatability measurement should be no more than 2% of their arithmetic mean.

## Bibliography

- [1] GB/T 17204—202X Terminology and classification of alcoholic beverages
-