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Supercedes GB/T 15037-1994

Wines

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Foreword

Chapter 3, Articles 5.2, 5.3 and 5.4 in Chapter 5 and Article 8.1 and 8.2 in Chapter 8 of this Standard are mandatory. All others are voluntary.

This standard applies to wine produced after the enforcement date.

The definition part of the Standard is not equivalent to 2003 *International Vine and Wine Code* drawn up by International Organization of Vine and Wine (OIV).

The Standard is an amendment to GB/T 15037-1994 .

This Standard substitutes GB/T 15037-1994.

The major changes in this Standard over the previous GB/T 15037-1994 in the following aspects:

1. Description of Definitions: Appropriate amendments are made in the light of *OIV Code and Technical Code of Wine Making in China*. Definitions to the following special wines are added: liqueur wine, ice wine, noble rot (botrytised) wine, flor wine, low-alcohol wine, non-alcohol wine and *Vitis amurensis* wine.

2. Product Classification: In addition to retaining the classification method according to the colour and carbon dioxide as in the previous standard, classification method based on the sugar content is also added.

3. Requirements:

---- The free sulfur dioxide level and the total sulfur dioxide limit level should follow GB 2758 Hygienic Standard for Fermented Wines.

---- The total acid is represented in measured value without any imposed requirements so as to determine the type of wine.

---- Add the citric acid, copper, methanol and antiseptic limit level. Since benzyl acid is naturally generated in the course of fermentation instead of artificially added, $\leq 50\text{mg/L}$ is specified.

---- Addition of synthetic colour, sweetener, essence and thickener is specifically prohibited.

4. Add the requirement of net content.

5. Amend the sampling table and related provisions in the Inspection Rules.

6. Add Appendix A for sensory grading, evaluation and description.

Appendix A of the Standard is informative appendix.

The Standard was proposed by China National Council of Light Industry.

The Standard is put under centralized management by the Winery Sub-committee of National Food Industry Standardization Technical Committee.

The Standard was drafted by the following companies and organizations: China National Research Institute of Food and Fermentation Industries, Changyu Pioneer Wine Company Limited Yantai China, China Great Wall Wine Co., Ltd., China-France joint venture Dynasty Wine Co., Ltd., China National Wine Quality Supervision and Inspection Centre, Xintian International Wine Company Limited, and Wine Operation Subsidiary of Gansu Mogao Industrial Development Co., Ltd.

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The Standard replaces GB/T-15037-1994.

Wines

1. Scope

The Standard stipulates the wine terms and definitions, product classification, requirements, analytical methods, inspection rules, label as well as packaging, transportation and storage.

The Standard is applicable to the production, inspection and sales of wine.

2. Normative References

The following documents contain provisions which, through reference in this Standard, constitute provisions of this Standard. For dated references, subsequent amendments (excluding corrections) to or revisions of any of these publications shall not apply to this Standard. However, all parties subject to agreements based on this Standard are encouraged to investigate the possibility of applying the most recent editions of the documents listed below. For undated references, the latest edition of the publication referred to applies to this Standard.

GB/T 191	Logo Identification for Packaging, Transportation and Storage
GB 2758	Hygienic Standard for Fermented Wines
GB/T 5009.29	Method for Determination of Sorbic Acid and Benzyl Acid in Food
GB 10344	General Rules for the Labeling of Pre-Packaged Alcoholic Beverage
GB/T 15038	General Analytical Methods of Grape Wine and Fruit Wine
JJF 1070	Inspection Rules for the Net Content Measurement of Quantitatively Packaged Commodities
AQSIQ 2005 Ordinances No. 75	<i>Administrative Measures on the Measurement and Supervision of Quantitatively Packaged Commodities</i>

3. Terms and Definitions

The following terms and definitions apply to the Standard.

3.1

Wines

Refers to fermented wines that have fresh grapes or grape juice as raw material, are made through full or partial fermentation, and contain a certain degree of alcohol content.

3.1.1

Dry Wines

Refers to wines whose sugar content (by glucose) is $\leq 4.0\text{g/L}$, or whose maximal sugar content is 9.0g/L when the difference between total sugar and total acid (by tartaric acid) is $\leq 2.0\text{g/L}$.

3.1.2

Semi-Dry Wines

Refers to wines whose sugar content is higher than dry wines with maximum at 12.0g/L , or whose maximal sugar content is 18.0g/L when the difference between total sugar and total acid (by tartaric acid) is $\leq 2.0\text{g/L}$.

3.1.3

Semi-Sweet Wines

Refers to wines whose sugar content is higher than semi-dry wines with maximum at 45.0g/L .

3.1.4

Sweet Wines

Refers to wines whose sugar content exceeds 45.0g/L .

3.1.5

Still Wines

Refers to wines whose carbon dioxide pressure is lower than 0.05MPa at 20°C .

3.1.6

Sparkling Wines

Refers to wines whose carbon dioxide pressure is equal to or higher than 0.05MPa at 20°C .

3.1.6.1

Over-Sparkling Wines

Refers to sparkling wines whose carbon dioxide (completely from natural fermentation) pressure is $\geq 0.35\text{MPa}$ (carbon dioxide pressure is 0.3MPa or above for bottles with capacity less than 250ml) at 20°C .

3.1.6.1.1

Brut Sparkling Wines: refers to over-sparkling wines whose sugar content is $\leq 12.0\text{g/L}$ (tolerance is 3.0g/L).

3.1.6.1.2

Extra-Dry Sparkling Wines: refers to over-sparkling wines whose sugar content is between 12.1g/L and 17.0g/L (tolerance is 3.0g/L).

3.1.6.1.3

Dry Sparkling Wines: refers to over-sparkling wines whose sugar content is between 17.1g/L and 32.0g/L (tolerance is 3.0g/L).

3.1.6.1.4

Semi-Dry Sparkling Wines: refers to over-sparkling wines whose sugar content is between 32.1g/L and 50.0g/L.

3.1.6.1.5

Sweet Sparkling Wines: refers to over-sparkling wines whose sugar content is over 50.0g/L.

3.1.6.2**Semi-Sparkling Wines**

Refers to sparkling wines whose carbon dioxide (completely from natural fermentation) pressure is between 0.05MPa and 0.34MPa at 20°C.

3.2**Special Wines**

Refers to wines that are brewed from fresh grapes or grape juice with specific methods in the picking and brewing process.

3.2.1**Liqueur Wines**

Refers to wines whose final degree of alcohol is between 15.0% and 22.0% (volume fraction) after addition of grape brandy, edible alcohol or grape alcohol, grape juice, concentrated grape juice, caramel grape juice, and white cane sugar to the wines (total degree of alcohol at 12% or above) made from grapes.

3.2.2**Carbonated Wines**

Refers to wines that whose carbon dioxide is artificially added, either partially or fully and whose physical features are similar to those of sparkling wines.

3.2.3**Ice Wines**

Refers to wines that are made through pressing and fermentation when frozen. The way to do this is to delay the picking of grapes, keeping grapes on vines for some time when the temperature is below -7°C and picking them when frozen. (not permitted to add sugar source during the production process)

3.2.4**Noble Rot Wines**

Refers to wines made from grapes whose fruits are infected by *Botrytis cinerea* toward the end of the ripe period and have obviously changed in their composition.

3.2.5

Flor or Film Wines

Refers to wines whose degree of alcohol is $\geq 15.0\%$ (volume fraction) after addition of grape brandy, grape alcohol or edible alcohol to the grape juice after the complete alcoholic fermentation produces a typical yeast film on the free surface of the wine.

3.2.6

Flavoured Wines

Refers to the wines made from grape wine as base, but with aromatic plant soaked in the wine or leachate (or distillate) from aromatic plant added to the wine.

3.2.7

Low Alcohol Wines

Refers to wines that are made from fully or partially fermented fresh grapes or grape juice with special processing technology and have the degree of alcohol between 1.0% and 7.0% (volume fraction).

3.2.8

Non-Alcohol Wines

Refers to wines that are made from fully or partially fermented fresh grapes or grape juice with special processing technology and have a degree of alcohol between 0.5% and 1.0% (volume fraction).

3.2.9

V. amurensis Wines

Refers to wines that are made from fully or partially fermented fresh *Vitis amurensis* (including wild grapes such as *Vitis quinquangularis*, *Vitis davidii* and *Vitis romanetii*) or *Vitis amurensis* juice.

3.3

Vintage Wines

The year labelled refers to the year when the grapes are picked. The percentage of the wine of the year is no less than 80% of the wine content (volume fraction).

3.4

Varietal Wines

The percentage of wine made from grape varieties labelled is no less than 75% of the wine content (volume fraction).

3.5

Original Wines

The percentage of wine made from grapes of areas labelled is no less than 80% of the wine content (volume fraction).

Note: No synthetic colour, sweetener, essence and thickener should be added to any product.

4. Product Classification

4.1 By Colour

4.1.1 White Wine

4.1.2 Pink Wine

4.1.3 Red Wine

4.2 By Sugar Content

4.2.1 Dry Wine

4.2.2 Semi-Dry Wine

4.2.3 Semi-Sweet Wine

4.2.4 Sweet Wine

4.3 By Carbon Dioxide Content

4.3.1 Still Wine

4.3.2 Sparkling Wine

4.3.2.1 Over-Sparkling Wine

4.3.2.2 Semi-Sparkling Wine

5. Requirements

5.1 Sensory Requirements¹

Requirements in Table 1 should be met.

¹ Corresponding product standards should be followed for special wines.

Table 1 Sensory Requirements

Item		Requirements	
Appearance	Colour	White Wine	Close to colourless, pale yellow with slight green, light yellow, straw yellow, golden yellow
		Red Wine	Purplish red, deep red, ruby red, red with slight brown, henna
		Pink Wine	Pink, light rose red, light red
	Degree of Clarity	Crystal clear with lustre, no obvious suspended substance (A slight amount of dregs is allowed if cork is used as stopper; small amount of sediment is allowed for wines bottled more than 1 year.)	
Degree of Sparkling	When sparkling wine is poured into the glass, slight and continuous beaded bubbles arise.		
Fragrance and Flavour	Fragrance		Pure, elegant, refreshing and balanced aroma and bouquet; old and mellow wine should also smell bouquet of aging or oak.
	Flavour	Dry & Semi-dry Wine	Pure, elegant and refreshing flavour and pleasing aroma; well-balanced body
		Semi-sweet & Sweet Wine	Sweet and strong flavour with bouquet of aging, sweet-sour balance and rich body.
		Sparkling Wine	Elegant, pure and refreshing flavour and special aroma of fermented and sparkling wine with very strong taste
Typicality		With characteristics and style typical of labelled grape varieties and product types	
Note: Sensory evaluation may be conducted with reference to Appendix A (Informative Appendix) "Sensory Grading, Evaluation and Description of Wines"			

5.2 Physical and Chemical Indexes²

Requirements in Table 2 should be met.

Table 2 Physical and Chemical Indexes

Item		Requirements	
Degree of Alcohol ^a (20°C) / % (volume fraction) \geq	Wine	7.0	
Total Sugar ^d (by glucose) / (g/L)	Still Wine	Dry Wine ^b \leq	4.0
		Semi-dry Wine ^c	4.1-12.0
		Semi-sweet Wine	12.1-45.0
		Sweet Wine \geq	45.1
	Over-sparkling Wine	Brut Sparkling Wine \leq	12.0 (tolerance of 3.0)
		Extra-dry Sparkling Wine	12.1-17.0 (tolerance of 3.0)
		Dry Sparkling Wine	17.1-32.0 (tolerance of 3.0)
		Semi-dry Sparkling Wine	32.1-50.0
		Sweet Sparkling Wine \geq	50.1

² Corresponding product standards should be followed for special wines.

Table 2 Continued

Dry Leachate (g/L) \geq	White Wine		16.0
	Pink Wine		17.0
	Red Wine		18.0
Volatile Acid (by acetic acid) / (g/L) \leq			1.2
Citric Acid / (g/L) \leq	Dry, Semi-dry, Semi-sweet Wine		1.0
	Sweet Wine		2.0
Carbon Dioxide (20°C) /MPa	Semi-sparkling Wine	< 250mL/bottle	0.05-0.29
		\geq 250mL/bottle	0.05-0.34
	Over-sparkling Wine	< 250mL/bottle \geq	0.30
		\geq 250mL/bottle \geq	0.35
Iron /(mg/L) \leq			8.0
Copper /(mg/L) \leq			1.0
Methanol /(mg/L) \leq	White and Pink Wines		250
	Red Wine		400
Benzyl Acid or Sodium Benzoate (by benzyl acid) / (mg/L) \leq			50
Sorbic acid or Potassium Sorbate (by sorbic acid) / (mg/L) \leq			200
Note: There is no requirement on the total acid, which is represented in the measured value (by tartrate, g/L).			
^a The marked value on the label for the degree of alcohol and the measured value should not be more than \pm 1.0% (volume fraction).			
^b When the difference between the total sugar and total acid (by tartaric acid) is \leq 2.0g/L, the maximal sugar content is 9.0g/L.			
^c When the difference between the total sugar and total acid (by tartaric acid) is \leq 2.0g/L, the maximal sugar content is 18.0g/L.			
^d The requirements for the total sugar in semi-sparkling wines are the same as in still wines.			

5.3 Microbiological Requirements

Stipulations in GB 2758 should be followed.

5.4 Net Content

"AQSIQ 2005 Ordinances No. 75 Administrative Measures on the Measurement and Supervision of Quantitatively Packaged Commodities" should be followed.

6. Analytical Methods

6.1 Sensory Requirements

GB/T 15038 should be followed.

6.2 Physical and Chemical Requirements (except benzyl acid and sorbic acid)

GB/T 15038 should be followed.

6.3 Benzyl Acid and Sorbic Acid

GB/T 5009.29 should be followed.

6.4 Net Content

JJF 1070 should be followed.

7. Inspection Rules

7.1 Lot

All the products that are produced during the same production period, of the same category and quality and packaged in the same ex-factory specifications belong to the same lot.

7.2 Sampling

7.2.1 Samples are selected according to Table 3. The amount of sampling may be increased on a pro-rated basis if the net content in one single packaged unit is less than 500 ml and the total amount of sampling is less than 1,500 ml.

Table 3 Sampling Table

Scope of Batch (Boxes)	Number of Samples (Boxes)	Number of Unit Samples (Bottles)
< 50	3	3
51-1200	5	2
1201-3500	8	1
> 3501	13	1

7.2.2 Once the sampling is completed, labels should be attached. Please also indicate: name of sample, variety specifications, quantity, name of manufacturer, sampling time, and location and sampler. Seal up two bottles and keep them for two months for further inspection. Other samples should be sent to the laboratory immediately for inspections of sensory, physical and chemical as well as hygienic indexes.

7.3 Inspection Classification

7.3.1 Ex-Factory Inspection

7.3.1.1 Before releasing the products from the factory, the quality supervision and inspection department of the producer should inspect each batch in accordance with the stipulations in this Standard. Only products that pass the inspection and have Certificate of Quality attached can be allowed to leave the factory. The quality inspection certificate (Certificate of Quality) may be placed inside the packing crate, or a separate packing box. "Acceptance" or "Certificate of Inspection" may be printed on the label or on the outside of the packing crate.

7.3.1.2 Inspection items: sensory requirements, degree of alcohol, total sugar, dry leachate, volatile acid, carbon dioxide, total sulfur dioxide, net content, and total plate count in microbiological index.

7.3.2 Type Inspection

7.3.2.1 Inspection items: All required items in the Standard.

7.3.2.2 Generally speaking, type inspection for the same category of products should be conducted once every six months. The inspection should also be conducted if one of the following situations applies:

- a) There are major changes in the raw and supplementary materials.
- b) There are modifications to key technology and equipment.
- c) Production resumes for newly developed products or products in normal production after 3 months of halt in production.
- d) Major differences exist between ex-factory inspection and the results of last type inspection.
- e) National quality supervision and inspection authority decides to conduct sample inspection in accordance with certain regulations.

7.4 Judging Rules

7.4.1 Non-conforming Classification

7.4.1.1 A-Type Non-conforming: sensory requirements, degree of alcohol, dry leachate, volatile acid, methanol, citric acid, antiseptic, hygiene requirements, net content, and label.

7.4.1.2 B-Type Non-conforming: total sugar, carbon dioxide, iron, and copper.

7.4.2 If inspection results indicate less than two (including two) non-conforming items, select twice as many samples from the same lot of products and conduct a re-inspection. The results of the re-inspection are to be used as basis for final judgment.

7.4.3 The lot of products shall be deemed non-conforming if the results of the re-inspection indicate one of the following situations:

---- There is more than one A-type non-conforming item.

---- One B-type item exceeds more than 50% of the specified value.

---- There are two B-type non-conforming items.

7.4.4 In the case of disagreement regarding the inspection results, the supply and demand parties shall settle the issue through negotiations. Or, they may entrust a related organization for arbitration inspection. The results of the arbitration inspection shall prevail.

8. Label and Identification

8.1 Labelling of pre-packaged wines shall follow GB 10344 and product categories should be indicated by the sugar content (or sugar content).

Note: No indication of raw and supplementary materials is necessary for wines made from one single ingredient. Specific names of the antiseptics should be indicated for wines with antiseptics.

8.2 The year, variety and original area indicated on the label of the wines should be in conformity with the definitions in 3.3, 3.4 and 3.5.

8.3 In addition to the name of product, manufacturer's (or distributor's) name and address, net content of unit package and total quantity should also be included on the outer packaging box.

8.4 The logo for the packaging, transportation and storage should be in conformity with the requirements in GB/T 191.

9. Packaging, Transportation and Storage

9.1 Packaging

9.1.1 The packaging material should be in conformity with food hygiene requirements. The packaging material for sparkling wines should be in conformity with corresponding pressure requirements.

9.1.2 The packaging container should be clean, tight-sealing and leak-proof.

9.1.3 Up-to-standard packaging material should be used for the outer packaging and should be in conformity with the corresponding standard.

9.2 Transportation and Storage

9.2.1 Wines with corks (or substitutes) as stoppers should be "upside down" or "flat" during transportation and storage.

9.2.2 Maintain cleanliness and avoid strong vibration, sunshine, rain and frost in the course of transportation and storage. Handle with care when loading and unloading.

9.2.3 The storage place should be cool and dry with good ventilation. Avoid sunshine, rain and kindling material.

9.2.4 The finished products should not be in direct contact with wet ground, and should not be transported or stored together with poisonous, hazardous, odourous or corrosive commodities.

9.2.5 The temperature for transportation should be kept between 5°C and 35°C. The temperature for storage should be kept between 5°C and 25°C.

Appendix A

(Informative Appendix) Sensory Grading, Evaluation and Description of Wines

Table A1

Grade	Description
Premier	Colour and lustre typical of the product; natural, pleasing to the eye, crystal-clear (transparent) with lustre; with pure, strong, elegant and harmonious aroma (bouquet); delicate and smooth texture with rich and full body and lingering taste; refreshing and relaxing as expected of the product
Top Quality	Colour and lustre typical of the product; clear and transparent with no obvious suspended substance; pure and harmonious aroma (bouquet); delicate and smooth texture with richness and elegance and lingering taste
Fair Quality	Colour and lustre a bit different from what is typical of the product; lack of naturalness and allowance of small amount of sediments; scent typical of the product with no unpleasant odour; balanced texture without harmony and completeness; no obvious defect
Sub-standard Quality	Colour and lustre distinctly different from what is typical of the product; lack of brightness or turbidness with obvious unpleasant aroma and odour; insipid and pale body without harmony, or with other obvious defects (The product will be deemed non-standard in quality as long as one part of the above description applies in addition to colour and lustre)
Poor Quality	Without features typical of the product