



National Standard of the People's Republic of China

GB/T 10343-201X

Replace GB 10343-2008

Edible alcohol

食用酿造酒精

(English Translation)

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Standardization Administration of the People's Republic of China

Foreword

SAC/TC 471 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 standard is drafted in accordance with the rules given in the GB/T 1.1-2009.

This standard replaces GB 10343-2008 Edible alcohol in whole. The following deviations have been made with respect to the GB 10343-2008 Edible alcohol:

----The standard name has been revised;

----The product classification has been added;

----The super neutral class has been added;

----The analytical methods for sensory and alcohol content have been modified.

This standard was proposed by China National Light Industry Council.

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

The previous editions replaced by this standard are as follows:

----GB 10343-1989, GB 10343-2002, and GB 10343-2008.

Edible alcohol

1. Scope

This standard specifies the terms and definitions, product classification, requirements, analytical methods, inspection rules, sign, packaging, transport, and storage of edible alcohol.

This standard is applicable to production, inspection and sales of edible alcohol.

2. Normative references

The following referenced documents are indispensable for the application 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 190 *Packing symbol of dangerous goods*

GB/T 191 *Packaging-Pictorial sign for handling of goods*

GB/T 394.2 *General methods of analysis for ethanol*

GB 5009.225 *National food safety standard – Determination of ethanol concentration in alcoholic drink*

GB 5009.266 *National food safety standard – Determination of methanol in food*

GB 7718 *National food safety standard – General standard for the labeling of prepackaged foods*

GB 31640-2016 *National food safety standard – Edible alcohol*

3. Terms and definitions

For the purposes of this document, the following terms and definitions shall apply.

3.1

edible alcohol

a type of water-containing alcohol for the food industry, made from fermented grain, yam, molasses or other edible crops through fermentation and refined distillation

4. Product classification

-According to the raw materials of products, edible alcohol shall be divided into:

-Edible alcohol made from grain;

-Edible alcohol made from yam;

-Edible alcohol made from molasses;

-Edible alcohol made from other crops

Note: grains mainly include corn and wheat, etc., yam include casava and sweet potatoes, etc., and molasses include sugarcane molasses and beet molasses, etc.

5. Requirements

5.1 Sensory requirements

Shall comply with the provisions in Table 1.

Table 1 Sensory requirements

Items	Super neutral	Special class	Excellent class	Common class
Appearance	Colorless and transparent			
Aroma	With a natural aroma of ethanol, free of odor			
Taste	Pure, light sweet, and free of unpleasant smell			

5.2 Physical and chemical requirements

Shall comply with the provisions in Table 2.

Table 2 Physical and chemical requirements

Items	Super neutral	Special class	Excellent class	Common class
Color scale/number	≤ 5	≤ 10		
Ethanol (%vol)	≥ 96.0	≥ 96.0	≥ 95.5	≥ 95.0
Aldehyde (expressed as acetaldehyde)/(mg/L)	≤ 1	≤ 1	≤ 2	≤ 30
Methanol/(mg/L)	≤ 1	≤ 2	≤ 30	≤ 150
Sulfuric color scale/number	≤ 5	≤ 10		≤ 60
Oxidation time/min	≥ 42	≥ 40	≥ 30	≥ 20
N-propyl alcohol/(mg/L)	≤ 1	≤ 2	≤ 12	≤ 100
Isobutanol + isoamylol/(mg/L)	≤ 1	≤ 1	≤ 2	≤ 30
Acid (expressed as acetic acid)/(mg/L)	≤ 7	≤ 7	≤ 10	≤ 20
Ester (expressed as ethyl acetate)/(mg/L)	≤ 7	≤ 10	≤ 18	≤ 25
Non-volatiles/(mg/L)	≤ 7	≤ 10	≤ 15	≤ 25

6. Analytical method**6.1 Sensory requirements**

As specified in GB 31640-2016.

6.2 Physical and chemical requirements**6.2.1 Ethanol (alcohol content)**

As specified in GB 5009.225.

6.2.2 Methanol

As specified in GB 5009.266.

6.2.3 Aldehyde

As specified in GB 31640-2016.

6.2.4 Color scale, sulfuric color scale, oxidation time, n-propyl alcohol, isobutanol + isoamylol, acid, ester, non-volatile matters

As specified in GB/T 394.2.

7. Inspection rules

7.1 Batch

- 7.1.1 Products of the same category, quality, and specification produced by every shift or every day shall be regarded as a batch.
- 7.1.2 Every tank or truck of products contained in tankers and tank trucks shall be regarded as a batch.

7.2 Sampling

- 7.2.1 The sampling method:
- For products contained in the tank truck, each tank truck is considered as a sample, and draw one sample from it.
 - For products contained in barrels and bottles, draw samples as specified in Table 2.

Table 2 Sampling

Unit: Barrel (bottle)

Batch range	Sampling quantity
≤ 150	5
151-3 200	8
3 201-35 000	20
$\geq 35 001$	23

- 7.2.2 Take samples of alcohol from the upper, middle, and lower positions of a tank in a ratio of 2:3:2 for a vertical tank and 1:3:1 for a horizontal tank. For tank trucks and barrels, draw samples from the middle positions.
- 7.2.3 Draw 2 L of samples from each batch, uniformly mix and fill into two brown narrow-mouth reagent bottles, label them immediately with sample name, batch No. (tanker, tank truck, barrel No.), class, sampling time and place, and sampler specified. One bottle is for test, and the other is sealed and stored for two months for future test.

7.3 Inspection classification

7.3.1 Delivery inspection

- 7.3.1.1 Before the product leaves the factory, the quality supervision and inspection department of the manufacturer shall inspect products batch by batch as specified by this standard. Products shall not be delivered until being qualified inspection and issued with quality certificate.
- 7.3.1.2 Inspection items: sensory requirements, color scale, ethanol, sulfuric color scale, oxidation time, acid, aldehyde, methanol, n-propyl alcohol, isobutanol, and isoamylol.

7.3.2 Type inspection

- 7.3.2.1 The inspection items: all items specified in this standard.
- 7.3.2.2 In general, the type inspection of products of the same category shall be carried out once every half a year. However, in any of following cases, the type inspection shall be carried out.
- Any major change in raw and auxiliary materials;
 - Any change in critical process or equipment;
 - Resumed production of the newly trial-manufactured products or the normal products which are suspended in production for three months;

- d) Significant difference between the delivery inspection and the last type inspection results;
- e) Sampling inspection required by the national quality supervision and inspection authority.

7.4 Judgment rules

7.4.1. If one or more, inspection item(s) of the inspection results do not comply with the requirements of this standard, double-size sample shall be taken from the same batch of products for re-inspection, and the re-inspection result shall prevail..

7.4.2 If one or more of item(s) still fails to comply with the requirements in the re-inspection results, the whole batch of products shall be judged as unqualified.

7.4.3 When the supply and demand sides dispute over the inspection results, which should by the relevant parties resolve their disputes through consultation, or entrust relevant institutions to conduct arbitration inspection, and the arbitration inspection results shall prevail.

8. Sign, packaging, transport and storage

8.1 Sign

8.1.1 Labels used for sales and package shall comply with the requirements in GB 7718 and shall specify the product classification.

8.1.2 Tanks and tank trucks for transporting edible alcohol shall be marked with “edible alcohol” and have “delivery product quality inspection certificate”. The certificate shall include, but not limited to, food production license number, raw materials, product classification, class etc.

8.1.3 Packaging-pictorial marking for handling of goods shall comply with the requirements in GB 190 and GB/T 191.

8.2Packaging, transport and storage

Packaging, transport and storage shall comply with the requirements in GB 31640-2016.