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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 19328-2007

Replacing GB 19328-2003

Product of geographical indication - Kouzijiao liquor

地理标志产品 口子窖酒

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1 Scope

The standard sets the scope of protection of the geographical indication product, the terms and definitions, the requirements, the test methods, the inspection rules and the marks, labels, packaging, transport and storage of Kouzijiao liquor.

It applies to Kouzijiao liquor whose protection has been approved by the administrative authority for quality supervision, inspection and quarantine under the Provisions for the Protection of Geographical Indication Products.

The foreword records that the standard was drawn up under those Provisions and under GB 17924-1999, General requirements for products of origin, that it replaces and abolishes GB 19328-2003, Products of origin: Kouzijiao liquor, and that the changes are the renaming that follows the Provisions, the change from mandatory to recommended status, and revisions to part of the wording of the sensory requirements and to some values of the physicochemical indicators so that they fit the product and production more closely.

2 Normative references

The standard cites GB 1351 wheat, GB 1353 corn, GB 1354 rice, GB 2757 hygienic standard for distilled and blended spirits, GB/T 5009.48 analytical methods for that hygienic standard, GB 5749 standards for drinking water quality, GB 7718 general rules for the labelling of prepackaged foods, GB/T 8231 sorghum, GB 10344 general rules for the labelling of prepackaged alcoholic beverages, GB/T 10345 analytical methods for Chinese spirits, GB/T 10346 inspection rules and marking, packaging, transport and storage of Chinese spirits, GB/T 10460 peas, GB/T 15109 terminology of the Chinese spirits industry, and the Measures for the Supervision and Administration of Metrology of Prepackaged Commodities, Order No. 75 of 2005 of the General Administration of Quality Supervision, Inspection and Quarantine.

3 Scope of protection and terms

The protected production area of Kouzijiao liquor is limited to the area approved for protection by the administrative authority for quality supervision, inspection and quarantine under the Provisions for the Protection of Geographical Indication Products, as shown in Annex A.

The terms of GB/T 15109 apply along with the following. Kouzijiao liquor is liquor made from several grains, within the protected production area of Kouzijiao liquor and by the Kouzijiao liquor process. The storage time of the liquor is the time from the entry of the base liquor into the store to its withdrawal after ageing, counted in years.

Kouzijiao liquor brick-shaped raw starter covers two kinds of reinforced starter made by combining the traditional Kouzijiao starter process with modern biotechnology: a medium temperature starter made from quality wheat, barley and peas, whose broken face shows a chrysanthemum pattern and which is called chrysanthemum-heart starter, and a high temperature starter made from wheat alone in high summer, called fragrant starter.

The fermentation cycle is the time the fermented grain needs from entering the pit to leaving it before distillation. The typical base liquors are mainly three, aged fragrance, mellow sweet and pit-bottom fragrance, and they make up the distinctive flavour type of Kouzijiao liquor. The flavouring liquor is liquor made by a special process and used to harmonize and balance the aroma and taste of the base liquor. Blending is the operation that makes the finished liquor from typical base liquors and flavouring liquor to the quality requirements of Kouzijiao liquor.

5.1 Raw materials and brewing environment

Water is taken from the ancient underground spring water of Suixi and meets GB 5749. Sorghum meets GB/T 8231, corn meets GB 1353, rice and glutinous rice meet GB 1354,

peas meet GB 10460 and wheat meets GB 1351. Barley is pale yellow, with full and even grains and a normal odour, free from mould and insect damage.

The brewing environment lies within the area laid down in the Provisions for the Protection of Geographical Indication Products. That area is on the Huaibei plain of Anhui, at an altitude between 15 m and 40 m, with deep fertile soil, abundant groundwater, plentiful rainfall and a mild climate; the mean annual temperature is about 14.6 °C, the mean frost-free period about 206.9 d and the mean annual rainfall about 854.8 mm. The standard states that the position and the warm humid natural climate give good natural conditions for the growth and multiplication of the micro-organisms of Kouzijiao liquor and for its brewing.

5.3 Production process

Kouzijiao liquor is made from quality sorghum, rice, corn, glutinous rice and wheat, with Kouzijiao liquor brick-shaped raw starter as the saccharifying, fermenting and aroma-producing agent. The process continues the old five-steamer method of mixed steaming, with double-round and single-round fermentation in mud pits and multi-round fermentation in stone-slab pits, fermentation periods of 120 d, 60 d and 30 d, slow distillation, cutting of the distillate by quality, storage by grade, and then blending, ageing and packing for delivery. The base liquor is stored for not less than five years and the flavouring liquor for not less than ten.

5.4 Sensory and physicochemical requirements

Table 1 sets the sensory requirements in four alcoholic strength bands, each of them marked in the original as superior grade: above 40.0 % vol; 40.0 % vol to 35.0 % vol; 34.9 % vol to 28.0 % vol; and below 28.0 % vol. Colour and clarity are given once for all four bands: colourless or slightly yellow, clear and transparent, without suspended matter and without sediment. The aroma is rich and elegant pit aroma in the first two bands and rich pit aroma in the last two. The taste is soft, sweet, mellow and thick with a full body and a long aftertaste in the first band; soft, sweet and mellow with a full body and a clean, refreshing finish in the second; mellow, sweet and clean with a full body in the third; and mellow, refreshing and clean with a harmonious body in the fourth. The style is given once for all four bands as the distinctive style of Kouzijiao liquor. A note states that a white flocculent sediment or loss of brightness is allowed when the liquor is below 10 °C and that it returns to normal step by step above 10 °C.

Table 2 sets the physicochemical indicators in the same four bands, given as alcoholic strength above 40.0, 40.0 to 35.0, 34.9 to 28.0 and below 28.0 per cent by volume. Total acid as acetic acid is not less than 0.50, 0.40, 0.35 and 0.30 g/L. Total esters as ethyl acetate are not less than 1.85, 1.45, 1.25 and 0.65 g/L. Ethyl hexanoate is not more than 1.80, 1.40, 1.20 and 0.60 g/L. Solids are not more than 0.60, 0.70, 0.80 and 0.80 g/L. A note allows a tolerance of +/- 1.0 % vol on the alcoholic strength.

Hygiene indicators meet GB 2757. Table 3 sets the ratios of trace components: ethyl lactate to ethyl acetate from 0.60 to 1.50, and ethyl lactate to ethyl hexanoate from 0.40 to 0.90.

6 Test methods, inspection rules, marks and packaging

The sensory requirements and the physicochemical indicators are tested by GB/T 10345 and the hygiene indicators by GB/T 5009.48.

Inspection rules follow GB/T 10346 and the Measures for the Supervision and Administration of Metrology of Prepackaged Commodities.

Marks and labels follow GB 10344 and GB 7718, and the special mark for protected geographical indication products may be shown as well. Packaging, transport and storage follow GB/T 10346.

Annex A is normative and carries Figure A.1, the map of the protected area. A note to the annex states that the protected production area of Kouzijiao liquor lies south of Xiangshan in Huaibei, north of the Suixi reach of the Hui river, east of Yueji township and west of Laolongji hill in Huaibei, at longitudes from 116 degrees 23 minutes east to 117 degrees 23 minutes east and latitudes from 33 degrees 16 minutes north to 34 degrees 14 minutes north, at an altitude between 15 m and 40 m.

Amendments Amendments to the standard

Amendment No. 1 was approved by the Standardization Administration on 19 June 2014 by announcement No. 12 and took effect on 30 June 2014. It rewrites Table 2, keeping the four alcoholic strength bands: total acid as acetic acid becomes not less than 0.30, 0.25, 0.20 and 0.15 g/L; total esters as ethyl acetate become a range of 0.50 to 2.50, 0.25 to 2.00, 0.15 to 1.50 and 0.10 to 1.00 g/L; ethyl hexanoate and solids keep the values of the 2007 edition of the table, that is not more than 1.80, 1.40, 1.20 and 0.60 g/L and not more than 0.60, 0.70, 0.80 and 0.80 g/L; and the note on the tolerance of $\pm 1.0\%$ vol is kept. The amendment also deletes the ratio of ethyl lactate to ethyl hexanoate from Table 3 and changes the ratio of ethyl lactate to ethyl acetate to 0.80 to 2.50.

Amendment No. 2 was approved by the Standardization Administration on 28 December 2018 and took effect the same day. It deletes GB 1353 corn from the normative references and adds GB 8951, the national food safety standard on hygienic practice for the production of distilled and blended spirits; it deletes 5.1.3; and it rewrites 5.3 so that Kouzijiao liquor is made from quality sorghum, rice, glutinous rice and wheat, with the brick-shaped raw starter as the saccharifying and fermenting agent, the rest of the process wording being kept, and it adds that the production and processing meet GB 8951.