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

GB/T 21822-2008

Product of geographical indication - Tuopai liquor

地理标志产品 沱牌白酒

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1 Scope

This standard specifies the terms and definitions, the protected area of the geographical indication product, the product classification, the requirements, the test methods, the inspection rules and the marking, packaging, transport and storage of Tuopai liquor.

This standard applies to the Tuopai range of liquors placed under protection by the national administrative authority for quality supervision, inspection and quarantine in accordance with the Provisions on the Protection of Products of Geographical Indication.

3 Terms and definitions

The terms and definitions established in GB/T 15109 and the following apply to this standard.

3.1 Tuopai liquor: a strong-aroma baijiu of refined style, produced within the protected area of the geographical indication from water and from high-quality sorghum, rice, glutinous

rice, wheat, maize and barley rich in amylopectin as the main raw materials, using naturally propagated and enriched brewing micro-organisms and the Tuopai compound process.

3.2 the compound stick-shape yeast of Tuopai: a saccharifying and fermenting agent made from high-quality wheat and barley by different production processes, in which the medium-temperature qu made in January, February, March and April is called peach blossom qu, the medium-to-high-temperature qu made in May, September, October, November and December is called laurel qu, and the high-temperature qu made in June, July and August is called aged-aroma qu, the three agents then being blended in a fixed proportion into a compound daqu.

3.3 storage time of liquor: the time for which base liquor or flavouring liquor is stored and matured in pottery jars or similar vessels, expressed in years.

3.4 fermenting period: the time running from the opening of a pit through the removal of the fermented grain, the blending of ingredients, the loading of the retort, distillation, discharge of the retort and the addition of quenching water, spreading and cooling and the addition of qu, and the return of the grain to the pit to ferment, until the pit is opened again.

3.5 cycling in the different fermentation cellars: the cyclic mode in which the fermented grain from a pit that has completed fermentation is taken out, raw and auxiliary materials are added, liquor is distilled off, and the grain is then spread, cooled, dosed with qu and placed in another pit to ferment.

4 Protected area of the geographical indication product

The protected area of the Tuopai liquor geographical indication product is limited to the territory approved by the national administrative authority for quality supervision, inspection and quarantine, namely the area of Liushu Town at latitude 30 degrees 43 minutes north and longitude 105 degrees 24 minutes east, about 2 km west of the Fu River, about 30 km north of the urban area of Suining City, adjoining Tongji Hill on the west and lying 15.6 km south of the urban area of Shehong County, at an altitude between 310.80 m and 389.45 m, as shown in Annex A.

5 Product classification

Products are classified by alcoholic strength as follows: high-strength liquor, with an alcoholic strength from 41 per cent volume to 70 per cent volume; low-strength liquor, with an alcoholic strength from 18 per cent volume to 40 per cent volume.

6.1 Main raw materials

6.1.1 Water shall comply with GB 5749. The water is drawn from the groundwater at the junction of Qinglong Hill and Longchi Hill in Liushu Town, Shehong County, known as

Tuoquan water.

6.1.2 Sorghum shall comply with GB/T 8231. Glutinous sorghum from Sichuan and high-quality sorghum from the north-east are mainly used.

6.1.3 Rice shall comply with GB 1354. It comes mainly from Sichuan, Hainan, Jiangxi and the north-east.

6.1.4 Glutinous rice shall comply with GB 1354. It comes mainly from Sichuan, Hainan and the regions south of the Yangtze.

6.1.5 Wheat shall comply with GB 1351. Red soft wheat from Sichuan, Henan and Shandong is mainly used.

6.1.6 Maize shall comply with GB 1353. It comes mainly from Sichuan, Gansu and the north-east.

6.1.7 Barley shall comply with GB/T 7416. It comes mainly from Gansu and the north-east.

6.1.8 The daqu used is the Tuopai compound daqu, stored for more than six months.

6.2 Brewing environment

The area lies on the northern edge of the hill country of central Sichuan and has a subtropical monsoon humid climate: mild all year round, with four distinct seasons, an average annual rainfall of 928.4 mm, an average annual temperature of 17.3 degrees C, abundant rain, a long frost-free period averaging 284 days a year, and a snow depth in the coldest weather of 5 cm. Groundwater resources are plentiful and rich in minerals, the soil is well supplied with nitrogen, phosphorus and other elements, and the vegetation is dense, forming an ecosystem suited to the propagation of brewing micro-organisms. Liushutuo, where the distillery stands, has no other factory or mine around it and unusually clean air; the mutually supporting ecological brewing system formed by the particular water, soil, air and climate, micro-organisms and biological communities favours the propagation and enrichment of saturated and unsaturated fatty acids and of esterifying active strains.

6.3 Production process requirements

Raw and auxiliary materials stored at a suitable temperature and cleaned and steamed are selected and blended in set proportions according to the season, the age of the pit and the layer of grain; the Tuopai compound daqu is used as the saccharifying and fermenting agent; the brewing process is the clean-through-to-the-end process, with cycling between different fermentation cellars, heap fermentation, a pit fermentation period of more than 90 days and more than 180 days for the double-round bottom, staged cutting of the distillate by quality, and storage in jars by quality, the base liquor being aged for more than 3 years and the flavouring liquor for more than 10 years; product quality is stabilised by the model of storage in pottery jars, blending in large tanks, flavouring in medium tanks and fine

adjustment in small tanks before packaging; and the product is packaged and released only after analysis, blending, flavouring, ageing, tasting, filtration and a trial drinking have been passed.

6.4 Sensory requirements

The sensory requirements for high-strength and low-strength liquor shall comply with Table 1 and Table 2 respectively. Both tables grade the product as special, superior and first grade.

For colour and appearance both tables set a single requirement across all three grades: colourless or slightly yellow, free from suspended matter and from sediment or impurities. A footnote allows loss of brilliance or a white flocculent precipitate when the temperature of the liquor falls below 10 degrees C, provided the liquor returns gradually to normal above 10 degrees C.

For aroma, high-strength and low-strength liquor carry the same wording: special grade, refined aroma with a fragrant grain and aged aroma; superior grade, refined aroma with an elegant grain and aged aroma; first grade, refined aroma with a restrained grain aroma.

For taste, high-strength liquor is required to be, at special grade, mellow and soft, fine and rounded, sweet and clean with a long finish; at superior grade, mellow and soft, fine and rounded, clear and sweetly clean with a clean lasting finish; and at first grade, mellow and clear, sweet and crisp with a clean aftertaste. Low-strength liquor is required to be, at special grade, soft and full, fine and gentle, sweet and clean with a long finish; at superior grade, soft and smooth, fine and gentle, clear and sweetly clean with a clean lasting finish; and at first grade, mellow and clear, sweet and smooth with a clean aftertaste.

For style, the product shall show the refined style characteristic of it: outstanding at special grade, marked at superior grade and evident at first grade.

6.5 Physical and chemical requirements

The physical and chemical requirements for high-strength and low-strength liquor shall comply with Table 3 and Table 4 respectively, each table setting values for special, superior and first grade.

For high-strength liquor, total acid expressed as acetic acid shall be not less than 0.50, 0.40 and 0.30 g/L for special, superior and first grade; total esters expressed as ethyl acetate shall be not less than 1.20, 0.80 and 0.60 g/L; ethyl hexanoate shall be not less than 0.90, 0.60 and 0.40 g/L; and solids shall be not more than 0.80 g/L for all three grades.

For low-strength liquor, total acid expressed as acetic acid shall be not less than 0.50, 0.40 and 0.30 g/L; total esters expressed as ethyl acetate shall be not less than 0.80, 0.60 and 0.50 g/L; ethyl hexanoate shall be not less than 0.50, 0.40 and 0.20 g/L; and solids shall be