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

LY/T 3223-2020

Quality grading of agarwood

沉香质量分级

(English Translation)

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for Standardization Work Part 1: Structure and Drafting Rules of Standardization Documents" Drafting.

1 Scope

This document specifies the terms and definitions, requirements, test methods, sampling and sampling, determination and marking, transportation and storage of agarwood.

This document is applicable to the classification of the quality grades of raw agarwood and raw agarwood products.

2 Normative references

The contents of the following documents constitute the indispensable clauses of this document through normative references in the text. Among them, the quoted date Only the version corresponding to the date is applicable to this document; for undated reference

documents, the latest version (including all amendments) Amendment) applies to this document.

LY/T 2904-2017 Agarwood LY/T 3137 General technical requirements for agarwood products

3 Terms and definitions

The following terms and definitions defined in LY/T 2904-2017 and LY/T 3137 apply to this document.

Aquilaria wood

Agarwood

Xylem tissue of agarwood species.

[Source. LY/T 2904-2017, 3.2] 3.2 Agarwood the natural mixture of xylem tissue and its secretions formed during the growth of agarwood species, and secreted the physical characteristics should meet the requirements specified in LY/T 2904.

[Source. LY/T 2904-2017, 3.3, with modification] 3.3 Ethanol extractive of agarwood A substance soluble in 95% ethanol in agarwood. Mainly include 2-(2-phenethyl) chromone compounds, sesquiterpenoids, Aromatic compounds and fatty acids, etc.

[Source. LY/T 2904-2017, 3.4, with modification] 3.4 Aquilaria wood with low agarwood resin Agarwood ethanol extract content is greater than or equal to 4.0%, but less than 10.0% agarwood.

Aquilaria wood without agarwood resin Agarwood with ethanol extract content of less than 4.0%.

Agarwood grading

According to the external sensory characteristics and internal quality of Agarwood, the quality level is divided.

Agarwood resin-rich side Agarwood is rich in secretions on the surface.

4 Requirements

4.1

The appearance should be clean, free of staining, waxing, and mildew.

4.2

The moisture content is $\leq 10.0\%$.

4.3

The characteristics of xylem structure and secretions should meet the requirements of LY/T 2904.

4.4 Quality classification requirements

Agarwood is divided into five grades. special grade, grade one, grade two, grade three and grade four. Each grade should meet the requirements of Table 1.

5.1.1 Requirements of evaluators

5.1.1.1

The evaluation team consists of 3 members.

5.1.1.2

On the day of the test, the evaluator should not carry and use odorous fragrances, cosmetics or skin care products, and should not eat irritating products the smell of food. People who have a cold or discomfort in the sense of smell or taste should not participate in the evaluation of the day.

5.1.2 Under natural light conditions, place the sample on a white background to look at the side of the eye.

5.1.3 In a clean and odor-free environment, smell the sample after washing your hands.

5.1.4 After rinsing with water, take a small amount of sample and put it in your mouth, chew carefully to taste the flavor and leftovers.

5.1.5 According to the sensory characteristics such as appearance, smell, taste, etc. independently described by 3 evaluators, the evaluation results will be given according to the opinions of the majority.

fruit.

5.2 Moisture determination

According to LY/T 2904-2017 regulations.

5.3 Xylem structure and secretion characteristics detection

According to LY/T 2904-2017 regulations.

5.4 Determination of Agarwood Ethanol Extract

According to LY/T 2904-2017 regulations.

5.5 Determination of the relative content of 2-[2-(4-methoxy)phenethyl]chromone and

2-(2-phenethyl)chromone

5.5.1 Sample solution preparation

The preparation of agarwood reference sample and sample solution is carried out in accordance with 5.2.6 of LY/T 2904-2017, and the sample solution adopts B the filtrate for the determination of the alcohol extract.

5.5.2 HPLC conditions

The composition of the mobile phase and the chromatographic column are in accordance with LY/T 2904-2017; the gradient elution conditions are detailed in Table 2; the flow rate is 1.2 mL/min; column temperature 31 °C; detection wavelength 252 nm.

5.5.3 HPLC analysis steps

Accurately draw 10 µL each of the Agarwood reference sample solution and 10 µL of the sample solution into the high performance liquid chromatograph for determination. The height of agarwood See Appendix A for an example of the effective liquid phase characteristic map.

6.1 Samples of similar quality and smaller volume between individuals

6.1.1

Agarwood such as flakes, strips, blocks or helmets formed from the same place of origin, the same tree species source, and the same incense-making technology is used as one piece of agarwood.

Inspection lot.

6.1.2

The samples of the same batch shall be sampled one by one.

6.1.3

For each package sample, one representative sample shall be randomly selected from 2 to 3 different parts, and the total amount shall be no less than 15 g.

6.1.4

Mix the drawn samples evenly, that is, the total amount of the drawn samples. If the total amount of samples taken exceeds the test dosage several times, press the quarter method reduces the sample size.