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Country: China - People's Republic of

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Report Highlights:

On November 14, 2022, China notified a revised draft for the “National Standard of the People's Republic of China (PRC) Cotton—Saw Ginned Upland Cotton” to the World Trade Organization (WTO) Technical Barriers to Trade (TBT) Committee. The PRC requested WTO members submit comments in 60 days. This standard will replace GB 1103.1 - 2012 Cotton - Part 1: Saw Ginned Upland Cotton. The major changes are described in the foreword and an unofficial translation of the document is included this report along with a reference to the TBT notification. The Standard contains significant technical material and a careful review by relevant stakeholders is encouraged.

Summary
On November 14, 2022, China notified the World Trade Organization on the “National Standard of the People’s Republic of China —Saw Ginned Upland Cotton,” and requested comments be submitted within 60 days. This standard specifies the terms and definitions, quality requirements, sampling requirements, inspection methods, inspection rules, inspection certificates, packaging and marking requirements of saw ginned upland cotton. The standard will replace GB 1103.1 - 2012 Cotton - Part 1: Saw Ginned Upland Cotton. The major changes are described in the foreword and require technical evaluation. Stakeholders are encouraged to review and comment on the standard.

This report contains an UNOFFICIAL translation of the Standard. U.S. industry stakeholders are recommended to submit comments to:

WTO/TBT National Notification and Enquiry Center of the People's Republic of China

Tel：+86 10 57954633 / 57954627

E_mail: tbt@customs.gov.cn
https://members.wto.org/crnattachments/2022/TBT/CHN/22_7744_00_x.pdf

TRANSLATION BEGINS

ICS 59. 060. 10

CCS B 32

National Standard of the People's Republic of China

GB 1103 - XXXX

Replace GB 1103. 1-2012

Cotton - Saw Ginned Upland Cotton

(Click here to add a marker for consistency with international standards)

(Draft for Comments)

Please submit your feedback together with any relevant patents you are aware of and any necessary supporting documents.

Issue Date: XXXX-XX-XX Implementation Date: XXXX-XX-XX

Issued by State Administration for Market Regulation and Standardization
Administration of the People's Republic of China

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Foreword

This document is drafted pursuant to GB/T 1.1-2020 *Directives for Standardization - Part 1: Rules for the Structure and Drafting of Standardizing Documents*.

This document would replace GB 1103.1 - 2012 *Cotton - Part 1: Saw Ginned Upland Cotton*. Compared with GB 1103.1 - 2012, main technical changes made are as follows in addition to structural adjustments and editorial changes:

- Supplemented normative references (see Chapter 2 of GB 1103.1 - 2012);

- Added short fiber content indicators and inspection contents (see 3.8, 4.9, 6.1.8, and 7.1.2);

- Adjusted requirements for “separating in four aspects” (see 4.1.1.4 of GB 1103.1 - 2012);

- Adjusted requirements for the quantity of production of color grade physical standard (see 4.1.3.2 of GB 1103.1 - 2012);

- Adjusted requirements for the quantity of production of preparation physical standard (see 4.2.4.1 of GB 1103.1 - 2012);

- Modified rules for sampling by lot (see 5.3.1 of GB 1103.1 - 2012);

- Modified requirements for sampling foreign fibers when trading cottons (see 5.3.3 of GB 1103.1 - 2012);

- Removed contents related to the assessment of percentage of trash of seed cotton when purchasing seed cotton (see 6.2.1.1 of GB 1103.1 - 2012);

- Added standards for the reference of conditioned lint percentage of seed cotton (see 6.2.3);

- Deleted requirements for bale sorting of non-conforming bales (see 7.3.1.1 of GB 1103.1 - 2012);

- Added the two-dimensional code form for marking cotton bales (see 9.3.2.1);

- Added requirements for transitional standard implementation period (see 11);

- Adjusted the color grading chart (see Appendix B of GB 1103.1 - 2012); and

- Adjusted the textual description of preparation grading conditions (see Appendix C of GB 1103.1 - 2012).

Please be aware that some of the information in this document may concern patents. The institution issuing this document does not assume responsibility for identifying patents.

This document is proposed and managed by the State Administration for Market Administration.

Previous releases of the standard superseded by this document are as follows:

- GB 1103.1 - 2012, GB 1103 - 2007, GB 1103 - 1999, GB 1103 - 1972;

- This is the fourth revision.

Introduction

Cotton is an important bulk farm-product and textile industry raw material that has a bearing on national economy and the people's livelihood. The cotton industry is of great significance to increase farmers' income, develop textile industry, offer employment opportunities and foreign trade export. For the purpose of adapting to new circumstances and requirements concerning the development of China's cotton industry over the past decade, the Administration, pursuant to the overall requirements of the national standardization reform on integrating and streamlining the mandatory standards, initiated a task to revise mandatory national standard on cotton in 2021.

In order to lead quality improvement of the cotton industry after the general promotion of machine-harvested cotton, short fiber content indexes were introduced in the revision, test methods such as full-automatic fast test of impurity and foreign fiber manual test, as well as two-dimensional code labeling were added. Strict conditioned percentage of trash and preparation grading standards were set, representativeness of sampling was improved, the basic stability of the color grade, micronaire value, length, and intensity indexed were maintained, and a transitional period for short fiber content and fast test of impurity was set according to basic technical conditions.

Cotton - Saw Ginned Upland Cotton

1. Scope

This document has stipulated the terminology and definitions related to saw ginned upland cotton, as well as requirements for quality, sampling, inspection methods, inspection rules, inspection certificates, packaging and labeling.

This document applies to the production, acquisition, processing, trade, storage and use of saw ginned upland cotton.

2. Normative References

Through normative references in this document, the contents of the following documents constitute the essential provisions of this document. For references in which a date is indicated, only the version corresponding to that date is applicable to this document; for references in which no date is indicated, their latest version (including all revised editions thereof) is applicable to this document.

GB/T 6098 Test Method for Length of Cotton Fibers - Roller Analyser

GB/T 6102.1 Test Method for Moisture Regain in Raw Cotton by Oven Drying

GB/T 6102.2 Test Method for Moisture Regain in Raw Cotton by Electrical Moisture Meter

GB/T 6103 Test Method for Cotton Defects in Raw Cotton - Hand

GB/T 6498 Test Method for Micronaire Value of Cotton Fibers

GB/T 6499 Test Method for Percentage of Trash Content in Raw Cotton

GB 6975 Cotton Baling

GB/T 8170 Rules of Rounding off of Numerical Values and Expression and Judgement of Limiting Values

GB/T 13786 Artificial Daylighting Illumination for Cotton Classing Rooms

GB/T 19617 Test Method for Length of Cotton - Hand-measured Staple Length

GB/T 20392 Test Method of Properties of Cotton Fibers by High Volume Instruments

GB/T 35931 Test Method for Neps and Short Fiber Content of Cotton Fibers - Photoelectric Analyser

GB/T 40628 Test Method for Seed Cotton Lint Percentage - Process of Sawtooth Pattern

GB/T XXXXX Quantitative Test Method for Foreign Fiber in Raw Cotton - Manual Method

3. Terms and Definitions

The following terms and definitions apply to this document.

3.1 Color grade

It refers to types and grades of the color of saw ginned upland cotton. The type is determined by yellowness, while the grade is determined by lightness.

3.2 White cotton

Saw ginned upland cotton that is pure white, milky white, or gray.

3.3 Light spotted cotton

Saw ginned upland cotton that is white yet is slightly yellowish or with light yellow spots.

3.4 Light yellow stained cotton

Saw ginned upland cotton that is slightly yellowish on the whole or is gray yet is slightly yellowish.

3.5 Yellow stained cotton

Saw ginned upland cotton that is yellowish on the whole.

3.6 Major color grade

It refers to the color grade that accounts for 80% or more in the batch inspection of saw ginned upland cotton, with the remaining color grades (no more than two types and three grades) being merely adjacent to it.

3.7 Preparation

It refers to the roughness level of the appearance of lint, as well as the type and quantity of defects contained therein, after the seed cotton is processed.

3.8 Short fiber content

The percentage of the mass (or number) of fiber in a cotton fiber that is shorter than a certain length limit in the total fiber mass (or number).

Note: The limit for length of upland cotton in this document is 16 mm.

3.9 Gross weight

The sum of the weight of the cotton and its package.

3.10 Net weight

Gross weight minus the weight of the package.

3.11 Conditioned weight

The weight in which the actual percentage of trash and actual moisture regain of cotton with respect to the net weight is converted into standard percentage of trash and conditioned moisture regain.

3.12 Conditioned lint percentage of seed cotton

The percentage of the conditioned weight of lint ginned from seed cotton in the weight of the corresponding seed cotton.

3.13 Foreign fiber

Non-cotton fiber and non-natural cotton fiber mixed into the cotton, such as chemical fiber, hair, silk, hemp, plastic film, plastic rope, dyeing line (rope, cloth), etc.

3.14 The content of foreign fiber in a baled cotton

The ratio of the weight of the foreign fiber picked from the sample to the weight of the picked sample, expressed in grams per ton (g/t).

3.15 Dangerous foreign matters

Hard and soft foreign matters mixed into the cotton, such as metal, masonry and foreign fibers, etc.

4. Requirements on Quality

4.1 Color grade

4.1.1 Division of color grades

4.1.1.1 Cottons are classified into four types by their yellowness, including white cotton, light spotted cotton, light yellow stained cotton, and yellow stained cotton. By the lightness, the white cotton is divided into five grades, the light spotted cotton is divided into three, the light yellow stained cotton is divided into three, and the yellow stained cotton is divided into two, totaling thirteen grades.

4.1.1.2 Grade 3 is the standard color grade for white cotton.

4.1.1.3 Color grade is expressed in two digits, with the first indicating grade, and the second indicating type. Color grade code is shown in Table 1.

Table 1 Color Grade Code

Grade	Type			
	White cotton	Light spotted cotton	Light yellow stained cotton	Yellow stained cotton
Grade 1	11	12	13	14
Grade 2	21	22	23	24
Grade 3	31	32	33	
Grade 4	41			
Grade 5	51			

4.1.1.4 See Appendix A for text description on color grade. The seed cotton morphology corresponding to the text description on color grade is also the basis for separating the hand-picked seed cotton in four aspects (separate picking, separate drying, separate storage, and separate selling).

4.1.2 Color grading chart

The distribution and extent of the color grades are represented by the color grading chart, as shown in the informative Appendix B.

4.1.3 Color grade physical standards

4.1.3.1 Color grade physical standards shall be made according to text description on color grade and color grading chart.

4.1.3.2 Physical standards shall be made for four color grades of white cotton and two color grades of light spotted cotton, which shall be served as the bottom line standards for each grade. Physical standards are not required for the lowest grade of each type as well as light yellow stained cotton and yellow stained cotton. Such color grades shall be inspected with reference to text description.

4.1.3.3 Color grade physical standards are divided into reserved copy, counterpart and replica.

4.1.3.4 The reserved copy is the basis for annual renewal of the counterpart, and the counterpart is the basis for the production of the replica.

4.1.3.5 The counterpart and the replica shall be updated annually, with the stability of each grade being maintained.

4.1.3.6 Color grade physical standard is the basis for sensory evaluation of the color grade.

4.1.3.7 The service life of the counterpart and the replica is one year (from September 1 of the year to August 31 of the following year).

4.2 Preparation

4.2.1 Division of preparation

Preparation is divided into three grades: good, average and poor, by the roughness of the appearance of lint, as well as the type and quantity of defects contained therein. The three grades are represented by P1, P2 and P3 respectively.

4.2.2 Preparation grading conditions

See informative Appendix C for preparation grading conditions.

4.2.3 Reference preparation indicators

See informative Appendix D for reference preparation indicators.

4.2.4 Preparation physical standards

4.2.4.1 Preparation physical standards shall be made according to preparation grading conditions and reference preparation indicators.

4.2.4.2 Preparation physical standards shall be made for good and average preparation, which shall be served as the bottom line standards for each grade. Physical standards are not required for poor preparation, which shall be inspected with reference to text description.

4.2.4.3 Preparation physical standards are divided into reserved copy, counterpart and replica.

4.2.4.4 The reserved copy is the basis for annual renewal of the counterpart, and the counterpart is the basis for the production of the replica.

4.2.4.5 The counterpart and the replica shall be updated annually, with the stability of each grade being maintained.

4.2.4.6 Preparation physical standard is the basis for the assessment of preparation of cotton.

4.2.4.7 The service life of the preparation physical standard is one year (from September 1 of the year to August 31 of the following year).

4.3 Length

4.3.1 Length grading is shown as follows, with 1 mm as the numerical range:

25 mm, including 25.9 mm and below;

26 mm, including 26.0 mm ~ 26.9 mm;

27 mm, including 27.0 mm ~ 27.9 mm;

28 mm, including 28.0 mm ~ 28.9 mm;

29 mm, including 29.0 mm ~ 29.9 mm;

30 mm, including 30.0 mm ~ 30.9 mm;

31 mm, including 31.0 mm ~ 31.9 mm;

32 mm, 32.0 mm and above.

4.3.2 28 mm is the standard length grade.

4.3.3 The physical standard for pulling cotton length shall be determined according to the average length of the upper part of the cotton measured by the quick fiber tester.

4.4 Micronaire value

4.4.1 The micronaire value is divided into three grades, namely, Grade A, Grade B, and Grade C. Grade B is sub-divided into two levels: B1 and B2; Grade C is sub-divided into two levels: C1 and C2. Grade B is the standard grade for the micronaire value.

4.4.2 See Table 2 for the grades and levels of micronaire value.

Table 2 Grades and Levels of Micronaire Value

Grade	Level	Micronaire value
Grade A	A	3.7~4.2
Grade B	B1	3.5~3.6
	B2	4.3~4.9
Grade C	C1	3.4 and below
	C2	5.0 and above

4.5 Moisture regain

The conditioned moisture regain for cotton is 8.5%, with a maximum moisture regain of 10.0%.

4.6 Percentage of trash

The standard percentage of trash for cotton is 2.5%.

4.7 Breaking strength

See Table 3 for breaking strength grades and codes.

Table 3 Breaking Strength Grades and Codes

Level	Code	Breaking strength (cN/tex)
Very strong	S1	≥31.0
Strong	S2	29.0~30.9
Average	S3	26.0~28.9
Poor	S4	24.0~25.9
Very poor	S5	<24.0
Note: The grade of breaking strength is determined with a numerical range of 3.2 mm, which is a HVICC calibration level.		

4.8 Length uniformity index

See Table 4 for length uniformity index grades and codes.

Table 4 Length Uniformity Index Grades and Codes

Level	Code	Length uniformity index (%)
Very high	U1	≥86.0
High	U2	83.0~85.9

Average	U3	80.0~82.9
Low	U4	77.0~79.9
Very low	U5	<77.0

4.9 Short fiber content

See Table 5 for short fiber content grades and codes.

Table 5 Short Fiber Content Grades and Codes

Level	Code	Short fiber content quality percentage (%)
Low	SF1	<16.0
Average	SF2	16.0~18.9
High	SF3	19.0~21.9
Very high	SF4	≥22.0

4.10 Dangerous foreign matters

4.10.1 Requirements for picking, selling, acquisition and processing of cotton

4.10.1.1 Dangerous foreign matters shall not be mixed into cottons when picking, selling, purchasing and processing cottons.

4.10.1.2 It is forbidden to use non-cotton bags that are easy to produce foreign fibers, or tie bags with colored or non-cotton thread or rope when picking or selling cottons.

4.10.1.3 If it is found that dangerous foreign matters such as metal, masonry and foreign fiber are mixed into cottons when purchasing or processing cottons, such foreign matters shall be sorted out before purchasing or processing cottons.

4.10.2 Content of foreign fiber in a baled cotton

See Table 6 for levels and codes with respect to content of foreign fiber in a baled cotton.

Table 6 Levels and Codes with Respect to Content of Foreign Fiber in a Baled Cotton

Level	Code	Content of foreign fiber in a baled cotton (g/t)
None	N	0
Low	L	<0.30
Average	M	0.30~0.70
High	H	>0.70

5. Sampling Requirements

5.1 Sampling principles

5.1.1 Sampling should be representative.

5.1.2 Sampling can be divided into seed cotton sampling and baled cotton sampling.

5.2 Seed cotton sampling

5.2.1 Sampling of seed cotton for acquisition

The multi-point and random sampling shall be adopted for seed cotton for acquisition.

For seed cotton of 1 t and below, one sample is taken; For seed cotton above 1 t and at or below 5 t, three samples are taken; For seed cotton above 5 t and at or below 10 t, five samples are taken; for seed cotton above 10 t, seven samples are taken. Each sample shall not be less than 1.5 kg.

5.2.2 Sampling of seed cotton stacks

The seed cotton stack shall be randomly sampled in different directions, at multiple points and in multiple layers, with the sampling depth not less than 30 cm.

For sampling by stack, the number of samples is as follows: 3 samples for stack of 10 t and below; 5 samples for stack of more than 10 t and 50 t and below; 7 samples for stack of more than 50 t. Each sample shall not be less than 1.5 kg.

5.3 Sampling of baled cotton

5.3.1 Sampling by batch

5.3.1.1 For sampling of baled cotton by batch, the minimum number of samples is as follows: 15 bales for 50 bales or below (sample bale by bale if the bales are less than the prescribed bales for sampling), 18 bales for 50 bales to 100 bales (and below), 20 bales for 100 bales to

200 bales (and below); for 200+ bales, one bale will be taken for every additional 50 bails (bales less than 50 will be counted as 50).

5.3.1.2 Sampling for weight test: as to sampling for percentage of trash test, remove the top layer of cotton from the compressed surface of each cotton bale to form a batch sample with a gross weight of not less than 600 g. As to sampling for moisture regain test, take 100 g of samples from the inner layer of the cotton bale 10 cm~15 cm away from the outer layer of the cotton bale, seal the samples in an airtight container to form a batch sample.

5.3.1.3 Sampling for quality test: remove the top layer of cotton from the compressed surface of each cotton bale, and take a complete block sample of not less than 125 g, to form a batch sample for quality inspection.

5.3.1.4 If the quality test and weight test are conducted at the same time, the sample for percentage of trash test can be taken from the batch sample for quality test, and the sample for moisture regain test is subject to 5.3.1.2.

5.3.1.5 For baled cotton, samples shall not be taken from the top of the bale.

5.3.1.6 Sampling for pre-baling inspection: cotton processing units can sample from the observation window of the main channel of aggregate cotton. During the baling of a whole batch of cotton, sampling shall be carried out according to Article 5.3.1.1. About 300 g samples shall be randomly taken each time for moisture regain, color grade, preparation, length, micronaire value and percentage of trash inspections. At least 2 kg samples shall also be taken at random each time, which shall be used together with the aforesaid samples as the batch sample for the inspection of the content of foreign fibers in the batch of cotton.

5.3.2 Sampling by bale

5.3.2.1 Sampling by bale is only applicable to I-shape cotton bales.

5.3.2.2 A special sampling device shall be used to cut two samples with a length of 260 mm, a width of 105 mm or 124 mm and a weight of not less than 125 g from the middle of the two compressed surfaces of each cotton bale respectively.

5.3.2.3 Each sample shall be divided into two equal halves by layers during sampling, with the half of one sample corresponding to the outer side of the cotton bale and the half of the other sample corresponding to the inner side of the cotton bale being combined to form an inspection sample, and the remaining two halves being combined to form a reserved sample for the cotton processing unit. The cotton sample must be retained in the size and shape in which it is cut, i.e., it must be flat and rectangular.

5.3.3 Foreign fiber sampling during cotton trading

It is required to conduct quantitative or qualitative inspection on the foreign fibers in the baled cotton traded in batches. Samples used for quantitative inspection must adhere to GB/T XXXXX. The relevant parties to the transaction might agree the specific sampling method and sampling quantity for qualitative inspection.

6. Inspection method

6.1 Quality inspection

6.1.1 Color grade inspection

6.1.1.1 Color grade inspection is divided into sensory inspection and quick fiber tester test.

6.1.1.2 Color grade sensory inspection shall be carried out according to the following methods.

6.1.1.2.1 Determine the color grade according to the color grade physical standard and color grade text description.

6.1.1.2.2 Color grade inspection should be carried out in the cotton grading room, grading room should comply with GB/T 13786 standard.

6.1.1.2.3 Inspect the color grade sample by sample. During the inspection, hold the cotton sample correctly so that the surface density of the sample and the standard surface density is similar, the color grade is determined by comparison next to the physical standard, and the inspection results are recorded sample by sample.

6.1.1.3 The color grade quick fiber tester shall be used to inspect the samples taken for inspection one by one according to GB/T 20392.

6.1.1.4 Calculation of inspection results. When inspecting by batch, calculate the percentage of each color grade in the batch sample (the result is rounded to one decimal place). If there is a main color grade, the major color grade should be determined; if there is no main color grade, the percentage of each color grade should be determined. Inspection by packet, the reflectance degree, the yellowness, color grade inspection results issued packet by packet.

6.1.2 Preparation inspection

6.1.2.1 Determine the quality grade of the preparation according to the physical quality standard of the preparation and the quality grading conditions of the preparation.

6.1.2.2 The quality inspection of the preparation shall be carried out in the cotton grading room, which shall comply with the GB/T 13786 standard.

6.1.2.3 Inspect the quality of preparation sample by sample. During the inspection, hold the cotton sample correctly to make the surface density of the sample similar to the standard surface density. Compare with the physical standard to determine the quality grade of the preparation, and record the inspection results sample by sample.

6.1.2.4 During batch inspection, calculate the percentage of each grade of the preparation in the batch sample (the result is rounded to one decimal place).

6.1.2.5 During package inspection, the quality grade inspection results of preparation shall be issued package by package.

6.1.3 Length inspection

6.1.3.1 Cotton length inspection divided to the ruler measurement method and quick fiber tester, and the inspection by quick fiber tester shall prevail.

6.1.3.2 The physical standard of cotton hand pull length is used as the basis for calibrating the hand pull length.

6.1.3.3 When measuring with a hand drawn ruler, follow GB/T 19617

6.1.3.4 The quick fiber tester shall be tested according to GB/T 20392.

6.1.3.5 Calculation of inspection results. During batch inspection, calculate the arithmetic mean value of the length of each sample in the batch and the percentage of each length class. The length grade corresponding to the average length is determined as the length grade of this batch of cotton. In case of package by package inspection, the length value inspection results shall be issued package by package.

6.1.3.6 The length inspection results shall be rounded to one decimal place.

6.1.4 Test of micronaire value

6.1.4.1 By batch inspection, according to GB/T 6498 or GB/T 20392 sample-by-sample test micronaire value. For each test sample, its micronaire value level and grade shall be determined according to the micronaire value. Calculate the percentage of each micronaire value class in the batch sample, and the micronaire value class with the largest percentage is determined as the main micronaire value class of the batch of cotton; Calculate the percentage of each file and the average micronaire value of each file in the batch sample.

6.1.4.2 In case of package by package inspection, the quick fiber tester shall be used for inspection according to GB/T 20392. The micronaire value and corresponding value level and grade inspection results shall be issued package by package.

6.1.4.3 The micronaire value results shall be rounded to one decimal place.

6.1.5 Inspection of foreign fibers content

6.1.5.1 The method of manual picking is adopted for the qualitative inspection of foreign fibers in the baled cotton lint, and the inspection results are expressed by the number of samples containing foreign fibers in the batch samples.

6.1.5.2 Quantitative inspection of foreign fiber of baled cotton lint and inspection of foreign fiber taken by cotton processing unit before baling shall be carried out according to GB/T XXXXX.

6.1.5.3 Quantitative test results of foreign fibers modified to two decimal places.

6.1.6 Breaking strength test

6.1.6.1 The breaking strength is tested sample by sample according to GB/T 20392.

6.1.6.2 During batch inspection, calculate the percentage and average value of each grade in the batch sample.

6.1.6.3 During package inspection, the specific breaking strength value and grade inspection results shall be issued package by package.

6.1.6.4 The test results of breaking strength shall be rounded to one decimal place.

6.1.7 Length uniformity index inspection

6.1.7.1 The length uniformity index shall be inspected sample by sample according to GB/T 20392.

6.1.7.2 During batch inspection, calculate the percentage and average value of each grade in the batch sample.

6.1.7.3 In case of package inspection, the length uniformity index and grade inspection results shall be issued package by package.

6.1.7.4 The inspection result of length uniformity index shall be rounded to one decimal place.

6.1.8 Short fiber content test

6.1.8.1 Short fiber content shall be tested according to GB/T 6098 or GB/T 35931. In case of any objection to the test results, GB/T 6098 shall prevail.

6.1.8.2 The physical standard sample of cotton short fiber content serves as the basis for calibrating the roller method and photoelectric method.

6.1.8.3 During batch inspection, calculate the arithmetic mean of the short fiber content of each sample in the batch to determine the short fiber rate grade of this batch of cotton.

6.1.8.4 The test result of short fiber content shall be rounded to one decimal place according to GB/T 8170.

6.2 Weight inspection

6.2.1 Percentage of trash inspection

6.2.1.1 The percentage of trash of seed cotton shall be inspected according to GB/T 6499.

6.2.1.2 The percentage of trash of baled cotton lint shall be tested according to GB/T 6499.

6.2.1.3 The percentage of trash test results shall be rounded to one decimal place.

6.2.2 Moisture regain test

6.2.2.1 The moisture regain shall be tested according to GB/T 6102.1 or GB/T 6102.2. In case of any objection to the test results, GB/T 6102.1 shall prevail.

6.2.2.2 The moisture regain test results shall be rounded to one decimal place.

6.2.3 Inspection of conditioned weight of seed cotton converted into cotton lint

6.2.3.1 Weigh 1kg for each sample. The seed cotton sample shall be embossed with a sawtooth lint percentage trial mill according to GB/T 40628. No broken seeds are required. Weigh the ginned cotton lint. The weighing results are accurate to 1g

6.2.3.2 The conditioned lint percentage of seed cotton shall be calculated according to Formula (1), and the result shall be rounded to one decimal place.

$$L_0 = \frac{G}{G_0} \times \frac{(100 - Z) \times (100 + R_0)}{(100 - Z_0) \times (100 + R)} \times 100 \quad \cdots\cdots (1)$$

Where:

L_0 - Conditioned lint percentage of seed cotton, %;

G - weight of lint rolled from seed cotton sample, unit: g;

G_0 - Weight of seed cotton sample, unit: g;

Z - Actual percentage of trash of rolled cotton lint, %;

Z_0 -Standard percentage of trash of cotton lint, %;

R_0 - Fixed moisture regain of cotton, %;

R - Actual moisture regain of rolled cotton lint, %,

6.2.3.3 When there is more than one sample, the arithmetic mean of the conditioned lint percentage of seed cotton of each sample shall be taken as the average conditioned lint percentage of seed cotton, and the result shall be rounded to one decimal place.

6.2.3.4 The conditioned weight of seed cotton converted into lint shall be calculated according to Formula (2), and the result shall be rounded to one decimal place:

$$W_L = L \times W_0 \quad \cdots\cdots (2)$$

Where:

W_L-The conditioned weight of seed cotton converted into lint, in kilogram (kg);

W_0 - Weight of seed cotton, kg;

L - The conditioned lint percentage determined by the corresponding seed cotton, %, i.e., L_0 for one sample, and the average conditioned lint percentage determined by each sample for more than one sample.

6.2.4 Inspection of the conditioned weight of baled cotton lint

6.2.4.1 Weigh the baled cotton lint one by one or more. The accuracy of weighing instrument for gross weight shall not be less than 1‰. When weighing, it shall be as close as possible to the maximum range of the weighing instrument.

6.2.4.2 According to the batch size, take 2~5 representative cotton bales from the batch, open the package and weigh the package, calculate the average weight of a single cotton package, and round it to 0.01 kg.

6.2.4.3 Calculate the net weight of each batch of cotton according to formula (3), and round it to 0.001 t:

$$W_2 = (W_1 - N \times M)/1000 \quad \cdots\cdots (3)$$

Where:

W_2 - Net weight of cotton batch, unit: ton (t);

W_1- Gross weight of the batch of cotton, kg;

N - Number of bales of cotton in a batch;

M - Average weight of single cotton package, unit: kg

6.2.4.4 Calculate the conditioned weight of each batch of cotton according to formula (4), and round it to 0.001 t:

$$W = W_2 \times \frac{(100 - \overline{Z}) \times (100 + R_0)}{(100 - Z_0) \times (100 + \overline{R})} \quad \text{.....} \quad (4)$$

Where:

W - Conditioned weight of batch of cotton, unit: t;

$\overline{Z}$ - Average percentage of trash of batch of cotton, %;

$\overline{R}$ -Average moisture regain of batch cotton, %

6.3 Rounding off of numerical value

All shall comply with GB/T 8170.

7. Inspection Rules

7.1 Inspection items

7.1.1 Inspection items of seed cotton purchase

Color grade, length, moisture regain, percentage of trash, conditioned lint percentage of seed cotton, and conditioned weight of seed cotton converted into lint.

7.1.2 Inspection items of baled cotton

7.1.2.1 Inspection items by batch include: Color grade, preparation, foreign fiber, length, micronaire value, short fiber content, moisture regain, percentage of trash and conditioned

weight; such as inspecting the reflectance degree, yellowness, length uniformity index, and breaking strength, by using the quick fiber tester.

7.1.2.2 Package-by-package inspection items include: preparation, foreign fiber, reflectance degree, yellowness, color grade, micronaire value, length, length uniformity index, and breaking strength.

7.2 Inspection order

7.2.1 Seed cotton purchasing inspection

Dangerous foreign matters, seed cotton weight, sampling, trial rolling lint percentage, moisture regain, percentage of trash, color grade and length.

7.2.2 Inspection order of baled cotton

7.2.2.1 Inspection order: Gross weight, tare weight, net weight, moisture regain, percentage of trash and conditioned weight.

7.2.2.2 Quality inspection order: preparation, color grade, foreign fiber, micronaire value and length; when using quick fiber tester and short fiber content tester, the preparation and foreign fiber are first checked by senses, and then the reflectance degree, yellowness, color grade, micronaire value, length, length uniformity index and breaking strength are checked by the quick fiber tester, and the short fiber content is checked by the short fiber content tester.

7.3 Batching rules of baled cotton

7.3.1 Inspection by batch

7.3.1.1 The cotton processing unit shall batch the baled cotton subject to saw processing, which shall have the major color grade, length grade (no more than 3 continuous length grades), and major micronaire value grade.

7.3.1.2 Cotton in batches can be sub-certified, and cannot be certified in combination. If scattered cotton bales need to be certified in combination, the major color grade, length grade and major micronaire value grade must be consistent, with the difference of moisture regain not exceeding 1% and the percentage of trash not exceeding 0.5%. The moisture regain and percentage of trash after combined certification are calculated by weighted average.

7.3.2 Package-by-package inspection

For the baled cotton subject to package-by-package inspection, the seller can sell in batches according to the inspection results and the buyer’s demand.

8. Inspection Certificates

8.1 Cotton inspection certificate

The cotton inspection certificate is the quality voucher of cotton, which is divided into the weight inspection certificate and quality inspection certificate.

8.2 Weight inspection certificate

The weight inspection certificate shall specify the following contents: gross weight, tare weight, net weight, moisture regain, percentage of trash and conditioned weight.

8.3 Quality inspection certificate

8.3.1 Inspection by batch

The quality inspection certificate shall specify the following contents: major color grade and percentage of each color grade; percentage of each grade of preparation; length grade and percentage of each length grade; major micronaire grade, percentage of each grade and average micronaire value of each grade; and inspection results of foreign fibers. If the quick fiber tester and short fiber content tester are used for inspection, the content of the certificate shall add the average value, grade and percentage of length uniformity index, the average value, grade and each percentage of breaking strength, and the test result of short fiber content.

8.3.2 Package-by-package inspection

The quality inspection certificate shall be provided in a package-by-package manner. The certificate shall specify the following contents: bar code, preparation grade, qualitative test results of foreign fibers, reflectance degree, yellowness, color grade, length value, micronaire value, length uniformity index and breaking strength value.

8.4 Other requirements of cotton inspection certificates

In addition to the above contents, the cotton inspection certificate shall also indicate the product name, implementation standard, place of origin, batch number, package number, processing unit, inspection unit, issuer, issuance date of the certificate, certificate number, certificate validity period and remarks (please indicate in remarks for the cotton with the certification in combination).

8.5 Certificate validity

The cotton quality inspection certificate is valid for one year from the date of issuance. Cotton that has exceeded the validity period of the certificate shall be re-inspected, and the certificate shall be issued according to the re-inspection results.

9. Packaging and Identification

9.1 Packaging

9.1.1 When packing, the packages shall be complete. Each package with the same package type shall have the same weight. It is forbidden to mix cotton linter, aborted recycled cotton, oily cotton, low-grade cotton and dangerous foreign matters into the package.

9.1.2 Cotton packaging shall be in accordance with GB 6975.

9.2 Cotton quality identification

9.2.1 Baled cotton subject to inspection by batch shall be labeled with cotton quality.

9.2.2 The quality labels of cotton shall be provided in the order of major color grade, length grade, and major micronaire value grade of cotton.

9.2.3 The quality label codes are as follows:

Color grade code: identification according to the corresponding color grade code;

Length grade code: 25 mm to 32 mm, labeled with “25” …… “32”;

Micronaire value grade code: Grades A, B, and C are labeled with A, B, and C respectively;

For example: White cotton Grade 3, with a length of 28 mm, and the major micronaire value grade of Grade B. The quality identification is 3128B;

Light spotted cotton Grade 2, with a length of 27 mm, and the major micronaire value grade of Grade B. The quality identification is 2227B.

9.3 Identification

9.3.1 Inspection by batch

9.3.1.1 For cotton bales packed with cotton cloth, black marks shall be painted on both ends of the bales, including cotton producing place (province/autonomous region, and municipality directly under the central government/county), cotton processing unit, cotton quality identification, batch number, package number, gross weight, foreign fiber content code and production date.

9.3.1.2 For cotton bales packed with plastic, adhesive stickers or other means shall be adopted at both ends of the cotton bales to fix the labels, and the contents of the labels shall be the same as 9. 3. 1. 1.

9.3.2 Package-by-package inspection

9.3.2.1 Barcode or QR code is used as the label of cotton bales, which is fixed at both ends of cotton bales packed with cotton or plastic.

9.3.2.2 For cotton bales packed with cotton cloth, black contents shall be painted on both ends of the bales: cotton producing place (province/autonomous region, and municipality directly under the central government/county), cotton processing unit, batch number, package number, gross weight, foreign fiber content code and production date.

9.3.2.3 For cotton bales packed with plastic, adhesive stickers or other means shall be adopted at both ends of the cotton bales to fix the labels, and the contents of the labels shall be the same as 9. 3. 2. 2.

10. Storage and Transportation

10.1 Storage requirements of baled cotton

For the storage of baled cotton, it is necessary to ensure ventilation and moisture protection, so as to avoid mildew and fire.

10.2 Matters needing attention during cotton transportation

10.2.1 In the process of cotton transportation, fire, water immersion, rain and pollution shall be prevented.

10.2.2 In the process of cotton transportation, the goods and the certificates shall be consistent, and it is necessary to ensure the goods are provided together with certificates. For inspection by batch, a batch of cotton shall not be shipped separately in principle. If it is really necessary to ship separately under special circumstances, it is necessary to have complete certificates or copies of the certificates, code sheets or copies of code sheets, and shipping documents; if the same vehicle (ship) is equipped with goods with several batches and grades, they shall be shipped by batch and grade in different compartments and layers.

10.2.3 In the section of transit shipment, the supplier and the demander shall not change the quality labels or forge the inspection certificates.

11. Transitional Requirements of Standard Implementation

The following requirements will be implemented from the 36th month after the implementation of this document:

-6.1.8 Short fiber content inspection;

-6.2.1 Percentage of trash inspection refers to Method B in the newly revised GB/T 6499;

-7.1.2.1 Short fiber content inspection items in batch inspection items of baled cotton;

-7.2.2.2 The short fiber content is tested by the short fiber content tester in baled cotton inspection order;

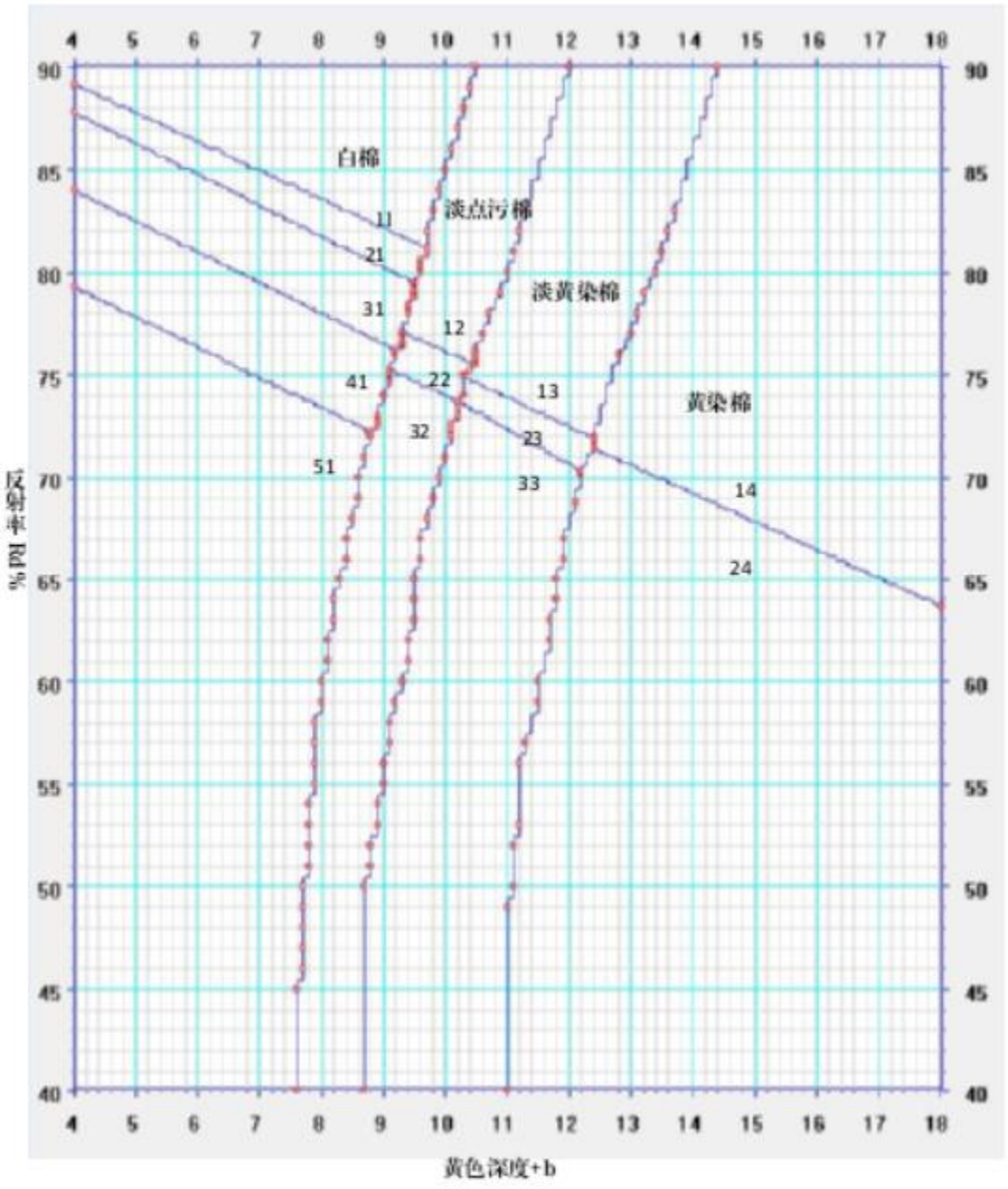
-8.3.1 Test results of short fiber content in quality inspection certificate under inspection by batch.

Appendix A
(Normative)
Text Description of Color Grade

Color Grade	Color Characteristics	Corresponding Seed Cotton Form
White cotton Grade 1	Pure white or milky white, and especially bright.	High-quality white cotton in the early and middle period, with large cotton petals and a small amount of general white cotton.
White cotton Grade 2	Pure white or milky white, and bright.	Good white cotton in the early and middle period, with large cotton petals and a small amount of rain-rust cotton and some general white cotton.
White cotton Grade 3	White or milky white, and slightly bright.	General white cotton in the early and middle period, and good white cotton in the late period, with cotton petals in different sizes and a small amount of rain-rust cotton.
White cotton Grade 4	White color with shallow gray, and not bright.	White cotton without glossiness in the early and middle period.
White cotton Grade 5	Grayish white or murky gray.	General white cotton subject to heavy pollution.
Light spotted cotton Grade 1	Milky white with shallow yellow, and slightly bright.	White cotton mixed with rain-rust cotton and a small amount of dead cotton, or white cotton turning yellow.
Light spotted cotton Grade 2	Milky cotton + dark yellow, with light yellow spots.	White cotton mixed with some dead cotton in the early and middle period or a small amount of light frosted cotton, or white cotton turning yellow.
Light spotted cotton Grade 3	Grayish white + dark yellow, with light yellow spots.	White cotton mixed with some dead cotton in the middle and late period or light frosted cotton, or white cotton turning yellow and mildewed.
Light yellow stained cotton Grade 1	Dark yellow, and a little bright.	Dead cotton in the middle and late period, a small amount of polluted cotton and some frosted yellow cotton, or light spotted cotton turning yellow.
Light yellow stained cotton Grade 2	Grayish yellow + dark yellow.	Dead cotton in the middle and late period, some polluted cotton and frosted yellow cotton, or light spotted cotton turning yellow and mildewed.

Light yellow stained cotton Grade 3	Grayish white + dark yellow, dyed with light yellow, with polluted cotton and bad wool.	White cotton Grade 4 mixed with various kinds of dead cottons and some secondary cotton in the late period, or white cotton Grades 4-5 with variable colors.
Yellow stained cotton Grade 1	Deep yellow, and a little bright.	Seed cotton with a relatively yellow color.
Yellow stained cotton Grade 2	Yellow and not bright.	Various kinds of yellow dead cotton, polluted cotton, and rotten-boll cotton.

Appendix B
(Informative)
Color Grading Graph



Reflectance Degree Rd%

Yellowness + b

Appendix C
(Normative)
Grading Conditions of Preparation

Preparation Grading	Appearance	Type and Degree of Defects
Good	Smooth surface, fluffy and uniform cotton layer, and low fiber entanglement degree.	Few seed crumbs with fiber, cotton knots, aborted and broken seeds, and extremely few rope silk, soft seed epidermis, and dead piece.
Average	Flat surface, relatively uniform cotton layer, and general fiber entanglement degree.	Relatively few seed crumbs with fiber, few cotton knots, aborted and broken seeds, and very few rope silk, soft seed epidermis, and dead piece.
Poor	Non-flat surface, non-uniform cotton layer, and high fiber entanglement degree.	Many seed crumbs with fiber, relatively more cotton knots, relatively few aborted and broken seeds, and few rope silk, soft seed epidermis, and dead piece.

Appendix D
(Informative)
Assessment Index of Preparation

Grading of Preparation	Rope silk, dead piece, and soft seed epidermis (grain/100 g)	Aborted and broken seeds (grain/100 g)	Seed crumbs with fiber (grain/100 g)	Cotton knots (grain/100 g)	Total number of grains of deflects (grain/100 g)
Good	≤230	≤270	≤800	≤200	≤1500
Average	≤390	≤460	≤1400	≤300	≤2550
Poor	>390	>460	>1400	>300	>2550

Note 1: Deflects include seven types: rope silk, soft seed epidermis, dead piece, broken seeds, aborted seeds, seed crumbs with fiber, and cotton knots.

Note 2: The preparation reference index is only used as the reference basis for making the physical standard of preparation and guiding the cotton processing enterprises to control the processing technology.

TRANSLATION ENDS

Attachments:

No Attachments.