

Voluntary Report – Voluntary - Public Distribution

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Report Name: China Publishes Draft Standards for Nuts and Kernels of Almonds

Country: China - People's Republic of

Post: Beijing

Report Category: Tree Nuts, Sanitary/Phytosanitary/Food Safety, FAIRS Subject Report

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Report Highlights:

The Standardization Administration of China (SAC) published the draft "Standards for Nuts and Kernels of Almonds" for comment. The standards will replace the existing national standard on almond kernels (GB/T 30761-2014) and specify the quality grading, inspection methods, inspection rules, packaging, labeling, storage, and transportation of nuts and almond kernels. The deadline for public comments to SAC is July 27, 2024. Based on previous experience, PRC officials may not notify the draft to the WTO as it is not considered a mandatory standard. This report contains an unofficial translation of the draft standard with links and related guidance to access and submit comments on the SAC platform.

Background

The Standardization Administration of China (SAC) recently published on its website the draft Standards on Nuts and Kernels of Almonds for public comment open until July 27, 2024 (click [here](#)). Any company or individual can register and logon to the [SAC comment platform](#) if they wish to submit comments. These recommended standards, which will replace the existing national standard on almond kernels (GB/T 30761-2014), specify the quality grading, inspection methods, inspection rules, packaging, labeling, storage, and transportation of inshell and shelled almonds. According to a standard-drafting note, the current standard will be revised to accommodate the domestically produced almonds in Xinjiang. For example, the scope of the current “almond kernel” standard will be expanded to cover inshell almonds. It is not immediately clear when the final standards will be implemented but the SAC note indicates that the standard-drafting process will last for one year since the project was launched on December 28, 2023. Also, based on previous experience, the draft standards may not be notified to the WTO as the PRC considers this a recommended (i.e., not mandatory) national standard for trading partners. In addition, the standard could be used as a reference in commercial contracts unless other specifications are detailed.

BEGIN TRANSLATION

National Standard of the People’s Republic of China

Issued on XXXX-XX-XX

Implemented on XXXX-XX-XX

Issued by the State Administration for Market Regulation and the Standardization Administration of China

Preface

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

This document replaces GB/T 30761-2014 Almond Kernel, and the main technical changes compared to GB/T 30761-2014 are as follows:

-The standard name has been changed (see the cover and the first page of the text, the cover and the first page of the text of the 2014 edition).

The scope has been changed (see Chapter I, Chapter I of the 2014 edition).

The normative references have been changed (see Chapter II, Chapter II of the 2014 edition).

Terminology and definitions have been changed (see Chapter III, Chapter III of the 2014 edition).

The harvesting requirements have been added (see Chapter IV).

-The quality grades of nuts have been added (see Chapter V).

- The quality grades of nuts have been changed (see Chapter VI, Chapter IV of the 2014 edition).
- The inspection methods have been changed (see Chapter VII, Chapter V of the 2014 edition).
- The inspection rules have been changed (see Chapter VIII, Chapter VI of the 2014 edition).
- The packaging, labeling, storage, and transportation have been modified (see Chapter IX, Chapter VII of the 2014 edition).
- Appendix A (see Appendix A of the 2014 edition) has been deleted.

This document is proposed and managed by the National Technical Committee on Economic Forest Products Standardization (SAC/TC 557).

This document was drafted by Xinjiang Academy of Forestry Sciences, Institute of Forestry of the Chinese Academy of Forestry Sciences, Department of Agriculture and Rural Affairs of Yarkand County, State-owned Second Forest Farm of Yarkand County, and Xinjiang Meiyitian Beverage Co., Ltd.

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The previous versions replaced by this document are as follows:

-GB/T 30761-2014

Standards for nuts and kernels of almonds

(Draft for comments)

1 Scope

This document specifies the quality grading, inspection methods, inspection rules, packaging, labeling, storage, and transportation of nuts and kernels of almonds. This document applies to the production, processing, and inspection of nuts and kernels of almonds.

2 Normative references

The following documents contain normative references that constitute essential provisions of this document. For dated references, only the edition corresponding to the date is applicable. For undated references, the latest edition of the referenced document (including any amendments) is applicable.

GB 5009.3 National Food Safety Standard: Determination of water in Foods

GB/T 6543 Single and Double Corrugated Paper Boxes for Transport Packaging

GB 4806.13 National Food Safety Standard: Composite Materials and Products for Food Contact

GB/T 34344 General Technical Requirements of Packaging Materials for Agricultural Product Logistics

GB/T 32950 Labels and Marks for Fresh Agricultural Products

GB/T 191 Packaging and Pictorial Marking for Handling of Goods

GB/T 22497 Grain and Oil Storage -Fumigants Application Guidelines

3 Terms and Definitions

The following terms and definitions are applicable to this document.

3.1 Almond hull

The collective term for the outer and middle peels that surround the almond nut.

3.2 Varietal purity

The percentage of nuts and kernels of the same variety in terms of shape and appearance, expressed in "%".

3.3 Percentage of defects

Any defects (including mildew, rancidity, and insect infestation) that render the nut unsuitable for human consumption, expressed as a percentage.

3.4 Nut or kernel purity

The percentage of remaining almond nuts and kernels after removing broken shells, green peels, other non-almond nuts, and foreign objects other than almond kernels, expressed as a percentage.

3.5 Percentage of whole kernel

The percentage of complete kernel grains in the total number of sampled kernel grains, expressed as a percentage.

4 Harvesting requirements

4.1 Maturity requirements

The cracking rate of the green skin of almond is $\geq 50\%$.

4.2 Post-harvest treatment

Post-harvest treatment shall be carried out according to the following procedures:

a) Peeling: after harvesting, the green skin of the almond should be peeled off as soon as possible by manual or mechanical means to prevent the nuts and kernels from moldy.

b) Drying: when using the sun drying method, spread the nuts evenly on the drying field and use sunlight to dry them, taking care to prevent rain and mold. When using the drying method, the hot air temperature should be $\leq 47^{\circ}\text{C}$.

c) Nuts storage: when the water content of the nuts reaches 6%, they should be stored in the warehouse.

d) Cracking the shell and extracting the kernel: cracking the shell manually or mechanically. After cracking the shell, separate the shell and kernel.

5 Quality grade of nuts

5.1 Basic requirements

The nuts are fully matured; the shell is complete; the products are classified according to varieties.

5.2 Classification requirements

The quality grades and requirements for nuts are shown in Table 1.

Table 1 Quality Grades and Requirements of Almond Nuts

Project	Level 1	Level 2	Level 3
Average weight of single fruit/g	≥ 2.2	1.9~2.2	≤ 1.9
Varietal purity/%	≥ 97.0	≥ 94.0	≥ 90.0
Nut or kernel purity/%	≥ 98.0	≥ 98.0	≥ 98.0
Thickness of shell/mm	≤ 1.1	1.1~1.8	≥ 1.8
Kernel-fruit ratio/%	≥ 55.0	40.0~55.0	≤ 40.0
Percentage of defects/%	≤ 1.0	≤ 2.0	≤ 3.0
Water content/%	≤ 6.0		
Note: In the percentage of defects, the almond nut must not contain the navel orange borer.			

6 Quality grade of kernels

6.1 Basic requirements

The kernels are fully matured; the kernels are plump; the products are classified according to varieties.

6.2 Grading Requirements

The quality grade and requirements of the nut are shown in Table 2.

Table 2 Quality Grade and Requirements of Almond Kernel

Project	Level 1	Level2	Level 3
Color	light yellow	yellowish brown	dark brown
Varietal purity/%	≥ 97.0	≥ 94.0	≥ 90.0
Nut or kernel purity/%	≥ 99.9	≥ 99.8	≥ 99.7
Whole kernel rate/%	≥ 95.0	≥ 80.0	< 80.0
Percentage of defects/%	≤ 1.0	≤ 2.0	≤ 3.0
Water content/%	≤ 6.0		

7 Inspection method

7.1 Average weight of single fruit

From the sample of almond nuts, 1,000 samples to be tested are taken by quartering, weighed with a balance with a sensitivity of 0.01 g, and the arithmetic mean is calculated. The average single fruit weight is calculated according to equation (1).

$$G=M/1\ 000 \quad \dots\dots\dots (1)$$

In the formula:

G - Average single fruit weight, in grams (g)

M - Total mass of almond nuts, in grams (g)

The result is rounded to one decimal place.

7.2 Varietal purity

From the samples of nuts and kernels of almonds, 1,000 samples are taken using the quartering method. Based on the shape and appearance of the nuts and kernels, distinct varieties are selected and counted. The varietal purity is calculated using equation (2).

$$C = (1000 - n) / 1000 \times 100 \dots\dots\dots (2)$$

In the formula:

C - Varietal purity, %

n - Number of nuts and kernels of almonds with obvious differences.

The result is rounded to one decimal place.

7.3 Nut or kernel purity

From the samples of nuts and kernels of almonds, take about 1,000 g of samples using the quartering method, weigh them with a balance with a sensitivity of 0.01 g, and place them on a clean surface. Select the broken shells, green peels, or other foreign objects that are mixed in with the nuts and kernels of almonds and weigh them. Calculate the nut or kernel purity according to equation (3).

$$J = (M - m) / M \times 100 \dots\dots\dots (3)$$

In the formula:

J - nut or kernel purity, %

M - Total mass of nuts and kernels of almonds, in grams (g)

m - The total mass of crushed shells, green peels, or other non-nut and non-kernel foreign objects mixed in the nuts and kernels of almonds, measured in grams (g).

The result is rounded to one decimal place.

7.4 Thickness of shell

From the sample of almond nuts, 1,000 samples to be tested were taken by quartering, and the thickness of the middle part of the nutshell was measured one by one with a vernier caliper, Calculate the thickness of the shell as per formula (4).

$$H = \sum_{i=1}^{1000} H_i / 1000 \dots\dots\dots (4)$$

In the formula:

H - thickness of the fruit shell, measured in millimeters (mm)

H_i - The thickness of the shell of each almond nut, measured in millimeters (mm).

The result is rounded to one decimal place.

7.5 Kernel-fruit Ratio

From the sample of almond nuts, 1,000 samples to be tested are taken by quartering, weighed with a balance with a sensitivity of 0.01 g, and the total mass of the kernels is weighed after breaking the shell one by one. The kernel-fruit ratio is calculated according to equation (5).

$$R = m/M \times 100 \quad \dots\dots\dots (5)$$

In the formula:

R - kernel-fruit ratio, %

m - Total mass of almond kernel, in grams (g)

M - Total mass of almond nuts, in grams (g)

The result is rounded to one decimal place.

7.6 Percentage of defects

From the samples of nuts and kernels of almonds, 1,000 samples to be tested are taken by quartering and placed on a clean surface. For nuts, the shells are broken one by one to extract the kernels; for kernels, the measurement is directly performed. The number of defective nuts and kernels (including ones that are moldy, rancid, and damaged by insects) is selected and recorded in order, and the percentage of defects of nuts is calculated according to equation (6).

$$Q = n/1000 \times 100 \quad \dots\dots\dots (6)$$

In the formula:

Q - Percentage of defects, %

n - The number of defective nuts and kernels (including ones that are moldy, rancid, and damaged by insects).

The result is rounded to one decimal place.

7.7 Water content

Determined according to GB 5009.3.

7.8 Color

From the almond kernel samples, take 1,000 samples to be tested according to the quartering method, spread them on a clean surface, and visually observe and record the color of the kernels under natural light conditions.

7.9 Whole kernel rate

From the sample of almond kernels, take 1,000 samples to be tested according to the quartering method, spread them on a clean surface, select and record the number of intact almond kernels based on whether the kernel seed coat or kernel is damaged, and calculate the whole kernel rate according to equation (7).

$$Z = n/1000 \times 100 \quad \dots\dots\dots (7)$$

In the formula:

Z- Whole kernel rate, %

n - The number of whole almond kernels

The result is rounded to one decimal place.

8 Inspection rules

8.1 Grouping

The same batch of nuts and kernels of almonds of the same variety and grade, which are purchased, transported, and sold together, are considered as a single group of products.

8.2 Sampling

8.2.1 When the packaging units of the same group of products do not exceed 50 pieces, the number of packaging units sampled shall not be less than 5 pieces; when more than 50 pieces, one unit shall be sampled for every additional 20 pieces. The sampling units shall be taken from the upper, middle, and lower parts of the stack.

8.2.2 When sampling nuts and kernels from packaging units, samples should be taken from different parts, with each packaging unit containing more than 500 g. The number of samples should be roughly the same. As a preliminary sample, the total amount should not be less than 2,500 g to 3,000 g.

8.3 Judgment

If the quality of the nuts does not meet the standards in Table 1, or the quality of the kernel does not meet the standards in Table 2, it is determined to be an out-of-grade product.

9 Packaging, labeling, storage and transportation

9.1 Packaging

Cartons, wooden boxes or packaging bags should be used for sub-packaging. The packaging should be sturdy, durable, clean, dry, and free of odors, and comply with the provisions of GB/T

6543, GB 4806.13, and GB/T 34344. water-proof measures should be taken. Each package should only contain the same variety and grade of nuts and kernels of almonds and should not be mixed.

9.2 Labeling

The packaging should bear the product name, variety, grade, net weight, place of origin, harvest year, batch number, production unit, and contact address. The packaging label should comply with the provisions of GB/T 32950, and the packaging pictorial markings for storage and transportation should comply with the provisions of GB/T 191.

9.3 Storage

The product should be stored in a dry, ventilated, cool, and dark place with a storage temperature of <15 °C and a relative humidity of <60%. It should not be stored together with toxic, harmful, odorous, volatile, and corrosive items. After entering the warehouse, the warehouse should be fumigated according to GB/T 22497, paying attention to mold prevention, insect prevention, and rat prevention.

9.4 Transportation

Avoid sun exposure and rain and pay attention to water prevention. The transportation vehicles should be clean and hygienic, free of odors, and should not be mixed with toxic, harmful, odorous items or items that affect product quality.

END TRANSLATION

Attachments:

No Attachments.