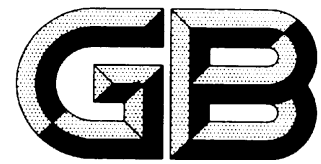


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National Standard of the People's Republic of China

GB/T 13516-XXXX

Replace GB/T 13516-2014

General quality requirements for canned peaches

桃子罐头质量通则

(English Translation)

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Foreword

SAC/TC 64 (National Technical Committee on Brewing of Standardization Administration of China) is in charge of this English translation. In case of any doubt about the contents of English translation, the Chinese original shall be considered authoritative.

This document was drafted in accordance with the rules given in the GB/T 1.1—2020 Directives for standardization Part 1:Structure and drafting of standards.

This document specifies the technical requirements related to food quality. See relevant laws, regulations, policies, food safety standards and other documents for the requirements related to food safety.

This document replaces GB/T 13516-2014 *Canned peaches*. In addition to a number of editorial changes, the following technical deviations have been made with respect to the GB/T 13516-2014: :

——the document name has been modified to “General quality requirements for canned peaches”;

——the description of raw materials “refrigerated” and “without preservatives added” has been added in the scope (see 1 of this edition vs. 1 of the 2014 edition);

——the terms and definitions of “irregular slice”, “dice”, “irregular dice”, “excessive trim” and “ground” have been modified (see 3.4, 3.5, 3.6, 3.7 and 3.9 of this edition vs. 3.4, 3.5, 3.6, 3.7 and 3.9 of the 2014 edition);

——the terms and definitions of “poorly handled fruit”, “blemishes” and “quick-frozen peach” have been added (see 3.10, 3.11 and 3.12 of this edition);

——the product type has been added (see 4.1.3 of this edition vs. 4.1.3 of the 2014 edition);

——the product code marking requirements have been modified, and the sweetener type product code has been added (see 4.2 of this edition vs. 4.2 of the 2014 edition);

——the description of sensory requirements of peach raw materials has been modified (see 5.1.1 of this edition vs. 5.1.1 of the 2014 edition);

——the requirements for raw material rock sugar (see 5.1.4), liquid sugar (see 5.1.5), milk beverage (see 5.1.8) and other raw and auxiliary materials (see 5.1.10) have been added;

——the sensory requirements have been modified (see 5.2 of this edition vs. 5.2 of the 2014 edition);

——the requirements for solid content have been modified (see 5.3 of this edition vs. 5.3.2 of the 2014 edition);

——the requirements for soluble solid content have been modified (see 5.3 of this edition vs. 5.3.3 of the 2014 edition);

——the pH value requirements have been modified (see 5.3 of this edition vs. 5.3.4 of the 2014 edition);

——the requirements for protein content of products in milk-containing packing media

have been added (see 5.3 of this edition);

——the hygiene requirements (see 5.4 of the 2014 edition), microbiological indicators (see 5.5 of the 2014 edition) and food additive requirements (see 5.6 of the 2014 edition) have been deleted;

——the test method for protein (see 6.2.5) has been added, and the reference standard for pH determination has been modified (see 6.2.3 of this edition vs. 6.2.4 of the 2014 edition);

——the test methods for hygiene indicators (see 6.3 of the 2014 edition) and microbiological indicators (see 6.4 of the 2014 edition) have been deleted;

——the label requirements have been modified (see 8.1 of this edition vs. 8.1 of the 2014 edition);

——the informative annex on peach raw material varieties, physicochemical indicators and test methods has been added (see Annex A).

This document was drafted with reference to Codex Alimentarius Commission (CAC) CODEX STAN 242-2017 Standard for canned stone fruits, and the degree of consistency is non-equivalent.

Attention is drawn to the possibility that some of the elements of this standard may be the subject of patent rights. The issuing body of this document shall not be held responsible for identifying any or all such patent rights.

This document was prepared by National Technical Committee 64 on Food Industry of Standardization Administration of China (SAC/TC 64).

The previous editions of this part are as follows:

——The first edition was issued in 1992 as GB/T 13516-1992

——This is the second revised edition..

General quality requirements for canned peaches

1 Scope

This document defines the terms and definitions of canned peaches, specifies the requirements for raw and auxiliary materials, sensory requirements, physicochemical indicators, etc., of canned peaches, describes the corresponding test methods, specifies contents of inspection rules, labeling, packaging, transportation and storage, and gives the product classification and code convenient for technical regulations.

This document is applicable to canned foods made of fresh, refrigerated, quick-frozen peaches or canned peaches (as main raw materials) which, without preservatives added, are processed, canned, packing media added, sealed, sterilized and cooled.

2 Normative References

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

GB/T 191 *Packaging— Pictorial marking for handling of goods*

GB/T 317 *White granulated sugar*

GB 5009.5 *National food safety standard Determination of protein in foods*

GB 5009.237 *National food safety standard Determination of pH value of foods*

GB 5749 *Standards for drinking water quality*

GB/T 10786 *Analytical methods of canned food*

GB/T 20882.4 *Quality requirements for starch sugar Part 4: High fructose syrup*

GB/T 21732 *Milk beverages*

GB/T 31121 *Fruit & vegetable juices and fruit & vegetable beverage (nectars)*

GB/T 35883 *Rock sugar*

QB/T 1006 *Inspection rules for canned food*

QB/T 4093 *Liquid sugar*

QB/T 4631 *Packaging, labeling, transportation and storage for canned food*

QB/T 5356 *Fermented liquid of fruits and vegetables*

3 Terms and Definitions

For the purposes of this document, the following terms and definitions apply.

3.1

half slice

peeled pitted peaches cut into two approximately equal parts along the seam

3.2

1/4 Slice

peeled pitted peaches axially cut from half slice into two approximately equal parts

3.3

slice

peeled pitted peaches axially cut from half slice into 3-5 approximately equal parts

3.4

Irregular slice

peeled pitted peaches cut into slice-like or parts of irregular shapes

3.5

dice

peeled pitted peaches cut into cube-like parts 3mm-40mm in dimension

3.6

Irregular dice

peeled pitted peaches cut into dice of irregular shapes and sizes

3.7

excessive trim

after trimming, slice has obvious cut marks, lost original shape or the trimmed section is larger than 1/3 of regular piece

3.8

bad pit-gouged

due to improper treatment, pit-gouged over or less

3.9

ground

the edge of slices is irregular, and the exposed fiber length exceeds one third of the length of peach pieces

3.10

poorly handled fruit

fruit in which peel and pedicel with an area of more than 0.5 cm², scar and worm with an area of more than 0.5 cm² and peach core and tip with a length of more than 2 mm are left due to inadequate handling in the process of raw materials

3.11

blemishes

surface discoloration and spots arising from physical, pathological, insect or other factors that definitely contrast with the overall colour, e.g. bruises, scab and dark discolouration

3.12

quick frozen peach

peach product subjected to a freezing process (range of temperature of maximum crystallization is passed quickly and the product temperature reaches -18 °C at the

thermal center) after fresh peach is peeled, cut, pit-gouged, blanched, cooled and water drained.

[Source: NY/T 3098-2017, 3.2]

4 Product Classification and Code

4.1 Product classification

4.1.1 Classification by different raw material varieties

According to different raw material varieties, the product can be classified into:

—canned yellow peach;

—canned white peach.

4.1.2 Classification by shape

According to different shapes, the product can be classified into:

—half slice;

—1/4 slice;

—slice;

—irregular slice;

—dice

—irregular dice.

4.1.3 Classification by packing media

According to different packing media, the product can be classified into:

—sugar syrup type: the packing media is the water solution of one or more of white granulated sugar, rock sugar, fructose syrup and liquid sugar;

—fruit and vegetable juice type: the packing media is the water solution of fruit (pulp), vegetable juice (pulp), concentrated fruit juice (pulp) or concentrated vegetable juice (pulp);

—blended type: the packing media is the water solution of two or more substances, such as white granulated sugar, rock sugar, fructose syrup, liquid sugar, sweetener, milk beverage, fruit and vegetable juice (pulp), concentrated fruit and vegetable juice (pulp), fruit and vegetable fermented juice, plant extract, plant fermentation liquid, *etc*;

—sweetener type: the packing media is the water solution of sweetener;

—water type: the packing media is water.

4.2 Product code

The product can be coded according to GB/T 41900, shall comply with the provisions in Table1 or Table 2.

Table 1 Product code of canned yellow peach

Items	Product code				
	Sugar syrup type	Fruit and vegetable juice type	Blended type	Sweetener type	Water type
Half slice	613 Y	613J Y	613B Y	613S Y	613W Y

1/4 slice	613 1Y	613J 1Y	613B 1Y	613S 1Y	613W 1Y
Slice	613 2Y	613J 2Y	613B 2Y	613S 2Y	613W 2Y
Irregular slice	613 3Y	613J 3Y	613B 3Y	613S 3Y	613W 3Y
Dice	613 4Y	613J 4Y	613B 4Y	613S 4Y	613W 4Y
Irregular dice	613 5Y	613J 5Y	613B 5Y	613S 5Y	613W 5Y

Table 1 Product code of canned white peach

Items	Product code				
	Sugar syrup type	Fruit and vegetable juice type	Blended type	Sweetener type	Water type
Half slice	613	613J	613B	613S	613W
1/4 slice	613 1	613J 1	613B 1	613S 1	613W 1
Slice	613 2	613J 2	613B 2	613S 2	613W 2
Irregular slice	613 3	613J 3	613B 3	613S 3	613W 3
Dice	613 4	613J 4	613B 4	613S 4	613W 4
Irregular dice	613 5	613J 5	613B 5	613S 5	613W 5

5 Requirements

5.1 Raw and auxiliary materials

5.1.1 Peach raw materials

5.1.1.1 Sensory requirements

The variety suitable for canned food processing shall be adopted. The fruit shall be white peach or yellow peach. The color of yellow peach flesh shall be yellow to light yellow, and the color of white peach flesh shall be creamy white to bluish white. Fruits shall be fresh, fleshy, well refrigerated or quick-frozen, moderately mature, normal in flavor, compact in flesh, browning-free, and resistant to cooking. A slight red color is allowed at the peel, tip point, pit and seam. There is no decomposition caused by serious deformity, mildew, insect and mechanical injuries.

Canned peaches shall meet the quality requirements of this document.

5.1.1.2 Varieties, physicochemical indicators of peach raw materials and test methods

See Annex A.

5.1.2 White granulated sugar

Shall as specified in the requirements in GB/T 317.

5.1.3 High fructose syrup

Shall as specified in the requirements in GB/T 20882.4.

5.1.4 Rock sugar

Shall as specified in the requirements in GB/T 35883.

5.1.5 Liquid sugar

Shall as specified in the requirements in QB/T 4093.

5.1.6 Concentrated fruit and vegetable juice (pulp) and fruit and vegetable juice (pulp)

Shall as specified in the requirements in GB/T 31121.

5.1.7 Fruit and vegetable fermented juice

Shall as specified in the requirements in QB/T 5356.

5.1.8 Milk beverages

Shall as specified in the requirements in GB/T 21732.

5.1.9 Water

Shall as specified in the requirements in GB 5749.

5.1.10 Other raw and auxiliary materials

Shall as specified in the requirements of corresponding standards.

5.2 Sensory requirements

Sensory requirements shall as specified in the provisions in Table 3.

Table 3 Sensory requirements

Items		Superior-grade product	First-grade product
Color	Solid	The color of yellow peach ranges from golden yellow to yellow, while the color of white peach ranges from creamy white to creamy yellow. The color shall be uniform in the same container.	The color of yellow peach ranges from yellow to light yellow, while the color of white peach ranges from creamy yellow to bluish white. The color shall be basically uniform in the same container.
	Packing media	Sugar syrup type, sweetener type, water type: clear and transparent for packing media Fruit and vegetable juice type, blended type: with the proper color of the packing media of corresponding product	Sugar syrup type, sweetener type, water type: clear and relatively transparent for packing media Fruit and vegetable juice type, blended type: with the proper color of the packing media of corresponding product
Taste and odor		With the proper taste and odor of this product. Rich scent, without peculiar smell.	
Structural state	Solid	Tissue: uniform in flesh, proper in hardness, no loose pit.	Tissue: relatively uniform in flesh, relatively proper in hardness, a little loose pit.
		Form: complete in form; the sum of excessive trim, ground, blemishes, bad pit-gouged, poorly handled fruit (fruit worms are not allowed), normal shape lost shall not exceed 20% of the total number, and the fragments smaller than 1/2 of the flesh shall not exceed 2% of the total weight. Half slice and 1/4 slice: the minimum weight of single slice shall be 23g and 15g.	Form: basically complete in form; the sum of excessive trim, ground, blemishes, bad pit-gouged, poorly handled fruit, normal shape lost shall not exceed 30% of the total number, and the fragments smaller than 1/2 of the flesh shall not exceed 5% of the total weight. Half slice and 1/4 slice: the minimum weight of single slice shall be 20g and 12g.
	Uniformity: the fruit flesh in the same can shall be uniform in size. The difference of flesh width between largest and smallest parts in half slice and 1/4 slice products shall not be more than 1.5 cm. The weight of the largest slice in the same can of peach slices shall not exceed 2 times the weight of the smallest slice, and the weight of the oversized and undersized slices shall not exceed 15% of the total solids	Uniformity: the fruit flesh in the same can shall be basically uniform in size. The difference of flesh width between largest and smallest parts in half slice and 1/4 slice products shall not be more than 2.0 cm. The weight of the largest slice in the same can of peach slices shall not exceed 2.5 times the weight of the smallest slice, and the weight of the oversized and undersized slices shall not exceed 20% of the total solids	
Packing		A very small amount of flesh debris is	A small amount of flesh debris is

	media	allowed; packing media of the juice type and mixed-type juice (pulp) shall be fine and uniform, and there can be a small amount of flesh particles precipitated after standing, and the packing media of milk beverage shall be uniform and fine emulsion, without stratification, and there can be a small amount of precipitate	allowed; packing media of the juice type and mixed-type juice (pulp) shall be fine and uniform, and there can be a small amount of flesh particles precipitated after standing, and the packing media of milk beverage shall be uniform and fine emulsion, without stratification, and there can be a small amount of precipitate
Impurity		No foreign impurities visible to normal vision.	

5.3 Physicochemical indicators

Physicochemical indicators shall as specified in the provisions in Table 4.

Table 4 Physicochemical indicators

Items	Physicochemical indicators		
	Superior-grade product	First-grade product	
Solid content, %	The average solid content of each batch of products shall be not lower than the labeled value, and Canned peaches in tinned (chrome) thin steel plate container: ≥ 55 Other canned peaches: ≥ 50		
Soluble solid content (20 °C, by refractometer), %	\leq	22	
pH	3.2~4.2		
Protein ^a , %	\geq	1.0	0.6
Net content	It shall comply with relevant standards and regulations, and the average net content of each batch of products shall be not lower than the labeled value		
^a Only applicable to products in milk beverages. The detection is based on milk-containing packing media, excl. fruit flesh.			

6 Test Methods

6.1 Sensory requirements

Inspect according to the method specified in GB/T 10786.

6.2 Physicochemical indicators

6.2.1 Solid content

Inspect according to the method specified in GB/T 10786.

6.2.2 Soluble solid content

Inspect according to the method specified in GB/T 10786.

6.2.3 pH value

Inspect according to the method specified in GB 5009.237.

6.2.4 Net content

Inspect according to the method specified in GB/T 10786.

6.2.5 Protein

Inspect according to the method specified in GB 5009.5.

7 Inspection Rules

Inspection rules shall as specified in the provisions of QB/T 1006. Sensory requirements, solid content, soluble solid content, pH and net content are delivery inspection items.

8 Labeling, Packaging, Transportation and Storage

8.1 Product labeling shall as specified in the requirements of relevant standards and indicate the product type. Take canned yellow peach as an example, which could be labeled as “yellow peach in sugar syrup”, “yellow peach in fruit and vegetable juice” (the name of specific fruit and vegetable juice shall be specified), “yellow peach in blended syrup” (ingredients of blended types shall be listed in the list of ingredients, and yellow peach in milk beverage shall indicate the protein content), “yellow peach in water”. It is encouraged to mark product characteristic indicators or component content in the label.

8.2 Packaging, transportation and storage of products shall as specified in the relevant provisions in QB/T 4631. Pictorial marking for handling of goods shall as specified in the provisions of GB/T 191. Packaging material shall as specified in relevant standards.

Annex (Informative)

Varieties, physicochemical indicators of peach raw materials and test methods

A.1 Varieties of peach raw materials

The following common peach varieties can be used for canned food processing:

—— Yellow peach: NJC83, Huangjinguan, Jinhuanghou, Guanwu, NJC19, Jintong No. 5, Tianhuangjin, Qianba, Lianhuang, *etc.*

—— White peach: Taijiubao, Beijing 14, Beijing 24, Lingkui, *etc.*

A.2 Physicochemical indicators of peach raw materials

Refer to Table A.1 for screening of peach raw materials.

Table A.1 Physicochemical indicators of peach raw materials

Items	Early-maturing variety ^a	Medium-maturing variety ^b	Late-maturing variety ^c
Soluble solids (20 °C), % \geq	8.0	8.5	8.5
Total acid (as malic acid), % \leq	1.0	0.8	0.8
Solidity-acid ratio \geq	8	10	10
pH \geq	3.0		
When one of the soluble solids and total acids fails to meet the requirements, the solidity-acid ratio shall meet the requirements.			
^a The fruit growth period of early-maturing varieties is 71~90 d.			
^b The fruit growth period of medium-maturing varieties is 91~120 d.			
^c The fruit growth period of late-maturing varieties is 121~160 d.			

A.3 Test methods

A.3.1 Soluble solids

It shall be tested according to the method specified in NY/T 424.

A.3.2 Total acid

It shall be tested according to the method specified in GB 12456.

A.3.3 Solidity-acid ratio

It shall be tested according to the method specified in NY/T 424.

A.3.4 pH

It shall be tested according to the method specified in GB 5009.237.

References

- [1] GB 12456 National food safety standard Determination of total acid in foods
 - [2] GB/T 41900 Code of canned food
 - [3] NY/T 424 Green food Peach
 - [4] NY/T 3098 Peaches for processing
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