

## Preface

Article 4.4 and Article 4.5 in this set of standards are compulsory, with the rest being recommendation clauses.

This set of standards is the revision to GB/T 9959.1-1988 *Fresh and Frozen Demi Carcass Pork with Skin* and GB/T 9959.2-1988 *Fresh and Frozen Demi Carcass Pork without Skin*. Considering that the only difference between the two sets of standards being with and without skin, the two sets have thus been combined into one and titled *Fresh and Frozen Demi Carcass Pork*.

This round of revision has made amendments to two areas, which are the volatile basic nitrogen index of the product from the original “ $\leq 15$  mg/100 g” to “ $\leq 20$  mg/100 g”; the moisture limit index has also been added as an item.

This set of standards replaces both GB/T 9959.1-1998 and GB/T 9959.2-1998 at the same time from the date of its implementation.

This set of standards is proposed by the State Domestic Trade Bureau.

This set of standards is being centrally managed by the Consumer Goods Circulation Department of the State Domestic Trade Bureau.

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# The National Standards of the People's Republic of China

## Fresh and Frozen Demi Carcass Pork

GB 5595.1-2001  
Replacing GB/T 9959.1-1988  
GB/T 9959.2-1988

### 1 Scope

This set of standards has stipulated the terms, technical requirements, test methods, test regulations and identification, storage and transportation.

This set of standards is applicable to fresh and frozen demi carcass pork made from slaughtering and processing live pigs.

### 2 Quoted standards

The clauses contained in the following standards were made the clauses of this set of standards through their quotation herein. At the time of publishing this set of standards, all of the versions shown are valid. All the standards would be revised, and all parties using this set of standards should explore the possibility of using the latest version of the following standards.

GB/T 5009.17-1996 Method of Determining the Total Mercury in Food

GB/T 5009.44-1996 Method of Analysing the Hygiene Standards of Meat and Meat Products

GB 18394-2001 Moisture Limits in Poultry and Meat

(59) Nongmuwei No. 113, (59) Weifang No. 556, (59) Jianyilian No. 231 and (59) Shangweilian No. 399 documents *Pilot Directives for Hygiene of Meat Products*.

### 3 Definitions

This set of standards adopts the following definitions.

#### 3.1 Demi-carcass pork

Pork that is sawn (hacked) into half vertically along the central spinal column of the entire carcass of a pig that has been slaughtered.

#### 3.2 Fresh demi-carcass pork

The pork of slaughtered demi-carcass pork that has been cooled but has not undergone the technical process of chilling.

#### 3.3 Chilled demi-carcass pork

Pork of demi-carcass pork that has undergone the technical process of chilling, of which the central temperature of the deep muscle layers of the hind legs is not higher than 4°C and not lower than 0°C.

#### 3.4 Frozen demi-carcass pork

Pork of demi-carcass pork that has undergone the technical process of freezing, of which the central temperature of the deep muscle layers of the hind legs is not higher than -15°C.

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Implemented on 01-12-2001**

### 3.4 Swine head

The head of a pig that is cut starting from between the root of the ears right down to the lower jaw bone in a straight line, and the meat at its neck cut out at 6-7 cm from the lower jaw without exposing the top of its skull.

## 4 Technical requirements

### 4.1 Raw ingredients

4.1.1 The live pigs must come from non-epidemic areas and come with proof of quarantine issued by the animal quarantine and supervision organizations of the places of the pigs' origin.

4.1.2 Male and female boars and hogs must not be used in processing fresh and frozen demi carcass pork.

### 4.2 Processing

4.2.1 Requirements for slaughtering and processing (see Table 1)

**Table 1**

Item / Grade	Grade 1	Grade 2	Grade 3
Blood-letting	Completed	Completed	Completed
Removal of head and neck meat	Cut the pig's head off according to the "swine head" specification. Align the first cervical vertebrae and cut the neck and bloody meat out in a straight vertical line.	Cut the pig's head off according to the "swine head" specification. Align the first cervical vertebrae and cut the neck and bloody meat out in a straight vertical line.	Cut the pig's head off according to the "swine head" specification.. Align the first cervical vertebrae and cut the neck and bloody meat out in a straight vertical line.
Removal of offal	Remove all of the offal, fats around the heart, diaphragm and gible, the large blood vessels at the spine and the reproductive organs. Trim off the evidently abnormal lymph nodes not caused by infectious disease at the parts that are to be inspected.	Remove all of the offal, fats around the heart, diaphragm and gible, the large blood vessels at the spine and the reproductive organs. Trim off the evidently abnormal lymph nodes not caused by infectious disease at the parts that are to be inspected.	Remove all of the offal, fats around the heart, diaphragm and gible, the large blood vessels at the spine and the reproductive organs. Trim off the evidently abnormal lymph nodes not caused by infectious disease at the parts that are to be inspected.
Removal of three glands	Remove the thyroid gland, adrenal gland and diseased lymph nodes.	Remove the thyroid gland, adrenal gland and diseased lymph nodes.	Remove the thyroid gland, adrenal gland and diseased lymph nodes.
Sawing (hacking) in half	Saw (hack) the carcass into half vertically along the centre line of the spine. The cut should be even and neat.	Saw (hack) the carcass into half vertically along the centre line of the spine. The deviation of two sections on each piece of the spinal bone with meat is not allowed.	Saw (hack) the carcass into half vertically along the centre line of the spine. The deviation of three sections on each piece of the spinal bone with meat is not allowed.
Removal of trotters	Cut from the wrist joints for the front trotters and from the instep joints for the hind trotters.	Cut from the wrist joints for the front trotters and from the instep joints for the hind trotters.	Cut from the wrist joints for the front trotters and from the instep joints for the hind trotters.

Removal of tail	Cut out in parallel along the root of the tail	Cut out in parallel along the root of the tail	Cut out in parallel along the root of the tail
Removal of nipples	Cut the nipples clean off, Trim off the pigmented areas and do not leave any yellow liquid.	Cut the nipples clean off, Trim off the pigmented areas and do not leave any yellow liquid.	Cut the nipples clean off, Trim off the pigmented areas and do not leave any yellow liquid.
Trimming	The black skin and anal sphincter at the hips and groin as well as the injury marks, internal injuries, pustules, ringworms, eczema, scabs, skin sarcoidosis, intense erythema and injuries on the skin surface should be trimmed off cleanly. The surface area for trimming on each piece of pork may not exceed one-third, and that for the trimming of internal injuries may not exceed 150 cm <sup>2</sup> .	The black skin and anal sphincter at the hips and groin as well as the injury marks, internal injuries, pustules, ringworms, eczema, scabs, skin sarcoidosis, intense erythema and injuries on the skin surface should be trimmed off cleanly. The surface area for trimming on each piece of pork may not exceed one-third, and that for the trimming of internal injuries may not exceed 200 cm <sup>2</sup> .	The black skin and anal sphincter at the hips and groin as well as the injury marks, internal injuries, pustules, ringworms, eczema, scabs, skin sarcoidosis, intense erythema and injuries on the skin surface should be trimmed off cleanly. The surface area for trimming on each piece of pork may not exceed one-third, and that for the trimming of internal injuries may not exceed 250 cm <sup>2</sup> .
Removal of residual hair	Remove residual hair cleanly. There must not be any long and short hair. The concentrated hair stubs (including villus and newly-grown short hair) on each piece of pork may not exceed 64 cm <sup>2</sup> . The additional surface area for concentrated sporadic hair stubs may not exceed 80 cm <sup>2</sup> .	Remove residual hair cleanly. There must not be any long and short hair. The concentrated hair stubs (including villus and newly-grown short hair) on each piece of pork may not exceed 64 cm <sup>2</sup> . The additional surface area for concentrated sporadic hair stubs may not exceed 100 cm <sup>2</sup> .	Remove residual hair cleanly. There must not be any long and short hair. The concentrated hair stubs (including villus and newly-grown short hair) on each piece of pork may not exceed 64 cm <sup>2</sup> . The additional surface area for concentrated sporadic hair stubs may not exceed 120 cm <sup>2</sup> .
Washing	There must be no floating hair, coagulated blood, bile contamination, faecal contamination as well as other contaminants.	There must be no floating hair, coagulated blood, bile contamination, faecal contamination as well as other contaminants.	There must be no floating hair, coagulated blood, bile contamination, faecal contamination as well as other contaminants.
Others	No scalding of raw and old meat, damages and peels on the entire body is allowed.	No scalding of raw and old meat, damages and peels on the entire body is allowed.	No scalding of raw and old meat, damages and peels on the entire body is allowed.

#### 4.2.2 Cold processing

4.2.2.1 The central temperature of the hind leg muscles of chilled demi carcass pork is not higher than 4°C and not lower than 0°C within 24 hours after the pig has been slaughtered.

4.2.2.2 The central temperature of the hind leg muscles of frozen demi carcass pork is not higher than -15°C within 20 hours of freezing the pork.

#### 4.3 Inspection and quarantine

Pre- and post-slaughter inspection and quarantine of the slaughtering and processing of live pigs should be carried out in accordance with the (59) Nongmuwei No. 113, (59) Weifang No. 556, (59) Jianyilian No. 231 and (59) Shangweilian No. 399 documents.

#### 4.4 Sensory indices

See Table 2 for the sensory requirements for fresh and frozen demi carcass pork.

**Table 2**

Item	Fresh demi carcass pork	Frozen demi carcass pork (thawed)
Colour	The colour of the muscles is bright or dark red and has shine; the fats appear creamy or pastel white	The muscles are shiny and bright red; the fats appear creamy white and have no mouldy spots
Bounce (tissue condition)	The dents upon finger pressure return to normal immediately	The meat is compact and sturdy
Viscosity	The external surface is slightly dry or slightly moist and is not sticky to touch	The external surface and cut sections are moist not sticky to touch
Smell	Has the normal smell of fresh pork. The broth is clear and transparent upon boiling. The fats converge on the soup's surface, and the soup is fragrant.	Has the normal smell of frozen pork. The broth is clear and transparent upon boiling. The fats converge on the soup's surface, and the soup has no smell.

#### 4.5 Physical and chemical indices

See Table 3 for the physical and chemical indices of the fresh and frozen demi carcass pork.

**Table 3**

Item	Fresh and frozen demi carcass pork
Volatile basic nitrogen, mg/100g	20
Mercury (in mercury), mg/kg	0.05
Moisture, %	77

#### 4.6 Product grades

4.6.1 Fresh and frozen demi carcass pork are divided into Grade 1, Grade 2 and Grade 3. The pork is graded by the thickness of the fats layer that runs parallel between the sixth and seventh ribs to the lower front area of the thoracic spinous process. There are quality requirements for Grade 1 pork in addition to the stipulated fats layer.

See Table 4 for the specifications for grading.

Table 4

Item		Grade 1	Grade 2	Grade 3
Thickness of the fats layer, cm		≤2.0	1.0 – 2.5	<1.0 >2.5
Demi carcass pork quality, kg	With skin	≥23	No limits	No limits
	Without skin	≥21		

4.6.2 The fats layer of fresh demi carcass pork is allowed to have the following contraction percentage upon freezing. See Table 5.

Thickness of the fats layer, cm	Allowable contraction percentage, %
<1.0	10
1.0 – 2.5	11
2.5 – 3.0	12
>3.0	13

## 5 Method of inspection

### 5.1 Sensory inspection

5.1.1 Appearance and colour: Visual inspection

5.1.2 Viscosity, bounce (tissue condition): Touch visual inspection

5.1.3 Smell: inspection by smelling

5.1.4 Broth upon boiling: Inspection according to the stipulations in Article 1.2 of GB/T 5009.44-1996.

### 5.2 Physical and chemical inspection

5.2.1 Volatile basic nitrogen: Inspection according to the stipulations in Article 2.1 of GB/T 5009.44-1996.

5.2.2 Mercury: Inspection according to the stipulations GB/T 5009.17.

5.2.3 Moisture: : Inspection according to the stipulations in Chapter 4 of GB 18394-2001.

### 5.3 Measurement of temperature

5.3.1 Instruments: Use normal ±50°C glass thermometers with a non-mercury column or other temperature measuring instruments.

#### 5.3.2 Measurement

Drill from the hind leg deep into the centre of the muscle (4cm – 6cm) with a drill bit of a diameter slightly bigger than the diameter of a thermometer (not exceeding 0.1cm). Pull the drill bit out and insert the thermometer quickly into the drill hole in the muscle. Read the temperature shown on the thermometer at eye level after about 3 minutes.

## 6 Rules for inspection

### 6.1 Batches

The products of the same shift type and specifications are of one batch.

### 6.2 Sampling

Extract samples according to Table 5.

Batch range, pc	Quantity of sample, pc	Quantity passed $A_c$	Quantity failed $R_c$
<1,200	5	0	1
1,201 – 35,000	8	1	2
≥35,001	13	2	3

Extract 2kg of the samples to be used for type inspection samples. Seal and store the remaining samples leaving them the way they are. Keep them in reservation for 3 months for inspection.

### 6.3 Inspection

#### 6.3.1 Delivery inspection

6.3.1.1 Each batch of products for delivery should pass inspection and produce the certificate of inspection before they can be delivered.

6.3.1.2 The items for inspection are the labels, net amount, packaging and sensory inspection.

6.3.1.3 The principles of judgment are implemented according to Table 5.

#### 6.3.2 Type inspection

6.3.2.1 To be carried out at least once every year. Type inspection should be carried out in the event of one of the following situations:

a) When there is a change of equipment or a return to production after a long suspension;

b) When there is a rather great discrepancy between the outcomes of delivery inspection

and the previous type inspection.

6.3.2.2 The items for inspection are all of the items stipulated in 4.5 and 4.6 herein.

#### 6.3.2.3 Principles of judgment

a) Labels, net amount, packaging and sensory inspection along with delivery inspection;

b) If one or more items in the other items (inclusive of one item) failed inspection, twice the amount of the samples should be extracted from the extracted samples to carry out a repeat inspection. The outcome of the repeat inspection shall prevail.

## 7 Identification, storage and transportation

### 7.1 Identification

7.1.1 The seals of veterinary examination, passing of inspection and grading stamp should be stamped on the hip and scapular area of every piece of pork. The words must be clear and neat.

7.1.2 The veterinary seal is round in shape with a diameter of 5.5 cm, with the company name as well as the words "Examined by veterinarian", "Date" and "Pig" etched on it. The grading seal is round in shape with a diameter of 4.5 cm, with the words "1", "2" and "3" etched on it.

7.1.3 The seal colours should be made of food-grade colourings.

### 7.2 Storage

7.2.1 The frozen demi carcass pork should be hung in a chiller with a relative humidity of 75% - 84% and a temperature of 0°C - 1°C. The distance between the carcasses should be maintained at 3 cm – 5 cm.

7.2.2 The frozen demi carcass pork should be stored in a freezer with a relative humidity of 95% - 100% and a temperature of -18°C. The magnitude of fluctuation in temperature in the span of one day and night must not exceed 1°C.

### 7.3 Transportation

7.3.1 Cold storage vehicles (ships) or insulated vehicles that conform to sanitation requirements should be used for road and water transportation.

7.3.2 Rail transportation should be executed in accordance with the regulations of the state.