Preface

Chapter 3 and Article 4.2.1 in this set of standards are compulsory, with the rest being recommendation clauses.

This set of standards is used as a supporting document to GB 9959.1-2001 *Fresh and Frozen Demi Carcass Pork*, GB 9959.2-2001 *Cut Fresh and Frozen Lean Pork*, GB 9661-2001 *Fresh and Frozen Carcass Mutton*, GB 17238-1998 *Fresh and Frozen Cut Beef* and GB 16869-2000 *Fresh and Frozen Poultry Products*.

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

This set of standards is drafted by: Meat Poultry and Egg Products Quality Test Centre (Beijing) of the State Domestic Trade Bureau

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The National Standards of the People's Republic of China
Permitted Level of Moisture in Meat of Livestock and Poultry

GB 18394-2001

1 Scope

This set of standards has stipulated such requirements as the permitted level indices of moisture in the meat of livestock and poultry and the methods of testing, etc.
This set of standards is applicable to fresh and frozen pork, beef, mutton and chicken.

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 9695.15-1988   Meat and Meat Products Measurement of Moisture Content
GB/T 9695.19-1988   Meat and Meat Products Methods of Sampling

3 Permitted level indices of moisture in the meat of livestock and poultry

See Table 1 for the permitted level indices of moisture in the meat of livestock and poultry

Table 1

Type	Moisture content, %
Pork	≤77
Beef	≤77
Mutton	≤78
Chicken	≤77

4 Preparation of samples

4.1   Sampling
Executed according to the method stipulated in GB/T 9695.19-1988.
4.2   Preparation of samples
4.2.1   Fresh meat: Mince the muscle tissues with their fats, tendons and sinew using a mincing machine (the diameter of the hole of which is no larger than 4 mm) at least twice. The minced sample should be kept in a sealed vessel.
4.2.2   Frozen meat: Thaw naturally and record the quality m_1 and m_2 (precise to 0.01g) before and after thawing. Process the thawed samples according to 4.2.1.

5 Method of measurement

5.1   Drying cabinet drying method (arbitrary method)

Measure according to the method stipulated in GB/T 9695.15.

5.2   Infrared drying method (quick method)

5.2.1   Heat with infrared rays to remove the moisture from the sample, and calculate the difference in quality before and after drying as the moisture content.

5.2.2 Instruments

Infrared quick moisture analyser: Moisture determination range 0% - 100%, reading precision 0.01%, weighing range (0 – 30) g, weighing precision 1 mg.

5.2.3 Determination

5.2.3.1 Connect to the power supply and turn on the switch. Set the drying and heating temperature to 105◦C and the heating time to automatic. Express the result as 0% - 100%.

5.2.3.2 Open the samples room cover, take one samples tray and place it one the weighing scale on the infrared moisture analyser and reset it to zero.

5.2.3.3 Take the samples tray out and spread 5.00 g of the samples prepared according to 4.2.1 herein evenly on the tray. Place the tray back into the sampling room.

5.2.3.4 Open the samples room cover back on again and start heating. Read the moisture content on the digital display. The moisture content can be printed out automatically if a printer is available.

6   Presentation of results

6.1 Report the result for the moisture content of fresh meat according to the determination values of 4.3 or 4.4.

6.2 Calculate the moisture content of frozen meat X according to formula (1):

$$X\ (\%) = (m_1 - m_2) + m_2 \times C/\ m_1 \times 100 \qquad\qquad ……..\ (1)$$

In which:

X – Moisture content of frozen meat

m_1 - Quality of sample before thawing, g

m_2 - Quality of sample after thawing, g

C - Moisture content of after thawing, %.

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