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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 9695.21-2008

Replacing GB/T 9695.21-1990

Meat and meat products -- Determination of magnesium

肉与肉制品 镁含量测定

(English Translation)

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Foreword

GB/T 9695 consists of the following components.

- GB/T 9695.1 "Meat and meat products - Determination of free fat content";
- GB/T 9695.2 "Meat and meat products - Determination of fatty acid";
- GB/T 9695.3 "Meat and meat products - Determination of iron content";
- GB/T 9695.4 "Meat and meat products - Determination of total phosphorus content";
- GB/T 9695.5 "Meat and meat pH measurement";
- GB/T 9695.6 "meat Carmine colorant determination";
- GB/T 9695.7 "Meat and meat products - Determination of total fat content";
- GB/T 9695.8 "Meat and meat products - Determination of chloride content";
- GB/T 9695.9 "Meat and meat products polyphosphate determination";
- GB/T 9695.10 "meat and meat products BHC and DDT residues determination";
- GB/T 9695.11 "Meat and meat products - Determination of nitrogen content";
- GB/T 9695.13 "Meat and meat products - Determination of calcium content";
- GB/T 9695.14 "meat starch content determination";
- GB/T 9695.15 "Meat and meat products - Determination of moisture content";
- GB/T 9695.17 "Meat and meat products - Determination of glucono-lactone content of -delta-";
- GB/T 9695.18 "Meat and meat products - Determination of ash";
- GB/T 9695.19 "Meat and meat sampling method";
- GB/T 9695.20 "Meat and meat products - Determination of zinc";

- GB/T 9695.21 "Meat and meat products - Determination of magnesium content";
- GB/T 9695.22 "Meat and meat products - Determination of copper content";
- GB/T 9695.23 "Meat and meat products L (-) - hydroxyproline determination";
- GB/T 9695.24 "Meat and meat cholesterol content determination";
- GB/T 9695.25 "Meat and meat products - Determination of vitamin PP";
- GB/T 9695.26 "Meat and meat products - Determination of vitamin A content";
- GB/T 9695.27 "Meat and meat products - Determination of vitamin B1";
- GB/T 9695.28 "Meat and meat products - Determination of vitamin B2";
- GB/T 9695.29 "Meat vitamin C content determination";
- GB/T 9695.30 "Meat and meat products - Determination of vitamin E content";
- GB/T 9695.31 "Meat total sugar content determination." this section GB/T Part of 219,695.

This Part replaces GB/T 9695.21-1990 "Meat and meat products - Determination of magnesium content." this section compared with the GB/T 9695.21-1990 main changes are as follows.

- According to GB/T 1.1-2000 "Standardization Guide Part 1. Standard structure and writing rules" and GB/T 20001.4-2001 "Rules for drafting standards - Part 4. Chemical analysis method" has been restructured and text modify;
- Increasing the normative references;
- Increasing the detection limit;
- The principle of representation has been modified;
- In the "agent" chapter added perchloric acid, hydrogen peroxide, and magnesium oxide standards, as well as standard stock solution of magnesium acquisition mode;
- In the "instruments and equipment" chapter added to microwave digestion;
- Remove 5.2 "800 ± 25 °C";
- The "Sample Preparation" chapter is divided into "sampling" and "Sample Preparation" two chapters;
- Increasing the heating plate wet digestion and microwave digestion first two sample preparation methods;
- Increasing the concentration range of the standard series working solution of magnesium;

- Increasing the blank test;
- Letter symbols to replace the original formula for calculating the value, and increases the deduction of a blank;
- With Chapter 10, "precision" and its contents instead of GB/T 9695.21-1990 in Chapter 9, "allows poor" and its contents;
- Added "Test Report" chapter;
- Increased by Inductively Coupled Plasma - Atomic Emission Spectrometry (ICP-AES), as a second method.

This part of the National Technical Committee of Standardization Technical Committee eggs and meat products food industry and focal points.

This section drafted by. China Chamber of Commerce Business Standard Centre, the National Food Quality Supervision and Inspection Center Processing (Guangzhou), Guangzhou Product quality supervision and inspection.

1 Scope

GB/T 9695 provisions of this part of the determination of meat and meat products in magnesium content.

This section applies to the determination of magnesium content in meat and meat products.

The detection limit of this method. The first method detection limit of 2.0mg/kg, the second method detection limit of 1.0mg/kg.

2 Normative references

The following documents contain provisions which, through reference to GB/T 9695 to the present, constitute provisions of this section. For dated reference documents Member, all subsequent amendments (not including errata content) or revisions do not apply to this section, however, encouraged to reach under this section Parties to research agreement to use the latest version of the referenced files. For undated reference documents, the latest versions apply to this section.

Laboratory use specifications and test methods (. 1987 neq ISO 3696) GB/T 6682-1992 Analysis the first atomic absorption spectrophotometry Principle 3 After digestion samples formulated as hydrochloric acid, was analyzed by atomic absorption spectrophotometer, a calibration curve for quantitative analysis.

4 Reagents

Unless otherwise specified, the reagents were of analytical grade.

4.1

Water. Water line with two GB/T 6682-1992 requirements.

4.2

HCl. $\rho_{20} \sim 1.19 \text{ g/mL}$.

Nitrate 4.3. $\rho_{20} \sim 1.42 \text{ g/mL}$.

4.4

perchloric acid.

4.5 30% hydrogen peroxide.

Hydrochloric acid solution 4.6 [1 + 1 (volume ratio)]. Measure 50mL of hydrochloric acid (4.2), 50mL water, and mix.

4.7

mixed acid [+ perchloric acid, nitric acid, 5 + 1 (by volume)]. Measure 50mL of nitric acid (4.3), 10mL of perchloric acid (4.4) and mix.

MgO 4.8 Standard. content $\geq 99.99\%$.

4.9

Mg standard solution ($Ba = 0.1 \text{ mg/mL}$). provided by the nationally recognized standard material sales units, or prepared according to the following method. Weigh Burning at $800^\circ\text{C} \pm 50^\circ\text{C}$ to constant weight of magnesium oxide standard (4.8) 0.1658g beaker, add 20mL of water was added slowly 20mL hydrochloric acid, heated to boiling until completely dissolved, cooled and transferred to 1000mL volumetric flask with water to volume, mix and set aside.

4.10

Mg standard solution ($Ba = 10 \mu\text{g/mL}$). absorb magnesium standard stock solution (4.9) 5.00mL, water volume to 50mL.

Preparation of standard working solution of 4.11 Mg. lessons magnesium standard solution (4.10) 0mL, 0.50mL, 2.50mL, 5.00mL, 10.00mL, Were placed in 50mL volumetric flask, each added 2.5mL hydrochloric acid solution (1 + 1) (4.6) with water to volume, and mix. This series of standard working solution Concentrations of magnesium were $0 \mu\text{g/mL}$, $0.1 \mu\text{g/mL}$, $0.5 \mu\text{g/mL}$, $1 \mu\text{g/mL}$, $2 \mu\text{g/mL}$.