

ICS 67.040
CCS X 04



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

GB/T 9695.4-2009

Replacing GB/T 9695.4-1988

Meat and meat products -- Determination of total phosphorus

肉与肉制品 总磷含量的测定

(English Translation)

Issued on: April 8, 2009

Implemented on: May 1, 2009

Issued by: Standardization Administration of China

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Foreword

GB/T 9695 "Meat and meat products" consists of the following components.

- Part 1. Meat and meat products - Determination of free fat content;
- Part 2. Determination of fatty meat and meat products;
- Part 3. Meat and meat products - Determination of iron content;
- Part 4. Determination of total phosphorus content of meat and meat products;
- Part 5. Meat and meat pH measurement;
- Part 6. Determination of meat Carmine colorant;
- Part 7. Meat and meat products - Determination of total fat content;
- Part 8. Meat and meat products - Determination of chloride content;
- Part 9. Determination of meat and meat products polyphosphate;
- Part 10. Meat and meat products BHC and DDT residues determination;
- Part 11. Meat and meat products - Determination of nitrogen;
- Part 13. Meat and meat products - Determination of calcium content;
- Part 14. Determination of starch content of meat products;
- Part 15. Determination of moisture content in meat and meat products;
- Part 17. Determination of meat and meat products gluconate -delta- lactone content;
- Part 18. Meat and meat products - Determination of total ash;
- Part 19. Meat and meat sampling methods;
- Part 20. Meat and meat products - Determination of zinc;

- Part 21. Meat and meat products - Determination of magnesium content;
- Part 22. Meat and meat products - Determination of copper content;
- Part 23. Meat and meat products - Determination of hydroxyproline content;
- Part 24. Meat and meat products - Determination of cholesterol;
- Part 25. Meat and meat products - Determination of vitamin PP;
- Part 26. Meat and meat products - Determination of vitamin A;
- Part 27. Meat and meat products - Determination of vitamin B1;
- Part 28. Meat and meat products - Determination of vitamin B2;
- Part 29. Determination of vitamin C content of meat products;
- Part 30. Meat and meat products - Determination of vitamin E;
- Part 31. Determination of the total sugar content of meat products.

This section GB/T 49695 Part of.

This part of the "Weighing precipitation 3 laws," the use of ISO 2294. 1974 "Meat and meat products - Determination of total phosphorus content (Reference method)." this part of ISO 2294. major changes compared to 1974 are as follows.

- Wet digestion nitrate - nitric acid to sulfuric acid digestion - perchloric acid digestion;
- Dry ashing concentrated nitric acid to hydrochloric acid (1 + 1);
- Quinoline phosphomolybdate precipitation temperature from $260\text{ }^{\circ}\text{C} \pm 20\text{ }^{\circ}\text{C}$ to $180\text{ }^{\circ}\text{C} \pm 20\text{ }^{\circ}\text{C}$;
- Results are expressed as P_2O_5 by the change as P;
- Standard structure and text were modified;
- References of ISO 3100 to GB/T 9695.19, because the sampling method ISO 3100 does not apply to meat and meat products.

This part of the "4 spectrophotometry" modify using ISO 13730:1996 "Meat and meat products - Determination of total phosphorus content spectrophotometer Law degree. " this part of ISO 13730:1996 compared to the main changes are as follows.

- Increased wet digestion;
- Dry ashing concentrated nitric acid to hydrochloric acid (1 + 1);
- Results are expressed as P_2O_5 by the change as P;
- The formula will change in volume in notation, instead of the original formula with specific numerals;

--- Standard structure and text has been modified.

This Part replaces GB/T 9695.4-1988 "Meat and meat products - Determination of total phosphorus content." this portion of the GB/T 9695.4-1988 compared to the main changes are as follows.

--- Deletes Appendix A quinoline phosphomolybdate volumetric method;

--- Increased spectrophotometry;

--- The drying temperature gravimetric method of quinoline phosphomolybdate precipitation changed to 180 °C;

--- 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 methods," the original standards and structural adjustment Editorial changes.

This part of the National Standardization Technical Committee of poultry meat products and centralized.

This section drafted by. China Meat Research Center, China Chamber of Commerce Business Standard Centre, Xiamen Disease Control and Prevention System Center, Jiangyin City Product Quality Supervision.

1 Scope

This section GB/T 9695 provisions of meat and meat products Determination of total phosphorus content.

This section spectrophotometric detection limits. 0.1mg/kg.

2 Normative references

The following documents contain provisions which, through reference to GB/T 9596 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.

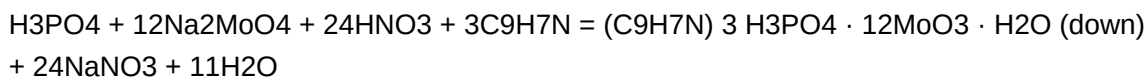
GB/T 6682 analytical laboratory use specifications and test methods (GB/T 6682-2008, ISO 3696. 1987, MOD) GB/T 9695.19 Meat and meat products - Sampling Methods

3.1 Principle

The sample was dry ashing or wet digestion to prepare a dilute acid solution at 5% to 10% of the acidity of nitrate, phosphate and sodium molybdate and quinoline the reaction of

quinoline phosphomolybdate precipitate. After washing, at $180\text{ }^{\circ}\text{C} \pm 20\text{ }^{\circ}\text{C}$ weighed at drying, the phosphorus content determined.

Reaction is.



3.2 Reagents

Unless otherwise noted, reagents were analytical grade, the water should be consistent with GB/T 6682 requirements.

3.2.1

hydrochloric acid.

3.2.2

nitrate.

3.2.3

perchloric acid.

3.2.4

hydrochloric acid solution. $\text{HCl} + \text{water} = 1 + 1$.

3.2.5

nitric acid solution. $\text{nitric acid} = 1 + 1 + \text{water}$.

3.2.6

acetone.

Sodium molybdate 3.2.7.

3.2.8

citric acid.

3.2.9

quinoline.

3.2.10

Quimociac precipitating agent.

3.2.10.1 70g of sodium molybdate was dissolved in 150mL of water;

3.2.10.2

citric acid 60g was dissolved in 150mL of water, together with nitric acid (3.2.2) 85mL;