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

GB/T 20193-2025

Replacing GB/T 20193-2006

Feed material - Bone meal, meat and bone meal

饲料原料 骨粉、肉骨粉

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Standardization Administration of the PRC**

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Foreword

This document was drafted in accordance with the rules provided in GB/T 1.1-2020 Directives for Standardization - Part

1. Rules for the Structure and Drafting of Standardizing Documents. This document serves as a replacement for GB/T 20193-2006 Bone Meal, Meat and Bone Meal for Feedstuffs. In comparison with GB/T 20193-2006, apart from structural adjustments and editorial modifications, the main technical changes are as follows:

- a) The scope of application is modified (see Chapter 1; Chapter 1 of Version 2006);
- b) The terms and definitions of "bone meal for feedstuffs" and "meat and bone meal for feedstuffs" are deleted (see 3.2 of Version 2006);
- c) The physicochemical indicators of bone meal are modified (see 5.2.1; 4.1 of Version 2006);
- d) The physicochemical indicators of meat and bone meal are modified (see 5.2.2; 4.2 of Version 2006);
- e) The provisions on sampling are added (see Chapter 6);
- f) The test methods for appearance and properties are added (see 7.1);
- g) The test method for volatile basic nitrogen is modified (see 7.13;

5.1 of Version 2006);

h) The inspection rules are modified (see Chapter 8; Chapter 6 of Version 2006);

1 Scope

GB/T 20193-2025 is the Chinese national standard covering bone and meat-and-bone meal as a feed ingredient - the protein, calcium and phosphorus, the ash and fat, the freshness, the microbiological limits, and the species restrictions that follow from the ruminant feed ban. Issued on 31 October 2025, it has been in force since 1 May 2026, replacing GB/T 20193-2006.

This document specifies the raw materials, technical requirements, inspection rules, labeling, packaging, transportation, storage and shelf life of bone meal, and meat and bone meal as feed material, and describes the sampling and test methods. This document applies to bone meal, and meat and bone meal as feed material.

2 Normative References

The contents of the following documents constitute indispensable clauses of this document through the normative references in the text. In terms of references with a specified date, only versions with a specified date are applicable to this document. In terms of references without a specified date, the latest version (including all the modifications) is applicable to this document.

GB/T 601 Chemical Reagent - Preparations of Standard Volumetric Solutions

GB/T 6432 Determination of Crude Protein in Feeds - Kjeldahl Method

GB/T 6433 Determination of Crude Fat in Feeds

GB/T 6435 Determination of Moisture in Feedstuffs

GB/T 6436 Determination of Calcium in Feeds

GB/T 6437 Determination of Phosphorus in Feeds - Spectrophotometry

GB/T 6438 Determination of Crude Ash in Feeds

GB/T 6682 Water for Analytical Laboratory Use - Specification and Test Methods

GB/T 8170 Rules of Rounding off for Numerical Values & Expression and Judgement of Limiting Values GB 10648 Feed Label

GB 13078 Hygienical Standard for Feeds

GB/T 14698 Identification Method of Feed Material by Microscopy

GB/T 14699 Feed - Sampling

GB/T 17811 Determination of Pepsin Digestibility for Animal-derived Protein Feeds - Filtration Method

3 Terms and Definitions

This document does not have terms or definitions that need to be defined.

4 Feed Material

4.1 Bone Meal It shall be derived from the same animal species. Animal bones from diseased or deteriorated animals shall not be used. Antioxidants and preservatives can be added as feed additives; relevant requirements are detailed in the Catalogue of Feed Additives Species and Safety Guidelines for the Use of Feed Additives.

4.2 Meat and Bone Meal It shall be derived from the same animal species. Except for unavoidable mixing, hooves, horns, animal hair, feathers, leather, and digestive contents shall not be added. Animal tissues from diseased animals or containing prohibited substances shall not be used. Antioxidants and preservatives can be added as feed additives; relevant requirements are detailed in the Catalogue of Feed Additives Species and Safety Guidelines for the Use of Feed Additives.

5.1 Appearance and Properties

5.1.1 Bone meal Light grayish-brown to light yellowish-brown powder, odorless and free of foreign matter.

5.1.2 Meat and bone meal Yellow to yellowish-brown powder, odorless and free of foreign matter.

5.3 Hygiene Indicators They shall comply with the provisions of GB 13078.

6 Sampling

For microbiological items, comply with the provisions of GB/T 42959; for other items, comply with the provisions of GB/T 14699.

7.1 Appearance and Properties

7.1.1 Take an appropriate amount of specimen and place it in a white porcelain dish. Under natural light, examine it by visual inspection, touch and smell, etc.

7.1.2 Microscopic examination shall be conducted in accordance with the provisions of GB/T 14698.

7.2 Moisture Moisture shall be determined in accordance with the provisions of GB/T 6435 and GB/T 18868. GB/T 6435 is the arbitration method.

7.3 Total Phosphorus Total phosphorus shall be determined in accordance with the provisions of GB/T 6437.

7.4 Calcium Calcium shall be determined in accordance with the provisions of GB/T 6436.

7.5 Ratio of Calcium Content to Total Phosphorus Content In accordance with the provisions of GB/T 6436 and GB/T 6437, determine the calcium content (w_1) and total phosphorus content (w_2). In accordance with Formula (1), calculate the ratio (r) of calcium content to total phosphorus content. Where, w_1

---the calcium content, expressed in (%); w_2

---the total phosphorus content, expressed in (%). The determination result is expressed as the arithmetic mean of parallel determinations, retaining two significant figures.

7.6 Crude Ash Crude ash shall be determined in accordance with the provisions of GB/T 6438.

7.7 Ash Insoluble in Hydrochloric Acid Ash insoluble in hydrochloric acid shall be determined in accordance with the provisions of GB/T 23742.

7.8 Crude Protein Crude protein shall be determined in accordance with the provisions of GB/T 6432 and GB/T 18868. GB/T 6432 is the arbitration method.

7.9 Lysine Lysine shall be determined in accordance with the provisions of GB/T 18246 and GB/T 18868. GB/T 18246 is the arbitration method.

7.10 Crude Fat Crude fat shall be determined in accordance with the provisions of GB/T 6433 and GB/T 18868. GB/T 6433 is the arbitration method.

7.11 Pepsin Digestibility Pepsin digestibility shall be determined in accordance with the provisions of GB/T 17811.