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

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Feed material - Fermented soybean meal

饲料原料 发酵豆粕

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part

1. Structure and drafting rules for standardization documents" Drafting. Please note that some of the contents of this document may involve patents. The issuing organization of this document does not assume the responsibility for identifying patents. This document was proposed and coordinated by the National Feed Industry Standardization Technical Committee (SAC/TC76). This document was drafted by: Feed Research Institute, Chinese Academy of Agricultural Sciences, Hubei Bangzhide Animal Husbandry Technology Co., Ltd. The main drafters of this document. Wang Jianhua, Teng Da, Wu Xiaofeng, Mao Ruoyu, Hao Ya, and Yang Na. Feed raw material fermented soybean meal

1 Scope

China's national standard for fermented soybean meal as a feed material. Ordinary soybean meal is the principal protein source in animal feed worldwide, and it carries antinutritional factors - trypsin inhibitors, lectins, oligosaccharides and the allergenic proteins glycinin and beta-conglycinin - which mature animals tolerate and young ones do not. A weaned piglet fed unfermented soybean meal suffers gut damage and diarrhoea, which is why milk products have traditionally been used instead at that stage. Solid-state fermentation degrades those factors: the microorganisms hydrolyse the allergenic proteins into peptides, consume the oligosaccharides and inactivate the inhibitors, and leave a material with higher digestible protein and a population of beneficial organisms. It has become the standard replacement for expensive milk protein in starter feeds, which is why it needs a specification rather than being sold on description.

This document specifies the technical requirements, sampling, inspection rules, labeling, packaging, transportation, storage and shelf life of fermented soybean meal as feed raw material. The corresponding test methods are described. This document applies to feed additives that use soybean meal as the main raw material ($\geq 95\%$) and are approved for use in the "Feed Additives Catalog" of the Ministry of Agriculture and Rural Affairs. A protein

feed raw material product made by solid-state fermentation of microbial strains and drying.

2 Normative references

The contents of the following documents constitute the essential clauses of this document through normative references in this document. For referenced documents without a date, only the version corresponding to that date applies to this document; for referenced documents without a date, the latest version (including all amendments) applies to This document.

GB 5009.228-2016 National Food Safety Standard Determination of Volatile Basic Nitrogen in Food

GB/T 6432 Determination of crude protein in feeds - Kjeldahl method

GB/T 6434 Determination of crude fiber content in feeds - Filtration method

GB/T 6435 Determination of moisture in feed

GB/T 6438 Determination of crude ash in feed

GB/T 6682 Specifications and test methods for water used in analytical laboratories

GB/T 8170 Rules for rounding off values and expression and determination of limit values

GB/T 8622 Determination of urease activity in soybean products for feed GB 10648 Feed Label

GB 13078 Feed Hygiene Standard

GB/T 14699.1 Feed sampling

GB/T 18246 Determination of amino acids in feed

GB/T 18823 Permissible error in determining feed test results

GB/T 20195 Preparation of animal feed samples

3 Terms and definitions

There are no terms or definitions that require definition in this document.

4 Technical requirements

4.1 Raw material requirements For relevant requirements, please refer to the "Catalogue of Feed Raw Materials".

4.2 Appearance and properties Light yellow to brown powder or granules, uniform color, no lumps; no foreign matter, no insects; has a special fermented taste, no peculiar smell.