

ICS 65.120
CCS B46



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

GB/T 17480-2008

Replacing GB/T 17480-1998

**Determination of aflatoxin B1 in animal feeding stuffs -
Enzyme-linked immunosorbent assay**

饲料中黄曲霉毒素B1的测定 酶联免疫吸附法

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Quarantine of the People's Republic of China;
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Foreword

This standard replaces GB/T 17480-1998 "feed aflatoxin B1 measured by ELISA." This standard and GB/T 17480-1998 compared to major changes are as follows:

- Range increase the "standard detection limit of 0.1 μ g/kg";
- Normative documents, "GB/T 20195 preparation of animal feed samples" used instead of "GB/T 8381-1987 feed Determination "of aflatoxin B1;
- Kit composition to increase the "

Note. Product composition and operation of the different test case between manufacturers will be slightly different, should be strictly in accordance with Specification requirements and standards ";

--- Instruments, equipment provision, remove the refrigerator terms; increased electric oscillator, grinding stoppered flask;

--- The "sample" clause to "sample preparation", while the "Press GB/T 8381-1987

5.1 requirements collection, sample handling, system To analyze the sample using "to" press GB/T 20195 requirements for specimen preparation ";

--- Limited Terms determination, the determination of the terms of grading operations into a single provision, and delete tables are measured in narrative process;

--- Quantitative determination of the terms of increase "result holds two significant figures";

--- The original "other" clause deleted, "where contact with AFB1 container needs dipped 1% sodium hypochlorite (NaClO₂) solution, 12h after cleaning spare. In order to analyze the safety of personnel, to bring medical latex gloves "to" Warning "Terms of operation;

--- Increase the informative Appendix A;

--- The sample solution is diluted and the dilution table with the results of the calculation as an information table in Appendix B. The Standard Appendix A and Appendix B are

informative. This standard by the National Standardization Technical Committee Feed Industry and focal points. This standard was drafted. Jiangsu Provincial Institute of Microbial limited liability company. The main drafters of this standard. Li Lidong, Mi Xiaoli, Yuan Jianxing, Du Shu Lin. This standard was first published in 1998, this is the first revision. Determination of aflatoxin B1 aflatoxin in feed Enzyme-linked immunosorbent assay

1 Scope

GB/T 17480-2008 is the Chinese national standard on determination of aflatoxin b1 in animal feeding stuffs - enzyme-linked immunosorbent assay, in the field of agriculture. The /T suffix marks it as a recommended standard: it is not compulsory by itself, but it becomes binding as soon as a contract, a tender or a customer specification calls it up - which in practice is how most foreign buyers meet it. It was issued on 21 November 2008 by the General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China; Standardization Administration of China, and has been in force since 1 February 2009. Classification: ICS 65.120, CCS B46. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This standard specifies the feed of aflatoxin B1 enzyme linked immunosorbent assay (ELISA) method. This standard applies to all kinds of feed materials, compound feed and determination of aflatoxin B1 in feed concentrate. The standard detection limit of 0.1µg/kg.

2 Normative references

The following documents contain provisions which, through reference in this standard and become the standard terms. For dated references, subsequent Amendments (not including errata content) or revisions do not apply to this standard, however, encourage the parties to the agreement are based on research Whether the latest versions of these documents. For undated reference documents, the latest versions apply to this standard.

GB/T 20195 preparation of animal feed samples (GB/T 20195-2006,

ISO 6498.1998, IDT) Principle

3 Sample aflatoxin B1, aflatoxin B1 ELISA antigen coated on microplate aflatoxin B1 specific anti Body is immune competitive reaction, after addition of the enzyme substrate color, the color of the sample is inversely proportional to the aflatoxin content of aflatoxin B1. Were visually or Instrumental method by standard solution of aflatoxin B1 in the sample comparison determination or calculation aflatoxin content of aflatoxin B1.

4 Reagents and materials

Unless otherwise indicated in the analysis using only recognized as analytical grade reagents and distilled or deionized water or equivalent purity.

4.1 Aflatoxin B1 ELISA test kit reagents

Note. Products of different test kit manufacturer between the composition and operation will be slightly different, should be strictly in accordance with specification requirements and standards.

4.1.1 coated with anti-aflatoxin B1 antibody polystyrene microtiter plate.

4.1.2 Sample dilution. Methanol - Distilled water (93 + 7).

4.1.3 aflatoxin B1 standard solution. 1.00µg/L, 50.00µg/L. Security analysts, to bring medical latex gloves when operating.

4.1.4 ELISA antigen Aflatoxin B1. aflatoxin B1- horseradish peroxidase crosslinked. 4.1.5 0.01mol/phosphate buffer LpH

7.5 preparation. Weigh 3.01g of disodium hydrogen phosphate ($\text{Na}_2\text{HPO}_4 \cdot 12\text{H}_2\text{O}$), 0.25g sodium dihydrogen phosphate ($\text{NaH}_2\text{PO}_4 \cdot 2\text{H}_2\text{O}$), 8.76g of sodium chloride (NaCl), dissolved in water to 1L.

4.1.6 ELISA Aflatoxin B1 antigen dilution solution. Weigh 0.1g of bovine serum albumin (BSA) dissolved in phosphate buffered 100mLpH

7.5 Red solution (4.1.5). 4.1.7 0.1mol/LpH

7.5 phosphate buffer solution. Weigh 30.1g of disodium hydrogen phosphate ($\text{Na}_2\text{HPO}_4 \cdot 12\text{H}_2\text{O}$), 2.5g dicalcium phosphate Sodium hydroxide ($\text{NaH}_2\text{PO}_4 \cdot 2\text{H}_2\text{O}$), 87.6g of sodium chloride (NaCl), dissolved in water to 1L.

4.1.8 wash liquor. lessons 0.5mL Tween-20 in 1000mL0.1mol/LpH

7.5 phosphate buffer (4.1.7).

5.0 sodium acetate - citric acid buffer solution. Weigh 15.09g sodium acetate ($\text{CH}_3\text{COONa} \cdot 3\text{H}_2\text{O}$), 1.56g of citric acid ($\text{C}_6\text{H}_8\text{O}_7 \cdot \text{H}_2\text{O}$), dissolved in water to 1L.

4.1.10 substrate solution a. Weigh tetramethylbenzidine (TMB) 0.2g sodium acetate dissolved 1LpH5.0 - citrate buffer.