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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 19539-2025

Replacing GB/T 19539-2004

Determination of ochratoxin A in feeds

饲料中赭曲霉毒素A的测定

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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.

This document replaces GB/T 19539-2004 "Determination of ochratoxin A in feed".

In addition to structural adjustments and editorial changes, the main technical changes are as follows.

a) The scope of application has been changed (see Chapter 1, Chapter 1 of the 2004 edition);

b) Thin layer chromatography (see Chapter 3 of the 2004 edition) has been deleted;

c) Enzyme-linked immunosorbent assay (ELISA) was deleted (see Chapter 4 of the 2004 edition);

d) Liquid chromatography-tandem mass spectrometry has been added (see Chapter 4).

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 is proposed and coordinated by the National Feed Industry Standardization Technical Committee (SAC/TC76).

This document was drafted by: Guangzhou Huibiao Testing Technology Center and National Animal Husbandry Station.

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The previous versions of this document and the documents it replaces are as follows.

- First issued in 2004 as GB/T 19539-2004;

- This is the first revision.

1 Scope

This document describes a method for the determination of ochratoxin A in feed by liquid chromatography-tandem mass spectrometry.

This document applies to compound feeds, concentrated feeds, concentrate supplements, additive premixes, mixed feed additives and plant-based feeds.

Determination of ochratoxin A in raw materials.

The detection limit of this document is 0.2μg/kg and the quantification limit is 0.5μg/kg.

2 Normative references

GB/T 6682

GB/T 20195

3 Terms and Definitions

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

4 Principles

Ochratoxin A in the sample was extracted with acetonitrile and water, cleaned up by immunoaffinity column, and detected by liquid chromatography-tandem mass spectrometry.

Prepare standard solution for calibration and use external standard method for quantification.

5 Reagents or materials

warn.

a) Any container that comes into contact with ochratoxin A must be immersed in a 4% sodium hypochlorite solution and cleaned after half a day for later use;

b) For safety reasons, analysts must wear medical latex gloves when operating.

Unless otherwise specified, only analytical grade reagents were used.

5.1 Water. GB/T 6682, Grade 1.

5.2 Methanol. Chromatographic grade.

5.3 Potassium hydroxide solution. Weigh 5.6 g of potassium hydroxide, dissolve it in water,

and dilute to 100 mL with water.

5.4 Phosphate buffered saline (PBS). weigh 8.0 g sodium chloride, 1.2 g disodium hydrogen phosphate, 0.2 g potassium dihydrogen phosphate, and 0.2 g potassium chloride and dissolve them in Add 900 mL of water, adjust the pH to 7.0 with potassium hydroxide solution (5.3), make up to 1 L with water, and mix well.

5.5 Extraction solution. Measure 800 mL of acetonitrile and.200 mL of water and mix well.

5.6 Eluent. Take 2 mL of acetic acid, dilute to 100 mL with methanol, and mix thoroughly.