

ICS 65.120
CCS B 46



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

GB/T 19542-2025

Replacing GB/T 19542-2007

**Determination of sulfonamides in feeds - Liquid
chromatography-tandem mass spectrometry**

饲料中磺胺类药物的测定 液相色谱-串联质谱法

Issued on: August 1, 2025

Implemented on: February 1, 2026

**Issued by: State Administration for Market Regulation;
Standardization Administration of the PRC**

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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 19542-2007 "Determination of sulfonamides in feed - High performance liquid chromatography" and GB/T 8381.10- 2005 "Determination of sulfaquinoline in feed - High performance liquid chromatography method". This document is based on GB/T 19542-2007 and integrates Compared with GB/T 19542-2007, this document has the following changes, except for the structural adjustment and editorial changes.

The technical changes are as follows.

- a) The scope of application and limit of quantification have been changed, and the types of sulfonamides have been added (see Chapter 1, Chapter 1 of the 2007 edition);
- b) The principles have been changed (see Chapter 4, Chapter 3 of the 2007 edition);
- c) The test steps have been changed (see Chapter 8, Chapter 7 of the 2007 edition);
- d) The test data processing has been changed (see Chapter 9, Chapter 8 of the 2007 edition);
- e) The precision requirements have been changed (see Chapter 10, Chapter 9 of the 2007 edition).

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: Institute of Agricultural Quality Standards and Testing Technology, Chinese Academy of Agricultural Sciences, Henan Zhongbiao Testing Service Co., Ltd., Shandong Shenghua Testing Technology Co., Ltd. and Guangzhou Huibiao Testing Technology Center.

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The previous versions of the documents replaced by this document are as follows.

- GB/T 8381.10, first issued in 2005;
- GB/T 19542, first issued in 2004, first revised in 2007, this is the second revision, incorporated into GB/T 8381.10- Content from 2005.

Determination of sulfonamides in feed Liquid chromatography-tandem mass spectrometry

1 Scope

This document describes a method for the determination of 29 sulfonamides in feed by liquid chromatography-tandem mass spectrometry.

This document applies to compound feeds, concentrated feeds, concentrate supplements, additive premixes, mixed feed additives and feed ingredients Sulfamylon, sulfaguanidine, sulfa, sulfacetamide, sulfadimethoxine, sulfadiazine, sulfathiazole, sulfapyridine, trimethoprim Sulfadiazole, sulfamethazine, trimethoprim, sulfadimethoxine, sulfamethoxazole, sulfamethazine, dimethicone Oxymethylbenzylamine, sulfamethoxypyridazine, sulfachloropyridazine, sulfamethoxazole, sulfamethoxazole, sulfa-o-dimethoxine, sulfamethoxazole, Methotrexate, sulfabenzoyl, sulfaphenazole, sulfachloropyrazine, sulfapyrazole, sulfamethoxazole, sulfaquinoline, sulfanitrophenyl Determination.

The detection limit of the method in this document is 0.03 mg/kg and the quantification limit is 0.1 mg/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

The analytes in the sample were extracted with formic acid acetonitrile solution, purified by multiple impurity adsorption materials, and detected by liquid chromatography-tandem mass spectrometry.

The standard curve was added for calibration and the external standard method was used for quantification.

5 Reagents or materials

Unless otherwise specified, only analytical grade reagents were used.

5.1 Water. GB/T 6682, Grade 1.

5.2 Methanol. chromatographic grade.

5.3 Formic acid. chromatographically pure.

5.4 0.1% formic acid solution. Take 0.1 mL of formic acid (5.3) and add it to 100 mL of water and mix well.

5.5 Extraction solution. Take 10 mL of formic acid, add 990 mL of acetonitrile and mix well.

5.6 Dilution solution. Take 0.1 mL of formic acid and 10 mL of methanol, add 90 mL of water and mix well.