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

**GB/T 44740-2024**

**Determination of chlorphenamine and bromphenamine in  
feeds-Liquid chromatography-tandem mass spectrometry**

饲料中氯苯那敏和溴苯那敏的测定 液相色谱-串联质谱法

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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 is required.

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/TC 76).

This document was drafted by: Institute of Agricultural Quality Standards and Testing Technology, Chinese Academy of Agricultural Sciences.

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Determination of chlorpheniramine and brompheniramine in feed Liquid chromatography-tandem mass spectrometry

### 1 Scope

This document describes a method for the determination of chlorpheniramine and brompheniramine in feed by liquid chromatography-tandem mass spectrometry.

This document applies to chlorpheniramine in compound feeds, concentrated feeds, concentrate supplements, additive premixes and mixed feed additives.

Determination of pheniramine and brompheniramine.

The detection limit of this document is 0.003 mg/kg and the quantification limit is 0.01 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 and acetonitrile solution, cleaned up by mixed strong cation exchange solid phase extraction cartridge, and then purified by liquid chromatography-tandem mass spectrometry.

The samples were determined by spectrometer, calibrated by matrix-matched standard curve, and quantified by external standard method.

## 5 Reagents or materials

Unless otherwise specified, only analytical grade reagents were used.

5.1 Water. GB/T 6682, Grade 1.

5.2 Formic acid. chromatographically pure.

5.3 Methanol. chromatographic grade.

5.4 Acetonitrile. chromatographic grade.

5.5 0.1% formic acid solution. Pipette 1 mL of formic acid (5.2), dilute to 1000 mL with water, and mix thoroughly.

5.6 1% Formic Acid x Acetonitrile Solution. Pipette 1 mL of formic acid, dilute to 100 mL with acetonitrile, and mix thoroughly.

5.7 5% ammonia x methanol solution. Take 5 mL of ammonia water, dilute to 100 mL with methanol, and mix thoroughly.

5.8 Chlorpheniramine standard stock solution (500 µg/mL). Weigh chlorpheniramine (CAS No.. 13272279, purity ≥98%).

25 mg, accurate to 0.01 mg, dissolve in acetonitrile, transfer to a 50 mL volumetric flask, make up to volume, and shake well. Store below -18°C. The expiration date is not More than 6 months, or using standard substances/standard samples.

5.9 Brompheniramine standard stock solution (500 µg/mL). Weigh brompheniramine (CAS number. 8672276, purity ≥98%).