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**Determination of isothiazolinone compounds in feeds - Liquid
chromatography-tandem mass spectrometry**

饲料中异噻唑啉酮类化合物的测定 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.

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).

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Determination of isothiazolinone compounds in feed Liquid chromatography-tandem mass spectrometry

1 Scope

This document describes a method for the determination of three isothiazolinone compounds in feed by liquid chromatography-tandem mass spectrometry.

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

Determination of Thiazolinone (MIT), Methylchloroisothiazolinone (CIT) and

Thiophanate-methyl (BIT).

The detection limit of this document is 10 μ g/kg and the quantification limit is 30 μ g/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 Principle

The analytes in the sample were extracted with acetonitrile, purified by a hydrophilic-lipophilic equilibrium solid phase extraction column, and detected by liquid chromatography-tandem mass spectrometry.

The samples were measured, calibrated with matrix-matched standard curve, and quantified with 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 Methanol. chromatographic grade. 5.3 Acetonitrile.

5.4 Standard stock solution (1 mg/mL). Accurately weigh the standard MIT (CAS No.. 2682-20-4, purity not less than 99%), CIT (CAS No.. 26172-55-4, purity not less than 99%), BIT (CAS No.. 2634-33-5, purity not less than 99%), appropriate amount (accurate to 0.01 mg), respectively, dissolved in methanol (5.2), fixed to volume, mixed, and prepared into a 1 mg/mL standard stock solution, or purchased commercially available certified standard Solution. Store below -18°C, valid for 6 months.

5.5 Mixed standard intermediate solution (10 μ g/mL). Accurately pipette 100 μ L of each standard stock solution (5.4) into a 10 mL volumetric flask.

Dilute with methanol (5.2), make up to volume, and mix well. Store at 2°C~8°C, with a shelf life of 3 months.

5.6 Mixed standard series solution. Accurately transfer an appropriate amount of mixed standard intermediate solution (5.5) into a volumetric flask and dilute with water to prepare the mass