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NY

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

NY/T 725-2003

**Determination of monensin in feeds. High performance liquid
chromatography**

饲料中莫能菌素的测定高效液相色谱法

(English Translation)

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Foreword

This standard is based on the general analysis methods recommended by the National Feed Association (NFIA) and a large number of domestic and foreign literature.

According to the research of China's technological development level, high performance liquid chromatography (HPLC)-post-column derivatization was adopted.

This standard was proposed by the Ministry of Agriculture of the People's Republic of China and the National Feed Industry Standardization Technical Committee.

This standard is under the jurisdiction of the National Feed Industry Standardization Technical Committee.

This standard was drafted. National Veterinary Drug Evaluation Center (National Agricultural University Animal Medical College).

1 Scope

This standard specifies a high performance liquid chromatography (HPLC) method for the detection of monensin in animal feed.

This standard applies to the determination of monensin in compound feed, concentrated feed and additive premix feed. The detection limit of this method is 5mg/kg.

2 Normative references

The terms in the following documents become the terms of this standard by reference to this standard. All dated references, followed by all Modifications (excluding errata content) or modified versions are not suitable for this standard. However, it is encouraged whether the parties that have reached an agreement under this standard may Use the latest version of these files. For undated references, the latest edition applies to this standard.

GB/T 6682 Analytical laboratory water specifications and test methods GB/T 14699.1 Feed sampling method

3 Principle of the method

Extracting monensin from the sample with methanol-water, using methanol-glacial acetic acid-water as the mobile phase, vanillin as the derivatizing agent, and using high-performance liquid color Spectro-post-column derivatization-ultraviolet detection separation assay.

4 Reagents and solutions

Unless otherwise stated, the reagents used in this method are of analytical grade and the water is deionized water, which meets the requirements of GB/T 6682 secondary water.

4.1

Sample extract. [methanol (chromatographic purity) + water] (90 + 10).

4.2

Vanillin Derivatization Solution. Measure 5 mL of concentrated sulfuric acid, slowly add to 250 mL of methanol, place in an ice water bath, and slowly add 20 g of vanilla.

Aldehyde, mix, de-gas, save in the dark, ready to use.

4.3

Monensin standard solution.

4.3.1

Monensin standard stock solution. Accurately weigh the monensin standard (purity $\geq 90\%$) 0.1000g, placed in a 100mL volumetric flask in the solution, the solution was dissolved in methanol, and the concentration was 1000 $\mu\text{g/mL}$, and stored in a refrigerator at 4 ° C.

4.3.2

Monensin standard working solution. accurately draw a certain amount of standard stock solution (4.4.1), placed in a 10mL volumetric flask, with a the alcohol was diluted and fixed to a concentration of 2.0 $\mu\text{g/mL}$, 4.0 $\mu\text{g/mL}$, 6.0 $\mu\text{g/mL}$, 8.0 $\mu\text{g/mL}$, 10.0 $\mu\text{g/mL}$, and 12.0 $\mu\text{g/mL}$.

Standard working fluid.

5 Instruments and equipment

Instruments and equipment commonly used in laboratories.

5.1

High Performance Liquid Chromatograph. Post-column derivatization unit and UV detector.

5.2

Centrifuge.

5.3

Oscillator.

5.4

Glass stoppered triangular flask (250mL).

5.5

Microsampler.

5.6

Microporous membrane (0.45 μm).