

ICS 65.120
CCS B 20

NY

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

NY/T 727-2003

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

饲料中呋喃唑酮的测定高效液相色谱法

(English Translation)

Issued on: December 1, 2003

Implemented on: March 1, 2004

Issued by: Ministry of Agriculture of PRC

Table of Contents

- Foreword
- 1 Scope
- 2 Normative references
- 3 Principle
- 4 Reagents and materials

Foreword

This standard is modified to use ISO 14797:1999 (E) "High Performance Liquid Chromatography for the Determination of Furazolidone Content in Feeds" (English version).

This standard was redrafted in accordance with ISO 14797:1999(E).

In view of China's national conditions and laboratory equipment, this standard has been modified in the use of ISO 14797:1999 (E). Related skills Surgical differences and editorial modifications have been incorporated into the text and identified by vertical single lines in the margins of the terms they refer to. In Appendix B A list of these technical differences and editorial changes is given for reference.

Appendix A and Appendix B of this standard are informative annexes.

This standard was proposed by the Ministry of Agriculture of the People's Republic this standard is under the jurisdiction of the National Feed Standardization Technical Committee.

1 Scope

This standard specifies the method for the determination of furazolidone in compound feed, premix feed and concentrated feed by high performance liquid chromatography (HPLC).

This standard can be used for compound feed containing 10mg/kg~5000mg/kg furazolidone and premixed feed with 0.5%-20% content.

Materials and concentrated feed.

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 (not including errata content) or revisions do not apply to this standard, however, parties to agreements based

on this standard are encouraged to study is it possible to 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

The compound feed is moistened with a small amount of water, and the furazolidone is extracted with a mixture of acetonitrile and methanol, and the premixed feed and the concentrated feed are directly the furazolidone is extracted with a mixture of acetonitrile and methanol, and the extract is purified by a short column of alumina and diluted with a diluent.

The phase was separated by HPLC and the UV detector was measured at 365 nm.

4 Reagents and materials

Only reagents identified as superior or chromatographically pure were used in the analysis unless otherwise stated.

4.1

Water. Meet the requirements of GB/T 6682 first-class water.

4.2

Extractant. acetonitrile:methanol = 1:1. Mix well and put it at room temperature before use.

4.3

Diluent. Mix 350 mL of extractant (4.2) with 650 mL of water (4.1).

4.4 10% acetic acid solution. Dilute 10 mL of glacial acetic acid to 100 mL with water.

4.5

Sodium acetate buffer, hydrazine ($\text{CH}_3\text{CO}_2\text{Na}$) = 0.01 mol/L, pH = 6.0.

Dissolve 0.82 g of sodium acetate with about 700 mL of water, adjust the pH to 6.0 with acetic acid solution (4.4), and dilute to 1000 mL with water.

Mix well.

4.6

HPLC mobile phase. Take 800 mL of sodium acetate buffer (4.5) and 200 mL of acetonitrile, mix well and pass through a 0.2 μm filter.

Filtration, ultrasonic degassing for 10 min before use.

4.7

Furazolidone standard. N-(5-nitro-2-furomethylidene)-3-amino-2-oxazolidinone.

Note: Since furazolidone is very sensitive to light, all operations should be carried out in the dark, and should be avoided during inhalation and contact.

Toxic furazolidone standards and solutions, the preparation of the solution should be carried out in a fume hood, work with glasses, wear overalls protection.

4.8

furazolidone stock solution (about 250µg/mL). weigh 25mg ± 1mg furazolidone standard (4.7), accurate to 0.1mg, with the solution (4.2) was dissolved, diluted to 100 mL, mixed, and stored in a refrigerator at 0 ° C to 8 ° C. The purity of the standard is taken into account when calculating the solution concentration.

The solution is valid for one month.

4.9

furazolidone working solution (about 5µg/mL and 12.5µg/mL). accurately absorb 2.0mL and 5.0mL stock solution (4.8) separately in a 100 mL volumetric flask, add 65 mL of water, dilute to the mark with the extract (4.2) and mix well. Prepare fresh work for each batch of samples.