

ICS 65.120

CCS B46



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

GB/T 14702-2018

Replacing GB/T 14702-2002

**Determination of vitamin B6 in premix - High performance liquid
chromatograph**

添加剂预混合饲料中维生素B6的测定 高效液相色谱法

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Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009. This standard replaces GB/T 14702-2002 "Determination of Vitamin B6 in Feeds by High Performance Liquid Chromatography". Compared with GB/T 14702-2002, the main technical contents of this standard are revised as follows:

---The standard name was changed from "Determination of Vitamin B6 in Feed to High Performance Liquid Chromatography" to "Prepared Vitamins in Premixed Feeds" Determination of B6 by High Performance Liquid Chromatography;

--- Increased chromatographic conditions for high performance liquid chromatography-fluorescence detectors (see Chapter 7,.2002 version 7.2.2);

--- Added vitamin B6 liquid chromatography-ultraviolet detector chromatographic conditions and liquid chromatography-fluorescence detector chromatography Standard chromatogram (see Figure A.1 and Figure A.2 in Appendix A). This standard is proposed and managed by the National Feed Industry Standardization Technical Committee (SAC/TC76). This standard was drafted. Institute of Agricultural Quality Standards and Testing Technology, Chinese Academy of Agricultural Sciences [National Feed Quality Supervision and Inspection Center (Beijing)]. The main drafters of this standard. Li Lan, Suo Decheng, Wei Shulin. The previous versions of the standards replaced by this standard are.

---GB/T 14702-1993, GB/T 14702-2002. Determination of Vitamin B6 in Additive Premixed Feed High performance liquid chromatography

1 Scope

GB/T 14702-2018 is the Chinese national standard on determination of vitamin b6 in premix - high performance liquid chromatograph, in the field of agriculture. The /T suffix marks it as a recommended standard: it is not compulsory by itself, but it becomes binding as soon as a contract, a tender or a customer specification calls it up - which in practice is how most foreign buyers meet it. It was issued on 17 September 2018 by the State

Administration for Market Regulation; Standardization Administration of China, and has been in force since 1 April 2019. Classification: ICS 65.120, CCS B46. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This standard specifies high performance liquid chromatography for the determination of vitamin B6 (pyridoxine hydrochloride) in additive premixed feeds. This standard applies to the determination of vitamin B6 in vitamin premix feeds and compound premix feeds. The limit of quantitation for the UV detector is 30 mg/kg; the limit of quantitation for the fluorescence detector is 10 mg/kg.

2 Normative references

The following documents are indispensable for the application of this document. For dated references, only dated versions apply to this article. Pieces. For undated references, the latest edition (including all amendments) applies to this document.

GB/T 6682 Analytical laboratory water specifications and test methods

GB/T 14699.1 Feed sampling Preparation of

GB/T 20195 animal feed samples

3 Principle

The vitamin B6 in the sample is ultrasonically extracted by an acidic extract, and then injected into a high performance liquid chromatography reverse phase chromatography system for separation. The external detector (diode matrix detector) or fluorescence detector detects the content of vitamin B6 by external standard method.

4 Reagents or solutions

Unless otherwise specified, the reagents used are of analytical grade, water is distilled water, and chromatographic water is deionized water, which meets the first level of GB/T 6682. Water regulations.

4.1 Disodium edetate dihydrate (EDTA). excellent grade pure.

4.2 Sodium heptane sulfonate (PICB7). excellent grade pure.

4.3 Glacial acetic acid. excellent grade pure.

4.4 Triethylamine. excellent grade pure.

4.5 Methanol. Chromatographically pure.

4.6 Hydrochloric acid solution. Take 8.5mL of hydrochloric acid and dilute to 1000mL with water.

4.7 Sodium dihydrogen phosphate solution.

3.9 g of sodium dihydrogen phosphate was dissolved in 1000 mL of ultrapure water and passed through a 0.45 μ m aqueous filter.

4.8 Extractant. In a 1000mL volumetric flask, weigh 50mg (accurate to 0.001g) EDTA (4.1), add 700mL deionized in sequence Water, ultrasound completely dissolves EDTA. Add 25 mL of glacial acetic acid (4.3), 5 mL of triethylamine (4.4), dilute to the mark with deionized water, shake uniform. 800 mL of this solution was mixed with.200 mL of methanol, degassed by ultrasonication, and used.

4.9 Mobile phase. In a 1000 mL volumetric flask, weigh 50 mg (accurate to

0.001

1.1 g (accurate to

0.001

g) heptane Sodium sulfonate (4.2), add 700 mL deionized water, 25 mL glacial acetic acid (4.3), 5 mL of triethylamine (4.4), and dilute to room with deionized water. Scale and shake. The pH of the solution was adjusted to $3.70 \pm$

0.10 with glacial acetic acid and triethylamine over a 0.45 μ m filter. Take the solution 800mL and 200 mL of methanol (4.5) was mixed, ultrasonically degassed, and set aside.