

ICS 65.120

CCS B 46



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

GB 7294-2017

Replacing GB/T 7294-2009

Feed additive - Menadione sodium bisulfite (vitamin K3)

饲料添加剂 亚硫酸氢钠甲萘醌 (维生素K3)

Issued on: October 14, 2017

Implemented on: May 1, 2018

**Issued by: General Administration of Quality Supervision, Inspection and
Quarantine;
Standardization Administration of the PRC**

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Foreword

The first chapter of this standard, Chapter 3 and Chapter 5 is mandatory, and the rest is recommended. This standard was drafted in accordance with the rules given in GB/T 1.1-2009. This standard replaces GB/T 7294-2009 "feed additive sodium thiourea menaquinone (vitamin K3)". This standard compared with GB/T 7294-2009, the main differences are as follows:

- Specification structured writing;
- Content determination method to remove the cotton wool filtration step, the calculation and the results of the said "absolute difference" to "relative deviation";
- Technical indicators, the "arsenic salt" limited by the 0.0005% adjusted to 2mg/kg;
- Revised arsenic determination method;
- Added Appendix A (informative). This standard is proposed and managed by the National Feed Industry Standardization Technical Committee (SAC/TC76). This standard drafting unit. Zhejiang Veterinary Drugs Feed Supervision, Brother Technology Co., Ltd.. The main drafters of this standard. Zhu Cong Ying, Ren Yuqin, apricot Fen, Wu Wang, Zhou Fengchao, Lv Weijun, Wei Zhengyi, Jiang Kai, Chen Weiliang, Huang Juan, Qiu Shijun. This standard replaces the standards previously issued as.
- GB 7294-1987, GB/T 7294-2006, GB/T 7294-2009. Feed additives Sodium thiourea menaquinone (vitamin K3)

1 Scope

China's mandatory standard for menadione sodium bisulfite used as a feed additive - the form in which vitamin K is supplied to animals. It specifies the requirements, the test methods, the inspection rules and the labelling, packaging, transport, storage and shelf life of feed additive menadione sodium bisulfite. Vitamin K is required for blood coagulation, and its absence shows up not as poor growth but as haemorrhage: birds that bleed from minor injuries and do not stop, and internal bleeding at slaughter. Poultry are the animals at risk, because they have little intestinal synthesis to fall back on and because coccidiostats

and some antibiotics in the ration suppress what there is - so the supplement is not optional in modern production. Menadione itself is an oily, unstable substance that cannot be handled in a feed mill, which is why it is supplied as this water-soluble bisulfite adduct: the salt is a stable, free-flowing powder that releases the active vitamin in the animal. That is the fact the standard is written around. The requirements cover the assay expressed as menadione, the appearance, the loss on drying, the pH and the particle size, and the impurity limits including the heavy metals - and, critically, the stability, because the adduct decomposes on exposure to moisture, alkali, light and heat, and a decomposed product assays low while looking unchanged. The packaging and the stated shelf life are part of the same requirement rather than separate ones. The feed hygiene limits of GB 13078 apply throughout. Issued on 14 October 2017 and in force since 1 May 2018, it replaces GB/T 7294-2009.

This standard specifies the feed additive sodium thiourea menaquinone (vitamin K3) product requirements, test methods, test rules and standard Sign, package, transport, storage and shelf life. This standard applies to chemical synthesis with 1 to 3 water-based feed additive sodium thiourea menaquinone (vitamins K3). Chemical Name 2-Methyl-1,4-dioxo-1,2,3,4-tetrahydro-naphthalene-2-sulfonic acid sodium hydrate Molecular formula $C_{11}H_9NaO_5S \cdot nH_2O$ Relative molecular mass. 294.26 ($n = 1$), 312.27 ($n = 2$), 330.29 ($n = 3$) (according to 2007 international relative atomic mass) Structure.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version applies to this article For all undated references, the latest edition (including all amendments) applies to this document.

GB/T 601 chemical reagent standard titration solution preparation

GB/T 603 chemical reagent test methods used in the preparation of preparations and products

GB/T 6682 analytical laboratory water specifications and test methods GB 10648 feed label

GB/T 13088 Determination of chromium in feed

GB/T 14699.1 feed sampling

GB/T 21781 chemical melting point and melting range of test methods capillary method

3 Requirements

3.1 Appearance and traits This product is white crystalline powder, odorless or slightly special smell, hygroscopic, case of light easy to decompose. This product is soluble in water, ethanol, Ether or benzene almost insoluble.

3.2 Specifications Technical indicators should meet the requirements of Table 1.

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