

ICS 11.220
CCS B41



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

GB/T 17494-2023

Replacing GB/T 17494-2009

Diagnostic techniques for equine infectious anemia

马传染性贫血诊断技术

Issued on: September 7, 2023

Implemented on: April 1, 2024

**Issued by: State Administration for Market Regulation;
Standardization Administration of China**

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part

1. Structure and Drafting Rules of Standardization Documents" Drafting. This document replaces GB/T 17494-2009 "Indirect ELISA Diagnostic Technology for Equine Infectious Anemia" and is the same as GB/T 17494-2009. In comparison, in addition to structural adjustments and editorial changes, the main technical changes are as follows:

- Added clinical diagnosis of equine infectious anemia (see Chapter 6);
- Added real-time fluorescence PCR detection of equine infectious anemia virus (see Chapter 8);
- Added the isolation and identification of equine infectious anemia virus (see Chapter 9);
- Added equine infectious anemia agar gel immunodiffusion test (see Chapter 10);
- Changed the indirect ELISA for equine infectious anemia (see Chapter 11, Chapter 4 and 5 of the 2009 edition);
- Added equine infectious anemia competition ELISA (see Chapter 12);
- Added equine infectious anemia immunoblotting test (see Chapter 13); Please note that

some content in this document may be subject to patents. The publisher of this document assumes no responsibility for identifying patents. This document is proposed by the Ministry of Agriculture and Rural Affairs of the People's Republic of China. This document is under the jurisdiction of the National Animal Health Standardization Technical Committee (SAC/TC181). This document was drafted by: Harbin Veterinary Research Institute of the Chinese Academy of Agricultural Sciences, Xinjiang Uygur Autonomous Region Animal Disease Prevention and Control Center, Guangzhou Customs of the People's Republic of China, China Agricultural University, Beijing Customs of the People's Republic of China. The main drafters of this document. Hu Zhe, Wang Xiaojun, Guo Wei, Lin Yuezhi, Wang Xuefeng, Wang Wen, Chen Ru, Wang Qin, and Bai Yaduo. The previous versions of this document and the documents it replaces are as follows:

---First published as GB/T 17494-2009 in 2009;

---This is the first revision.

Category II animal diseases stipulated in the "List of Epidemic Diseases" (2022). EIAV only infects animals of the genus Equus, of which horses are the most susceptible. Infected animals are the main source of infection. After EIAV infects the host, the virus will integrate into the host's genome, causing persistent host infection and lifelong virus transmission. Clinically, sick animals may show repeated fever, Anemia, jaundice, hemorrhage, edema and emaciation are the characteristics of the disease. However, a certain proportion of horses and most donkeys and mules do not show obvious clinical symptoms after infection. As latent virus carriers. There is currently no available vaccine for this disease. The diagnosis of this disease requires laboratory diagnosis. EIAV belongs to reverse transcription virus. After entering the host cell, the virus and EIAV replicate in the early stage under the action of viral reverse transcriptase to form double-stranded viral DNA (often called provirus). The proviral DNA is further integrated into the host chromosome under the action of the virus-encoded integrase. EIAV proviral DNA is relatively stable in the infected host and is often used as a target for viral nucleic acid detection. There are relatively few EIAV genome sequences in different regions of the world. There is a big difference. The nucleic acid detection method used in this document is a universal real-time fluorescence PCR method suitable for different current strains.

Diagnostic Technology for Equine Infectious Anemia

1 Scope

GB/T 17494-2023 is the Chinese national standard on diagnostic techniques for equine infectious anemia, in the field of health care technology. 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 7 September 2023 by the State Administration for Market Regulation; Standardization Administration of China, and has been in force since 1

April 2024. Classification: ICS 11.220, CCS B41. 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 document describes the clinical diagnosis of EIA, real-time fluorescence PCR, virus isolation and identification, agar gel immunodiffusion test, indirect Methods of ELISA, competitive ELISA, and western blot assays. This document applies to the diagnosis, quarantine, surveillance and epidemiological investigation of EIA.

2 Normative reference documents

The contents of the following documents constitute essential provisions of this document through normative citations in the text. Among them, dated references For referenced documents without dates, only the version corresponding to that date applies to this document; for undated referenced documents, the latest version (including all amendments) applies to this document. document.

GB/T 6682 Specifications and test methods for water used in analytical laboratories

GB 19489 General requirements for laboratory biosafety

NY/T 541 Technical specifications for collection, storage and transportation of veterinary diagnostic samples

3 Terms and definitions

There are no terms or definitions to be defined in this document.

4 Abbreviations

The following abbreviations apply to this document. BCA. Bicinchoninic Acid OD value. optical density value (OpticalDensity) Electrophoresis)