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

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Protocol of quarantine for bovine anaplasmosis

牛无浆体病检疫技术规范

(English Translation)

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Foreword

This standard is a reference to the International Organization for Animal Health (OIE) "Manual of Diagnostic, Tests and Vaccines for Terrestrial Animals" (2004 edition) CHAPTER 2.3.7 BOVINE ANAPLASMOSIS, at home and abroad a large number of references and standards Bovine anaplasmosis research diagnostic method of drafting units prepared.

The Standard Appendix B, Appendix C, Appendix D is a normative appendix, Appendix A is an information appendix.

This standard is proposed and managed by the National Certification and Accreditation Administration Committee.

This standard was drafted. People's Republic of China Shanghai Entry-Exit Inspection and Quarantine Bureau, Shanghai Veterinary Research Institute, Chinese Academy of Agricultural Sciences, Central China Agricultural University.

1 Scope

This standard specifies the bovine anaplasmosis quarantine technical specifications, including smear microscopy, polymerase chain reaction, enzyme-linked immunosorbent assay detection Measuring method.

This standard applies to bovine anaplasmosis quarantine.

2 Normative references

The following documents contain provisions which, through reference in this standard and become the standard terms. For dated references, subsequent Amendments (not including errata content) or revisions do not apply to this standard, however, encourage the parties to the agreement are based on research Whether the latest versions of these documents. For undated reference documents, the latest versions apply to this standard.

GB/T 18651 bovine anaplasmosis rapid agglutination detection method SN/T 1679 animal anaplasmosis micro complement fixation test procedures

3 Overview

Bovine anaplasmosis (Bovineanaplasmosis) by Anaplasma parasites in cattle red blood cells, causing fever, anemia, jaundice and progressive Weight loss, or even a disease death. The distribution of the disease, pathogen classification, the media, etc. See Appendix A.

Diagnosis of bovine anaplasmosis include clinical symptoms and pathological changes, pathogen identification and serum antibodies. Serological detection methods the complement fixation test (Complementfixationtest, CFT) and card agglutination test (Cardagglutinationtest, CAT) is the most commonly used method. CFT used for many years, the rules see SN/T 1679, but recent data confirm the diagnosis of persistent infection in CFT when the cow, the sensitivity is only 20%, most of the carriers of the pathogen can not be detected. Therefore, CFT confirmatory test for individual animals is not reliable of. The advantages of CAT is sensitive, rapid, both in the laboratory can also be carried out in the field, the test results can be reached in a few minutes. False negative rate it is very low, but non-specific reaction is a problem. It can be used as screening methods, operating procedures, see GB/T 18651. Competitive ELISA method in the detection sensitivity Infected animals, which greatly increase the sensitivity. Indirect ELISA, dot ELISA and fluorescent antibody test can also be used to detect antibodies specific, but Since an indirect fluorescent antibody test to detect the operation of their day limited number of samples, and there are non-specific fluorescence reaction, generally wish to vote Other serological methods.

4.1 Clinical symptoms and pathological changes

Anaplasmosis with increasing age of the animal becomes severe, infected cattle showed temperature continues to rise, reaching 10d ~ 21d, but rarely exceed Over 41 °C, and accompanied by anemia, weakness and breathing difficulties, especially increased after exercise. Early depression, loss of appetite is not obvious, but with Development of the course and became clear. The most typical clinical symptoms of anemia and jaundice, which occurs late in the disease. Hemoglobin does not appear White anemia and

hemoglobinuria, but because of bile pigments in the urine, infected cattle appear brown urine, that contribute to the differential diagnosis of anaplasmosis and Babesiosis. This disease is often in the same area two popular, can only be diagnosed through pathogen identification. In addition, when the number of Anaplasma in blood smears A relatively small amount (such as in the recovery stage of the disease), red blood cell count and hematocrit decrease diagnosis Anaplasma infection. No edge Slurry virulent, when an outbreak of cattle mortality rate of up to 50% to 80%. Miscarriage pregnant cows, breeding cows milk production reduced by 30% ~ 50%, or even stop lactation. Beef cattle weight has dropped a lot, so that the quality and quantity of livestock suffered serious losses. Autopsy performance the anemia and weight loss, jaundice, liver, spleen, organs, jaundice, biliary thick, sometimes bleeding heart, dark urine than normal. The disease is hepatic necrosis Characteristics. Central Anaplasma pathogenic weak, less affected bovine infection.