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GB/T 27530-2025

Replacing GB/T 27530-2011

Diagnostic techniques for bovine haemorrhagic septicaemia

牛出血性败血症诊断技术

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part 1: Structure and drafting rules for standardization documents" Drafting is required.

This document replaces GB/T 27530-2011 Diagnostic technology for bovine hemorrhagic septicemia. Compared with GB/T 27530-2011, except for the structure In addition to adjustments and editorial changes, the main technical changes are as follows.

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--The scope of application has been changed (see Chapter 1, Chapter 1 of the 2011 edition);

--Added abbreviations (see Chapter 4);

-- Changed the clinical diagnosis characteristics and added the result determination of clinical diagnosis (see Chapter 5, Chapter 4 of the 2011 edition);

--Changed the operating procedures for bacterial isolation, microscopic examination, and identification (see Chapters 7 and 8, and Chapter 5 of the 2011 edition);

--Added culture medium for bacterial isolation and culture (see 7.1, Appendix A);

--Changed the smear staining microscopy of bacteria (see 7.2, Appendix B, 5.2, Appendix A of the 2011 edition);

-- Deleted MR, VP test, beta-galactosidase test, citrate utilization test (see 5.3.2.3.2, 2011 edition) 5.3.2.3.4, 5.3.2.3.5);

--Changed the identification method of biochemical characteristics of bacteria and specified the preparation of culture media for different biochemical tests (see 8.1, Appendix A, Appendix B, 5.3.2.3 of the 2011 edition);

--The capsular antigen and antiserum preparation methods for the indirect hemagglutination test have been changed (see 8.2, 5.3.2.4.1 of the 2011 edition);

--Added the criteria for capsule type identification and the multiplex PCR identification technique for Pasteurella multocida (see Chapter 9);

--The comprehensive judgment criteria have been changed (see Chapter 10, Chapter 6 of the 2011 edition).

Please note that some of the contents of this document may involve patents. The issuing organization of this document does not assume the responsibility for identifying patents.

This document was 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 Technical Committee on Animal Health Standardization (SAC/TC 181).

This document was drafted by: Beijing Academy of Agricultural and Forestry Sciences, China Animal Health and Epidemiology Center, Gansu Agricultural University, Fujian Provincial Agricultural University Institute of Animal Husbandry and Veterinary Medicine, Academy of Sciences.

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The previous versions of this document and the documents it replaces are as follows.

--First published in 2011 as GB/T 27530-2011; --This is the first revision.

Introduction

Bovine haemorrhagic septicaemia is a major infectious disease in cattle, buffalo, yaks, dairy cows and bison.

Disease caused by certain serotypes of Pasteurella multocida (Pm), typically characterized by highly lethal acute septicemia and fibrinous suppurative pneumonia. The disease is mainly sporadic, occasionally spreading locally and causing great harm. World Organization for Animal Health (WOAH) lists bovine hemorrhagic septicemia as a statutory listed disease, and China lists it as a Category III animal disease.

Pasteurella multocida is divided into five capsular serotypes (A, B, D, E, and F). The cross-immune protection between the capsular serotypes is weak.

Serotype identification must be carried out first when formulating targeted prevention and control measures.

The revision of this document refers to the WOAH Manual of Diagnostic Tests and Vaccines for Terrestrial Animals (2022) and combines relevant technical research in China. New research results.

Diagnostic technology of bovine hemorrhagic septicemia

1 Scope

This document describes the clinical diagnosis of bovine hemorrhagic septicemia, sample collection, transportation and storage, and the isolation and culture of Pasteurella multocida.

Laboratory diagnostic methods include culture, staining microscopy, biochemical tests, polymerase chain reaction, etc.

This document applies to the diagnosis of bovine hemorrhagic septicemia.

2 Normative references

NY/T 541

3 Terms and definitions

There are no terms or definitions that require definition in this document.

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4 Abbreviations

The following abbreviations apply to this document.

AGID. agar gel immune diffusion test CSY. casein/sucrose/yeast agar DNA. deoxyribonucleic acid IHA. indirect haemagglutination test LPS. lipopolysaccharide Pm. Pasteurella multocida RBCs. red blood cells SPF. specific pathogen free TAE. Tris-acetic acid-EDTA buffer TSA. tryptic soy agar TSB. tryptic soy broth

5.1 Epidemiology

5.1.1 Sick animals and carriers are the source of infection. Cattle, buffaloes, yaks, dairy cows and bison can all be infected and fall ill.

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