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

GB/T 18647-2020

Replacing GB/T 18647-2002

Diagnostic techniques for animal coccidiosis

动物球虫病诊断技术

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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 18647-2002 "Animal Coccidiosis Diagnostic Technology": This standard is compared with GB/T 18647-2002, except for In addition to the editorial modification, the main technical changes are as follows:

- In the "Scope" section, domestic animals (pigs, cattle, sheep, horses, etc.) and pets (dogs, cats, etc.) are added (see Chapter 1);
- Added the "Clinical Diagnosis" section (see Chapter 3);
- "Sample collection, storage and transportation" is added to the "pathogen inspection" section (see 4:2);
- "Qualitative Inspection" and "Quantitative Inspection" have added different animal manure treatment methods (see 4:3:1:2 and 4:3:2:3);
- The "qualitative examination" negative result judgment part has been modified according to different animals, and the number of days that need to be continuously examined for stool has been modified [see 4:3:1:8b), 2:2:1:8b)];
- In the "Quantitative Inspection" section, the amount of feces collected from different animals and the conversion method of OPG of oocysts have been added (see 4:3:2:2, 4:3:2:7~ 4:3:2:9);
- The merozoite/schizont examination part of "pathological examination" adds the examination of rabbit liver and duck and goose kidney (see 5:3:1);
- Added the result "comprehensive judgment" part (see Chapter 6);
- "Coccidia oocysts morphological characteristics" section adds the size and pattern diagrams of coccidia oocysts of different genera (see Appendix B): Please note that certain contents of this document may involve patents: The issuing agency of this document is not responsible for identifying these patents: This standard was proposed by the Ministry of Agriculture and Rural Affairs of the People's Republic of China: This standard is under the

jurisdiction of the National Animal Health Standardization Technical Committee (SAC/TC181): This standard was drafted: Shanghai Institute of Veterinary Medicine, Chinese Academy of Agricultural Sciences: The main drafters of this standard: Dong Hui, Huang Bing, Han Hongyu, Chen Zhaoguo, Zhao Qiping, Zhu Shunhai: The previous versions of the standard replaced by this standard are as follows:

---GB/T 18647-2002

Coccidiosis (coccidiosis) is an important parasitic disease of a variety of animals: It occurs in various countries: It can affect livestock, poultry, pets, fish and wild animals: Live animals have varying degrees of harm, especially in intensive aquaculture, if not strictly controlled, it will cause significant economic losses: The disease to poultry And rabbits are more harmful, and the mortality rate of acute outbreaks can exceed 30%; followed by pigs, cattle, sheep and other domestic animals, acute infections often cause diarrhea and severe growth: Severe obstruction; coccidiosis in dogs and cats is also more common, which can cause weight loss, anemia, diarrhea, and growth and development obstruction: In severe cases, it can lead to death; occasionally Reports of coccidiosis in fish and wild animals: The pathogen of the disease is Apicomplexa, Conoidasida, Eucoccidiorida, Eimeria Eimeria, Isospora, Tyzzeria, Wenyang in Eimeridae (Wenyonella) Coccidia: Each animal has its own unique species of coccidia, and the species of coccidia in livestock and wild animals recorded in the literature have reached More than:2000 kinds: The classic diagnosis method for coccidiosis at home and abroad is pathogen inspection, combined with clinical symptoms and pathological autopsy for comprehensive diagnosis: Although domestic and foreign scholars have established a variety of diagnostic techniques such as immunology, serology, and molecular biology, such as pigment test methods, sporozoite brake reaction, Indirect hemagglutination test, immunofluorescence antibody test, enzyme-linked immunosorbent test (ELISA), immunocytochemistry technology, random primer amplification polymorphism DNA (RAPD) and polymerase chain reaction (PCR), etc., but due to the accuracy of these methods and the complexity of the operation, they have not yet Can replace existing methods: Pathogen inspection and comprehensive diagnostic techniques are still the most commonly used methods: Comprehensive diagnosis is mainly used for diagnosis after illness or death to determine Whether the animal or animal group became ill or died due to coccidiosis: Pathogen inspection is simple and easy to perform, both qualitative and quantitative, and can be used for disease It can be used to determine the degree of coccidia infection in animals or groups of animals after the onset of disease: Pathogen inspection can be widely used in epidemiological investigation, prevention and treatment Drug screening and clinical verification, import and export quarantine, establishment of healthy animal groups free of this disease, etc: In order to standardize the quarantine methods for coccidiosis and coccidiosis, make the detection results objective, accurate and consistent, so as to ensure This standard is specially formulated for the implementation of the Anti-epidemic Law: Animal Coccidiosis Diagnostic Technology

1 Scope

GB/T 18647-2020 is the Chinese national standard on diagnostic techniques for animal coccidiosis, 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 14 December 2020 by the State Administration for Market Regulation; Standardization Administration of China, and has been in force since 14 December 2020. 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 standard specifies the technical requirements for clinical diagnosis, pathogen examination, pathological examination, and comprehensive determination of animal coccidiosis: This standard applies to the diagnosis of coccidiosis (infection) in poultry (chickens, ducks, geese, etc.), livestock (pigs, cattle, sheep, horses, rabbits, etc.), pets (dogs, cats, etc.):

2 Normative references

The following documents are indispensable for the application of this document: For dated reference documents, only the dated version applies to this article Pieces: For undated references, the latest version (including all amendments) applies to this document:

GB/T 6682-2008 Analysis laboratory water specifications and test methods

NY/T 541-2016 Technical Specifications for Collection, Storage and Transportation of Veterinary Diagnostic Samples

3 Clinical diagnosis

According to the clinical characteristics of the disease, coccidiosis can be divided into acute type and chronic type: The acute type mostly occurs in young animals, and the initial symptoms of the disease are depression, lethargy, coarse coat, decreased appetite, and diarrhea: Late in the course Movement disorders, loss of appetite, bloody and watery stools, even bloody stools, with a foul smell, visible mucosal anemia, paleness, weight loss, and even To weightlessness, and finally died of dehydration and exhaustion: The chronic type is more common in older animals, without obvious symptoms, mainly manifested as anorexia, intermittent diarrhea, gradual weight loss, and decreased production performance: Those with the above clinical symptoms can be suspected of coccidiosis, and the diagnosis requires further pathogen or pathological examination:

4 Pathogen inspection

1 Materials and reagents 4:1:

1 Reagents: saturated brine, 2:5% potassium dichromate solution, the preparation methods are shown in Appendix A, A:1 and A:2, the preparation water meets GB/T 6682-2008 Level 3 water requirements: 4:1:

2 Equipment: sample storage bag, marker pen, waterproof label paper, 60 mesh and 100 mesh copper wire mesh or nylon mesh, 100mL graduated cylinder, 50mL burner Cup, 50mL centrifuge tube, 10mL glass bottle, pipette, tweezers, balance, centrifuge, McKenzie egg counting plate, glass slide, cover slip, microscope Mirror etc: 4:

2 Sample collection, storage and transportation 4:2:

1 Collection of animal feces: for small animals such as poultry, dogs, cats, rabbits, etc., if it is a group sampling, the collection of fresh feces is not less than:200g: It is individual sampling, and the collection of fresh manure is not less than 60g; for large animals such as pigs, cattle, sheep, and horses, if it is a group sampling, the collection of fresh manure is not less than 300g, if it is an individual sample, collect a lot of fresh feces 100g: 4:2:

2 Sample storage: After the sample is collected, it is placed in the sample storage bag: After sealing, the packaging bag of each sample must be labeled The detailed information of collection location, collection time, animal species, animal age, fecal traits, etc., should be stored in a refrigerator at 2°C~8°C: 4:2:

3 Transportation of samples: The collected samples are sent to the laboratory for testing in the fastest and most direct way, and the transportation conditions comply with NY/T 541-2016 requirements: