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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 18935-2018

Replacing GB/T 18935-2003

Diagnostic techniques for foot and mouth disease

口蹄疫诊断技术

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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 18935-2003 "Diagnostic Techniques for Foot and Mouth Disease". This standard is compared with GB/T 18935-2003, except for editorial In addition to the changes, the main technical changes are as follows:

--- Increased clinical diagnosis;

--- Removed the micro-complement binding assay;

--- Cancel the part of the virus testing test, the relevant content is specified in other parts;

--- Removed the virus infection-related (VIA) antigen agar gel immunodiffusion test (VIA-AGID), increased non-structural protein 3ABC antibody indirect enzyme-linked immunosorbent assay (3ABC-I-ELISA) and non-structural protein 3ABC antibody block enzyme-linked immunosorbent assay Adsorption test (3ABC-B-ELISA) to replace

VIA-AGID;

--- Increased stereotyped reverse transcription-polymerase chain reaction;

--- Increased sequence analysis of the viral VP1 gene;

--- Increased fluorescence quantitative reverse transcription-polymerase chain reaction.
This standard was proposed by the Ministry of Agriculture and Rural Affairs of the People's Republic This standard is under the jurisdiction of the National Animal Health Standardization Technical Committee (SAC/TC181). This standard was drafted. Lanzhou Veterinary Research Institute, Chinese Academy of Agricultural Sciences. The main drafters of this standard. Liu Xiangtao, Zhang Qiang, Guo Jianhong, He Jijun, Liu Zaixin, Lu Zengjun, Bao Huifang, Chang Huizhen, Tian Hong, Zheng Haixue, Shang Youjun, Ma Junwu, Wu Guohua, Takino, Lin Mi, Ma Weimin, Lu Yongqian, Zhu Caizhu. The previous versions of the standards replaced by this standard are.

---GB/T 18935-2003.

Foot and Mouth Disease (FMD) is caused by Foot and Mouth Disease (FMDV) An acute, potent, and contact infectious disease caused by hoofed animals. Foot-and-mouth disease can cause huge economic losses and social impact, world animals The Health Organization (OIE) lists foot-and-mouth disease as an animal-borne disease that must be reported. China's foot-and-mouth disease is a class of animal diseases. The source of foot-and-mouth disease is mainly latent infection and clinically ill animals. Susceptible animals can pass through the respiratory tract, digestive tract, reproductive tract and wounds Oral infection of the virus, usually by direct or indirect contact (droplets, etc.), or by human or dog, fly, cockroach, bird and other animal media, or by car Vehicles, appliances, etc. are spread by pollutants. If the climate is right, the virus can spread long distances with the wind. Infected animal exhaled, saliva, feces, Urine, milk, semen, meat and by-products can be poisoned. After infection with ruminants such as cattle and sheep, the virus can continue to be poisoned in the esophagus-throat. The foot-and-mouth disease virus is classified into the picornavirus family (Picornaviridae), the foot-and-mouth disease virus genus, and has seven serotypes, namely O, A, Asia1, C, SAT1, SAT2 and SAT3, there is no cross-immunoprotective response between the serotypes, and the immune control is equivalent to 7 kinds of no The same epidemic, serotype identification is the first problem to be solved by immune prevention and control. Samples suitable for the diagnosis of foot-and-mouth disease are unruptured or newly broken water Bubbles and blister fluids. In the absence of blister and blisters, blood can be collected and/or ruminant food can be collected using an esophageal cup. A sample of tract-pharyngeal secretions, also present in these samples. In the absence of a tissue sample, detection of specific antibodies is also used for diagnosis. Virus isolation of tissue or liquid samples to detect the presence of foot-and-mouth disease virus antigens or nucleic acids can make a positive diagnosis. If sample Insufficient or undefined results, by reverse transcriptase polymerase chain reaction (RT-PCR), and/or by sensitive cell culture or suckling mice The nucleic acid or live virus