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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 18638-2021

Replacing GB/T 18638-2002

Diagnostic techniques for Japanese encephalitis

流行性乙型脑炎诊断技术

Issued on: March 9, 2021 **Implemented on: October 1, 2021**

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Standardization Administration of China

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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 18638-2002 "Diagnostic Techniques for Japanese Encephalitis", and compared with GB/T 18638-2002, except for editing In addition to the modification, the main technical changes are as follows:

--- Added "Normative Reference Documents" (see Chapter 2);

---Added "abbreviations" (see Chapter 3);

---Added "viral RT-PCR detection method" (see Chapter 7);

---Added "indirect ELISA antibody detection method" (see Chapter 10);

---Added "indirect immunofluorescence test (IFA) detection method" (see Chapter 11);

--- Added "Virus Neutralization Test Detection Method" (see Chapter 12);

---Added reagent preparation for virus RT-PCR detection method test (see Appendix A);

--- Added a schematic diagram of the results of the complement fixation test detection method and hemagglutination inhibition test detection method (see Appendix D);

---Added the reagent preparation for the indirect ELISA antibody detection method test (see

Appendix E);

---Added the reagent preparation for the indirect immunofluorescence test (IFA) test method (see Appendix F). 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). Drafting organizations of this standard. Institute of Military Veterinary Medicine, Academy of Military Sciences, Wenzhou University, Huazhong Agricultural University, Jilin the University. The main drafters of this standard. Jin Ningyi, Xiao Pengpeng, Lu Huijun, Cao Shengbo, Huang Shaomei, Zhang Ying, Tian Mingyao, Li Xiao, Li Chang. The previous versions of the standard replaced by this standard are as follows:

---GB/T 18638-2002.

Japanese encephalitis (Japaneseencephalitis), also known as Japanese encephalitis, is a kind of Japanese encephalitis caused by the Japanese encephalitis virus Mosquito-borne zoonoses. Horses show signs of encephalitis, pigs show miscarriage, stillbirth and orchitis, and most other livestock and poultry are invisible dye. There is obvious seasonality, and it occurs frequently in summer and autumn. The disease is widely distributed, mainly in Asia, causing human and animal health and national economy Great harm and loss. The pathogen that causes this disease is Japanese encephalitis virus (Japaneseencephalitisvirus), which belongs to the Flaviviridae family (Flaviviridae) Flavivirus is a single-stranded RNA virus. The virus particles are spherical and have a lipoprotein envelope. It has hemagglutinating activity and can agglutinate red blood cells of chickens, ducks, geese and sheep. The virus is not strong against the outside world, is more sensitive to chemicals, and is often disinfected The medicine has a good inactivation effect, and it is also sensitive to pancreatin, ether, chloroform and so on. The World Organization for Animal Health (OIE) recommends the use of virus isolation and identification, immunofluorescence test, hemagglutination inhibition test, complement fixation test, blood Diagnosis by methods such as Qingzhong and test. There are many research reports on the disease in our country, and the more commonly used diagnostic methods are still specified in this standard. Clinical diagnosis, virus isolation and identification, hemagglutination inhibition test, complement fixation test, RT-PCR test, indirect ELISA test, indirect immunization Fluorescence test and virus neutralization test. When performing virus isolation and identification, it is required that all sample processing should be at the corresponding level that can ensure biological safety Operations are carried out in the laboratory; containers, articles, and experimental materials used to process samples should be effectively disinfected before being transported out of the laboratory. The revision of this standard refers to the.2018 edition of the OIE "Manual of Diagnostic Tests and Vaccine Standards for Terrestrial Animals" (Manual of Diagnostic Tests and Vaccines). Tests and Vaccines for Terrestrial Animals,.2018), combined with the new research results of related technologies in my country. The implementation of this standard, It will play an important role in improving the diagnosis of Japanese encephalitis and

predicting the epidemic situation and taking timely preventive measures to ensure the health of humans and animals. Diagnosis technology of Japanese encephalitis

1 Scope

GB/T 18638-2021 is the Chinese national standard on diagnostic techniques for japanese encephalitis, 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 9 March 2021 by the State Administration for Market Regulation; Standardization Administration of China, and has been in force since 1 October 2021. 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 and laboratory diagnosis of Japanese encephalitis (JE). This standard applies to the diagnosis and quarantine of Japanese encephalitis in animals such as pigs, horses, mules, donkeys, cattle, sheep, dogs, ducks, geese and birds.

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 reference documents, the latest version (including all amendments) is applicable to this document.

GB/T 18088 Entry and Exit Animal Quarantine Sampling

GB 19489 Laboratory Biosafety General Requirements

3 Abbreviations

The following abbreviations apply to this document. BBS borate buffer (boratebufferedsaline) CFT complement fixation test (complementfixationtest) CPE cytopathic effect (cytopathiceffect) DEPC diethylpyrocarbonate (diethylpyrocarbonate) DNA deoxyribonucleic acid (deoxyribonucleic acid) dNTP deoxy-ribonucleosidetriphosphate (deoxy-ribonucleosidetriphosphate) ELISA enzyme-linked immunosorbent assay (enzymelinkedimmunosorbentassay) FITC fluoresceinisothiocyanate (fluoresceinisothiocyanate) HRP horseradish peroxidase (horseradishperoxidase) JEV Japanese encephalitis virus (Japaneseencephalitisvirus) PBS phosphate buffered saline RNA ribonucleic acid (ribonucleicacid) RT-PCR reverse transcription-polymerase chain reaction (reversetranscription-polymerasechain reaction) TCID50 half tissue culture

infection dose (mediantissueculture infective dose)

4 Clinical diagnosis

4.1 Susceptible animals Pigs, horses, mules, donkeys, cattle, sheep, dogs, ducks, geese and birds can be infected, and pigs are the most common.

4.2 Clinical symptoms

4.2.1 Pigs develop fever after infection, and a small number of pigs will have neurological symptoms. Pregnant sows can cause miscarriage, stillbirth, and testicular swelling in boars.

4.2.2 After the horse is infected, the body temperature increases (39°C~41°C), neurological symptoms (depression or manic restlessness), abnormal posture, shaking or turning when walking Circle, limbs are swimming.