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

SN/T 1084-2010

Replacing SN/T 1084-2002; SN/T 1085-2002; SN/T 1472-2004; SN/T 1907-2007; SN/T 2036-2007

Quarantine protocol for paratuberculosis of bovine

牛副结核病检疫技术规范

(English Translation)

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Foreword

This standard replaces the SN/T 1084-2002 "paratuberculosis intradermal allergy rules", SN/T 1085-2002 "complement paratuberculosis Binding assay procedures ", SN/T 1472-2004" paratuberculosis bacteriological examination procedures ", SN/T 1907-2007" Mycobacterium paratuberculosis Tuberculosis PCR detection procedures "and SN/T 2036-2007" bovine paratuberculosis ELISA test procedures. " this standard SN/T 1084-2002, SN/T 1085-2002, SN/T 1472-2004, SN/T 1907-2007 and SN/T 2036-Compared to 2007, the main technical changes are as follows.

--- Reference OIE "Terrestrial Animals Manual of diagnostic tests and vaccines (mammals, birds and bees)," 2010 edition Section 2.1.11 deputy knot TB (Johne's disease) Diagnosis Technology section B;

--- Adds a clinical diagnosis, microscopy, agar immunodiffusion test, enzyme-linked immunosorbent assay, the capture probe PCR method, embedded Nested PCR method.

This standard was drafted in accordance with GB/T 1.1-2009 given rules.

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

This standard was drafted. Jilin People's Republic of China Exit Inspection and Quarantine, People's Republic of China Jiangsu Entry-Exit Inspection and Quarantine Bureau, People's Republic of China Shanxi Exit Inspection and Quarantine, People's Republic of China Tianjin Entry-Exit Inspection and Quarantine Inspection Bureau, People's Republic of China Shenyang Entry-Exit Inspection and Quarantine Beijing People's Republic of China.

1 Scope

This standard specifies the technical specifications quarantine cattle paratuberculosis.

This standard applies to the inspection and quarantine of cattle and bovine paratuberculosis pathogen epidemiology and antibodies.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version suitable for use herein Member. For undated references, the latest edition (including any amendments) applies to this document.

Laboratory use specifications and test methods GB/T 6682 Analysis

3.1 General

Paratuberculosis (Paratuberculosis, Johne's disease) is a chronic enteritis by ruminants caused by *Mycobacterium paratuberculosis*.

According to epidemiological, clinical symptoms and pathological changes of the disease, we can make a preliminary diagnosis, but the diagnosis through laboratory diagnosis.

3.2 Epidemiology

Mycobacterium paratuberculosis infection mainly cattle, especially in young cattle more susceptible to disease. In addition to cattle, the sheep, goats, camels, pigs, horses, donkeys, deer and other animals can also be infected. But the long incubation period of up to six months to 12 months or even longer. Sometimes young cattle infected until 2 years old to 5 years old Before clinical signs of any age cattle after 1 year to 2 years of the disease can occur, especially when the cattle pregnancy, childbirth or lactation prone Now symptoms. Cows and latent infected cattle is the source of infection, they can emit large amounts of pathogenic bacteria through breast milk, feces and urine. The disease often has to distribute or Party epidemic, mainly through the digestive tract infection, but also through the uterus and infect the fetus. Popular features of the disease is slow development, the incidence rate is not high, dead Rate, mortality rate of infection of cattle up to 2% to 10%, even up to 25%.

3.3 Clinical symptoms

No obvious symptoms early stages, the symptoms became clear later, beginning with intermittent diarrhea, then gradually severe and frequent, severe, such as feces Water samples, jet-like discharge or gruel-like, containing protein clots, bubbles and large amounts of mucus, occasionally bloodshot. Early spirit, appetite, lactation no significant change Change, after loss of appetite, poor spirit, lactation reduced or stopped. Huanxu

gradual weight loss, tired, often lying. Coarse hair disorder, jaw and Wattle edema. But the temperature often change. Continue with diarrhea, the emergence of progressive weight loss, until death.

3.4 Pathological changes

Early lesions in the small intestine and mesenteric lymph duct, with the course of further development, in the ileum, jejunum, posterior segment of the small intestine, cecum and colon, and mesenteric lymph nodes appear visible lesions. Paratuberculosis is not only based on the observation of the surface of the bowel wall thickening and make diagnosis Off, especially on the terminal ileum mucosa mucosal layer, should be pathological thickening and wrinkling of pathological changes, the intestinal wall to get a bright place, see scattered when plaque is infected early lesions. Will make further sample holder (10% formalin) after histological examination of the sample sections were hematoxylin Purple - eosin and Ziehl - Nissl staining, pathology diagnosis of lesions, including infiltration of the lamina propria, Peyer's patches and mesenteric lymph node cortex Large pale infected skin-like cells and giant multinucleated Langerhans cell infiltration, successful cluster or a single acid-fast staining bacteria present in both cells.