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SN

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

SN/T 1151.1-2011

Replacing SN/T 1151.1-2002

**Quarantine protocol for shrimp taura syndrome
(English Translation)**

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Foreword

SN/T 1151 series of standards is divided into six parts.

- Taura Syndrome shrimp quarantine technical specifications;
- White spot disease quarantine technical specifications;
- Monodon baculovirus (MBV) diagnostic methods;
- Shrimp yellow head disease quarantine technical specifications;
- Shrimp baculovirus (BP) test methods;
- White Spot virus dot blot and in situ hybridization procedures.

This section SN/T 1151 Part 1.

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

The partial replacement of SN/T 1151.1-2002 "shrimp Taura syndrome virus (TSV) reverse transcription polymerase chain reaction (RT-PCR) diagnostic methods. " This section compared with the SN/T 1151.1-2002, major technical changes as follows.

- Integration and optimization of RT-PCR detection method;
- New Real-time RT-PCR detection method.

The partial modification using World Organisation for Animal Health (OIE) of "aquatic animal disease diagnostic manual" (2009 Edition) chapter 2.2.4, and Taura Syndrome shrimp by RT-PCR method for the integration and optimization.

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

1 Scope

SN/T 1151 This section specifies the method of operation of shrimp Taura syndrome RT-PCR and Real-time RT-PCR detection.

This section applies to epidemiology, diagnosis, and monitoring of quarantine shrimp Taura syndrome.

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.

GB/T 18088 Entry and Exit Animal Quarantine sampling

3 Overview

Taura syndrome (Taurasynndrome) is an infection by the Taura syndrome virus (Taurasynndromevirus, TSV) caused A serious threat to shrimp farming important disease, which is the World Organisation for Animal Health (OIE) prescribed notifiable aquatic animal diseases. TSV few it can infect virtually all types of farmed shrimp, such as. South American white shrimp, red forehead shrimp, brown shrimp, white shrimp, black tiger shrimp, etc., and the incubation period of the infection Shrimp, its death rate. TSV infection has three distinct phases. acute, transition and chronic phase. In the acute phase, shrimp skin epithelium Tissue sections can be seen in the typical pathological lesions. In the transition period and the chronic phase, but not typical pathological injury; shrimp main incidence of death to occur in the acute phase, the survivors after acute infection after a brief transition period after entering a long period of chronic infection, in a slow sexy Transfection of lymphoid organs shrimp in their lifetime presence of the virus, the virus carrying the shrimp can spread the virus to other susceptible shrimp level. disease Toxicity studies confirm, TSV is a small icosahedral non-enveloped viruses, the diameter of 32nm, its genome is a single positive-strand RNA by the 10205 Nucleotides, containing two large open reading frame (Openreadframe, ORF), ORF1 encodes non-structural proteins such as helicase, Protease and RNA-dependent RNA polymerase, etc., ORF2 encoding structural proteins such as capsid protein VP1, VP2, VP3 (large molecular weight Small were 55kDa, 40kDa, 24kDa).

4 Reagents and materials

4.1

Taq Taq polymerase enzyme 10-fold concentrated buffer. Taq enzyme concentration 5U/μL, -20 °C, avoid repeated freezing and thawing.

4.2

retroviral reverse transcriptase enzyme 10-fold concentrated buffer. reverse transcriptase concentration of 50U/ μ L, -20 °C, avoid repeated freezing and thawing.

4.3

RNA inhibitors. a concentration of 40U/ μ L, -20 °C, avoid repeated freezing and thawing.

4.4

dNTP. containing dATP, dGTP, dCTP, dTTP each 10mmol/L, -20 °C preservation.

4.5

RT-PCR primer. concentration were 20 μ mol/L; there are two pairs of primers can optionally use one; as primers 9992F and 9195R OIE Recommended primers amplified gene fragment 231 bp in size, gene amplification primers TSVF TSVR and size of 295bp, its sequence is as follows.

The upstream primer (9992F). 5'-AAG-TAG-ACA-GCC-GCG-CTT-3 ' Downstream primer (9195R). 5'-TCA-ATG-AGA-GCT-TGG-TCC-3 ' the upstream primer (TSVF). 5'-ATT-GAA-TAC-TTA-GCA-CAG-CGA-CC-3 ' Downstream primer (TSVR). 5'-GAA-CAC-CAC-TAC-CAT-AGG-GGA-G-3 '