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SN

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

SN/T 1151.4-2011

Replacing SN/T 1151.4-2003

**Quarantine protocol for shrimp yellow head disease
(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 4.

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

The partial replacement of SN/T 1151.4-2003 "shrimp yellow head virus (YHV) reverse transcription polymerase chain reaction (RT-PCR) detection side law".

This section compared with the SN/T 1151.4, the main technical changes are as follows.

- Add nested RT-PCR method for the differential diagnosis;
- 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) 2.2.7 chapter.

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 yellow head disease RT-PCR and Real-timeRT-PCR detection.

This section applies to shrimp yellow head disease epidemiology, diagnosis, quarantine and monitoring.

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

Shrimp yellow head disease (Yellowhead disease, YHD) is a shrimp by the yellow head virus (Yellowhead virus, YHV) caused serious Threat of shrimp diseases, widespread infection, death rate, the World Organisation for Animal Health (OIE) prescribed notifiable aquatic animal diseases.

Currently, only South Penaeus vannamei outbreaks YHD outbreaks reported, but the Japanese shrimp, white shrimp, krill, also can Naturally infected with YHV. YHV belong to the yellow head syndrome virus (Yellowhead complex of viruses), the group currently has six virus Known genotype, YHV (genotype 1) is one of a type, and is the only pathogen yellow head disease. Gill associated virus (Gil-associated virus, GAV) belongs to genotype 2. GAV and several other type (type genotype 3 to 6) in East Africa, Asia and Australia Health monodon are more common, but rarely cause disease. YHV is enveloped baculovirus whose genome is a single positive-stranded RNA.

4 Reagents and materials

4.1

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

4.2 10 times reverse transcriptase enzyme reverse transcriptase reaction buffer. reverse transcriptase concentration of 50U/μL, -20 °C, avoid repeated freezing and thawing.

4.3

RNA inhibitor (40U/μL). - 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 primers were. concentration 20μmol/L, which sequence is as follows.

Primer (10F). 5'-CCG-CTA-ATT-TCA-AAA-ACT-ACG-3 ';

Primer (144R). 5'-AAG-GTG-TTA-TGT-CGA-GGA-AGT-3 ';

Primer (GY1). 5'-GAC-ATC-ACT-CCA-GAC-AAC-ATC-TG-3 ';

Primer (GY2). 5'-CAT-CTG-TCC-AGA-AGG-CGT-CTA-TGA-3 ';

Primer (GY4). 5'-GTG-AAG-TCC-ATG-TGT-GTG-AGA-CG-3 ';

Primer (GY5). 5'-GAG-CTG-GAA-TTC-AGT-GAG-AGA-ACA-3 ';

Primer (Y3). 5'-ACG-CTC-TGT-GAC-AAG-CAT-GAA-GTT-3 ';

Primer (G6). 5'-GTA-GTA-GAG-ACG-AGT-GAC-ACC-TAT-3 ';

Primer (YC-F1ab). 5'-ATC-GTC-GTC-AGC-TAC-CGC-AAT-ACT-GC-3 'and
5'-ATC-GTC-GTC-AGY-TAY-CGT-AAC-ACC-GC-3 'mixing the two primers;