



**Proven shrimp diseases detection kits
is now within reach**

rapid test kits . PCR kits . qPCR kits

Our Story

About Us

Speedy Assay Sdn Bhd is a biotechnology company with comprehensive distribution network striving to meet your emerging and changing needs with solution for aquaculture safety by detection of diseases through supply of rapid test kits, PCR kits and real-time PCR kits with superior quality.

Vision & Mission

To constantly align ourselves with global technology and product trends, and to integrate reliable product quality offering to our customers with solution for aquaculture safety via molecular diagnosis approach and lateral flow platform.

Our Team

We are teamed by specialists with scientific and technical knowledge to ensure delivery of quality products and customer services in effective and timely manner.

Our Quality

We deliver products that help end-users such as farm managers, researchers, QA/QC managers and authorities to efficiently monitor the health of shrimp. All the products are guaranteed with superior quality with stringent quality control management from raw material selection up to finished goods and in compliance with ISO standard.



Choose the right Speedy Assay ShrimpCheck solution to match your performance needs



Designed based on industry-leading innovation, Speedy Assay *ShrimpCheck* detection kits portfolio can grow with your screening, monitoring, research and prevention needs on shrimp diseases.

From the simple reliability of shrimp diseases rapid test kits to the unprecedented sensitivity of shrimp diseases real-time PCR kits, *ShrimpCheck* lineups offer you more comprehensive, flexibility and performance.

ShrimpCheck Detection Kits Selection Guide

| | Rapid Test Kits | PCR Kits | Real-time PCR Kits |
|------------------------|--------------------|--------------------------------|--------------------------------|
| Assay Time | Approx. 15 minutes | Approx. 3-4 hours ⁺ | Approx. 2-3 hours ⁺ |
| Detection Limit | | | |
| WSSV | 2.0% (v/v) | 10 copies DNA/reaction | <10 copies DNA/reaction |
| MBV | 1.5% (v/v) | 100 copies DNA/reaction | <10 copies DNA/reaction |
| IMNV | 0.05% (v/v) | 100 copies RNA/reaction | <100 copies RNA/reaction |
| YHV | 0.05% (v/v) | 100 copies RNA/reaction | <100 copies RNA/reaction |
| EHP | Not available | 10 copies DNA/reaction | <10 copies DNA/reaction |
| AHPND/EMS | Not available | 10 copies DNA/reaction | <10 copies DNA/reaction |
| HPV | Not available | 10 copies DNA/reaction | <10 copies DNA/reaction |
| IHHNV | Not available | 10 copies DNA/reaction | <10 copies DNA/reaction |
| TSV | Not available | 100 copies RNA/reaction | <100 copies RNA/reaction |
| CMNV | Not available | 100 copies RNA/reaction | <100 copies RNA/ reaction |

⁺Time indicated including DNA extraction process using Speedy Assay Viral Nucleic Acid Extraction Kit

White Spot Syndrome Virus (WSSV)

White spot syndrome virus (WSSV) is a highly infectious viral pathogen that causes mass mortality in farmed penaeid shrimps worldwide. WSSV has been known as the most prevalent, widespread and lethal to most of the commercially cultivated penaeid shrimp species.

Clinical signs of infected shrimps

- White spots on carapace and last abdominal segment
- Body colour becomes pale
- Lethargic behaviour
- Reduction in food consumption
- Loose cuticle or shells

Mortality rate

Cumulative mortality of up to 100% within 3 -10 days after infection

Mode of transmission

Transmitted vertically by trans-ovum, consumption of infected tissue (e.g. cannibalism, predation, etc.), and by water-borne routes. Dead and moribund animals can be a source of disease transmission.

Infected shrimp types

Penaeus monodon, *Marsupenaeus japonicus*, *Litopenaeus vannamei* and *Fenneropenaeus indicus*

Ordering information

Rapid Test Kits

| | | |
|------------|---|---------------|
| RWSS01-020 | ShrimpCheck White Spot Syndrome Virus (WSSV) Rapid Test Kit | 20 tests/ kit |
|------------|---|---------------|

PCR Kits

| | | |
|-------------|---|----------------|
| PWSS01-050 | ShrimpCheck White Spot Syndrome Virus (WSSV) PCR Kit | 50 tests/ kit |
| PWSS01-100 | ShrimpCheck White Spot Syndrome Virus (WSSV) PCR Kit | 100 tests/ kit |
| CPWSS01-050 | ShrimpCheck White Spot Syndrome Virus (WSSV) PCR Kit with Nucleic Acid Extraction Kit | 50 tests/ kit |
| CPWSS01-100 | ShrimpCheck White Spot Syndrome Virus (WSSV) PCR Kit with Nucleic Acid Extraction Kit | 100 tests/ kit |

Real-time PCR Kits

| | | |
|-------------|---|----------------|
| QWSS01-050 | ShrimpCheck White Spot Syndrome Virus (WSSV) Real-time PCR Kit | 50 tests/ kit |
| QWSS01-100 | ShrimpCheck White Spot Syndrome Virus (WSSV) Real-time PCR Kit | 100 tests/ kit |
| CQWSS01-050 | ShrimpCheck White Spot Syndrome Virus (WSSV) Real-time PCR Kit with Nucleic Acid Extraction Kit | 50 tests/ kit |
| CQWSS01-100 | ShrimpCheck White Spot Syndrome Virus (WSSV) Real-time PCR Kit with Nucleic Acid Extraction Kit | 100 tests/ kit |

Early Mortality Syndrome (EMS)

The early mortality syndrome (EMS) is an emerging shrimp disease more technically known as acute hepatopancreatic necrosis disease (AHPND), caused by unique strain of *Vibrio parahaemolyticus*. The pathogenic bacteria colonize the shrimp gastrointestinal tract and produce a toxin that causes tissue destruction and dysfunction of the shrimp digestive organ (hepatopancrease).

Clinical signs of infected shrimps

- Erratic swimming or swimming near the bottom of the pond
- Reduced growth whitening of the hepatopancreas reduction in size of hepatopancreas
- Soft texture of the exoskeleton
- Dark spots or streaks on the hepatopancreas
- Hardening of hepatopancreas

Mortality rate

Mortality rate of up to 90% within 30 days

Infected shrimp types

L. vannamei

Mode of transmission

Transmitted by oral routes and cohabitation

Ordering information

| PCR Kits | | |
|--------------------|---|----------------|
| PEMS01-050 | ShrimpCheck Acute Hepatopancreatic Necrosis Disease/Early Mortality Syndrome (AHPND/EMS) PCR Kit | 50 tests/ kit |
| PEMS01-100 | ShrimpCheck Acute Hepatopancreatic Necrosis Disease/Early Mortality Syndrome (AHPND/EMS) PCR Kit | 100 tests/ kit |
| CPEMS01-050 | ShrimpCheck Acute Hepatopancreatic Necrosis Disease/Early Mortality Syndrome (AHPND/EMS) PCR Kit with Nucleic Acid Extraction Kit | 50 tests/ kit |
| CPEMS01-100 | ShrimpCheck Acute Hepatopancreatic Necrosis Disease/Early Mortality Syndrome (AHPND/EMS) PCR Kit with Nucleic Acid Extraction Kit | 100 tests/ kit |
| Real-time PCR Kits | | |
| QEMS01-050 | ShrimpCheck Acute Hepatopancreatic Necrosis Disease/Early Mortality Syndrome (AHPND/EMS) Real-time PCR Kit | 50 tests/ kit |
| QEMS01-100 | ShrimpCheck Acute Hepatopancreatic Necrosis Disease/Early Mortality Syndrome (AHPND/EMS) Real-time PCR Kit | 100 tests/ kit |
| CQEMS01-050 | ShrimpCheck Acute Hepatopancreatic Necrosis Disease/Early Mortality Syndrome (AHPND/EMS) Real-time PCR Kit with Nucleic Acid Extraction Kit | 50 tests/ kit |
| CQEMS01-100 | ShrimpCheck Acute Hepatopancreatic Necrosis Disease/Early Mortality Syndrome (AHPND/EMS) Real-time PCR Kit with Nucleic Acid Extraction Kit | 100 tests/ kit |

Enterocytozoon Hepatopenaei (EHP)

A microsporidian parasite, *Enterocytozoon hepatopenaei* (EHP) is an emerging pathogen for penaeid shrimp. EHP has been found in several shrimp farming countries in Asia including Vietnam, Thailand, Malaysia, Indonesia and China, and is reported to be associated with growth retardation in farmed shrimp.

Clinical signs of infected shrimps

- Discoloration in muscles due to spores
- Retarding growth of cultured shrimp

Mortality rate

Not causing mortality but serious growth retardation

Infected shrimp types

Penaeus monodon (Black tiger prawn), *Penaeus vannamei* (Pacific white shrimp)

Mode of transmission

Transmitted directly from shrimp to shrimp by the oral route

Ordering information

| PCR Kits | | |
|--------------------|---|----------------|
| PEHP01-050 | ShrimpCheck <i>Enterocytozoon Hepatopenaei</i> (EHP) PCR Kit | 50 tests/ kit |
| PEHP01-100 | ShrimpCheck <i>Enterocytozoon Hepatopenaei</i> (EHP) PCR Kit | 100 tests/ kit |
| CPEHP01-050 | ShrimpCheck <i>Enterocytozoon Hepatopenaei</i> (EHP) PCR Kit with Nucleic Acid Extraction Kit | 50 tests/ kit |
| CPEHP01-100 | ShrimpCheck <i>Enterocytozoon Hepatopenaei</i> (EHP) PCR Kit with Nucleic Acid Extraction Kit | 100 tests/ kit |
| Real-time PCR Kits | | |
| QEHP01-050 | ShrimpCheck <i>Enterocytozoon Hepatopenaei</i> (EHP) Real-time PCR Kit | 50 tests/ kit |
| QEHP01-100 | ShrimpCheck <i>Enterocytozoon Hepatopenaei</i> (EHP) Real-time PCR Kit | 100 tests/ kit |
| CQEHP01-050 | ShrimpCheck <i>Enterocytozoon Hepatopenaei</i> (EHP) Real-time PCR Kit with Nucleic Acid Extraction Kit | 50 tests/ kit |
| CQEHP01-100 | ShrimpCheck <i>Enterocytozoon Hepatopenaei</i> (EHP) Real-time PCR Kit with Nucleic Acid Extraction Kit | 100 tests/ kit |

Monodon Baculovirus (MBV)

Penaeid shrimps are susceptible to Monodon Baculovirus (MBV) at all stages of life, except eggs and nauplii. MBV has been associated with high mortalities (over 90%) in late post larvae and juvenile shrimp. Infected shrimp has a weak performance in growth and low survival rate of larvae. Although MBV has not been as lethal as white spot syndrome virus, the infection has also resulted in economic loss.

Clinical signs of infected shrimps

- Lethargy
- Dark colored with heavy surface fouling
- Abrupt reduced feeding

Mortality rate

Over 90% mortality in late post larvae and juvenile shrimp

Infected shrimp types

Penaeid shrimp

Mode of transmission

Transmitted by ingestion of infected tissue (cannibalism), feces, occlusion bodies, or virus-contaminated detritus or water

Ordering information

| Rapid Test Kits | | |
|--------------------|--|----------------|
| RMBV01-020 | ShrimpCheck Monodon Baculovirus (MBV) Rapid Test Kit | 20 tests/ kit |
| PCR Kits | | |
| PMBV01-050 | ShrimpCheck Monodon Baculovirus (MBV) PCR Kit | 50 tests/ kit |
| PMBV01-100 | ShrimpCheck Monodon Baculovirus (MBV) PCR Kit | 100 tests/ kit |
| CPMBV01-050 | ShrimpCheck Monodon Baculovirus (MBV) PCR Kit with Nucleic Acid Extraction Kit | 50 tests/ kit |
| CPMBV01-100 | ShrimpCheck Monodon Baculovirus (MBV) PCR Kit with Nucleic Acid Extraction Kit | 100 tests/ kit |
| Real-time PCR Kits | | |
| QMBV01-050 | ShrimpCheck Monodon Baculovirus (MBV) Real-time PCR Kit | 50 tests/ kit |
| QMBV01-100 | ShrimpCheck Monodon Baculovirus (MBV) Real-time PCR Kit | 100 tests/ kit |
| CQMBV01-050 | ShrimpCheck Monodon Baculovirus (MBV) Real-time PCR Kit with Nucleic Acid Extraction Kit | 50 tests/ kit |
| CQMBV01-100 | ShrimpCheck Monodon Baculovirus (MBV) Real-time PCR Kit with Nucleic Acid Extraction Kit | 100 tests/ kit |

Infectious Myonecrosis Virus (IMNV)

Infectious myonecrosis (IMN) is a viral disease of penaeid shrimp caused by myonecrosis virus (IMNV). The genome of IMNV consists of a single, double-stranded RNA molecule of 7560 bp. The principal host species in which IMNV is known to cause significant disease outbreaks and mortalities is *Penaeus vannamei*.

Clinical signs of infected shrimps

- Acute phase: white necrotic areas in striated (skeletal) muscles, especially in the distal abdominal segments and tail fan, which can become necrotic and reddened similar to the colour of cooked shrimp
- Severely affected shrimp become moribund, and mortalities can be high immediately following a “stress” event and continue for several days
- Lethargy
- Loss of balance
- Swimming on water surface during day time

Mortality rate

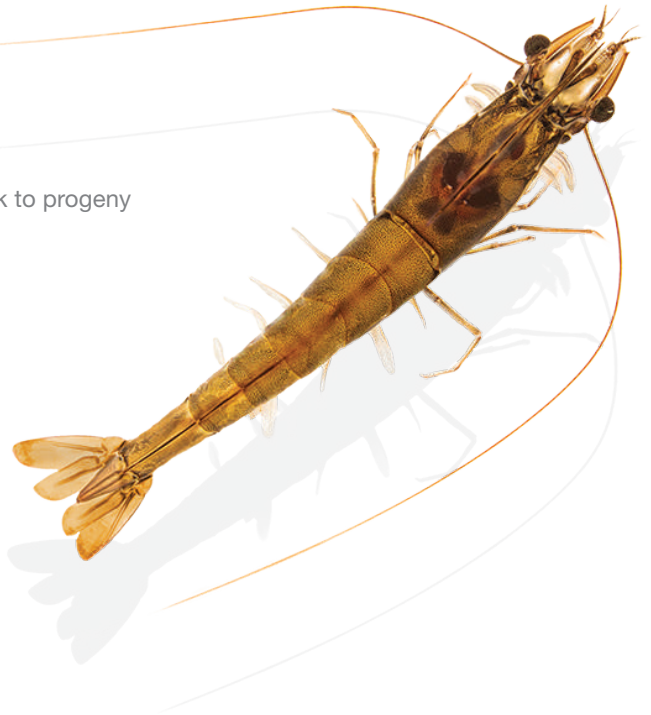
40% to 70% of affected populations

Infected shrimp types

Penaeid shrimp

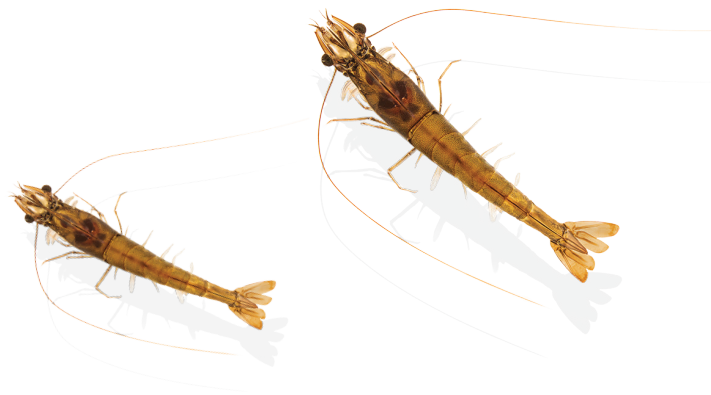
Mode of transmission

Transmitted via water and from broodstock to progeny



Ordering information

| Rapid Test Kits | | |
|--------------------|--|----------------|
| RIMN01-020 | ShrimpCheck Infectious Myonecrosis Virus (IMNV) Rapid Test Kit | 20 tests/ kit |
| PCR Kits | | |
| PIMN01-050 | ShrimpCheck Infectious Myonecrosis Virus (IMNV) One Step RT-PCR Kit | 50 tests/ kit |
| PIMN01-100 | ShrimpCheck Infectious Myonecrosis Virus (IMNV) One Step RT-PCR Kit | 100 tests/ kit |
| CPIMN01-050 | ShrimpCheck Infectious Myonecrosis Virus (IMNV) One Step RT-PCR Kit with Nucleic Acid Extraction Kit | 50 tests/ kit |
| CPIMN01-100 | ShrimpCheck Infectious Myonecrosis Virus (IMNV) One Step RT-PCR Kit with Nucleic Acid Extraction Kit | 100 tests/ kit |
| Real-time PCR Kits | | |
| QIMN01-050 | ShrimpCheck Infectious Myonecrosis Virus (IMNV) One Step Real-time RT-PCR Kit | 50 tests/ kit |
| QIMN01-100 | ShrimpCheck Infectious Myonecrosis Virus (IMNV) One Step Real-time RT-PCR Kit | 100 tests/kit |
| CQIMN01-050 | ShrimpCheck Infectious Myonecrosis Virus (IMNV) One Step Real-time RT-PCR Kit with Nucleic Acid Extraction Kit | 50 tests/ kit |
| CQIMN01-100 | ShrimpCheck Infectious Myonecrosis Virus (IMNV) One Step Real-time RT-PCR Kit with Nucleic Acid Extraction Kit | 100 tests/ kit |



Yellow Head Virus (YHV)

Yellow Head Disease (YHD) is caused by infection of Yellow Head Virus (YHV) on shrimp. It was first reported in Thailand in 1990 and has since been reported in Asia, East Africa, Australia and South America. YHV is a positive-sense single-stranded RNA virus related to coronaviruses and arteriviruses. YHD outbreaks have been reported in black tiger prawn (*P. monodon*) and white Pacific shrimp (*P. vannamei*).

Clinical signs of infected shrimps

- Yellow discoloration of its cephalothorax
- Exceptionally high feed consumption at initial stage followed by abrupt reduced feeding
- Moribund shrimps congregate near the surface of their pond before dying

Mortality rate

Up to 100% mortality within 3-5 days of the first appearance of clinical signs

Infected shrimp types

P. monodon (Black tiger prawn), *P. vannamei* (Pacific white shrimp)

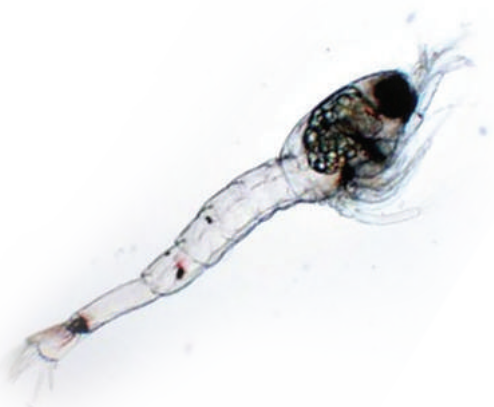
Mode of transmission

Transmitted by injection, ingestion of infected tissue, immersion in membrane filtered tissue extracts, or by co-habitation with infected shrimp; injection of extracts of paste prawns collected from infected ponds; by surface contamination or infection of tissue surrounding the fertilised egg.



Ordering information

| Rapid Test Kits | | |
|--------------------|--|----------------|
| RYHV01-020 | ShrimpCheck Yellow Head Virus (YHV) Rapid Test Kit | 20 tests/ kit |
| Real-time PCR Kits | | |
| PYHV01-050 | ShrimpCheck Yellow Head Virus (YHV) One Step RT-PCR Kit | 50 tests/ kit |
| PYHV01-100 | ShrimpCheck Yellow Head Virus (YHV) One Step RT-PCR Kit | 100 tests/ kit |
| CPYHV01-050 | ShrimpCheck Yellow Head Virus (YHV) One Step RT-PCR Kit with Nucleic Acid Extraction Kit | 50 tests/ kit |
| CPYHV01-100 | ShrimpCheck Yellow Head Virus (YHV) One Step RT-PCR Kit with Nucleic Acid Extraction Kit | 100 tests/ kit |
| Real-time PCR Kits | | |
| QYHV01-050 | ShrimpCheck Yellow Head Virus (YHV) One Step Real-time RT-PCR Kit | 50 tests/ kit |
| QYHV01-100 | ShrimpCheck Yellow Head Virus (YHV) One Step Real-time RT-PCR Kit | 100 tests/ kit |
| CQYHV01-050 | ShrimpCheck Yellow Head Virus (YHV) One Step Real-time RT-PCR Kit with Nucleic Acid Extraction Kit | 50 tests/ kit |
| CQYHV01-100 | ShrimpCheck Yellow Head Virus (YHV) One Step Real-time RT-PCR Kit with Nucleic Acid Extraction Kit | 100 tests/ kit |



Hepatopancreatic Parvovirus (HPV)

Hepatopancreatic parvovirus (HPV) is one of the major shrimp parvovirus which is known to cause slow growth in penaeid shrimps. It was first reported in *Penaeus* (Fenneropenaeus) *chinensis* from Korea, *Penaeus merguensis* from Singapore, *Penaeus semisulcatus* from Kuwait and *P. monodon* from the Philippines.

Clinical signs of infected shrimps

- Affects mid-juvenile stages with signs of necrosis and atrophy of the hepatopancreas
- Poor growth rates, anorexia and reduced preening with a concurrent increase in surface and gill fouling by epicommissal organisms

Mortality rate

50%-100% mortality in post-larvae stages

Infected shrimp types

Penaeid shrimp (early postlarvae, juveniles and adults)

Mode of transmission

Transmitted via contaminated water, eggs may be easily contaminated during spawning when coming into contact with water and fecal material from infected females

Ordering information

| PCR Kits | | |
|--------------------|--|----------------|
| PHPV01-050 | ShrimpCheck Hepatopancreatic Parvovirus (HPV) PCR Kit | 50 tests/ kit |
| PHPV01-100 | ShrimpCheck Hepatopancreatic Parvovirus (HPV) PCR Kit | 100 tests/ kit |
| CPHPV01-050 | ShrimpCheck Hepatopancreatic Parvovirus (HPV) PCR Kit with Nucleic Acid Extraction Kit | 50 tests/ kit |
| CPHPV01-100 | ShrimpCheck Hepatopancreatic Parvovirus (HPV) PCR Kit with Nucleic Acid Extraction Kit | 100 tests/ kit |
| Real-time PCR Kits | | |
| QHPV01-050 | ShrimpCheck Hepatopancreatic Parvovirus (HPV) Real-time PCR Kit | 50 tests/ kit |
| QHPV01-100 | ShrimpCheck Hepatopancreatic Parvovirus (HPV) Real-time PCR Kit | 100 tests/ kit |
| CQHPV01-050 | ShrimpCheck Hepatopancreatic Parvovirus (HPV) Real-time PCR Kit with Nucleic Acid Extraction Kit | 50 tests/ kit |
| CQHPV01-100 | ShrimpCheck Hepatopancreatic Parvovirus (HPV) Real-time PCR Kit with Nucleic Acid Extraction Kit | 100 tests/ kit |

Infectious Haemopoietic and Hypodermal Necrosis Virus (IHHNV)

Infectious Haemopoietic and Hypodermal Necrosis Virus (IHHNV) is a single stranded DNA virus with genome size of ~4.1kbps. At least three distinct genotypes of IHHNV have been identified with Type 1 and 2 genotypes are infectious to *P. vannamei* and *P. monodon*.

Clinical signs of infected shrimps

- Reduced food consumption
- Cannibalism
- Increased mortality

Mortality rate

Acute epizootics and mass mortality (> 90%) in all stages

Infected shrimp types

P. monodon (Black tiger prawn), *P. vannamei* (Pacific white shrimp), and *P. stylirostris* (Pacific blue shrimp)

Mode of transmission

Transmitted via infected eggs, cannibalism or by contaminated water

Ordering information

| PCR Kits | | |
|--------------------|---|----------------|
| PIHH01-050 | ShrimpCheck Infectious Hypodermal & Hematopoietic Necrosis Virus (IHHNV) PCR Kit | 50 tests/ kit |
| PIHH01-100 | ShrimpCheck Infectious Hypodermal & Hematopoietic Necrosis Virus (IHHNV) PCR Kit | 100 tests/ kit |
| CPIHH01-050 | ShrimpCheck Infectious Hypodermal & Hematopoietic Necrosis Virus (IHHNV) PCR Kit with Nucleic Acid Extraction Kit | 50 test/ kit |
| CPIHH01-100 | ShrimpCheck Infectious Hypodermal & Hematopoietic Necrosis Virus (IHHNV) PCR Kit with Nucleic Acid Extraction Kit | 100 test/ kit |
| Real-time PCR Kits | | |
| QIHH01-050 | ShrimpCheck Infectious Hypodermal & Hematopoietic Necrosis Virus (IHHNV) Real-time PCR Kit | 50 tests/ kit |
| QIHH01-100 | ShrimpCheck Infectious Hypodermal & Hematopoietic Necrosis Virus (IHHNV) Real-time PCR Kit | 100 tests/ kit |
| CQIHH01-050 | ShrimpCheck Infectious Hypodermal & Hematopoietic Necrosis Virus (IHHNV) Real-time PCR Kit with Nucleic Acid Extraction Kit | 50 tests/ kit |
| CQIHH01-100 | ShrimpCheck Infectious Hypodermal & Hematopoietic Necrosis Virus (IHHNV) Real-time PCR Kit with Nucleic Acid Extraction Kit | 100 tests/ kit |

Taura Syndrome Virus (TSV)

Taura syndrome (TS) is a virus disease of penaeid shrimp caused by infection with Taura syndrome virus (TSV). The principal host species in which TSV can cause significant disease outbreaks and mortalities are *Penaeus vannamei* and *P. stylirostris*.

Clinical signs of infected shrimps

- Reddening of the tail fan and visible necrosis of the epithelial tissue

Mortality rate

Mortalities range from 40 to >90%

Infected shrimp types

Penaeus vannamei (Pacific white shrimp) and *P. stylirostris* (Pacific blue shrimp)

Mode of transmission

Horizontal transmission by cannibalism or by contaminated water.

Ordering information

| PCR Kits | | |
|--------------------|---|----------------|
| PTSV01-050 | ShrimpCheck Taura Syndrome Virus (TSV) One Step RT-PCR Kit | 50 tests/ kit |
| PTSV01-100 | ShrimpCheck Taura Syndrome Virus (TSV) One Step RT-PCR Kit | 100 tests/ kit |
| CPTSV01-050 | ShrimpCheck Taura Syndrome Virus (TSV) One Step RT-PCR Kit with Nucleic Acid Extraction Kit | 50 tests/ kit |
| CPTSV01-100 | ShrimpCheck Taura Syndrome Virus (TSV) One Step RT-PCR Kit with Nucleic Acid Extraction Kit | 100 tests/ kit |
| Real-time PCR Kits | | |
| QTSV01-050 | ShrimpCheck Taura Syndrome Virus (TSV) One Step Real-time RT-PCR Kit | 50 tests/ kit |
| QTSV01-100 | ShrimpCheck Taura Syndrome Virus (TSV) One Step Real-time RT-PCR Kit | 100 tests/ kit |
| CQTSV01-050 | ShrimpCheck Taura Syndrome Virus (TSV) One Step Real-time RT-PCR Kit with Nucleic Acid Extraction Kit | 50 tests/ kit |
| CQTSV01-100 | ShrimpCheck Taura Syndrome Virus (TSV) One Step Real-time RT-PCR Kit with Nucleic Acid Extraction Kit | 100 tests/ kit |

Covert Mortality Nodavirus (CMNV)

A new nodavirus, named covert mortality nodavirus (CMNV), is associated with covert mortality disease of shrimp which has caused serious loss in China since 2009. The name ‘covert mortality disease’ (or ‘bottom death’) was broadly used in China before 2009 to describe the disease in which mortality was hidden under deep water in shrimp farms.

Clinical signs of infected shrimps

- hepatopancreatic atrophy with colour fading
- empty stomach and guts,
- soft shell
- slow growth
- slightly whitish muscle lesion areas in the abdominal segments or slightly pale body

Mortality rate

The disease causes economic losses in hatcheries and farms due to high mortality rates of up to 80% commonly found within 60–80 days post-stocking.

Infected shrimp types

hepatopancrease, abdominal muscle of *Litopenaeus vannamei*

Mode of transmission

Transmit vertically via sperm and oocytes in the main species of cultured shrimp and prawns.

Ordering information

| PCR Kits | | |
|--------------------|--|----------------|
| PCMN01-050 | ShrimpCheck Covert Mortality Nodavirus (CMNV) One Step RT-PCR Kit | 50 tests/ kit |
| PCMN01-100 | ShrimpCheck Covert Mortality Nodavirus (CMNV) One Step RT-PCR Kit | 100 tests/ kit |
| CPCMN01-050 | ShrimpCheck Covert Mortality Nodavirus (CMNV) One Step RT-PCR Kit with Nucleic Acid Extraction Kit | 50 tests/ kit |
| CPCMN01-100 | ShrimpCheck Covert Mortality Nodavirus (CMNV) One Step RT-PCR Kit with Nucleic Acid Extraction Kit | 100 tests/ kit |
| Real-time PCR Kits | | |
| QCMN01-050 | ShrimpCheck Covert Mortality Nodavirus (CMNV) One Step Real-time RT-PCR Kit | 50 tests/ kit |
| QCMN01-100 | ShrimpCheck Covert Mortality Nodavirus (CMNV) One Step Real-time RT-PCR Kit | 100 tests/ kit |
| CQCMN01-050 | ShrimpCheck Covert Mortality Nodavirus (CMNV) One Step Real-time RT-PCR Kit with Nucleic Acid Extraction Kit | 50 tests/ kit |
| CQCMN01-100 | ShrimpCheck Covert Mortality Nodavirus (CMNV) One Step Real-time RT-PCR Kit with Nucleic Acid Extraction Kit | 100 tests/ kit |



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Company Profile & Product Catalogue 2018

Speedy Assay Sdn Bhd 586317-W

A Member of Revongen Corporation
Revongen Corporation Center
No 12A • Jalan TP5 • Taman Perindustrian UEP
47600 • Subang Jaya • Selangor Darul Ehsan
Malaysia.

† • +6 03 8025 1603
f • +6 03 8025 1637
e • info@speedyassay.com
w • www.speedyassay.com

 @Speedy Assay Sdn Bhd