

Services available in Mobile Lab Facility

Package No.	Test Description (s)	Total amount (In Rs.) Inclusive of GST
PCR Analysis		
1.	Diagnosis of WSSV, IHHNV, AHPND, EHP, IMNV by Real Time PCR / Per sample per Test	1500.00
Bacteriological Analysis (Spread plate method)		
2.	Total Vibrio and heterotrophic count for Crustacean/Finfish per organ sample	200.00
3.	Total Vibrio and heterotrophic count for water sample	200.00
4.	Total Vibrio count for water sample	100.00
Water Quality Analysis		
5.	Water quality analysis (pH, Salinity, Ammonia, Nitrite, Nitrate, Total Hardness, Total Alkalinity, Carbonate, Bicarbonate, Calcium, Magnesium, Ca: Mg ratio & Iron)	150.00
6.	Package of tests (Total vibrio count and Water Quality analysis) for Water sample	200.00

For more details, please contact:

Lab In-Charge

Central Aquaculture Pathology & Genetics Laboratory

NABL Accredited Lab as per ISO/IEC 17025:2017

Rajiv Gandhi Centre for Aquaculture (RGCA), MPEDA

Payment can be made through Net Banking

State Bank of India (SBI)

RGCA Account Number: 10948711219

SBI Mayiladuthurai

IFSC code - SBIN0000875

Phone : 04364-265213 (Water Quality, Microbiology and Seed Quality Lab)

Phone : 04364-265214 (PCR Lab enquiry)

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Mobile Infection Testing and Reporting Laboratory (MITRL)

Central Aquaculture Pathology Laboratory (CAPL)
(NABL accredited Laboratory as per ISO/IEC 17025: 2017)



Rajiv Gandhi Centre for Aquaculture

MPEDA, Ministry of Commerce & Industry, Govt. of India

3/197, Poompuhar Road, Karai medu Village, Sattanathapuram
Sirkali – 609109, Tamil Nadu, India



Introduction of CAPL

MPEDA/RGCA established Central Aquaculture Pathology Laboratory (CAPL) at Sirkali, Tamil Nadu in 2011 to cater the disease diagnostic and disease research needs of the Aquaculture Industry. Laboratory provides disease diagnostics and pathogen surveillance service to RGCA Projects, hatcheries, aquaculture farmers & seafood exporters.

This laboratory is one of the very few NABL accredited (as per ISO/IEC 17025: 2017) aquaculture pathology laboratory in India. CAPL is constituted of Molecular pathology, Histopathology, Microbiology, Water Quality and Seed Health Analysis. Laboratory screens more than 25 pathogens which inclusive of Shrimp, Crab, Finfish and Freshwater prawn.

RGCA is actively participating "National Surveillance Programme for Aquatic Animal Diseases (NSPAAD)" coordinated by NBFGR and funded by PMMSY covering Odisha, Tamil Nadu & Andaman states for sample collection and disease reporting.

Highlights of Mobile Lab Facility

Disease is a continuous threat in aquaculture industry and is a complex interaction of animal health, environment and pathogen. In addition to other environment factors, the culture water is essential for the growth of animals.

In this view a mobile laboratory service is established to travel across major cultivable zones to reach the farmers at on-site. Three types of services are planned such as, Water Quality Analysis, Microbiology and Pathogen detection by Real Time PCR. These services are considered as a prime need for farmer's perspective.

Screening of the pathogens will be decided accordance to the signs of animals and conditions of the farms. In addition to the onsite services, samples will be preserved and transported to the centralised lab located in RGCA Head office, Sirkali for further analysis / Research.



Major diseases proposed to test in shrimp farms – Onsite

White Spot Disease (WSD)

White Spot Syndrome Virus (WSSV) belongs to the genus *Whislovirus* in the family *Nimaviridae*.

The virus can infect a wide range of aquatic crustaceans especially Decapods (shrimp, crab, lobster and Crayfish) and causes infection at any stages of shrimp lifecycle.

Common signs are pink or reddish discolouration of body and appendages and infected animals had calcified white spots on the carapace (0.5 and 2.0 mm in diameter).



Infectious Hypodermal and Haematopoietic Necrosis (IHNN)

IHNN virus (also known as infection with *Penaeus stylirostris* densovirus (PstDNV) and it is a small (22 nm average diameter), single strand DNA-containing parvovirus.

IHNNV is common in wild *P. monodon*, *L. vannamei* and *P. stylirostris* and other wild penaeid species and infects all life stages.

Common signs are Runt- deformity syndrome (RDS), reduced feed, Cannibalism, increased mortality and floating slowly to the water surface.



Hepatopancreatic Microsporidiosis (HPM) / *Enterocytozoon hepatopenaei* (EHP)

The disease caused by EHP is known and their spores are very small (1.1 ± 0.2 by $0.6-0.7 \pm 0.1 \mu\text{m}$) and show the presence of a polar filament of 4-5 coils.

EHP infects *P. monodon*, *L. vannamei*, *P. japonicas* and other wild penaeid species and infects all life stages.

Common signs includes, severe growth retardation, high size variation, Floating white faeces and Low level mortality associated with



Infectious Myonecrosis (IMN)

IMNV is caused by the double strand RNA virus belonging to family similar to Totiviridae

Brown tiger prawn (*P. esculentus*), Banana prawn (*P. merguiensis*), and White leg shrimp (*P. vannamei*) and other wild penaeid species and infects all life stages.

Common signs includes Whitish necrotic areas in the skeletal muscles, distal abdominal segments and tail fan.



Acute Hepatopancreatic Necrosis Disease (AHPND)

AHPND is known to be caused by strains of *Vibrio parahaemolyticus* that contain a unique virulence plasmid

AHPN infection is common in wild *P. monodon*, *L. vannamei* and *P. stylirostris* and other wild penaeid species. Disease is predominantly observed in 25 – 35 DOC.

Common signs includes, high level mortality occurs, empty gut, due to pigment loss hepatopancreas appears pale to whitish colour.

