

Aquaculture Pathology Laboratory
Department of Veterinary Science and Microbiology
University of Arizona

Laboratory Diagnostic Service Price List
For Penaeid and Freshwater Shrimp and other Crustaceans
April 4, 2008

1. Diagnostic procedures by direct microscopy of wet mounts, tissue smears, or by routine histopathology (Mayer's H&E stain of paraffin blocks). Costs are per subset. A subset is defined as any group of specimens from the same pond, tank or source with the same collection date. Client must indicate if samples are to be analyzed as pooled subsets.

- a. Eggs, larvae, postlarvae (1-50) and early juveniles (to ~ 0.9 grams) 1-10 shrimp/subset \$130.00
- b. Juveniles (~1 to <12 grams); first 1-5 shrimp/subset: \$130.00
Each additional shrimp within this subset charged at \$26.00.
- c. Adults (>12 grams); first 1-5 shrimp/subset: \$160.00
Each additional shrimp within this subset charged at \$32.00.
- d. Duplicate slides \$ 10.00/slide
- e. Special stains (non-silver) \$ 10.00/slide
- f. Wet mounts / gross observations \$ 75.00/hour

2. *In situ* hybridization (gene probe) for selected pathogens

(WSSV, IHHNV, TSV, YHV, HPV, MBV, BP, IMNV, PvNV, certain bacteria, rickettsial-like bacteria and NHP-B)

- a. \$50.00 basic set-up fee; plus
- b. \$25.00 per slide

3. Immunohistochemistry (antibody) for selected pathogens (WSSV or TSV)

Inquire by telephone (520-621-4438) or by email (aquapath@ag.arizona.edu) regarding availability, scheduling of test(s) and cost.

4. Standard PCR (RT-PCR) detection for selected pathogens

Definition: A sample is defined as one "specimen" submitted for analysis. This can be one frozen shrimp, one tube with hemolymph from one shrimp, one tube of pooled hemolymph from up to 5 juvenile shrimp or broodstock, a pooled homogenate of Pls, etc.

DNA viruses (IHHNV, WSSV, BP, MBV, HPV, SMV); **RNA viruses** (TSV, YHV, GAV, IMNV, PvNV, MoV, LSNV), certain bacteria, NHP-B and rickettsial-like bacteria.

- a. Frozen shrimp tissue, hemolymph and feces that require extraction. \$32.00/sample/pathogen
- b. Samples preserved in ethanol that require extraction. \$35.00/sample/pathogen
- c. IHHNV/WSSV or TSV/YHV or TSV/YHV-GAV or a pair of enteric pathogens (MBV, HPV, BP, NHP-B) from the same extracted sample. \$47.00/sample/pathogen pair
\$47.00/sample/virus pair
- d. Additional pathogens from the same extracted sample. \$21.00 /sample/pathogen
- e. Extracted DNA or RNA. \$21.00/sample/pathogen

5. Real Time PCR (RT-PCR) for selected pathogens

DNA viruses (IHHNV, WSSV); RNA virus (TSV); Others: inquire

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| a. Basic set-up fee; in addition to procedure. | \$70.00 |
| b. Frozen shrimp tissue and hemolymph that require extraction. | \$32.00/sample/pathogen |
| c. Samples preserved in ethanol that need extraction. | \$35.00/sample/pathogen |
| d. IHHNV/WSSV from same extracted sample. | \$47.00/sample/pathogen pair |

6. Dot Blots (WSSV and IHHNV)

Inquire by telephone (520-621-4438) or by email (aquapath@ag.arizona.edu) regarding availability and cost.

7. Microbiology

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| a. Basic set-up fee for sample preparation/isolation - in addition to the procedure requested. | \$100.00 |
| b. Identification (API system) | \$ 50.00/isolate |
| c. Antibiotic sensitivity (disk diffusion; 10 disk) ** | \$100.00/isolate |
| d. MIC in agar (per drug) ** | \$125.00/isolate |
| e. Other microbiology procedures call for a quote - 520-621-4438. | |
- ** Call for availability of antibiotics for this test - 520-621-4438.

8. Diagnostic services for finfish/molluscs

Inquire by telephone (520-621-4438) or by email (aquapath@ag.arizona.edu) regarding availability and cost.

9. Challenge Studies

Inquire by telephone (520-626-1390/ 520-621-4438) or by email (bwhite@ag.arizona.edu or aquapath@ag.arizona.edu) regarding availability and cost.

10. Rush Fees

Testing can be expedited upon request. A rush fee for the handling of expedited cases will be 50% above the normal cost of the case.

11. Pre-payment for large cases

The APL laboratory operates on a cost recovery basis. Therefore, on large cases a pre-payment of the total estimated cost of a case may be required where the total cost exceeds \$1,000 (USD). This pre-payment is necessary to cover costs needed to run the diagnostic test(s).

12. Administrative Fees

- Charges for reports, sent by courier, will be added to the fee invoice unless a designated courier, (eg. Federal Express, United Parcel Service, DHL, etc.), is provided to us prior to sending the reports. The account number for that courier must be provided so that the charges can be billed directly to the courier.
- Charges for faxing reports will be invoiced to the client if the long distance phone rate is unusually high.
- Multiple copies of reports will be charged at \$1.50 per copy.
- Duplicate reports will be charged at \$5.00 per report.