

**National Veterinary Services Laboratories
Vesicular Stomatitis – Complement Fixation (VS-CF)
Proficiency Test Summary**

- 1. Composition of proficiency test panel:** The panel consists of nine, 500 µl samples of sera. The panel contains positive and negative sera. The samples are labeled with numbers 1-9.
- 2. Cost of proficiency test:** Click [here](#) to view current NVSL Catalog of Reagents. Additional information on diagnostic reagents, including ordering, payments, shipping details and fees, is located at www.aphis.usda.gov/nvsl. Then click on the Reagents and Proficiency Tests link.
- 3. Storage conditions:** Short term (up to 7 days) store at $4^{\circ} \pm 2^{\circ}$ C. Long term (over 7 days) store at $<-20^{\circ}$ C in a non-frost free freezer.
- 4. Sample preparation/selection criteria:** Samples with positive and negative results are chosen for incorporation into the panel. Antibody levels arise from naturally and experimentally acquired infections. Each panel member is tested at least five (5) times by a minimum of two technicians in Diagnostic Virology Laboratory (DVL), at NVSL.
- 5. Panel quality control:** Samples are monitored for stability and reproducibility. Sera are filtered prior to bottling.
- 6. Timing of the proficiency test distribution and data collection:** The VS-CF panel is administered to the participating NAHLN laboratories once a year, generally in February. The panel is available upon request to other laboratories.
- 7. Test method:** Performance and interpretation of the Vesicular Stomatitis – Complement Fixation should be conducted as outlined in NVSL SOP-BPA-0300 for BPA personnel and NAHLN laboratory personnel.
- 8. Submitting test results:** Participants are required to have data submitted for scoring no more than three (3) weeks after panel distribution. Results are reported to the Head of the Bovine/Porcine/Aquaculture Section (BPA), in the DVL, at NVSL, or designee, by fax, e-mail, or mail. .
- 9. Scoring of individual panel samples:** Scoring is based on two criteria: proper identification of positive and negative samples and accuracy of reported titers. The New Jersey and Indiana-1 results are combined to determine the identification score and the accuracy score. Identity scores are determined by assigning one point per sample correctly identified as negative (less than 1:5) or positive (any titer).

Accuracy scoring is determined by assigning one point per sample for the expected titer. Reported titers within one two-fold dilution of the expected titer are also assigned one point. For a four-fold difference in titer from the expected result, 0.33 point is subtracted; for an eight-fold difference, 0.67 point is subtracted. Reported titers that differ more than eight-fold from the expected titer received zero points for accuracy.

- 10. Laboratory pass/fail criteria:** For NAHLN laboratory personnel, identification scores and accuracy scores must be at least 14/18 to pass. Laboratories that are not part of the NAHLN

system for VS CF testing do not have established pass/fail criteria and individual laboratories determine if they need to change their test procedures based on their score.

11. Reporting laboratory test scores: Results for each person are reported to the individual laboratory director and the AVIC. Pass letters are sent to laboratory directors within 60-90 days of the deadline for receipt of participants results. A copy of the results for all National Animal Health Laboratory Network (NAHLN) laboratories is sent to the NAHLN Program Office.

12. Remedial actions required for failing laboratory personnel: NAHLN laboratory personnel are given a second chance to pass a proficiency panel. If they fail a second time, the individual is no longer allowed to test, the person must undergo training (defined by NVSL), and the individual must pass a panel before they can begin testing again.

13. Special requirements: Participating NAHLN laboratories must comply with provisions outlined in the NAHLN Laboratory Qualification Checklist for Membership of a Veterinary Diagnostic Laboratory. Training received at a laboratory other than the NVSL must be approved by the NAHLN Program Office in conjunction with NVSL.