National Veterinary Services Laboratories
Salmonella Group D Proficiency Test

Proficiency Test Summary

1. Composition of proficiency test panel: The panel consists of 10 simulated drag swabs consisting of lyophilized mixed cultures. The samples are labeled with numbers 1-10. The test is offered in conjunction with the National Poultry Improvement Plan (NPIP). Each kit is labeled with a unique kit number which is used for reporting.

2. Cost of proficiency test: See the current NVSL Catalog of Reagents

3. Storage conditions: Kits are lyophilized and should be refrigerated immediately upon receipt. Kits may be stored as long as desired within the allowed reporting time of 30 days.

4. Sample preparation/selection criteria: Various common contaminants and Salmonella serotypes are mixed in different concentrations in the lyophilized cultures.

5. Panel quality control: These organisms are tested in the laboratory both alone and in the combinations used in the kits to ensure that Salmonella Group D can be recovered from the samples and correctly identified. Ten percent of the kits are kept at NVSL and processed by NVSL technicians.

6. Timing of the proficiency test distribution and data collection: The Salmonella D proficiency test is offered annually. Results are to be submitted to NVSL within 30 days of the receipt date.

7. Test method: Individual laboratories are free to perform proficiency testing by their method of choice. NPIP laboratories should follow NPIP approved methods. It is recommended to perform initial pre-enrichment or enrichment steps at a 1:10 ratio – 1ml of reconstituted sample into 9 or 10ml media. Thereafter samples should be treated as normal drag swab/environmental diagnostic samples would be in the participating laboratory.

To rehydrate lyophilized samples, lift or remove the foil circle on the cap. Thoroughly soak the rubber stopper with 70% ethanol and allow it to dry. Alternative disinfection methods may be used, but please note that the exterior surface of the vials and rubber stopper are not sterile. Rehydrate samples with 2ml of sterile water and allow cake to fully dissolve, 1-2 minutes. Occasional vials may not be under vacuum and it may be necessary to pull air from the vial with a syringe before adding water. Gently mix the culture before inoculating media. One milliliter (1ml) of culture is equivalent to a single environmental drag swab sample.

8. Submitting test results: Participating laboratories are required to have data submitted for scoring no more than 30 days after panel distribution. Results are reported to the NVSL by email to NVSL.DBLBIPT@aphis.usda.gov on the provided results worksheet.
9. **Scoring of individual panel samples**: For each sample, scoring is based on correct identification of positive *Salmonella* spp. by culture and identifying positives as Group D or non Group D *Salmonella* serotypes. Molecular/rapid testing for *Salmonella* spp., Group D *Salmonella*, or *Salmonella* Enteritidis is scored separately. Culture identification of *Salmonella* Enteritidis and non-group D serogroups are scored but do not contribute to the final pass/fail score.

10. **Laboratory pass/fail criteria**: A final score of 80 percent correctly identified is considered a passing score. This is subject to change based on compiled results from participating laboratories and input from NPIP. Depending on the methods used, pass/fail scoring may be based on a total of 10-50 points.

11. **Reporting laboratory test scores**: Each panel is assigned a kit number. Results listed by panel number are provided as part of the final report to all participants and laboratory directors. In addition, full results are provided to NPIP officials. Final results are compiled and reported within 60 days of the deadline for receipt of participants’ results.

12. **Remedial actions required for failing laboratories**: NPIP will follow up with the laboratories that do not pass.

13. **Special requirements**: For laboratories outside of the United States, a valid USDA transport permit is required to receive the proficiency test. A copy of the permit must be provided to NVSL prior to shipment. For laboratories in the US, the NVSL provides a valid permit.