New Jersey Department of Environmental Protection
Proficiency Testing (PT) Provider Protocols for Verification, Homogeneity and Stability (VHS) Data

VHS data must include a written protocol that demonstrates compliance with all requirements contained in the NELAC 2003 Standard Chapter 2, Appendix B.2 "Verification of Assigned Value," Appendix B.3 "Homogeneity Testing" and Appendix B.4 "Stability Testing." The data submitted must include:

A. Homogeneity testing for each analyte (only for PT Provider's in-house testing results, do not include outside laboratory results).

1. Define the procedure for verifying the homogeneity of each analyte in each sample;
2. Assigned Value;
3. Units;
4. N, number of samples analyzed for each analyte;
5. N, number of replicates analyzed for each sample, where applicable;
6. Completion date of homogeneity testing;
7. Mean of homogeneity testing data, across and within the batch, where applicable
8. Standard deviation of homogeneity testing data, across and within the batch, where applicable;
9. Statistical procedure and equation used to determine the homogeneity of the sample for each analyte, with the terms defined;
10. Homogeneity testing acceptance limits;
11. Homogeneity testing acceptance evaluation; and
12. Define the procedure for evaluating the acceptability of the sample homogeneity for an analyte if any statistical test fails.

B. Verification of assigned value for each analyte (only for PT Provider's in-house testing results, do not include outside laboratory results).

1. Define procedure for verifying the assigned value of each analyte and relative standard deviation of verification analysis;
2. True value (gravimetric value);
3. Assigned value;
4. Units;
5. Relative standard deviation of verification analysis;
6. Relative standard deviation of verification analysis limits;
7. Relative standard deviation of verification analysis evaluation;
8. N, number of samples analyzed for each analyte;
9. N, number of replicates analyzed for each sample, where applicable;
10. Completion date of verification of assigned value analysis;
11. Mean of verification analysis;
12. Mean percent recovery of verification analysis;
13. Acceptance limits for verification analysis mean;
14. Standard deviation of verification analysis;
15. Acceptance limits for verification analysis standard deviation;
16. Verification testing acceptance evaluation; and
17. Define the procedure for evaluating the acceptability of the assigned value of an analyte if any statistical test fails.

C. Stability testing for each analyte (only for PT Provider's in-house testing results, do not include outside laboratory results).

1. Define procedure for verifying the stability of each analyte during the study;
2. Assigned value;
3. Units;
4. N, number of samples analyzed for each analyte;
5. N, number of replicates analyzed for each sample, where applicable;
6. Start and completion dates of stability analysis;
7. Mean of results from stability analysis;
8. Mean of the initial verification analysis;
9. Standard deviation of stability analysis;
10. Standard deviation of the initial verification analysis;
11. Statistical equation used to determine the stability of the analytes, with the terms defined;
12. Stability testing acceptance limits;
13. Stability testing acceptance evaluation; and
14. Define the procedure for evaluating the acceptability of the stability of an analyte if any statistical test fails.