

DOM09 – Practices for Proficiency Testing

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1. Background

- 1.1. The open proficiency testing practices are a measure used by the Department of Forensic Sciences (DFS) Forensic Science Laboratory (FSL) to monitor performance. These practices are designed to demonstrate the FSL personnel performing forensic examinations produce reliable work and that analytical procedures are conducted within the established performance criteria. The program is designed in a manner to test analysts as well as the FSL quality system. These practices also satisfy the requirements of the *FSL Quality Assurance Manual*, the accreditation standards under ISO/IEC 17025:2005, and supplemental standards.

2. Definitions

- 2.1. For purposes of this document, the following terms shall have the designated meanings:

CAR: Corrective Action Report

DFS: Department of Forensic Sciences

DOM: Departmental Operations Manual

DPM: Department of Personnel Management

FSL: Forensic Science Laboratory

3. Scope

- 3.1. These practices apply to casework units who routinely perform analytical or interpretive procedures on evidentiary items. Open proficiency tests are analyzed and interpreted according to the unit's approved protocols in use at the time of the proficiency test.

- 3.1.1. **NOTE:** Proficiency tests are expected to be completed as one would complete assigned casework. However, assigned casework does at times entail the discussion of one's work amongst their supervisor(s) as well as peers. During proficiency testing it is expected that individuals during the assigned round of proficiency testing shall limit their discussion of the test to direct supervisors and not with those also in the assigned round of proficiency testing. Failure to do so can subject the individual to corrective action as defined by the *FSL Quality Assurance Manual* (section 4.11) and/or the disciplinary action as defined in *The Department of Personnel Management (DPM) of the District of Columbia Human Resources*.

4. Responsibilities

4.1. The **Laboratory Manager** will:

- 4.1.1. Support the FSL's proficiency testing program.
4.1.2. Perform an annual review of proficiency testing activities.

4.2. The **Deputy Director of Quality Assurance** will:

- 4.2.1. Implement and monitor the FSL's proficiency testing program.
4.2.2. Acquire and distribute external proficiency tests to participating units.
4.2.3. Perform an assessment of external proficiency test results.
4.2.4. Plan and organize an annual review of proficiency testing activities.

4.3. The **Technical Leader** and/or **Quality Assurance Liaison** will:

- 4.3.1. Perform an assessment of external proficiency test results involving DNA analysis procedures.
4.3.2. Oversee the resolution of proficiency testing discrepancies, involving DNA analysis procedures.

4.4. Analysts will:

- 4.4.1. Complete at least one open proficiency test annually.

5. Practices

- 5.1. The laboratory shall participate annually in at least one external proficiency test for each discipline of forensic science in which it provides services. ISO-approved test providers shall be used where available. Whenever there is not an ISO-approved test provider available, the laboratory shall locate and use a source of an external test in that discipline.
- 5.2. Each analyst must complete at least one open proficiency test annually. The test may be external or internal and will test his/her capabilities and performance in each discipline or sub-discipline in which he/she routinely performs casework. Each person tested must participate in the test to the extent that he/she would perform the procedures in casework. Proficiency tests are not required for non-routine procedures.
- 5.3. External proficiency tests will be purchased from ISO-approved proficiency test providers. Prior to test data being returned to the test provider, technical and administrative reviews must be performed. If an external provider is not available for a particular test, an internally designed and prepared test will meet the annual proficiency testing requirement.
 - 5.3.1. Individuals performing DNA testing must complete two external proficiency tests per year. The administration of those tests must be in accordance with the Quality Assurance Standards for Forensic DNA Testing Laboratories requirements. Each test must be obtained from an ISO-approved external provider.
- 5.4. Proficiency Test Procedures
 - 5.4.1. Proficiency tests are intended to monitor work as normally performed in the laboratory and are to be conducted using the currently approved casework procedures. Work is to be done independently by the analyst, supported by notes, photographs and other documentation, and summarized in a written report as required by casework. Prior to reporting the proficiency test results to the proficiency test provider, the work is to receive the same level of technical and administrative review required for casework. Individuals in the same proficiency testing round for a specific discipline should not perform technical reviews of their colleague's work unless their own proficiency test has undergone a technical review.
- 5.5. Proficiency Test Nomenclature
 - 5.5.1. Proficiency tests are to be treated as casework. Like casework, proficiency tests will be identified by a numbering system. The unique identifier number given to a proficiency test will adhere to the following

nomenclature: MYY-####P, where “YY” is the last two digits of the year in which the proficiency test is assigned.

5.6. Proficiency Test Evaluation

5.6.1. The Technical Leader and/or Quality Assurance Liaison will review the results and supporting documentation and compare the submitted results with the expected results. An evaluation form will be completed for each proficiency test administered. The form will be completed when the proficiency test results are evaluated for an internal test. The form will be completed after the manufacturer’s results are received for an external test. The evaluation form will include, at a minimum:

- 5.6.1.1. Name of test participant and title
- 5.6.1.2. Discipline
- 5.6.1.3. Test provider
- 5.6.1.4. Test identification number
- 5.6.1.5. Provider due date
- 5.6.1.6. Date assigned
- 5.6.1.7. Completion date
- 5.6.1.8. Name of evaluator and the evaluation date
- 5.6.1.9. Results: satisfactory or unsatisfactory
- 5.6.1.10. Description of discrepancy(ies) or corrective action(s), when appropriate.

5.6.2. Upon completion, the evaluation form will be made available to the test participant. Each test participant must document his/her receipt of the test evaluation. This documentation includes the name and signature of the test participant and the date the evaluation was reviewed.

5.7. Proficiency Test Records

5.7.1. The Deputy Director for Quality Assurance will maintain records of proficiency tests. These records include:

- 5.7.1.1. The test set identifier
- 5.7.1.2. How samples were obtained or created

- 5.7.1.3. Identity of the person taking the test
- 5.7.1.4. Date of analysis and completion
- 5.7.1.5. Original copies of all data and notes supporting the conclusions
- 5.7.1.6. The proficiency test results
- 5.7.1.7. Any discrepancies noted
- 5.7.1.8. The proficiency test evaluation form including analyst feedback
- 5.7.1.9. Details of corrective action (if necessary)

5.7.2. The date the proficiency test is assigned is the date that is referred to when determining subsequent proficiency test assignment dates.

5.8. Corrective Action

5.8.1. Administrative errors will be brought directly to the attention of the test participant by the administrative reviewer. All administrative errors will be corrected prior to the completion of the administrative review.

5.8.2. Analytical and/or interpretive errors will be reviewed to determine if the error is an employee performance issue, a Level 1 nonconformity or a Level 2 nonconformity. The Technical Leader and/or Quality Assurance Liaison will document the error, notify the test participant of the error, and record the date of the notification on the review sheet. At the discretion of the Technical Leader and/or Quality Assurance Liaison, the test participant may address the error and complete the proficiency test.

5.8.2.1. If the error is an employee performance issue, it will be addressed by the Technical Leader and/or Quality Assurance Liaison and will not require a *Corrective Action Report*.

5.8.2.2. If the error is a Level 1 or Level 2 nonconformity, the Technical Leader and/or Quality Assurance Liaison will determine the root cause of the error and a *Corrective Action Report* will be issued. The analyst will be removed from casework until the corrective action has been resolved. Depending on the nature of the error, an audit of casework completed by the analyst since his/her last satisfactory proficiency test may be required. Before resuming casework, the analyst must complete remedial training and satisfactorily complete a proficiency test (or competency test).

5.8.2.3. If the error is determined to be the result of a systemic problem (e.g., equipment, materials, environment, etc), an audit of all

cases completed since the laboratory's last satisfactory proficiency test may be required. Depending on the nature of the error, casework analysis may be suspended until the cause of the error is identified and corrected. The Technical Leader and/or Quality Assurance Liaison will determine the root cause of the error and a *Corrective Action Report* will be issued. All affected analysts will be informed of the corrective action.

6. Documentation

6.1. The following records will be generated and retained for at least one accreditation cycle or five years, whichever is longer:

6.1.1. Proficiency Test Records

6.1.2. Corrective Action Report w/associated responses (if applicable)

7. References

- 7.1. *ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories*, International Organization for Standardization, Geneva, Switzerland (current revision).
- 7.2. *ASCLD/LAB-International® Supplemental Requirements for the Accreditation of Forensic Science Testing and Calibration Laboratories*, American Society of Crime Laboratory Directors/Laboratory Accreditation Board, Garner, NC (current revision).
- 7.3. *Quality Assurance Standards for Forensic DNA Testing Laboratories*, Federal Bureau of Investigation, (current revision).
- 7.4. *Forensic Science Laboratory Quality Assurance Manual* (current revision)
- 7.5. *Unit-specific Quality Assurance Manual* (current revision)