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Proficiency Testing

ISO 7.7.2

I. Purpose

The proficiency testing program at the CBI-FS is used to monitor the reliability and quality of the analytical work product and ensure that the established policies and procedures are being followed. As such, this program is an integral part of the quality management system. Along with demonstrating the proficiency of the current staff, this program identifies areas where overall improvement may be made within Forensic Services.

II. Scope

All forensic scientists and technicians within the CBI-FS who are deemed qualified to perform independent casework/database work are subject to this policy.

III. Policy/Procedure

A. Objectives of the Proficiency Testing Program

1. Ensure quality work is maintained throughout the system;
2. Identify areas for improvement in system-wide policies and procedures;
3. Demonstrate the proficiency of the individual forensic scientist/technician, the laboratory and the system;
4. Determine future needs of the system.

B. Requirements

1. It is expected that all proficiency tests (PT) will be conducted thoroughly, accurately and in the same manner as casework;
2. All proficiency tests will utilize test methods approved by the CBI-FS;
3. All proficiency tests will be tracked and worked utilizing LIMS;
4. All proficiency test results must be interpreted [and](#) in compliance with ISO-17025 2017, ANAB AR3125, or any other governing body.



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- a. Where available and appropriate, external proficiency tests should be purchased from a provider that is accredited to ISO/IEC 17043.
- b. Where not available or appropriate for the work conducted, approval for an alternate test will be gained from ANAB.
- c. External tests must be submitted to the test provider in an agreed upon due date.

5. Each laboratory shall successfully complete at least one external proficiency test annually for each discipline in which it provides services.

C. Responsibilities

The following details the responsibilities for each position regarding the Proficiency Testing Program at the CBI-FS:

1. Quality Manager

- a. Implements and monitors the Proficiency Testing Program;
- b. Creates a system-wide schedule for the upcoming year's proficiency tests no later than November of each year;
- c. Maintains and adjusts the schedule as necessary;
- d. Ensures all external proficiency tests are obtained from an approved provider if available;
- e. Based on the schedule, orders and ensures the timely receipt of the appropriate number of external proficiency tests;
- f. Ensures scheduling is in conformance with the requirements outlined in the FBI's Quality Assurance Standards for DNA Databasing Laboratories and the Quality Assurance Standards for Forensic DNA Testing Laboratories;
- g. Reviews and approves all internal proficiency tests;
- h. Ensures that all internal proficiency tests are appropriately distributed, evaluated and documented;
- i. When discrepancies exist with either internal or external proficiency tests, informs the Forensic Services Director and can initiate the Quality Incident Review process;
- j. Receives and reviews the test providers' results or designates a program manager to receive specific results;
- k. Notifies the forensic scientist/technician electronically of the result of the PT through Qualtrax;

2. Forensic Services management



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- a. Monitors the proficiency test schedule ensuring affected personnel receive the appropriate test in a timely manner;
 - b. Ensures the timely completion of all distributed tests;
 - c. Ensures the timely appropriate reviews of all casework/database work related to proficiency tests;
 - d. When concerns and/or questions with the proficiency tests surface, consults with the Quality Manager and other members of Forensic Services management to reach a timely, appropriate resolution.
3. Technical leader
- a. Prepares internal proficiency tests with notification to the Quality Manager and/or other members of Forensic Services management;
 - b. If questions or concerns surface regarding a proficiency test, provides technical consultation in order to ensure the timely resolution of the question/concern; consults with the Quality Manager and other members of Forensic Services management as appropriate;
4. Program Manager—in addition to the above:
- a. Monitors the proficiency test schedule for DNA or Toxicology and ensures the staff to complete the tests in a thorough, accurate and timely manner;
 - b. Reviews the results of the DNA, Toxicology, or Databasing proficiency tests.
 - c. Ensures the proficiency test program is in compliance with the FBI QAS, ABFT, or CDPHE standards or criteria.
5. Forensic scientist/technician
- a. Ensures the thorough, accurate and timely completion of all assigned proficiency tests;
 - b. When questions or concerns arise, consults with the Technical Leader, the Quality Manager or other members of Forensic Services management to reach a timely, appropriate resolution while avoiding delay in the completion of the test.
 - c. Prepares internal proficiency tests with the approval of the Quality Manager and/or other members of Forensic Services management.
6. DNA forensic scientists/technicians—in addition to the above:



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- a. Must ensure conformance with the requirements outlined in the FBI's QAS for DNA Databasing Laboratories or the Quality Assurance Standards for Forensic DNA Testing Laboratories.

D. Schedule of Proficiency Testing

1. Forensic scientist/technician: Minimally each forensic scientist or technician, excluding DNA forensic scientists and technicians, must:
 - a. Complete one proficiency test per year in each discipline in which the scientist performs testing, a competency test can be used in place of a proficiency test for that year for a newly trained scientist;
 - b. Complete a proficiency test for each scope of testing in which the scientist performs analysis once per accreditation cycle.
 - c. The Quality Manger will create a schedule for each discipline that requires multiple categories of testing.

E. 2. DNA forensic scientist: Minimally must conform with the requirements in the DNA and Database DOMs. Questions or Concerns Regarding a PT

1. If questions or concerns arise with an external or internal PT, the Quality Manager will be notified. The Quality Manger will determine the next steps which can include consulting with the test provider and the accrediting body in order to resolve the discrepancy;

F. Due Dates

1. Proficiency tests are expected to be completed in a timely manner.
2. A due date is given for each PT assigned to the individual. This due date is reflective of the date the forensic scientist or technician must turn in the results.
3. Extensions can be requested through the scientist's immediate supervisor and may be granted with extenuating circumstances only (for example, an unexpected problem or question with the test; a leave that was not planned but must be taken; a rush case that must be completed within the same timeframe) and not in conjunction with day-to-day operations.

G. Reviews of Proficiency Tests

1. Technical Review



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- a. All proficiency tests will be technically reviewed using the same policies and procedures used for casework/database work;
 - b. Any forensic scientist or technician participating in the same proficiency test must complete their test prior to performing the technical review on another participating scientist/technician;
 - c. All DNA proficiency tests must be evaluated and comply with the current FBI Quality Assurance Standards for Forensic DNA Testing Laboratories or the Quality Assurance Standards for DNA Databasing Laboratories;
 - d. Any analytical or interpretive errors will be subject to the Quality Incident Review process.
2. Administrative Review
- a. All proficiency tests will be administratively reviewed using the same policies and procedures used for casework/database work;
3. Verification/Suitability Review
- a. A verification review shall be completed on proficiency tests in disciplines that require a verification review.

H. Blind Proficiency Tests

1. Blind proficiency testing can evaluate the services provided to the external customer including: evidence receipt, handling, storage and return; all aspects of casework including examination, interpretation, reporting, and overall customer service.
3. This type of testing requires the cooperation of an external user agency.
4. The Quality Manager will be responsible for evaluating the possibility for blind testing.

I. Internal Proficiency Tests

1. Internal proficiency tests may consist of the following:
 - a. Reusable, expired external PTs;
 - b. Multiple-use external PTs;
 - c. Internally prepared proficiency tests;
 - d. Competency tests.
 - e. Observation
2. Reusable, expired external PTs

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- a. The following will be documented when using reusable, expired external PTs:
 - Who prepared the test;
 - Date the test was prepared;
 - The unique identifier for each test;
 - The sample(s) and sample identifier(s) used for the test.
 - b. The sample test identifier must be altered so that the individual completing the PT cannot correlate any published results with the sample;
 - c. The test must be entered into LIMS using an “I” identifier after the case number.
 - d. The new identifier assigned to the sample must be documented;
 - e. The original manufacturer’s results for these proficiency test samples will be considered the expected results; no validation or confirmation needs to be performed.
3. Multiple-use external PTs
- a. An external PT may be assigned to one or more forensic scientists/technicians as an internal test when the test samples lend themselves to multiple examinations (ex. comparison of latent print images ordered on a DVD)
 - b. Will be assigned as an internal PT;
 - c. Must be completed prior to the release of the results.
4. Internally prepared PTs
- a. Minimally, the following will be documented when preparing an internal PT:
 - Who prepared the test;
 - Date the test was prepared;
 - The unique identifier for each test;
 - The sample(s) and sample identifier(s) used for the test;
 - b. Must be prepared by an individual who is qualified in that discipline/sub-discipline;
 - c. Each test or lot of tests must be checked to ensure the expected results can be obtained
 - d. When possible, a portion of the proficiency test sample from the same source will be retained for possible re-analysis if circumstances dictate such re-analysis; minimally, any remaining portion of the sample will be retained for possible reassignment and or re-analysis if circumstances dictate.
5. Observational Based PTs
- e. Minimally, the following will be documented when preparing an observed PT:

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- Who prepared the test;
 - Observer of the test
 - Date the test was prepared;
 - The unique identifier for each test;
 - Expected results of the test/what area is being tested;
- f. Observational tests can be completed on mock items or based on actual casework depending on the situation. If actual casework is used and there is no known value, the evaluator will document the proper use of methods and procedures for each step of the testing.

J. Expected Results

1. The following states the expected results for the types of PTs utilized at the CBI-FS:
 - a. External PTs—test provider’s results and consensus results;
 - a. Criteria used for evaluation for tests that use a mean value will be documented. Example is ‘three standard deviations from the mean’.
 - b. Reusable, expired external PTs—test provider’s results and consensus results;
 - c. Multiple-use external PTs—test provider’s results and consensus results;
 - d. Internally prepared PTs—expected results provided by the discipline forensic scientist who prepared the test;
 - e. Observed PTs. – Expected results or the proper application of the methods and procedures.

K. Unexpected Results

1. If an individual test contains unexpected results, the Quality Incident Review process will be initiated.
2. There can be many reasons that a test has unexpected results; a determination will be made as to the reason for the unexpected results and if further action is warranted.
3. Further action can include a second proficiency test, previous casework review, remedial training, new equipment, and environmental changes.
4. These actions will be documented during the Quality Incident Review process, with the completion of the process culminating in a successful proficiency test.

L. Records of Proficiency Testing

1. At a minimum, proficiency testing records shall include:
 - a. The test set identifier;



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- b. How samples were obtained or created;
 - c. Identity of the person taking the test;
 - d. Date of analysis and completion;
 - e. Originals or copies of all data and notes supporting the conclusions;
 - f. The proficiency test results;
 - g. Any discrepancies;
 - h. An indication that the test results were reviewed and feedback was provided to the forensic scientist/technician;
 - i. When applicable, the Quality Incident Review and any subsequent documentation will be included.
 - j. Location where test was taken.
2. Prior to calendar year 2009, all proficiency testing records were retained for one full accreditation cycle.
 3. As of calendar year 2009, all proficiency testing records are retained permanently.

M. Extended Leaves

1. An extended leave is considered any time exceeding one half of the proficiency test cycle;
2. If a forensic scientist or technician is on an extended leave, that individual will be tested upon their return in order to ensure continued proficiency;
3. The proficiency test must be successfully completed prior to that individual resuming independent casework/database work;

III. Links

A. None