



TENNESSEE BUREAU OF INVESTIGATION

Forensic Services Division

Quality Assurance Manual Resource Requirements; Personnel

6 Resource Requirements

6.2 Personnel

6.2.1 TBI-FSD personnel shall:

- Conduct themselves in an impartial/unbiased manner;
 - Have the authority needed to perform activities on a crime scene
- Demonstrate competence prior to performing independent laboratory activities; and
- Work in accordance with the management system.

6.2.2 The TBI-FSD has competency requirements in place for all functions influencing laboratory activities.

6.2.2.1 The following table outlines the competence requirements for each discipline within the TBI-FSD:

DISCIPLINE	MINIMUM EDUCATION	TRAINING	DEMONSTRATION OF COMPETENCE	PROFICIENCY TESTING
Evidence Receiving	H.S. diploma	2-6 months	Mock case and trial	N/A
Forensic Technicians		3-6 months	Mock case and trial	To cover extent of lab activities
Breath Alcohol Calibration	BS (see below) *** (see below)	3-4 months	Mock case with Official TBI Report Mock trial	1 external/year
Forensic Biology	BS (see below) *** (see below) -Molecular Biology -Genetics -Biochemistry -Statistics	14-24 months Minimum of 8 hours/year continuing education	Mock case with Official TBI Report Mock trial	2 external/year
CODIS	Same as Forensic Biology	Forensic Biology plus 3-6 months in CODIS	Same as Forensic Biology CODIS LMS modules Observation based	Same as Forensic Biology
Forensic Chemistry	BS (see below) *** (see below)	8 months	Mock case with Official TBI Report Mock trial	1 external/year
Firearms/ Toolmark ID	BS (see below) *** (see below)	24 months	Mock case with Official TBI Report Mock trial	1 external/year

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DISCIPLINE	MINIMUM EDUCATION	TRAINING	DEMONSTRATION OF COMPETENCE	PROFICIENCY TESTING
Latent Prints	BS (see below) *** (see below)	13-24 months	Mock case with Official TBI Report Mock trial	1 external/year Processing or Examination
Microanalysis -Fire Debris -Materials -Impression -GSR	BS (see below) *** (see below)	<u>Months</u> FD 8 Mat. 3-18 Impr. 9 GSR 8	Mock case with Official TBI Report Mock trial	1 external/year Scientists will complete all applicable tests in the Materials discipline per accreditation cycle
Toxicology	BS (see below) *** (see below)	4 months BA 10 months Tox	Mock case with Official TBI Report Mock trial	1 external/year in Alcohol and Toxicology
VCRT	Same as discipline requirements	6 week school in addition to discipline training	Mock crime scene with Official TBI Report Mock trial	1 internal/year May be covered by discipline external PT

*** Graduation from an accredited college or university with a bachelor's degree in chemistry, or other natural or physical sciences; forensic science, or other forensic related areas; including a minimum of thirty-six quarter hours (twenty-four semester hours) in chemistry.

6.2.2.2 The TBI Forensic Services Division utilizes a comprehensive training program to ensure future forensic personnel are adequately trained prior to independent laboratory activities.

Training program may be modified based on prior laboratory experience.

The supervisor of a new employee should submit the Trainee Checklist to the Quality Assurance Manager prior to start date.

Unit training programs will be developed to ensure personnel in training are adequately prepared to function within the laboratory to the extent necessary to fulfill their job function. Training programs will address the following, as applicable:

- a) Knowledge, skills, and abilities needed to perform laboratory activities;
- b) Knowledge of forensic science;
- c) Ethical practices in forensic science. Supervisors will review the *Guiding Principles of Professional Responsibility for Forensic Services Providers and*



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- Forensic Personnel* or a similar approved document with each trainee. This review will be documented in the training notebook. Annual review of this document will be performed and acknowledged by all forensic personnel;
- d) Laws/statutes relevant to their discipline, courtroom procedures/etiquette, and observation of qualified scientists;
 - e) Provisions in place for retraining of personnel. If retraining is necessary, applicable steps will be taken including possible suspension from casework to ensure the validity of results is not adversely impacted;
 - f) Monitoring the laboratory activities of personnel and ensuring appropriate skill and expertise levels are maintained;
 - g) Criteria to gauge an individual's progress.

Additional notes on the training program:

Forensic scientists in training are expected to read scientific literature relative to forensics and specific to their discipline. The TBI Laboratory and each discipline maintain libraries that provide access to forensic science resources such as relevant books, journals, and literature. The trainee will give presentations to demonstrate their knowledge of the scientific literature and procedures they have learned. Successful completion will be determined by Supervisor/TL.

Forensic scientists in training will be instructed in the use of the scientific method as it applies to forensic testing. This will include the use of the sampling procedure, if applicable, the writing of scientific reports, verifications, and reviews.

Forensic personnel in training must maintain a training notebook to document all training activities. Upon successful completion of the training program, the training notebook must be reviewed for completeness by the Unit Supervisor and Technical Leader, the Quality Assurance Manager and the Crime Laboratory Regional Supervisor. A memo from the Unit Supervisor or Technical Leader should be issued to the QAM, CLRS, and trainee signifying the completion of training.

Training programs will have criteria in place for evaluating scientists with previous forensic laboratory experience. Programs may be truncated based on this evaluation.

Overseeing the training program is the responsibility of the Unit Supervisor or their designee, referred to as the Training Officer (TO).

Progress reports will be generated and issued each quarter (preferably in March, June, September, and December). Issuing of progress reports may be modified based on the length of the training period. Progress reports will be reviewed with the trainee. A copy of the report will be given to the trainee following the review for addition to their training notebook. A copy will also be sent to the Quality Assurance Manager and CLRS. The following outline should be followed:

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First paragraph

- List of training activities completed during previous quarter;
- Evaluation of performance on training activities during previous quarter;
- Results of competency tests (if applicable);

Second paragraph

- Training activities to be completed during the upcoming quarter;
- Schedule of competency tests (if applicable) and presentations;

Final paragraph

- Overall satisfaction with training performance to date;
- Evaluation of trainee's ability to perform activities with increasingly less supervision;
- Expected final date for completion of training.

6.2.3 TBI-FSD management will ensure only qualified technical personnel perform laboratory activities. Prior to assuming independent casework responsibilities, all personnel must successfully complete a competency test. The competency test will include:

- Practical examination to cover the spectrum of anticipated work to be performed and evaluate the individual's ability to perform proper laboratory activities;
- A written test report/calibration certificate to demonstrate the individual's ability to properly convey results and/or conclusions and the significance of those results/conclusions; and
- A written/oral examination to assess the individual's knowledge of the discipline, category of laboratory activities, or task being performed. The examination should be in the form of a mock case and mock trial.

Any deviations from expected results of competency tests must be addressed by the unit technical leader. The technical leader will evaluate the circumstances associated with the results to determine the necessary plan of action. The technical leader will notify the Quality Assurance Manager in writing of the plan of action.

6.2.3.1 To minimize the risk associated with the mishandling of evidence by inexperienced personnel, milestones will be established within the training program to evaluate a trainee's ability to handle and test evidence prior to beginning supervised casework with their Training Officer. Milestones will include the proper use of PPE, safe handling of evidence and competency testing. Competency testing covering the

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spectrum of anticipated work shall be successfully completed with mock samples prior to performing any examinations on evidence samples.

6.2.3.2 Competency requirements shall be met by all personnel who:

- Are authorized to review results, opinions or interpretations; and
- Perform technical reviews of results or testimonies.

6.2.4 Current job descriptions for all TBI-FSD personnel are maintained in the Human Resources Department;

Personnel are authorized by management prior to commencement of independent laboratory activities.

6.2.5 The following procedures are in place to ensure the TBI-FSD hires, trains and maintains the competence of laboratory personnel:

- a) Transcripts should be submitted to laboratory management for review either prior to or upon interview for laboratory positions. Education requirements are listed in table 6.2.2. Transcripts for all newly hired examiners (except Forensic Biology/CODIS examiners) are reviewed by Quality Assurance Manager for compliance and an Education Compliance Memo is written. This memo along with transcripts are added to the individual's Ensur training record. For new Forensic Biology/CODIS examiners, the DNA Technical Leader reviews the transcripts and writes an Education Compliance Memo for the individual's Ensur training record;
- b) Hiring practices are maintained by the Human Resources Department;
- c) Each discipline has an extensive training program. The training programs have procedures in place for remedial training. Training programs are overseen by unit supervisor/TL, training officer, CLRS and QAM. Criteria are set for evaluating the competence of personnel prior to independent laboratory activities;
- d) All laboratory personnel are supervised by one (1) supervisor. Individuals on VCR teams will be directed by the VCR team leader on scene. Discipline Technical Leaders oversee the technical processes of the discipline and may restrict the laboratory activities of an examiner(s) as needed to protect the validity of results. See organizational charts;
- e) Laboratory management grants authorizations to laboratory personnel based upon their demonstrated competency performing specific laboratory activities. Laboratory personnel must work within the range of their authorizations at all times. Authorizations will be maintained in Ensur training record;
- f) Management is responsible for monitoring the competency of personnel. Expectations are periodically reviewed by supervisors with personnel. Results

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from proficiency tests, training activities and quarterly technical system reviews will also be incorporated into monitoring activities.

g) Records are maintained in Ensur, with QAM or by Unit Supervisor.

6.2.6 TBI-FSD management authorizes qualified personnel to perform activities within the laboratory system. Records are maintained of an employee's qualifications to include education, professional experience, and the successful completion of the training program. The above requirements also apply to contract employees working within the TBI Laboratory. These records will be available in the employee's training notebook and/or Ensur training account. Personnel will be issued authorizations detailing the extent to which they can operate within the laboratory. Authorizations shall include, as applicable:

- Laboratory activities;
- Equipment/software usage;
- Interpretations of data and results;
- Offering opinions and testifying;
- Report writing;
- Verification and review of results;

TBI-FSD management personnel and their designees are authorized to develop, modify, review, verify, and validate methods, policies, and procedures as necessary to make and enforce decisions affecting laboratory activities.