TRAINING MANUAL AND CHECKLIST

26.1 PURPOSE

To train forensic science examiners to examine evidence, perform serological tests and use the LIMS computer system.

26.2 RESPONSIBILITY

Forensic Science Examiner 2 or designee of the Forensic Biology Unit. The amount of time necessary to achieve proficiency in any area may be affected by the previous experience and training of the individual examiner. The Deputy Director or designee will oversee all training.

26.3 SAFETY

Use appropriate measures for the proper handling of physical evidence, biological materials and chemicals according to GL-2 (Safety Manual) Safety Data Sheets.

26.4 DEFINITIONS

LIMS: Laboratory Information Management System
ABAcard® HemaTrace® and p30: Rapid Immunoassays
RSID: Rapid Stain Identification
KM: Kastle-Meyer
o-Tol: o-Tolidine
AP: Acid Phosphatase

26.5 TRAINING CHECKLIST

The initials of the Forensic Science Examiner 2 or designee indicates that all practical exercises have been completed and the correct results have been obtained on the competency test (if applicable).

I. Introduction

Goals:
Upon completion, the examiner will be familiar with the Forensic Laboratory operation.

Initials	Date	**Tasks:**
_____	_____	Orientation to the Laboratory facility and personnel
_____	_____	Instruction on the organizational structure, code of ethics and the chain of command
_____	_____	Familiarized with building security and confidentiality requirements
_____	_____	Introduction to the quality control measures, including required Documentation, LIMS and Qualtrax
_____	_____	Familiarized with safety procedures, chemical handling and proper handling of biohazardous materials such as blood and body fluids, incident reports and fire/emergency procedures.

Reading:

_____	_____	All current DSS General Laboratory SOPs
_____	_____	All current Forensic Biology SOPs

II. Scientific Knowledge

Goals:

To ensure the examiner has the formal education and working knowledge of the fundamental basis of serology and physical evidence examination.

Initials	Date	**Tasks:**
_____	_____	Document a Bachelor's degree or higher in a physical or closely related science.
_____	_____	Document Laboratory training and experience in Forensic Science or a closely related field (i.e. SOQ and CV).

Reading:

_____	_____	DeForest, P. R., Gaensslen, R. E. and Lee, H. C., Forensic Science: An Introduction to Criminalistics, Chapter 6:"Transfer and Trace Evidence,"Chapter 9: "Blood" and Chapter 10: "Body Fluids," McGraw-Hill, Inc., 1983.
_____	_____	Lee, H. C. "Identification and Grouping of Bloodstains," Forensic Science Handbook,vol.1, ed. Richard Saferstein, Prentice hall, Inc. 1982, pp267 – 337.
_____	_____	AS A REFERENCE: Gaensslen, R. E., Sourcebook in Forensic Serology, Immunology, and Biochemistry, National Institute of Justice, 1983.

III. Technical Knowledge, Evidence Handling and Examination Goals:

Upon completion, the examiner will be able to demonstrate technical knowledge and proper techniques for the documentation, handling and transfer of physical evidence, both general and specific to the Forensic Biology Unit. The examiner will also develop the critical thinking skills necessary to evaluate the case circumstances and ensure all necessary testing has been conducted.

Tasks:

Initials	Date	
		Received instruction on the theory and observed techniques specific to the examination of physical evidence, including but not limited to:
_____	_____	1. Recognition of evidence
_____	_____	2. Recognition of Trace material
_____	_____	3. Identification of human hair and screening for DNA analysis
_____	_____	4. Documentation and identification of blood and/or body fluid stains
_____	_____	5. Physical match examination
_____	_____	6. Recognition of patterns
_____	_____	7. Documentation of damage
_____	_____	8. Proper preservation of evidence, transport and/or transfer of evidence for further testing
_____	_____	Familiarized with the proper procedures for documenting the evidence packaging and labeling.
_____	_____	Learned to properly handle physical evidence with blood/body fluid stains and to preserve and package cuttings, swabs and/or trace material for future testing.
_____	_____	Learned the proper aseptic technique for handling evidence.
_____	_____	Learned the proper technique for the collection of touch/wearer samples.
_____	_____	Learned the proper technique for handling and preserving liquid blood samples.
_____	_____	Learned the operation of the LIMS system, packaging designation of sub-items, maintenance of the chain of custody of the evidence, transfer of evidence to another Unit, and transfer of sub-items into their proper storage locations.

IV. Laboratory Analytical Procedures

Goals:

To provide practical instruction to the examiner on routine analytical procedures utilized in the Forensic Biology Unit.

Tasks:

1. Training will be conducted through a series of demonstration, observed practice and side-by-side examination of evidence with a supervising examiner or a designee. It is the trainee's responsibility to document the DSS case number, technique(s) utilized and trainer worked with through this process.

2. Training will be supplemented with corresponding journal articles relating to the specific procedure. These articles include but are not limited to those found in the Forensic Biology SOP Reference Binder and relevant Forensic Biology Validation binders.

3. Trainees are expected to review case jackets, including worksheets, photograph documentation and reports generated by analysts during their training.

4. Training for each procedure is fulfilled upon successful completion of a competency and oral examination at the discretion of a Forensic Science Examiner 2 or designee of the Forensic Biology Unit.

5. Fill in the table below accordingly, with the date range of execution.

6. After a probationary period (to be determined and approved by the DSS Director and Deputy Director) and the successful completion of above training, the examiner will be assigned small cases. An examiner is not required to complete training in all FB procedures before going on-line as an analyst.

7. With increasing experience, the examiner will be assigned more complex/larger cases.

8. Retraining, if needed, will be performed and a competency/proficiency test will be given according to GL-14 (General Training).

5. Fill in accordingly, with the date range of execution:

Procedure	Practical Exercises	Competency (with Report)	Oral Examination	Supplemental Reading	Applicable Case Jackets	Initials
AP						
CT/SH staining						
Sperm searches						
ABAcard p30						
Amylase						
RSID-Urine						
Urobilinogen						
Other:						
KM/o-Tol						
RSID-Blood						
HemaTrace						
Takayama						
Ouchterlony						
Other:						
Human Hair Identification and Screening						
Physical match						
Other:						

V. Report Writing and Review

Goals:

To learn the Laboratory protocol for report writing, report review, finalization of reports and review of LIMS procedures in order to conduct report writing as an analyst.

Initials	Date	**Tasks:**
_____	_____	Learned Laboratory and Unit guidelines for the writing of reports, and the completion of the documentation in LIMS.
_____	_____	Completed a written report of proficiency or competency test results.
_____	_____	A new analyst must complete a minimum of (5) cases and be evaluated prior to authorization for Technically Reviewing cases. The completion of additional cases may be necessary as determined during evaluation.
_____	_____	Reviewed a minimum of five (5) reports after the completion of the initial technical review
_____	_____	Independently conducted the initial technical review of a minimum of five (5) reports; Reports must then be reviewed by a Forensic Examiner 2 or designee of the Forensic Biology Unit.

VI. Legal Issues

Goals:

To become familiar with the legal requirements for testimony in the state of Connecticut.

Initials	Date	**Tasks:**
_____	_____	Received instruction on the following: 1. Qualifications 2. Technical testimony 3. Courtroom dress and demeanor 4. Ethical responsibilities of an expert witness 5. Laboratory courtroom monitoring procedures 6. Presentation of evidentiary findings 7. Pertinent rules of the courtroom
_____	_____	May observe courtroom testimony of another examiner in the Forensic Biology Unit. Testimony given by a former examiner of the Forensic Biology Unit may be observed if the testimony relates to Forensic Biology. May also attend pre-trial meetings.
_____	_____	Moot court conducted by examiners in the Forensic Biology Unit

Reading:

_____	_____	Transcripts or sample testimony of examiners in the Forensic Biology Unit
_____	_____	Admissibility requirements: *State v. Porter, Frye, Daubert*

26.6 REFERENCES

A. GL-2 (Safety Manual)
B. GL-4 (LIMS/Justice Trax)
C. GL-14 (General Training)
D. Public Act No. 15-207 (An Act Concerning Evidence in Sexual Assault Cases)