Deviation Request Form (DRF)

Directions: The Initiator will complete Sections A through C. Additional continuation pages can be included if necessary.

Initiator	MJ DeHaan	**Date**	2/11/2019

A. Requested deviation applies to (Technical Procedure – include specific section):

Forensic Biology Section Procedure for Chemistry Technician Training

B. Requested deviation:

See attached, multiple sections.

C. Necessity for the deviation:

A Chemistry Technician is currently assigned to the Forensic Biology Section in the Western Regional Laboratory. Changes are required to document the training program that fully covers the duties listed in the job description for that position.

D. Technical review and Authorization (to be completed by the Quality Manager and/or Technical Leader)
Comments(to include merits and impacts):

The training log that corresponds with the procedure was also updated and will need to be followed for successful completion of the training program.

Approved	☑	Yes	☐	No	Duration	until next version
Signature	Mackenzie G DeHaan	Digitally signed by Mackenzie DeHaan DN: cn=Mackenzie DeHaan, o=NC SCL, ou=FB, email=mdehaan@ncdoj.gov, c=US Date: 2019.02.11 13:32:40 -05'00'			Date	2/11/2019

E. Quality Assurance Authorization (to be completed by the Quality Manager, Forensic Scientist Manager or designee)

Acceptable within general QA guidelines and good laboratory practice?	☑	Yes	☐	No
Significant negative impact to Crime Laboratory Quality System?	☐	Yes	☑	No

Restrictions/limitations:

☑	Authorized	☐	Rejected	Signature	Jody H. West	Digitally signed by Jody H. West DN: cn=Jody H. West, o=DOJ, ou=State Crime Laboratory, email=jwest@ncdoj.gov, c=US Date: 2019.02.12 11:48:40 -05'00'	Date	2-12-19

Form approved for use by: Timothy G. Suggs

Digitally signed by Timothy G. Suggs DN: cn=Timothy G. Suggs, o=North Carolina State Crime Laboratory, ou=Quality Manager, email=tsuggs@ncdoj.gov, c=US Date: 2014.12.19 09:01:52 -05'00'

DRF – Procedure for Chemistry Technician Training

Throughout procedure, change reference to Chemistry Technician III to Chemistry Technician.

Add sections:

6.5.7 The Chemistry Technician shall attend demonstration of the inventory process for Sexual Assault Evidence Collection Kits (SAECK) received in the Forensic Biology Section.

6.5.8 The Chemistry Technician shall demonstrate the proper inventory process, including use of FA for SAECK.

6.6.4 The Chemistry Technician shall attend demonstration of handling DNA extracts and the proper aseptic process for drying down extracts.

6.6.5 The Chemistry Technician shall complete a competency test for handling of DNA extracts including evaluation of the proper procedure for drying down the extracts and packaging for return to the investigating agency,

6.6.5.1 The competency test shall consist of a set of at least 3 DNA extracts with 2 control samples. The extracts containing DNA shall have at least one sample of high DNA concentration (e.g. buccal swab extraction) and one sample of low DNA concentration.

6.6.5.2 The Chemistry Technician shall dry down the extracts using the most current section procedure.

6.6.5.3 The Chemistry Technician shall then package and give the dried extracts to a qualified analyst. The qualified analyst shall reconstitute the extracts and analyze them.

6.6.5.4 To successfully complete the competency test the extracts must give consistent results with no indication of contamination.

6.10.5.1 The training program may be divided to authorize the Chemistry Technician to perform routine DNA QC maintenance/tasks that do not involve the processing of samples prior to the completion of the training samples. The training samples and competency test shall be successfully completed prior to the Chemistry Technician performing DNA QC duties that would involve sample processing.

Procedure for Chemistry Technician Training

1.0 Purpose - The purpose of this procedure is to provide a training program for a Chemistry Technician, in the Forensic Biology Section, at the North Carolina State Crime Laboratory. This program shall provide individuals with the theoretical background and the working knowledge to conduct independent instrument calibrations and maintenance. Heavy emphasis shall be placed on quality assurance of all tests performed (data integrity via documentation). Upon completing the training program, the technician shall demonstrate the following:

- Ability to assist with evidence transfers through the section.
- Ability to perform routine safety maintenance.
- Ability to order supplies for both body fluids and DNA.
- Ability to perform all preventative/post maintenance and repair checks on instrumentation.
- Ability to perform all quality control procedures for both body fluids and DNA.
- Ability to assist the state CODIS Administrator.

2.0 Scope - This training program applies to Chemistry Technician III in the Forensic Biology Section.

3.0 Definitions – See specific technical procedures.

4.0 Equipment, Material, and Reagents - See specific Body Fluid and DNA technical procedures.

5.0 Training- Blocks may be completed independently of each other and the completion will be documented and approved on the Training Log. Authorization may be granted to perform portions of the training program according to the Procedure for Personnel Training.

6.0 Procedure

6.1 Training of Experienced Chemistry Technicians - In the event a Chemistry Technician with previous training and/or experience in body fluid and DNA is hired, the Body Fluid and DNA Technical Leaders shall assess the Chemistry Technician's knowledge, skills, and abilities based on any written training documentation provided by the Technician's previous employer. The Chemistry Technician's training program may be modified based on the Technical Leaders' assessments.

6.2 Safety

6.2.1 The Chemistry Technician III shall receive power point presentations as well access to policy and procedures related to safety and building evacuations for the section and building.

6.2.2 The Chemistry Technician III shall demonstrate the ability to perform the routine maintenance required to keep the Forensic Biology Section compliant with laboratory and section procedures.

6.3 Ethics

6.3.1 The Chemistry Technician III shall attend lecture(s).

6.3.2 The Chemistry Technician III shall read policies and procedures related to ethics.

6.3.3 The Chemistry Technician III shall read policies and procedures related to Alcohol and Drug Free workplace.

6.3.4 The Chemistry Technician III shall read policies and procedures related to the Use of Social Media.

6.4 Forensic Advantage

6.4.1 The Chemistry Technician III shall attend lecture(s).

6.4.2 The Chemistry Technician III shall read policies and procedures related to FA.

6.4.3 Demonstrate knowledge of FA.

6.5 Evidence Handling

6.5.1 The Chemistry Technician III shall attend lecture(s).

6.5.2 The Chemistry Technician III shall read policies and procedures related to evidence.

6.5.3 Forensic Biology evidence shall be received from the Evidence Control Unit. The Chemistry Technician III shall demonstrate the ability to retrieve forensic biology evidence.

6.5.4 The Chemistry Technician III shall ensure the evidence packaging is in a properly sealed condition. If the packaging seal does not meet policy, the technician shall remediate the seal and document the remediation in FA (Forensic Advantage) Laboratory Information Management (LIMS) software.

6.5.5 The Chemistry Technician III shall demonstrate the ability to work with evidence.

6.5.6 The Chemistry Technician III shall work with the evidence technician assigned to the Forensic Biology Section.

6.6 Aseptic Technique

6.6.1 The Chemistry Technician III shall attend lecture(s).

6.6.2 The Chemistry Technician III shall read policies and procedures related to aseptic technique.

6.6.3 The Chemistry Technician III shall be able to demonstrate proper aseptic technique and contamination controls.

6.7 Body Fluid Identification

6.7.1 The Chemistry Technician III shall attend lecture(s).

6.7.2 The Chemistry Technician III shall read policies and literature related to body fluid identification.

6.7.3 The Chemistry Technician III shall demonstrate proper identification of body fluids to the degree required for use in the job.

6.7.4 The Chemistry Technician III shall complete competency tests for body fluid identification to the degree required for use in the job.

6.8 DNA Analysis

6.8.1 The Chemistry Technician III shall attend lecture(s).

6.8.2 The Chemistry Technician III shall read policies and literature related to DNA analysis

6.8.3 The Chemistry Technician III shall demonstrate the ability to obtain a DNA profile.

6.8.4 The Chemistry Technician III shall complete competency tests for DNA analysis.

6.9 CODIS Operation

6.9.1 The Chemistry Technician III shall attend lecture(s).

6.9.2 The Chemistry Technician III shall read policies and procedures related to CODIS.

6.9.3 The Chemistry Technician III shall assist the CODIS Administrator in assessing information.

6.9.4 Demonstrate the ability to use the CODIS procedures.

6.10 Quality Control for Body Fluid Identification and DNA Analysis

6.10.1 The Chemistry Technician III shall attend lecture(s).

6.10.2 The Chemistry Technician III shall read policies related to Quality Control for both body fluid analysis and DNA analysis.

6.10.3 The Chemistry Technician III shall meet with the Quality Manager of the Crime Laboratory or designee for a session on accreditation, audits, and inspections.

6.10.4 The Chemistry Technician III shall understand the current DNA Federal QAS Standards.

6.10.5 The Chemistry Technician III shall demonstrate the ability to perform preventative/post/post-repair maintenance for instrumentation within the Forensic Biology Section.

6.10.6 The Chemistry Technician III shall be able to demonstrate the documentation of QC processes using FA and section forms.

6.10.7 The Chemistry Technician III shall be able to perform all tasks needed to assist the Forensic Biology Section, including but not limited to making aliquots, use of autolave, coordinating instrumentation services, and assessing new reagent lots.

6.11 Ordering

6.11.1 The Chemistry Technician III shall be shown proper procedure for ordering technical supplies.

6.11.2 The Chemistry Technician III shall demonstrate the ability to order technical supplies.

6.12 Competency Test - Individuals shall successfully complete a series of competency tests. These tests are to determine the technician's ability to obtain proper results for both body fluid identification and DNA analysis.

6.13 Additional Training

The training program shall, at a minimum, consist of a competency test. The training program may also consist of readings of relevant scientific publications; lecture(s) pertaining to any new technology advances and/or policy and interpretation changes; or wet lab scenarios where instruction on new

laboratory techniques may be demonstrated and hands on practice of new laboratory techniques may be performed to the degree trained.

The competency test will be a demonstration of maintenance, validation requirements, and reagent assessments. For successful completion, the Chemistry Technician III shall obtain results within the expected requirements for reagent acceptance and instrument inspections that is in compliance with Section Quality Control policies.

The Chemistry Technician III shall understand the ordering system and use of grant codes to effectively order supplies for caseworking analysts.

7.0 Limitations – Processing of casework samples.

8.0 Safety- There are many potential hazards that exist in the Laboratory. It is the responsibility of the Training Officer to ensure the Technician is aware of all potential hazards. These potential hazards include, but are not limited to, the following:

8.1 Infectious Agents

- Viral agents, including HIV and Hepatitis
- Bacteria, including sexually transmitted diseases
- Fungi
- Parasites

8.2 Hazardous Materials

- Caustic Agents (Acids and Bases)
- Carcinogens/mutagens
- Teratogens
- Organic chemicals
- Flammable materials
- Oxidizers

8.3 Electrical Hazards

- Electrophoresis units
- Laboratory equipment
- Grounding

8.4 Burn Hazards

- Autoclaves
- Thermal cyclers

8.5 Laboratory Safety Procedures

Individuals must be trained in laboratory safety by the Section Safety Officer prior to the commencement of training. Various manuals are provided that must be followed to ensure safety of all Laboratory personnel. The following manuals are to be used for reference and guidance for laboratory safety: SDS Notebook, the State Crime Laboratory Safety Manual, and the DOJ Safety Manual.

It is the responsibility of the Safety Officer to alert the technician to safety hazards specific to this Laboratory, including all items mentioned above.

9.0 References

- Listed within the Section and Laboratory Training Procedure

10.0 Records

- Training Logs and Notebooks

11.0 Attachments – N/A

Revision History		
Effective Date	Version Number	Reason
04/06/2016	1	Original Document