

GENERAL ORDER

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Immediately

V.3:05

Distribution: All Employees

Subject: **DNA EVIDENCE**Index as: Deoxyribonucleic Acid (DNA)
DNADNA Evidence
Evidence Procedures, DNA

Accreditation Standards: 83.2.7

Cross Reference: G.O. III-14, Property and Evidence
I.O. V.5:22, Infectious Diseases
Exposure Control PlanNational Institute of Justice, National Commission on the Future of DNA Evidence
FDLE (Florida Department of Law Enforcement) *Evidence Submission Manual*

Replaces: I.O. V.3:5, DNA Evidence (September 18, 2007)

This Order establishes precautions and guidelines for first responders pertaining to the recognition and safe handling of potential biological/DNA Evidence. It also outlines procedures for the collection, storage, transportation and submission to an accredited laboratory of probable DNA evidence and, lastly, discusses training requirements for employees who collect, transport and submit such evidence. It consists of the following sections:

- I. Definitions
- II. Recognition, Responsibilities and Precautions
- III. Collection, Storage and Transportation
- IV. Training Requirements
- V. Submission to Accredited Laboratories

I. DEFINITIONS

A. DNA (Deoxyribonucleic Acid) – The fundamental building block for an individual's entire genetic makeup. It is a component of virtually every cell in the human body and is the same in every cell. For example, the DNA in a person's blood is the same as the DNA in their skin cells, semen and saliva.

1. DNA is a powerful resource in a criminal investigation as each person's DNA is different from every other person's, except for identical twins. DNA collected from a crime scene can either link or eliminate a suspect to the evidence or crime scene. Through DNA comparison with relatives, a victim can be positively identified, even when no body can be found. DNA evidence from one crime scene can be compared with evidence from another locally, statewide or across the nation and can tie the incident(s) to the same perpetrator.

2. Valuable forensic evidence in the form of viable DNA can be found on evidence that is decades old. However, environmental factors can affect the DNA left at a crime scene; e.g., heat, sunlight, moisture, bacteria, and mold, etc. Therefore, not all DNA evidence will result in a usable DNA profile. Furthermore, just like fingerprints, DNA testing cannot tell when the suspect was at the crime scene or for how long.

II. RECOGNITION, RESPONSIBILITIES AND PRECAUTIONS

A. First responders to crime scenes should be aware that DNA is present at almost every scene. Since only a few cells can be sufficient to obtain useful DNA evidence, it may provide sufficient information to help solve a case.

1. The first responder is primarily responsible for the evidence found at the scene. It is their responsibility to identify what may or may not be useful and ensure that collection and preservation of the evidence is carried out.

2. Recognition of potential sources for recovery of DNA evidence is very important to further the investigation. The following list identifies common items found at crime scenes which may be good sources of DNA evidence.

- a. Guns, knives or other weapons may have DNA on either the handles, butts or other points. Sweat, skin, blood or human tissue may be present which can be collected or swabbed.
- b. Hats, bandannas or masks may contain sweat, hair or dandruff which can be collected and examined for possible DNA.
- c. Eyeglasses, specifically the nose and ear pieces, are good sources of sweat and skin.
- d. Facial tissues and cotton swabs may contain mucus, blood, sweat, semen or even ear wax which may contain DNA.
- e. Dirty laundry may have blood, sweat or semen in or on it.
- f. Items which may contain saliva such as cigarettes, toothpicks, gum or envelopes.
- g. Tape or a ligature (ropes/strings) may contain skin or sweat.
- h. Bottles, cans or drinking containers may contain saliva or sweat.
- i. Used Condoms may contain semen, vaginal or rectal cells.
- j. Bedding (pillow cases/sheets) may contain sweat, hair, semen, urine or saliva.
- k. Bullets that have passed through a person's body may contain blood and/or tissue.
- l. Bite marks may contain saliva.
- m. Fingernails may be a source of blood, sweat or tissue.

B. If possible, in cases involving DNA evidence, Forensic Technicians should be called to the scene to do the collecting.

C. Precautions

1. When collecting DNA, the employee gathering the evidence must protect the integrity of the item as well as themselves against the possibility of an infectious disease.

2. The following precautions should be followed:

- a. Wear protective gloves. Change them often.
- b. Use disposable instruments or clean them thoroughly before and after handling each sample.
- c. Avoid touching the area where you believe DNA may exist.
- d. Avoid talking, sneezing and coughing over evidence.
- e. Avoid touching your face, nose, and mouth when collecting and packaging evidence.
- f. Air dry evidence thoroughly before packaging.
- g. Put evidence into paper bags or envelopes, not into plastic bags. Do not use staples; use evidence sealing tape.

III. COLLECTION, STORAGE AND TRANSPORTATION

A. DNA evidence will be collected according to standard biohazard procedures.

B. Items such as wet or bloody clothing will be collected by Forensic Services Unit personnel who will carry out any required preparation and packaging.

C. Any DNA relevant items will be marked as bio-hazardous, or a bio-hazard sticker will be affixed, and will have "DNA" marked prominently on the evidence label.

D. When transporting and storing evidence that may contain DNA, it is important to keep the evidence dry and at room temperature.

1. Once the evidence has been secured in paper bags or envelopes, it should be sealed, labeled, and transported in a way that ensures it can be properly identified, affirmatively tied to the place where it was found, and it reflects the proper chain of custody.

2. Never place evidence that may contain DNA in plastic bags because plastic will retain damaging moisture. Direct sunlight and warmer conditions also may be harmful to DNA; so avoid keeping evidence in places that may get hot, such as a room or police vehicle without air conditioning.

E. Long term storage issues for items with DNA evidence shall be managed by the Property and Evidence Unit.

F. Items containing relevant DNA may only be disposed of pursuant to Florida State Statutes and will be done at the direction of the Property and Evidence Unit.

IV. TRAINING REQUIREMENTS

A. Sworn Personnel

1. Training for sworn personnel will be conducted by providing current, applicable literature issued by recognized sources such as the National Institute of Justice.

2. Refresher training on recognition, precautions and safety practices will be provided at read-off and during regular reviews of the *Exposure Control Plan*.

B. Forensic Personnel

1. It is recognized that forensic personnel will conduct most of the collection, transportation and packaging of probable DNA evidence.

2. Each forensic technician will be required to complete refresher training encompassing on-line information as well as the demonstration of practical recognition, collection and safety practices pertaining to DNA.

3. Training for forensic personnel will be provided on recognition of DNA evidence, methods for DNA collection and preservation, bloodborne pathogens and universal precautions, and use of personal protection equipment.

4. Training for forensic personnel will be provided:

a. Via on-line, DNA-related Web sites which provide advanced training and the most current information.

b. Through biannual training which will be conducted via on-line publications such as:

1) www.dnaresource.com, and/or

2) <http://www.nij.gov/training/Pages/forensics.aspx> (Operated by the National Institute of Justice), and/or

3) www.dna.gov. (Links directly to <http://nij.gov/topics/forensics/Pages/welcome.aspx>).

c. By any other identified and recognized source of training and information which can be utilized for field technicians to stay current on any advances, changes, or legal issues related to the field of DNA.

5. Forensic Technicians will attend outside training schools as time and the budget permits. Application will be made to schools pertaining to DNA issues as they become available in the region.

V. SUBMISSION TO ACCREDITED LABORATORIES

A. All requests for submission and testing of potential DNA evidence will be made by Investigative Services Bureau (ISB) personnel in accordance with the procedures of the selected, accredited testing facility, whether it is a government or private laboratory.

B. Requests for DNA evidence testing made to the Department by the State Attorney's or Public Defender's Office shall be forwarded to the supervisor of the section or unit that investigated the offense; *i.e.*, robbery, burglary etc., to ensure the request is handled in the proper manner.

C. ISB. Personnel have access to the proper submission forms provided by the laboratories that will receive and test the evidence.

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