

Annapolis Police Department



GENERAL ORDER

Number: K.7

**Issue Date: April
2007**

TO: All Personnel

SUBJECT: Collection of Trace Evidence and DNA Evidence

PURPOSE

The purpose of this General Order is to establish clear guidelines in the collection and preservation of trace evidence and DNA Evidence.

POLICY

It shall be the policy of the Annapolis Police Department that any personnel whose duty, assignment or responsibility is to collect and preserve trace/*DNA* evidence shall adhere to these procedures.

DEFINITIONS

1. **Trace Evidence** - Any hair, fiber, tissue, fluid, paint, glass or other materials that when collected and compared with a known sample may link a person or persons to a specific location or offense.
2. **Contamination** - The undesirable transfer of material to physical evidence (DNA) from another source.
3. **Cross Contamination** - The undesirable transfer of material between two or more sources of physical evidence.
4. **Biological Evidence** - Evidence commonly recovered from crime scenes in the form of hair, tissue, bones, teeth, body or other bodily fluids.
5. **Single -Use Equipment** - Items that will be used only once to collect evidence such as biological samples, then discarded to minimize contamination, e.g., latex gloves, tweezers,

scalpel blades and droppers.

6. **Personal Protective Equipment (PPE)** - Articles such as disposable (latex) gloves, masks, shoe covers and eye protection that are utilized to provide a barrier to keep biological or chemical hazards from contacting the skin, eyes and mucous membranes to avoid contamination of the crime scene.
7. **DNA (Deoxyribonucleic Acid)** - The molecule that encodes genetic information. DNA is a chemical substance contained in cells that determines each person's individual characteristics. An individual's DNA is unique except in cases of identical twins.
8. **Evidence Technician**- Refer to **General Order L.3 Crime Scene Procedures/Collection of Evidence**.

I. Required Action

- A. Upon responding to a crime scene all personnel shall take appropriate action to render first aid as needed, secure and preserve the crime scene as prescribed in **General Order L.3** and protect any trace and DNA evidence until such time as the Evidence Technician personnel or an officer trained in such evidence collection can respond to take control of the scene and collect evidence. Whenever possible materials and substances shall be collected from a known source, for submission to Forensic Services for comparison with any physical evidence collected. Evidence Technicians personnel and all officers trained in evidence collection will be trained in the identification, processing, packaging and transportation of DNA evidence.
- B. Responding personnel must remember that DNA can be found anywhere at a crime scene. The members should identify possible sources and locations of DNA evidence. Any object or surface that may contain or have been in contact with semen, perspiration, saliva, and other bodily fluids or skin cells from the victim or suspect is of significant value to the investigation and should be preserved. Evidence can be contaminated when DNA from another source gets mixed with DNA relevant to the case. This can happen when someone sneezes or coughs over evidence or touches their mouth, nose or other part of the face and then touches the area of the evidence containing DNA.
- C. In an effort to secure a crime scene from contamination, it is necessary to
 1. Restrict entry of the crime scene only to essential personnel as outlined in **General Order L.3**.
 2. Use the established point of entry and exit and pathway.
 3. Determine the need for personal protective equipment prior to entering the crime scene, i.e., Tyvex suite, booties, mask, etc.
- D. To avoid contamination of evidence that may contain DNA, always take the following precautions;
 1. Use new latex gloves for each piece of evidence.
 2. Use disposable single-use tools and equipment between evidence collections.

3. Avoid touching the evidence. Use a swab, disposable forceps, etc.
 4. If possible, allow evidence to dry before packaging.
 5. Collect and package evidence separately.
 6. Avoid direct contact with the evidence sample
 7. Use the appropriate personal protective equipment such as gloves, shoe covers, coveralls and disposable respirators.
*Personnel should consider crowds or hostile environments to be potential contaminants to evidence. Environmental factors such as heat, sunlight, bacteria and mold can destroy DNA evidence. Accordingly, all potential DNA evidence should be identified, preserved, collected, packaged and transported without due delay.
- E. As a general guideline when collecting, transporting and storing DNA evidence, keep the evidence dry and at room temperature. Once the evidence has been secured in paper bags or paper envelopes it must be sealed, labeled and transported in a way that ensures proper identification of where it was found. The Maryland State Police chain of custody form will be filled out when the DNA evidence is collected. Never place DNA evidence into plastic bags due to moisture that can be retained in the bags which can be damaging to the DNA. Direct sunlight and hot conditions also may be harmful to DNA. Avoid keeping evidence in places that may get hot, such as a room or police vehicle without air conditioning.
- F. Hair, Fiber and Fluid Evidence
1. Hair and fibers, by nature of their size, require special procedures for their collection.
 2. From a crime scene:

Hair and fiber evidence will be collected either by vacuuming, sticky lifters (3M tape) or other appropriate methods. They will be placed in a paper container for transport and/or storage. The evidence container will be marked with all necessary information to identify the case, technician's name, date, and any other information which is deemed necessary. The Maryland State Police chain of custody form will be filled out. This shall then be submitted to the Forensic Services Unit via the Property Section as prescribed in **General Order K.1**. For the collection of other biological and DNA evidence, Evidence Technician personnel or an officer trained in such collection should refer to the Annapolis Police Department Crime Lab Manual.
 3. From a victim:

Fiber and fluids (blood, semen, swabs, personal clothing, underwear, etc.) will be collected at a proper medical facility by a licensed medical professional, utilizing the standard as prescribed in the Maryland State Police Assault Collection Kit. The Maryland State Police chain of custody form will be filled out at the facility by the Annapolis Police Department personnel receiving the collection kit from the medical professional. Hair or swabs may be collected by medical professionals,

Evidence Technicians or officers trained in such collection. This shall then be submitted to the Forensic Services Unit via the Property Section as prescribed in **General Order K.1**.

4. From the suspect:
 - a. Fiber and fluids (blood, semen, swabs etc.) will be collected by a licensed medical professional, Evidence Technician or officer trained in such collection using the Maryland State Police Suspect Collection Kit. The Annapolis Police Department personnel overseeing the collection will insure that no fewer than 24 “pulled” head and 24 “pulled” pubic hairs are collected from the suspect. The attached Maryland State Police chain of custody form will be filled out at the facility by the Annapolis Police Department personnel receiving the kit from the medical professional. Hair or swabs may be collected by medical professionals, Evidence Technicians or officers trained in such collection. This shall then be submitted to the Forensic Services Unit via the Property Section as prescribed in **General Order K.1**.
 - b. Prior to collection of the evidence a search warrant may be required if the suspect does not give consent.
5. Glass, paint, soil, fabric and trace evidence.

Glass, paint, soil, fabric and other trace evidence shall be collected in paper, plastic or other suitable containers. All such containers will be marked with all required information to be submitted to the Forensic Services Unit via the Property Section as prescribed in **General Order K.1**

- G. Whenever possible, the entire item of evidence should be collected instead of a piece thereof. The entire piece of evidence then can be submitted and examined for comparison.
- H. Each time the transfer of physical custody takes place, to include transfers in the field, the chain of custody form must be filled out.

II. Cross Contamination of Evidence

- A. To protect against the cross contamination of victim/crime scene trace evidence with the trace evidence of any suspect(s), the Annapolis Evidence Technician personnel will establish two different and separate examination and packaging rooms.
- B. The first room will be for the victim and the crime scene trace evidence.
- C. The second room will only be used for packaging suspect trace evidence

III. Submission to Forensic Services for Comparison Testing

- A. Whenever an investigator or other police personnel wishes to have any evidence submitted for processing or comparison, the requesting officer must submit a written request to the Forensic Services Unit on the “APD Forensic Services Request Form”.
- B. The request shall include the case number, the officer making the request, the date, the offense-date-location, and the type of examination request.
- C. Evidence that is being sent to outside agencies for examination will be transported in a timely fashion by trained Evidence Technician personnel or Criminal Investigations personnel to the desired lab (FBI, MSP, etc.). In every case a cover letter (written by the investigating officer or Evidence Technician personnel) will accompany the item(s). The standard Maryland State Police chain of custody form, correctly filled out, will also accompany all evidence (unless the particular lab requires a form of their own). All evidence will be packaged, marked and sealed according to the procedures set down by the receiving agency lab. A written report will be required from all labs, although a preliminary oral report may be given.
- D. The Forensic Services Unit will maintain a current log of all evidence transported to outside agencies which shall include the evidence sent, the lab it was sent to, the date it was sent, the requested examination, date returned, and who the transporting Evidence Technician personnel was.
- E. When whole blood is collected (in a tube) it shall be placed in a bubble wrapped container (or some other type of container to prevent breaking) and transported. Every effort should be made to collect blood on ultra stain collectors. In place of blood collection for DNA comparison, oral swabs of the inside cheek may be used utilizing sterile swabs.
- F. DNA evidence will be submitted to an accredited laboratory. All evidence will be packaged, marked and sealed according to the procedures set down by the receiving agency lab.
- G. All handguns submitted into evidence for analysis shall be submitted as prescribed in **General Order K.9**.

Joseph S. Johnson
Chief of Police

References
1. Accreditation Standards 83.2.1, 83.2.7, 83.3.1, 83.3.2
2. General Order K.1 Evidence and Recovered Property, K.9 Recovered Firearms, L.3 Crime Scene Procedures/Collection of Evidence

Revision: This General Order replaces General K.7 Collection of Trace Evidence dated April 2001