Physical Evidence Handbook

1 General Information
- 1.1 Introduction
  - 1.1.1 Goals and Objectives
  - 1.1.2 Accreditation
  - 1.1.3 Services Provided
  - 1.1.4 Hours of Operation
- 1.2 Statement of Services
  - 1.2.1 Introduction
  - 1.2.2 Laboratory Service Requests and Policies
  - 1.2.3 Customer Feedback
  - 1.2.4 Laboratory Addresses and Phone Numbers

2 Analysis Requests

3 Evidence Collection and Protection

4 Evidence Submission

5 Section Specific Requirements for Evidence Submission and Analysis
- 5.1 Drug Section
- 5.2 DNA Section
- 5.3 Firearm and Toolmark Section
- 5.4 Latent Print Section
- 5.5 Crime Scene Evidence/Latent Print Processing Section
- 5.6 Multi Media Section

6 Evidence Return and Reporting
- 6.1 Notification
- 6.2 Reporting and Evidence Return

7 Resources
- 7.1 Non-APD Resources for Testing
- 7.2 Additional Testing Resources

8 Forms
- 8.1 Analysis Request Form (FSD-011)
- 8.2 Outside Agency Testing Authority (FSD-031)
- 8.2 DNA Case Synopsis Form (DNA-046)
- 8.3 Multi Media General Request (MM-001)
- 8.4 Multi Media Travis County Attorney Request (MM-002)
- 8.5 Customer Survey Form (FSD-032)

1.0 GENERAL INFORMATION

1.1 Introduction

The Physical Evidence Handbook is provided to acquaint law enforcement personnel with the forensic laboratory services offered by the Austin Police Department Forensic Science Laboratory (herein referred to as Laboratory). It is intended as a guide to assist officers in the proper, safe, and efficient methods of evidence collection, packaging, and submission. Law enforcement personnel must take care to ensure the evidence will not be lost, damaged or contaminated.It is our goal to work with law enforcement to protect the integrity of their evidence and the criminal case being investigated.

1.1.1 Goal and Objectives

The Laboratory is responsible for providing the Austin Police Department, Citizens of Austin and numerous other customers, with a high level of forensic science services and support based on quality, timeliness, accuracy, and professional standards.

1.1.2 Accreditation

Texas Government Code 411.0205 requires that specific forensic testing of evidence must have been conducted in an accredited laboratory in order for testimony to be admissible in Texas courts.

A description of the state accreditation program may be found on Texas DPS website: http://www.txdps.state.tx.us/CrimeLaboratory/LabAccreditation.htm.

The Laboratory is accredited by the AmericanSociety of Crime Laboratory Directors/Laboratory Accreditation Board.

1.1.3 Services Provided

The Forensic Science Laboratory has the capability to provide the following services:

- Controlled Substance Analysis
- Clandestine Laboratory Investigation
- Blood Alcohol Analysis
- Serology Screening
- DNA Typing
- CODIS (Combined DNA Index System)
- Firearm and Toolmark analysis
- NIBIN (National Integrated Ballistics Information Network) entry
- Latent Print Analysis
- Latent Print Processing
- AFIS (Automated Fingerprint Identification) entry
- Photography
- Crime Scene Investigation

1.1.4 Hours of Operation

- The normal operating hours for the Laboratory are Monday through Friday from 7:30 a.m. to 4:00 p.m., except recognized city holidays, or due to inclement weather conditions as determined by the City of Austin.
- Laboratory Evidence Intake Unit hours for external customers are typically operational Monday – Friday, 7:30am – 1:00pm.
- The staff of the Crime Scene Section maintains a 24 hour coverage schedule.
- For emergencies, after hours contact with the Laboratory can be made through the Communications Division at 974-0922.

1.2 Statement of Services

1.2.1 Introduction

The Laboratory values and encourages communication and cooperation with its customers. As a result of compliance with accreditation standards, there are certain requirements of communication and policies regarding case acceptance that must be upheld by the Laboratory. This section outlines the specific parameters and limitations regarding the submission of evidence to the Laboratory.

In the remainder of this document, the submitting officer, submitting agency or case agent may also be referred to as “customer”.

1.2.2 Laboratory Service Requests and Policies

The Laboratory receives analysis requests through the Laboratory Information Management System (LIMS):

- Customers with access to the Department’s Records Management System (Versadex) can utilize the web pre-log function of LIMS to create an analysis request form. This request will be received electronically by the Laboratory and the request will be reviewed by laboratory staff as soon as possible.
- Customers who do not have access to Versadex can utilize the LABORATORY SUBMISSION SOFTWARE provided by the Laboratory to complete an analysis request form at a remote location prior to arrival at the laboratory. This form will be used to provide the customer’s case information to the laboratory. The form will be submitted in conjunction with the evidence at the Laboratory Evidence Intake Unit. Acquisition and associated training will be arranged through the LIMS Administrator.
- Services requested will be evaluated by a reviewer assigned to that specific section. This process could be delayed depending on caseload. At the discretion of the reviewer, the request will either be accepted, rejected or modified. Reasons for the rejection will be communicated to the customer.
- For APD customers:
  - If the request is accepted the evidence will be requested from the Evidence Control Section and placed in the pending queue.

  - If the request is rejected the customer will be notified as to the reason for the rejection. The evidence will remain in the evidence control section.
- For external customers:
  - If the request is accepted the evidence will be placed in the pending queue.
  - If the request is rejected the customer will be notified as to the reason for the rejection and the evidence will be returned to the submitting agency.
- If questions arise concerning an analysis request the requestor should contact the laboratory via telephone or email. ***DO NOT SUBMIT A SECOND ANALYSIS REQUEST.***

Information for submission should include a description of the items of evidence being submitted and the general type of service(s), or discipline(s) believed to be necessary in the analysis of the evidence.

Explanation of Types of Service Requests:

- **ADM –** Administrative Evaluation (Internal Lab Use Only) – DO NOT USE
- **AFIS –** Automated Fingerprint Entry (Internal Lab Use Only) – DO NOT USE
- **BAC – Blood Alcohol Analysis –** For blood specimens that require alcohol concentration determination and/or drug testing.
- **CM – Transportation of Items to DPS for Analysis –** For requested evidence to be forwarded to DPS for additional analysis.
- **CSL – Crime Scene Laboratory Analysis (Additional Information) –** Other analysis than latent print processing (e.g., photography of evidence item(s) for documentation purposes); please utilize the Comments area to enter details of the requested task(s).
- **CSL – Process for Fingerprint –** For requesting latent fingerprint processing on evidence items; also includes documenting inked fingerprints on paper documents.
- **DC – Drug Analysis –** For items that require confirmation of a controlled substance.
- **DNA Analysis –** Screening of evidence for biological fluids and DNA typing of biological stains; CODIS entry. Reference samples are required for DNA requests for the swabbing of firearms and ammunition. If reference samples have not been collected, requests for the swabbing of firearms and ammunition will be submitted to CSL.
- **FA – Distance Determination –** Gunshot residue evidence examination and identification on clothing performed using suspected firearm and ammunition on similar material in order to determine an approximate distance.
- **FA – Firearms -** Firearms evidence examination and identification including fired ammunition components when applicable, comparative analysis is performed.
- **FA – Serial Number Restoration –** Serial numbers on Firearms that have been partially or completely obliterated.
- **FA – Toolmark Analysis –** Toolmark evidence examination and identification including fracture matching.
- **LP – Latent Print Comparison –** For the comparison of latent print evidence only. For latent prints evidence processing select “CSL – Process for Fingerprint”.
- **MM – Audio Processing –** For requesting audio redaction and enhancements.
- **MM – Digital Processing –** For requesting photographic prints or the transfer of digital images to a cd/DVD.
- **MM – Video Processing –** For requesting video redactions and enhancements.

A completed analysis request submission serves as a proposed contract between the customer and the Laboratory.

Laboratory personnel will evaluate the evidence, the requested services, and the case history to ensure that the needs of the customer can be met by the Laboratory. A case synopsis or report can assist in evaluating the requested services.

Requests submitted requiring analysis by multiple sections (e.g. serology collection and latent print processing) will be prioritized by laboratory staff utilizing a sequence that will allow for optimal results (e.g. serology collection before latent print processing). If only one process can be accomplished, the customer will be consulted to determine the best course of action.

Evidence that has been previously examined and processed for latent prints or analyzed for firearms or drug evidence will generally not be subsequently examined for DNA evidence.

The customer will be informed if the laboratory is unable to meet their needs or if other services offered by the Laboratory would ultimately benefit the investigation.

The laboratory may contact the customer to clarify any discrepancies with the request, description or condition of the item(s) of evidence, and whether to proceed with testing.

A forensic scientist may contact the customer when circumstances of the submission need to be clarified before work can commence.

If the Laboratory believes that the evidence is unsuitable, there is an insufficient quantity/quality or is of limited value, or the request is unreasonable (e.g. an extensive amount of evidence requested) the forensic scientist has the discretion to not perform a test. Information will be provided on the laboratory report to inform the customer that an item of evidence was not analyzed or examined.

The customer permits the forensic scientist to choose the appropriate testing methods to fulfill the requested services and deemed to be of the most relative value to the submitted evidence.

When the Laboratory has the capability to complete the requested services, appropriate methods of analyses and examinations that have been validated and are recognized by the forensic community will be used.

The customer will not necessarily be informed prior to testing regarding the specific methods used on the submitted evidence. However, the methods used are available for review by the customer, upon request.

During the course of analysis of evidentiary items where large numbers of a particular item are submitted as one exhibit (e.g. baggies, pills, and an excess quantity drugs), it may be necessary for the forensic scientist to use a sampling plan to analyze a portion of items from

that exhibit. A statistically valid method of selection and analysis will be used on the samples, such that the reported results are intended to be representative of the whole exhibit.

Occasionally, it may be necessary for the forensic scientist to subdivide an exhibit for analysis or to collect a sample from the exhibits in order to properly preserve or analyze the evidence (e.g. cuttings, tapings, extractions, and segregation of samples). These subdivided exhibits may be retained by the Laboratory for possible future examination or retrieval. The Laboratory will maintain an internal chain of custody of the movement of exhibits while in the care of the Laboratory.

The Laboratory may contact the customer to discuss the decision to not perform a requested service. After receiving the laboratory report, the customer, in turn, may contact the laboratory to discuss the test(s) not performed or to request other services.

There are some testing methods the laboratory does not perform. Examples include Trace Evidence Analysis (including hair comparisons), Shoe Print Comparisons, Mitochondrial DNA Testing, Y-STR DNA testing, Mini STR DNA Testing, Toxicology (except blood alcohol), GSR Kit (hands) Analysis, and Questioned Document Examinations. If these types of examinations are desired, the laboratory may be able to assist internal customers in packaging and shipping the evidence to a laboratory that provides the services needed. It will be the responsibility of the customer to provide the appropriate submission forms and funding codes for the services being requested. For external customers, the laboratory will release the evidence back to the customer and provide guidance as needed.

For special service requests (e.g. upcoming set court date, immediate public threat)**, it is the responsibility of the customer to effectively communicate those needs in writing to the Laboratory, either by email to the supervisor of the section or the section email address.**

If the Laboratory receives a special service request to complete analysis of evidence in a certain time-frame but the laboratory cannot meet the requested time requirements, the customer will be notified. Delays in routine casework will usually not result in communication with the customer. Should a significant delay occur, laboratory management may contact the affected customers.

The customer should understand that non-routine service requests and rush situations are discouraged as it will inevitably impact completion of other cases.

At a time convenient to all parties, customers may meet with the scientist(s) to discuss potential testing, view the evidence or discuss the results and conclusions of testing.

In order to preserve the confidentiality of all cases, maintain a secure working environment and protect the integrity of the evidence to be analyzed, customers are not routinely permitted to be present during the examination of evidence. Any requests to do so will be referred to the Laboratory Manager for their decision.

If there are questions regarding laboratory services and policies, please contact Laboratory staff utilizing the contact information in section 1.2.4.

1.2.3 Customer Feedback

Suggestions or comments for improvements to the Laboratory is encouraged and can be submitted to the Laboratory by completion of the Customer Survey form (FSD-032) located in this handbook or complete the online survey at:

https://www.surveymonkey.com/s/APDForensicsurvey.

1.2.4 Laboratory Addresses and Phone Numbers

The mailing and physical addresses and phone numbers for the Laboratory are as follows:

Section	Phone Numbers
Forensic Science Laboratory – Main Number	512-974-5150 Fax:512-974-6640 Forensic.Division@austintexas.gov
Forensic Laboratory Manager's Office	512-974-5118 Fax: 512-974-6640
Assistant Manager's Office	512-974-5131 Fax: 512-974-6661
Quality Assurance Program Manager	512-974-5103 Fax: 512-974-6640
Quality Assurance Specialist/Laboratory Evidence Intake	512-974-4258 Fax: 512-974-6640
Laboratory Information Management System Coordinators	LIMS@austintexas.gov
Forensic Chemistry Section Supervisor's Office	512-974-5107 Fax: 512-974-6648 Chemlab@austintexas.gov
DNA Section Supervisor's Office	512-974-5108 Fax: 512-974-6694 DNA.Lab@austintexas.gov
Latent Print Supervisor's Office	512-974-5780 Fax: 512-974-6640 Latent.Unit@austintexas.gov
Polygraph Section Office	512-974-5111 Fax: 512-974-6673 Polygraph@austintexas.gov
Crime Scene Office	512-974-5119 Fax: 512-974-6640 Crime.scene@austintexas.gov
Firearm and Toolmark Section Office	512-974-5109 Fax: 512-974-6669 Ballistics@austintexas.gov

Multi Media Section Office	512-974-5115 Fax: 512-974-6658 APDPhotolab@austintexas.gov
Mailing Address: PO Box 689001 Austin, Texas 78768-9001	Physical Address: 812 Springdale Road Austin, Texas 78702

2.0 ANALYSIS REQUESTS

Analysis request information is located in 1.2.2 of this handbook.

Requests must be filled out as completely as possible. Please note that incorrect or incomplete analysis requests may delay the processing of evidence.

Once the evidence is ready for submission, it is preferred that contact be made with the Laboratory Evidence Intake staff to set up an appointment for delivery. Failure to contact the section ahead of time may result in staff being unavailable to receive your submission.

Typical hours of operation for the Evidence Control Section are 7:30am to 2:00pm, with no evidence received after 1:00pm.

The evidence will be brought to the laboratory located at 812 Springdale Road.

Accompanying the evidence should be an analysis request form created with the software identified in 1.2.2.

Other documentation may be required depending on the type of analysis being requested. Please see section specific requirements listed below.

These forms are designed to ensure that the laboratory has all the necessary information about the case and to minimize the customer's time and effort.

3.0 EVIDENCE COLLECTION AND PROTECTION

This manual is intended to address evidence submission to the laboratory and does not address the evidence recognition, collection and protection in the field. For more information on this chapter, refer to the Texas Department of Public Safety – Physical Evidence Handbook which can be viewed at:
http://www.txdps.state.tx.us/CrimeLaboratory/documents/PEHmanual.pdf

4.0 EVIDENCE SUBMISSION

Evidence received by the laboratory must meet certain packaging requirements.

ALL EVIDENCE MUST BE LABELED AND PROPERLY SEALED.
For a seal to be considered proper, the tape must have the initials of the person performing the seal and the date on which the seal was created with some part of the labeling extending over the edge of the seal. Tape should completely cover all openings to the evidence container. Please do not use staples as it does not constitute a proper seal and may present a safety hazard. All of these steps are taken in an effort to ensure that if a seal has been tampered with, it will be evident.

It is recommended that at a minimum, items be labeled with the agency case number, an item number, location of collection, date collected (including time; as required by some agencies), and initials of individual who collected the item. Other pertinent information may also be included, depending on your agency's policies.

In addition, evidence being submitted that was collected directly from a person (e.g. buccal swab, blood sample, fingerprint card) must have the name of the person the sample was collected from. This information should be present on the outside evidence container.

Any items suspected of containing blood or other body fluids must be labeled as a "Biohazard".

Packaging of items that contain knives, razor blades, needles or other sharp pointed items.
Please properly label each item for idenitification. It is vital that these items be packaged in a safe manner for both the transporter and analyst.

Acceptable containers for knives are knife sleeve protectors, puncture resistant plastic container or small cardboard boxes with tie down.

Sleeve Proctector

Adjustable sharps container small box with ties

Razors blades can be placed in small sliding cardboard boxes that are closed and secured.

Sryinges need to be submitted in a puncture resistant container such as a syringe tube if the content is to be analyzed or another type of puncture resistant container such as Nalgene bottle for large quanitites of syringes that do not require analysis.

Do not remove contents from syringe. Do not remove the needle from the syringe.

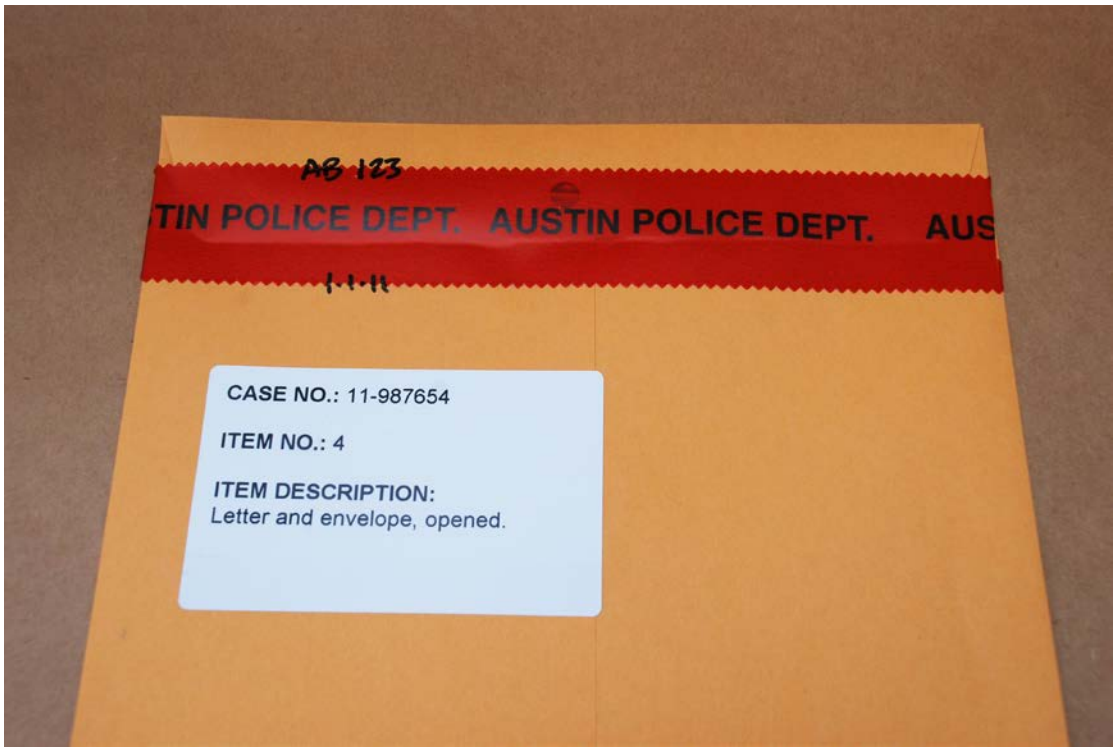
Do not attempt to recap syringes.

Liquids:
Liquids that are submitted for anlaysis need to be submitted in an approved container. Approved containers include a manfucturer bottle with original screw top such as soda and water bottles, sports drinks, liquor bottles. Liquid in syrofoam/paper cup should be transferred into an approved container. Approved containers include Nalgene wide mouth bottles. These are chemical- resistant and have fairly thick walls to prevent breakage due to punctures. Do not dispose of the orginial container. It should be kept for evidentiary purposes.

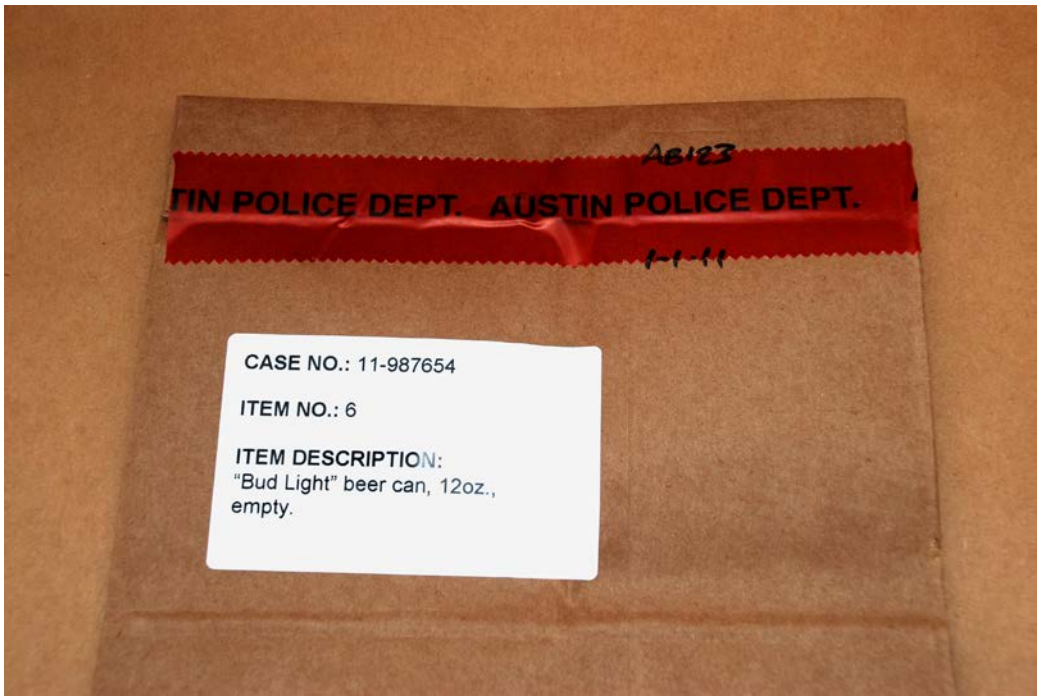
Metal containers **<u>are not</u>** appoved containers for liquids suspected of containing a controlled substance.

NOTE: The following pages contain photos of properly sealed envelopes and boxes.

Packaging Examples



Examples of properly sealed envelopes (note that manufactured seal at the bottom has not been reinforced with tape)



Proper seal on a paper sack

Proper seal on the top of a box

Proper seal on the bottom of a box

Proper seal on a plastic bag

DNA Evidence Collection

Establishing proper collection and evidence handling procedures reduces the possibility of evidence contamination and DNA degradation. Therefore, observe the following guidelines:

- Be careful not to mix known reference standards with questioned samples.
- Package individual items of clothing from the same person in separate containers.
- If the exact location of evidentiary DNA on an item is important, wrap the item in clean paper and roll it up on itself prior to placing in a bag in order to prevent transfer of evidence from one location on the item to another location.
- Do not package the suspect's evidence, such as clothing, with the victim's items.
- Wear gloves and change them as necessary. Do not transfer DNA from one item to another with your gloves.
- **Wear a mask**! Talking, coughing, or sneezing over the unpackaged evidence can easily contaminate the evidence. Keep in mind that the more DNA contributors in a sample the lower the statistical significance. If you are talking over a piece of evidence and your DNA gets on the item, you could be responsible for lowering the significance of the statistics significantly. This could impact the ability to convict or exonerate someone from a crime.
- **Thoroughly dry wet or moist items**, such as clothing or blood swabs, before packaging.
- **Refrigerate liquid biological samples** until submission to the laboratory.
- **Freeze tissue samples** until transporting to the laboratory for submission. This includes items such as bloody tampons and sanitary pads.
- Package items in **paper** bags or envelopes. Do not use plastic packaging for biological evidence.
- Do not staple the packages to close; use evidence tape
- Do not lick envelopes to seal
- Store the packaged items in a cool, dry area. Avoid sunlight, heat, and excessive humidity.
- **Refrigerate sexual assault kits** until submitted to the laboratory. Do not freeze the kits.
- Label and seal all packaging properly. Mark packages with biological hazard stickers as applicable.

Good Sources of DNA

- Blood
- Saliva (gum, cigarette butts, drinking containers)
- Semen with sperm cells

Items likely to yield complex mixtures when tested for "trace" or "touch" DNA

- Guns
- Clothing
- Vehicle swabs
- Door knobs, countertops, items from a public place

Collection of Evidentiary Samples

Observe the following steps to collect evidence samples:

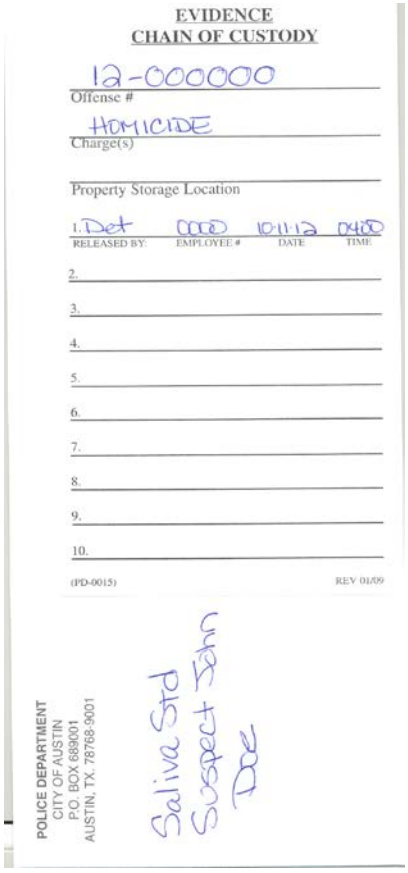
- Use sterile swabs to absorb wet stains from non-absorptive surfaces.
- Dampen a sterile swab, using sterile water, to collect dry stains from walls or other larger items. Do not scrape dried stains.

Collection of Known Reference Samples (buccal swabs) for DNA
(Don't talk while the swabs are exposed; your DNA could end up on the swabs. It is recommended a mask be worn)

It is preferable if the subject swabs their own mouth (if they do have them wear gloves if available). If not, and you will do the swabbing, use caution to avoid getting your DNA on the swabs.

Performing and Packaging Buccal swabs

- Write the case number and the **subjects name** on an envelope.
- Remove the sterile swabs (2 minimum) from the swab packet by opening the tabbed end and pulling the swabs out
- Rub the swabs firmly against the inside of the cheek. There is no need to swab the right and left cheeks separately.
- Return the swabs to the swab packet cotton-tipped end first
- Place the swab packet into an envelope
- Seal the envelope with evidence tape; DO NOT LICK TO SEAL.
- Sign and date across the seal and place a chain of custody sticker on the envelope
- Information of suspected recent blood transfusions of the victim and/or suspect should be provided to the laboratory.


EVIDENCE
CHAIN OF CUSTODY

12-000000
Offense #

HOMICIDE
Charge(s)

Property Storage Location

1. Det 0000 10-11-12 0400
RELEASED BY: EMPLOYEE # DATE TIME

2.
3.
4.
5.
6.
7.
8.
9.
10.

(PD-0015) REV 01/09

POLICE DEPARTMENT
CITY OF AUSTIN
P.O. BOX 689001
AUSTIN, TX. 78768-9001

Saliva Std
Suspect John
Doe

Example of properly labeled buccal swab package

Storage of DNA Evidence

DNA can naturally degrade. However, the degradation process may by be slowed by proper preservation steps. Inform the Evidence Control Section if your evidence needs special storage conditions:

- **Refrigerate liquid biological samples**
- **Freeze tissue samples.** This includes items such as fetuses, bloody tampons and sanitary pads.
- **Refrigerate sexual assault kits**

The laboratory utilizes an electronic chain of custody. The customer will release the evidence to the laboratory within the electronic system and the customer will be provided with a receipt for the submission.

5.0 SECTION SPECIFIC REQUIREMENTS FOR EVIDENCE SUBMISSION AND ANALYSIS

5.1 Drug Section

The Drug Chemistry Section performs general drug analysis screening for most controlled substances. Examples of general analysis screening includes cocaine, methamphetamine, heroin, ecstacy, LSD, synthetic cannabinoids, new designer drugs and most prescription controlled drugs such as alprazolam, hydrocodone and oxycodone. The suspected drug should be noted per item at time of submission for analysis.

The laboratory does not generally test empty containers submitted as an item if another item with a felony charge is analyzed. If an empty container is crucial to the case, please make arrangements ahead time with the section for testing of this item.

The laboratory also does not generally test contents of syringes if another felony item is tested. Please make prior arrangements for syringes to be tested as this is a biohazard and safety issue for the analyst.

Submissions such as milk products, fruit juices, baked goods, and liquid soy formulas should be refrigerated or frozen to prevent spoilage and possible decomposition of the suspected drug. Please indicate the suspected drug at time of submission.

For baked goods or oils indicate the suspected drug, i.e. marihuana, marihuana extracts (THC) or mushrooms at time of the request.

If a liquid (soda, orange juice, milk) is being submitted, indicate the suspected drug believed to be contained within the liquid, i.e. “codeine cough syrup” or “unknown pill dissolved in drink”.

If a matrix (paper, cigarette, candy, plant material other than marihuana) is suspected of being laced with a suspected drug, i.e. LSD, PCP, synthetic cannabinoids or new designer drug, please indicate the suspected drug at the time of the request.

Submitted plant material (marihuana or cactus) should be air dried before submission. If a sample has not been air dried, this must be noted on the evidence tag and within the analysis request to prevent decomposing of the plant material.

For any questions on submission of drug items, send an email to Chemlab@austintexas.gov.

5.2 DNA Section

Successful DNA results are dependent on the amount and condition of the evidentiary material. Factors such as environmental conditions that the material has been exposed, substrate on which the material is found, and the exposure of the sample area to multiple individuals may affect DNA results and should be considered prior to submitting evidence for processing.

A laboratory report will be issued containing results of analysis and relevant conclusions.

For a DNA report, the laboratory will summarize the results of DNA profile comparisions, which may include the significance of associations with known references (statistical calculations). Additionally, a DNA profile may be entered into the Combined DNA Index System (CODIS) that contains DNA profiles from convicted offenders and forensic case samples. Profiles can be searched against other profiles for the purpose of helping to generate investigative leads.

Required DNA Questionnaire
A completed DNA Questionnaire (DNA-046) must be submitted with with the analysis request form at the time the evidence is submitted to the laboratory. The completed form can also be emailed to DNA.lab@austintexas.gov . Requests will not be processed without this document. Please complete it accurately since it will become a part of the case record. You can also access this form from the APD intranet under APD Forms.

DNA Processing
The following are required for a case to be approved for DNA processing:
- Prelog Request
- Completed DNA Questionnaire
- Suspect reference sample in cases with an identified suspect. WE DO NOT HAVE ACCESS TO THE PROFILES IN CODIS SO EVEN IF YOU SEE THE SUSPECT HAS DNA ON FILE, WE STILL NEED A STANDARD.
- Victim and appropriate elimination standards in non-suspect cases (Anyone whose DNA would be expected to be on the evidence item)
- In sexual assault cases, elimination samples from consensual partners (if sexual activity occurred 3 days prior to the offense) must be submitted.

Evidence not processed by the DNA Laboratory:
- Fired cartridges and casings for handler DNA
- Fired projectiles for handler DNA
- Urine
- Vomit

Please remember that DNA needs to be collected **before** any other section conducts analysis.

Be sure and make an additional request for reference samples if you collect them after you make the evidence request.

CODIS (COMBINED DNA INDEX SYSTEM) Eligibility
Strict federal guidelines exist as to what can be entered into CODIS. It is up to the DNA laboratory to determine what is and is not eligible on a case by case basis. The following guidelines apply for a profile to be uploaded:
- A crime must have occurred
- There must be a direct link to the evidence being tested and the perpetrator. For example, if the crime occurred at a bar and the suspect was seen smoking but there were multiple

individuals smoking in the same general area, the profiles from a collection of cigarette butts would not be eligible.
- All victims or potential eliminations have been excluded from the profile. For example, if a vehicle is stolen and swabs are collected from the steering wheel, eliminations samples from any regular drivers of the vehicle must be submitted.

The following are not CODIS eligible:
- Victim profiles
- Elimination profiles
- Profiles not attributed to a putative perpetrator (the person who actually committed the crime)
- The profile cannot come from a location you would reasonably expect to find the profile, even if it is at the crime scene. For example, if the crime scene is the suspect's residence or the suspect's vehicle, no profiles from evidence consistent with the suspect's profile would be eligible for upload.
- Complex mixtures where no distinguishable profile can be deduced
- Felon in Possession of Firearm cases

After you are notified of a CODIS hit, you will need to collect a buccal swab from the identified individual for comparisons to be made. CODIS hit information is not admissible in court so we need to have a buccal swab for us to issue a report identifying the individual as being included in the DNA from the evidence.

5.3 Firearm and Toolmark Section

Firearms and Toolmarks examinations, including distance determinations and serial number restorations. This lab contains a Remote Data Acquisition System that is connected to NIBIN (National Integrated Ballistic Information Network) for the entry of cartridge cases from evidence firearms and fired cartridge cases from crime scenes. This is a national database to identify potential associations of gun-related crimes.

- Gunshot primer residue analysis does not give an indication of the distance from which a firearm is fired (i.e., Distance Determination). GSR Kits for primer residue analysis are performed at the Austin DPS Lab.

- <u>Analysis Requests</u>
  - A firearms analysis request is for the examination of firearms and/or fired ammunition components.
  - A toolmark analysis request is for the examination of a tool and a marked surface suspected of having been contacted by the submitted tool.
  - Items commonly submitted for analyses:
    - Firearms
    - Projectiles
    - Fired cartridge cases
    - Fired shotshells
    - Live rounds of ammunition

  - Clothing with bullet defect(s)
  - Firearm accessories i.e. magazines, clips
- Safety Considerations for Firearms Evidence
  - To ensure the safe handling, storage, and submission of firearms evidence; practice general safety measures such as:
  - Submit the firearm unloaded at all times or when possible.
  - Package and submit an unloaded firearm using a plastic tie-strap to indicate that the firearm has been cleared of live ammunition.
  - Submit the firearm when possible with the action closed.
  - Do not place the plastic tie-strap inside the barrel of any evidence firearm.
  - Do not place the plastic tie-strap inside the chamber(s) of a revolver.
  - The most common way to place a plastic tie-strap in a pistol is through the magazine well and out the ejection port. If you make this loop slightly larger, it will allow the action to be closed carefully.
  - If loaded firearms must be submitted, the laboratory personnel accepting the evidence must be notified of the loaded state of the weapon at the time of submission.
  - When a firearm or ammunition component is being submitted that may have been contaminated with biological materials, the outer packaging needs to be marked with the proper label.
  - As a general rule, the collection process is relatively straightforward and damage to any firearms related evidence can occur when attempting to mark the items. It is recommended that the evidence not be marked because of the possibility of altering or affecting any microscopic marks or patterns that may be present and useful for analyses and comparison.
- The purpose of correctly packaging firearms is to protect the breech face and the bore of the barrel from damage. Proper packaging techniques include:
  - Attach an evidence tag to trigger guard
  - Magazines and live cartridges should be separated and secured; however, they should be submitted within the related firearm.
  - Firearms sealed within a plastic or paper container are to be placed in a “Transport” cardboard box, whichever is applicable.
  - Never use metal to secure the action, bore, breech or magazine well areas of evidence firearms.
  - Legibly write or type on a label the contents of each package accurately
  - When practical, place all containers from an incident into a common container.
  - Firearms recovered in water should be submitted in a container of the same water.
  - For example, using an evidence “paint can” would be sufficient for a small pistol or revolver
  - Various containers can be utilized from coin envelopes, small pill boxes to plastic bags, etc. The important consideration is to protect the item to be examined from loss or contamination.

- <u>Firearm Examination</u>
  - The following is a listing of evidence items that might be submitted for Firearms examination with the results that may be determined.

- Projectile: caliber, firearm type, listing of possible manufacturers
- More than one projectile: Same as projectile above – additionally if fired from same firearm or multiple firearms
- Fired Cartridge Case: caliber, firearm type, possible manufacturer, possible reload, evaluated for entry into the NIBIN database
- Multiple fired cartridge cases: Same as fired cartridge case – additionally if fired from same firearm or multiple firearms
- Projectile or Fired Cartridge case and a firearm: If fired from or in the submitted firearm
- Shot pellets / shot wads: size of shot pellets, gauge of shotgun barrel, gauge of wad, possible pellet size contained in wad
- Clothing and firearm: Approximate distance of the muzzle to clothing / Distance determination examination can only be performed when there is a suspected bullet hole (defect) in the submitted clothing. Request for GSR / Distance Determination also requires a copy of the medical examiner's report, a review of crime scene images entered into evidence, a review of the offense report, the suspected firearm, and the same ammunition used during the shooting.
- Note: If the suspected firearm and ammunition have not been recovered, or the clothing does not contain a bullet hole (defect) the Firearms Lab will not perform a distance determination test.

- <u>Toolmark Examination</u>
  - Toolmark comparative analysis is based upon manufacturing processes and the usage of tools to contain unique microscopic characteristics. Under certain conditions these characteristics can be transferred to surfaces having contact by such tools. Submitted tools should be able to produce the mark in question and have a suspect associated with them.
  - If it is not possible to submit the evidence, a micro cast of the mark may be submitted. It is recommended, however, that the evidence mark be submitted whenever possible. Note that photographs of toolmarks cannot be used for identification purposes.
  - Possible types of evidence
    - Tool and evidence mark: Determine if submitted tool produced evidence mark, cut, impression etc.
    - Sometimes items are submitted that may exhibit multiple marks or cuts. In this event, it is important that the evidence marks in question are properly labeled.

- <u>NIBIN</u>
  - The National Integrated Ballistic Information Network (NIBIN) uses Integrated Ballistics Identification System (IBIS) technology, developed and supported by the Bureau of Alcohol, Tobacco, Firearms, and Explosives (ATF) to collect images of fired cartridge cases and correlate them against stored images from Texas and other states.
  - All fired cartridge case evidence and test fired samples from legally seized firearms are evaluated for entry into this database. A separate submission is not necessary.
  - The objective of NIBIN is to be an additional tool for the Firearms Examiner to use in order to assist an investigation. A search of the database may result in a possibility that

a suspect weapon or fired cartridge case was used in multiple shooting incidents, previously and unrelated the current incident.

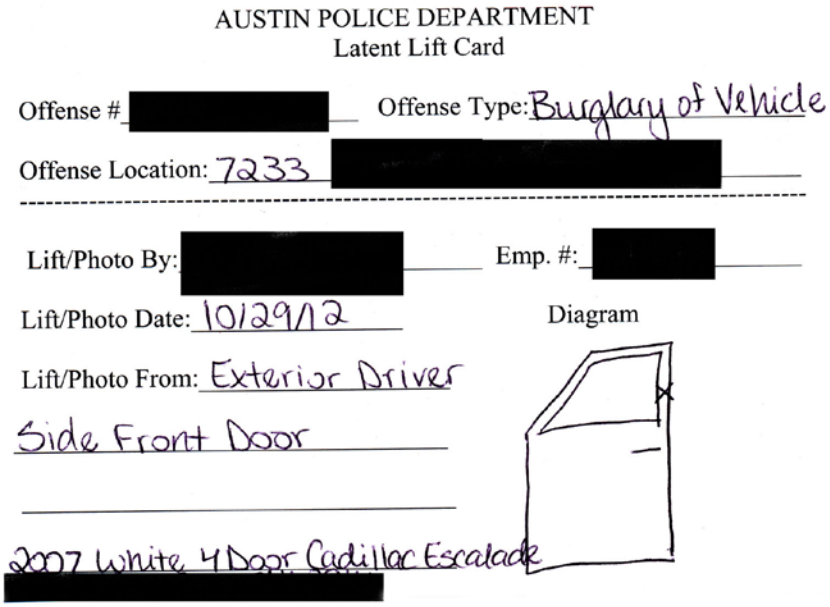
- The Firearms Lab performs an automatic and manual correlation within Region 2 (Texas and Oklahoma). If a request for a manual correlation in another region is made, the submitting officer must provide which specific region is to be searched and an explanation as to why.
- Notify the Firearms Lab if the firearm is to be returned or otherwise brought back to the public.
- Evidence that is entered into the NIBIN database is digitally imaged and searched. In the event of any potential "NIBIN HIT", the actual evidence from both incidents will be needed. A Firearms Examiner will confirm the HIT only with the original evidence.

- Range of Conclusions
  - Firearm and Toolmark reports will contain some or all of the following conclusions. The interpretation of individualization/identification is subjective in nature, founded on scientific principles and based on the examiner's training and experience. The statement that "sufficient agreement" exists between two toolmarks means that the agreement is of a quantity and quality that the likelihood of another tool could have made the mark is so remote that it is considered a practical impossibility.
    - Identification - Agreement of class and individual characteristics where the extent of this agreement excludes the possibility of toolmarks made by other tools. The toolmarks are also consistent with marks known to have been produced by the same tool.Inconclusive - Some agreement of individual characteristics and all discernible class characteristics, but insufficient for an identification; agreement of all discernible class characteristics without agreement or disagreement of individual characteristics due to an absence, insufficiency, or lack of reproducibility; or agreement of all discernible class characteristics and disagreement of individual characteristics, but insufficient for an elimination
    - Elimination - Significant disagreement of discernible class characteristics and/or individual characteristics
    - Unsuitable - Unsuitable for examination

5.4 Latent Print Section

- AFIS Inquiry Requests
  - An AFIS (Automated Fingerprint Identification System) inquiry is a request to have latent prints searched through a computerized system capable of matching and storing latentfingerprints.
  - APD has the ability to search three AFIS databases:
    - Local – is the database maintained by Austin PD, which includesTravis Co, Round Rock PD and Williamson Co.
    - State - is the database maintained by the state of Texas
    - Federal (IAFIS) - is the database maintained by the Federal Bureau of Investigation. Searches through the federal database will be based on the level of the crime.

- <u>Latent Print Comparison Requests</u>
  - A latent print comparison request is for the analysis and comparison of latent print evidence to a know standard.
  - If available, the inked rolled finger and palm impressions should be submitted for comparison. If the finger and palm impressions are not available, the investigator should provide the name, race, sex, DOB and a unique identifying number for that invididual.
  - Comparison will not be conducted unless there is a unique identifying number.
  - All items will be returned to the submitting agency. Copies will be retained in LIMS for future reference. Copies of checks submitted with inked prints will be retained in LIMS and the original check will be returned.
  - Any unidentified latent(s) will be searched through the local and/or state AFIS databases.
  - When submitting lifted latents to the laboratory, mark each lift card with the following information:
    - Exact location from where the latent was lifted
    - Type of offense
    - Offense number
    - Offense location
    - Date of the lift
    - The name and employee number of the individual lifting the prints.
    - Name of the submitting agency
    - Whenever possible, do a simple drawing of the item with an "X" being placed in the appropriate location from where the latent was lifted.


AUSTIN POLICE DEPARTMENT
Latent Lift Card

Offense # [redacted] Offense Type: Burglary of Vehicle

Offense Location: 7233 [redacted]

Lift/Photo By: [redacted] Emp. #: [redacted]

Lift/Photo Date: 10/29/12

Diagram

Lift/Photo From: Exterior Driver Side Front Door

2007 White 4 Door Cadillac Escalade [redacted]

The back of a lift card showing the required documentation.

  - Limited examinations are comparisons where there is at least one latent identification and the results are being reported without all of the remaining latent prints having been compared with the individual(s) named in the request.The examiner has the discretionto perfom limited examinations based on the following criteria:

- Property crimes in which all submitted latents are from the same surface and a latent print has been identified to each individual named in the request.
- Property crimes in which all latents are from exterior surfaces (outside the residence or vehicle, etc.), and one latent print has been identified to each individual named in the request.
- Any case in which the case detective directs that only latent prints from certain surfaces be compared to the individual(s) named in the request.
- Other situations which have been approved (written or verbal) by the Section Supervisor.

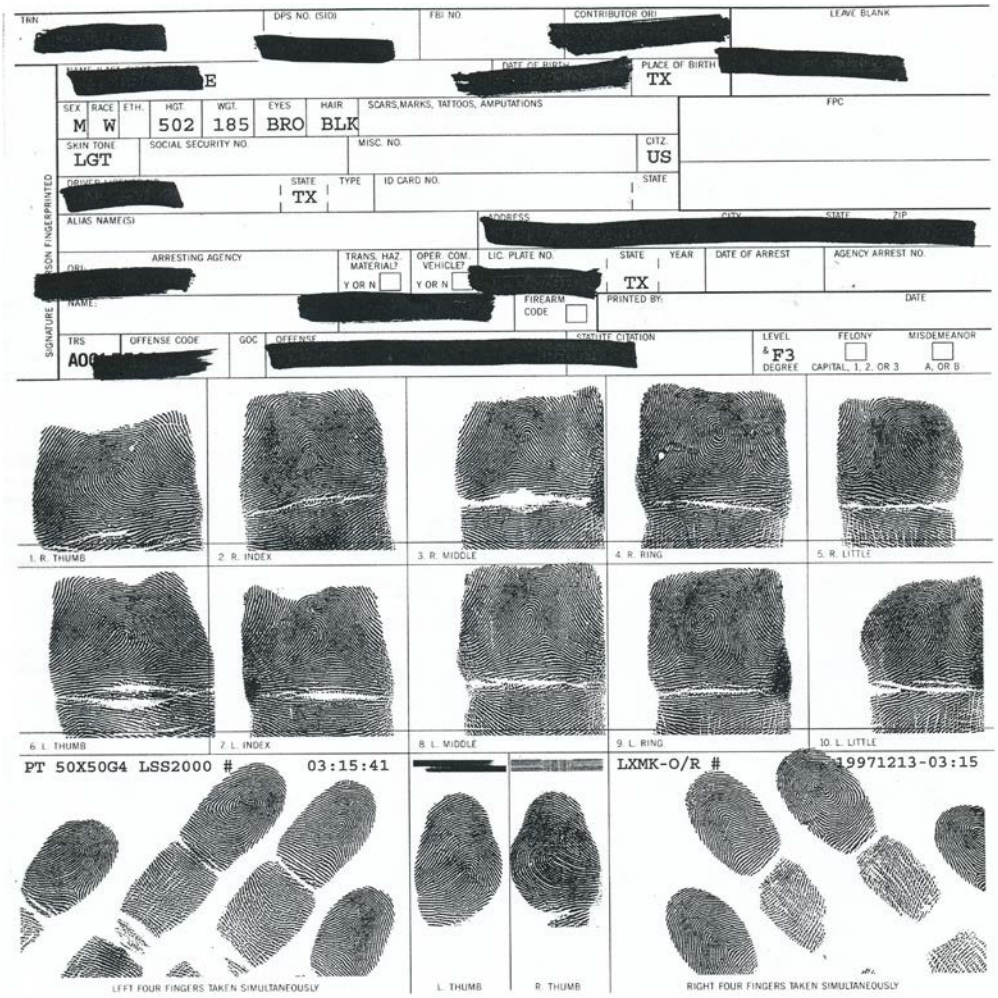
➢ Wear gloves when handling evidence so as not to submit your own fingerprints. If your fingertips accidently show on the sticky side of the tape, place an "X" over your own prints and initial it.

Marks and initials when lifting your fingertips.

➢ If submitting a set of major case prints, each finger and thumb should have the center, both sides, and the extreme tips recorded.

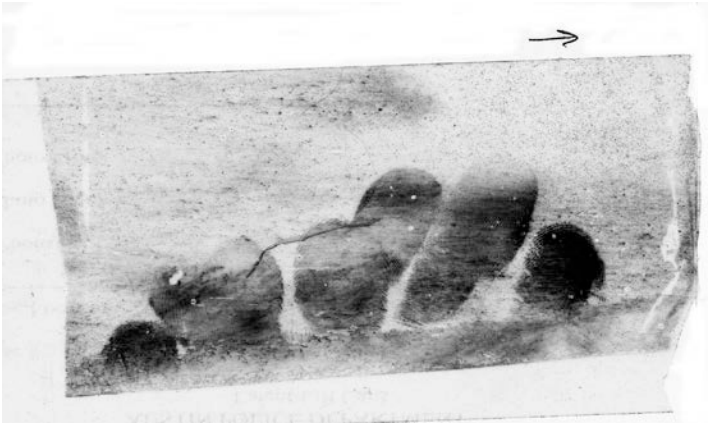
Major case prints showing one finger.

- A properly recorded 10-print card should have all the fingers rolled nail to nail with minimal smears, along with the plain impressions at the bottom.



A ten-print card properly recorded.

- Place an arrow on the front of the lift card to show upward direction.



Front of lift card showing directional arrow.

- The palms should be completely recorded from the tips to the wrist crease and the hypothenar area, the thenar side is optional.

The complete recording of a palm print.

- Any instance of the known prints not being fully and properly recorded may result in a inability to complete the comparison.
- Submission of the actual latents is preferred. However, if possible, 1:1 photographs of the latents can be submitted. It is preferred they are captured at least 500 ppi with a one inch scale. Palms should be submitted in sections. The image quality will suffer when trying to enlarge the image for detail.
- Known standards will be submitted as evidence. They will be scanned into LIMS and the originals will be returned to the customer.

- <u>Safety Considerations</u>
  - Make a note on the outside of the latent print envelope stating any health or safety concerns
    - Broken glass
    - Blood or other biological fluids
    - Chemical processing

5.5 Crime Scene Section

Within the Laboratory environment, the Crime Scene Section is responsible for:

- Processing evidence for latent prints, all developed latent prints are forwarded to the Latent Print Section for further analysis.
- Photography of evidence for documentation purposes (e.g., clothing items with defect marks, inked print on a paper document)
  - This applies to Internal Customers only. External Customers should make arrangements to adequately photograph document items prior to submission.

Assisting Other Agencies

The Crime Scene Section may assist other agencies with both forensic support at crime scenes and laboratory analysis. However, requests of this nature will require the approval of Laboratory Management.

Packaging Items of Evidence Prior to Submittal

General Practice

- Items should be individually packaged.
- Avoid excessive handling of ANY package containing evidence. Be aware that any contact that the evidence has with other surfaces, including the evidence container, may interfere with the recovery of latent fingerprints.
- The evidence should not be marked or scribed. These markings may interfere with the development of latent fingerprints or other laboratory analysis. Initials and identifying marks should be placed on the packaging. In some instances, evidence tags may be carefully attached to items of evidence. The tags should be placed on an area where analysis will not be conducted. If marking the evidence is required by your agency, initials or identifying marks should be carefully placed to avoid damage to any area that might contain latent prints.

Trace Evidence

- External Customers should collect any easily removable trace evidence from items prior to submission.
- If trace evidence is discovered on an item during the latent print processing, the trace evidence will be collected.

Marking of packaging with “Biohazard”

- The outer packaging of evidence that pose a biohazardous risk should be marked appropriately either in writing or with a label as a “Biohazard”.

Packaging of sharp items

- Large pieces of broken glass and other sharp/pointed items (e.g., knives, razor blades, scalpels, needles, etc.) should be packaged so that the sharp point of the object cannot protrude through the package (e.g., puncture-resistant containers).

Packaging of fragile items

- Glass items and other fragile items should be packaged so that the contents are protected within the package.
- The exterior of the package should be labeled as “FRAGILE”.

Liquids

- The liquid (flammable or otherwise) from non-sealed evidence containers (e.g., drink containers) should be carefully removed prior to submission if there is no request or need for the liquid to be tested the Laboratory.
- If any liquid remains, the container must be sealed to prevent contamination of other surrounding items and to minimize or eliminate any accidental spillage that may occur (if the evidence item itself does not have a seal, it can be secured in an evidence paint can). This is not a preferred packaging method; this may cause the item to bathe in the liquid, which will likely interfere with DNA and/or latent fingerprint processing.

Large Items

- Large and/or awkward sized items (e.g., bicycles, car seats, safes, etc.) should be properly packaged to prevent loss, cross transfer, contamination, and/or deleterious change.

5.6 Multi Media Section

Eligible Media Items

- Multi Media Lab accepts a variety of media evidence, including VHS videotape, DVD, CD-ROM, digital media cards and USB drives, for duplication, enhancement and redaction. Items such as DVRs, cell phones, and computers may not be eligible for processing by the Multi Media Lab; contact lab personnel prior to submitting requests for these items.

Film and Digital Images

- Unless seized from a crime scene, digital and film images are considered work product *not* evidence. To request image prints, use the Multi Media Request form (MM-001) and email the form to apdphotolab@austintexas.gov.
- NOTE: Travis County Attorney’s Office has a separate Multi Media Request form (MM-002).

Image Submission for Latent or Shoe Impression Comparison

- For image submission for latent or shoe impression comparisons submitted to Texas DPS, follow these guidelines:
  1. Using the Multi Media Request form, request the images, specific for the comparison, saved onto a DVD. and
  2. Email the form to apdphotolab@austintexas.gov
  3. Once the request is processed, the DVD will be entered into Evidence.
  4. After the evidence DVD is entered into the Forensic LIMS, the Forensic Quality Assurance Specialist will transfer it, along with the comparison evidence item, to Texas DPS.

Audio Processing

- For audio enhancements, describe the issue that needs to be corrected with the audio. Indicate the date and the start/end times of where the correction needs to begin and end.
- For audio redactions, indicate the date and start/stop for each audio redaction.
- Include your name and contact phone number.

Digital Processing

- NOTE: If your request requires photographing evidence items, please select the CSL – Crime Scene Laboratory Analysis (Additional Information) option from the LIMS Service Request list.
- NOTE: If your request requires hardware processing or content recovery, please contact the DART Unit at 974-8679.
- For digital media processing [i.e. printing or transferring files from seized digital media cards], indicate the number of copies needed, and how you want the images processed [i.e. duplicated onto a CD-R, printed on photo paper].
- Include your name and contact phone number.

Video Processing

- NOTE: If your request requires hardware processing or content recovery, please contact the DART Unit at 974-8679.
- NOTE: For DMAV duplication requests [i.e. from the storage server to DVD] please contact the DMAV Unit at APD DigitalMav@austintexas.gov
- For video enhancements, describe the video issue [i.e. enhancement, redaction, still image]. Indicate the date and start/end time for enhancements and redactions.
- For still images, state as much information as known [i.e. suspect description, date, time, etc.].
- Indicate the method for saving results [i.e. DVD, prints, Officer to Officer folder transfer [note: limitations apply to transfers].
- Include your name and contact phone number.

6.0 EVIDENCE RETURN AND REPORTING

6.1 Notification

Upon completion of the analysis a report will be generated. Once the report is finalized the report and evidence will be ready for release.

- Internal customers will be forwarded an email that the analysis has been completed.
- External customers will be contacted by email or telephone and notified that the analysis has been completed and the evidence and report can be released.

6.2 Reporting and Evidence Return

- The report will be viewable by internal customers through the APD records management system in the image vault.

- The evidence will be returned to the APD Evidence Control section by the laboratory.

- For external customers, the customer will pick up the submission as soon as practical.
  - A copy of the report can accompany the evidence.
  - Reports can also be forwarded to the customer electronically. This requires the customer to acquire the decryption software from the laboratory. A request for this software can be made to the LIMS Administrator (LIMS@austintexas.gov).
  - The evidence will be released directly to the customer.

The electronic chain of custody will be utilized by the laboratory for the release of the evidence to the customer. A copy of the evidence receipt will be provided to the customer upon transfer.

6.0 RESOURCES

6.1 Non-APD Resources for Testing

This is a listing of resources available to conduct analyses that the laboratory is unable to provide. This is not an all-inclusive list.

6.2 Additional Testing Resources

- Texas DPS Laboratory
- FBI Laboratory
- DEA Laboratory
- ATF Laboratory
- Other Laboratories - A listing of forensic laboratories that are accredited to perform forensic testing in Texas are available at: www.txdps.state.tx.us

Admissibility of evidence in Texas criminal courts is dependent on Texas DPS accreditation.

7.0 Forms

- Customer Survey Form (FSD-032)
- Outside Agency Testing Authorization Form (FSD-031)
- DNA Questionaire (DNA-046)
- Multi Media Request Form – General (MM-001)
- Multi Media Travis County Attorney Request Form (MM-002)