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1/INTRODUCTION

1/100 PURPOSE OF THIS GUIDE

The information in this guide is being provided to our submitting agencies as an aide to acquiring forensic services, whether at the Jefferson County Regional Crime Laboratory or through another entity. This information is meant to help with the collection, packaging and submission of evidence, as well as to explain Laboratory procedures regarding evidence analysis. Our goal is to provide useful information that is current and easily accessible. If you have suggestions for additional information to be included in this guide, please contact the Laboratory.

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1/200 LABORATORY MISSION AND RESPONSIBILITY

The mission of the Jefferson County Regional Crime Laboratory is to provide meaningful, timely, unbiased, and accurate forensic services to the community. The Laboratory is committed to an ongoing program to ensure the highest quality and consistency of Laboratory services.

It is the responsibility of the Jefferson County Regional Crime Laboratory to perform all testing and/or calibration activities in a manner to conform to the latest version of the ISO/IEC 17025 criteria, the ASCLD/LAB-International Supplemental Requirements for the Accreditation of Forensic Science Testing Laboratories, and the ASCLD/LAB-International Supplemental Requirements for the Accreditation of Forensic Science Calibration Laboratories – Breath Alcohol Measuring Instruments, the laws pertaining to forensic laboratory accreditation mandated by the state of Texas, other Texas laws, and the criteria set by any other regulatory authority or organization providing recognition that is sought by the Laboratory. For additional information regarding ASCLD/LAB please visit their website at www.asclid-lab.org. Links to the Laboratory's accreditation certificates and scope are posted on the home page of the Laboratory website.

1/300 STANDARD OF SERVICE

The Jefferson County Regional Crime Laboratory serves the community by analyzing evidence that may be of interest in criminal cases.

The Laboratory is responsible for the analysis of physical evidence submitted by local law enforcement agencies. In addition to federal and state agencies, the Laboratory provides services for law enforcement agencies in Jefferson, Orange, Hardin, and Chambers

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Counties, and other agencies as approved by the Jefferson County Sheriff or his/her designee.

The examinations conducted by the Laboratory are listed below, according to the division of the Laboratory that performs the test.

Drug Chemistry

Identification of controlled substances and dangerous drugs

Methods utilized:

- Weight determinations
- Spot (color) tests
- Macro and microscopic evaluations
- Chromatographic (TLC, GC-FID)
- Mass spectrometric (GC-MS)
- Infrared spectroscopy (FT-IR)

Firearms

Firearms processing

Firearms comparison and identification

Serial number restoration

IBIS entry

Methods utilized:

- Weight determinations
- Length determinations
- Macro and microscopic evaluations
- Function testing, including trigger pull determination
- Chemical or magnetic serial number restoration

Forensic Biology

Screening of evidence items for body fluids and trace evidence

Blood and semen stain identification

Methods utilized:

- Body fluid screening tests (blood and semen color or fluorescent tests)
- Physical evidence screening, including ALS
- Microscopic examination (sperm)
- Trace evidence collection
- Body fluid confirmatory tests (blood and semen immunological tests)

Toxicology

Alcohol content in blood

Maintenance of Jefferson County's Breath Testing Program – breath alcohol measuring instruments

Methods utilized:

- Chromatographic (headspace GC-FID)
- Infrared spectroscopy

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Crime Scene (all divisions of the Laboratory respond to Crime Scenes)

Performing spot tests, confirmatory tests and evidence collection

Methods utilized:

- Body fluid screening tests (color tests or fluorescent tests)
- Body fluid confirmatory test (blood immunological test)
- Physical screening, including ALS
- Evidence collection

Some evidence that is submitted is evaluated and/or tested, but may need additional analysis beyond the scope of testing employed at the Jefferson County Regional Crime Laboratory (DNA analysis, blood toxicology other than alcohol, GSR, hair & fiber, paint, etc). Although preliminary or in some cases partial analysis may be performed at this Laboratory for these cases, it is understood by the submitting agency that these additional tests will not be performed at this facility, and that the evidence may be forwarded to another lab for further analysis, as necessary, at the discretion of the Forensic Scientist assigned to the case. Evidence is usually forwarded to the Texas Department of Public Safety Laboratory system, unless other arrangements are made with the submitting agency or prosecuting official.

By accepting evidence into the Laboratory, the Laboratory is not agreeing to test all of the items submitted using the entire capabilities of the Laboratory. Policies are in force to expedite the sampling and processing of cases (see 1/400 below), and the Forensic Scientists in the Laboratory will make the final determination of which samples will be tested, and to what extent, as well as which methods will be utilized. If deviations from standard methods occur, they shall be technically justified, reviewed and approved before implemented in casework. The Laboratory reserves the right to re-test any submitted evidence as part of the Laboratory's quality control program (refer also to section 2/600 of this guide). If a case is re-tested as part of this program, the submitting agency will be notified.

By submitting evidence to the Laboratory for forensic evaluation or analysis, the submitting agency is agreeing to the Laboratory's standard of service. The submitting agency is also authorizing the Laboratory to select the appropriate method for testing and to make other technical decisions regarding the evidence, as appropriate.

1/400 POLICY FOR EXPEDITING CASEWORK

In order to process evidence in a timely manner and expedite forensic casework, certain decisions must be made regarding evidence analysis which may result in some items not being subjected to testing.

Prior to the analysis of evidentiary material, an evaluation of the important elements of the case shall be obtained through communication with the submitting agency and/or prosecuting officials (e.g., submission forms, police reports, medical reports, discussions with investigators). This evaluation shall include an assessment of the evidence and its relevance. Depending on the circumstances of each case, the Scientist will determine which exhibits will be analyzed and which tests will be performed, and shall also have the option to limit screening and/or testing to probative evidence only.

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For suspected controlled substance cases, a sampling plan may be used where only a specific number or weight of sufficiently similar items is analyzed. Generally, once a penalty weight threshold has been reached, the Scientist will not analyze any similar remaining evidence in that case. In general, drug paraphernalia will not be analyzed unless it is the only exhibit submitted in the case.

For cases (such as homicides) where there may be numerous stains of blood or other body fluids, testing may only be performed on a sampling of these stains – especially if it is likely that all of the stains originated from the same source.

For sexual assault cases, the Scientist will generally start the analysis with items collected directly from the victim and work outward. If there is a Sexual Assault Evidence Collection Kit associated with the case, this will normally be analyzed first, followed by clothing, then bedding, etc. Within the Sexual Assault Evidence Collection Kit, if semen is detected on swabs from the victim, the Scientist may choose not to analyze the smear slides included in the kit, since the swabs will likely be forwarded for DNA analysis regardless of what is found on the slides. If sufficient probative evidence is found on items within the Sexual Assault Evidence Collection Kit (semen detected on swabs, etc.), then the Scientist may choose not to analyze additional evidence items from the case such as clothing from the victim or bedding. Similarly, if probative evidence is found on the clothing, the Scientist may choose not to analyze bedding or other additional evidence items. This will expedite casework and allow for only the most probative evidence (evidence that is most closely associated with the victim) to move forward to DNA analysis.

Whenever evidence items are not analyzed by the Scientist, the reason for this will be noted in the case record. Exceptions to this policy would be items clearly submitted for an analysis that is not performed at the Laboratory (gunshot residue, trace analysis, etc.), drug paraphernalia, live ammunition rounds, and firearms accessories such as magazines, holsters, etc. Items submitted for DNA analysis that are not normally tested by this Laboratory (fingernail scrapings, buccal swabs, blood cards, etc.) are also exceptions under this policy and do not require an explanation when no testing is performed. The scope of testing performed by the Jefferson County Regional Crime Laboratory is listed in the Standard of Service, which submitting agencies may access by clicking on the “Customer Information” tab on the Laboratory’s website.

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2/LABORATORY POLICIES AND GENERAL INFORMATION

2/100 OPERATING HOURS

Crime Laboratory personnel will be available to receive submitted evidence from 8:00 am to 12:00 pm and 1:00 pm to 4:00 pm, Monday through Friday. Any agency submitting more than 10 items of evidence should call at least one day in advance to make an appointment for evidence submittal. For agencies that submit evidence every week, a standing appointment with the Laboratory can be scheduled.

The Laboratory will be closed for all official Jefferson County holidays. Occasionally, it may be necessary to close the Laboratory or suspend evidence submissions due to training, court appearances, crime scenes, or a shortage of staff. Whenever possible, the Laboratory will attempt to notify submitting agencies in advance of closure events. It is highly recommended that every submitting agency provide an e-mail address to the Laboratory so that they may be notified of Laboratory closures. This e-mail address should be for personnel that are responsible for submitting evidence to the Laboratory. If crime scene assistance is needed after hours, please call the Jefferson County Sheriff's Office dispatch center at (409) 835-8411, and ask them to contact the Forensic Scientist on call for the Crime Lab. For any questions regarding hours of Laboratory operation or closings, please call the Laboratory at (409) 726-2577.

2/200 RECEIPT OF EVIDENCE

All evidence received into the care of the Laboratory must be sealed and properly marked. Exceptions to this policy may occur for vehicles, bicycles, and other large items.

The Laboratory may refuse evidence items that are dangerous, unsuitable, or that may cause a deviation from the Laboratory's compliance with accreditation criteria. The Laboratory may also refuse to accept evidence items that are unable to be analyzed due to scientific or accreditation limitations. The Laboratory has the right to suspend submissions if an agency refuses to pick up evidence upon completion of analysis.

When submitting additional evidence to the Laboratory for a case in which items have previously been submitted, please note this on the Laboratory submission form and/or let Laboratory personnel know when submitting the evidence.

If a case becomes inactive after submission but prior to analysis, either through refusal to charge, dismissal or plea agreement, it is the responsibility of the primary officer and/or the assigned attorney to notify the Crime Laboratory of that change in status. Analysis will cease and submissions will be returned to the submitting agency, unless the Laboratory is required to complete the analysis under Texas law.

2/300 PACKAGING FORENSIC EVIDENCE

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When packaging forensic evidence, the essential goal is to preserve the original integrity of the evidence. All packages, envelopes, bags, boxes, and containers must have a proper seal.

A package is “properly sealed” only if its contents cannot readily escape and only if entering the package results in obvious damage/alteration to the package or seal that is “sufficient to compromise the integrity of the evidence”. All packages shall be heat sealed or sealed with evidence tape, and the tape used to seal the package or the heat seal shall be initialed and dated to document the person sealing the evidence. The tape must not be torn or have exposed areas that are no longer adhering to the evidence packaging. Manufactured evidence bags having adhesive seals are also acceptable, provided that the seal is initialed and dated. Staple closures are not acceptable under any conditions as this does not constitute a proper seal and may represent a safety hazard. Evidence which is sealed with strings, twist ties, glued flaps, or other closures, even if appearing secure, is considered open evidence if the contents can readily escape. If the container bearing the seal is a box, then the bottom seam of the box shall also be sealed with evidence tape and initialed and dated. Each evidence item must be packaged securely to prevent outside or cross contamination.

All packages, envelopes, bags, boxes, and containers must be identified by a submitting agency case number. The agency case number should be written on the item of evidence and packaging, although a securely attached evidence tag is acceptable. For agencies that do not routinely use case numbers, the evidence must be labeled with the subject’s name and the offense date.

All packages, envelopes, bags, boxes, and containers must be labeled as “biohazard” when blood and/or body fluids may be present. This should also be noted on the submission form.

Evidence items that are wet or moist must be air-dried before packaging. Always put biological evidence in paper, never plastic. Paper allows moisture to escape, but plastic or anything airtight will trap moisture, creating mold and this will degrade the evidence. Plastic bags may only be used for suspected controlled substances and as secondary containers for sealed liquid samples (i.e. blood tubes from autopsy or urine specimens).

Sharp objects, especially knives and syringes, must be packaged in such a manner that accidental injury will not result from routine evidence handling. The Laboratory requires all syringes or knives to be placed in a commercially manufactured puncture-proof container. Placing sharp items in manila envelopes without a puncture-proof container is insufficient and unacceptable. Plastic should be avoided, if possible, for the reasons stated previously.

Firearms must be unloaded and placed in a manufactured gun box according to size. Live ammunition and any fired components should be noted on the submission form and packaged appropriately.

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Please do not use staples to affix items to evidence containers, and please do not attach property tags with strings (except on items such as bicycles and vehicles).

The Laboratory does not accept the following items:

- paraphernalia of any type (i.e. empty syringes, containers, prescription bottles, or smoking devices)
- liquid in containers that are not leak-proof
- evidence associated with a suspected clandestine laboratory.

2/400 LABORATORY STANDARDIZED PACKAGING REQUIREMENTS

To aid with evidence storage and inventory, all evidence must be submitted in standardized packaging. This requirement applies to the outside container when evidence is submitted to the Laboratory. The submitting agency may use whatever inside container the agency requires; however, multiple layers of packaging (more than 3) are discouraged.

Drugs, swabs, and other small items (other than DPS blood kits):

9" x 12" manila envelope (or larger if needed)

Manila envelopes with a "viewing window" are not considered sealed and are not acceptable for submission to the Laboratory. Please place all agency tags and labeling on the back of the envelope. Since DPS Laboratories require that their bar codes be placed on the front of the envelope, this will keep the Laboratory from re-packaging the evidence, allowing agency packaging to remain intact in the event that the evidence is forwarded to DPS. Whenever possible, place all envelopes, bags, etc. for one drug case together into one larger manila envelope (9 x 12 or larger) for submission to the Laboratory. If all of the evidence items to be submitted will not fit into one envelope, then use multiple envelopes for smaller items or place larger items into paper bags or boxes. This assures security of the evidence and allows the Scientist room to re-package the evidence without breaking the agency seal. Always make sure that the packaging is suitable for the evidence.

Firearms:

Gun boxes

These boxes can be obtained through gun dealerships, various box companies, or law enforcement evidence handling suppliers such as Sirchie, Forensics Source, or Lynn Peavey. It is not necessary to place evidence tape on all three edges that make the seal of the gun box. Boxes with a "viewing window" are not considered sealed and are not acceptable for submission to the Laboratory.

Sexual Assault kits and paper bags of sexual assault evidence:

No further packaging is needed

DPS toxicology kits:

DPS blood toxicology kits will be required for all blood alcohol and toxicology samples. Keep in mind that these kits may be mailed to Austin for toxicology, so please do not write anything on the front of the box that you do not wish to be covered with an evidence label. Do not put DPS kits in another container.

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2/500 SUBMISSION DOCUMENTATION

A current submission form is required for each case submitted. A complete and accurate submission form will expedite the evidence submission process and also aid in the speedy analysis of the evidence in your case. Please ensure that any handwritten submission forms are legible. These forms are designed to ensure that the Laboratory has all the necessary information about the case and are used to clearly communicate the examinations and comparisons desired. Incorrect, illegible, or incomplete submission forms may delay the processing of evidence. All current Laboratory submission forms can be found on the Crime Laboratory website under the "Evidence Submission" tab. In order to maintain conformance to accreditation criteria, the current versions of these forms must be used.

The submission form must list the following minimum information:

- Submitting Agency name, address, phone number
- Submitting Agent's printed name and signature
- Victim's name
- Suspect's name (if known)
- Submitting agency case number
- Offense date
- Name of the seizing officer (first and last name)
- Itemized list of the submitted evidence and examination(s) requested

A detailed offense report is also required for all cases except suspected controlled substances.

2/600 NON-CASEWORK USE OF EVIDENCE

The Jefferson County Regional Crime Laboratory will occasionally encounter a need to use evidence for purposes other than the analysis requested for criminal investigations. As part of the Laboratory's quality control program, random cases may be selected for re-analysis. The re-analysis will be conducted and documented in the same fashion as the original analysis, while preserving enough sample for future testing, if needed. If the sample is judged to be of an insufficient quantity, then the case will not be subjected to re-testing and another case must be selected for re-testing.

A Laboratory report will be issued to notify the submitting agency of any re-testing conducted as part of the quality control program. If the subsequent analysis is concurrent with the initial analysis, the report will state this. If the results differ, then the report will state the results from the re-testing.

2/700 ACCESS TO LABORATORY RESULTS

Laboratory case information shall only be released to the submitting agency, appropriate prosecuting official(s), or anyone designated by the submitting agency or the appropriate prosecuting official as authorized to receive the information.

All case results are relayed to a secure server for use by the JCRCL iResults system. This is the primary means by which Laboratory results are transmitted to the submitting agencies, so

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each agency will be given access to the iResults system by the Laboratory and the Jefferson County MIS Department.

Once access is granted to the submitting agency, the agency will appoint an Agency Administrator for iResults, who is responsible for monitoring users and passwords and safeguarding the security of their own agency's information. If you do not have access to iResults, please see your Agency Administrator. If you do not know who your Agency Administrator is, please contact the Laboratory.

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3/LABORATORY DISCIPLINES

3/100 DRUG CHEMISTRY

Controlled substance evidence is composed of several different types of physical evidence – plant substances, solid substances, powders, liquids, pills, and tablets. The goal of the Laboratory is to determine the presence or absence of a controlled substance in the physical evidence submitted to the Laboratory.

Evidence Collection and Packaging

Marihuana and other plant substances:

- Do not include the roots and dirt with the plant substance.
- Leaves and stems should be stripped from large stalks for submission.
- Large stalks, dirt, or roots are not included in the weight.
- Package freshly dried plant substance in paper bags or boxes to allow for continued drying before submission.
- If you know the plant material is not fully dry, please let the Laboratory know upon submission.

Pills and tablets:

- Submit pills/tablets as found – it is not necessary to separate pills/tablets found together. Please note if there are multiple tablets and be descriptive (i.e. color, imprint, shape) on the evidence submission form.
- Any pills that are in their original packaging and not opened (blister packs or bottles) can be submitted as they are.
- Empty prescription bottles or containers do not need to be submitted to the Laboratory as no analysis is needed. Please use discretion and submit only those items that are in need of analysis. Items that do not need to be tested should not be submitted to the Laboratory.

Liquids (codeine, etc.):

- If liquids are in a leak proof container (i.e. prescription bottle with secure cap, tightly-closed soda bottle):
 1. Confirm container will not leak prior to packaging. If spillage is anticipated, double bag the evidence prior to packaging.
 2. Seal container in envelope according to standardized packaging requirements – make sure container is in upright position prior to sealing envelope.
 3. Note on evidence submission form the liquid and container that is being submitted to the Laboratory.
- If liquids are not in a leak proof container (i.e. baby bottle, cup with lid/straw, pill bottle, paper or cardboard cup):
 1. Transfer liquid to a Nalgene or other leak proof container. If spillage is anticipated, double bag the evidence prior to packaging.

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2. The original container is not required for analysis and does not need to be submitted with the liquid evidence.
3. Seal container in envelope according to standardized packaging requirements – make sure container is in upright position prior to sealing envelope.
4. Note on evidence submission form the liquid and container that is being submitted to the Laboratory.

PCP:

- If found in a glass bottle/container, keep in the original bottle and package according to standardized packaging requirements. If a strong odor is present or spillage is anticipated, put evidence in heavy plastic prior to packaging.
- If found in a thin plastic container, transfer the liquid to an appropriate container such as a Nalgene brand bottle. Leaving the PCP in plastic will eventually cause the plastic lining of the container to erode and pose a hazard when handling the evidence. If a strong odor is present, put evidence in heavy plastic prior to packaging and package evidence according to standardized packaging requirements.
- Cigarettes dipped in PCP should be placed in a plastic (Ziploc) bag and packaged according to standardized packaging requirements.

The Laboratory **does not** respond to clandestine laboratories, nor can we analyze or store clandestine laboratory samples. Please contact the Houston DPS Crime Laboratory at (281) 517-1380 or refer to their website at www.txdps.state.tx.us for advice on collecting, sampling, and packaging evidence from a clandestine laboratory, as well as any restrictions that they may have regarding evidence submission.

Evidence Submission

A completed Controlled Substance evidence submission form should be submitted with each case. It is necessary to include the proper offense charge (i.e. possession vs. delivery, State vs. Federal) on the Laboratory submission form. If the item is “Found Property”, then it will not be analyzed by the Laboratory. If there are multiple suspects in a case, please designate which item(s) correspond to which suspect.

Fingerprinting is not done at the Laboratory – if this is needed, please indicate this on the submission form so that proper precautions to preserve fingerprints are taken. The items will be returned to the submitting agency after analysis to be processed for fingerprints.

Drug evidence or a container with drug evidence is often confiscated from a body cavity or spit from the mouth. When submitting evidence retrieved from a body cavity, note this on the submission form, in addition to using the universal “biohazard” label on the evidence. For information on biohazard labeling, see “Biohazard Evidence” in section 3/300 below.

3/200 FIREARMS

All firearms are to be unloaded before being submitted to the Laboratory for examination. If for some reason a particular firearm cannot be unloaded, **it is the responsibility of the**

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submitting agency to notify the Laboratory as to the date and time they will be arriving so that proper personnel will be available to unload the firearm. If the firearm cannot be easily unloaded, it should be secured in a manufactured gun box and clearly labeled “Loaded Weapon” or similar. This must also be noted on the submission form.

In unusual circumstances where firearms are found under water, in snow, etc., call the Laboratory for advice before attempting to collect and preserve the firearm.

The Laboratory will analyze firearms and/or fired evidence (bullets/projectiles, cartridge cases, shot shells, etc.) involved in criminal cases. Due to federal budget cuts, the Laboratory no longer has an Integrated Ballistic Identification System (IBIS). Items that meet the criteria for IBIS entry will normally be forwarded to the Harris County Institute of Forensic Sciences for imaging. This is done after complete firearms identification analysis has been performed at the Laboratory. Laboratory analysis is not required for firearms seized as found property or for safekeeping and will not be accepted. If you feel that you have extenuating circumstances and that firearm analysis may be beneficial in your specific case, please contact the Laboratory prior to any submission of evidence.

Packaging and Submission

Fingerprinting is not done at the Laboratory – please have this performed prior to submitting firearms evidence to the Laboratory. An offense report must accompany all firearms evidence submitted for analysis.

All firearms must be submitted to the Laboratory in a manufactured gun box according to size – please do not submit damaged or overused boxes. Cover any exposed area of the firearm that does not fit inside the box with paper and seal appropriately. Place only the firearm and the items removed from it (magazine, live rounds, etc.) in the gun box.

All other evidence should be placed in separate 9x12 envelopes. Evidence of like kind (i.e. all found in the same place), may be placed in the same 9x12 envelope, but please do not place exhibits found in more than one location in a single 9x12 envelope.

It is not necessary to place anything in the barrel of a firearm to demonstrate that it is safe. This can damage the rifling of the firearm. If it is the policy of the submitting agency to secure the action of a firearm, this can be done by locking the firearm open, or securing a plastic zip tie through the chamber, not the barrel.

If the firearm is considered to be a biohazard, please do not put “clean” packaged evidence in the gun box with it, as this will contaminate the packaging of the additional evidence. All evidence must be labeled as “biohazard” when blood and/or body fluids may be present. This must also be noted on the submission form.

3/300 FORENSIC BIOLOGY

Biological fluids such as blood, semen, and saliva are frequently encountered as physical evidence in many types of criminal investigations such as homicides, sexual assaults,

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assaults, and robberies. Examinations performed will be based on the type of case submitted and the quality and quantity of forensic samples detected.

When a biological substance is left at the scene of a crime, the sample will begin to degrade (break down or be destroyed) if not properly collected, packaged, and preserved. Following proper collection and evidence handling procedures reduces the possibility of evidence contamination and DNA degradation.

General Collection Guidelines

- Treat all biological evidence as potentially infectious
- Wear protective clothing: gloves, laboratory coat or coveralls, shoe covers, eye protection, etc
- Guard against cross-contamination and change gloves frequently.

Collection of Blood Stains

- It is always preferable to submit the entire item to the Laboratory. If the whole item cannot be transported to the Laboratory, then cut out the stain if possible (i.e. carpet, linoleum, car seats, etc).
- If the stain cannot be cut out, it can be collected onto sterile swabs. If the stain is still wet, simply absorb it onto the swab and allow to air dry completely before packaging. If the stain has dried, moisten the swab with distilled or sterile water first, and allow to air dry completely. Another alternative is to scrape the stain onto a folded piece of paper. Do not attempt to remove stains from cloth. Do not mix dried stains – place each in separate envelopes.
- Remember that one concentrated swab is better than several weak ones.
- Collect too much (several swabs of large area) rather than too little.
- Collect samples from each area and package separately.
- Control swabs (swabs from unstained areas) are not analyzed, therefore there is no need to collect or submit a control swab to the Laboratory.
- Store the stains or swabs at room temperature until the samples are submitted to the Laboratory.

Collection of hairs or fibers (trace evidence)

- If the hairs or fibers are on a small item, it is better to submit the entire item to the Laboratory (package carefully).
- If the hairs or fibers are on a large item, you can use:
 - gloved hands to pick them off the item
 - a special vacuum and filters
 - lint rollers (available at stores or dry cleaners)
- Store in paper, use as small an envelope as possible and make sure the item does not fall through envelope seams.

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- Very small items should first be placed inside a folded piece of paper and then placed into the envelope. Tape sections from lint rollers can be placed in zipper bags and sealed in manila envelopes for submission.
- If the hair is attached, such as in dry blood, or caught in metal or a crack of glass, do not attempt to remove it but rather leave the hair intact in the object. If the object is small, mark it, wrap it, and seal in an envelope. If the object is large, wrap the area containing the hair in paper to prevent loss of hair during transfer to the Laboratory.

Victim or Suspect Blood

Qualified medical personnel must draw the blood. They should label the tube with the date, time, name of donor, their initials, and the case number, if known. *Never accept an unlabeled tube.* Check the expiration date on the tube(s). Protect the tubes from breakage and refrigerate them until submission; DO NOT freeze them. Attach a “biohazard” sticker to all items of evidence that may contain body fluids.

For DNA/Serology:

- In most cases, a buccal swab kit can be used for a DNA reference sample. If blood is collected, use a purple top (EDTA) tube.

For Toxicology (alcohol or drugs):

- Use the DPS blood kit if possible.
- Urine is better for certain drugs (GHB, Rohypnol, etc.). If you suspect a date rape drug (GHB, Rohypnol, ketamine, etc.), inhalants (paint thinner, gasoline, etc.), or LSD were used, this must be specifically marked on the evidence submission form. These drugs are not routinely tested for in a toxicology analysis.

Seminal Stains

- Stains are often, but not always, found on clothing and bedding. Allow stains to air dry before packaging.
- Handle clothing as little as possible.
- If the semen stain is on an object that cannot be easily submitted to the Laboratory, contact the Laboratory for assistance.

Buccal Swabs

If a buccal (cheek) swab is to be collected:

- The subject should not have had anything to eat or drink for 20 minutes prior to collection.
- Use only sterile swabs. Wearing gloves, remove the swabs from the wrapper and rub the inside of the subject’s cheek at least six times. Collect at least 2 swabs.
- Do not touch the cotton end of the swab to anything else.

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- Carefully air dry the swabs on a clean surface, then place them in a paper envelope or box. Do not use plastic. Write the subject's name on the outside of the envelope or box.
- There is no need to refrigerate the swabs, but submit them to the Laboratory as soon as possible.

Gunshot Primer Residue (GSR)

Gunshot primer residue may be deposited on the shooter's hands, depending on the type, caliber, and condition of the weapon used and the environmental conditions at the time of the shooting. This type of analysis is done on samples obtained from the hands of persons suspected of recently discharging a firearm. GSR kits are forwarded to the DPS Crime Laboratory in Austin for analysis; therefore, they must be submitted in accordance with DPS Crime Laboratory policy. Please refer to their website at www.txdps.state.tx.us for additional information regarding GSR submission policies. In addition:

- Analysis for gunshot primer residue is performed on **SEM stubs only**. Only **two stub** GSR kits will be accepted for analysis.
- Instant Shooter Identification (ISId) Kits will be returned without analysis. DPS has not validated the Instant Shooter Identification Kit or a method of analysis for it.
- Atomic Absorption (AA) Kits will be returned without analysis. DPS no longer has the proper instrumentation to analyze AA kits.
- **GSR Kit Information Form** should be completed and if possible a copy should be made for the lab.
- It is DPS Laboratory policy to not perform analysis for gunshot primer residue on samples from **shooting victims**.
- It is DPS policy to not perform analysis for gunshot primer residue if the samples were collected **more than four hours after the shooting**.

Fire Debris

The Laboratory does not analyze arson/fire debris evidence, nor can it store this type of evidence. Forensic arson laboratory services are provided at no cost to the fire service and other law enforcement agencies in the State of Texas. Please contact the Forensic Arson Laboratory in Austin at (512) 305-7974 or refer to their website at www.tdi.texas.gov/fire/fmlab.html for advice on collecting, sampling, and packaging evidence related to arson/fire debris, as well as any restrictions they may have regarding evidence submission.

Biohazard Evidence

The greatest safety hazard is associated with biological fluids and biological materials with syringes, razors, and broken glass. These items pose a threat to law enforcement and Laboratory personnel for the transmission of HIV and/or Hepatitis. HIV (AIDS) has a short life span when exposed to air; however, Hepatitis can live for years in the open air. The Hepatitis

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virus has been shown to be viable in contaminated evidence that has been frozen and thawed years later.

For biohazard cases, please be sure to:

- Mark all layers of packaging, containers, and Submission form with the universal “biohazard” label.
- Explain on the Submission form if the evidence contains a syringe(s) or the contents of a syringe, in addition to using the universal “biohazard” label. Syringes must be placed into a puncture resistant container.
- When submitting evidence retrieved from a body cavity, note on the Submission form, in addition to using the universal “biohazard” label.

Evidence Packaging and Storage

Biological evidence should always be packaged in paper – paper envelopes, paper bags, or boxes. Paper allows moisture to escape. The rare exceptions to this rule are: blood in soil, snow, or water, and tissue (such as muscle, organs, etc.). These samples should be placed in an airtight container and frozen. Other than these exceptions, biological evidence should never be packaged in plastic.

Do not package the suspect’s evidence, such as clothing, with the victim’s items. Always keep evidence from different sources (suspect vs. victim) separated. This can be done in separate manila envelopes, paper bags, etc. Be careful not to mix known reference samples with questioned samples. Separate items - do not put clothing and bedding together. One item of evidence per paper bag is ideal to prevent cross contamination.

Thoroughly dry wet or moist items, such as clothing or swabs, before packaging. Evidence packaged wet will grow fungus/bacteria more quickly and lead to degradation of the DNA. If evidence is very wet, you can use a plastic container or bag to transport the item to your facility for drying, but it must immediately be removed and dried upon arrival. Save the plastic for submission to the Laboratory.

When handling clothing or other evidence that is wet with blood or another fluid, take care to preserve stain patterns. Avoid creating additional patterns on the item. Dry clothing and similar articles in a room with adequate ventilation. When air drying articles stained with body fluids, place them on or over a piece of clean paper. Any debris which falls from the material onto the paper during the drying process should be collected and submitted with the article.

Ideally, wet swabs (including buccal swabs, blood swabs, etc.) should be dried before packaging, but may be placed into swab boxes to dry if necessary. Cigarette butts and chewing gum should be treated in the same manner as any other biological evidence. Gloves must be used when handling them, and they must be air dried before packaging.

Refrigerate liquid biological samples or items that are still moist until submission to the Laboratory. If you are submitting an item that you know may still be moist (condom, diaper,

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sanitary napkin, etc.) please **advise the Laboratory upon submission** so that we may take the appropriate measures to preserve the evidence.

If evidence to be DNA tested has come from or has been handled by a victim or other (non-suspect) individual, it will be necessary to obtain a DNA reference sample (buccal swabs) from that individual for elimination purposes. This would include obtaining samples from home/business owners and/or employees in robbery cases, vehicle owners in stolen vehicle cases, and any officers who have handled the evidence without gloves. If the evidence is blood found at the scene and it is clear that the blood did not come from the victim (home owner, etc.), a victim sample may not be necessary, but this needs to be clearly stated in the offense report.

In sexual assaults, if a sexual assault kit was collected, it usually contains a DNA sample from the victim. A separate sample would not usually be needed in these cases. If a sexual assault victim has had consensual sex with another partner within a week of the assault, a DNA sample from this person would be beneficial to the case and allow entry of any remaining profiles into CODIS.

Until submission to the Laboratory, store packaged items in a cool, dry place. Avoid sunlight, heat, and excessive humidity. Refrigerate sexual assault kits and blood tubes (do not freeze). Mark all packages with "biohazard" labels.

For additional information on collection, packaging, storage, preservation, and retrieval of biological evidence, the Texas DPS has a "best practices" document available on the DPS website at www.dps.texas.gov. Search under "Biological Evidence" to find this document.

Submission of Evidence

The outer packaging should, at a minimum, have the agency case number and a short description of the evidence contained in it written on one side of the envelope. A detailed offense report and completed Physical Evidence Submission Form should be submitted with each case.

Evidence that has been fingerprinted can still be tested for DNA, but please note on the agency submission form if an item has been fingerprinted. The presence of a fingerprint can be a good sign that there may be DNA present.

According to DPS policy, a case cannot be sent for DNA analysis without proper reference samples; therefore, the Laboratory does not accept cases for analysis that do not have proper reference samples. Sexual assaults and homicides are exempt from this policy.

Since the DPS Laboratory limits the number of samples submitted for DNA analysis on burglary/property crimes, the Laboratory will also adopt this policy. Submission is limited to two (2) items, plus any reference samples that are needed. These must be swabs of blood from the crime scene or items/swabs of items left at the scene such as: cigarette butts, blood from clothing, gloves, or drink containers. Evidence of "touch" DNA including swabs of:

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steering wheels, shift knobs, door handles, switches, counters, keys/locks, ammunition/cartridge cases, prints/smudges, etc. will not be accepted for property crimes. More than two items may be accepted if the circumstances (such as multiple perpetrators) dictate the need for additional analysis. Please keep in mind that the agency can **collect** as many samples as needed, but may only submit two at a time for analysis on burglary/property crimes.

3/400 TOXICOLOGY – BLOOD ALCOHOL

During investigations when there is cause to believe that an individual may have been under the influence of alcohol and/or drugs, efforts should be made to obtain blood for toxicological analysis. The Toxicology section of the Laboratory uses procedures, techniques, and instruments for the analysis of blood for suspected alcohol. Samples for which both alcohol and drug analysis are requested should first be analyzed at the Laboratory for alcohol content. Samples with a request for blood alcohol content will not be analyzed if the subject provided a valid breath test. Samples with a request for drug analysis containing ethanol greater than 0.10 (breath or blood) will not be forwarded for additional drug testing unless specifically requested by the submitting agency.

If blood evidence is received for drug analysis only, the Laboratory will forward the specimen to the appropriate Laboratory. Analysis for drug content utilizing blood specimens is normally performed by the Texas DPS Crime Laboratory in Austin. The DPS blood specimen kit is the preferred method for packaging blood toxicology evidence, as the kits are prepared according to strict specifications under DPS authority. These may be purchased from DPS General Stores in Austin, TX. Call (512)424-5424 for ordering and price information. The address is:

DPS Reprographics & Distribution Services
P.O. Box 15999
Austin, TX 78761-5999

Item:	Stock Number:
Alcohol Blood Test Kit	680-93-8050

For all law enforcement agencies in **Jefferson** County, the drawing of blood at the jail infirmary for DWI/DUI offenses is available. The procedure will remain the same at the jail facility as it would be if the blood were drawn at a hospital. The arresting officer should bring their own blood sample kit, remain with the subject the entire time, complete all paperwork, and take custody of the blood tube after it is drawn. The arresting agency will be responsible for submitting the blood kit to the Laboratory.

Collection and packaging of blood samples using the DPS specimen kit:

1. At least 10 milliliters (one tube) of blood should be collected. Blood tube **should be inverted multiple times** immediately upon collection.
2. After specimen has been collected, write the requested information on the tamper-evident blood tube seal, and seal the tube by placing the tape across the top of the stopper and down the side of the tube.

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If no DPS kit is available or if the expiration date on the blood collection tube has passed, have the medical personnel use a new gray top tube with the same amount of sample preservative and anti-coagulant as the DPS kit tube, and then package in kit per usual instructions.

3. Wrap the blood collection tube with the absorbent material and place inside the plastic tube.
4. Place the plastic tube in the foam padding inside the box.
5. Seal box with enclosed red integrity seal. Initial and date the seal. Write the agency case number on outside of box.
6. Fill out the DPS submission form and place inside the plastic sleeve attached to the outside of the box.
7. Refrigerate the specimen until it is submitted to the Laboratory.

Submission of blood specimen kit to the Jefferson County Regional Crime Laboratory:

1. Submit blood sample using the DPS blood specimen kit.
2. Do not place the box inside an envelope or another box for submission.
3. A detailed offense report (mainly the officers' narrative) must accompany the kit upon submission.
4. A completed toxicology evidence submission form must accompany the kit upon submission. Please specify what type of analysis is needed for the blood sample (i.e. alcohol, drugs, or alcohol and drugs).
5. If drug analysis is needed, the agency is requested to list the specific drug(s) suspected on the submission form.
6. Blood should be submitted to the Laboratory as soon as reasonably possible.

Post-mortem blood samples are the responsibility of Forensic Medical Management Services and will not be analyzed by the Laboratory for alcohol and/or drugs.

3/500 BREATH TESTING

The Laboratory oversees the Breath Testing Program for Jefferson County. Two instruments are maintained at the Jefferson County jail, where certified breath test operators may perform breath tests on subjects if alcohol use is suspected. Police officers wishing to receive training to become a certified breath test operator should contact the Laboratory.

Normally, the Laboratory will not test blood for alcohol if a breath test has been administered. If there is a valid evidentiary breath test, no further analysis is necessary and the blood sample will be returned to the submitting agency.

3/600 CRIME SCENE

The Laboratory has Scientists on call at all times to assist law enforcement agencies with crime scene processing. In addition to performing spot tests and confirmatory tests, the Laboratory can assist with the collection of the following types of evidence:

- Gunshot residue (GSR)
- Foot, shoe and tire impressions
- Paint scrapings or glass for comparison

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- Soil samples for comparison
- Hair, fiber, and other trace evidence
- Fire debris
- Buried human remains
- Blood and other body fluids
- Trace DNA.

If your agency needs crime scene assistance after hours, call the Jefferson County Sheriff's Office Dispatch Center at (409) 835-8411, and ask them to contact the Forensic Scientist on call for the Crime Lab. Since the Laboratory is not staffed after hours, please allow time for the Scientists to travel from home, gather equipment at the Laboratory, and travel to the scene.

If you are working a scene after hours and have a question about evidence processing or need help with any evidence matter, please do not hesitate to call. Laboratory staff will return your call and attempt to address your issue over the phone, if needed.

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4/PUBLISHED REFERENCES

Best Practices for Collection, Packaging, Storage, Preservation, and Retrieval of Biological Evidence, prepared by the Texas Department of Public Safety.

Blood Alcohol Procedure Manual, prepared by the Jefferson County Regional Crime Laboratory.

Drug Chemistry Procedure Manual, prepared by the Jefferson County Regional Crime Laboratory.

Evidence Collection & Submission Suggestions, power point training presentation prepared by Linda Johnson, Director of the Jefferson County Regional Crime Laboratory.

Evidence Collection Guidelines, prepared by Crime Scene Investigator Network.

Evidence Handling & Laboratory Capabilities Guide, prepared by the Virginia Department of Forensic Science.

Firearms Procedure Manual, prepared by the Jefferson County Regional Crime Laboratory.

Forensic Biology Procedure Manual, prepared by the Jefferson County Regional Crime Laboratory.

Forensic Evidence Handling Guidelines, prepared by Orchid Cellmark.

Guide to Laboratory Services, prepared by the Bexar County Criminal Investigation Laboratory (Texas).

Physical Evidence Handbook, prepared by the Texas Department of Public Safety.

Property Evidence Manual, prepared by the Washington County Sheriff's Office (Oregon).

Quality Manual, prepared by the Jefferson County Regional Crime Laboratory.

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