

KERN REGIONAL CRIME LABORATORY
Laboratory Services Section, Evidence Control Unit



Policy on the Submission of Evidence for Biological Analysis

QT41330

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The purpose of this document is to provide law enforcement and criminal justice officials with guidance regarding the submission of biological evidence for examination by the Kern Regional Crime Laboratory.

The Kern Regional Crime Laboratory offers forensic DNA testing. Deoxyribonucleic acid (DNA) recovered from items of evidence is analyzed. DNA tests are conducted by comparing the DNA profiles developed from evidence samples to the DNA profiles developed from reference (known) samples to determine if individuals can or cannot be excluded as potential contributors to DNA profiles obtained from evidence items and/or crime scenes. It is, therefore, imperative that ALL samples (both known and questioned items) be submitted for analysis together within the same submission.

DNA typing results obtained by the Kern Regional Crime Laboratory are uploaded to its local database and, when appropriate, to the Combined DNA Index System (CODIS).

Services offered in Portal

Discipline	Service Type
DNA Analysis Unit (DAU)	Biological Screening
	DNA Analysis v2016
	Kinship Analysis
	Subcontracting Request

Service Type	Evidence Item	Testing
Biological Screening	Blood, semen, saliva or other biological fluid-stained item (e.g. swabs, clothing or bedding)	Screen for the presence of body fluids (blood, semen, saliva, urine, feces); locate stains for DNA analysis

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	Hair	Determine if human or non-human. If human, determine if root is suitable for DNA analysis
DNA Analysis	Known References: Buccal swab / FTA card from a known individual Liquid blood / FTA card from a known individual Bone or human remains Alternate known reference sample	Obtain DNA profile for comparison
	Questioned (unknown) items: Items stained with blood, semen, saliva or other biological fluids Chewing gum, drinking container, cigarette butt Bone or human remains "Touch" items or swabs of "touch" items Human hair with root tissue	Obtain DNA profile for comparison
Kinship Analysis	Known References: Buccal swab / FTA card from a known individual Liquid blood / FTA card from a known individual Bone or human remains Alternate known reference sample	Obtain DNA profiles to determine biological relationships

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Subcontracting Requests	Knowns and unknowns, as appropriate	Provide assistance in obtaining biological testing services not offered by KRCL (i.e. mtDNA)
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Submitting agencies should remember that DNA evidence must be properly documented, collected, packaged, and preserved. Proper collection techniques should always be used to avoid potential contamination of evidence (e.g., wearing gloves and face masks). The following information is provided for guidance.

Kits provided by the laboratory can be picked up by a county law enforcement agency Monday-Friday, 8 AM to 5 PM. The laboratory will not deliver these kits.

Blood from a Known Individual

It is the laboratory's preference to receive dried bloodstain cards rather than tubes of liquid blood. However, when this is not possible, liquid blood tubes shall be packaged individually in sturdy containers with absorbent packing material surrounding them. Only qualified medical personnel should collect blood samples. At least two (2) 5 mL tubes of blood in purple-top collection tubes (tubes containing EDTA as a preservative) should be collected. If toxicological analysis is also needed, then those blood samples should be collected in gray-top tubes (tubes containing sodium fluoride and potassium oxalate as a preservative). Each tube should be labeled with the date and time of collection, the individual's name, the collector's name, the location of collection, and the case identifying information. Tubes of blood should be refrigerated, and never frozen (if using ice, then use cold packs and not dry ice). Whether blood samples are dry or liquid, samples from different individuals must be packaged separately. Each package containing liquid blood shall be labeled with the words: "Refrigerate on Arrival" and "Biohazard", and submitted to the laboratory as soon as possible.

If results indicate that the known reference sample originated from more than one individual (i.e., male quant results in a female known reference and/or a resultant mixture DNA profile), then the sample can also be interpreted as a questioned (unknown) item when it is relevant in the context of the case.

Note: The laboratory does not provide collection tubes for this type of sample. Liquid blood samples will not be returned to the submitting agency.

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Buccal (Oral) Swabs from a Known Individual

“DNA Collection Kit Known (reference) Sample” kits are provided by the laboratory and instructions for use are located inside. Only clean swabs shall be used to collect buccal (oral) samples and, in each case, the inside surface of the cheek shall be rubbed vigorously to obtain the best possible sample. The swabs shall be pressed onto indicating FTA cards. The swabs and the indicating cards shall be air-dried and placed within their original packaging. This original packaging shall then be placed under proper seal and identified with the date and time the sample was collected, the individual’s name, the collector’s name, and any other case identifying information that may be necessary. Buccal samples from different individuals shall be packaged separately. Buccal samples do not need to be refrigerated, but they should be submitted to the laboratory as soon as possible.

If results indicate that the known reference sample originated from more than one individual (i.e., male quant results in a female known reference and/or a resultant mixture DNA profile), then the sample can also be interpreted as a questioned (unknown) item when it is relevant in the context of the case.

Alternate known reference sample

An alternate known reference sample is one that can be used to establish a DNA profile from a person when a buccal swab (FTA card), blood (FTA card), and/or bone/human remains sample is unavailable or unsuitable for testing. Alternate known reference samples should be items that have had direct and prolonged contact with the individual in question (i.e., toothbrushes, hairbrushes, used razors, cigarette butts, and unwashed clothing). Alternate known reference samples should be submitted only as a last resort and the laboratory shall be provided with information regarding the nature of the sample being submitted explicitly stating how the sample is associated to the individual in question. Known reference samples should also be submitted for other individuals that could have also been in direct and/or prolonged contact with the alternate known reference sample submitted for elimination purposes. A known reference sample shall be collected from the individual in question if/when one becomes available.

Blood on a Person or Surface

“DNA Collection Kit Questioned (unknown) Sample” kits are provided by the laboratory and instructions for use are located inside. Suspected blood should be absorbed onto a clean swab. If the blood is dry, then the swab can be moistened with a minimum volume of sterile water. Collect as much sample as possible from each individual stain and concentrate onto one area rather than spread over the entire swab head. The swab should then be air-dried and

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packaged in a clean paper bag, box or an envelope with sealed corners and placed under proper seal. Plastic containers shall not be used.

Bloodstains

Large samples should be cut from suspected bloodstains on immovable objects with a clean, sharp instrument. Samples should be packaged in a way that prevents stain removal by abrasion during transport. Dry bloodstained apparel or linens shall be wrapped in clean paper and placed in a paper bag, and never in airtight or plastic containers. Care should be taken to package bloodstained materials in such a manner as to preserve bloodstain patterns. Wet samples may be collected on swabs as described above. Paper, not plastic, containers shall be used.

Bone/Human Remains (Dry or tissue remaining)

The Kern Regional Crime Laboratory does not conduct anthropological analysis for the determination of age, ethnicity, sex, or stature of skeletal remains. Determination of whether a bone is from a human or non-human source shall be ascertained by acquiring a human DNA profile from the sample. Bones should be wrapped in protective material (e.g., bubble wrap or paper), with as little accompanying soil as possible, and packed in paper bags. Tissue samples shall not be packaged in preservative and shall be kept frozen. If tissue is present on skeletal material, then it shall be kept frozen.

Hair

Hair should be carefully collected with clean forceps to prevent damage – especially to any root tissue. If mixed with body fluids, the hair should be air-dried and packaged accordingly. Each grouping of hair should be packaged separately into clean a paper bag or an envelope with sealed corners, and placed under proper seal. Plastic containers shall not be used.

The laboratory will conduct a biological screening to determine if the hair is human or non-human. If of human origin, the hair will be analyzed for DNA, if appropriate.

Semen and Semen Stains

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Suspected liquid semen should be absorbed onto a clean swab, air-dried, packaged into a clean paper bag, box or an envelope with sealed corners, and placed under proper seal. Plastic containers shall not be used.

Suspected dry semen-stained items shall be packaged in such a way as to prevent stain removal by abrasive action during transport. Large samples should be cut from immovable objects with a clean, sharp instrument, packaged into a clean paper bag or an envelope with sealed corners, and placed under proper seal. Plastic containers shall not be used.

Note: Semen reference samples should not be collected. Rather, blood or buccal swabs are submitted as known reference samples.

Sexual Assault Evidence

Parties involved in sexual assault should be medically examined in a hospital employing SART personnel using a standard sexual assault evidence kit provided by the laboratory (or similar kit). The laboratory provides sexual assault kits for the hospitals to pick up. These kits do not have an expiration date.

A known reference from the victim and any consensual sex partners listed on the CAL-OES report should be collected and submitted to the Laboratory at the time of sexual assault kit collection. This is done with a 'DNA Collection Kit Known (reference) Sample' kit. Known reference samples from individuals from whom kits are collected are contained within the kit itself. Evidence Control Unit personnel will ask individuals who submit sexual assault kits to confirm the presence of all known reference samples, and will reject evidence if the individuals submitting the evidence tell them that known reference samples are not present among the items that they are submitting.

AB1517 Sexual assault kits (as required by California law, effective January, 2016) consist of two duplicates of the most probative samples from the SART examination, known reference(s) and a completed CAL-OES form (or similar information form). These samples are collected in addition to the standard sexual assault evidence kit and are submitted directly to the laboratory by the SART team. The samples are consumed in testing and not returned to the law enforcement agency.

Sexual assault evidence should be kept frozen or at room temperature and submitted to the laboratory as soon as possible.

Saliva, Urine, or Other Biological Fluid-stained Evidence

Suspected liquid saliva or urine should be absorbed onto a clean swab, air-dried, packaged into a clean paper bag or an envelope with sealed corners, and placed under proper seal. Plastic containers shall not be used.

Suspected dry biologically-stained items shall be packaged in such a way as to prevent stain removal by abrasive action during transport. Large samples should

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be cut from immovable objects with a clean, sharp instrument, packaged into a clean paper bag or an envelope with sealed corners, and placed under proper seal. Plastic containers shall not be used.

Other items, such as cigarette butts (no ashes), chewing gum, drinking container (with contents poured out), etc., should be collected with proper collection techniques and submitted to the laboratory. Alternatively, suspected biological fluids may be absorbed onto a clean swab, air-dried, packaged into a clean paper bag, box or envelope with sealed corners, and placed under proper seal. Plastic containers shall not be used.

“Touch DNA” Evidence

“Touch DNA” refers to the presence of low-level DNA on questioned items that is not directly related to the presence of a biological fluid.

When analysis is requested for spent cartridge casings from Firearms, the analysis strategy is to swab the cartridge casings before the firearms analysis. If associations to a single firearm are made by a firearms examiner, the associated swabs can then be combined. Swabs from spent cartridge cases may also be combined based on the location of their recovery and/or other relevant case information.

These items shall be packaged in such a way as to prevent stain removal by abrasive action during transport. Alternatively, suspected biological fluids may be absorbed onto a clean swab, air-dried, packaged into a clean paper bag, box or envelope with sealed corners, and placed under proper seal. Plastic containers shall not be used.

Restrictions

The laboratory will not pick up evidence samples to be analyzed. Agencies are responsible for transporting samples to and from the laboratory for analysis.

Biological screening and DNA analysis requires written permission from the DNA Technical Lead or the Laboratory Director (KRCLDNA@kernDA.org).

Best efforts will be made to limit analysis to five items of evidence (known references are not counted in this total and a sexual assault kit is considered one item).

The laboratory will not accept submission of a case without all known references (victim, subject, consenting partner, etc.) submitted at the same time as the evidence items.

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SUBMISSION OF PHYSICAL EVIDENCE TO THE LABORATORY FOR ANALYSIS

Agency Responsibilities

In order to submit biological evidence to the Kern Regional Crime Laboratory for biological screening and DNA analysis, submitting agencies should:

1. Send requests for DNA Analysis approval to KRCLDNA@KernDA.org. Requests should include at a minimum, a brief synopsis of the case along with the specific evidence items (with items numbers) relating to the request. Requests will be reviewed by the DNA Technical Lead, Laboratory Director and/or the Assistant D.A.
Note: The laboratory will strive for five (5) of the most probative items of evidence (a sexual assault kit is considered one item) per request, if possible;
2. If the submitting agency would like the potential DNA profile obtained from the submitted evidence item(s) to be included in the CODIS database, they should submit proper documentation demonstrating that the profile is eligible for CODIS upload. This documentation must describe details of the crime including location of the item in question, how it relates to the crime, and how it is believed to be attributed to the perpetrator. Examples of proper documentation may include (but is not limited to) police reports, evidence receipts, emails and phone conversations. Giving a brief description of the item such as "sweatshirt from bedroom" or "from crime scene and perpetrator" without giving further details, or simply writing "CODIS eligible" next to the item description will not be accepted as sufficient documentation;
3. Enter the case, evidence item(s) and analysis request into Portal;
4. Submit approved evidence to the laboratory accompanied by a copy of the approval letter. At a minimum, submit known references from the victim(s), consensual partner(s) and the subject(s) with the evidence. The only exception to this requirement is in a case where the subject is unknown, or when the reference samples are not able to be obtained. All forensic evidence that is brought to the laboratory without appropriate known/elimination samples shall be refused or returned unanalyzed. DNA profiles located within COmbined DNA Index System (CODIS) cannot be used as references; and
5. Track the progress and final report completion in Portal.

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SUBMISSION OF PHYSICAL EVIDENCE TO THE LABORATORY VIA PORTAL

Full instructions for the use of Portal are available on the laboratory's website, www.kerncounty.com/daCrimeLab. Click on the link "Getting started with Portal" and there you will find basic instructions for use with a link to in-depth instructions by clicking on "Instructions for using Portal."

Submitting Evidence in Portal

Use the following example when submitting item(s) for biological screening and/or DNA analysis.

Evidence Type	Evidence Description
DNA collection kit – Known (reference) sample	Sealed known (reference) sample envelope labeled as - [Name], [Agency property # or item #]
DNA collection kit – Questioned (unknown) sample	Sealed questioned (unknown) sample envelope labeled as - [Name], [Agency property # or item #]
DNA – Sexual assault kit (victim)	Sealed sexual assault evidence kit Victim labeled as – [Name], [Agency property # or item #]
DNA – Sexual assault kit (subject)	Sealed sexual assault evidence kit Subject labeled as – [Name], [Agency property # or item #]
Envelope (other envelope)	Sealed envelope labeled as – [Agency property # or item #], [Exact description as on label or evidence envelope]
Bag	Sealed bag labeled as – [Agency property # or item #], [Exact description as on label or evidence bag]
Box (gun box)	Sealed gun box labeled as – [Agency property # or item #], [Exact description as on label or evidence box]
Box (other box)	Sealed box labeled as – [Agency property # or item #], [Exact description as on label or evidence box]

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Add/Edit Evidence	Add/Edit Evidence
Evidence Type DNA collection kit - Known (re) v	Evidence Type Envelope (other envelope) v
Description Sealed known (reference) sample envelope labeled as - Jane Doe, 1234-5	Description Sealed envelope labeled as - 1234-8, Swab of driver side steering wheel
Note 	Note
Submitting Rep Tammi Noe v	Submitting Rep Tammi Noe v
✓ Save ✓ Save & Add Another Cancel	✓ Save ✓ Save & Add Another Cancel

Submitting Request(s) in Portal

See page 1 for the *Discipline(s)* and *Service Type(s)* available for submitting physical evidence for analysis request(s) in Portal.

Add Request

Discipline DNA Analysis Unit v	Select... Biological Screening DNA Analysis v2016 Kinship Analysis	Requesting Rep Tammi Noe v
Complexity Case Work v	Standard v	Due Date
Notes 		
✓ Save ✓ Save & Add Another Cancel		

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Please print the Evidence List and submit along with your evidence to the Evidence Control Unit of the Laboratory.

Evidence submitted without a printout may not be accepted.

Laboratory Responsibilities

In order to accept physical evidence from law enforcement officials a member of the Kern Regional Crime Laboratory's Evidence Control Unit (ECU) shall:

1. Ensure that the information on the evidence is properly completed. The following information, at a minimum, is **required** for acceptance:
 - a. Agency;
 - b. Incident date;
 - c. Requesting officer;
 - d. Agency case number;
 - e. Offense(s);
 - f. Subject and/or victim names (first and last);
 - g. Inventory of items submitted; and
 - h. Requested analysis.
2. Ensure that an email is included with the request from the DNA Technical Lead or the Laboratory Director approving biological screening analysis or DNA analysis;
3. Accept evidence that was approved for analysis or up to five (5) of the most probative items per case submission;
4. Ensure that all known reference blood or buccal samples from all named persons of interest (including but not limited to the victim, subject(s), or persons to be eliminated) are present. Exceptions to this policy can only be made by the DNA Technical Lead or Laboratory Director;
5. Ensure that the requested analysis matches the evidence received for analysis;
6. Ensure that the outer packaging of the evidence is properly sealed; and
7. Record the date, time, and received from and by in the Laboratory Information Management System (LIMS).

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