



SUBMISSION GUIDELINES FOR DNA

These are guidelines for the routine submission of biological evidence to the St. Louis County Police Department Crime Laboratory for DNA analysis.

- The St. Louis County Police Department Crime Laboratory supports the preservation and proper collection of all available physical evidence, and these guidelines are not intended to replace proper crime scene collection techniques or limit the number of samples collected at the crime scene.
- Requests for analysis of evidence that fall outside these guidelines should be made by the case officer to the Biology/DNA Supervisor or DNA Technical Leader of the St. Louis County Police Crime Laboratory.
- Be advised that evidence processing by one laboratory section may potentially have a detrimental effect on another section(s) ability to process the same evidence. When multiple sections of the laboratory are involved, the case officer should contact the Biology/DNA Supervisor or the DNA Technical Leader immediately.
- DNA analysis should be reserved for felony criminal investigations and limited to probative evidence in a case. “Probative” is defined as evidence which is relevant in the context of the case, directly relates to the crime and has the tendency to provide support for (or against) a fact or allegation in the case, rather than confirming the presence of an individual’s DNA where it is reasonably expected to be present, irrespective of the crime. **The DNA section of the laboratory prioritizes the analysis of, to the extent practicable and consistent with public safety considerations, samples from homicides and sexual assaults.**
- DNA testing does NOT provide any information about how or when the DNA was or was not deposited. DNA testing does not provide any information about the biological source (e.g. blood, semen, saliva, skin cells) of a DNA profile. DNA testing can only help address whose DNA may or may not be detected when there are appropriate reference standards for comparison.
 - Crimes of possession are not routinely processed and will not be accepted without a reference standard from the suspect and approval from the Biology/DNA Supervisor or DNA Technical Leader.
 - This includes crimes of felon in possession of a firearm or UUW where the firearm is removed from the suspect’s possession. Possession includes backpack/clothing being worn by the suspect as well as a vehicle or residence being occupied by the suspect.
- DNA analysis will generally not be performed on physical evidence from misdemeanor offenses unless related to a more serious offense or part of a serial crime. *Note: although [Missouri statute changes 8/28/25](#) now classify motor vehicle thefts and related vehicle crimes under the Burglary 2nd offense umbrella, the laboratory does not currently have the capacity to routinely process contact/trace DNA evidence from vehicle thefts.* The chart below shows the accepted evidence for these offenses. Note: the



collection recommendations are suitable for all offense types, not just the offenses noted below. Refer to the [Contact/Trace DNA Collection and Preservation document](#) for guidance on swab collection:

| DNA Evidence | | | | |
|--|-----------------|--|---|---|
| Offense | Best evidence | Examples | Collect | |
| <ul style="list-style-type: none"> - stealing/larceny, - recovered stolen vehicles (unless related to a more serious crime), - destruction of property, - harassment, - tampering, - attempt burglary, - shooting into dwelling, - traffic offenses. | Blood | Blood left by the perpetrator | Swab the blood | |
| | Saliva | | Cup/bottle used by the perpetrator | Swab the rim/lip of the drinking container where the mouth would make contact |
| | | | Straw (from a drinking container) used by the perpetrator | Swab the end of the straw where the mouth would make contact |
| | | | Smoked cigarette butt / cigar-blunt left by the perpetrator | Submit the cigarette/cigar/blunt |
| | | | Mask/face covering | Submit the mask |
| | Clothing | Hats, gloves, shirts, pants, jackets left by the perpetrator | Submit the clothing item | |
| Vehicle airbag | Deployed airbag | Swab the area where the perpetrator would have skin contact or submit the airbag | | |

- DNA testing is generally considered to be completed when an association is established between an individual and the victim (or the crime scene). Additional items will generally not be analyzed unless case circumstances warrant the supplemental testing.

Please notify the Laboratory if evidence analysis is no longer needed for a case. This will allow the laboratory to more effectively manage criminal case processing and better serve your agency.

DNA EVIDENCE SUBMISSION

A completed **Biology-DNA Submission form** must be provided with the submitted evidence and include the case scenario and evidence context. The context of the evidence, including where it was recovered and how it is believed to be related to the crime, will establish the value of each item as to its likelihood to provide probative results or an investigative lead.

The information provided to the laboratory is essential in proper triaging of the submitted evidence. The laboratory cannot make informed processing decisions if case information is incomplete or if it is unclear how the evidence is believed to be associated to the crime. As investigations develop, the relevance of collected evidence may change. It is essential that this information be provided to the laboratory



immediately, ideally prior to DNA analysis requests, so that resources are used effectively. Providing complete information significantly improves timeliness of service.

In addition to providing case information, it is also essential that reference standards from individuals in the case are submitted for comparison along with the evidence. If appropriate reference standards are not presented at time of initial submission, the case may be returned to the agency without analysis. If circumstances prevent reference standards from being submitted with the evidence, include this information on the Biology-DNA Submission form. Refer to each case type section for more information on what references are required.

Firearms evidence where DNA is being requested MUST be swabbed prior to submission. The laboratory will not swab firearms evidence for DNA. Swabbing tutorial videos are located on the [laboratory website](#) at the following links:

- **Handgun swabbing tutorial:** <https://youtu.be/5U6X0oyzFO4>
- **Long gun swabbing tutorial:** <https://youtu.be/dFY44ubUOZ8>

CASE AND EVIDENCE TRIAGING

The type and number of items processed for DNA is based on the circumstances of the case and potential probative value of the evidence. DNA evidence that can provide new information in the case is prioritized over DNA evidence that is meant to establish information already known or supported by other evidence in the case. Body fluids (blood, saliva and semen) have the highest probability of obtaining useable results and are generally prioritized when body fluid items and contact/trace items (refer to [section 5](#)) have similar probative potential.

Requests for prioritization must be submitted using the **Request for Priority Analysis – Biology/DNA** form. The form is available on the [laboratory’s website](#) under the Laboratory Forms section. Email the completed form to: LabBioDNAStaff@stlouiscountymo.gov

Retrieving Laboratory Reports – Checking Case Status

The investigating officer is sent a time sensitive link via email to access the laboratory report when released. The link expires after 7 days. If the investigating officer changes after initial evidence submission, please contact the laboratory with the updated investigator’s information. The laboratory also has an online portal to check case status, view and download reports. Contact the LIMS Administrator for more information on access: LabEvidenceProStaff@stlouiscountymo.gov.

In Portal, case status displays as either “Started”, “In Progress”, “Released”, or “Cancelled”. See below for information on the statuses:

| Status | Analyst | Status Description |
|-------------|----------|---|
| Started | | A request has been created in the LIMS. Generally requests are created when the evidence has been received. |
| In Progress | Write Me | DNA lab work has been completed and the case is pending data interpretation and report writing. |



| | | |
|-------------|------|--|
| In Progress | Name | The analyst listed has been assigned. The report is either pending lab work, report writing or technical and administrative review prior to release. |
| Released | Name | Report is complete and has been released. The report can be viewed and downloaded from Portal. |
| Cancelled | | In some cases, a duplicate request is inadvertently created and subsequently cancelled. Generally the requested items are included on the request numbered just before the cancelled request (check remaining requests for that discipline to determine if all items are present). It is also possible the evidence was not received or the request was cancelled by the investigator. |

The “Reason” status indicator includes three selections or is left blank. These designations do not necessarily indicate the prioritization of the case. The laboratory has weekly rotations of analysts assigned to specific offense types so that all cases are processed as soon as possible. A brief description of how the Biology/DNA section utilizes these selections is listed below:

| "Reason" | Bio/DNA section priority description |
|-----------------|--|
| Low Priority | This designation is used for property crimes where the submitted evidence likely contains a body fluid and should be prioritized over property crime cases with only contact/trace DNA evidence (refer to section 5). This expedites CODIS entry and searching. |
| Medium Priority | Sex crimes cases are assigned this designation to differentiate them from non-sex crimes cases. Alternatively, Medium Priority can be assigned when expedited analysis has been requested. |
| High Priority | All homicides and cases with priority processing approval are designated as "High Priority". |
| Blank | If no "Reason" is selected, none of the above apply or the case has not yet had its status evaluated/updated. |

1. Homicides

- a. **The initial round of DNA testing is** generally limited to the best **5 items** per case (reference standards do not count against the number of items submitted).
- b. Fewer than 5 items may be processed depending on case circumstances and the probative potential of the submitted evidence. Likewise, case circumstances may warrant additional items to be processed. Contact DNA section management to discuss specific case scenarios where more than 5 items are needed during the initial round of testing.
- c. If probative DNA results are not obtained from the initial submission, and additional processing is likely to provide useful results, contact DNA section management to discuss additional processing. Supplemental testing will be prioritized.



- d. **Reference standards required (homicides):**
 - i. Victim – bloodstain card obtained from the medical examiner following autopsy
 - ii. Suspect(s) if known
 - iii. Witnesses or other individuals whose DNA is likely to be detected on submitted items
 - iv. If **contact/trace DNA** (refer to [section 5](#)) is submitted from items belonging to a witness/victim/owner/occupant where there is a high probability of these individual's DNA being present, elimination reference standards from these individuals must be submitted with the evidence. Examples include: swabs from items in a residence (submit references from occupants of the residence), swabs from a vehicle (submit references from the individuals who drive or ride in the vehicle), swabs from personal belongings such as backpacks, clothing etc.

2. Sexual Assaults

- a. **The laboratory utilizes a technique called Y-screening to process sexual assault kits.**

This technique allows analysts to determine if male DNA is present prior to forwarding for DNA analysis. Case information is used to determine which swabs in the sexual assault kit potentially contain semen and will be Y-screened. Samples not believed to contain semen (e.g. potential saliva from kissing/licking/biting) are generally forwarded for DNA without Y-screening.
- b. **All* swabs in the sexual assault kit that potentially contain semen are Y-screened.**

*Sexual assault kits from male victims are not processed with Y-screening due to the male DNA from the victim masking any male perpetrator DNA. Likewise, sexual assaults with a female suspect would not benefit from Y-screening analysis.
- c. Y-screened samples with no male detected are generally not forwarded for DNA. Samples with male DNA detected are examined in the context of the case to determine which swabs will proceed for DNA analysis.
 - i. Swabs considered to provide equivalent information will proceed to DNA based on the amount of male detected during the Y-screening. For example, vaginal swabs and cervical swabs both test positive for male DNA, however the vaginal swabs have a higher concentration of male DNA. The vaginal swabs would proceed for DNA analysis while the cervical swabs would not be processed further.
 - ii. Information regarding the nature of the assault also affect which items are forwarded for DNA testing. For example, a victim has consensual vaginal sex with the suspect but is then assaulted rectally by the same individual. In this scenario, only the rectal swabs would proceed for DNA analysis even if the vaginal swabs test positive for male DNA.
- d. Case circumstances will determine if additional items beyond the sexual assault kit will be processed. For example, an assault where a condom is used and left at the crime scene. In this case, the detection of victim and suspect DNA on the condom provides investigative



information. If requesting processing of items beyond the sexual assault kit, information must be provided to the laboratory regarding the relevance of the requested items.

- e. **Reference standards required (sex crimes):**
 - i. Suspect reference standard(s) if known,
 - ii. Consensual partner(s) who had sexual contact with the victim within 72 hours of evidence collection must be submitted. If it is not possible to obtain reference standards include this information on the Biology-DNA submission form.
 - iii. Victim reference standard if no sexual assault kit is collected (sexual assault kits typically have a victim reference standard collected as part of the kit).

3. Crimes Against Persons

- a. **The initial round of DNA testing is** generally limited to the best **3 items** per case (reference standards do not count against the number of items submitted).
- b. Fewer than 3 items may be processed depending on case circumstances and the probative potential of the submitted evidence. Likewise, case circumstances may warrant additional items to be processed. Contact DNA section management to discuss specific case scenarios where more than 3 items are needed during the initial round of testing.
- c. If probative DNA results are not obtained from the initial submission, and additional processing is likely to provide useful results, contact DNA section management to discuss additional processing. Supplemental testing will be prioritized.
- d. **Reference standards required (persons crimes excluding homicides):**
 - i. Victim – victim DNA is not allowed to be entered in CODIS. We must have a reference standard from the victim if there is any possibility that their DNA will be detected on submitted evidence items.
 - ii. Suspect(s) if known
 - iii. Witnesses or other individuals whose DNA is likely to be detected on submitted items
 - iv. If **contact/trace DNA** (refer to [section 5](#)) is submitted from items belonging to a witness/victim/owner/occupant where there is a high probability of these individual's DNA being present, elimination reference standards from these individuals must be submitted with the evidence. Examples include: swabs from items in a residence (submit references from occupants of the residence), swabs from a vehicle (submit references from the individuals who drive or ride in the vehicle), swabs from personal belongings such as backpacks, clothing etc.

4. Property Crimes

- a. **The initial round of DNA testing is** generally limited to **1 item** per case (reference standards do not count against the number of items submitted). If multiple suspects are involved, additional items may be requested.
- b. DNA processing of body fluids (blood, saliva and semen) are prioritized over contact/trace DNA (refer to [section 5](#)).



- c. If probative DNA results are not obtained from the initial submission, and additional processing is likely to provide useful results, contact DNA section management to discuss additional processing.
- d. **Reference standards required (property crimes):**
 - i. Victim – victim DNA is not allowed to be entered in CODIS. We must have a reference standard from the victim if there is any possibility that their DNA will be detected on submitted evidence items.
 - ii. Suspect(s) if known
 - iii. Witnesses or other individuals whose DNA is likely to be detected on submitted items
 - iv. If **contact/trace DNA** (refer to [section 5](#)) is submitted from items belonging to a witness/victim/owner/occupant where there is a high probability of these individual's DNA being present, elimination reference standards from these individuals must be submitted with the evidence. Examples include: swabs from items in a residence (submit references from occupants of the residence), swabs from a vehicle (submit references from the individuals who drive or ride in the vehicle), swabs from personal belongings such as backpacks, clothing etc.

5. Contact/Trace DNA Evidence

- a. "[Contact/trace](#)" DNA evidence (sometimes referred to as "touch" DNA) is defined as evidence which has no visible staining or body fluids but may contain DNA resulting from contacting an item with the skin. Contact/trace DNA evidence does not include cigarette butts, swabbing from cans, bottles, straws or other items in which the substance being tested is most likely saliva. In the context of evidence acceptance criteria, contact/trace evidence does not include clothing items such as shirts, shoes, hats, etc. where there is probability of prolonged contact with the individual wearing the item.
- b. Contact/trace evidence will be accepted for possible DNA analysis when there is a high degree of likelihood that the evidence submitted will provide probative results or investigative leads. A high degree of likelihood may be established by means of witness corroboration, visual monitoring systems, or sound deductive reasoning.
- c. Contact/trace evidence accepted will be processed for DNA only if it has not been previously processed by another discipline.
- d. Contact/trace evidence will be processed for DNA only if it has been properly collected and stored.
- e. Items submitted for contact/trace evidence processing will comply with existing policy relating to the number of items of evidence that may be submitted based on case type.
- f. Charred or burnt evidence and fired cartridge casings will not routinely be processed for DNA.



- g. Contact/trace evidence collected from the floor, countertop, doorknob/handle, or payphone of a public place will not be processed for DNA, unless there is direct evidence that the object was contacted/handled by the subject.
- h. Contact/trace items of evidence taken directly from a subject in a possession case (i.e. body cavity, pockets, or waistband) will not be routinely processed for DNA.
- i. **Elimination standards must be submitted with contact/trace evidence where appropriate** (i.e. owner of carjacked vehicle).

6. Criminal Parentage Cases – SLCPD lab does not perform parentage testing, however we will assist with packaging and mailing of paternity cases to an outside agency for processing.

- a. Submissions must include a buccal swab standard from the (1) mother or alleged mother, (2) father or alleged father, and (3) the child or the product of conception (frozen with no preservatives).
- b. Information required for testing includes:
 - i. Names (first and last) of ALL submitted individuals
 - ii. Race of ALL submitted individuals (necessary for parentage statistics)
 - iii. Date ALL reference standards/fetal tissue were collected
 - iv. Relationship between individuals (e.g. mother, child, suspected father)
- c. No partial submissions will be accepted, unless dictated by case circumstances (such as mother is deceased or maternity is in question and the father is unknown).

These guidelines are designed to enhance the timeliness of service and ensure evidence is triaged as effectively as possible. They establish a mechanism for increased dialogue between submitting parties and laboratory management, facilitating a clearer understanding of case-specific needs and the process for requesting supplementary analysis. If submitters are ever uncertain about the proper procedure for a case submission, we strongly encourage them to contact the laboratory.

We are committed to providing you with quality forensic analyses in a timely fashion. Questions, concerns or comments may be directed to the appropriate Laboratory personnel, see contact information below:

St. Louis County Police Crime Laboratory

7900 Forsyth Blvd. Saint Louis, MO 63105

Phone (314) 615-5365

Biology/DNA (314) 615-3283

Email: LabBioDNAStaff@stlouiscountymo.gov

Website: <https://www.stlouiscountypolice.com/who-we-are/crime-laboratory/>



Evidence Submission Information and Forms:



Kyra Groeblichhoff
DNA Technical Leader
St. Louis County Police Crime Lab
Phone (314) 615-3803
Email: kgroeblichhoff@stlouiscountymo.gov

Kelly Pokorny
Biology/DNA Section Supervisor
St. Louis County Police Crime Lab
Phone (314) 615-5356
Email: kpokorny@stlouiscountymo.gov

Lisa Campbell
Director/Quality Manager
St. Louis County Police Crime Lab
Phone (314) 615-0332
Email: lcampbell@stlouiscountymo.gov

Let us know how we are doing at:

<http://www.stlouiscountypolice.com/who-we-are/crime-laboratory/crime-laboratory-satisfaction-survey/>