



The Rhode Island State Crime Laboratory (RISCL) aims to provide our customers with scientific results and administrative services in a reasonable time frame. This document is designed to make submitting evidence to the RISCL easier, safer, and more efficient. It is extensive, but additional section-specific guidelines may exist. Should you require additional information, please call the RISCL at 401-874-2893 for assistance.

HOURS OF OPERATION

RISCL hours are from 8:30 a.m. to 4:30 p.m., Monday through Friday.
Evidence submission hours are **BY APPOINTMENT ONLY**. Contact RISCL for your specific submission needs.

RISCL LOCATION

Fogarty Hall, Campus Avenue Entrance
41 Lower College Road
Kingston, RI 02881-1966
<http://web.uri.edu/riscl/>

Main Telephone: 401-874-2893 FAX: 401-874-4868
Director: 401-874-5056
Latent Print Section: 401-874-2922
Trace Analysis Section: 401-874-4114
Firearms/Toolmarks Section: 401-874-5436
Evidence Receiving: 401-874-5227

SERVICES PERFORMED BY THE RISCL

RISCL offers a range of scientific services for all appropriate agencies investigating evidence related to federal, state, or local crimes. Services offered may change from time to time depending on the availability of scientific expertise.

Automated Fingerprint Identification System	Footwear Impressions	Paints and Coatings
Distance Determination	Physical Fit	Adhesive Tapes
Touch DNA Swabbing	Primer Gunshot Residue	Serial Number Restoration
Fibers	Hair Screening and Comparisons	Test Fires
Firearms	Latent Prints	Toolmarks
Fire Debris	National Integrated allistic Network (NIBIN)	



Table of Contents

Evidence Submissions	3
Right of Refusal	3
Evidence Delivery Methods	3
Documents Required when Submitting Evidence	4
Case Documentation and Prelog Web Portal.....	4
Service Requests.....	4
Reporting Results	4
The Return of Evidence	5
Packaging, Sealing, and Labeling Evidence.....	5
Safety Considerations for Submission of Evidence	6
Biohazards	6
Warning Labels.....	6
Hazardous Chemicals	6
Syringes	6
Loaded Firearms	6
Submitting Evidence to the Firearms Division	7
Submitting Evidence to the Latent Print Division	11
Submitting Evidence to the Trace Evidence Division	14
Quality Control Check for Fire Debris Collection	19



Evidence Submissions

All exhibit submissions must be connected to an official investigation. No evidence will be analyzed for private individuals or corporations.

There are two methods of submission: in person and by mail/common carrier. Currently, the RISCL does not accept evidence submitted by email.

Whichever method is used, the officer/submitting agency must take care to ensure that the evidence will not be lost, damaged, or contaminated and that the chain of custody is always maintained. It is equally important to recognize and observe that proper safety precautions have been always used not only in the collection of evidence but also when submitting evidence to the RISCL.

Right of Refusal

All evidence being submitted to the Rhode Island State Crime Laboratory that is known to contain or has contained drug related evidence must adhere to the following:

- No unknown drug related evidence will be accepted. All drug related Evidence must first be tested for its components prior to the lab accepting the evidence.
- All drug-related evidence must be removed prior to evidence being submitted to RISCL, and evidence submission personnel *must* be notified by the submitting agency/officer that the evidence being submitted at one time contained drug-related evidence.
- If the drug-related evidence cannot be removed prior to submission, a decision will be made by the Director whether we will accept the delivery of the evidence. In this case, prior arrangements *must* be made with RISCL for delivery, and the item must be clearly marked as a "Possible Contamination."

Evidence Delivery Methods

In Person

Evidence submission hours are currently by appointment only. Please contact RISCL for instructions on scheduling an appointment.

Mailing/Common Carrier

All submissions by mail/common carrier must follow the general requirements for submitting Evidence to the RISCL. It is strongly recommended that any evidence sent via mail/common carrier be sent by tracking with a return receipt.

Note: The U.S. Post Office will not transport human remains or body parts. Evidence, with some exceptions, may be sent by common carrier to the RISCL. Commercial carriers have additional regulations and must be consulted regarding their individual requirements.



Documents Required when Submitting Evidence

Case Documentation and Prelog Web Portal

The submitting agency is responsible for completing a Prelog Evidence Submission Form prior to submitting evidence to the RISCL through the Prelog web portal. The Prelog User Guide describes the general requirements for submitting evidence to the laboratory. See Appendix A for Prelog User Guide Instructions.

The Prelog web portal provides a means for law enforcement personnel in Rhode Island to record or "log" evidence into the web-based portal prior to delivery to the crime laboratory. The Prelog process benefits the laboratory and the law enforcement agency by streamlining our services. Additionally,

- All submissions of exhibits must be connected to an official investigation.
- No evidence will be analyzed for private individuals or corporations.
- Currently, the RISCL does not accept any evidence submitted by email.
- The officer/submitting agency must ensure that the evidence will not be lost, damaged, or contaminated, and the chain of custody must be maintained.
- Observe that proper safety precautions have been always used.

Review this manual and Appendix A: the Prelog User Guide for all instructions before use. If you need any assistance with Prelog or to obtain a username and password, contact Amy Duhaime at 401-874-4114 or asduhaime@uri.edu.

If you have any questions regarding laboratory submissions, please call 401-874-5227.

Service Requests

All evidence submitted for scientific analysis must have a service requested in writing on the RISCL Prelog Evidence Examination Request. Some evidence requires only one service (e.g. NIBIN entry); however, other evidence may require more than one type of scientific analysis. It is important that all services required for a complete analysis be requested by the submitting agency to ensure that the evidence is submitted for the appropriate analyses in the proper sequence. Coordination of these service requests by the RISCL is necessary to prevent damage or loss of evidentiary value. Unless otherwise noted in the report, all analyses of evidence will take place at the RISCL.

Reporting Results

The results of scientific testing are provided through the RISCL Official Reports. The reports are signed by the analyst(s) performing the examination(s). RISCL Official Reports are not official unless signed. A separate report will be issued for each service under the same RISCL case

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number if multiple services are requested.

The reports generated by the RISCL are considered "simplified" reports. These reports contain a general description of the evidence, a simple description of the methods used for analysis, results and conclusions. The conclusions section includes the opinions and interpretations of the analyst.

The simplified reports do not include the following information. However, this information is available in the analyst's notes (where applicable) and is available upon request.

1. The specific date(s) that each step of the analysis was performed.
2. Reference to the sampling plan and/or sampling method used, if applicable
3. Additions, deviations, and exclusions to the methods used
4. Information of specific test conditions, if applicable

The customer's signature on the Evidence Submission Report indicates their agreement to receive a simplified report.

The Return of Evidence

In most cases, evidence will be only temporarily stored in the RISCL system until all services have been completed. Upon completion, evidence will be returned to the submitting agency. Appointments are required for evidence pick-up.

A submitting agency may elect to have evidence "destroyed" instead of returned (Firearms evidence is not eligible for destruction). The destruction option is available by written authority only. The submitting agency must return, to the RISCL, a signed and dated *Permission to Destroy Evidence Form*. Forms are available upon request. Evidence will be destroyed by the RISCL upon receipt of proper documentation.

Packaging, Sealing, and Labeling Evidence

Packaging: All evidence should be packaged in a suitable container which prevents loss, damage, and contamination to the evidence, as well as minimizes potential safety hazards to employees. Evidence with suspected biological material should be packaged in paper. Wet items should be dried before packaging, except for fire debris evidence. Large or bulky items that cannot be easily packaged (e.g. car doors) may be submitted without packaging, although an effort should be made to protect any areas of interest.

Sealing: All evidence must be sealed when submitted to the RISCL. A proper seal should extend across the opening of the package to prevent loss or contamination of evidence. Tamper proof tape or heat seals are recommended. Staples are not an acceptable means of sealing an item. It is strongly recommended that the seals be marked with the initials of the person sealing the

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evidence (or by some other distinguishing mark, such as a badge number) and dated. Unsealed evidence will not be accepted and will be returned to the submitting officer.

Labeling: All items of evidence must be labeled with the agency name, agency case number and an item identification number/letter at a minimum. It is recommended that the label also include the agency name, description of the item, and the location, date, and time of collection.

Note: Keep the Prelog evidence submission form and other paperwork separate from the evidence. Do not seal it inside the packaging.

Safety Considerations for Submission of Evidence

Biohazards

All biohazards must be packaged in a leak-proof container if necessary, that will contain all contents and prevent leakage during handling, storage, and transport. All items contaminated with blood should be air dried prior to packaging, with the exception of evidence being submitted for fire debris analysis.



Warning Labels

- Warning labels are recommended. Note any warning on the package. Example:
- Warning: Biohazard
- Warning: Hepatitis or HIV Positive
- Warning: Glass
- Warning: Sharp

Hazardous Chemicals

Flammable and other hazardous chemical materials must be delivered in person and must be in a leak-proof container that will contain all contents and prevent leakage during handling, storage, and transport.

Syringes

Syringes may be valuable pieces of evidence in some cases. Therefore, in life threatening situations, they are accepted by the RISCL for analysis. However, for safety reasons, syringes must be submitted with the needles removed. Removal of the needle is the responsibility of the submitting agency/officer.

Loaded Firearms

Refer to Submitting Evidence to the Firearms Division.



Submitting Evidence to the Firearms Division

The Firearms Section is dedicated to providing reliable scientific support to all law enforcement personnel. Services are provided at both the investigation and trial preparation stages of criminal cases involving the use of a firearm or other tool.

The firearms section is a versatile, well-equipped unit offering several services that can be useful to investigators. The section may be able to determine the following:

- The type of firearm that discharged a projectile or cartridge case.
- Whether a projectile was or could have been fired from a suspected firearm.
- Whether a discharged cartridge case was, or could have been discharged, in a suspected firearm.
- Whether a tool found in a suspect's possession was, or could have been, used to cut, scrape, pry, or pinch evidence material seized from a crime scene.
- The original serial number of a firearm or other metal object after the number has been obliterated.
- If gunpowder is present on a victim's clothing or other evidence.
- The distance from the muzzle of the firearm to the target at the time the firearm was fired.*** Though RISCL may complete the test, distance determination is not included in the laboratory's scope of accreditation.
- Firearms submitted in criminal cases will be test-fired, and the cartridge cases from those firearms will be entered into the NIBIN system.

****Muzzle-to-target distance tests cannot be done without the firearm that was involved in the shooting. Note: It cannot be determined "how long" it has been since a firearm was fired.*

Analysts in the Firearms Section may conduct other testing that is of special interest to an investigator. Such requests may be made during evidence submission or by phone.

Collection and Submission of Evidence

The following are general requirements for officers and other law enforcement personnel to collect and submit evidence to the Firearms Section. As in all cases, common sense should be used to protect the integrity of evidence and ensure the safety of those who will handle it.

Firearms

Firearms should be collected carefully so that no firearm parts are damaged. Officers should ensure that nothing comes in contact with either the inside of the barrel or the breech face, which is where the head of the cartridge rests before firing. If a firearm(s) in question is to be examined for fingerprints or swabbed for DNA samples, it should be carefully handled and not touched by the evidence officer. Firearms to be swabbed for DNA samples should not be test-fired prior to submission to the laboratory. Assume that all firearms are biological hazards; use gloves when handling firearms.

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Firearms Recovered from Water

Firearms removed from fresh or salt water should be sprayed heavily with WD-40 or other lubricant and taken to the Firearms Section as soon as possible. The firearm, removed from the water, must be oiled, ensuring that the inside of the barrel is sprayed or filled with oil. The procedure may slow the oxidation process. The slightest bit of rust on the inside of the barrel may alter the individual characteristics necessary to make an identification. Heavily bloodstained firearms should be labeled with a biohazard label. Note: Do not use plastic bags.

Protecting the Firearm from Damage

Do not insert foreign objects into any part of the firearm such as the barrel or ejection port. Do not dry fire or work the action of any firearm that is to be submitted to the crime lab. In the event the firearm will be dusted for fingerprints or fumed, block both ends of the barrel gently with tape. This will prevent residue from building up inside the barrel.

In cases involving revolvers, the chamber containing the last discharged cartridge case should be marked on either side before removing it. The discharged cartridge case should be packaged separately. All other cartridge cases that were discharged should be numbered in the order of the discharge. These discharged cartridge cases may be removed and packaged separately.

Loaded Firearms

Loaded firearms will not be accepted at the RISCL unless:

- It cannot be determined whether a firearm is loaded or unloaded.
- The firearm is jammed or otherwise cannot be unloaded safely.

Note: It is imperative that the firearm not be disturbed prior to RISCL examination.

Only firearms analysts may accept loaded firearms at the RISCL.

To submit a loaded firearm:

- 1) The firearms section must be contacted prior to submission, and the circumstances must be explained 401-874-5436.
- 2) A date and time for delivery must be arranged directly with the firearms section.

Projectiles, Discharged Cartridge Cases, and Cartridges

When projectiles and discharged cartridge cases are submitted for analysis, they must be described and entered separately. Therefore, projectiles and discharged cartridge cases should be individually packaged in their own envelope or other small container.

- Do not mark or engrave any surface on a projectile or discharged cartridge case, as this may damage individual characteristics. If evidence must be marked, mark the container.
- Do not let any metal object, such as forceps, knives, or screwdrivers, come into contact with a projectile. Metal objects may scratch the surface and alter the markings used for identification.

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- Be sure to collect any wads or pellets in cases involving a shotgun. Many times a wad can be compared to the barrel of a shotgun, especially if it has a sawed-off barrel.
- For any projectiles collected from autopsy which are heavily soiled with blood and/or tissue, please request that the Medical Examiner gently clean the projectile to remove as much material as possible. Rinse with water to remove obvious blood and tissue and then soak in either an alcohol or bleach solution for a few minutes. Allow to air dry before packaging. This procedure will not affect the striations on the projectiles. If the projectile is to be examined for trace evidence, DO NOT clean the projectile prior to submission.

Clothing

Clothing submitted to the Firearms Section to be checked for gunpowder should be packaged separately in a paper bag or box. Do not package wet or bloody clothes until they have air-dried. Wet clothes will mold, making them difficult to examine. Only the outermost layer of clothing needs to be submitted. When performing muzzle-to-target distance determinations, the firearm identified as being used in the shooting must also be submitted. If no firearm has been seized, the examination will be limited to a search for gunpowder or a gunpowder pattern.

Automobiles

If a firearms analyst is necessary to examine a car or other vehicle associated with a gunshot(s), the requesting agency should secure the vehicle at an indoor location, if possible. The Director of the RISCL will then be contacted and a request made for the vehicle's examination. Examination of glass fractures can be critical; therefore, all precautions should be taken not to further fracture any glass on the vehicle.

Integrated Ballistic Identification System (IBIS)/ National Integrated Ballistic Information Network (NIBIN)

The Integrated Ballistic Identification System (IBIS) is a computerized image analysis system that allows firearm technicians to acquire, digitize, and compare markings made by a firearm on expended cartridge cases. The National Integrated Ballistic Information Network (NIBIN) is a database network that enables law enforcement agencies to discover possible links between crimes. Firearm evidence images from discharged cartridge cases and test-fired cartridge cases can be acquired and entered into the ATF-maintained database. Test-fired cartridge case entries are correlated with previously entered images of discharged cartridge cases. Discharged cartridge case entries are correlated with previously entered images of other discharged cartridge cases and test-fired cartridge cases. The IBIS system applies an algorithm and assigns a score/number to associated images. A lead is generated when two cartridge cases viewed side-by-side exhibit similar markings to warrant further microscopic examination. For cases with an incident date prior to 09/14/21, the RISCL analyst will review the correlations. For cases with an incident date on or after 09/14/21, the NIBIN National Correlation and Training Center (NNCTC) will review the correlations. The submitter will be notified if a lead is identified. A NIBIN lead is intended for investigative purposes only.

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Upon request, a NIBIN lead can be microscopically compared by a Firearms Examiner to verify that the discharged cartridge case(s) or test-fired cartridge case(s) were discharged from the same firearm. A NIBIN lead that has been microscopically confirmed is called a NIBIN hit.

All NIBIN entries are initially searched in an ATF database. The RISCL routine regional search includes participating New England laboratories, certain Federal laboratories and other sites as requested. Additionally, upon request, RISCL can manually search additional geographical areas or nationally.

Tool Mark Comparisons

The Firearms Section can receive tools suspected of being associated with a crime scene. The officer must take great care to protect the marking surfaces on the tool. Suspect tools should never be placed into unknown tool mark impressions to see if they "fit." If the entire tool cannot be wrapped, the marking surface of the tool should be protected using whatever materials are available to the officer. Materials at the crime scene displaying unknown tool mark impressions should be photographed and then carefully removed from the scene so that the toolmark impressions are not compromised. If the item bearing the tool mark impression cannot be removed, the unknown impression can be photographed and cast. Note: a full tool mark comparison cannot be conducted on photographs. Each item should be packaged separately and submitted to the RISCL.

Future testing

During analysis, items of evidence may be created or collected which may be used for future testing. In the firearms and tool mark section, this includes test fires, casts and trace evidence. Test fires, casts, and trace evidence will be returned to the submitting agency.



Submitting Evidence to the Latent Print Division

Latent Prints are among the most valuable and common types of physical evidence. All objects at the crime scene should be considered sources of latent prints that may lead to the offender's identification. By examining the evidence submitted, the RISCL may be able to:

- Determine the presence of latent prints of value
- Determine if the latent prints are identifiable
- Compare and identify latent prints with the known exemplar prints of suspects and with others for eliminating purposes
- Establish the identity of unknown persons
- Identify the latent print via the Automated Fingerprint Identification System (AFIS)

Collection and Submission of Evidence

Evidence should be submitted for examination as soon as possible after its recovery. Gloves should be used to pick up items of evidence, careful not to wipe possible latent prints off the surface. Never wrap nonporous items in cotton or cloth – they damage or destroy the latent impressions.

Identify all evidence, indicating if it is an original article, a lift, a photograph, a photographic negative, or a digital image. It is strongly recommended that all photographic and digital images include a scale. Photographs and digital images without a scale will be evaluated by the latent print analyst on a case-by-case basis and may not be acceptable for further analysis.

The only exception to multiple items for analysis sealed in one package is when paper specimens containing latent prints, such as lifters, may be placed in a single container for transmittal. The following may protect these: place them in manila envelopes or plastic folders, put them between stiff cardboard, or wrap them in a box. Large articles containing latent prints should be secured with string or wire to a rigid surface to prevent shifting and contacting other items.

Exposure to water or dampness does not necessarily destroy all latent prints. Any wet or damp object must be air-dried before it is packaged for transport.

Items of evidence that are to be examined for latent prints should be submitted to the Latent Prints Section, before submitting to any other section(s) except the Trace Evidence Section.

If items have been processed prior to submission to the RISCL, package those items to prevent smudging of the latent prints or possible breakage. When using the Prelog Web Portal, a notation should be made indicating which items have been processed prior to submission and which processing methods were used. In addition, a notation should be placed on the evidence packages(s) indicating prior processing.



Submission of Latent Prints for Comparison

The latent print(s) submission may include the original, a lift, a photograph, a photographic negative, or a digital image. Photography shall include traditional film or digital technology. For digital images, a minimum resolution of 1000 pixels per inch (PPI) is strongly recommended when calibrated to actual size (1:1). Digital images of less than 1000ppi will be evaluated by the latent print analyst on a case-by-case basis and may not be acceptable for further analysis. It is recommended that the item of evidence from which the latent print(s) was obtained also be submitted to the RISCL.

Submission of Known Exemplar Prints for Comparison

Treat all known exemplar print cards as evidence: seal, package, and label as evidence. Known exemplar prints for comparison with latent prints may be submitted with the evidence. Photocopies of prints may be submitted, but originals are preferred. If known exemplar prints are not available, the investigator may name the person(s) for comparison, and an effort will be made to locate the prints in the R.I. Attorney General's Office BCI files. All descriptive data available about the individual should be listed.

Often, latent prints found at the scene of a crime involve areas of the palms, second and third joints of the fingers, and the finger sides and tips. For this reason, the investigator should take complete major case prints of all the ridges on the hands of subjects and persons known to have legitimately handled the evidence (elimination prints) to permit comparisons. Palm prints should always include prints of the lower finger joints and an extra print of the outer edge of the palm.

Identifying the Deceased

Complete major case prints and footprints of deceased subjects should routinely be taken for potential investigative purposes. To identify a deceased subject, known exemplar fingerprints and palm prints should be taken for comparison purposes. If legible prints cannot be obtained, please contact the Latent Prints Section for further instructions.

Automated Fingerprint Identification System (AFIS)

The Automated Fingerprint Identification System (AFIS) is a computerized system capable of reading, matching, and storing fingerprints and palm prints for every criminal justice agency in Rhode Island. AFIS-quality latent prints are entered into the AFIS to search for possible matches against the state-maintained database of known exemplar print records. By examining the evidence submitted, the RISCL may be able to determine the presence of AFIS-quality prints on the evidence, photographs, latent lifts, and/or negatives for possible AFIS search. If an identification is not made due to the local State of Rhode Island latent fingerprint database search, a second search is done at the Federal level.

Unidentified Latent Prints

Entry of unidentified latent prints into the AFIS Unsolved Latent Print Database will be determined by the quality of the submitted latent print(s) and at the examiner's discretion. The RISCL Official Report will notify the submitting agency if an identification is made.

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Unidentified latent prints of good quality entered into the Unsolved Latent Print Database will be compared daily to new print records being added to the main print database.

Future testing

During analysis, evidence may be created or collected that may be used for future testing. The latent print section includes digital images and lifts of latent prints. These items are maintained at the RISCL.



Submitting Evidence to the Trace Evidence Division

Trace evidence examinations encompass a wide variety of evidence types, including trace (transfer) evidence, fractured materials (physical fits), and impression evidence.

Trace (Transfer) Evidence

Examination of questioned and known materials can determine whether samples could (or could not) have a similar source of origin. This category of evidence includes materials that are often microscopic in nature and are readily exchanged between people, places and objects upon contact. Examples of this type of evidence include hair, fiber, paint, and plastic.

Fractured Materials (Physical Fits)

It is possible to examine any broken, torn, or cut item to determine whether it was once a single, intact item. This type of examination can determine if evidence originated from one particular source.

Impression Evidence

In many instances, footwear impressions can be identified as having been made by a specific shoe.

Collection and Submission of Evidence

The following are general requirements for officers and other law enforcement personnel to collect and submit evidence to the Trace Evidence Section.

General Trace (Transfer) Evidence

Trace evidence may not be visible to the naked eye; therefore, special care must be taken to preserve and prevent loss or contamination. Whenever possible, submit the entire item suspected of bearing trace evidence. The RISCL must collect all trace evidence before items are processed for other types of evidence.

- Enclose **small items** (e.g., hairs, fibers, or paint scrapings) in sealed paper folds, Post-its, or other appropriate packaging material. Then, enclose the paper fold or Post-it in a sealed outer container such as an envelope or plastic bag.
- Do not put clothing, damp items, or items bearing biological evidence in plastic bags. **If wet or damp, each piece of evidence must be dried and packaged separately in a paper bag, envelope, or box.**
- Clothing and bed linens from suspect and victim must be handled and packaged separately to avoid cross-contamination.

Paint and Coating Evidence

Examination of paint in the laboratory may reveal the following information:

- The color of a hit-and-run vehicle and information concerning the vehicle's year, make, and model.
- Whether a paint fragment originated from a particular source (physical fit).

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- Whether paint samples could (or could not) have a similar source of origin (comparison of known and questioned samples).

Hit-and-Run Paint-Evidence

Note: Time is critical in hit-and-run cases requiring investigative lead information. Please submit evidence from hit-and-run victims as soon as practical.

Vehicles or other modes of transportation that may have been involved in a hit-and-run have the potential to collect paint smears. Submit the painted surface in its entirety or remove a small portion of the item for submission.

- Collect the unknown paint sample by cutting or carving the item with a new and clean scalpel or razor blade.

Hit and Run Scene Evidence

There is a potential to physically fit paint chips left at the scene back into a suspect's vehicle. If this potential exists, no paint should be removed from any damaged vehicle areas. Submit the questioned paint chips and the vehicle (or vehicle part removed) to the laboratory for a physical fit analysis.

Paint Database Query for Unknown Paint Samples

The International Forensic Automotive Paint Data Query (PDQ) database is a searchable chemical and color information database of original automotive paints. Unknown paint samples collected at a scene may be submitted to the RISCL, and a request may be made for information regarding the possible make, model, year, and assembly plant for the unknown paint sample. The unknown paint samples are most often collected in paper folds and then packaged in a sealed envelope. Road sweepings may also be collected at the crime scene and placed into a sealed metal can.

Collection of Exemplar Paint Samples

A paint standard is an exemplar sample of the undamaged paint collected as close as possible to each damaged area. Paint may vary in type or composition in different locations on a vehicle or item, even though the color appears the same. Therefore, it is important that exemplar paint samples be collected near **each area** of damage. The exemplar sample should contain all layers of paint down to the metal or bumper substrate. Each exemplar sample should be collected in a paper fold and then packaged into a sealed envelope.

- Collect the exemplar paint samples by chipping or carving the item with a new and clean scalpel or razor blade.

Paint Evidence on Clothing

Clothing should be handled as little as possible. Do not attempt to remove paint from clothing. Wet or damp clothing must be air-dried on clean butcher paper, careful not to lose microscopic evidence. Package clothing and the paper it was dried on in a sealed paper bag.



Paint on Tools and Other Objects

Package the end of the tool containing the trace evidence in a plastic or paper bag and seal it to prevent loss. Submit the entire item for analysis.

Plastic and Polymer Evidence

Submission of plastic and polymer evidence may include vehicular car parts, adhesive tapes, and miscellaneous items.

Vehicle car parts bearing numbers or markings recovered from hit-and-run scenes may be submitted to the laboratory for examination.

Adhesive tape evidence may be submitted to the laboratory for a tape comparison. Care should be taken when collecting adhesive tape samples to ensure that the tape does not become entangled or "wadded up." It is suggested that the tape evidence be placed into an opened plastic bag and then the plastic bag be placed into a sealed envelope. If the tape must be cut prior to submission, the investigator must indicate which ends were cut.

Fractured Materials (Physical Fits)

It is possible to examine any broken, torn, cut, or separated items to determine whether or not they were once a single, intact item. Pieces collected from **different locations must be packaged separately**, taking care to avoid any further damage to the fractured surfaces.

Fiber Evidence

Clothing/Bedding: Clothing, bedding, and other fabric material submitted to the RISCL must be packaged separately in an appropriately sealed paper bag or box. Do not handle the victim and suspect's clothing in the same room. They should not be allowed to come in contact with each other at any time.

Any wet or damp items need to be air-dried prior to submission and placed in an appropriate sealed paper bag or box.

Transferred Fibers: Fibers transferred to an item may be collected with tape lifts or Post-its or picked off with clean forceps and placed into a paper fold. The tape lifts, Post-its, or paper folds must be put into an appropriately sealed envelope.

Hair Evidence

Unknown and known hairs may be submitted to the RISCL for analysis. Additionally, items such as, but not limited to, bedding and clothing may be examined for unknown hairs. However, if bedding or clothing needs to be examined for biological material and/or stains, it should be submitted to the Forensic Biology Laboratory first.

Clothing, bedding, and other fabric material submitted to the RISCL must be packaged separately in an appropriately sealed paper bag or box. Do not handle the victim and suspect's clothing in the same room. At no time should they be allowed to come in contact with each other.



Any wet or damp items need to be air-dried before submission and placed in an appropriate sealed paper bag or box.

Unknown hairs that have been transferred to an item may be collected with tape lifts or Post-its or picked off with a clean forceps and placed into a paper fold. The tape lifts, Post-its, or paper folds must be placed into an appropriate sealed envelope.

Microscopic Hair Comparison: Only the head and pubic hairs will be examined when requesting a hair comparison. A minimum of fifty (50) exemplar-pulled head hairs, and twenty-five (25) pulled pubic hairs must be taken for a full hair comparison. Ten exemplar head hair samples need to be pulled from five (5) regions (front, top, back, left side, and right side) of the head. These samples should be collected and packaged separately in a paper fold and sealed in an appropriate envelope. **Note:** Microscopic hair comparison is not a positive means of identification.

Hair Screening: Instead of a full microscopic hair comparison, unknown hairs may be screened for suitability for DNA analysis.

Biological Evidence/Touch DNA

Swabbing for Touch DNA: Evidence may be submitted to the RISCL for swabbing of possible Touch DNA. Requests for Touch DNA swabbing must be made at the time of submission. The evidence being submitted for Touch DNA swabbing must be packaged appropriately. If the item is to be processed by the Latent Print and/or Firearms section, it must be evaluated by the Trace Evidence section first to determine the proper order of analyses. All firearms should be swabbed for Touch DNA before test firing.

Impression Evidence

Two-Dimensional Impression Evidence: Exam-quality photographs must be taken for comparison purposes before removing the impression evidence from the scene. The following photography practices are recommended for exam-quality photos:

- The camera needs to be set at an F-stop of F8 or higher and in Aperture Priority Mode.
- The camera needs to be placed on a tripod.
- The camera and tripod need to be parallel and perpendicular to the unknown impression.
- A scale **MUST** be placed at the same depth as the unknown impression. A full comparison may not be conducted if the scale is incorrectly positioned with the unknown impression.
- The images must be taken in RAW, TIFF, or High Resolution JPEG format.
- The image should be a close-up image, and the unknown impression should fill the frame of the camera.
- Please submit all impression images.

If the impression evidence can be removed from the scene, protect it from possible damage before submitting it to the laboratory. If the two-dimensional impression cannot be removed

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from the scene, it can be lifted with a gel lift. The gel lift should be kept in a flat container and packaged in an appropriate sealed envelope.

Special Considerations:

- Once the cover of the gel lift is placed on the impression, **DO NOT REMOVE THE COVER.**

Three-Dimensional Impression Evidence: Before removing the impression evidence from the scene, exam-quality photographs must be taken for possible comparison purposes. Follow the photography practices described for two-dimensional impressions for exam-quality photos.

A three-dimensional impression can be collected with a casting material such as Dental Stone. After the cast has been removed and air dried, place it in an appropriate sealed box to prevent it from breaking.

Special Considerations:

- Do not attempt to wash the cast. Submit the cast to the laboratory as is.
- Impressions in snow should be sprayed with protective wax material before casting. The wax protects the impression from the heat generated during the curing of the impression material.

Fire Debris Evidence

All fire debris evidence should be collected and submitted in appropriate sealed vapor-tight containers, such as unused lined metal cans with friction-fit lids.

Special Considerations:

- The fire debris evidence containers should only be filled three-quarters full. The space at the top of the can is necessary for proper analysis.
- The outside of the fire debris containers should be kept clean and dry to reduce corrosion of the cans. It is possible for corrosion on the metal container to damage the container, resulting in contamination and or evaporation of the evidence.
- Liquid samples should be submitted by placing 2-4 drops on sterile gauze or sterile paper towels and sealed in an unused lined metal can.
- Fire debris samples containing soil should be refrigerated as soon as possible to prevent bacterial degradation of petroleum products. These samples should be identified at the time of submission to the laboratory so they can be properly stored.
- The RISCL does not routinely screen for alcohol. If alcohol is suspected, a request for analysis must be made upon submission of evidence.
- The RISCL offers a quality control check of lined metal cans used for fire debris evidence. Please call the laboratory for further information.

Gunshot Residue Evidence

Particles characteristic of primer gunshot residue may be detected on the hands, clothing, and/or
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face of a person suspected of discharging a firearm. The primer gunshot residue samples should be collected using adhesive stubs found in gunshot residue kits. After collection, the kits should be sealed appropriately and submitted to the RISCL.

Special Considerations:

- Primer residue is very fragile and easily displaced. The samples are strongly recommended to be collected within four (4) hours of the shooting.
- Do not allow suspects to wash their hands before collection.
- If primer gunshot residue samples collected from an individual's hands and clothing items from the same individual are submitted, the samples collected from the hands will be processed first. If particles characteristic of primer gunshot residue are confirmed, the items of clothing will not be analyzed unless specifically requested.

Future testing

During analysis, items of evidence may be created or collected, which may be used for future testing. For trace evidence, fire debris extracts, exemplar test impressions, lifts/casts of unknown impressions, digital images, microscope slides, and trace evidence are included. Digital images, fire debris extracts, and microscope slides are typically maintained at the RISCL but may be returned to the submitted agency. All other evidence will be returned to the submitting agency.

Quality Control Check for Fire Debris Collection

RISCL offers a quality control check of metal cans and vapor-tight bags designed to collect fire debris, such as Kapak brand bags. Agencies may submit a select number of cans/bags from each lot purchased to check for potential contamination. RISCL will process the items in the same way that evidence in a regular case is processed and a report will be generated. Any contamination detected will be reported, as well as a recommendation as to whether the lot is appropriate for evidence collection. If the submitted items are shown to be free from contamination, the entire lot is deemed suitable for evidence collection. For items which show evidence of contamination, a recommendation will be made for remediation.

Should you require additional information or guidance, please call the RISCL at 401-874-2893 for assistance.