The goal of the Rhode Island State Crime Laboratory (RISCL) is to provide our customers with scientific results and administrative services in a useful time frame. This handout is designed to make the process of submitting evidence to the RISCL easier, safer, and more efficient. This handout 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, at this time, are Monday, Tuesday, Thursday and Friday from 8:30 a.m. to 1:30 p.m. but may be expanded upon request. Please call the RISCL for your specific submission needs.

RISCL LOCATION

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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

SERVICES

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.

SERVICES PERFORMED BY THE RISCL

Automated Fingerprint Identification System  Footwear and Tire Impressions  National Integrated Ballistic Network (NIBIN)
Distance Determination Fracture Matches Paints and Coatings
Fibers  Gunshot Residue Plastics/Polymers
Filaments  Glass Serial Number Restoration
Firearms  Hair Test Fires
Fire Debris  Latent Prints Toolmarks
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Evidence Submissions

All submissions of exhibits should be connected to criminal investigations. No evidence will be analyzed for private individuals or corporations.

There are two methods of submission, in person and by mail. The method selected will depend upon the type and size of the item, the urgency, and the complexity of the case. At this time, the RISCL does not accept any evidence by email submission.

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 maintained at all times. It is equally important to recognize and observe that proper safety precautions have been used at all times 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 have 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 or not we will accept delivery of the evidence. In which 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, at this time, are Monday, Tuesday, Thursday and Friday from 8:30 a.m. to 1:30 p.m. but may be expanded upon request. Please call the RISCL for your specific submission needs.

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

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

RISCL Evidence Examination Request (or equivalent) is required each time evidence is submitted to the RISCL. The submitting agency is responsible for filling out the information on the request prior to submitting evidence to the RISCL. Evidence Examination Request form should contain the following information:

- Case Type/Offense
- Submitting Agency (Name)
- Case Officer
- Submitting Agency Case Number
- Incident Location
- Incident Date
- Suspect and/or victim name(s) if available
- Agency Evidence Item number(s)
- Evidence description
- Service(s) requested

A copy of the Offense, Arrest, or Incident Report must be provided on all cases. Duplicate reports are not necessary on the same case. Refusal to submit an offense, arrest, or incident report by the submitting agency will be documented and handled on a case by case basis.

Service Requests

All evidence submitted for scientific analysis must have a service requested in writing on the RISCL Evidence Examination Request or equivalent. 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. 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 analysis 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 number if multiple services were 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 are available upon request.

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

By submitting evidence to the RISCL, the customer is agreeing to continue 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. The submitting agency may be contacted by telephone or U.S. Mail to retrieve evidence. To expedite evidence pick-up, please call ahead.

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 (OPS FORM 4). 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 or damage 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 prior to packaging, with the exception of 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 evidence (or by some other distinguishing mark such as a badge number). It is also strongly recommended that the seal be 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 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 RISCL evidence examination request 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 a number of services that can be useful to investigators. The section may be able to determine:

- The type of firearm that a particular projectile or expended cartridge case was fired from.
- Whether a projectile was, or could have been discharged, from a suspected firearm.
- Whether an expended 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 on other evidence that may have been the target of the suspect.
- The distance from the muzzle of the firearm to the target at the time the Firearm was fired.***
- Firearms submitted in criminal cases will be test fired and 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 at the time of evidence submissions or by phone.

Collection and Submission of Evidence

The following are general requirements for officers and other law enforcement personnel for collecting and submitting evidence to the Firearms Section. As in all cases, common sense should be used when attempting to protect the integrity of evidence as well as the insuring the safety of those who will handle the evidence.

Firearms

Firearms should be collected carefully so that no parts of the firearm are damaged. Officers should make sure 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. Assume that all firearms are biological hazards, use gloves when handling firearms.

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 slightest bit of rust to the
inside of the barrel will alter the individual characteristics necessary to make identification. The firearm removed from the water, must be oiled, making sure that the inside of the barrel is sprayed or filled with oil. This will slow the oxidation process. Heavily bloodstained firearms should 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 super glued, block both ends of the barrel gently with tape. This will prevent residue from building up inside of the barrel.

In cases involving revolvers, the chamber containing the last discharged cartridge should be marked on either side before removing the fired cartridge case. The cartridge case should be packaged separately. All other cartridge cases that were discharged should be numbered in the order of the discharge. These 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 explained.
2) A date and time for delivery must be arranged with the firearms section.

**Projectiles, Expended Cartridge Cases and Cartridges**

When projectiles and expended cartridge cases are submitted for analysis, they must be described and entered into evidence separately. Therefore, projectiles and expended 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 expended cartridge case as this may damage individual characteristics. If evidence must be marked, mark the container itself.
- Do not let any metal object such as forceps, knives or screwdrivers come into contact with a projectile. Metal objects will scratch the surface and alter the markings used for identification.
- Be sure to collect any wads or pellets in cases involving a shotgun. Many times a wad can be matched 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.
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 it is necessary to have a firearms analyst examine a car or other vehicle associated with a gunshot or gunshots, the vehicle should be secured at an indoor location, if possible, by the requesting agency. The Director of the RISCL will then be contacted and a request made for examination of the vehicle. 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 highly technical, computerized image analysis system that allows firearm technicians to acquire, digitize, and compare markings made by a firearm on projectiles and expended cartridge cases. The National Integrated Ballistic Information Network (NIBIN) is a network that enables law enforcement agencies to discover links between crime comparing the evidence regionally and with the option to search nationally the growing database of images. Projectiles and expended cartridge cases recovered from victims and crime scenes are imaged into the database and correlations are performed against test fires from confiscated firearms used in the commission of a crime and other evidence cartridge cases from other incidents/crimes. The images from the test fires are compared against the evidence cartridge case database. These images are compared in a few seconds, an impossible task for a firearms analyst using conventional procedures. These images are correlated by the IBIS system and given a score as to a possible match. The firearms analyst makes a final determination of a positive match which then becomes a Hit. RISCL will notify the submitting agency if a Hit occurs. Further investigative and legal actions may be taken at the discretion of the designated law enforcement agency. Note: RISCL currently does not image projectiles.

Toolmark Comparisons
The Firearms Section can receive tools suspected of being associated with a crime scene. Cutting, pinching, prying, and striking tools are all examined by these sections. Great care must be taken by the officer to protect the marking surfaces on the tool. If the entire tool cannot be wrapped, the tool’s marking surface should be protected using whatever materials are available to the officer. Suspect tools should never be placed into unknown toolmarks to see if they “fit”. Materials at the crime scene displaying unknown toolmarks should be photographed and then carefully removed from the scene so that the toolmarks are not disrupted. If the material cannot be removed, the unknown toolmark can be photographed and cast. 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 toolmark section, this includes test fires, casts and trace evidence. Test fires are maintained at the RISCL. 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 scene of the crime should be considered as possible sources of latent prints that may lead to identification of the offender. By examining the evidence submitted, the RISCL may be able to:

- Determine the presence of latent prints
- 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, being 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. These may be protected by either of the following: place them in manila envelopes or plastic folders; put them between stiff cardboard; or wrap them in a box. Secure large articles containing latent prints 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 shipment.

Items of evidence which 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. A notation should be made on the Evidence Examination Request form 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**
Submission of latent print(s) may include original article, a lift, a photograph, a photographic negative, or a digital image. Photography shall include traditional based film or digital technology. For digital images, a minimum resolution of 1000 pixels per inch (PPI) when calibrated to actual size (1:1) is strongly recommended. 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. If at all possible, 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**
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 RI Attorney General’s Office BCI files. All descriptive data available pertaining to the individual should be listed. Treat all known exemplar print cards as evidence, seal, package, and label as evidence.

Often latent prints found at the scene of a crime involve areas of the palms, second and third joint 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, as well as an extra print of the outer edge of the palm.

**Identifying the Deceased**
In order to identify a deceased subject, known exemplar fingerprints and palm prints should be taken for comparison purposes. Complete major case prints along with footprints should routinely be taken of deceased subjects for potential investigative 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 the state of 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 as a result of the local State of Rhode Island latent fingerprint database search, a second search is made at the Federal level. RISCL will notify the submitting agency of the AFIS search results.
Unidentified Latent Prints
Entry of unidentified latent prints into the AFIS Unsolved Latent Print Database will be determined by the quality of the latent print(s) submitted and the particular criminal offense. 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. If identification is made, the RISCL Official Report will notify the submitting agency.

Future testing
During analysis, items of evidence may be created or collected which may be used for future testing. In the latent print section, this 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 that include trace (transfer) evidence, fractured materials (physical matches) and impression evidence (footwear and tire).

Trace (Transfer) Evidence
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, glass, paint and plastic. Examination of questioned and known materials can determine whether samples could (or could not) have a similar source of origin.

Fractured Materials (Physical Matches)
It is possible to examine any broken, torn or cut items to determine whether or not they were at one time a single, intact item. This type of examination can determine if evidence did originate from one particular source.

Impression Evidence
In many instances, footwear and tire impressions can be positively identified as having been made by a specific shoe or tire.

Collection and Submission of Evidence
The following are general requirements for officers and other law enforcement personnel for collecting and submitting 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 it and prevent loss or contamination. Whenever possible, submit the entire item suspected of bearing trace evidence. All trace evidence must be collected by the RISCL before items are processed for other types of evidence.

- Enclose small items (e.g. hairs, fibers, paint scrapings or glass fragments) in sealed paper folds, gel-lifts or other appropriate packaging material. Enclose the paper fold or gel-lift 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. *Each piece of evidence must be 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. Some trace evidence can remain airborne for long periods of time and cross contamination can occur if extreme care is not taken in the handling of these items.

**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 year, make and model of the vehicle.
- Whether a paint fragment originated from a particular source (physical match).
- 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 for the collection of 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 match paint chips left at the scene back to 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 fracture match analysis.

**Paint Database Query for Unknown Paint Samples**
The International Forensic Automotive Paint Data Query (PDQ) database is a searchable database of chemical and color information of original automotive paints. Unknown paint samples collected at a scene may be submitted to the RISCL and a request 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 druggist 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 enough
paint to cover the surface of a nickel and should contain all layers of paint down to the metal surface. Each exemplar sample should be collected in a druggist 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 clothing must be air dried on clean butcher paper being careful not to lose any 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 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 with the collection of 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 Matches)**
It is possible to examine any broken, torn, cut or separated items to determine whether or not they were at one time 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 another other fabric material submitted to the RISCL must be packaged separately in an appropriately sealed paper bag or box. Do not handle victim and suspect’s clothing in the same room. Fibers remain suspended in air for long periods of time can cause cross contamination. At no time allow them to come in contact with each other.

Any items that are wet, need to be air dried prior to submission and placed in an appropriate sealed paper bag or box.
**Transferred Fibers:** Fibers that have been transferred to an item may be collected with tape lifts, gel lifts or may be picked off with a clean forceps and placed into a druggist fold. The tape lifts, gel lifts or druggist folds must be placed into an appropriate sealed envelope.

**Hair Evidence**
When requesting a hair comparison only head and pubic hairs will be examined. A minimum of fifty exemplar pulled head hair samples and twenty pulled pubic hairs need to be taken in order for a full hair comparison to be conducted. 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 druggist fold and sealed in an appropriate envelope.

**Special Considerations:**
- Hair comparison is not a positive means of identification.

**Impression Evidence**

**Two-Dimensional Impression Evidence**
Prior to removal of the impression evidence from the scene, exam quality photographs must be taken for possible comparison purposes. The following photography practices are recommended for exam quality photos:
- Camera needs to be set at an F-stop of F22 or higher and in Aperture Priority Mode.
- 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. If the scale is not placed correctly with the unknown impression, a full comparison may not be conducted.
- 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 images.

If the impression evidence can be removed from the scene, protect the impression from possible damage before submitting it to the laboratory. If the two dimensional impression cannot be removed from the scene, it can be lifted with a gel lift. The gel lift should be kept in a flat and packaged in an appropriate sealed envelope.

**Special Considerations:**
- Do not cover or collect a two dimensional impression with tape. The tape may destroy the impression.
- Once the cover of the gel lift is placed on the impression, DO NOT REMOVE THE COVER.

**Three Dimensional Impression Evidence**
Prior to removal of the impression evidence from the scene, exam quality photographs must be taken for possible comparison purposes. Follow the photography practices as 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 the cast in an appropriate sealed box to ensure it will not get broken.

**Special Considerations:**
- Do not attempt to wash the cast. Submit the cast to the laboratory as is.
- If casting a tire impression, at least eight feet of the tire impression must be casted in order to capture the entire circumference of a tire.
- Impressions that are in snow should be sprayed with a snow wax prior to casting. This is to prevent the casting material from melting the impression.
- Call the laboratory for special instructions on collecting tire exemplars.

**Fire Debris Evidence**
All fire debris evidence should be collected and submitted in appropriate sealed vapor-tight containers such as unused lined metal paint 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 which would result 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 paint 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 alcohols. If an 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**
Primer gunshot residue may be detected on the hands, clothing and/or face of a person suspected of discharging a firearm. The primer gunshot residue 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 it is strongly recommended that the samples are collected within four (4) hours of the shooting.
- Do not allow suspects to wash their hands before collection.
- At this time GSR kits will be not processed unless a request is received in writing from the Attorney General’s office.
Examination of Miscellaneous Materials
This class of materials includes glass, filaments, bank dye packs, fire extinguisher residue, metals, cosmetics and building materials. This list is not all-inclusive, but will include materials that have not been expressly discussed in prior sections. These types of examinations may include identification or classification of the material as well as comparison with suspected sources.

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

Quality Control Check if Submitting Agency’s Supplies
RISCL offers a quality control check of metal cans and vapor tight bags designed for collection of 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.

Since this service is not related to an active case, no incident report is required at submission.

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