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I. Introduction

The **RCSD Evidence and Property Handbook** is a guidebook for the submission of property/evidence for RCSD personnel and those outside agencies requesting forensic services. It is not feasible to address every possible situation. When additional information or guidance is needed, please contact the Evidence and Property (E/P) Section or the Forensic Sciences Laboratory (803-576-3000).

Guidelines may be altered at the direction of the Sheriff or by court order.

RCSD Forensic Sciences Laboratory customers include:

- Law enforcement agencies (local, state and federal)
- Judicial systems
- Medico-legal community
- Other government laboratories
- Regulatory and public service government agencies
- Non-law enforcement security agencies (criminal cases only)

A. Laboratory Location

The RCSD Forensic Sciences Laboratory is located at:

Address: RCSD Forensic Sciences Laboratory
5623 Two Notch Rd.
Columbia, SC 29223
Telephone: 803-576-3000
Fax: 803-576-3190

B. Hours of Operation

Evidence/Property Section-receiving hours are from 7:00 a.m. to 5:00 p.m. EST, Monday through Friday, except official county holidays.

Laboratory hours are from 8:30 a.m. to 5 p.m. EST, Monday through Friday, except official county holidays.

On-Call: Evidence/Property personnel are assigned on a rotational basis to provide assistance outside of normal business hours. Contact the RCSD Desk Sergeant (803-576-3102) or the online call schedule or see the board posted in E/P pre-log area for this service.

For assistance regarding forensic testing services, contact the Desk Sergeant (803-576-3102) or reception (803-576-3000) to be connected to the appropriate technical leader or forensic section. There is an on-call schedule available.
C. Scope of Forensic Services

The RCSD Forensic Sciences Laboratory provides the following services: Crime Scene Investigation, Drug Identification, Firearms and Tool Mark Analysis, Fire Debris Analysis, Latent Prints Analysis, and Serology/DNA Analysis. The laboratory uses test methods, including methods for sampling, that meet the needs of the customer and that are appropriate for the tests conducted. Laboratory personnel select methods that have been: published in international, national, or regional standards; promulgated by respected technical organizations; found in relevant scientific texts, journals or as specified by the manufacturer; validated in-house, in the case where laboratory developed methods are used.

Please note that laboratory personnel reserve the right to: reject for testing those items that do not meet acceptance or testing criteria; conduct testing beyond that requested by the customer; consume items during analysis in cases of limited sample size; conduct alternate testing if the method(s) proposed by the customer is inappropriate or out-of-date.

D. Fees for Forensic Services

A current forensic services fee schedule is available upon request and at www.rcsd.net. Forensic services are free of charge to RCSD personnel and to those agencies with which the RCSD has cases of mutual interest. Requesting agencies must complete the Request for RCSD Forensic Analysis (FMG042) prior to the onset of forensic testing. Copies of this document are available from the E/P Section, laboratory personnel and www.rcsd.net.

E. Request for Forensic Analysis

All evidence requiring forensic analysis must first be submitted to the E/P Section in order to initiate the proper chain of custody documentation.

To the greatest extent possible, all forensic services should be requested at the time of evidence submission to ensure that testing is conducted in the proper manner. Coordination of service requests is necessary to prevent possible damage, loss, or deterioration of evidence. For example, it is important to carefully evaluate any stain with an apparent pattern, such as a bloody fingerprint, prior to any DNA testing.

E/P personnel are responsible for evidence distribution to the appropriate forensic section(s) for testing purposes.

F. Evidence Submission to a Secondary Testing Facility

For evidence submitted to another facility for testing:

- All evidence (except computers and Nibin specimens) is transported to SLED by the E/P Section
- Evidence must have an RCSD case number
- Evidence must be properly packaged, sealed, initialed and dated
• Copies of the RCSD E/P label, RCSD Incident Report and documentation required by the testing facility (i.e. SLED iLAB form), must accompany the evidence when submitted
• Items will be packaged separately per the type of analysis to be performed (e.g. toxicology, trace, etc.)
• When secondary testing by a private laboratory is required, the section technical leader must obtain authorization in writing from the customer prior to testing
• Evidence should be transferred to an authorized representative of the secondary testing agency with proper Chain of Custody (COC) documentation
• COC documentation should also reflect any evidence returned by the secondary testing facility following examination

G. Definitions

Evidence - Physical evidence is any article, material, or substance found in connection with an investigation that helps determine the circumstances of a criminal act. All evidence submitted must be related to criminal and/or coroner case investigations. No evidence will be analyzed for private individuals, corporations or in association with other civil matters.

Found Property - Items that have been found, are the property of an individual, firm, agency, or concern, and are not evidence or contraband.

Asset Seizure – The RCSD may seek civil action against a property owner. If the civil action is upheld, the property is forfeited by the owner to the RCSD. Examples include: vehicles, money, firearms, equipment, commercial and residential buildings, et al.) The Narcotics Unit is required by law to notify the owner(s) of seized property within 10 days of a seizure.

II. General Information

A. RCSD Case Numbers

The RCSD case number received from Communications consists of 10 digits (Example: 0712 3456 18). The first two digits indicate the year. The second two digits indicate the month and the last two digits refer to the day of the month (ex. December 18, 2007). The remaining four digits are a sequential number.

B. Evidence and Property Submission

Evidence and Property are normally received in the E/P intake area via drop boxes, evidence lockers, and refrigerator or by person-to-person transfer from the submitting officer to E/P personnel.
C. Drop Boxes, Evidence Lockers, Refrigerator and Freezer

A drop box (“mail box”), evidence lockers, refrigerator and freezer are located in the E/P pre-log area. Drop Boxes are also available in each region. These serve as secure temporary storage areas that are designed for evidence submission outside of normal business hours and if person-to-person delivery is not needed.

- Use the locker that best accommodates the number of items submitted.
- Do not use a large locker to contain evidence that could otherwise fit into a smaller locker.
- Do not use the drop box for fragile items (glass, liquids).
- Place all items from one case (together) in locker if too large for drop box.
- For new submissions, do not place multiple cases in one locker.

D. Obtaining Supplies for Evidence/Property Submission

Supplies for the proper packaging, sealing, and labeling of evidence/property are available in the E/P pre-log area or from E/P personnel. Supplies include drug field test kits, gun ties, gun boxes, evidence bags, DNA Swab Kits, miscellaneous boxes, paper bags, syringe/razor blade safety containers, biohazard warning labels, and zip lock bags. Gloves, swabs and swab boxes are available from the Captain of each region.

Contact E/P personnel if additional assistance is needed.

E. Evidence and Property Label

The Evidence/Property (E/P) label contains the mandatory information needed for E/P personnel and for the forensic analyst(s)/technicians(s). The E/P label will accompany submitted evidence/property. A copy of the RCSD Incident Report may also be requested by the analyst(s).

General procedures

- Officers should not store evidence in personal desks, lockers, vehicles, homes, or other places that are not secure or would interrupt the chain of custody.
- Item Numbers: E/P personnel will assign item numbers.
- Enter only one item per line on the label. For multiple items, additional labels should be used, numbering the pages accordingly (1 of 3, 2 of 3, etc.).

**EXAMPLES:**

- One wallet with contents (list contents—money, credit cards, etc.)
- Clothing (list articles of clothing—shirt, trousers, shoes, etc.)
Figure 1.
Evidence inventory with only item per line and no item numbers assigned

- The Evidence/Property label should provide the following information:
  - RCSD Case Number
  - Criminal Charge(s)
  - Agency
  - Incident Date
  - Case Agent, S#, Region Telephone #
  - Incident Location, Name of Collector
  - Name of suspect(s) and/or victim(s), DOB, Race, Sex
  - Short description of item(s) contained in package
  - Test Request(s)
  - Submitter’s Name, S# and Telephone #, Date and Time Submitted
  - Manner of Submission (Person-to-Person, Drop Box, Locker, Refrigerator or Freezer)

- Do not write in the bottom area of the E/P label. This area is reserved for E/P personnel.

NOTE: Improperly identified, sealed or packaged evidence and/or evidence submitted without a properly completed E/P label will not be submitted for testing. The submitting officer will be asked to return to the E/P Section to correct any deficiencies.
F. ACISS-Case Management System

ACISS is the agency's electronic case management system. ACISS contains an evidence/property module that is used to facilitate evidence/property transfers from the time of receipt by the E/P Section until final disposition.

All items submitted to the laboratory for examination must first be entered into ACISS.
- Persons submitting evidence will be identified in ACISS.
- Persons receiving evidence will be identified in ACISS.
- A complete copy of the ACISS Property Report may be used for chain of custody purposes.

G. Item Bar-Code Labels

- Items are labeled with a unique bar code. Bar code labels contain the following information: “case number item number” (i.e. 0712345678.1), a bin location, and item description.
- The bar code label is affixed to the item or item container to facilitate electronic evidence transfers and maintain the chain of custody.
  - Bar code labels should not be removed or altered on any item or packaging.
  - Bar code labels should remain unobstructed so as to facilitate evidence transfers.

III. Handling of Evidence and Property

Evidence should be handled in a secure manner that prevents loss, contamination, or degradation.

A. General Packaging and Sealing

- All E/P must be properly identified, packaged and sealed. Large and/or bulky items may require special handling. Contact the E/P Section for assistance.

Refer to the specific types of evidence/property (e.g. DNA, Controlled Substances, Firearms, etc.) as described in other areas of this handbook for additional instructions.

1. Sealing/Packaging Evidence

- Evidence that is not properly packaged, sealed, and initialed will not be accepted.
  - The “right of refusal” will be exercised for improperly submitted evidence.
  - The submitting officer will be contacted to address any discrepancy.
  - Unaddressed discrepancies will be forwarded to the appropriate supervisor.
- All evidence will be sealed upon receipt, while in long term storage, during transfer between laboratory sections, and upon return to the submitting officer/agency.
• The evidence package must be sealed with “tamper evident” evidence tape or with heat-sealing. Sealing includes manufactured seams on envelopes.
• An acceptable seal is one that prevents ready escape of the evidence and will be clearly damaged or altered if broken to permit entry. Acceptable seals include:
  o Original manufacturer’s closures that meet the definition of “acceptable seal” above
  o Heat seals
  o Closures made with tamper-resistant/evident tape (i.e. evidence tape)
  o Certain closures made with adhesives (e.g. gummed envelopes)
  o Any other type of seal that meets the definition above
• Evidence tape must be initialed and dated by the submitter.
• Initials and date should cross the tape onto the package or box. Where a designated area exists on the seal for the initials/date, it is acceptable to use that location.
• For large or bulky items, place a piece of evidence tape across the opening, use zip ties for closure if possible without damaging the item (e.g., suitcase).
• Bottles, jars, and cans must be capped tightly to avoid leakage. Write ‘FRAGILE” on each box. Please do not submit glass unless absolutely necessary.
• Place items in a box and add sufficient packing material to prevent contents from overturning. Seal with packing tape and evidence tape. Initial and date evidence tape across box. Place an arrow (↑) to indicate “This Side Up” on box.
• Attach all documentation to the outside of the sealed evidence container/package so that it may be removed from the package without breaking the integrity seal.
• Opening and Resealing Evidence: Once evidence has been sealed, there is an assumption the evidence is secure. To minimize suspicion of wrongful action, it is important that the same precautions used in initial sealing of the item(s) be followed in any subsequent resealing. When sealed evidence must be opened, the following procedures should apply:
  o Open the evidence package in an attempt to preserve the information on the evidence tape and stamped label. If possible do not break the old seal. A slit cut in another area of the package will preserve the seal.
  o If the packaging is damaged to the extent that it cannot be reused, repackage the material and retain the original packaging material inside the new package, along with the evidence. Seal, initial and date the new package.
  o Make sure sharp objects are properly wrapped for safety before placing in box.
  o Food and beverages are not accepted into evidence except for certain circumstances. Please contact Evidence & Property Section before submission.
Figure 2.
Envelope sealed with evidence tape, initialed and dated

Figure 3.
Evidence tape extends around box seams
B. Handling of Hazardous Materials

The following items are not accepted:

- Gas tanks or gas cylinders
- Flammable liquids
- Fireworks and explosives
- Large amounts of chemicals
- Bank dye packs, unexploded
- Glass jars
- Light bulbs

The guidelines that follow apply to both chemical and biohazard risks, keeping in mind that any combination of protective measures may be needed to address a given situation. Avoiding contamination exposure is a matter of organization, housekeeping, personal hygiene and discipline.

OSHA defines a hazardous chemical as any liquid, solid or gas that could be present as a physical or health hazard to an employee. Examples of hazardous chemicals include cleaning agents, degreasers, flammables, greases, paints, pesticides, aerosols and compressed gases.

Bloodborne pathogens are infectious microorganisms in human blood that can cause disease in humans. These pathogens include, but are not limited to, hepatitis B (HBV), hepatitis C (HCV) and human immunodeficiency virus (HIV). Workers in many occupations, including first responders, housekeeping personnel and laboratory personnel may be at risk of exposure to bloodborne pathogens.

- All liquids are treated as hazardous materials.
- Treat **all** blood and blood-stained objects as sources of bloodborne pathogens when handling biological specimens or stains (Universal Precautions).
- Use personal protective equipment such as safety glasses, gloves, laboratory outerwear (apron, coat).
- Practice good personal hygiene.
- All potentially bio-hazardous materials should be packaged in a manner that retains the contents and prevents leakage during handling, storage, and transport.
- Apply a biohazard-warning label to the outside of the container and packaging.
- Note any warning(s) on outer packaging such as: “Hepatitis B or HIV Positive, Hazardous Chemical, Contains Glass, Sharps, Found in Toilet or Body Cavity”, etc.

[Packaging and marking requirements for biohazard evidence are based upon the OSHA Bloodborne Pathogen Standard, CFR Title 29, 1910.1030 and United States Postal Service Publication 52 - Hazardous, Restricted, and Perishable Mail]

All unexploded dye packs will be treated as “unexploded devices” and will be handled by bomb technicians with the proper PPE and means to transport and detonate them. They are not to be transported in vehicles, brought into the agency or submitted to the E/P...
Section. For the safety of all personnel, forensic processing will not be conducted until they are detonated.

C. Disposal of Biohazardous Waste

A red biohazard waste container is available in the E/P intake area and is to be used for the disposal of soiled latex gloves, clothing (non-evidentiary), paper or other materials contaminated by body fluids. Any item that has been used for cleanup or has been contaminated with biological materials should be disposed of in this container.

A sharps container is available in the E/P pre-log area for disposal of syringes/razor blades that do not meet the criteria for evidence submission.

Do not use the paper trash container for disposal of gloves or any other biohazardous waste. Do not place paper trash in the biohazardous waste container.

Refer to the Richland County Bloodborne Pathogen Exposure Control Plan for additional information.

D. Handling Evidence with the Courts

The following procedures apply whenever evidence is needed for court:

- When evidence is received from E/P personnel, the transfer will be documented in ACISS.
- If a request is made by the court to open packages of evidence containing biological materials, universal precautions shall be taken. All parties should wear proper personal protective equipment (gloves).
- Items returned to the E/P after court procedures will be documented in ACISS.

E. Evidence and Property Storage

Evidence must be stored in a manner that prevents loss, contamination, and degradation and that maintains chain of custody. Evidence drop boxes, lockers, refrigerator and freezer serve as temporary secure storage locations.

Long-term storage is used for evidence and property that is pending distribution to a laboratory section(s), is waiting for return to the submitting officer/agency, or awaiting disposal.

Access to long-term storage areas is limited to authorized personnel as defined by the laboratory director.

Storage in Conex Trailers

The RCSD maintains two Conex® trailers for secure storage of large non-evidentiary items that do not require climate-controlled conditions. RCSD also maintains two Conex® trailers that are climate controlled for secure storage of physical evidence that may require
examination. The secured trailers are located in the rear parking lot (employee) at headquarters. There are also 6 secured Conex trailers kept off site.

F. Found Property
An E/P label will be completed for found property submissions. Items will be entered into ACISS and will be held according to established E/P retention schedules. A disposition form is also completed to document return to owner or destruction. The evidence should be properly packaged the same as all other evidence.

G. Return of Evidence and Property
- In the case where evidence is to be returned to an outside agency, it is preferable that all items be returned at the same time and with person-to-person transfer.
- Officers must complete Evidence Disposition (EVP005) to authorize evidence release and/or destruction prior to the retention schedule timetable.
- All other evidence will be disposed of per the E/P Section retention schedule timetable.
- Contact the E/P Section if evidence or property is to be held beyond the retention schedule timetable.
- Officers will receive review letters once a case has met its retention time.

1. Items Released to Known Owners
When the owner is known and items meet the criteria for release:
- E/P personnel will notify the owner at the last known address via certified mail in an effort to return the item(s).
- Food and Beverages are not returned. Prescription medications are not returned.
- Owners have sixty (60) days from the date of notification to claim the item(s). If no claim is made, the item(s) will be disposed of per E/P policy.

2. Return of Property from Suicides
- Items submitted from suicide investigations will be returned to the claimant after two years if a disposition form or review letter is signed by the investigator.
- Firearms may be returned to the next of kin if a disposition form is signed with a name for release by the investigator.

3. Return of Guns to Rightful Owners
A criminal history (NCIC check) will be conducted prior to the release of any firearm. No firearm shall be returned if the claimant has been convicted in any court of a crime of violence punishable by imprisonment for a term equal to, or exceeding one year, to include misdemeanors.
If a court order is received that is in conflict with the above, the E/P Custodian will notify the issuing judge for verbal confirmation of the order, and explain the circumstances to the judge. If the judge confirms the order, documentation will be placed in ACISS prior to release of the firearm.
Firearms are rendered safe and placed into a sealed package prior to their release. When the owner is unknown, a classified advertisement is placed in a local newspaper in an effort to locate the owner. Unclaimed firearms are disposed of per E/P policy.

**H. Disposal of Evidence and Property**

Items must first meet the minimum retention period before they may be considered for disposal. However, an officer may fill out an Evidence Disposition (EVP005) to release or dispose of evidence before the retention period has been met. The case officer will be notified *in writing*, via the Case Agent Review Letter prior to the disposal of evidence or property. The case officer must notify the E/P Custodian *in writing* to confirm that the evidence or property need not be retained. If the case officer does not notify the E/P Section, the evidence or property will be disposed of per E/P policy.

**Retention Table – Retention times begin from the log-in date**

<table>
<thead>
<tr>
<th>Offense Type</th>
<th>Minimum Retention</th>
<th>Property Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Other Offenses</td>
<td>1 Year</td>
<td>Class 1</td>
</tr>
<tr>
<td>Aggravated Assault</td>
<td>20 Years</td>
<td>Class 20</td>
</tr>
<tr>
<td>Arson</td>
<td>5 Years</td>
<td>Class 5</td>
</tr>
<tr>
<td>Arson, Resulting in Death</td>
<td>Indefinite</td>
<td>Class SCP</td>
</tr>
<tr>
<td>Breach of Trust</td>
<td>2 Years</td>
<td>Class 2</td>
</tr>
<tr>
<td>Burglary</td>
<td>5 Years</td>
<td>Class 5</td>
</tr>
<tr>
<td>Burglary, First</td>
<td>Indefinite</td>
<td>Class SCP</td>
</tr>
<tr>
<td>Counterfeiting</td>
<td>3 Years</td>
<td>Class 3</td>
</tr>
<tr>
<td>Criminal Sexual Conduct (CSC)</td>
<td>Indefinite</td>
<td>Class SCP</td>
</tr>
<tr>
<td>Failure to Stop</td>
<td>2 Years</td>
<td>Class 2</td>
</tr>
<tr>
<td>Federal</td>
<td>2 Years</td>
<td>Class F</td>
</tr>
<tr>
<td>Felony DUI/BUI Death</td>
<td>Indefinite</td>
<td>Class SCP</td>
</tr>
<tr>
<td>Ferrous Metals</td>
<td>1 Year</td>
<td>Class 1</td>
</tr>
<tr>
<td>Forgery</td>
<td>3 Years</td>
<td>Class 3</td>
</tr>
<tr>
<td>Found Property/Unknown</td>
<td>60 Days</td>
<td>Class 60d</td>
</tr>
<tr>
<td>Fraud</td>
<td>2 Years</td>
<td>Class 2</td>
</tr>
<tr>
<td>Gambling</td>
<td>2 Years</td>
<td>Class 2</td>
</tr>
<tr>
<td>Harassment</td>
<td>2 Years</td>
<td>Class 2</td>
</tr>
<tr>
<td>Home Invasion</td>
<td>Indefinite</td>
<td>Class SCP</td>
</tr>
<tr>
<td>ID Theft</td>
<td>3 Years</td>
<td>Class 3</td>
</tr>
<tr>
<td>Intimidation</td>
<td>1 Year</td>
<td>Class 1</td>
</tr>
<tr>
<td>Larceny</td>
<td>2 Years</td>
<td>Class 2</td>
</tr>
<tr>
<td>Lynching, First</td>
<td>Indefinite</td>
<td>Class SCP</td>
</tr>
<tr>
<td>MIPP</td>
<td>2 Years</td>
<td>Class 2</td>
</tr>
<tr>
<td>Motor Vehicle Theft</td>
<td>2 Years</td>
<td>Class 2</td>
</tr>
</tbody>
</table>
### IV. Types of Evidence

#### A. Alcohol

<table>
<thead>
<tr>
<th>Evidence Type</th>
<th>Duration</th>
<th>Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>NIBIN-Entered Firearm</td>
<td>2 Years</td>
<td>Class 2</td>
</tr>
<tr>
<td>Obtaining Goods by False Pretense</td>
<td>2 Years</td>
<td>Class 2</td>
</tr>
<tr>
<td>Possession of Stolen Property</td>
<td>1 Year</td>
<td>Class 1</td>
</tr>
<tr>
<td>Robbery</td>
<td>Indefinite</td>
<td>Class SCP</td>
</tr>
<tr>
<td>Shoplifting</td>
<td>1 Year</td>
<td>Class 1</td>
</tr>
<tr>
<td>Spousal Sexual Battery</td>
<td>Indefinite</td>
<td>Class SCP</td>
</tr>
<tr>
<td>Suicide</td>
<td>1 Year</td>
<td>Class 1</td>
</tr>
<tr>
<td>Theft from Motor Vehicle</td>
<td>2 Years</td>
<td>Class 2</td>
</tr>
<tr>
<td>Traffic Offense</td>
<td>1 Year</td>
<td>Class 1</td>
</tr>
<tr>
<td>Unlawful Carry</td>
<td>2 Years</td>
<td>Class 2</td>
</tr>
<tr>
<td>Vandalism</td>
<td>2 Years</td>
<td>Class 2</td>
</tr>
<tr>
<td>Weapon on School Grounds</td>
<td>2 Years</td>
<td>Class 2</td>
</tr>
<tr>
<td>Homicide</td>
<td>Indefinite</td>
<td>Class SCP</td>
</tr>
<tr>
<td>Adjudicated/Cleared</td>
<td>Indefinite</td>
<td>Class SCP</td>
</tr>
<tr>
<td>Unsolved</td>
<td>Indefinite</td>
<td>Class SCP</td>
</tr>
<tr>
<td>Controlled Substances</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Probable Cause (PC) Buys</td>
<td>2 Years</td>
<td>Class 2</td>
</tr>
<tr>
<td>PWID</td>
<td>5 Years</td>
<td>Class 5</td>
</tr>
<tr>
<td>Simple Possession (Marijuana)</td>
<td>1 Year</td>
<td>Class 1</td>
</tr>
<tr>
<td>Simple Possession (All Other Drugs)</td>
<td>2 Years</td>
<td>Class 2</td>
</tr>
<tr>
<td>Trafficking/Manufacturing</td>
<td>5 Years</td>
<td>Class 5</td>
</tr>
</tbody>
</table>

**General procedures**

- For DUI, open container and minor in possession cases, liquids should be properly discarded after documentation.
- Place the beverage container in the appropriate bag/box.
- Place packing material around the container(s) to prevent breakage.
- Seal with evidence tape. Initial and date across seal.
- Use the ↑ arrow to indicate the direction to maintain the container.
- Alcohol cannot be stored in a non-climate controlled trailer.
- Alcohol cannot be returned to the owner and/or business.
B. Biohazardous Evidence

1. Blood/Urine

Complete:
- RCSD Evidence/Property Label
- RCSD Incident Report
- SLED Forensic iLAB form

- Blood/urine obtained for the purpose of determining the presence of drugs and/or alcohol will be sent to the SLED Toxicology Laboratory
- In most cases, submitting officers will use the SLED Blood/Urine Collection or CSC kits available at the medical facility.
- Place sealed/initialed toxicology or CSC kits into the secure E/P refrigerator.
- Properly submitted toxicology or CSC kits and accompanying documentation will be delivered to SLED by E/P personnel.

Figure 4.
Evidence with Biohazard label
2. Syringes/Razor Blades

**Complete:**
- RCSD Evidence/Property Label
- RCSD Incident Report

**General procedures**
- Syringes/razor blades should be entered into evidence only when:
  - Syringe is probative evidence in a death investigation
  - Syringe was used as a deadly weapon in an assault
  - Syringe is associated with a drug diversion case
  - Syringe was used in a meth case

- Wear gloves when handling syringes. Gloves will not protect against a needle stick.
- Officers may obtain syringe/razor blade safety systems from the E/P Section. Place syringes/razor blades in the safety system during transport and for submission to the E/P.
- Dispose of non-evidentiary syringes/razor blades in the red biohazard sharps container located in the E/P intake area.
- Liquids must be submitted in a glass vial with Teflon-lined cap and then placed in a polypropylene bottle. Liquids collected from an area of chemical or biohazard contamination should be labeled as above.

*Figure 5.*
Safety system for evidentiary syringes, razor blades and knives
3. Blood-Soaked Items

**Complete:**
- RCSD Evidence/Property Label
- RCSD Chain of Custody Form (if applicable)

Blood-soaked clothing should be handled using universal precautions. Even after clothing has been dried, it is still a biohazard with every potential of transmitting an infectious disease to the handler.

**General procedures**
- Adequate protective gear must be worn.
- Document the article of clothing, from whom it was removed, who assisted, date/time obtained.
- Place blood-soaked clothing into a red biohazard bag for transport to the E/P.
- Do not allow blood-soaked items to remain on the hot metal surface of a vehicle.
- Drying of blood-soaked items is the responsibility of the Crime Scene/Latent Print Section. Contact the on-call Crime Scene Investigator (CSI) or CSI Supervisor for assistance.

C. Cell Phones, Computers, Digital/Analog Devices and Media

**Complete:**
- RCSD Evidence/Property Label
- RCSD Incident Report
- SLED iLAB form

1. Cellular Phones

   The Technical Investigations (TI) Unit (Narcotics) performs examinations of cell phones and may be contacted for consultation (803-576-3085).

   - All power cables and adapters should be collected with any cell phone or Personal Digital Assistant (PDA). The very nature of such devices causes the digital information to be very fragile. These devices require extra care to maintain the information contained inside.
   - If the device is found in the “Off” mode, retain the device in “Off” mode.
   - If the device is in “Off” mode, remove the battery prior to evidence submission.
   - If the device is in the “On” mode, it must be removed from the network. Do not turn off the device. Contact TI staff for further assistance.
   - If testing is requested, place in pink bubble wrap sleeve.
2. Computers
The TI Unit is available for consultation prior to the collection of any computer taken as evidence (803-576-3085).

- Do not attempt to power-up a computer taken as evidence, as this may destroy information on the device. Do not place evidence tape directly on a computer.

3. Other Digital/Analog Storage Devices and Media
- Audio statement tapes and videotapes should be placed in a sealed evidence package with initials and date.
- Compact discs (CD’s) and DVD’s should be placed in a pink bubble wrap sleeve prior to placing in the evidence package.
- Certain examination requests may require submission to SLED. Contact TI personnel for additional information.
  Items submitted to SLED for analysis must follow procedures described elsewhere in this handbook (Evidence Submission to Secondary Testing Facilities)
- Examples of digital storage devices and media used to store information include:
  - Floppy disks/Zip disks
  - CDs/DVDs
  - Videotapes, Cassette Tapes and/or Associated Recorders
  - External backup drives (tapes and tape drives, external hard drives)
  - USB “Jump”/“Thumb” drives
  - Hard-drive-based TV recorders (e.g., Tivo®)
  - Data storage cards (could be hidden in a variety of devices such as digital cameras, music players, and Global Positioning System [GPS] units)
  - Digital music devices
  - Hand-held digital photo viewers

D. DNA
Complete:
- RCSD Evidence/Property Label
- Forensic Science Request Form (FMG040)

DNA services are intended to assist the criminal justice system by providing timely scientific analysis of biological evidence. When appropriately utilized, DNA testing has the potential to: include/exclude a donor of biological evidence, substantiate or refute case circumstances, associate serial crimes (e.g. sexual assaults, burglaries), distinguish multiple donors, determine the sex of the individual leaving the biological evidence, identify missing persons, and establish maternal/paternal linkage.
The DNA analyst begins by evaluating the investigative information and available evidence to understand the nature of the case and the problem to be solved. Initially, items of physical evidence are examined for potential biological evidence to include blood, semen, or saliva. Further analysis is guided by the investigating officer’s request, case circumstances, sample size and condition, available technology, and/or conformance to scientific protocols.

Health and Safety Considerations-The agency’s Bloodborne Pathogen policy requires that all biological evidence (liquid or dried) must be considered as potentially infectious and bio-hazardous material (Universal Precautions). For this reason, adequate protective clothing and proper evidence handling techniques are essential. Disposable latex gloves should always be worn when collecting and packaging evidence potentially contaminated with body fluids or stains. Gloves serve the dual purpose of protecting all individuals from contact with potentially infectious pathogens, and when properly changed, also minimize the likelihood of cross-contamination from one item or area to another.

1. Collection and Submission of Reference Samples (Standards)
Reference samples should be submitted as buccal swabs (see below). If recent consensual sex has occurred, a reference sample from the consenting partner(s) will also be requested. When possible collect and submit any victim and/or elimination standards for all case types. Medical training is not required for buccal swab collection.

NOTE: Bandages, chewing gum, cigarette butts or drink containers are not suitable for use as a reference standard for match purposes.

- Do not collect a liquid saliva sample
- Moisten sterile cotton swab with sterile water (if available)
- Rub gums and cheeks of subject with swab
- Allow to air dry and place in buccal swab container
- Label with subject name, collector’s name, date, and time of collection and type of individual (i.e. suspect, victim, elimination).
- Package buccal swabs separate from touch swabs
2. Samples collected from Autopsy
   - Use of bloodstain cards or buccal swabs is preferred. If unavailable, tissue specimens may be submitted.
   - In states of decomposition, contact the DNA Section regarding the preferred sample for analysis.
   - Samples preserved in formalin are unsuitable for DNA.

3. Fingernail Scrapings
   Fingernail scrapings may yield visible bloodstains or small clumps of tissue or skin cells. Artificial fingernails may require scraping if they cannot be removed.

   Package fingernails inside an enclosed folded paper packet in order to minimize potential loss of evidence and then place in a heat sealed bag.

4. Physical Evidence for DNA
   - When collecting physical evidence, it is preferable that the entire item be submitted to the laboratory with questioned stains intact.
   - If removal or transport of an item is not possible, the stain(s) may be cut out or scraped from the item or surface.
   - Small stains should be collected on a sterile (if available) water-dampened cotton-tipped applicator that must be air-dried prior to packaging. Care must be taken to minimize the possibility of contamination.
   - Physical evidence for serological and DNA analysis should be packaged in paper, paper bags, envelopes, or cardboard boxes as appropriate to sample
type and size. For example, blood scrapings may be enclosed in folded paper packets. Envelopes and paper bags do not provide a suitable enclosure as scrapings may leak from seams or openings.
  o Adhesive tape is an unsuitable method to retain scrapings.
- Items collected in paper bags should also be placed in cardboard boxes, properly sealed, initialed and dated.
- Dampered or wet items submitted in plastic bags and airtight containers are unacceptable because they create an environment that accelerates mold growth.
- Evidence packages should always be maintained in a cool, dry location following collection to reduce the adverse effects of heat, humidity and sunlight.
- Victim and suspect clothing or items believed to have stains from different donors should be packaged separately.
- All evidence items must be completely dried without heat or sunlight before packaging for delivery. Items with wet stains should be spread out in a single layer on paper.
  o Do not fold wet items.
  o Air-drying should be accomplished in a manner that prevents cross-contamination of stains and loss of other evidence types (hair, fibers, or other trace evidence). The Crime Scene/Latent Print Section maintains a self-contained drying cabinet for this purpose. Contact the Crime Scene/Latent Print Section for assistance.

Figure 7.
Evidence bag with individual item descriptions
5. Criminal Sexual Conduct (CSC) Evidence Collection Kits

The CSC kit was developed to comply with the statewide medical examination protocol for sexual assault victims. The kit contains supplies sufficient to collect adequate biological and trace evidence from the victim as well as known reference samples. Instructions for proper evidence collection are provided in each kit.

- CSC kits should be refrigerated prior to submission, when possible.
- CSC kits should be delivered to the E/P Section as soon as possible.
- CSC kits should be placed in the secure refrigerator in the E/P pre-log area or delivered to the E/P staff, person-to-person.
- Blood/urine specimens collected for toxicology will be submitted to the SLED Toxicology Laboratory by E/P staff.

Figure 8.
Criminal Sexual Conduct (CSC) Kit with proper seal and labeling
Criminal Sexual Conduct (CSC) Kit labeling

6. Blood Identification
   Suspected blood evidence may be examined to: locate bloodstain(s), identify blood by chemical testing, determine if of human origin and perform DNA testing.

   Bloodstains may not be profiled when there is no question as to the blood's source or origin. This request deviates from the basic premise of establishing a transfer between the victim, suspect, object, or location. For the same reason, multiple bloodstains collected from a crime scene will not be analyzed unless there is justifiable reason to expect that the suspect was bleeding or to substantiate or refute case circumstances.

7. Semen Identification
   Biological evidence will be examined to:
   - Locate semen stain visually, microscopically, chemically, or by alternate light source (ALS)
   - Perform DNA testing

   DNA analysis may be performed on items that are positive for semen. Eligible male DNA profiles will be entered into CODIS.

   CSC kits are examined as high priority. Items contained in the CSC kit are examined before any other items of evidence.
A victim’s clothing, bed linens, etc. will not be routinely examined for semen unless the CSC kit is negative and/or the investigator makes a request for such analysis. Thus, proper collection of clothing and linens remains important as it may be needed for DNA analysis.

8. Hair Testing for DNA
DNA testing may be performed on hair samples if specific criteria are met.

DNA testing on hair will not be performed when other probative and acceptable biological specimens are available. When hair cannot be analyzed in-house, samples must be sent to a private laboratory for analysis (e.g. mitochondrial DNA analysis).

Contact the DNA Section for assistance with this service.

9. Touch DNA
DNA testing may be performed on items possibly touched by an individual. The probative nature of touch DNA samples should be considered. For example, items commonly and frequently touched by multiple individuals (i.e. elevator button, front door pull) are less likely to yield a useable result.

Evidence is collected with moisten sterile cotton swab and packaged as other DNA evidence (see Section 4 above).

10. Combined DNA Index System (CODIS)
CODIS is not a service per se, but is a function of the DNA Section. The acronym CODIS refers to a database of DNA profiles. These profiles originate from casework samples and those samples taken from convicted offenders.

In South Carolina, convicted offenders are those who have been convicted of felonies. Casework profiles are composed of “forensic unknowns”-DNA profiles from both violent and nonviolent crimes. The RCSD DNA Section maintains a local CODIS terminal for uploading of DNA profiles into the state’s database. SLED is the authorized administrator of the SC CODIS database.

Any DNA profile developed from evidence that did not originate from the victim or individual to be eliminated will be uploaded and searched in CODIS. If a hit occurs between cases, the investigator will be notified (hit notification). If a hit is made to a convicted felon, the investigator will be notified of the offender’s name and asked to submit a buccal swab (reference standard) for confirmation. DNA profiles already in CODIS are continuously searched on a weekly basis against newly added profiles.

The investigator does not need to continuously request CODIS searches.
E. Drugs

Complete:
- RCSD Evidence/Property Label

The primary function of the Drug Identification Section is to analyze physical evidence suspected to be or contain drugs. The Drug Identification Section also provides: assessment and analysis of clandestine laboratory seizures and technical support in undercover narcotics operations.

General Procedures
- Treat all drug evidence as a potential health hazard.
- Do not eat, drink, or smoke while handling drug evidence.
- Always wear gloves when handling suspected drugs. Wash hands thoroughly after handling, even if direct contact was not made. Never try to identify a substance by taste or smell.
- Syringes and razor blades should be submitted in a safety system and should meet the requirements for evidence submission (see IV, Section B2).
- Field test results should be included in the incident report.
  - Drug field test kits are presumptive tests. A field test is not a conclusive test that proves the presence or absence of a particular drug. The field test kit is useful in establishing probable cause and provides support for an affidavit to obtain a search warrant.
  - Do not use a field test if testing will consume the evidence as this may prevent further testing by the laboratory.
  - Discard used field test kits in a biohazard waste container. Do not submit used field test kits to the laboratory.
- Do not refer to evidence as a particular drug. Examples of item descriptions include "unknown white powder", or "yellow rock substances", vs. "cocaine" or "crack cocaine".
- Do not place “loose” items such as powders, tablets, capsules, crack rocks, marijuana, etc. in the outer evidence bag. Zip lock bags, envelopes, and paper bags are acceptable inner packages.
  - Secure inner packaging so that the contents will not fall into the outer container.
  - Do not overfill evidence packaging. Group like-items together.
- Do not place documents or paperwork inside the evidence package.
- Items collected from an area of possible chemical or biohazard contamination (e.g. toilets, body cavities, etc.) should be clearly identified with a hazardous or biohazard-warning label.
- Submit liquids in a glass vial with Teflon-lined cap and placed in a polypropylene bottle. Liquids collected from an area of chemical or biohazard contamination should be labeled with a hazardous warning label.
- Package drug paraphernalia separately from plant material and other drug evidence.
- Package green plant material and suspected synthetic cannabinoids (ex. K2, Spice) separately from other evidence.
• Do not package wet or damp plant evidence (mushrooms, marijuana) in plastic. Place in a paper bag or box. Trapped moisture may cause the evidence to rot and render it unsuitable for analysis. Large quantities of wet or damp material may require air-drying prior to submission. Contact the Drug Identification Section for assistance (803-576-3000).

• Psychedelic Mushrooms and certain hallucinogens are light sensitive. Package in a paper bag, envelope or box before placing in the outer evidence packaging.

• Evidence must be packaged to prevent cross-contamination (i.e. Do not place a marijuana pipe in a plastic bag with loose marijuana leaves).

• Package undercover buys separately from evidence seized from a search warrant.

• Seizures made at the same location and attributable to a specific individual should be packaged separately from other evidence.

• Weights from individual requests or cases cannot be added together to determine if statutory weight requirements have been met.

• The laboratory does not report preliminary weight measurements and/or presumptive drug identification.

• There is no verbal or telephonic reporting of results.

• Confiscated meds cannot be returned.

Figure 10.
Labeling drug items
Figure 11.
Packaging and sealing for plants, psychedelic mushrooms or wet plant material. (L) Evidence tape should wrap around each side of the bag (R).

F. Clandestine Laboratory Evidence Submissions

Complete:
- RCSD Evidence/Property Label

Contact the Bomb Squad via the Desk Sergeant if a clandestine laboratory operation is suspected.

General Procedures
- Unknown liquids should be packaged in glass vials with Teflon caps. Each glass vial should be placed into a polypropylene bottle to ensure that the liquid will be contained if the glass vial should break or leak. Each bottle must be separately packaged.
- A maximum of approximately 90 mls. (3 oz) of liquid sample per item will be accepted for analysis.
- Solids or items containing solids (eg. Coffee filters) should be placed in Ziplock bags.

G. Explosives and Fireworks

Complete:
- RCSD Evidence/Property Label

Explosives and all fireworks that appear to be homemade (i.e. tennis ball explosives, M-80, Cherry Bomb, etc.), should be approached with caution.

Notify the RCSD Bomb Squad (803-576-3199) or via the Desk Sergeant. An RCSD bomb technician should be consulted prior to handling, seizing, or otherwise dealing with dangerous explosives.
General procedures
- Under no circumstances are explosive devices or fireworks (tennis ball bombs, M-80s, etc.) to be placed in any evidence locker or drop box.
  - E/P personnel should be contacted regarding submission of explosives and/or fireworks (803-576-3120).

H. Firearms & Tool Marks

1. Firearm and Tool Mark Capabilities
   The Firearm and Tool Mark Section provides examinations to include:
   - Bullet to bullet = number and type(s) of firearms involved
   - Cartridge case to cartridge case = number and type(s) of firearms involved
   - Bullet to firearm = was or was not fired in suspected firearm
   - Cartridge case to firearm = was or was not fired from suspected firearm
   - Single bullet = caliber and type of firearm that may have fired it
   - Single cartridge case = NIBIN entry and type of firearm that may have fired it
   - Tool mark to tool = was or was not made by suspected tool*
   - Restoration of obliterated serial number
   - Determination of the presence of gunpowder
   - Determination of the approximate distance from the firearm muzzle to the target at time of firing**

Exclusions:
*Tools found at the scene of a crime that cannot be associated with a suspect will not be examined.
**NO muzzle-to-target distance tests are performed without the firearm involved in the shooting and a sufficient quantity of the ammunition that was used in the shooting incident.

2. Nomenclature
   **Firearms**

   **Revolver:** A handgun comprised of a single barrel and multiple chambers housed in a cylinder which spins on an axis so that each time the trigger is
pulled, a different chamber is brought in line with the barrel. Fired cartridge cases must be manually extracted and ejected from the cylinder.

**Pistol:** A handgun comprised of one chamber that is part of the barrel and a magazine which holds the unfired cartridges. Unlike the revolver, each fired cartridge case is extracted and ejected from the pistol during firing and replaced by an unfired cartridge from the magazine until it is empty.

**Rifle:** A firearm having rifling in the bore and designed to be fired from the shoulder.

**Shotgun:** Generally, a smooth bore firearm designed to fire a shotshell and to be fired from the shoulder. Shotguns can also have a rifled bore.

**Magazine:** A container for unfired cartridges which has a spring and follower to feed those cartridges into the chamber of the firearm. The magazine may be detachable from the firearm or built into the firearm frame.

### Ammunition Components

**Cartridge:** A single unit of unfired ammunition consisting of the cartridge case, primer, propellant, and normally one or more projectile(s).

**Cartridge Case:** The container for all other components which comprise a cartridge.

**Projectile(s):** An object propelled from a firearm by the force of rapidly burning gases (may be a single bullet or multiple pellets).

**Shotshell:** A single unit of ammunition consisting of the shotshell case, primer, propellant, and one or more projectile(s). May also contain wadding.

**Shotshell Case:** The container, which may be metal, plastic or paper, for all other components which comprise a shotshell.

**Wadding:** A component of a shotshell made of felt, paper, cardboard, or plastic, which typically serves as a spacer and/or to separate/contain the propellant and projectile(s).

### 3. Firearm Safety and Evidence Collection

- Always assume the firearm is loaded
- Always keep the firearm pointed in a safe direction
- Always keep your finger off the trigger unless you are prepared to fire
- Know what is behind your target before pulling the trigger
- If practical, photographs should be taken of the firearm as found, this means before the firearm is collected or made safe.
• If practical, wear gloves to collect the firearm so that Latents and DNA can still be collected
• Firearms should be made safe prior to transport
  ▪ Cocked hammers should be considered extremely dangerous and must be made safe before transportation. If the deputy does not feel that he/she can safely decock the firearm, contact a supervisor or the Firearm and Tool Mark Section.
  ▪ NEVER attempt to unload a firearm that you are uncomfortable with or are unsure about. If you are presented with this situation during normal business hours, bring the weapon to HQ and Evidence personnel will contact a Firearms Examiner to render the firearm safe for submission.
• Notify E/P staff when a firearm cannot be unloaded safely.
  ▪ During weekends or after hours, put the loaded firearm in a sealed evidence box and into an evidence locker. Mark the locker with the “Unsafe Weapon Inside” sign and notify the E/P on-call staff member. Signs are available in the evidence pre-log area.

4. General Submission Procedures
All Firearms:
• If a firearm needs Latents and/or DNA, mark appropriate boxes on the E&P label and fill out a forensic request form to submit to Crime Scene.
• All firearms WILL be packaged in the firearm boxes provided in the Evidence and Property Section. Use an E/P label, not the pre-printed form on the gun box.
• NEVER put a cable tie or any other object down the barrel of the firearm
• If blood or biological fluids are noted on the firearm or firearm related evidence, a bio-hazard warning label should be affixed to the outside of the package.
• Firearms should be carefully collected so that no parts of the gun are damaged.
• Do NOT dry-fire or work the action of any weapon that is submitted for analysis.
• Avoid using the plastic evidence bags for anything of significant weight or for anything that is wet or may have biological material.

Weapons Recovered From Water:
• A weapon removed from water must be submitted in the same water from which it was recovered.
• The issued plastic PPE supplies container is suitable for most handguns.
• When rifles or shotguns are removed from a lake or pond contact a member of the Firearm and Tool Mark Section for assistance (803-576-3000).
5. Cartridge and Cartridge Case Submission

- Fired cartridge cases and shotshells should be individually packaged in coin envelopes and labeled uniquely. (Figures 13 & 14)
- Each fired cartridge case or shotshell should be listed individually on the RCSD Evidence and Property label to ensure that each one receives its own item number.
- Unfired cartridges can be grouped together in one envelope if the same caliber and found in the same area.
- Unfired cartridges do not need to be removed from the magazine or ammunition box for submission. If left in the magazine or ammunition box you do not need to include a total number of cartridges on your evidence label description as the magazine will be unloaded and inventoried in the lab. (Ex. Evidence label reads “magazine containing unfired cartridges”)

6. Projectile Submission

- Fired bullets should also be individually packaged in coin envelopes and should be listed individually on the RCSD Evidence and Property label to ensure that each one receives its own item number. (Figures 13 & 14)
- Fired projectile fragments should be packaged together in one coin envelope ONLY if known to be from one source (based on recovery location).
- Shotgun wads, if located, should be collected. It may be possible to match a shotgun wad to an individual firearm through microscopic analysis.
  - Wads should be packaged in the same manner as projectiles.

Figure 13.
Coin Envelope labeling example
Evidence label example

7. Revolver Submission
- Open the cylinder and, if possible, take a photo of the cylinder contents before removal. Remove the fired cartridge cases or unfired cartridges and place them into a coin envelope marked with your initials, the date and “FROM CYLINDER.”
- Loop a cable tie through the cylinder in such a manner as to preclude the cylinder from being locked back into place. Lock the cable tie onto itself so that it can only be removed by cutting. (Figure 15)
  - For revolvers that do not have hinged or removable cylinders, insert the cable tie through the weapon in any manner that will prevent the firearm from functioning (avoid putting the cable tie down the barrel).

Figure 15.
Revolver with cable tie
8. Pistol Submission

- Remove the magazine.
- Lock the bolt or slide rearward and insert the cable tie through the ejection port and down the magazine well. For large weapons, two or more cable ties can be connected to make a longer loop.
  - Single shot pistols should have a cable tie run between the barrel and frame to prevent the barrel from locking into place.
- If there was an unfired cartridge in the chamber, package it in its own coin envelope and label it “FROM CHAMBER.”
- Package the firearm, magazine and coin envelope with cartridge from chamber together in a handgun box (Figure 16). If you choose to unload the magazine place the unfired cartridges in another envelope and label it “FROM MAGAZINE”.

Figure 16.
Semi-automatic pistol with cable tie, magazine removed and cartridge removed from chamber

9. Longarm Submission (Rifle and Shotgun)

- Most rifles and shotguns can be treated in the same manner as pistols. (See Section 8 and Figure 17)
  - EXCEPTION: Special attention must be given to those rifles and shotguns that have magazine tubes. All unfired cartridges/shotshells must be removed from the tube exposing the magazine follower in order for the firearm to be considered “safe”. 
10. Gunpowder Residue
   - Clothing and items suspected to contain gunpowder residue should be
     individually wrapped in butcher paper and then packaged in a properly sealed
     container.
     - If blood or other biological fluids are noted on the clothing or other
       items, the item must be dried prior to packaging and have a bio-
       hazard warning label affixed to the outside of the package.
     - When gunpowder residue is suspected to be present, clothing or other
       items should be moved as little as possible and should not come in
       contact with one another.
   - If known, document how the layers of clothing were worn in order to assist
     the examiner in determining the path of the bullet.

11. Tools and Tool Marks
   - Materials at a crime scene that are suspected of being marked by a tool
     linked to a person of interest should be carefully removed so that the marks
     are not disturbed.
     - The removed tool mark should be clearly labeled in a manner that
       indicates location of the mark in reference to its place of origin at the
       scene.
     - Any markings you made during removal should be easily
       distinguished from the evidence tool mark.
If removal is not possible, the marks should be cast with a suitable forensic silicone casting material by either Crime Scene or Firearm and Tool Mark Section personnel.

- Tool marks must be packaged individually in a manner that protects the tool mark and preserves any trace evidence.
- Tools must be packaged separate from tool marks and in a manner that protects the tool working surface and preserves any trace evidence.
- Tools and Tool Marks must be individually listed on the evidence label to ensure that each one receives its own item number.

I. Gunshot Residue (GSR) Kits

Crime Scene and Latent Print Section maintains an inventory of GSR kits for collection of GSR.

Complete:
- RCSD Evidence/Property Label
- RCSD Incident Report
- SLED iLAB form

General procedures
- Properly sealed GSR kits are submitted to the E/P Section
- GSR kits are submitted to the SLED Trace Laboratory for analysis. (See Figure 18)

Figure 18.
Gun Shot Residue (GSR) kit

J. Fire Debris
Petroleum products and other ignitable liquids are the most common types of materials used in arson crimes. Because alcohol, gasoline, stove oil, paint thinners, solvents, and other similar fluids may not burn completely, residues of these fluids may be recovered and identified from fire scenes. Proper sample packaging and preservation is critical. Collection and submission of fire debris evidence is the responsibility of the arson investigator.

The following recommendations are made in relation to the proper selection and use of evidence containers as utilized for Fire Debris Analysis.

**Comparison Samples**
- When physical evidence is collected for examination and testing, it is also necessary to collect comparison samples.
- Comparison samples allow the laboratory to evaluate possible contributions of volatile pyrolysis products and to estimate the flammability properties of the normal fuel present in the substrate.
- Collection of comparison samples is especially important when materials are believed to contain liquid or solid ignitable substances. For example, the comparison sample for a piece of carpeting believed to contain an ignitable liquid would be a piece of the same carpet that does not contain any of the ignitable liquid.
- Comparison samples should be collected from an area that the investigator believes is free of such ignitable liquids, such as under furniture or in areas that have not been involved in the fire.
- While it is understood that comparison samples may be unavailable due to fire scene conditions, every effort should be made to obtain comparison samples.

**Acceptable Packaging**
- Selecting the proper container and assuring an effective seal are **critical** in preserving the fire debris ignitable liquid sample and preventing loss and/or contamination.
- Fire debris evidence bags and cans are maintained by the Fire Debris Laboratory Section and the Arson investigator(s).
- Material to be analyzed for ignitable liquids need to be packaged in air-tight and vapor-tight containers.
  - Lined Metal Paint cans – used for packaging most fire debris evidence to include soil samples
    - Debris around the rim of the can may prevent a proper seal
    - The outside of the container should be clean and dry to reduce corrosion
  - Fire Debris bags – specially designed to retain ignitable liquid vapors, easy to transport, less bulky and can be used for odd-shaped items such
as shoes and clothing; be careful with sharp pieces of wood or other objects that may puncture the bags

- Glass vials – liquids should be collected by pipette and placed in a glass vial with a Teflon®-coated cap and secured in a second plastic bottle (e.g. Nalgene®) for safety
- Paper, plastic, unlined paint cans, mason-jars, etc. are NOT acceptable containers and will be rejected

- A properly filled container is approximately ¾ full. Overfilling containers can adversely affect recovery and test results.
- Package fire debris bags/cans into a cardboard box and complete the evidence label.
  - Specify source and type of sample (e.g. “Burned carpet from northeast corner of master bedroom”) on each item of evidence and also on evidence label
  - Multiple fire debris samples may be placed in a single box
  - Seal box with evidence tape
  - Initial and date across seal onto box

Considerations when packaging

- General
  - For fire debris analysis, the term “sealed” refers to air-tight and vapor-tight
  - Place item in the approved container so that the portion containing the ignitable liquid is closest to the top
  - If a rainbow sheen is observed, use fresh absorbent material to collect it; submit a blank comparison sample of the absorbent material used; DO NOT use hazmat pads or nonstick gauze pads
  - Label biohazards appropriately (if in contact with the deceased, human or animal tissue, etc.)
  - NEVER place gloves inside containers with evidence

- Wood, carpet, flooring, or furniture
  - Increase the surface area by cutting and submitting smaller pieces

- Clothes
  - Packaging can be difficult, cut clothing and package separately if needed

- Shoes
  - Package each shoe into separate containers. Do not package together

- Liquids
  - Collect and handle liquids last to prevent accidental contamination of other items for testing
  - Pipette or pour liquids from their original containers to obtain a small amount for testing (~1 fluid ounce - maximum)
  - Fresh absorbent materials may also be used to collect liquids; submit a blank comparison sample of the absorbent material used
  - Provide the lab with ALL information from the labels of any liquids submitted
- Soil, foliage or organic materials
  - Prompt submission of fire debris evidence is critical
  - Refrigerate or freeze promptly
  
  [Refrigeration or freezing has proven successful in facilitating preservation of volatile substances associated with fire debris samples and preventing microbial degradation of ignitable liquid residues.]

Figure 20.
Heat-sealed packaging for fire debris evidence

Figure 21.
Soil sample packaged for fire debris analysis

K. Impression Evidence
Complete:
- RCSD Evidence/Property Label
- Forensic Science Request Form (FMG040)

Persons committing a crime may leave footwear or tire impressions when entering and/or exiting the crime scene. Impressions have the potential to be positively identified as having been made by a specific shoe or tire. Examinations of questioned impressions may provide investigative lead information such as brand and model of tires and/or footwear.

General procedures
- If the impression evidence can be removed from the scene, protect the impression from possible damage before submitting it to the laboratory. Examples of removable impressions include paper or cardboard boxes with a visible shoe impression.
- Removable impressions should be properly packaged, labeled, and submitted to the E/P Section.
- If the impression evidence cannot be removed from the scene, contact the Crime Scene/Latent Print Section for assistance.
- Outside agencies requesting assistance with impression evidence should contact the Crime Scene/Latent Print Section (803-576-3000).

L. Latent Prints

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 fingerprints that may lead to identification of the offender. By examining the evidence submitted, the laboratory may be able to: determine if the latent prints are identifiable, compare and identify latent prints with the inked prints of suspects or others, identify unknown deceased or missing persons, and search for candidates via the Automated Fingerprint Identification System (AFIS) and/or the Integrated Automated Fingerprint Identification System (IAFIS).

1. General Latent Print Examination

Complete:
- RCSD Latent Print Card(s)
- RCSD Latent Print Envelope

General procedures
- Evidence should be submitted for examination as soon as possible after its recovery.
- Latex or rubber gloves should be used to pick up items of evidence, being careful not to wipe possible latent prints off the surface.
- Never wrap items in cotton or cloth – they may damage or destroy the latent impressions. Do not cover items to be examined for latent prints with evidence tape.
• Exposure to water or dampness does not necessarily destroy latent prints. Any wet or damp object must be air-dried before it is packaged for submission.
• Complete the back of the latent card (matte side) to include: date, incident type, case number, victim’s name, incident location, written description of the location from which the latent(s) were lifted AND a simple diagram of the location/item from which the latent was lifted, the name of the officer processing the item, officer’s S-number, and initials.
• Write the case number and the officer’s initials on the front of the card (glossy side).
• Place a directional arrow on the front (glossy side) of the latent card to indicate the orientation of the latent prints. A corresponding arrow should be included in the sketch on the back of (matte side) the latent card.
• Place the latent card(s) in one of the “Latent Evidence” (6 x 9 inch) envelopes provided in the E/P intake area.
• Complete the label on the exterior of the latent print envelope (case number, incident type, location, submitting officer’s name, S-number, number of cards in the envelope, manner of submission, date/time of submission).
• Close the envelope. Place a strip of evidence tape across the open side to secure. Initial and date across the seal.
• Deposit the envelope in the evidence drop box or hand directly to E/P personnel.
• For multiple forensic requests that include latent print examination:
  o Clearly identify all forensic requests prior to submission.
  o Latent Print examination is typically performed prior to any other forensic testing, except fire debris cases.

Figure 22.
Latent print envelope

Figure 23.
Latent print card (front)
2. Identifying the Deceased

Identification of the deceased requires the collection of inked fingerprints and palm prints for comparison purposes. Footprints may also be taken if deemed appropriate. Contact the Crime Scene/Latent Print Section for assistance (803-576-3097).
3. Automated Fingerprint Identification System (AFIS)

The Automated Fingerprint Identification System (AFIS) is a computer system capable of searching and archiving the state's database of known fingerprint records. AFIS-quality latent fingerprints are searched for possible matches against the state-maintained database of fingerprint records. SLED is the authorized administrator of the state's database.

By examining the evidence submitted, the Crime Scene/Latent Print Section can determine the presence of any AFIS-quality fingerprints (e.g. photographs, latent lifts and/or negatives) for possible AFIS entry or to establish the identity of unknown persons.

An Integrated Automated Fingerprint Identification System (IAFIS) search will be conducted only after submission to the South Carolina AFIS database and when eligible.

M. Photographs

The Crime Scene/Latent Print Section is responsible for photo-documentation of crime scene investigations to which they respond.

NOTE: The Crime Scene/Latent Print Section does not provide routine photography services for individual agencies at this time.

N. Securities – Currency/Fine Jewelry/Valuables

1. Currency as Evidence

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<td>• RCSD Evidence/Property Label</td>
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General procedures

- Currency must be packaged separately from other Evidence/Property
- Currency should be listed as a total amount on the E/P label

Figure 25.
Labeling for currency submissions
a. Gambling/Narcotics/Prostitution
   - Currency will be secured in the E/P Section until transfer to a banking institution.
   - Monies obtained from specific suspects will require separate deposits.
   - If the E/P label indicates that currency is not to be deposited, monies will be secured in the E/P until proper disposition occurs.

b. Armed Robbery/Other Crimes
   - Currency will be submitted in packages that are properly sealed, initialed and dated
   - Sealed evidence will be entered into ACISS as “said to contain”.
   - Currency will be held in the E/P until the case is resolved or otherwise approved for release.

2. Found Currency
   - Submit found currency in a properly sealed and initialed/dated package.
   - If unclaimed, monies will be held as found property until relinquished to the RCSD Seizure Agent for deposit into Narcotics fund.

3. Fine Jewelry/Other Valuables
   For jewelry and other items of perceived value:
   - Itemize each individual piece of jewelry/valuable for the record.
   - Provide a general description for each piece (ex. gold-colored ring with clear stone vs. 24K gold diamond ring).

   General procedures
   - Properly seal, initial and date the evidence package.
• For most jewelry and small items of value, it is satisfactory to deposit them in the evidence drop box. Do not use the drop box if the item could be broken in transit (e.g. glass, watches).
• Use the evidence lockers or person-to-person transfer for fragile items.
• Contact the E/P Custodian in the event of multiple item submission, in cases of extreme value or should other assistance be required (803-576-3120).

O. Trace (Transfer) Evidence

Trace analysis encompasses a wide variety of evidence to include trace (transfer) evidence, fractured materials (physical matches) and impression evidence (footwear and tire).

Complete:
• RCSD Evidence/Property Label
• RCSD Incident Report
• SLED iLAB form

1. General Procedures

Trace evidence includes materials that are often microscopic in nature and are readily exchanged between people, places and objects upon contact. Examples include hair, fiber, glass, paint, and plastic. Examination of questioned and known materials may determine whether samples have the same source of origin. Trace evidence may not be visible to the naked eye, therefore, special care must be taken to preserve it and prevent loss or contamination.

• Collect and secure any obvious trace evidence to ensure its safekeeping.
• Submit the entire item suspected of bearing trace evidence, when possible.
• Trace evidence should be collected before an item is examined for other types of evidence (i.e. latent prints, blood, drugs).
• Evidence tape that forms a tamper-evident seal or heat-sealing are acceptable sealing methods. A proper tape seal should extend across the entire opening of the container. Closed envelopes or bags, stapled bags, containers with unsecured lids and short pieces of tape along one portion of a fold, do not constitute properly sealed evidence.
• Small items (e.g. hairs, fibers, paint scraping or glass fragments) may be enclosed in properly labeled/sealed paper folds. Enclose the paper fold in a sealed outer container.
• Do not place clothing, damp items or items bearing biological evidence in plastic bags.
• Each piece of evidence must be packaged separately. Exceptions would include clothing from a single individual or several broken items from a single crime scene (e.g. broken glass from a single window or broken plastic from a hit-and-run scene).
• Clothing and bed linens from suspect and victim must be handled and packaged separately to avoid cross contamination. Trace evidence may
remain airborne for extended periods and cross contamination may occur if care is not taken when the handling these items.

- All items should be clearly labeled with a description of the contents, location where collected, and date/time of collection.
- Preliminary screening tests on fiber, glass, and paint samples may be conducted to determine if more extensive trace analysis is required.
- Extensive trace analysis is conducted by the SLED Trace Department and must first be submitted to the E/P Section.

2. Filaments
- Requests to determine the on/off lamp status require that the entire lamp be submitted for analysis. Care should be taken so as not to disturb the filament inside the bulb.
- Secure the lamp in a box to prevent its movement inside the container (use paper, packing peanuts, etc. to prevent breakage).
- If the lamp has been destroyed, collect and submit as many fragments and pieces as possible.
- The SLED Trace Laboratory conducts filament examinations.

3. Fractured Materials (Physical Matches)
It may be possible to examine any broken, torn, cut or separated item(s) 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 surface(s).
- Every attempt should be made to submit all pieces of the broken item.
- Fracture materials may be submitted to the RCSD Firearms and Tool Marks Section for investigative screening.
- The SLED Forensic Services Laboratory conducts these examinations.

4. Impression Evidence
In many instances, footwear and tire impressions may be positively identified as having been made by a specific shoe or tire. Examination of questioned impressions may also provide investigative information such as brand, make or model of tires and footwear.

- Impression evidence is typically collected and examined by the Crime Scene/Latent Print Section of the RCSD laboratory.
- Contact the Crime Scene/Latent Print Section for assistance (803-576-3000).

5. Paints and Coatings
Paint may be transferred during forceful contact such as a pedestrian struck by a vehicle or a surface pried with a tool. Paint may also be passively transferred through contact with a surface of loose or wet paint.
Examination of paint and coatings may yield 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), and whether paint samples may have the same source of origin (comparison of known and questioned samples). The E/P Section will submit properly packaged/sealed paint evidence to the SLED Trace Laboratory for analysis.

a. Hit-and-Run Vehicles
   Chips of paint left at the hit-and-run scene may be matched to the paint from a suspect's vehicle.
   - Do not attempt to remove paint from any damaged areas of the vehicle. The questioned paint and the entire suspect vehicle or panel should be submitted to the laboratory for fracture match examination.
   - If the potential for a fracture match does not exist, samples of transferred (questioned) paint should be taken from each damaged area/panel of the vehicle using a clean, unused blade for each area.
   - Each sample must be packaged separately.
   - Never use tape to collect paint samples.

b. Collection of Paint Reference Samples (Standards)
   A paint standard is a known sample from the undamaged paint collected from within one inch of the damaged area. Paint may vary in type or composition in different locations on a vehicle or item even though the color appears the same to the naked eye.
   - Known paint standards should be collected from each separate panel or area of the object showing fresh damage. Reference samples (standards) should be collected from the original undamaged paint within one inch of the damaged area(s).
   - Use a clean, unused blade for each collection area.
   - The reference sample should contain enough paint to cover the surface of a nickel and must contain all layers of paint down to the substrate. Place each sample in a different paper fold or envelope, seal, initial and date. Place the paper fold in another properly sealed/labeled outer container.
   - In addition to the investigator’s name, date/time of collection, the label should include the specific source of the sample, including vehicle identification number (VIN), if applicable (e.g. “right front fender, 1996 Chevrolet Blazer, VIN ABC123456789”).

c. Paint from Clothing
   - Do not attempt to remove paint from clothing.
   - Wet or damp clothing must be dried on clean butcher paper being careful not to lose any microscopic evidence. Package the clothing and paper in a paper bag.
   - Properly seal/label the paper bag prior to submission for analysis.
d. Summary for the Collection of Paint Evidence

- Obtain paint from vehicles, walls and similar locations by chipping or carving the paint with a clean scalpel, razor blade or knife.
- Use a clean knife/new razor blade or scalpel between each sample collected to prevent contamination.
- All layers of paint must be obtained (down to the substrate). Place each sample into a separate paper fold, seal with evidence tape, initial and date. Place into a sealed/labeled envelope.
- Do not place samples directly into evidence bags or boxes as loss of trace evidence may occur.
- When possible, submit the entire object or cutout area(s) bearing any paint smears and transfers.
- Paint evidence is referred to the SLED Trace Laboratory for analysis.

6. Plastics and Polymers

Plastics are used in a wide variety of modern products. Vehicle parts, decorative trim tapes, decals, adhesive tapes (duct, electrical, masking, etc.) or rubber may be broken or transferred from one source to another. Local auto dismantlers, auto repair or dealerships may identify vehicle parts bearing numbers or markings should they be recovered during a scene investigation. If identification is not possible, the parts may be submitted to the laboratory.

**General procedures**

- All plastics/polymer evidence should be submitted in a sealed/labeled container.
- Each sample must be separately packaged.
- Reference samples (standards) should also be submitted.
- Plastics/polymer evidence should be submitted to the E/P Section.
- The E/P Section will submit properly packaged/sealed plastics/polymer evidence to the SLED Trace Laboratory for analysis.

7. Fibers and Textiles

Fibers may become important evidence in incidents that involve personal contact and struggle such as homicides and sexual assaults. Cross-transfers may occur between the clothing/personal effects of the suspect and victim and between people and the environment (e.g. carpeting, upholstery or bedding). The force of impact between a hit-and-run vehicle and victim may result in fabric impressions, fibers, threads, or even intact pieces of clothing on the vehicle. An intruder entering a broken window may leave fibers on the jagged glass or window screen edges. Ropes and cordage from a crime scene may be compared with reference standards collected from a suspect. Cases involving a struggle may require the submission of clothing from both individuals.

**General procedures**
- Do not handle the victim and suspect’s clothing in the same area. Fibers remaining on hands or gloves used to package/examine clothing may cause cross contamination.
- Submit the victim and suspect’s clothing in separate containers.
- Fibers from the victim’s clothing may remain on the suspect’s items for an extended period after the incident. Submit the entire item to be examined. Do not rely on alternate light sources to attempt fiber collection in the field. Many fibers do not fluoresce and may be overlooked.
- If the entire item cannot be submitted, (e.g. automobile seats or carpet), tape-lift the item to collect transferred fibers before collecting a fiber standard. Tape lifts should be placed on clean plastic surfaces for transport (such as the inside surface of a cut open zip-lock bag). Do not place tape lifts on paper or cards, as this may prevent their recovery and comparison.
- Fiber reference samples (standards) should be collected from each source that the victim and suspect may have contacted. Submit the entire item to be used as a fiber standard. If not possible, remove a small swatch (i.e. for a car seat) or pull a random sample of the fibers (i.e. for carpeting).
- When collecting fiber standards from a vehicle, be sure to collect samples from all areas that may have transferred fibers. For example, front/rear floorboard carpeting and mats, or front/rear seat upholstery may appear the same, but may have different manufacturers (sources). Laboratory analysis may be required for discrimination.
- Do not attempt to remove fiber(s) from clothing. Submit the entire item in a sealed/labeled paper bag to the E/P Section.
- The SLED Trace Laboratory will conduct fiber examination(s).

NOTE: The greater the number of matching fiber types that exist in a case, the stronger the evidence of association. Remember that fiber matches between two individuals who share the same environment (e.g. live together or drive the same car) are essentially meaningless.

8. Hair Evidence

Contact and association may be demonstrated between individuals and/or objects through transfer of hairs. Laboratory examination of hair may reveal: the source of origin (human or animal), race, body area of origin (head, pubic, axillary), artificial treatment (e.g. dyed, bleached, etc.), condition of hair (e.g. forcibly removed, broken, burned, putrefied), wig fibers, and whether the hair is consistent from a particular individual.

General procedures
- Submit both reference (standard) and questioned hair samples.
- A reference hair sample consists of a minimum of 25 hairs randomly pulled from a body area.
- Hair standards should be submitted from both the head and pubic regions.
Hair samples should be packaged separately in sealed paper folds or plastic bags and labeled with the victim/suspect's name, area of body origin, date, and collector's initials/date.

Hair samples that are suitable for DNA testing (STR) will be retained for analysis.

Hair samples that are unsuitable for STR analysis may be submitted to an independent laboratory for mitochondrial DNA testing.

9. Glass
Glass is often encountered as evidence in burglaries, homicides, assaults, and hit-and-run offenses. Examination of glass in the laboratory may reveal: whether questioned fragments may have originated from a particular source, from which side of the broken glass a force was applied (direction of force), and whether broken fragments were at one time a single piece (fracture match).

a. General procedures
- If the evidence appears to have potential for a fracture match (physical fit), all pieces of broken glass should be collected and submitted.
- Submit all clothing worn by the suspect. Do not attempt to remove glass from clothing. Clothing should be wrapped in clean paper and submitted in sealed/labeled paper bags.
- A representative glass reference sample (standard) from each broken item (e.g. windowpane, headlight, and container) should be submitted for comparison purposes. Comparison glass should be collected from any remaining glass in the window or doorframe, as close as possible to the point of breakage.
- Questioned and reference glass samples should be packaged separately.
- Glass fragments should be packaged in solid containers (boxes) to avoid further breakage and/or loss.
- Submit the entire item suspected of having embedded glass when possible (e.g. bats, clubs, weapons).
- Glass evidence should be submitted to the E/P Section for transport to the SLED Trace Laboratory for analysis.

b. Direction of Force
The determination of "direction of force" identifies the side to which a force was applied to break the glass.
- When information regarding direction of force is needed, all broken glass must be recovered and submitted for analysis.
- Leave any remaining (intact) glass in the window or doorframe and mark as to exterior and interior surfaces.
P. Examination of General Materials

This class of materials includes bank dye bombs, fire extinguisher residue, metals, cosmetics, and building materials. This list is not all-inclusive, but includes materials not expressly addressed in this handbook. Examinations may be limited to identification or classification of the material, as opposed to comparison(s) with suspected sources of origin.

Contact the Crime Scene/Latent Print Section for assistance.

Q. Vehicles

Vehicles that must be towed will typically be stored at the RCSD Compound or RCSD Forensic Garage.

Contact the on-call CSI or CSI Supervisor for notification of the processing request and for determining the location to which the vehicle will be towed.

Vehicles as “Rolling Methamphetamine Labs”

If a vehicle is suspected to contain a clandestine laboratory (e.g. “trunk lab”), the Clan Lab Response Team is to be notified. The Desk Sergeant will notify the Clan Lab Response Team to provide technical assessment and evidence collection.

- Approach the vehicle with caution as hazardous chemical fumes or materials may be present.
- If possible, isolate the vehicle as a safety precaution and to prevent loss, contamination or deterioration of evidence.
- Never open, smell or touch any package or device suspected to contain materials used in the clandestine manufacture of drugs.
- Once the vehicle is deemed safe to approach, technical personnel will determine what, if any, evidence may be collected for analysis.
## Manual History

Issuing Authority: Evidence Custodian

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<td>C. Barrickman</td>
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