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## Policy and Procedure for Evidence Submissions

- 1.0 Purpose** - This policy and procedure establishes the requirements for submitting evidence to the North Carolina State Crime Laboratory.
- 2.0 Scope** - This policy and procedure applies to all evidence submissions at any of the Laboratory locations.
- 3.0 Evidence Submission Policy**
- 3.1** The State Crime Laboratory accepts evidence based on the following criteria:
- 3.1.1** The evidence has been obtained as the result of an official criminal investigation (e.g. found property, suicide and murder/suicide are not criminal investigations) or is a sexual assault evidence collection kit.
  - 3.1.2** The submitting agency is a law enforcement agency or company/campus police agency certified or commissioned through the North Carolina Criminal Justice Education and Training Standards Commission, The North Carolina Sheriffs' Education and Training Standards Commission or the North Carolina Company and Campus Police Program.
  - 3.1.3** The investigating officer intends to pursue a criminal case pending the results of evidence analysis and/or the related investigation.
  - 3.1.4** The evidence has not been previously examined by another analyst, the submitting agency, or another independent testing laboratory, unless prior approval has been requested and received from the Crime Laboratory Director. (e.g., items of evidence which have been tested for the presence of semen will not be accepted for examination by the Forensic Biology Section) (Note: A phenolphthalein test shall not be considered a prior examination for the purposes of submitting evidence.)
  - 3.1.5** The customer acknowledges and approves Laboratory personnel use of the most appropriate and up to date methods authorized by the Laboratory.
- 3.2** Initial and subsequent submissions shall be limited in the quantities set out herein so as to prioritize items of evidence and facilitate timely analysis. Subsequent submissions for the same type of examination will not be accepted until the prior report(s) are completed. Laboratory representatives in each forensic discipline will be available to discuss potential submissions with local law enforcement officials.
- 3.3** The type and number of items accepted per submission is based on case type. An item is defined as one article of evidence or a maximum of two swabbings/cuttings that have been collected from the same area where the intent is to combine these swabbings/cuttings. In those instances where multiple swabbings have been taken from an item of evidence, each swabbing shall be treated as an item of evidence (e.g., 15 swabbings from a firearm would be treated as 15 items of evidence).
- 3.4** For all case types, known standards from victim(s) or subject(s) will not be counted against the number of items that may be submitted.
- 3.5** Evidence will be limited per submission to the following:

**3.5.1** Homicides

- 10 items for the first submission
- 5 items for subsequent submissions

**3.5.2** Sexual Assault Cases

- For the first submission, the sexual assault kit, one pair of underwear (if not contained in kit), a condom if applicable, the hair evidence kit, or other trace evidence (see additional evidence submission policies below).
- For subsequent submissions, up to 3 items of clothing and/or bed linens (see Trace Evidence submission policies below if requesting hair or fiber on clothing and/or bed linens).

**3.5.3** Crimes against the Person

- 5 items for the first submission
- 5 items for subsequent submissions

**3.5.4** Other Crimes

- 5 items for the first submission
- 5 items for subsequent submissions

**3.6** The item number limitation shall be per type of examination requested (e.g., 10 items for the first DNA analysis submission, 10 items for the first latent evidence submission does not exceed the 10 item limitation in a homicide case). There are no item number limitations for firearms or fire debris examinations.

**3.7** All Laboratory Sections are required to return evidence unworked due to the following circumstances:

**3.7.1** The items have been improperly packaged or preserved prior to submission;

**3.7.2** The items appear to have been contaminated;

**3.7.3** Cases in which a standard needed for comparison is not submitted at the time of intake shall not be accepted by Evidence Control; and

**3.7.4** Digital evidence (computers, cellular phones, etc.) that is submitted without either a search warrant, court order, letter of consent or prior written approval from the applicable Forensic Scientist Manager shall not be accepted by Evidence Control. If the owner of the digital media is deceased, the evidence submission may be accompanied by a letter stating there is no expectation of privacy in lieu of a letter of consent.

**3.8** In certain circumstances, the applicable Forensic Scientist Manager or designee may allow an exception to a specific numerical evidence submission limitation or to other evidence submission restrictions set out in this procedure. A request for exception shall be made in writing and shall set out adequate justification to allow the exception. The final decision on whether to allow an exception shall be that of the Laboratory Director or designee.

**3.9** Digital Evidence and Firearms Sections require additional submission forms to be submitted. Please reference Section 8 for additional information.

**4.0 Type of Examination Capabilities:**

**4.1** CODIS (Raleigh and Western Regional Labs)

**4.2** Digital Evidence (Raleigh Lab only)

- Audio
- Cell phones
- Computer Forensics
- Tasers
- Vehicles (call prior to submission)
- Video

**4.3** Drug Chemistry (All labs)

- Controlled Substances

**4.4** Firearms (Raleigh Lab Only)

- Bullet Comparisons
- Caliber Determinations
- Cartridge Case Comparisons
- Firearm Barrel and Overall Length Measurement
- Firearm Function Tests
- NIBIN Database Entry
- Serial Number Restoration
- Trigger Pull Determination

**4.5** Forensic Biology (Raleigh and Western Regional Labs)

- Body Fluids
- DNA
- Familial DNA
- Paternity Testing

**4.6** Latent Evidence (All labs)

- Latent Prints
- Footwear/Tire Track
- Impression Evidence

**4.7** Toxicology (All labs)

- Alcohol(Blood/Urine/Suspicious liquid)
- Drug (Blood/Urine)
- Inhalants (Blood/Urine)

#### 4.8 Trace Evidence (Raleigh Lab Only)

- Fiber
- Fire Debris (including Ethylene Glycol)
- Glass
- Primer Gunshot Residue
- Hair
- Paint
- Physical Fit
- Tape

### 5.0 Evidence Submissions

- 5.1 Evidence may be submitted by **in-person submission (preferred)**, courier mail, registered U.S. mail, or a commercial carrier that allows for package tracking.
- 5.2 All in-person submissions to the Laboratory are by pre-scheduled appointment only. Customers may submit all evidence types to the closest Laboratory facility for in-person submissions. Contact your nearest Laboratory facility to schedule an appointment.
- 5.3 Bring the copy of the evidence FA Web pre-log printout to the Laboratory. Due to the heavy volume of incoming evidence, Laboratory personnel will not sign other agencies' receipts. During the submission process, signatures will be captured in the FA database. A receipt will be provided to the submitting person.
- 5.4 Only enclose evidence from one case per package if submitting by mail or commercial carrier. Generally speaking, a case is defined as an incident. Do not package or mail multiple cases (or incidents) together.
- 5.5 For mailed items, place a copy of the FA Web pre-log printout into an envelope addressed to the correct Laboratory location, and make sure the appropriate return address is clearly indicated. Tape this envelope to the **outside** of the evidence package. Keep a copy for your records.
- 5.6 Mark the outside of the package Attention: Evidence Control. **Do not indicate drugs, firearms, or victim/suspect names on the outside of the package.**
- 5.7 For **non-in-person submissions**, submit evidence to the nearest Laboratory location based on the type of examination requested and the services provided.

#### 5.8 Laboratory Locations:

##### 5.8.1 Raleigh Laboratory

Laboratory Main Number: (919) 582-8700  
Evidence Control: (919) 582-8840

For in-person evidence submissions, commercial delivery, and mail delivery:  
121 East Tryon Road  
Raleigh, North Carolina 27603

State Courier #: Mail Service Center 9052

### **5.8.2 Triad Regional Laboratory**

Laboratory Main Number: (336) 315-4900

For in-person evidence submissions, commercial delivery, and mail delivery:  
Triad Regional Laboratory  
2306 West Meadowview Road, Suite 110  
Greensboro, North Carolina 27407

State Courier #: 02-18-57

### **5.8.3 Western Regional Laboratory**

Laboratory Main Number: (828) 654-0525  
Evidence Control: (828) 393-6807

For in-person evidence submissions and commercial delivery:  
300 Saint Pauls Road  
Hendersonville, North Carolina 28792

For mail delivery:  
Western Regional Laboratory  
P.O. Box 528  
Edneyville, North Carolina 28727

State Courier #: 06-90-01

## **6.0 Evidence Packaging**

- 6.1** It is the responsibility of the Laboratory to ensure, insofar as reasonable and possible, that evidence does not undergo deleterious change while in our possession.
- 6.2** **All items must be individually packaged upon submission. The minimum size for all outer packaging, excluding sexual assault evidence collection kits, gunshot residue collection kits, and toxicology evidence collection kits, must be at least a 6" x 9" envelope.**
- 6.3** When an officer delivers evidence packaged in such a condition or in a container in which the evidence may be subject to deterioration, he/she may be asked to repackage the evidence prior to submission.
- 6.4** **Package and seal each item individually as appropriate for that type of evidence. Do not use plastic bags for wet/damp, bloody clothing or undried plant material.** Seal and package evidence containing

fragile and sharp articles with protective padding to prevent breakage, leakage, cross-contamination, or deterioration.

- 6.5** Mark each item with the item number you listed on the Request for Examination of Physical Evidence form, your name or initials, and your case number.

## **7.0 Evidence Seals**

- 7.1** All evidence submitted to the North Carolina State Crime Laboratory **must** be in a sealed condition. The only seals which will be accepted are:

- Tape Sealed Packages
- Heat Sealed Packages
- Packages with Tamper-Proof Seals

- 7.2** An evidence package is considered sealed only if its contents cannot readily escape and if entering the container will result in obvious damage/alteration to the seal. **Stapled or zip-locked seals are not proper seals.**

- 7.3** All evidence seals must be initialed by the person sealing the package or placing a seal on the package.

- 7.4** In the case of tape, the initials may be on the tape, under the tape (if the tape is clear), or partly on the tape and extending onto the package surface. But, in any case, the initials must either be on the tape, under the tape, or partially on the tape.

- 7.5** For tamper-proof packages, the initials must be on the seal. For heat sealed packages, the initials must be as close as practical to the seal.

- 7.6** If it is not practical to package a piece of evidence, such as an entire vehicle, the officer or technician submitting that evidence should securely attach a tag to the evidence and initial the tag.

- 7.7** All evidence containers/packages must be sealed to the extent that nothing may be added to or removed from the container/package.

- 7.8** Excessive use of tape on evidence packages should be avoided. Close and seal evidence containers carefully, but not so as to make them difficult to open without damaging the contents.

## **8.0 Submission Forms**

- 8.1** All evidence submitted to the Laboratory must be accompanied by the FA Web pre-log printout.

- 8.2** In FA Web there is an instruction sheet with numerous submission highlights. Please read the instruction page in its entirety before completing the submission information.

- 8.3 Additional forms are required at intake when submitting the following evidence:**

- 8.3.1** Firearms evidence submitted for examination must be accompanied with a Firearms Supplemental

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Submission Form.

- 8.3.2** The Supplement for Computer Forensics Requests must be completed on all computer forensics requests. Answer the questions in depth in order for the examiner to understand the request and provide an appropriate file search. It is **imperative** to state under what lawful authority the evidence was seized and to provide the Laboratory with a copy of this documentation (e.g., court order, search warrant, etc.).
- 8.4** Do not allow submission forms, packages, or other cases being transported to become contaminated by biological or other potentially hazardous evidence.
- 8.5** Some considerations for completing the online form include:
- 8.5.1 Requesting Officer:** Please use the same officer for all submissions in a given case. This simplifies keeping case records together, as well as grouping submissions on the Laboratory report. The Laboratory always returns evidence to the **Requesting Officer** unless otherwise specified.
- 8.5.2 SBI File #:** When an SBI Field Agent is involved with a case, supply that agent's file number (both new and old number when applicable). Indicate on the Request for Examination of Physical Evidence form, and the CAA (Case Agent Assigned) - this information is available from the SBI Field Agent.
- 8.5.3 Lab #:** If evidence has previously been submitted in a case and you know the Laboratory number, please provide that number. If you do not know the specific number, please advise the Laboratory that other evidence has been submitted in the case.
- 8.5.4 Age/Sex/Race:** Provide this information for all suspects and victims as it is pertinent to several kinds of Laboratory analyses. **Date of birth is required for all DWI submissions.**
- 8.5.5 Analysis Requested:** Be as specific as possible. If not sure of what tests may be performed, please call the Laboratory prior to completing the form, or refer to the appropriate sections above for further information. Clearly state the analysis required for each item of evidence. Clarify the request if necessary by stating what you need to know from the analysis on the bottom of the form or on a separate sheet of paper. The Laboratory will not arbitrarily examine evidence without a specific request for each forensic discipline clearly indicated.
- 8.5.6 Origin of Evidence:** Give the exact location where the evidence was seized or collected, (e.g., victim (name), suspect (name), bedroom, vehicle, etc.). The address does not help the scientist, but whose residence does help. **Note: For the safety of all who might handle the evidence, always indicate when evidence was recovered or seized from a body cavity or contaminated area.**
- 8.5.7 Disposition of Evidence:** The Laboratory is not a long term storage facility. All evidence except Toxicology DWI items will be retained with the understanding that it **must** be picked up by the submitting agency within 180 days from report issuance unless otherwise authorized.
- 8.5.8 Remarks or Synopsis:** Briefly describe in Part B of the submission form what reportedly happened. Supply sufficient detail to illustrate how the evidence submitted relates to the investigation. A copy of the investigative report may suffice if it contains that information. Be sure

to specify why each item is being submitted so that analysts may conduct appropriate examinations.

## 9.0 Requesting Expedited Analysis

- 9.1** In certain exigent circumstances, the examination of evidence may need to be expedited (e.g., public safety concerns during an ongoing investigation where a suspect may be at large and evidence analysis is required for apprehension, or the trial involving the evidence is already scheduled in the near future). In such an instance, the State Crime Laboratory shall consider a written rush request by the District Attorney's office explaining the precise justification for the request. (e.g., "case being sent to Grand Jury" does NOT constitute an adequate basis for a rush request.) In certain exigent circumstances, a written rush request may be submitted by the submitting agency's Chief of Police, Elected Sheriff or the SBI Special Agent in Charge of the district in which the incident occurred.
- 9.2** Not every rush request may be honored. A proper written rush request shall be directed to the Forensic Scientist Manager of the appropriate Laboratory Section. The final decision on whether to accord rush status to a case shall be that of the Laboratory Director or designee.
- 9.3** If possible, rush requests should be submitted at least 60 days or more prior to the scheduled court date. In addition when multiple examinations are requested, please allow an additional 30 days for each examination. This time frame will allow adequate time for evidence processing. **For the fastest and most reliable service, submit rush requests via FA web.**
- 9.4** For cases in which a standard needed for comparison is not submitted, the individual who initiated the rush request shall be contacted by the Laboratory. The requestor shall be given three business days to provide the required standards or a reasonable explanation as to why the required standard is not immediately available. If the required items or explanation are not received within three days, the case shall not be expedited and the requestor so notified. Once all required evidence is received and the authorization of the Section Manager is obtained, the case shall be assigned rush status and accorded priority for analysis.

## 10.0 Change in Case Status/Information

- 10.1** If the status of a case or the progress of an investigation changes and there is no longer a need for the evidence to be analyzed (stop work), please advise the appropriate Laboratory of the change via FA web. Prompt notification that the analysis is no longer needed frees valuable analysis time for other cases.
- 10.2** Requests to correct erroneous information after submission may be made in writing or via telephone conversation by the officer or agent who made the initial request. Such requests may also be made via fax to the Raleigh Laboratory at (919) 661-5849, to the Western Regional Laboratory at (828) 654-9682 and to the Triad Regional Laboratory at (336) 315-4956. The request must refer to the erroneous information which appeared on the submitted form and specify the appropriate change(s). Changes will be made only to active Laboratory cases.

## 11.0 Additional Evidence Submission Policies for Audio/Video Evidence

- 11.1** When submitting audio/video evidence, carefully package it to prevent damage during shipment.
- 11.2** In the FA Web Portal, or on the Request for Examination of Physical Evidence form, indicate in some manner the area of interest on the video. This may be indicated by listing the time in hours, minutes and



seconds, or by giving a description of a person of interest.

- 11.3** When locating the area of interest, avoid pausing or overplaying analog video. Excessive playing and pausing of analog video (e.g., VHS videotapes) may cause serious degradation of the video quality. For analog tapes, the write-protection tabs should also be removed before viewing the video in order to prevent accidental erasure of the evidence.
- 11.4** For cases involving digital video (video recovered from a DVR system), the original video files as they are stored on the system should be recovered from the DVR system to get the best quality video. To get the best results possible, be sure that when exporting the video from the DVR system for analysis, the video is exported in the native format. Many DVR systems store video in a proprietary format. When exporting video from the DVR, download the proprietary video player with the video if at all possible. Write protect media containing the exported video and video player if possible.
- 11.5** When seizing a DVR (preferred method), submit the power cord with the item, as all DVRs are different.

## **12.0 Additional Evidence Submission Policies for Digital Evidence**

- 12.1** Personal computers, cell phones, vehicles, CDs, other removable media, digital cameras, tapes and other storage media found at crime scenes may contain vital evidence that may be examined, retrieved and saved by Laboratory forensic examiners. The Laboratory will accept computer forensic examination requests relating to the following incidents:
  - 12.1.1** Crimes against children, e.g., child pornography, child abduction, sexual assaults against children, child molestation and traveling to meet a child for the purpose of sexual relations;
  - 12.1.2** Violent crimes, threats of violence or terrorism wherein a computer or mobile device search may provide evidence of such crime (e.g., homicide, rape, or serious assault);
  - 12.1.3** Fraud-based crime where the amount of loss is greater than \$100,000.00 and a computer or mobile device was utilized; or
  - 12.1.4** Any crime in which digital encryption inhibits progress by any member of the criminal justice system.
  - 12.1.5** Drug-related cases shall be limited to cell phones.
  - 12.1.6** Prior to submitting a vehicle for analysis, the requesting agency shall contact the Digital Evidence Section at (984) 204-2547.
- 12.2** Evidence submitted for examination must include the Computer Forensics Supplement form and the search warrant, court order, or letter of consent to search the evidence. If the owner of the digital media is deceased, the evidence submission may be accompanied by a letter stating there is no expectation of privacy in lieu of a letter of consent.
- 12.3** For the purposes of submission, one computing device/mobile device/storage media device will be considered one item and must be packaged separately in instances when multiple items are to be submitted. The Laboratory will not accept packages that contain more than one item.

- 12.4** Cases involving digital evidence, such as computers, must be packaged with anti-static bags or paper packaging. Due to static electricity, computer evidence must not be packaged in plastic. Be careful not to expose this type of evidence to magnetic fields. Magnetic fields are present in two-way radios, police equipment, scanners, speakers, stereo equipment, etc. If available, the computer should be packaged in the original box (from the scene) or equivalent. Anti-static foam padding or crumpled paper (such as newspaper) may be used to prevent shifting during transport.
- 12.5** If the computer to be seized is “off” at the time of discovery, **do not turn it on** or attempt to determine what evidence may be on it.
- 12.6** If the computer is “on,” save any file or files that are open at the time the computer is seized to a separate USB storage device, then attempt to determine if the computer has encryption enabled. To determine if encryption is enabled, view the icons in the bottom right of the task bar. If encryption is enabled, contact a Digital Evidence examiner for steps to take prior to shutting down the computer. If no encryption software is running, pull the plug from the back of the CPU. Clearly mark and submit the USB storage device to the Laboratory at the same time as the computer.
- 12.7** Any relevant computer manuals or software located at the scene should also be collected and may be submitted to the Laboratory as items of evidence at a later date if needed.
- 12.8** Submit any passwords that are located during the time of the crime scene search. Passwords are often found jotted down on a desk blotter or on a post-it note or posted near the work station.
- 12.9** When seizing electronic devices such as cell phones and tablets, locate, seize, and submit any power cords, chargers, or cables to charge the batteries in these devices or to connect these devices to computers.
- 12.10** If a mobile device (e.g., cell phone, tablet, etc.) is off at the time of seizure, leave the device turned off. If the mobile device is on at the time of seizure, **do not** turn the phone off, and keep the mobile device charged.
- 12.11** It is recommended that all computers be hand delivered to the State Crime Laboratory.
- 12.12** Do **not** submit computer displays/monitors, keyboards, mouse, printers, speakers, or other accessories.
- 12.13** Mobile devices requiring lock bypass services must be kept powered on if found in that state, and placed in a Faraday bag, aluminum foil or other material or enclosure that inhibits its ability to communicate with cellular networks, Wi-Fi networks, or other Bluetooth devices in order to prevent remote erasure. Agencies requiring a lock bypass for mobile devices in this state should transport the device directly to the Raleigh Laboratory without unnecessary delay and should call the Digital Evidence Section at (984) 204-2547 or the Evidence Control Section at (919) 582-8840 to alert personnel of the incoming device.
- 13.0 Additional Evidence Submission Policies for Drug Chemistry**
- 13.1** Evidence from concerned parents, schools, organizations, private citizens; found property, or evidence that has no value for criminal prosecution will **not** be accepted.
- 13.2** **No misdemeanor cases of any kind, residue amounts, drug paraphernalia, cigarette butts, or**

**hypodermic syringes** shall be accepted without the prior written approval of the Forensic Scientist Manager of the Drug Chemistry Section (Raleigh Lab), the Regional Laboratory Forensic Scientist Manager, or designee, at the written request of the Prosecutor's office. .

- 13.2.1** As an exception, residues for cases involving the manufacture of a controlled substance and hypodermic syringes in overdose death investigations may be submitted for analysis without a written request from the District Attorney's office. Forensic Scientist Manager approval is still required for submission.
- 13.3** Tablets, cigarettes, powders, etc. shall **not** be enclosed in tape.
- 13.4** Used field test kits will **neither** be accepted nor examined by the Laboratory.
- 13.5** No vaping devices such as vape pens (also known as vaporizer pens, vapor pen, pen vaporizers, vaping cartridges) shall be accepted without the prior written approval of the Prosecutor's office.
- 13.6** Non-controlled items (e.g., aspirin) may **not** be sent to the Laboratory.
- 13.7** In multi-item cases the Forensic Scientist assigned will only work the evidence of highest evidentiary value, taking into consideration the Schedule, amount, and location seized for all items submitted. Any additional information that could assist the Forensic Scientist in evidence triage shall be indicated on the submission form.
- 13.8** Evidence in product liability cases, drug residues on U.S. currency, and cases involving stomach contents (lavage) will **not** be analyzed.
- 13.9** Drug Chemistry will **not** accept cases for potential poisonings unless prior approval has been obtained from the Forensic Scientist Manager or designee. The Laboratory does **not** analyze for bacterial toxins, which occur when food spoils.
- 13.10** Since the Laboratory has a very limited storage capacity, bulk quantities of controlled substances may be sampled or analyzed by a scientist and returned to the submitting officer on the same day, if possible. To ensure that a scientist is available, contact the Drug Chemistry Section or the Regional Laboratory for an appointment before transporting a sizeable quantity of drug evidence to the Laboratory.
- 13.11** Drug evidence seized from the same individual on different dates, such as for separate controlled buys, must be submitted as separate submissions. In an effort to facilitate more timely analysis, if multiple cases are to be submitted for the same individual in these situations, the submitting officer should make every attempt to group the cases for submission to the Laboratory at one time.
- 13.12** Evidence seized from body cavities or evidence contaminated with blood, body fluids or biological waste **must** be clearly marked as a biohazard and notations concerning this evidence must be made in the FA Web Portal or Request for Examination of Physical Evidence form. The submitting officer **must** make every attempt to remove contaminated packaging and submit the evidence in clean bags.
- 13.13** Plants (including mushrooms and cacti) must be thoroughly dried prior to sending to the Laboratory. Green plants which are sealed in plastic bags will decompose and will be not be able to be examined.

**13.13.1** For suspected cannabis plants, all roots and stalks **must** be removed prior to submission.

**13.13.2** The current procedures at the North Carolina State Crime Laboratory do not allow for the differentiation of “marijuana” from “hemp”, as defined in North Carolina General Statutes.

**13.14** When submitting items containing suspected controlled substances for latent print and drug analysis, separate the suspected controlled substance evidence from the latent print evidence prior to submission.

**13.15** Drug evidence seized from different individuals must be submitted as separate submissions, even if they were arrested at the same time or at the same incident. This process will result in separate Laboratory reports being issued for each individual. **If the intent is to charge multiple individuals with the same items collectively, please designate such on the submission form.**

#### **13.16 Packaging Requirements for Drug Chemistry Submissions**

**13.16.1** All evidence must be submitted in clear packaging with the following exceptions:

- Undried plant material
- Bulk cases
- Wet/damp items

**13.16.2** All syringes must be submitted in clear puncture proof containers (i.e., sharps containers).

**13.16.3** Glass vials and plastic bottles are acceptable for liquid submissions.

#### **14.0 Additional Evidence Submission Policies for Firearms Evidence**

**14.1** Note: The Firearms Section does **not** perform tool marks, gunshot residue distance, muzzle velocity, suppressor/silencer, or ejection pattern examinations.

**14.2** When a firearm is submitted for NIBIN entry or with fired cartridge cases or bullets for comparison, a firearm function test will not be performed unless specifically requested. Firearms function tests include magazine capacity and testing of firearm safeties. If germane to the investigation with a prosecuting agency request, trigger pull determinations as well as barrel and overall length measurements will be performed.

#### **14.3 Firearm Examinations**

**14.3.1** Never place anything into the barrel of an evidence firearm.

**14.3.2** If possible, carefully unload the firearm at the scene. For revolvers, it is a good idea to note which chamber was under the hammer and/or the location of discharged and live cartridges in relation to that chamber. For pistols and other firearms that load by magazine, remove the magazine and unload the live cartridges from the magazine.

**14.3.3** **Only submit loaded firearms when absolutely necessary, and then do so in person.** Place loaded firearms in sturdy containers, not paper or plastic bags or envelopes, and tie them down to prevent movement. Mark the package - **Caution - Loaded Firearm.**

- 14.3.4** When a firearm is submitted to the Laboratory, it will be inspected to ensure the firearm is unloaded and safe prior to receipt.
- 14.3.5** In circumstances where the firearm cannot be submitted, but test fires are available, contact the Firearms Section for further instruction.
- 14.4 Fired Ammunition (Bullets, Cartridge Cases, Shotshells, etc.)**
- 14.4.1** Collect all live ammunition at a crime scene for use as standards. Only submit live ammunition if it is the same caliber as any firearms submitted and if requested to do so by the Laboratory. Contact the Firearms Section if there are any questions.
- 14.4.2** Do **not** mark cartridge cases or bullets in any manner. Place them in individual envelopes and place all necessary identification data on the outside of these envelopes. This process prevents accidental marring of the important surfaces of the bullet and/or cartridge case and accidental destruction of trace evidence. All containers must be sealed and initialed.
- 14.4.3** When collecting bullet, cartridge case, shotshell, and similar evidence at a crime scene, do **not** attempt to wash or clean the evidence or place cotton or tissue around bullets.
- 14.4.4** During autopsies, pathologists should attempt to clean blood or other body fluids off the evidence prior to packaging.
- 14.5 NIBIN Entry**
- 14.5.1** Evidence in Possession of Firearm by a Felon cases will be accepted for entry into NIBIN only.
- 14.5.2** Only cartridge cases may be entered into NIBIN. The IBIS BRASSTRAX™ System in operation at the North Carolina State Crime Laboratory Firearms Section does not accept entry of fired bullets.
- 14.5.3** If the **evidence** is being submitted for entry into the NIBIN database **only**, indicate in the space “Examine for IBIS only.” Please indicate the actual alleged offense in the “Type of Case” space on the Request for Examination of Physical Evidence form.
- 14.5.4** When submitting **test** fired cartridge cases for entry into NIBIN only, use the NIBIN Test Fires Submission form. It is mandatory that the Case #, Incident/Recover Date, and the Description/Remarks sections be completed for each firearm test fired. Multiple case submissions of test fires may be made on the NIBIN Test Fires Submission form.
- 14.5.5** Please review the NIBIN Test Fires Submission Form for firearms and calibers that are currently being entered into NIBIN.
- 14.6 Packaging for Firearms and Ammunition Components**
- 14.6.1** Firearms must be packaged separately in a paper or plastic bag or cardboard gun box. Do not

use plastic bags for firearms that are being submitted to the State Crime Laboratory's Latent Evidence Section, Trace Evidence Section, or Forensic Biology Section. **Ammunition must be packaged in a separate container and must not be in the container with the firearm.**

**14.6.2** Firearms discovered **SUBMERGED** in water must be packaged and submitted in a sample of that same water. Use a container that may remain with the firearm when submitted. Some examples of containers are screw-capped PVC pipe, old paint cans, and Tupperware-type containers.

**14.6.3** Do **not** package fired bullets or shotshell wads in sealed air tight containers.

## **15.0 Additional Evidence Submission Policies for Forensic Biology Evidence**

**15.1** The Forensic Biology Section prioritizes analysis of evidence submitted in cases involving violent crimes (e.g., homicides, sexual assaults, assault against a person) over non-violent crimes (e.g., property crimes, larceny, firearm possession).

**15.2** The Section does **not** perform saliva testing or mitochondrial testing. Paternity testing and familial testing may be performed in criminal cases with prior approval. Please contact the Forensic Scientist Manager of the Forensic Biology Section for more information.

**15.3** Touch DNA analysis will **not** be performed on any on the following:

- Swabbings from surfaces of objects at a crime scene (e.g., door knob, door handle, countertop).
- Evidence related to drug cases.
- Currency

**15.4** Touch DNA will be performed on the following items only with the written approval of the Forensic Biology Forensic Scientist Manager.

- Evidence related to weapons violations (e.g., possession of a firearm by a convicted felon).
- Ammunition, spent shell casings or swabbings from ammunition or spent shell cases.
- Clothing (This limitation does not include the examination for the wearer of the article of clothing.)

**15.5** No analysis will be performed on items retrieved from a person or a person's property when the intent is to link that person to the item.

**15.6** DNA testing may be performed on items or objects that may have been left behind by the alleged perpetrator(s) (e.g. bottles, cans, straws, cigarette butts, hats, ski masks, and gloves.)

**15.7** Section analysts will perform body fluid (blood and semen) and DNA testing, if necessary, on evidence if all standards are submitted (including elimination). If there is insufficient probable cause to obtain a DNA standard from a suspect or if the suspect is unknown, CODIS may be utilized to help develop an investigative lead. If a CODIS match or "hit" is obtained, a DNA standard must be collected from the individual and submitted for confirmation.

**15.8** The Section may perform YSTR testing on sexual assault cases and intimate items (e.g., fingernail scrapings) from a homicide under the following circumstances:

- The YSTR profile may aid in victim identification or
  - The victim is female,
  - The alleged perpetrator(s) is male, and
  - All necessary DNA standards from the alleged male perpetrator(s) and any male elimination standards are available.
- 15.9** The Section will not conduct testing on an item if it was previously tested by an investigating agency using a Rapid DNA technology. If an investigating agency decides to utilize a Rapid DNA technology, at minimum two swabs/samples must be collected from the stain in question and packaged separately. If one swab/sample is tested using a Rapid DNA technology, the untested swab/sample(s) may be submitted to the Laboratory for testing as appropriate.
- 15.9.1** Collecting multiple swabs/samples for touch DNA may have adverse effects on the ability to obtain DNA results.
- 15.10** Confirmatory testing for human blood (i.e., to determine if the origin is human) will only be performed if it is suspected that non-human blood may be present on an item, or with a specific written request from the District Attorney's office.
- 15.11** The Section has no test to identify fecal material; however, DNA analysis will be performed on submitted swabbings from the outer layer of the fecal material only. Do not collect a swabbing if the fecal material is in water or non-formed. Allow the swabbing to air dry thoroughly before submitting.
- 15.12** DNA analysis will be performed on fingerprint lift cards or on submerged items only upon prior written approval of the Forensic Biology Section Forensic Scientist Manager.
- 15.13** Avoid directly touching the evidence with bare hands or introducing body fluids that contain DNA to the evidence. **Saliva and mucous produced by coughs, sneezing, or even talking over the evidence may introduce enough DNA to affect the evidence.**
- 15.14** Avoid excessive heat, humidity, temperature fluctuations and damp conditions by maintaining evidence under environmentally controlled conditions such as an air conditioned/heated building or room. When transporting evidence, place the evidence in a climate controlled portion of the vehicle if possible (e.g., **do not transport in the trunk**).
- 15.15** In general, for items to be processed for touch DNA, no more than two swabs should be taken from the item. Best practice is to use one wet (sterile water) swab followed by one dry swab. Both swabs should be packaged together.
- 15.16** The actual firearm is preferred; however, if it cannot be submitted to the laboratory for DNA processing, it is suggested that two swabs (total) be collected from each of the following areas:
- 15.16.1** Rough surfaces on weapons (e.g. grips, trigger, slide, hammer).
- 15.16.2** The rough surfaces of a magazine (e.g., bottom of the magazine) if one is associated with a firearm.

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- 15.17** Known blood standards or cheek scrapings must be collected from all individuals (including all elimination standards) relevant to the case. A proper liquid blood standard consists of ONE lavender (EDTA) stopper blood tube OR a dried blood stain. A proper cheek scraping consists of two sterile swabs rubbed vigorously on the inside of an individual's cheeks.
- 15.18** If no blood sample is available due to complete exsanguination (loss of blood), or if an individual has been transfused within two weeks prior to the collection, an alternate standard may be obtained which may include:
- 15.18.1** If the individual has been transfused but is still alive, collect a buccal swab (cheek scraping) standard.
- 15.18.2** An article of clothing (with chain of custody intact) that is stained with what must be considered to be the subject's blood.
- 15.18.3** Ask the pathologist for 2-4 teeth (preferably molars without dental work). If they are not available, request a 3-6 inch section of compact bone (femur). Bone material that is still attached to tissue must be frozen prior to submission to the lab and must be hand delivered. **Please note that human tissue or bones cannot be destroyed or disposed of without a court order. This is the responsibility of the submitting agency.**
- 15.19** Complete information is essential in making determinations in sexual assault cases as to the donor of any foreign DNA. Since these cases deal with a possible mixture of body fluids from two or more persons, the analyst **MUST** know whether the victim had sexual intercourse with any other individuals in the five days prior to the assault. If so, an elimination standard from such individual(s) must be submitted. Other important information includes:
- Did the alleged assailant ejaculate;
  - Did he wear a condom;
  - What body cavities did the assailant allegedly penetrate;
  - If oral sex was allegedly involved, state by whom and on whom;
  - Was ejaculation reported to have taken place outside the body, and, if so, where the semen was reportedly deposited?
- 15.20** Analysts need to know, for example:
- How many people could have bled.
  - Victim's and suspect's statement.
  - What, if any, unusual circumstances may have affected the stains, such as soaking, heating or contamination.
- 15.21** Only items of evidence directly attributable to a suspect may be uploaded to the national level of CODIS. **If information cannot be provided that reasonably links a particular item to a crime the resulting profile will not be placed into the CODIS database.**
- 15.22 Packaging for Forensic Biology Evidence**
- 15.22.1** Always allow DNA evidence that is wet or that contains liquid body fluids to dry naturally



before storing and submitting. Once dry, store evidence in breathable containers (e.g., paper or Tyvek envelopes, cardboard boxes, but NOT in plastic) to avoid condensation. **Never use plastic bags or plastic containers for wet/damp and/or bloody clothing.**

- 15.22.2** Package each item intended as a separate piece of evidence separately (e.g., victim's clothing in one container, suspect's clothing in a second container, etc.)

## **16.0 Additional Evidence Submission Policies for Latent Evidence**

- 16.1** Latent Evidence will accept up to ten latent lifts and/or photographs per submission for each exam type (latent print and footwear and/or tire track). A latent lift is defined as one piece of tape on a backing card, piece of paper, or pre-made fingerprint lifter such as a hinge lifter or gel lift. The latent lift must be no larger than 8.5 in. x 11 in. (e.g., Three individual pieces of tape on one backing card are three lifts). Photographs may be submitted as hard copies or on a digital media storage device such as a DVD or flash drive. Any subject or victim elimination prints will not count toward the ten lift limit per submission.
- 16.2** Any subsequent submission for the same case will also have the ten lift/photograph limit and will be worked in sequential order by date of submission.
- 16.3** Latent Evidence does **not** work cases involving vandalism to private property (not including businesses and places of worship) or damaged personal property. Additionally, the section does not accept items of evidence for processing that were previously processed using the same methods. In cases where evidence that is submitted has been processed in some format (e.g., powdered in the field) the section may not repeat the same process. The items will be examined and processed utilizing other available techniques that are most appropriate for use based upon the nature of the evidence.
- 16.4** Latent Evidence will **not** work narcotics cases in which evidence was acquired through hand to hand buys by a sworn law enforcement officer or Possession of a Firearm by a Felon cases in which a sworn law enforcement officer removed the weapon from the subject (including when the weapon was recovered near the subject). Plastic bags from narcotics cases will also **not** be examined in the Section. An exception may be granted if a request in writing is submitted from the District Attorney's office.
- 16.5** Latent evidence will **not** work cases in which a firearm was acquired as part of a Found Property case.
- 16.6** Latent evidence will **not** work cases consisting of miscellaneous impressions (e.g., glove impressions, fabric impressions, weapon impressions, etc.) Latent evidence **will** continue to accept footwear and tire track cases.
- 16.7** When lifting latent prints wear surgical (or smooth surface) gloves and handle evidence "lightly." Do not write or place labels or tape on evidence to be processed for latent prints. Examination of any submitted item (e.g., cardboard box or piece of paper) that is submitted pre-powdered or pre-processed with tape covering suspected latent prints will be treated as a latent lift.
- 16.8** Hand-carrying fragile evidence to the Laboratory is the best way to prevent damage. Due to the fragile nature of footwear and tire impression evidence, hand-carry it to the Laboratory. If such evidence must be mailed, take extra care in packaging it.

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- 16.9** The method of analyzing an item of evidence is determined by the analyst assigned to each case. In the event that special circumstances exist which cause a specific type of analysis to be requested, a letter of explanation must be included. Additionally, if the submitting agency does not want a specific method of processing to be applied to an item of evidence, the instructions for that particular evidence must be placed in the “Extra Instructions” box on the submission form. Do not place special processing instructions in the summary of incident box.
- 16.10** The victim elimination prints should include the victim’s full printed name, signature, and date of birth.
- 16.11** Submit a subject’s full name, race, sex, state identification number (SID), and date of birth. If inked impressions are not submitted with the evidence, the SBI Identification files will be checked.
- 16.12** If it is necessary to have the FBI Identification files checked, please include any known FBI number(s) and indicate the request on the submission form.
- 16.13** Submit latent prints for SAFIS/FBI database searches with the FA Web pre-log printout to Evidence Control.
- 16.13.1** When completing the required on-line submission form, provide all requested information concerning potential subject(s).
- 16.13.2** Process arrest fingerprint cards through the SBI Criminal Information and Identification Section (CIIS). Please note that arrest fingerprint cards are for recording purposes only. Arrest fingerprint cards are not treated as evidence, and no chain of custody is recorded while they are being processed by CIIS.
- 16.13.3** Do **not** submit routine arrest criminal fingerprint cards to the Crime Laboratory unless the intent is for them to be used as evidence.
- 16.14** Always photograph any visible impressions (latent prints and/or footwear and tire tracks) prior to processing (casting or lifting). Submit the photographs to the laboratory along with the cast or item of evidence.
- 16.14.1** Use a scale and a tripod to take the photograph. Ensure that the camera lens is perpendicular or at a 90 degree angle to the impression. Photographs of footwear and tire track impressions that are submitted without a proper scale and/or not perpendicular or at a 90 degree angle to the impression will be limited to outsole design only.
- 16.14.2** Fill the viewfinder of the camera with the impression (i.e., get as close as possible).
- 16.14.3** Submit negatives of film, compact discs, or DVDs of digital images of impressions as evidence to Latent Evidence.
- 16.15** In instances of dust prints, the impressions may be lifted with special gelatin lifters. Photographs of these impressions are important, as the lifts sometimes lack adequate contrast. In all photographs, use a tripod and aim the camera perpendicular or at a 90 degree angle to the impression and provide a scale. Show the center of the impression in the center of the frame to reduce distortion. Be sure the scale is not on or

- in the impression. Gel lifters should be protected from heat and not stored in a hot environment (i.e. trunk of a car, etc.) as they will melt.
- 16.16** Because plaster shrinks as it dries, the State Crime Laboratory recommends using dental stone or another commercial forensic equivalent to cast soil or soft material impressions.
- 16.17** Do **not** attempt to clean casts. Doing so may interfere with the integrity of the case or the impression.
- 16.18** In all instances, attempt to obtain comparison standards of tires or footwear that could have made the questioned impression. Collect known shoes and tires as soon as possible, and include the elapsed time between the incident and evidence collection when submitting items to the Laboratory.
- 16.19** Agencies must collect known tire standards prior to submitting tire track evidence to the laboratory. Submit the collected known tire standards and the tires for examination. Mark all submitted tires as to their location on a vehicle (e.g. “right rear”). Mark all standards to include the location of the tire on the vehicle, and include the manufacturer, model, and DOT number.
- 16.20** Submit both shoes or boots (right and left) that could have made the questioned impression. Keep in mind that some impressions will be “reversed” upon collection (e.g. an impression on a gel lift may look like a left shoe when it was in fact made by a right shoe). Do **not** make impressions of shoes or boots being submitted to the Laboratory. Such “known standard” impressions are better done in the Laboratory where care of such evidence may be assured, and trace material may be controlled.
- 16.21** Latent Evidence does not issue reports on shoe size. Unless the size is present within an impression and/or photograph there is no reliable method for determining the size of a shoe that made a particular impression.
- 16.22 Packaging for Latent Evidence**
- 16.22.1** **Do not package wet items.** Air dry items naturally and then package them in paper bags or cardboard boxes.
- 16.22.2** When submitting tape, package each strip or piece in separate containers (**preferably plastic bags or containers**) to prevent the loss or cross-contamination of trace material, and to prevent pieces from adhering to one another.
- 16.22.3** Latent Evidence will not accept controlled substances. Remove drug evidence from any container **PRIOR to submitting** for latent print analysis.
- 16.22.4** Package known impressions separately from any latent lifts.
- 16.22.5** Do not bend, fold, or crease latent lifts prior to packaging. This can potentially interfere with the ridge detail used in the examination.
- 16.22.6** When submitting multiple cartridge cases that do not need DNA analysis, package and submit all cartridge cases as one item.
- 16.22.7** Dust impressions should never be placed in a cardboard box unless the box was

manufactured and marketed especially for dust print lifts. Place the dust print lift inside a manila folder and then put the manila folder inside an envelope.

- 16.22.8** Package footwear or tire impression evidence in a strong cardboard or wooden box. Cushion well with a suitable packing material.

## **17.0 Additional Evidence Submission Policies for Toxicology**

- 17.1** Toxicology does **not** conduct employee screening for controlled substances or participate in drug monitoring programs. Blood or urine samples related to such programs will not be accepted for analysis.
- 17.2** The State Crime Laboratory does **not** examine postmortem toxicology evidence. It should be submitted to the Chief Medical Examiner's Office.
- 17.3** Do **not** submit dried blood samples. Toxicology cannot test dried blood samples for alcohol or drugs.
- 17.4** Do **not** send blood collection kits from different subjects as part of the same evidence submission for DWI cases.
- 17.5 DWI cases:**
- 17.5.1** Blood is the preferred sample for analysis in DWI cases.
- 17.5.2** When both alcohol and drug analysis has been requested in a DWI case, Toxicology will **not** screen for other impairing substances (drugs) when the blood has an alcohol concentration at or above 0.08 gram of alcohol per 100 milliliters of whole blood, except in cases involving serious injury or death to someone other than the suspect. A request for exception to this rule must come from the District Attorney's office after the alcohol concentration is known. A form letter submitted prior to any knowledge of blood alcohol results does not qualify as a valid request for exception to this rule.
- 17.5.3** When a negative breath alcohol test result is noted on the Request for Examination of Physical Evidence form or associated case documentation, no blood alcohol analysis will be performed.
- 17.5.4** After the analysis is completed, DWI toxicology evidence will be retained by the Laboratory until otherwise authorized.
- 17.6 Non-DWI cases:** (e.g. - drug facilitated assault/rape cases, homicide suspects, custodial neglect)
- 17.6.1** Collect and submit both urine and blood samples in drug facilitated assault/rape cases and other non-DWI type cases.
- 17.6.2** The remaining portions of samples will be returned to the submitting agency upon completion of the examination.
- 17.7 Toxicology sample collection:**

- 17.7.1** Collect 20 mL of blood in two 10 mL blood collection tubes from the subject as soon as possible.
- Collect and submit all blood samples using commercially available evidence collection kits that utilize evacuated blood collection tubes, such as those made by *Vacutainer* or *Venject*. Only use blood collection tubes which contain a preservative and an anticoagulant; these tubes are identified by their grey stopper.
  - Be sure the person taking the blood sample does not leave the needle or other unnecessary items in the kit.
  - Use the protective packaging included with the kit for submission.
  - A minimum of 1 mL of blood is required for the analysis for alcohol and/or other volatiles.
  - A minimum of 5 mL of blood is required for the analysis for any other impairing substances.
- 17.7.2** In non-DWI type cases, collect at least 20 mL of urine from the subject as soon as possible.
- Use a leak proof container placed in a zip-lock type plastic bag when submitting a urine sample.
- 17.7.3** Storage of blood and/or urine samples in a refrigerator is recommended.
- 17.7.4** Indicate any suspected impairing substances being used by the subject on the Request for Examination of Physical Evidence form when submitting blood and/or urine samples for analysis.

**17.8 Alcohol Concentration in other Liquids:**

- 17.8.1** The Toxicology section determines ethanol, methanol, and isopropanol concentrations for illegally manufactured liquor or other liquids. In cases dealing with multiple buys or numerous samples from the same source, only two random samples will be analyzed.
- 17.8.2** Alcohol analysis requires only small samples of the liquid. Submit only a 5 mL sample for analysis. The Laboratory will provide small sampling vials if needed.
- 17.8.3** The sample container should not leak air or liquid. Avoid having more air-space than liquid in the container.
- 17.8.4** The remaining portions of samples will be returned to the submitting agency upon completion of the examination.

**18.0 Additional Evidence Submission Policies for Trace Evidence**

- 18.1** If DNA testing performed on an item of evidence results in an association to the suspect, any unworked

evidence submitted to the Trace Evidence Section for hair analysis, glass analysis, paint analysis, or fiber analysis that may establish the same association shall be returned without analysis.

- 18.2** Multiple trace examinations will not be performed on questioned items and known items when an association has already been made between those items showing that the two were in contact with each other. A request for exception from this rule must come from the District Attorney's office after the positive case record showing the association has been received. A form letter submitted with the evidence prior to any knowledge of the trace results does not qualify as a valid request for multiple trace analyses.
- 18.3 Fiber Evidence**
- 18.3.1** Obtain fiber evidence as soon as possible to ensure retention of the evidence and to preserve the integrity of the evidence. Consider fiber evidence a primary source of information, not a last resort.
- 18.3.2** Collect standards from all items that could have been involved in either a primary (direct contact) or secondary transfer (from an article contacted by both suspected and known items).
- 18.3.3** Where a mutual transfer is suspected, treat both items as questioned.
- 18.3.4** Whenever possible, submit the entire item. When this is not possible, collect a representative sample of as large a size as needed to show any variation in the item.
- 18.3.5** Standards should be collected from larger items such as carpet or upholstery during the initial search of the crime scene.
- 18.3.6** Fibers may be collected from larger areas (e.g., car seats, furniture) using tape. Use clear fingerprint tape. Do not use packaging tape, frosted fingerprint tape, gel fingerprint tape or latent gel adhesive lifts. After collecting the fibers, place the tape immediately into a clean zip-lock or cellophane bag with the sticky side facing the bag and seal the bag.
- 18.3.7** Under special circumstances, vacuum sweepings may be submitted with prior approval of the Forensic Scientist Manager. Vacuum sweepings should only be collected after the collection of the loosely adhering fibers using tape.
- 18.3.8** When collecting ropes or cords, clearly identify cut ends. Protect knots; do not untie them.
- 18.3.9 Packaging for Fiber Evidence:**
- 18.3.9.1** Do **not** package tape (including tapings collected from bulky items) in paper bags or manila envelopes. Do **not** wad the tape or fold the sticky sides of the tape together. Do **not** allow the tape to stick to paper or cardboard. The tape must be immediately placed into a clean zip-lock or cellophane bag with the sticky side facing the bag.
- 18.3.9.2** Clothing and bedding must be submitted in paper bags or cardboard boxes.

**18.3.9.3** Do **not** package loose fibers in plastic. Use gel caps, metal tins, or labeled paper folds contained within an envelope.

## **18.4 Fire Debris Evidence**

**18.4.1** Appropriate vapor-tight packaging includes clean metal paint cans (new and preferably lined), glass jars or vials, and nylon bags. Ignitable liquids and ignitable liquid residues in fire debris evidence are volatile and will evaporate quickly in packaging that is not vapor-tight.

**18.4.2** **DO NOT** package fire debris evidence in paper bags, plastic bags, boxes, metal tins or plastic bottles. Improperly packaged evidence or evidence in damaged packaging (e.g., puncture holes in nylon bags or rust through metal paint cans) will not be examined. This evidence cannot be resubmitted for analysis.

### **18.4.3 Types of Fire Debris Evidence:**

**18.4.3.1** Debris samples (e.g., debris found at a fire scene such as carpet or wood) are best packaged in metal paint cans or nylon bags. Do not place sharp debris in nylon bags. The Laboratory preferred method of fire debris evidence collection utilizes both a nylon bag and a metal paint can. Place the nylon bag in the metal paint can be similar to placing a trash bag in a trash can. Place the debris into the nylon bag. Fold the nylon bag into the metal can and secure the lid on the can.

**18.4.3.2** Liquid samples are best packaged in glass jars/vials or absorbed onto a cotton absorbent material (e.g., gauze, tampons). Seal the glass jar/vial or cotton absorbent material in a nylon bag or metal paint can. Do not include the wrapper from the cotton absorbent material with the evidence. Retain and properly store a cotton absorbent material (e.g., gauze, tampons) from each lot as a control sample in case it is requested by the Laboratory.

- Cotton swabs are not the best method for collecting liquid samples. If used, the cotton swabs must be sealed in a nylon bag or metal can. Do not include the swab box or any plastic swab caps with the evidence.
- If a large container of liquid (e.g., a gas can) has been collected, remove a small amount of the liquid (~3-4mL is sufficient) and place it into a smaller container such as a glass jar or vial for submission to the Laboratory.
- When liquid is removed from a container prior to submission and both the liquid and container are submitted for analysis, only one of the items will be examined if the presence of an ignitable liquid is detected in the

first item.

- 18.4.3.3** Clothing (except shoes) from one person is one item of evidence and can be packaged in a metal paint can or nylon bag. Package shoes together in another metal paint can or nylon bag separate from the clothing.
- 18.4.3.4** When alcohols or light solvents (e.g., acetone) are suspected, indicate this on the Request for Examination of Physical Evidence form as additional testing is required.
- 18.4.3.5** If DNA or Latent Print analysis is needed on a container (e.g., Molotov cocktail, charcoal starter bottle) from the fire scene, remove the liquid and submit as a separate sample for analysis. Specify on the Request for Examination of Physical Evidence form that the liquid sample was removed from the container.
- 18.4.3.6** Comparison samples may be collected from the fire scene (e.g., unburned sample of carpet, unburned sample of flooring) but generally do not need to be submitted to the Laboratory unless requested.

#### **18.4.4 Packaging for Fire Debris Evidence:**

##### **18.4.4.1 Metal paint cans**

- Best suited for debris samples.
- Fill the can no more than ~2/3 full. The remaining vapor space is necessary during analysis of the evidence.
- Paint cans require a clean rim groove to properly seat the lid. Debris in the groove will not allow the lid to seal completely.
- Use a hammer or mallet to properly seat the lid. Take care not to dent the container. Secure the lid to the can with tape.
- Clean and dry the outside of the container. Debris and moisture remaining on the outside of a metal can will cause the can to rust and may affect the integrity of the evidence. Samples in rusted (damaged) containers will not be analyzed.

##### **18.4.4.2 Glass jars and vials**

- Best suited for liquid samples.
- Debris in the threads of a screw top glass jar or vial will not allow the lid to seal completely.
- Secure the lid to the jar or vial with tape.



- Package the glass jar or vial in a manner such that the glass container will not break during transit or handling.

#### 18.4.4.3 Nylon bags

- Best used for samples that will not puncture through the bag.
- Fill the bag no more than ~2/3 full. The remaining vapor space is necessary during analysis of the evidence.
- Nylon bags may be heat-sealed and/or tape sealed.
- Heat-seal: Seal the entire width of the nylon bag. Several seals may be necessary to create an airtight nylon bag. Make sure the nylon bag does not melt along the seal creating holes in the bag.
- Tape-seal: Secure the top opening of the bag with a piece of tape to create an airtight seal. Roll the tape seal down and create a tamper-proof seal by taping along the rolled portion of the bag and around the corners. **Do not fold the nylon bag like a chip bag (folded down with one tape seal across the bag), knot the bag, twist the bag like a candy wrapper or roll the bag all the way down to the evidence (no vapor space for analysis).**
- If the nylon bag will not seal properly or air escapes when squeezing the nylon bag (pillow test), place it into another nylon bag or metal can that will seal properly.

18.4.4.4 Label evidence collected from a fire victim's body as biohazard.

18.4.4.5 Discard gloves worn to collect evidence. Do not place gloves in the evidence container.

### 18.5 Ethylene Glycol (Antifreeze)

18.5.1 Cases involving ethylene glycol (antifreeze) are typically animal poisonings and some fire investigations.

18.5.2 Follow the packaging guidelines for fire debris evidence.

18.5.3 Contact a fire debris analyst at the Laboratory with any questions.

### 18.6 Glass Evidence

18.6.1 Always collect samples of any broken windows or objects that appear to be made of glass and specify where it was collected.

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- 18.6.2** If more than one window is broken, collect and package each separately. It is best to collect glass fragments still located in the window frame to ensure that the standard is from that window.
- 18.6.3** If laminated (commonly windshield) glass is collected, be sure to obtain a standard that consists of both panes of glass and the laminate layer. Label the interior and exterior side of the window, if known.
- 18.6.4** In order to perform a glass analysis, a glass standard must be collected. If a standard is not available, the evidence will be analyzed on a case-by-case basis only with pre-approval of the Forensic Scientist Manager of the Trace Evidence Section.
- 18.6.5** The object used to break the window should be collected and submitted for analysis. **DO NOT** attempt to remove the glass fragments from the object.
- 18.6.6** The clothing (except shoes) of the victim and/or suspect should be collected as soon as possible.
- 18.6.6.1** Have the subject stand over a large piece of paper and carefully remove his/her clothing. Package all of the clothing along with the paper together in a paper bag or box.
- 18.6.6.2** Shoes may be collected but often do not produce pertinent evidence because broken glass is commonly found in a person's everyday environment. Package shoes separately from clothing.
- 18.6.7** Glass fragments may also be found in the hair or skin of the subject and should be collected noting the location where recovered.
- 18.6.8** **Packaging for Glass Evidence:**
- 18.6.8.1** The best packaging materials for glass evidence are metal tins, boxes, or manila envelopes. Label the item with the location where it was found and the designation "SHARP."
- 18.6.8.2** Do **not** use envelopes for large pieces of glass. Wrap each large piece separately in cardboard and package tightly to prevent breakage
- 18.6.8.3** If an entire window is being submitted, the best way to package it is in a flattened cardboard box with all the sides sealed.
- 18.7** **Primer Gunshot Residue Evidence**
- 18.7.1** The collection of gunshot residue from the hands requires the use of a Gunshot Residue Collection Kit that utilizes adhesive lifts. Gunshot Residue Collection Kits that contain only cotton swabs will **not** be analyzed. Contact the Trace Evidence Section for a list of current vendors that offer Laboratory approved collection kits. Follow the collection instructions included with each kit.

**18.7.2** When a gunshot residue hand kit and clothing are submitted from the same subject, the gunshot residue kit will be examined first. If the kit reveals particles characteristic of gunshot residue, the clothing will **not** be examined.

**18.7.3** Clothing and Gunshot Residue Collection Kits collected from the victim of a gunshot wound will **not** be examined for gunshot residue.

## **18.8 Hair Evidence**

**18.8.1** Hair comparisons are only performed on head and/or pubic hairs. Facial hair should not be collected, as hair comparisons cannot be performed on facial hair. Collect hair standards by removing a total of **50 full length hairs** from the head and pubic area only. Investigators must collect the hair standards from all around the region of interest. For example, collect hairs from the front, top, back, and sides of the head.

- Collect and submit known hair samples from suspect(s), victim(s), and any elimination(s) as soon as possible after the incident. Proper standards from all parties (suspect, victim, elimination) are required if a hair analysis is to be performed. If possible, determine if hair length or color has been dramatically altered between the dates of the incident and the collection of the standard. Note these alterations on the RFLE.
- **Never** collect hairs from one spot only and never cut locks of hair. If the trauma of plucking appears too great, then the hairs may be cut just at the surface of the skin, one at a time.
- In sexual assault kits collect pubic hair combings **before** collecting a pubic hair standard.
- If a victim or suspect was wearing any type of hair weave or wig during the time an incident occurred, a sample of that weave or wig must be collected and submitted as a standard.
- If a hair standard cannot be collected directly from the victim's body (victim is missing or deceased) a hairbrush may be submitted as an alternate standard.

**18.8.2** Agencies shall tape bulky items (for example: clothing, bedding, furniture, hats/headwear) for hair examinations rather than submitting these bulky items to the Trace Evidence Section.

**18.8.2.1** Use clear fingerprint tape. Do not use packaging tape, frosted fingerprint tape, gel fingerprint tape or latent gel adhesive lifts. After taping the item, place the tape immediately into a clean zip-lock or cellophane bag with the sticky side facing the bag and seal the bag.

**18.8.2.2** Exceptions must be approved by the Forensic Scientist Manager of the Trace Evidence Section.

**18.8.3** Hair root suitability for DNA analysis at the NCSCL is determined by a trained hair analyst. All hair evidence should be submitted to the Trace Evidence Section with a trace

request not a DNA request.

**18.8.3.1** If hairs of evidentiary value are found and a suitable root is present, then the root will be removed and transferred to the Forensic Biology Section of the Laboratory. For this reason, a DNA standard (cheek scraping) should also be submitted when requesting hair examinations.

**18.8.4** In rare instances in non-suspect cases, a DNA profile obtained from a questioned hair sample may be approved for a CODIS search.

**18.8.5 Packaging for Hair Evidence:**

**18.8.5.1** Place head hair and pubic hair samples in carefully labeled separate envelopes. Make sure that the seals are secure (including envelope corners) to preserve the integrity of the hair standards.

**18.8.5.2** Do **not** package tape (including tapings collected from bulky items) in paper bags or manila envelopes. Do **not** wad the tape or fold the sticky sides of the tape together. Do **not** allow the tape to stick to paper or cardboard. The tape must be immediately placed into a clean zip-lock or cellophane bag with the sticky side facing the bag.

**18.8.5.3** Clothing and bedding approved for a hair examination must be submitted in paper bags or cardboard boxes.

**18.9 Paint Evidence**

**18.9.1** Collect standards from the area immediately adjacent to the damaged area of vehicles. Collect paint standards from each panel of the car that is damaged, since bumpers, hoods, doors, etc. may have different types of paint even though they are the same color. For a typical automobile collision where there is a smear present on each vehicle, collect a minimum of four samples for submission: a standard from the damaged area of each vehicle involved and the questioned smears.

- Indicate the color, make and model of vehicle, and location of damage on each vehicle in the submission information. Include a brief summary of how the collision reportedly happened.

**18.9.2** When contact occurs between an automobile and a person, submit the individual's clothing and any other personal items which may have been involved.

- Submit clothing in paper bags. For hit and run cases, all clothing from a single victim will be treated as one item and should be packaged in one paper bag. If there are multiple victims, package each victim's clothing in separate paper bags.
- When the suspect vehicle is unknown, no paint standards are required to perform a make/model search in the PDQ Database of Automotive Paint Systems.
- Paint chips or painted vehicle parts collected from the scene may be submitted for a make/ model search if there were no paint chips of value found on the victim's

clothing.

**18.9.3** Collect any broken automobile parts, such as turn-signal covers, chrome strips, large paint chips, metal parts, and/or decorative items found at the scene.

**18.9.4** Burglary tools, such as screwdrivers and crowbars, may retain paint evidence. Whenever possible, submit the entire tool for analysis.

**18.9.5** Painted windows and door frames often have many layers of old paint. Submit wood sections containing all the paint layers. Submit the entire known object, if possible. This allows the analyst to determine the most appropriate location for standard collection.

**18.9.6 Packaging for Paint Evidence:**

**18.9.6.1** If possible, submit the entire object containing a paint smear (e.g., car bumper, mail box post). If this is not possible, carefully remove a portion of the object leaving the smear attached.

**18.9.6.2** Paper folds are the best containers for paint chips. Paper envelopes are also acceptable if all four corners and the flap are properly tape sealed. The preferred method of submission is a paper fold inside of a sealed envelope.

**18.9.6.3** Plastic bags and tape must not be used to collect or submit paint samples.

**18.10 Physical Fit Evidence**

**18.10.1** Collect the two (or more) pieces to be compared, taking great care to avoid further fracture.

**18.10.2** Do **not** attempt to physically fit the pieces prior to submission, as this process should be conducted only in the controlled environment of the Laboratory.

**18.10.3 Packaging for Physical Fit Evidence:**

**18.10.3.1** Package questioned items separate from known items.

**18.10.3.2** Ensure any broken edges are protected.

**18.11 Tape Evidence**

**18.11.1** Do **not** attempt to physically unwind or separate pieces of tape prior to submission.

**18.11.2** If bindings need to be cut from a victim, be careful not to cut through or alter any tape ends. Clearly identify any cuts made in the tape by law enforcement / medical examiner as bindings were removed.

**18.11.3** Collect any known rolls for comparison, being careful not to alter the end of the tape roll.

**19.0 Attachment - Post-Analysis Storage and Packaging Requirements of Biological and Non-Biological Evidence Exhibits**

<b>Revision History</b>		
Effective Date	Effective Date	Effective Date
03/25/2024	4	3.5.2 – updated for Trace Evidence examinations 4.4 – Updated to Raleigh Lab Only 4.7 – updated matrices 4.8 – updated examinations 8.3.1 – Removed Sexual Assault Kit Supplemental Submission form 13.3 – updated items 13.10 – updated bulk examination requests 13.16 – added packaging requirements 13.17 – removed dilution case acceptance 14.2 – updated function test scope 14.4.1 – clarified when to submit live ammunition 15.1 – incorporated authorized deviation 15.3 and 15.4 – clarified touch DNA analysis 16.1 – updated latent lift requirement 16.10 and 16.14.2 – deleted original requirement 17.5.3 – Added new clause 18.1 – replaced match with association 18.3.6 and 18.8.2.1 – added packaging tape 18.4 – removed filament examination 18.4 (new) – reorganized and updated requirements 18.5 – added ethylene glycol testing 18.6.1 – removed headlight casings 18.6.6 – Added additional collection instructions 18.7 – inserted primer to clarify examination scope 18.8.1 – added facial hair instructions 18.8.3 – added information concerning DNA testing from hair 18.10 – updated exam type to physical fit.

**ATTACHMENT: Post-Analysis Storage and Packaging Requirements of Biological and Non-Biological Evidence Exhibits**

**NOTE 1:** Most court exhibits can be packaged in envelopes, paper bags, boxes, or wrapped in large pieces of brown paper. Most exhibits can also be stored in a climate-controlled room<sup>1</sup>. This chart provides detail on special packaging requirements for some specific types of exhibits for which these guidelines do not apply. If the clerk does not have the necessary storage capacity, the court can order an alternate custodian for the exhibit under Rule 14. **NOTE 2:** Biological Evidence covered by N.C. General Statute 15A-268<sup>2</sup> is noted in the table below. Evidence Custodians must be aware that additional evidence NOT specifically listed by Statute COULD be deemed biological if there is a need for DNA and/or fingerprint testing. ***THIS DOES NOT CHANGE THE STORAGE REQUIREMENTS LISTED BELOW.***

Type of Exhibit: Biological	Climate-controlled room	Refrigerator	NON-frost free freezer <sup>3</sup>	Outer Packaging requirements	Special Instructions
Latent Fingerprint evidence	X			paper bags or cardboard boxes	
Dry hair roots or hair	X			envelopes	Make sure that the seals are secure (including envelope corners)
Dry DNA evidence (sexual assault kits, dry bone without marrow, teeth, clothing, bedding, cups, cigarettes, etc.)	X			paper bags or cardboard boxes	NOT exposed to light and in cool, dry space; NOT in plastic
DNA extracts ( <i>Dried down</i> )	X			envelopes	
DNA extracts ( <i>Liquid</i> ) <i>Liquid extracts were created by the Crime Lab during the period 10/2013-12/2016</i>	X			tubes are stored in a paper envelope	Packaging by the Laboratory with this evidence will be clearly labeled with a " <b>Keep Frozen</b> " label affixed to the packaging
DNA evidence with human tissue attached (i.e. scalp, bone with tissue attached; if something has no tissue attached, such as pieces of hair not attached to scalp and bone that is dry, it can be stored in a climate controlled room)	X			paper bag	
Urine (collected in a specimen container)			X	plastic bag	A freezer is recommended post-analysis for long-term storage to prevent bacterial growth
Feces (collected in a specimen container)			X	plastic bag	

Liquid blood not already submitted to crime lab (blood used as an individual's DNA standard)		X		plastic bag	
Blood Alcohol Kit (BAK) <i>or</i> blood vials collected in DWI or non-DWI toxicology testing		X		BAK specimen box or a plastic bag	
<b>Type of Exhibit: Non-Biological</b>	<b>Climate-controlled room</b>	<b>Refrigerator</b>	<b>NON-frost free freezer</b>	<b>Packaging requirements</b>	<b>Special Instructions and Risk Assessment</b>
Unknown White powders (non-drug evidence)	X			inner sample biohazard bag or glass vial, an inner leak proof poly bag, and an outer Tyvek envelope; NOT paint cans	<b>POTENTIAL HEALTH DANGER:</b> Potential to contain an explosive  (see "Explosive Exhibit" description)
Fire debris samples	X		X ( <i>only soil samples which could degrade</i> )	in airtight container; clean cans, glass jars, nylon bags; NOT paper or plastic bags	
Ignitable liquids (e.g. gasoline)	X			in airtight container; clean cans, glass jars, nylon bags; NOT paper or plastic bags	<b>POTENTIAL HEALTH DANGER:</b> Vented storage cabinet, separate from other exhibits; best stored with the Fire Marshall or other entity with vented storage cabinets
Glass	X			metal tins, boxes, manila envelopes; wrap large glass in flattened cardboard boxes	
Filaments (in incandescent light bulbs)	X			Styrofoam cup or box filled with tissue paper or bubble wrap	
Paint chips	X			paper folds placed in paper envelopes	
Digital evidence (e.g. computers)	X			anti-static bags or paper packaging	Due to static electricity, computer evidence must not be packaged in



					plastic
Firearms and ammunition	X			paper bags, wrapped in paper, or cardboard gun box	<b>HIGHER SECURITY CONCERN (THEFT RISK):</b> Store separately from general evidence items in a location with enhanced security (i.e. locker or closet or cage with separate padlock to secure doors)
Drug Evidence (non-plant material)	X			plastic bags	<b>HIGHER SECURITY CONCERN (THEFT RISK):</b> Store separately from general evidence items in a location with enhanced security (i.e. locked file cabinet with additional padlock attached or safe); area should have a negative pressure ventilation system that changes the air in the storage room 10 -12 changes per hour
Drugs (Plant material, i.e. cannabis)	X			paper bags (to prevent mold growth)	<b>HIGHER SECURITY CONCERN (THEFT RISK):</b> Store separately from general evidence items in a location with enhanced security (i.e. locked file cabinet with additional padlock attached or safe); area should have a negative pressure ventilation system that changes the air in the storage room 10 -12 changes per hour
Footwear / Tiretrack dental stone casts and gel lifters	X			paper bags (to prevent mold growth)	If stored in plastic, the dental stone casts will mold/mildew. Gel lifters stored in heat will dry up with evidence attached.
Explosives, lithium batteries, vaping devices	X			inner sample biohazard bag or glass vial, an inner leak proof poly bag, and an outer Tyvek envelope; NOT paint cans	<b>POTENTIAL HEALTH DANGER:</b> Vented storage cabinet, separate from other exhibits
Cash <sup>4</sup>	X			envelope or paper bag	<b>HIGHER SECURITY CONCERN (THEFT RISK):</b> Store separately from general evidence items in a location with enhanced security (i.e. locked file cabinet with additional padlock attached or safe)

<sup>1</sup> Definition: A climate-controlled room is one maintained between 60° and 75° F and at a relative humidity of no more than

60%.

<sup>2</sup> § 15A-268. Preservation of biological evidence. (a) As used in this section, the term "biological evidence" includes the contents of a sexual assault examination kit or any item that contains blood, semen, hair, saliva, skin tissue, fingerprints, or other identifiable human biological material that may reasonably be used to incriminate or exculpate any person in the criminal investigation, whether that material is catalogued separately on a slide or swab, in a test tube, or some other similar method, or is present on clothing, ligatures, bedding, other household materials, drinking cups, cigarettes, or any other item of evidence.

<sup>3</sup> Definition: Non-frost free freezer is one that does not use defrost cycles which can potentially affect the stability of DNA. It is also a storage condition in which the temperature is maintained thermostatically at or below  $-10^{\circ}\text{C}$  ( $14^{\circ}\text{F}$ ).

<sup>4</sup> Cash offered as an exhibit at trial shall not be deposited or invested pursuant to G.S. § 7A-112 or 7A-112.1