



**CENTRAL FORENSIC SCIENCE LABORATORY
DIRECTORATE OF FORENSIC SCIENCE SERVICES
MINISTRY OF HOME AFFAIRS, GOVERNMENT OF INDIA**

**38/4 KRISHNA COMPLEX,
HADAPSAR BYPASS
KHARADI, PUNE-411014**

EVIDENCE GUIDE

**CENTRAL FORENSIC SCIENCE LABORATORY
DIRECTORATE OF FORENSIC SCIENCE SERVICES
MINISTRY OF HOME AFFAIRS, GOVERNMENT OF INDIA**



**FORENSIC BIOLOGY DIVISION
(A UNIT FOR IDENTIFICATION OF BODY FLUIDS:
BLOOD, SEMEN AND SALIVA)**

SEPTEMBER 2014

SPECIAL NOTICE #1

Evidence Seals

All evidence submitted to Central Forensic Science Laboratory must be in sealed condition. The only seals which will be accepted are:

- Heat sealed packages bearing seal impression on lac.
- Packages with tamper-proof seal

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

Evidence which does not meet the sealing requirement cannot be accepted for analysis by the Laboratory.

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

Where to submit Evidence

Submit Evidence to the

**COORDINATOR
CENTRAL FORENSIC SCIENCE LABORATORY
38/4 KRISHNA COMPLEX
HADAPSAR BY-PASS
KHARADI
PUNE-411014**

Hours of Operation:

Laboratory hours are from 9:30 a.m to 6:00 p.m., Monday through Friday.

If you need guidelines prior to collecting or submitting evidence:

The Central Forensic Science Laboratory, Pune provides guidelines for processing crime scenes and collecting evidence. The Expert Scientist will provide guidance to the law enforcement agencies in the proper collection, preservation and packaging of evidence at crime scenes.

In many cases it is generally best to first contact the appropriate Scientist at CFSL, Pune.

You may call 020-20261696/020-20261698 for obtaining further information.

EVIDENCE CONTROL

Evidence control in the CFSL, Pune ensures proper evidence flow and tracking.

EVIDENCE ACCEPTANCE POLICY

- The CFSL Pune accepts any evidence which meets the following criteria:
- The evidence has been obtained as the result of an official criminal investigation.
- The submitting agency is a bona fide law enforcement agency.
- The investigating officer intends to pursue a criminal case pending the results of evidence analysis and/or/the related investigation.
- The evidence has not been previously examined by another analyst or laboratory, unless prior approval has been requested and received from the Directorate of Forensic Science Services, New Delhi.

EVIDENCE SUBMISSION PROCEDURES

Adherence to proper submission procedures is essential for analysts to evaluate evidence property, to maintain the chain of custody and to maintain the physical integrity and evidentiary value of the submitted items. Failure to follow the Laboratory's instructions when submitting the evidence could result in the evidence being returned unanalyzed.

Should you have any questions as to the proper evidence submission procedures, it is always best to call the laboratory first.

EVIDENCE SUBMISSION FORMS

(COPIES OF FORMS ARE LOCATED ON PAGES 8-10)

Attached to each “Request for Examination of Physical Evidence” form is an instruction sheet with numerous submission highlights. Please read the instruction page in its entirety before completing the form.

Fill out the “Request for Examination of Physical Evidence” form completely, supplying all information requested.

The chain of custody of each piece of evidence submitted must be tracked while in possession of the laboratory; therefore do NOT use a separate page (s) for itemization of the evidence.

Type the form or write it legibly.

Do not allow submission forms, packages or other case items you may be transporting to become contaminated by biological or other potentially hazardous evidence. Keep all submission documents and other evidence away from contaminated evidence when preparing evidence for submission to the laboratory or transporting evidence to the lab. For safety reasons stained submission documents will not be accepted by the laboratory.

Some consideration for completing the form includes:

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 requested on the form.

CFSL Pune 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.

Gender/age: Provide this information for all suspects and victims as it is valuable in several kinds of laboratory analyses.

Analysis requested: Be as specific as possible. If you are not sure of what tests may be performed please call the laboratory prior to completing the form. Clearly state the analysis you need performed on each item of evidence. Clarify the request if necessary 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 on the form.

Origin of evidence: Give the exact location where the evidence was seized or collected (i.e. victim (name), suspect (name), bed room, vehicle etc.) **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.**

Disposition of the evidence: Evidence cannot be stored in the laboratory for long after analysis; therefore unless other arrangements are made all evidence will be mailed back to the requesting officer. Bulky evidence and all hazardous material evidence will be retained with the understanding that it must be picked up by the submitting agency along with the report.

Remarks: Briefly describe in Part B of the submission form what happened. Supply sufficient detail to illustrate how the evidence submitted relates to the investigation. A copy of your investigative report (FIR and Medico Legal Report) may suffice if it contains that information. Be sure why you are submitting each item so that analysts may conduct appropriate examinations.

CENTRAL FORENSIC SCIENCE LABORATORY, PUNE

PHYSICAL EVIDENCE EXAMINATION REQUEST INSTRUCTIONS

IF INSTRUCTIONS ARE NOT FOLLOWED, EVIDENCE IS SUBJECT TO BEING RETURNED.

If status of this case changes in any manner (i.e. case closed) please notify the laboratory immediately.

1. Number all items using NUMERICAL VALUES ONLY e.g. 1, 2 3,4, etc.
2. Type or print ALL information.
3. ALL CONTAINERS/PARCELS MUST BE SEALED. THE PERSON SEALING THE EVIDENCE SHOULD PLACE THEIR INITIALS ACROSS OR CLOSE TO THE SEAL.HEAT SEALED AND TAMPER-PROOF EVIDENCE CONTAINERS/PARCELS MUST BEAR THE INITIALS OF THE INDIVIDUAL SEALING THE PARCEL.
4. COMPLETE PART A, B AND C OF THE FORM FOR BODY FLUID EVIDENCE.
5. Any wet evidence (e.g. clothing) should be dried out and submitted in **PAPER BAGS (Not plastic bags)**.
6. **All glass containers (especially tubes of blood) must be adequately protected against breakage and leakage (i.e padding and plastic bags).**
7. **Sharp metal objects or glass objects (e.g. knives, glass, razor blades etc) must be secured to heavy cardboard with ends protected.**
8. **Hypodermic needles are not accepted for analysis.**
9. **Use modern methods for collection of biological evidence. For clarification concerning the packaging or labeling of evidence please refer to the BIOLOGICAL EVIDENCE PRESERVATION HANDBOOK PUBLISHED BY National Institute of Standards and Technology U.S. (www.crime-scene-investigator.net/BiologicalEvidencePreservationHandbook).**
10. **The Laboratory's acceptance policy in hair cases is as follows:**
 - A. **Cases will only be accepted when proper standards are submitted from all victim's and suspects**
 - B. **Hair evidence will be accepted only after it has been removed from large bulky items (e.g. clothing and bedding etc.)**
 - C. **Hair evidence will be accepted only in cases in which hair is a vital part of the evidence.**
11. **Any package containing biological material must be properly identified as BIOLOGICAL HAZARDS. In addition you must indicate on the submission forms that the case contains Biohazardous evidence.**
12. **The requesting officer will be informed about the completion of the analysis/tests. It is the responsibility of the requesting officer to depute authorized person to collect the reports and the remnants of the evidence.**

NOTE: There are many legal and technical problems associated with the acceptance of evidence in the court. Take necessary precautions to insure the proper preservation, identification and packaging of items of evidence. Use commercially available kits for evidence collection.

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PART A

FORWARDING NOTE

Case Number		District/State	
Police station		FIR No.	
Name of the Messenger		Messenger ID	

Police Station Address		Type of case/Section of law	
Investigating officer Name and contact No.		Date of Offence	

Victim(s)	Gender	Suspect(s)	Gender

LIST OF EXHIBITS SENT FOR EXAMINATION

Agency item #	Type container/ Description of Evidence	Examine for	Exact location found (use name for body fluids)

Additional Analysis Requested / instructions:

Has any evidence in this case been submitted to the laboratory previously? If yes to which section?-----

CFSL CHAIN OF CUSTODY USE ONLY

ITEMS	Received by: (Initial)	Received from(Initial)	Date

Biology Case #	
CFSL File #	

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Complete Part B or attach a copy of the investigative report (FIR and MLR)

PART B

Description of the incident (Brief summary of the events of the crime), be sure to provide details as to who may have been bleeding in cases involving body fluid)

PART C (For body fluid cases)

Have samples from all possible bleeders or body fluid donors Included?

In sexual assault cases answer the following:

1. Was the attacker/suspect known to victim?
2. Did the victim have sex with someone within 72 hrs prior to assault?
3. Did the victim change her clothing's after assault?
4. Are the clothing items sent for body fluid identification same as those worn by the victim at the time of assault?

PART D (For hair analyses cases)

Crime occurred (check all that apply)

Suspects residence	
Suspects vehicle	
Victims residence	
Victims vehicle	
Other location (describe)	
Have the suspects and victims lived at the same residence or shared a common environment	

Please retain all hair evidence until the hair samples from all suspects and victims are obtained. You must submit the necessary standards before analysis can be performed.

CENTRAL FORENSIC SCIENCE LABORATORY, PUNE

FORENSIC BIOLOGY SECTION

Capabilities and Services

The forensic biology section assists in investigation of cases including homicide, rape and assault cases. Services provided by this section include the identification of the body fluid (blood semen or saliva).

Blood Identification:

When blood/blood stained objects are submitted and reasonable justification accompanies the service request, evidence will be examined to:

- Locate bloodstain(s)
- Identify blood by chemical testing
- Determine species origin (human or non human)

Semen identification:

When evidence is submitted in a sexual assault case, the evidence will be examined as appropriate to:

- Locate semen stain visually
- Examine microscopically for spermatozoa (sperm)
- Test for other semen components when negative for sperm

Saliva Identification:

When dried stains or questioned samples are submitted, the evidence items will be examined to:

- Identify saliva by chemical testing

Fingernail evidence:

The forensic biology sections are often requested to look for tissue under the fingernails of victims who have scratched their attacker. In these instances, **DO NOT COLLECT** fingernail scrapings or cuttings. If a clump of tissue is found under the fingernail, tissue can be collected with a sharp pair of unused, cleaned or sterile tweezers. Place this material in a paper fold. Then place this into a container, seal and label it appropriately. **Send it for DNA typing to one of the main CFSLs (Kolkata, Chandigarh and Hyderabad) under DFSS.**

A reasonable justification should accompany the service request and the service request should not deviate from the basic premise of establishing a transfer between victim, suspect, object or location.

For the same reasons:

- Weapons removed from a wound by a medical or autopsy personnel will not be routinely examined for blood.
- Standard Blood /semen samples collected by medical or autopsy personnel will not be examined for blood/semen and species origin.
- Suspect's clothing, undergarments and penile / urethral swabs will not be examined for presence of semen.

Classification of biological evidence by conventional serology methods like ABO blood group typing is poorly discriminating and hence DNA technology should be used for individualization of biological evidence.

- ☞ DNA typing tests are presently not available at CFSL, Pune.
- ☞ The section has no test to identify faecal material.
- ☞ The lab has no test to identify vaginal secretions, urine or sweat.
- ☞ The lab has no test to identify gonococci.
- ☞ If crime scene assistance is needed, the request should be channeled through the officer not below the rank of the Superintendent of Police.

Collection, Packaging and storage of evidence :

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 contaminate the evidence.

Avoid excessive heat, humidity, temperature fluctuations and damp conditions by maintaining evidence under environmentally controlled conditions such as air conditioned building or room. If transporting the evidence place the evidence in a climate controlled portion of the vehicle if possible.

Adequate labeling is essential not only for DOFS laboratory applications, but also vital for usage in court. All items of evidence must have both the first and last name of the victim/suspect and the agency case number or other unique identifying information on each outside package.

All paperwork attached to evidence should contain the following information:

Name (suspect and/or victim)

Brief description of contents of packaging

Location where collected

Date and time of collection

Investigator's name, agency and agency case number

Doctor, medical examiner, or technician (when applicable)

- **Always allow biological evidence that is wet or that contains liquid body fluids to dry before storing.**
- **Store evidence in breathable containers (i.e. paper envelopes, cardboard boxes)**
- **DO NOT store evidence in plastic bags.**
- **Package each item intended as a separate piece of evidence separately, i.e. each victim's clothing in a separate package/container.**
- **Always package evidence in clean paper, never use plastic bags.**
- **Pad fragile and sharp articles so that they will not break or penetrate the packaging.**
- **Store evidence in cool dry location.**

Clothing

If clothing is wet, lay the clothes flat until dry; do not fold while wet. Submit the entire article of clothing.

Wet stains

If the entire item can be collected do so. Air dry the item thoroughly before packaging it in a paper container. Do not apply heat to dry an item.

If wet stain is present and the whole item cannot be seized, the stain should be removed using sterile clean cotton swab. Swab the stain until the stain is no longer visible or until the swab becomes saturated with stain. If possible collect at least two swabs. Collect the stain on the very tip of the swab until the swab tip is dark in color.

Dry stains:

The best choice is to collect the entire article; however, there are times when this is not practical. If a stain must be cut out of an article such as carpet, cut the entire stain. If multiple areas are being cut out of an article, clean the cutting instrument before going to the next area to avoid cross contamination. If the article cannot be removed entirely or cannot be cut, the sample may be absorbed onto sterile swabs. Place a drop of sterile water on the swab and shake the swab to remove excess water. Swab the stain on the very tip of

the swab until the swab tip is dark in color or the stain is no longer visible. If possible collect at least two swabs. If the sample is very small, be very careful not to dilute the sample.

Sexual assault cases:

Take the victim to the hospital as soon as possible to have sexual assault examination. Advise the victim not to clean up prior to going to hospital. Evidence could be lost by allowing them to clean up.

Collect all evidence using modern kits.

The undergarments and clothing that will be collected during the examination are those that are worn after the sexual assault.

Do not submit the suspect's clothing for semen analysis.

Do not submit urethral or penile swab of the suspect for semen analysis.

Finding semen on suspect's own clothing does not have forensic value since it can be legally deposited there at any time.

However if victim is bleeding, suspect's clothes should be analyzed for victim's blood.

Standards

Known blood standards should be collected from all relevant people involved in the case. A proper blood standard consists of one lavender (EDTA) stopper blood tube or a dried blood stain (on a piece of sterile cotton gauze piece).

The liquid blood samples should be kept under refrigeration prior to submission to the laboratory.

Submit the dried bloodstain prepared by the medical examiner from the autopsy.

Sealing of the outer containers, along with the initials of the sealing officer, is mandatory. The seal **must** be tamper evident. Tamper evident tape or heat sealing are acceptable methods to seal a container. Self sealing evidence bags are also acceptable containers. The sealing officer must initial across the tape, heat seal, or self seal onto the package. In those instances where there is a designated area on the seal for the initials it is acceptable to use that area.

Case acceptance/ submission

Please submit only evidence that is relevant to the case.

The purpose of testing is to establish a transfer of body fluids between the victim and suspect and /or crime scene.

Examples of irrelevant evidence:

- a) Looking for victim's blood on his own clothing
- b) Looking for suspect's semen on his own clothing
- c) Looking for suspect's semen on penile/urethral swab
- d) Looking for gonococci in vaginal smears (as it has no forensic relevance).

The depth and scope of examinations selected by the analyst for a given case depends to a large extent on the amount of information provided by the submitting officer. It is imperative, therefore to include a complete description of the crime on the second part (PART B) of the physical evidence examination request form or to attach a copy of the investigative report.

Following information could help in the analysis:

How many people could have bled?

What the officer believed happened and what he /she seeks to prove by the analysis?

What if any unusual circumstances may have affected the stains such as soaking, heating, or contamination?

Complete information is also essential in making determination in sexual assault cases as to the donor of any semen detected. Since one is dealing with these cases with a mixture of body fluids from at least two individuals, the analyst must know if the victim had sexual intercourse with any other individual (s) in the 72 hrs prior to the assault.

Other important information includes:

- 1) Did the assailant ejaculate?
- 2) Did he wear a condom?
- 3) What body cavities did the assailant penetrate?
- 4) Was oral sex involved?
- 5) Did ejaculation took place outside the body? If so where was the semen deposited?

Answers to the above questions will help not only in analysis but will keep the case on track.

ABO blood grouping is no more a good choice for classification/establishing the identity of the assailant. If the investigative officers are interested in establishing the identity of the assailant/victim the evidence may kindly be sent to CFSL Hyderabad/Kolkata/Chandigarh.

At CFSL Pune all cases with or without suspect/victim standards will be routinely screened/examined for body fluids (semen/blood/saliva) only.

Safety considerations for biological evidence:

Always assume that unknown samples may be infected and handle the evidence accordingly.

Always follow precautions.

- ☞ Use clean gloves
- ☞ Do not smoke, drink, or eat until after removing the gloves and washing hands.