

Guidelines for



Forensic Medical Examination in Sexual Assault cases (2018)

CENTRAL FORENSIC SCIENCE LABORATORY
DIRECTORATE OF FORENSIC SCIENCE SERVICES
MINISTRY OF HOME AFFAIRS, GOVT.OF INDIA
DAKSHIN MARG, SECTOR 36-A
CHANDIGARH-160 036

Tel.: 91-172-2615068, 91-172-2605933

Fax: 91-172-2605923 Website: cfslchandigarh.gov.in Email:cfsl-chd@nic.in

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1. Introduction

The rational for collecting forensic evidence is to link a suspect to the victim of the crime. In order to collect suitable forensic evidence, the Medical Practitioners must understand the types of evidences present in sexual assault cases. Specimens may corroborate contact between individuals or between an individual and a location; evidence of contact occurs at the time of the offence. Specimen collection should be performed soon after the incident occurred in order to minimize loss and degradation of the biological samples.

The aim of this booklet is to provide practical approaches and guidelines for Medical Practitioners to manage biological evidence for DNA analysis more efficiently and effectively. Proper management of biological evidence is critical for forensic DNA profiling as it affects the integrity of the final results. Due to this speculation, special attention has to be paid for examination of the victim and also other steps involved in selection, collection, packing, sealing, labeling, storage, preservation, transportation and maintenance of biological samples.

2. Role of Medical Practitioners

Medical practitioners play a dual role in responding to the survivors of sexual assault. The first is to provide the required medical treatment and psychological support. The second is to assist survivors in their medico-legal proceedings by collecting evidence and ensuring proper documentation.

Examination of a case of rape shall be conducted by a Registered Medical Practitioner (RMP) employed in a hospital run by the government or a local authority and in the absence of such a practitioner, by any other RMP (Section 164 A of Cr PC) with the consent of victim or of a person competent to give such consent on victim's behalf within twenty-four hours from the time of receiving the information relating to the commission of such offence.

The victim (minor or adult), the parent/guardian/person in whom the victim reposes trust, has the right to refuse either medico-legal examination or collection of evidence or both, but that refusal will not be taken as deny for medical treatment of survivor after sexual violence.

The examining RMP or hospital is required to inform the police about the sexual offence. However, if the survivor does not wish to lodge FIR or to involve in police investigation, RMP is bound to provide medical treatment to the victim. Informed refusal will be documented in such cases.

The stepwise approach to be followed by a RMP for a comprehensive response to the sexual violence survivor is mentioned below:

1. Initial Resuscitation/First Aid

- 2. Informed consent for examination, evidence collection, police procedures
- 3. Detailed history of offence as informed by the victim
- 4. Medical examination
- 5. Age estimation (Physical/Dental/Radiological) if requested by the investigating agency.
- 6. Evidence collection as per the protocol
- 7. Documentation
- 8. Packing, sealing and handling over the collected evidence to police
- 9. Treatment of injuries
- 10. Testing/prophylaxis for STIs, HIV, Hepatitis B and pregnancy.
- 11. Psychological support & counseling

3. Medico-legal Examination of Sexual Assault victim

- Medical Practitioners shall inform the person being examined about the nature and purpose of examination and in case of child to the child's parent/guardian/or a person in whom the child reposes trust. The medico-legal examination includes removal and isolation of clothing, scalp hair, foreign substances from the body, pubic hair, samples taken from the vagina, anus, rectum, mouth and reference blood sample.
- Per vaginum examination (two-finger test) must not be conducted for establishing an incident of sexual violence and no comment should be made on the size of vaginal introitus, elasticity of the vagina or hymen or about past sexual experience or habituation to sexual intercourse as it has no bearing on a case of sexual violence.
- Medical Practitioners should examine carefully and record the details of sexual violence informed by the victim such as injuries, bleeding, swelling, tenderness etc.
 Sexual violence is commonly perpetrated against females; it may also be perpetrated against males, transgender and intersex persons.
- The nature of forensic evidence collected will be determined by three main factors:-
 - Nature of sexual violence
 - Time lapsed between incident of sexual violence and examination
 - Whether survivor has bathed or washed herself after the occurrence of the incidence.

The details of biological specimens usually collected by medical practitioners during forensic medical examination in case of sexual assault is given as detailed below:

Specimens	Collection	Purpose
or samples		
Clothings	 The victim should undress on a clean white sheet of paper in order to collect any foreign matter that may fall to floor from herself or her clothing. Ensure whether the clothes are incidental or they have been changed. Items such as hosiery or bra, underpant, blouse, shirt, salwar etc. should be collected and placed in paper bags. Wet or blood-stained clothing should be air dried before packing in paper bags. Each piece of clothing must be folded inward, placing a piece of clean paper against any stain, so the stains are not in contact with the bag or other parts of clothing. Ensure packaging is properly labeled and delivered to laboratories as soon as possible. 	 Detection of blood, saliva, semen, vaginal secretions etc. on clothing. Identification of victim or accused(s) by DNA Profiling
Sanitary pad/ Tampon	 Sanitary pad must not be removed if it is attached to the underpant. If the sanitary pad was detached from the underpant at the time of medical examination, the sticky side of the sanitary pad must be covered by the waxed sheet to prevent the pad from sticking to the paper collection bag. 	 Presence of spermatozoa/ semen. Identification of accused(s) by DNA profiling.
Condom	The condom used during assault may be collected and swabbed separately from inner and outer surface.	Presence of semen/spermatozoa (inner surface) and vaginal epithelial cells (outer surface).
Evidence on body	 This is done to collect and preserve any physical or biological evidence that may be present on the body of victim or accused. The evidence site on the body surface 	 Detection of spermatozoa/ semen, saliva, blood etc. Identification of victim or accused(s) by DNA profiling.

	may be determined by asking the patient,	
	by examination and by use of the	
	Ultraviolet light source, which will	
	reveal stains that are invisible in normal	
	light.	
	• The swabs in the kit should be used for	
	collecting evidence material. Moisten the	
	swabs by using Phosphate Buffered	
	Saline (PBS)/saline/molecular grade	
	water for lifting suspected stains from the	
	body surface.	
	Areas that may be swabbed include the	
	breasts, face, neck and hands.	
	• If bite marks are present, they should be	
	photographed with and without the	
	evidence documentation ruler after	
	taking the necessary swabs.	
	Any foreign hair sample present on the	
	body surface should be collected using	
	sterilized forceps and packed separately	
	in a catch paper which should be	
	properly folded and labeled.	
Head hair		Identification of victim or
Tieau IIaii	• Hair sample should be collected using clean forceps.	accused(s) by DNA
		•
	• Where there is evidence of semen or	profiling.
	other matted material on head hair, it	
	may be collected with the help of a	
	moistened swab. Matted hairs may be	
	collected using sterilized scissors and	
	forceps and packed in another sheet of	
	paper which should also be folded and	
	labeled.	
	• Control samples of body, scalp and	
	auxiliary hairs should be taken, ideally	
	by plucking (not by cutting the tips) to	
	obtain hair root that contain adequate	
	DNA for the analysis.	
Pubic hair	• A sheet of catch paper should be placed	Detection of spermatozoa/
	under the buttocks.	semen, blood, saliva etc.
	• Pubic hair should then be combed with	• Identification of victim or
	the comb using downward strokes so that	accused(s) by DNA
	any loose hair or debris will fall onto the	profiling.
	paper which should be carefully folded	
		İ

	and labolad	
Vulval swab	 and labeled. Combing the pubic hair with gloved fingers may also be assisted in obtaining samples of loose hair or debris. Any matted pubic hair which indicate the presence of blood or semen should be collected using sterilized scissors and forceps and packed in another sheet of paper which should also be folded and labeled or matted material may be collected with the help of a moistened swab. For reference purposes in order to obtain a comparative sample from the victim, pubic hair should be collected, ideally, by plucking and not by cutting the tips to obtain hair root. Vulval swab should be taken prior to the collection of Vaginal or cervical swabs. To collect vulval swab, labia majora should be separated carefully with the left hand. Swabbing should be done around the inner surface of the labia minora and fossa navicularis as shown in 	 Detection of spermatozoa/ semen. Identification of accused(s) by DNA profiling.
Vaginal swab	 Swabs of the vaginal fornices are essential to collect any saliva or semen that may be present in vaginal area. Swabs of anterior and posterior vaginal fornices should be taken using a vaginal speculum as shown in figure 2. 	 Detection of spermatozoa/ semen. Identification of accused(s) by DNA profiling.
Compinal		- Detection of snormatogod
Cervical swab	• Swab should be taken from cervical orifice by collecting as much of the	• Detection of spermatozoa/ semen.
swau	mucous plug as possible. The cervical swab collection along with smear preparation on slide is shown in figure 3.	 Identification of accused(s) by DNA profiling.
Anal / Rectal swab	 In case of possible ano-rectal assault, external anal and rectal swabs should be collected. The swab should be slightly moistened with sterile water and the anus carefully swabbed, slightly extending into the anal canal. When conducting the rectal swab, gentle 	 Detection of spermatozoa/ semen. Identification of victim or accused(s) by DNA profiling.

Oral swab	lateral traction (separation of the cheeks of the buttocks) should be applied for about three minutes to allow for dilation of the anal sphincter. The anal/rectal swab collection is shown in figure 4. Oral swabbing is essential to collect seminal fluid in the oral cavity where there is suspected oro-genital contact. The oral swab collection is shown in figure 5.	 Detection of spermatozoa/ semen. Identification of victim or accused(s) by DNA profiling. To corroborate oro-genital contact by the accused with the victim.
Penile swab and Urethral swab	• Moisten the tip of swab with a drop of sterile water and roll it around the tip (glans) of the penis including the sulcus and urethral meatus. The inside of the foreskin (if present) should be swabbed. The Urethral swab collection is shown in figure 6.	 Detection of spermatozoa/ semen, saliva etc. To corroborate Peno- vaginal contact between accused and victim.
Smear slides (Vaginal, cervical, anal, oral etc.)	 A smear on a glass slide can also be prepared by rolling a swab (Vaginal, cervical, anal, oral etc.) over a slide without rubbing it as the latter may cause the spermatozoa to break and thereby give a false negative result. Moisten the swabs by using PBS/saline/molecular grade water for lifting suspected dry seminal stains from the body surface. 	Detection of spermatozoa/ semen.
Nail clipping/ Nail scraping	• Fingernail clippings and fingernail scrapings from the left and the right hand should be collected and packed in a piece of white butter paper and put into a labeled and sealed envelope.	 Establish the physical contact during assault/violence. Identification of victim or accused(s) by DNA profiling.
Urine sample Vaginal wash	 Urine should be taken into leak proof sterile plastic container. Vaginal wash should be taken into leak proof sterile plastic container. 	 Pregnancy test. Detection of spermatozoa/ semen. Identification of accused(s) by DNA profiling.
Aborted Foetus	• Foetal tissue samples should be collected in sterile plastic container and stored at -20 °C.	To establish paternity by DNA profiling.

Around 3 ml of blood should be collected as reference blood sample in a purple cap (Ethylenediaminetetraacetic acid (EDTA)) tube for DNA Profiling. Few drops of blood should be taken on Flinders Technology Associates (FTA) Card/ Gauze piece and air dried.

 Approx. 3 ml of blood may be taken in the care (Sodium Fluoride) tube for

• Approx. 3 ml of blood may be taken in grey top (Sodium Fluoride) tube for alcohol and drug tests.

- Blood grouping and DNA profile of the concerned individual (victim or accused).
- Detection of alcohol and drugs.

Standard reference sample

During medical examination, RMP should collect reference sample (blood) from the victim/accused(s) as the DNA profile obtained from the same is required to be compared with that of evidence biological samples. In some other case, if any, the medical officer suspects that blood transfusion or bone marrow transfer has been performed with victim/accused, oral sample is preferred. However, in case of deceased victim, the sample such as blood, tissue, nail clippings, bone etc. may be collected as reference sample.

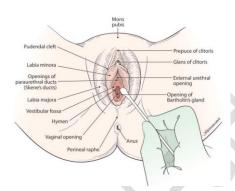


Figure 1. Vulval Swab

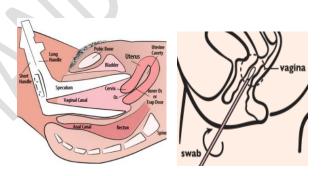


Figure 2. Vaginal Swab

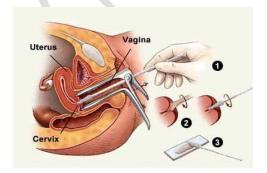


Figure 3. Cervical swab

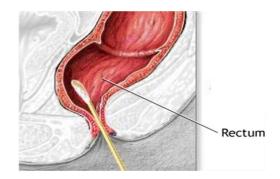


Figure 4. Rectal/anal swab



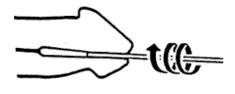


Figure 5. Oral swab

Figure 6. Urethral swab

4. Storage and Preservation of Biological Specimens

- 1. Evidence specimens such as clothing, sanitary pad, tampons etc. should be air dried before packing. Extreme sources of heat such as sunlight, hairdryer etc. should not be used for drying. After drying, the items should be packed and sealed in properly labeled paper (not plastic) bags. The parcels should be stored in a cool dry place.
- 2. Swabs such as vaginal, cervical, anal, oral, penile etc. and their smear slides should be air dried before packing and stored at room temperature. Fixative should not be used in the preparation of smear slide.
- 3. Hair samples/Nail clippings should be packed in a sheet of white butter paper which should be properly folded, labeled and sealed.
- 4. Individual foreign hairs or clumps of hair should be separately packed, sealed and labeled.
- 5. Urine/Vaginal wash should be collected in a leak proof sterile plastic container and stored at 4 °C without any preservative.
- 6. Liquid reference blood sample should be stored at 4 °C and should be transported in refrigerated conditions.
- 7. Blood stained FTA cards/gauze pieces should be air dried before packing and stored at room temperature.
- 8. Foetal tissue samples should never be preserved in Formalin. It should be stored at -20 °C and transported in refrigerated conditions.

5. Important Instructions to Medical Practitioners

- 1. Exhibits should be collected, handled and stored properly to maintain their integrity
- 2. Protective devices such as gloves, mask and apron should be used during biological sample collection. Gloves should be changed after collection of every sample to avoid cross contamination. Do not touch any sample with bare hands.
- 3. Coughing or sneezing should be avoided over the area expected to carry biological material
- 4. Disposable or sterilized devices (Scissors, Forceps, Vaginal speculum etc.) should be used for sample collection to avoid cross contamination.

- 5. Biological evidence material should not be exposed to high temperature or intense light sources.
- 6. Each exhibit should be packed separately in paper envelopes and seal properly. Do not use polythene bags.
- 7. Chain of custody should be maintained and well documented.
- 8. Following case details should be properly mentioned over the packed exhibit:
 - A. Name of person (examinee)
 - B. Description of the exhibit
 - C. Date and time of sample collection
 - D. MLR No./PMR No.
 - E. FIR No.
 - F. Police station
 - G. Name and Signature of Medical Officer
- 9. CFSL Authentication forms viz. Blood sample authentication form (Annexure I), Sexual assault victim information form (Annexure II) and Aborted foetus submission form (Annexure III) and Autopsy specimen submission form (Annexure IV) should be duly filled and sent along with the sealed exhibits.
- 10. Attested specimen seal and signature should be sent along with the sealed exhibits.
- 11. Registered Medical Practitioner should follow the recommended guidelines and may use **Sexual Assault DNA Evidence Collection Kit (SAECK)** to collect biological specimens of victim and accused.

	Sexual Assault DNA Evidence Collection Kit (SAECK)					
Sr. No.	Name of the item	Purpose	Qty			
1.	Pair of gloves	For health & safety and to avoid	04			
2.	Mask	contamination	02			
3.	Syringe	Blood sample collection from Examinee	02			
4.	Dropper	Body fluid collection	02			
5.	Vaginal speculum	Vaginal examination and help in collection of biological specimens.	01			
6.	Pair of comb	Collection of Pubic/Head hair	01			
7.	Nail cutter	Collection of Nail clippings	01			
8.	Ampoule of sterile Distilled water/Saline/ PBS	Moistening the swab for biological sample collection.	01 each			
9.	Alcohol swab	Sterilization of surgical equipments	04			
10.	Sterilized gauze pack	Collection of body fluid stains (blood, saliva etc.)	02			
11.	Filter paper	Collection of body fluids stains (blood, saliva etc.)	05			
12.	EDTA vacutainer (purple cap)	Collection of liquid blood sample for DNA profiling	01			

13.	Sodium Fluoride vacutainer	Collection of liquid blood sample for drug and alcohol testing	01
	(Grey cap)	drug and arconor testing	
14.	FTA cards	Collection of blood and saliva for	01
		storage & preservation at room	
		temperature	
15.	Foam tip swab	Collection of evidence biological	06
		samples (body fluid or dry stains).	
		Collection of seminal fluid from the oral	
		cavity, lips, breast etc.	
16.	Sterile Uricol container	Collection of Urine sample and vaginal	03
		wash	
17.	Sterile cotton swabs	Collection of samples from vagina,	10
		cervix, anus/rectum, urethra, mouth etc.	
18.	Glass slides	Preparation of smear of samples	10
		collected from vagina, cervix,	
		anus/rectum, urethra, mouth etc.	
19.	Pregnancy detection kit	Detection of pregnancy of the victim	01
20.	Catch paper	Collection of any foreign matter that	02
		may fall from the body or clothing's of	
		victim during examination.	
21.	Labeled evidence paper	Packing of biological specimens and	15
	bags/white envelopes	related documents	
22.	Hand disinfectant	For health & safety and to avoid	01
		contamination	
23.	Butter paper	Collection of hair, nail clippings etc.	02
24.	CFSL Authentication For authentication of biological samples collect		collected
	forms	from donor.	

Appendix I

CFSL/CHD/FM/106/01.09.2010/II

(Confidential)

CENTRAL FORENSIC SCIENCE LABORATORY
DNA Division,

Ministry of Home Affairs, Govt. of India,

CFIs Complex, Dakshin Marg, Sector 36-A, Chandigarh – 160036.

<u>BLOOD SAMPLE AUTHENTICATION FORM</u>

(To be completed by the Authorized Medical officer collecting the samples. Identity of person from whom blood sample is being collected) Attested _____Father's/Guardian/Husband name: ___ Name of person: _____ Photograph Male [] Female [] Age _____ Caste/ Origin of State: __ Gender: by Medical officer Address: __ __ PIN__ FIR/Crime Case No: Collection Center Name ____Sample Collection Date Sample Collected By ___ Collection Center Address___ Storage conditions used ____ Name of the person Date &Time Signature Collecting the blood sample Name of Investigating Officer/ Date &Time Signature Representative Name of Witness Date &Time Signature Name of Witness Date &Time Signature Imp: A person from the opposite party in Paternity disputes and Sexual assault cases. **Chain of Custody** ____Blood samples released to: ___ Blood samples sealed and released by: ___ Mode of release: Hand delivery [] or Mail [] Date sent to CFSL, Chandigarh:__ SUBJECT'S STATEMENT OF VOLUNTARY CONSENT & RELEASE ____Son/Daughter/Wife/Guardian of Kum/Master_____ ___hereby certify that the information provided above is true and accurate. I willingly consent to the collection of the blood sample from myself for the purpose of DNA analysis. Signature/thumb impression of the donor Date &Time For Office use only Sample received on: ___ CFSL File No:

Signature of Authorized Medical Officer

Laboratory Reference No:

Laboratory Exhibit Code No : ____

Examined By:

Appendix II

CFSL/CHD/FM/106/01.09.2010/III

(Confidential)

CENTRAL FORENSIC SCIENCE LABORATORY
DNA Division,

Ministry of Home Affairs, Govt. of India,

CFIs Complex, Dakshin Marg, Sector 36-A, Chandigarh – 160036

SEXUAL ASSAULT VICTIM INFORMATION FORM

(10 be completed by the Authorized Me	edical Officer who conducted	the Medical examinati	on)	
1. VictimName:	MLR/PMR Numb	per		ttested Photograph y Medical Officer
Address	<i>F</i>	Age Sex		
Date & Time of assault	District & State of	of Incident:		
Date of Examination:				
Number of Assailants		Age	Sex	
Sexual Assault Examiner:				
Hospital Name:	Hospital T	elephone No.:		
2. DETAILS OF ASSAULT: (e.g., ora foreign object; oral contact by perpetrat				
3. Pregnancy test to determine pre-ex 4. PRIOR TO EVIDENCE COLLEC		Yes/ No/Don't know_		
Bathed / Urinated /Defecated /Vomit above Whether Clothes changed:		shed Teeth or Used Mou		
 4. For "Rape Drug" Test Blood and/or U 		Yes/ No/Don't know		
5. AT TIME OF ASSAULT WAS:				
1. Contraceptives / Spermicide / Lubrica	ant/ Condom present /used?	Yes/ No/Don't know		
2. Victim menstruating? know		Yes/		No/Don't
6. AT TIME OF EXAM WAS: Victin	n menstruating:	Yes/ No/Don't kno	ow	
7. RECENT CONSENSUAL COITU	S :			
Has Victim had consensual coitus withi	n last 5 days?	Yes/ No/Don't know	/	
If yes, was birth control used?		Yes/ No/Don't know	/	
What method of birth control was used?	?			

Overleaf

Brief Description of Evidence Submitted (One item per line.)

Parcel No.	No. of Seals	Description			
	Scars				
		Chain of Chain	Custody		
					
Parcel Description	n	Evidence received From	n Evidence delivered To	Date	Comment
		<u>Examinations</u>	Requested		
rson authorizing release	of Information is (check one): Victim Vic	tim's parentVictim	's guardian	Other
necify)					
reporting anonymously, thin 3 months after the m	I have been infor	med that all evidence, including	my clothing will be disposed of,	if I do not rep	ort the crime
nature:	icuicai examinatio	и,	Date:		
TIM/PARENT/GUAR	DIAN SIGNATU	RE	Place:		
ure with stamp:			Date		
are with stafff.			Duic		

Place:

Sexual Assault Examiner

Appendix III (Confidential)

CFSL/CHD/FM/106/01.09.2010/VII

CENTRAL FORENSIC SCIENCE LABORATORY
DNA Division,
Ministry of Home Affairs, Govt. of India,
CFIs Complex, Dakshin Marg, Sector 36-A, Chandigarh – 160036

ABORTUS (Aborted Foetus) IDENTIFICATION SHEET (DNA PATERNITY TESTING)

To be completed by the Authorized Medical Officer who conducted the Medical/Postmortem Examination 1. Identity of person from whom abortus sample is being collected

Name of person:	
Address:	
Whether the individual is juvenile or deceased?	
2. Specimen Collection (See instructions)	
Hospital Name:	Hospital Telephone No.:
Medical Examiner	Date
3. Type of Specimen(s) Collected (Please specify	y the portion of Abortus)
i	
ii.	
iii.	
4. Weeks GestationS	storage conditions used
5. Chain of Custody	
Specimen sealed and released by:	
Specimen released to:	
Mode of release: Hand delivery	Mail
Date sent to CFSL, Chandigarh:	

Signature of Authority Medical officer

ABORTUS SPECIMEN COLLECTION INSTRUCTIONS

Abortus collection	Wear gloves while collecting samples Tissue from an abortus shall be selected by the physician and approximately 2 cm² portion must be placed into a sterile plastic tube. Print the mother's name and the date of collection on the label. Physician should put his/her initials on the label.
Storage	Do not preserve the tissue in formalin. Freeze the tissue and transport it on ice. Blood sample should be collected in sterile EDTA tubes. Do not freeze the blood sample.
Forms	Complete the forms, documenting all the required information. Sign the form where indicated to verify collecting the biological samples.
Packing	Package each sample separately and affix with a tamper proof seal.

Appendix IV (confidential)

CFSL/CHD/FM/106/01.09.2010/VI

CENTRAL FORENSIC SCIENCE LABORATORY DNA Division,
Ministry of Home Affairs, Govt. of India,
CFIs Complex, Dakshin Marg, Sector 36-A, Chandigarh – 160036

(To be completed by the Authorized Medical	OTOPSY SPECIMEN (S) SUBMISSION Officer who conducted the Postmortem)	FORM				
1. Identity of person from whom samples are	being collected:					
Name:	ne: Religion/Caste					
Date of Death	Hospital Patient # (If any)	_				
2. Cause of Death						
3. Has the individual received a blood transfu	usion or bone marrow transplant in the last	three months?				
4. Legal Contact:	Phone					
5. Specimen Collection:						
Collection Centre Name:		+-				
Collection Centre Address:						
Sample Collected by:	Sample collection date:					
6. Description of Samples Collected:) ~				
Sample	Storage conditions	Other remarks				
Specimen Disposal: (Please check eith Note: If the disposal or return of the soft. Chain of Custody	her option 1 or 2 or 3) sample is not authorized, a Specimen(s) ma	y be destroyed of in 1 year.				
Specimen(s) sealed and released by_						
Specimen(s) released to:						
Mode of release: Hand delivery	Mode of release: Hand delivery Mail					
Date sent to CFSL, Chandigarh						
uthorized Medical Officer Signat	ure:	Date				