



सी. डी. एफ. डी.

CDFD

डी एन ए फिंगरप्रिंटिंग एवं निदान केन्द्र

(जैव प्रौद्योगिकी विभाग, विज्ञान एवं प्रौद्योगिकी मंत्रालय, भारत सरकार का स्वायत्त संस्थान)

CENTRE FOR DNA FINGERPRINTING AND DIAGNOSTICS

(An autonomous institute of the Dept. of Biotechnology, Ministry of Science & Technology, Govt. of India)

प्रयोगशाला ब्लॉक : तुलजागुडा, (एम जे मार्केट के सामने), नामपल्ली, हैदराबाद - 500 001, भारत

Laboratory Block : Tuljaguda, (Opp.M.J. Market), Nampally, Hyderabad - 500 001, India

सभी पत्राचार हेतु / For all Correspondence :

कार्यालय ब्लॉक : भवन 7, 5-4-399/8, गृहकल्प, नामपल्ली, हैदराबाद - 500 001, भारत

Office Block : Bldg. 7, Gruhakalpa, 5-4-399/8, Nampally, Hyderabad - 500 001, India

PROCEDURES FOR COLLECTION & FORWARDING OF SAMPLES FOR DNA FINGERPRINTING ANALYSIS

DNA fingerprinting technology today has made it possible to identify the source of biological samples found at scenes of crime and also to resolve disputes of Paternity and Maternity. The Laboratory of DNA Fingerprinting Services of **CDFD** provides services to various investigating agencies to resolve cases of Maternity / Paternity disputes, Identification of rapist(s), linking the suspects to biological evidence found at the crime scene in murder cases, Identification of mutilated remains of deceased, Identification of missing child, child-swapping cases in hospital wards and forensic wildlife (in poaching cases). This leaflet has been prepared to disseminate information to the investigating officers/judicial authorities/medical officers about the process of evidence collection, preservation and forwarding the samples for DNA fingerprinting analysis. The procedures described here are simple, time tested and most suitable for Indian conditions. The samples should be collected in the way prescribed below and sent to **CDFD**.

For the establishment of maternity/paternity, we require the bloodstains of the mother, disputed child and the alleged/suspected biological father.

For the Identification of rapist in sexual assault cases, we require the forensic exhibits (viz., garments, vaginal swabs and slides) along with the bloodstains of the suspect(s) and victim.

For the Identification of deceased, we require the bloodstains of the nearest relatives (viz., mother, father, brother, sister and children) along with the material objects of the deceased like teeth, post-mortem blood, muscle tissue, bone, hair with root and other material relevant to the case.

The bloodstains can be made using lancet on FTA cards being sent by us, in the presence of **Hon'ble Court** Authorities. These stains should be air-dried and sent to us. The procedure for collection and shipment of bloodstains on FTA cards are given in the annexure.

The forensic exhibits should be sent as mentioned below:

Bloodstains	Wrapped with a dry paper or cloth
Muscle tissues	About 100 gms of muscle tissue should be sent in a clean glass bottle/plastic container with 0.9% DNS (normal saline sold in medical shops) on ice or in a crystal salt (sodium chloride) as a preservative. Tissue samples should not be preserved in formalin.
Vaginal swabs	The dry cotton swab should be placed in a clean dry glass vial/bottle
Teeth, Hair with root and Bones (intact)	Wrapped with a dry paper or cloth Complete burnt bones, pieces of bones and decomposed tissue are not useful for analysis

All the samples should be properly collected & sealed and sent to CDFD under certification along with specimen seal for comparison. **The samples should reach CDFD between 10:00 am to 5:00 pm on any working day (Monday to Friday).**



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On request, necessary blood collection material kit (blood lancet and FTA cards) and prescribed formats (identification forms and forwarding note) will be provided by **CDFD** to the concerned authorities.

The prescribed formats need to be submitted duly filled-in along with the samples. An extra **attested** passport size photograph of each individual, whose bloodstains are being forwarded, should be sent along with the identification form.

The charge for the DNA fingerprinting analysis for each bloodstain sent on FTA card/paper is Rs. **5,000/-** (Rupees five thousand only). For each analysed non-blood sample (viz., body fluid stains, teeth, bones, hairs and post-mortem tissues etc), it is Rs. **10,000/-** (Rupees ten thousand only). In addition to these analysis charges, an admissible service charge as levied by Government of India has also to be paid. Payment has to be paid in advance, in the form of a crossed demand draft drawn in favour of "**Director, CDFD**" payable at Hyderabad.

For enquiries in this regard, please contact us at:

Email: dfp@cdfd.org.in

Tel No. 040-24749331 / 332 / 333

Fax No. 040-24749448

The DNA typing report will be submitted on receipt of the DNA testing charges and fulfilling of all the official formalities.

The following conditions have to be fulfilled for the appearance of the DNA expert from CDFD for depositing evidence in the Hon'ble Court of Law:

- 1) Personal security of the expert has to be ensured from the time of his/her arrival till his/her departure.
- 2) TA/DA would be paid as per Government of India rules and entitlement.
- 3) The expert should be escorted from and to the railway station/airport and accommodated in a guesthouse or in a best available hotel.
- 4) The payment is to be made to the expert before his/her departure from the Hon'ble Court. In all cases forwarded by the investigative agencies the above payment would have to be reimbursed by the investigative agencies and not the Hon'ble Courts.
- 5) CDFD may kindly be provided with a copy of the Judgment of the Hon'ble Court, if any pertaining to this case.
- 6) In order for the CDFD to comply with audit requirements, you are requested to kindly issue a certificate of attendance clearly indicating about the payment of TA/DA to the DNA examiner by your office or otherwise.

Please note that no telephonic enquiries will be entertained regarding case reports.

Annexure

Collection and shipment of blood on FTA Cards

Description: FTA (Flinders Technology Associates) cards are used for room temperature collection, shipment, archiving, and purification of nucleic acids from a wide variety of biological samples for PCR analysis.

Precautions

Handling: Always wear gloves to avoid contamination of FTA cards. Follow universal precautions when handling biological specimens.

Storage: Store unused cards in original packaging in a cool, dry, clean environment. After applying samples, allow them to dry, then store at room temperature in a dry clean environment.

Important Instructions:

Application of blood samples (fresh whole blood or with the anticoagulants: EDTA, sodium citrate, ACD, or heparin)

- 1) Label the FTA card with the appropriate sample identification. The date and time of collection, name of the concerned person whose bloodstain is collected, name of the Medical Officer who collected the blood and his/her signature need to be mentioned on the FTA card.
- 2) In one circle of the card, drop the blood (<125 μ l per 1-inch circle, 0.75 μ l per 3/4-inch circle) onto the card in a concentric circular motion within the printed circle area and allow it to air dry. Avoid "pudding" of the liquid sample, as it will overload the chemicals on the card. Also do not rub or smear the blood onto the card. In the second circle, please spot at 4-6 locations by placing one drop of blood at each location. (please see the figure below).
- 3) Samples applied to FTA cards are ready for immediate room temperature storage. Do not heat to shorten the drying period.
- 4) Dried blood spots will appear darker than freshly spotted ones.
- 5) The sample is now ready for transporting for downstream processing or archive.

Transport: The FTA cards can be sealed in a clean, dry envelope and sent to the Laboratory of DNA Fingerprinting Services, CDFD for DNA profiling analysis.

