



Central Forensic Science Laboratory
(An ISO/IEC 17025:2017 Accredited Institution)
Directorate of Forensic Science Services
Ministry of Home Affairs
Govt. of India

Phone :0172-2615068, Fax :2605923, e-mail : cfsi-chd@nic.in
Website: www.cfsi Chandigarh.gov.in

HISTORICAL BACKGROUND

The laboratory since its inception functioned under various governments departments.

CID Scientific Section, Lahore (1933)

The Central Forensic Science Laboratory, Chandigarh started as *CID Scientific Section*, in 1933, under the Police Department of United Punjab in Lahore. This Scientific Section continued to function there till it was shifted to Phillaur (Punjab) in 1947.

FSL Punjab at Chandigarh (1961)

It received major uplift when it was converted into a full-fledged Forensic Science Laboratory of erstwhile Punjab at Chandigarh in 1961.

Union Territory, Chandigarh (1966)

The Laboratory was taken over by the Union Territory, Chandigarh in 1966 and housed in the Government Book Depot Building at Sector 18-A, Chandigarh.

BPR&D, Govt. of India (1978)

After taking over its control on July 01, 1978, under the Bureau of Police Research & Development, Ministry of Home Affairs, Government of India renamed it as *Central Forensic Science Laboratory (CFSL), Chandigarh*. In order to expand its capabilities and infrastructure, laboratory was relocated in 1996 to its present position at Plot No. 2, Dakshin Marg, Sector-36 A, Chandigarh.

Directorate of Forensic Science Services (2002)

To ensure constant upgradation of forensic science activities at national level, a separate full-fledged department namely "Directorate of Forensic Science" was set up by Ministry of Home Affairs, Govt. of India vide resolution dated 31.12.2002. Later MHA renamed it as Directorate of Forensic Science Services (DFSS). Presently, the CFSL, Chandigarh is working under the administrative control of DFSS, MHA, Govt. of India, New Delhi.

LOCATION

Presently the laboratory campus is situated at Dakshin Marg, Plot No.2, Sector 36-A, Chandigarh at a distance of about 3 kms. from ISBT, Chandigarh, 12 Kms. from Chandigarh Railway Station and about 20 Kms. from Chandigarh Airport.

VISION

To become the leading forensic science laboratory of the nation and make the Indian forensic science deterrent enough to potential criminals. This will be achieved by having highly motivated human resource and remaining at the fore-front of forensic science for providing prompt and dependable service of international standards to the criminal justice delivery system through continuous research & development efforts.

OBJECTIVES

- Examination of referral cases.
- Research and development for evolving better and new methodologies in the field of forensic science.
- Dissemination of the results of research & development activities to the forensic community.
- Providing scientific assistance to criminal justice delivery system.
- Providing trainings to judicial officers, forensic scientists, police and students of various institutions.
- Providing scientific assistance to various state governments for establishment and upgradation of forensic science laboratories.
- Providing guidance and assistance to state forensic science laboratories and other similar institutions for implementation of quality management system.
- Collaboration with other R&D/S&T/Universities/Educational institutions for the development of forensic science.
- Awareness of forensic science in the society.

SERVICES

The various divisions of the laboratory examine different types of crime exhibits for its clients viz.

- Courts of Law
- Police
- Central Bureau of Investigation
- Narcotic Department
- Directorate of Revenue Intelligence
- Custom and Excise
- Foreign Post Office
- Income Tax
- Indian Air Force
- Military
- Navy
- Railways
- Controller of Explosives
- Forensic Science Laboratories
- National Investigation Agency

Ballistics Division

- ❖ Barrel Wash Examination
- ❖ Firearm (s) or part (s) thereof/manufacturing tool (s)
- ❖ Serviceability/working condition of firearms
- ❖ Firearms, prone to accidental discharge
- ❖ Firearm for type, make and model
- ❖ Firearm, whether its part(s) tempered with
- ❖ Restoration of erased markings on firearm(s)
- ❖ Ammunition or parts thereof/ manufacturing tools
- ❖ Identification of ammunition/parts thereof for type, make and calibre.
- ❖ Identification of shots, pellets, wad/wad pieces, propellant charge and bullet/slug/parts thereof
- ❖ Linkage of fired/misfired cartridge & fired bullet/bullet fragments with firearm.
- ❖ Bullet/pellets/wads whether fired or not
- ❖ Examination of target(s) involved in shooting
- ❖ Measurement of wound ballistic parameters
- ❖ Chemical tests for ammunition and firearm discharge residue
- ❖ Test firing & specimen



Created Facility for ballistics evaluation of Bullet Resistance Materials (Jacket, Helmet, Vehicle, glass etc.). The technology was also transferred to Directorate of Forensic Science Gujarat.

Biology Division

- ❖ Hairs / Fibers
- ❖ Bones, Skull, Teeth
- ❖ Skull superimposition
- ❖ Facial reconstruction
- ❖ Blood grouping
- ❖ Human semen detection & grouping
- ❖ Urine test
- ❖ Vaginal fluids examination
- ❖ Saliva testing



Forensic DNA Profiling Unit

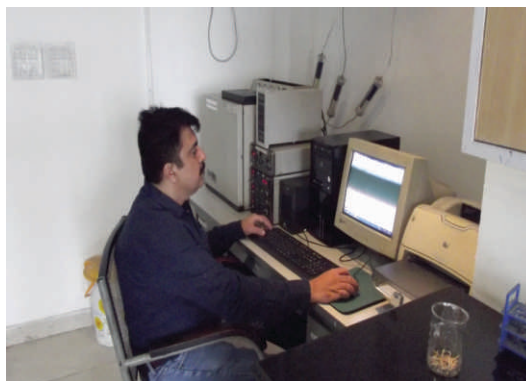
- ❖ Disputed paternity/maternity
- ❖ Criminal paternity
- ❖ Rape and murder cases
- ❖ Child abuse sexual cases
- ❖ Human identification cases
- ❖ Homicide cases
- ❖ Kinship analysis.
- ❖ Forensic challenged DNA cases: burnt bone , touch DNA, trace elements etc.



State of Art– DNA Lab facility with annual capacity of around 2000 case examination being developed under Nirbhaya Fund Scheme & development of CFSL Chandigarh as a reference laboratory in DNA analysis.

Chemistry Division

- ❖ Drugs and Psychotropic substances under NDPS Act like Opium and its derivatives, Heroin, Cocaine, Cannabis, Amphetamine, Barbiturates, Benzodiazepines, LSD
- ❖ Liquor
- ❖ Pharmaceutical products
- ❖ Acid and Alkali
- ❖ Arson
- ❖ Petroleum products– petrol, kerosene, diesel.
- ❖ Bribe Trap cases
- ❖ Metals and alloys, etc.



New Instrumentation facility of GC, GC-MS, HPLC, FT-IR UV-Visible have been developed & to act as the Nodal Laboratory for the development of SRM database for reference.

Document Division

- ❖ Handwritten items
- ❖ Indentations
- ❖ Paper
- ❖ Typewriting
- ❖ Ink
- ❖ Altered documents
- ❖ Dry seal impressions
- ❖ Paper cuts, tear, perforations
- ❖ Rubber stamps
- ❖ Documents produced with toner technology



Explosive Division

- ❖ Organic Explosives/Explosive debris
- ❖ Inorganic explosives/ingredients
- ❖ Explosive composition
- ❖ Diffused and post blast low and high explosives
- ❖ Pyrotechnics compositions etc.



Toxicology Division

- ❖ Visceral material
- ❖ Blood
- ❖ Urine
- ❖ Stomach aspirate
- ❖ Nails
- ❖ Hairs
- ❖ Bones
- ❖ Poisons/drugs as such or associated with various Matrices, etc.



Physics Division

- ❖ Tool marks and impressions
- ❖ Foot prints and shoe prints
- ❖ Tyre prints
- ❖ Cement and mortar
- ❖ Glass
- ❖ Soil
- ❖ Electrical failures
- ❖ Restoration of numbers/impressions
- ❖ Paints and pigments
- ❖ Fibres and fabrics
- ❖ Broken and severed parts, etc.



Speaker Identification and Audio-Video Authentication Unit

- ❖ Speaker identification .
- ❖ Examination of audio/video tape for authentication.
- ❖ Examination of pirated audio/video cassettes, VCD, MP3,CD, DVD etc.
- ❖ Analysis of video for identification of object/ costumes/ personals.
- ❖ Analysis of CCTV video footage and mobile contents.
- ❖ Enhancement of audio/video signals.
- ❖ Recording of specimen voice samples forwarded by different authorities.
- ❖ Preparation of authorized judicial copy of edited copy.
- ❖ Enhancement of selected portion, specially far end speaker.



Cyber Forensic Unit

- ❖ Hard disk of computer and laptop
- ❖ Mobile phones, Mobile phone memory cards
- ❖ Mobile phones, SIM cards.
- ❖ Memory devices i.e. Pen drive/Flash drive
- ❖ E-mails.
- ❖ PDA and Magnetic strip card etc.



SPECIALISED TECHNICAL FACILITIES

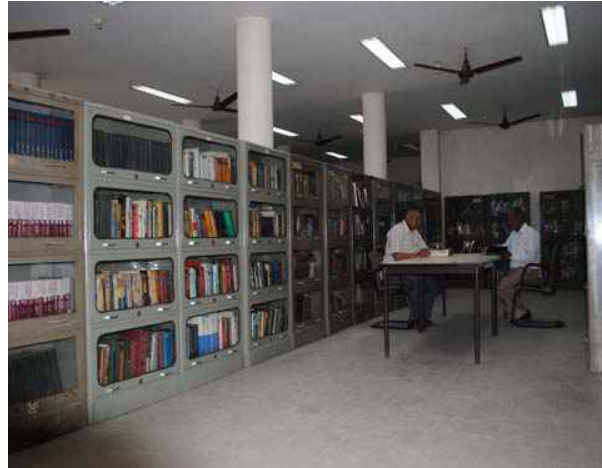
- ❖ Narcotic Drug Testing
- ❖ Skull Examination for Personal Identification
- ❖ Automatic Speaker Recognition System
- ❖ Cyber/Mobile Phone Forensics.
- ❖ Facial Recognition.

INSTRUMENTAL FACILITIES AVAILABLE

Name of the instrument	Utility
Integrated Ballistics Identification System (IBIS)	Automatic Identification of Firearms
Glass Refractive Index Measurement System	Glass examination
Atomic Absorption Spectrometer	Trace element analysis of physical evidences
Image Processing Facilities	Image enhancement, retrieval etc.
Computerized Speech Lab	Voice analysis
X-ray Diffractometer	Cement and paint analysis
Ballistics Data Measurement System	Velocity of Projectiles
Comparison Microscope	Comparison of fired cartridge cases, bullets etc.
Pyrolysis Gas chromatography – Mass Spectrometry system	Paint/ polymer and explosive examination
UV-Vis Spectrophotometer	Drug analysis
HPLC	Drug and explosive etc. analysis
GC-MS	Poison and drug analysis
FT-IR	Poison and drug analysis
LC-MS-MS System	Analysis of residues of explosive/drugs and trace analysis
Thermocycler (PCR)	DNA profiling
Automated DNA Sequencer	DNA profiling

Library

The laboratory has a library with a wide collection of about 6000 books and about two dozens of national and international journals.



TRAINING

- ❖ Imparts training to in-service forensic scientists, police personnel and judicial officers and students of various universities undergoing courses in Criminology & Forensic Science.
- ❖ Laboratory arranges lectures and practical demonstrations in forensic science to the Judicial officers under training.
- ❖ Laboratory arranges lectures and practical demonstrations in forensic science to the trainees of CDTI, Chandigarh and IAS, IPS, IRS, Air Force, Navy & Army Officers.
- ❖ The laboratory organizes national level seminars, workshops on latest/emerging trends and techniques in forensic science.
- ❖ Provides consultancy to state police organizations for creating and modernizing forensic science facilities.



Training Course on “Best Practices on Handling, Labeling & Packing of Physical Clue Materials”

QUALITY CONTROL, QUALITY ASSURANCE & ACCREDITATION

CFSL, Chandigarh has got the unique distinction of being the premier Forensic Science Laboratory in India accredited by the National Accreditation Board for Testing and Calibration Laboratories (NABL), Department of Science & Technology, Ministry of Science & Technology, Govt. of India, New Delhi in year 2005. The laboratory ensures for the implementation of quality management system as per international standards of ISO/IEC 17025:2017 in providing its services.

The laboratory conducts and participates in the Inter Laboratory Comparison Testing/Inter Laboratory Proficiency Testing programs with other Forensic Laboratories and premier scientific institutions/organizations for its technical competence.

The laboratory is entrusted by Directorate of Forensic Science Services, Ministry of Home Affairs, Govt. of India, New Delhi with the preparation of national level Working Procedure Manuals pertaining to the different fields of forensic examination.

QUALITY POLICY

The Central Forensic Science Laboratory, Chandigarh is responsible for providing scientific examination of evidentiary value materials upon the request of its case forwarding authority, the criminal justice agencies in India. The Laboratory is dedicated to provide a defect-free service in a professional manner to those agencies. To this end, the Laboratory is committed to good professional practice and to the quality of its testing in the servicing of its case forwarding authority via:

- ❖ The performance of forensic analyses and examinations that are accurate, relevant, reliable thorough, timely and meets the need of the case forwarding authority.
- ❖ Interpretation of analytical results without bias and free of internal and external influence.
- ❖ The presentation of the results of analyses and examinations in reports and testimonies that are clear, objective, balanced and easily understood by its case forwarding authority.
- ❖ The ongoing development of the skills and expertise of its personnel.
- ❖ Maintaining a properly functioning and safe facility in which to perform analyses.
- ❖ The advancement of the state of Forensic Science.
- ❖ The conformance of Laboratory policies and practices to ISO/IEC 17025: 2017, General Requirements for the Competence of Testing and Calibration Laboratories and NABL 113: 2008, Specific Guidelines for Accreditation of Forensic Science Laboratories.
- ❖ Adherence to the Laboratory's Code of Professional Ethics.
- ❖ Continual improvement of the effectiveness of its management system through the use of this quality policy, quality objectives, audit results, analysis of data, corrective and preventive actions and management review.

AWARENESS IN FORENSIC SCIENCE





- ❖ Public awareness of Forensic Science is a key factor in preserving the vital physical evidences, thereby contributing to the successful delivery of criminal justice through science.
- ❖ This laboratory plays an important role in inculcating awareness among the general public by observing Forensic Awareness Week, Exhibitions, Visits, Presentations, etc.
- ❖ The laboratory conducts interactive meetings with the judiciary and investigating Officers for the improvement of Forensic Science services.
- ❖ Such interactive meetings provide a platform for discussing emerging forensic technique/fields and also to evaluate the forensic services rendered by the laboratory.



Visit of Hon'ble Justices of Punjab & Haryana High Court, Chandigarh

PRESTIGIOUS UNION HOME MINISTER'S AWARDEES

	<p>Dr.S.K. Jain, Director, CFSL, Chandigarh, the then Assistant Director (Ballistics) has been conferred “Home Minister’s Award” for the year 2001 in Forensic Physical Sciences for his outstanding contribution in the field of Speaker Identification and Audio-Video Tape Authentication during IVX All India Forensic Science Conference 2003.</p>
	<p>Dr.S.K.Shukla, Director (Retired), CFSL, Chandigarh, has been conferred “Home Minister’s Award” for the year 2003 for his outstanding contribution in the field of Forensic Chemical Sciences during XVI All India Forensic Science Conference 2004.</p>
	<p>Dr. Rajiv Giroti, Dy. Director & Scientist-D(Bio), the then Junior Scientific Officer (Biology) has been conferred “Home Minister’s Award” for the year 2003 in Forensic Biological Sciences for his outstanding contribution in the field of DNA profiling.</p>
	<p>Dr. Sanjeev, Dy. Director & Scientist-D (Bio) (Retired), the then Senior Scientific Officer (Biology) has been conferred “Home Minister’s Award” for the year 2004 in Forensic Biological Sciences for his outstanding contribution in the field of Computerized Facial Reconstruction and Superimposition.</p>
	<p>Dr.R.S. Verma, Director (Retired), CFSL, Chandigarh, has been conferred “President’s Police Medal for Meritorious Services” on the occasion of Republic Day –1997 & the “Home Minister’s Award” for the year 2005 for his outstanding contribution in the field of Forensic Chemical Sciences.</p>
	<p>Dr. S.S. Murthy, Asstt. Director & Scientist-C (Ballistics.), the then Senior Scientific Officer (Ballistics) has been conferred “Home Minister’s Award” for the year 2005 in Forensic Physical Sciences for his outstanding contribution in the field of Forensic Cyber Crime Examination during XVIII All India Forensic Science Conference 2007.</p>
	<p>Mr. B.P. Singh, Asstt. Director & Scientist-C (Ballistics), the then Junior Scientific Officer (Ballistics) has been conferred “Home Minister’s Award” for the year 2006 in Forensic Physical Sciences for his outstanding contribution in the field of Forensic Ballistics during XVIII All India Forensic Science Conference 2007.</p>

	<p>Dr. R.M. Tripathi, Dy. Director & Scientist-D (Toxicology), the then Senior Scientific Officer (Forensic Science) has been conferred “Home Minister’s Award” for the year 2007 in Forensic Chemical Sciences for his outstanding contribution in the field of Forensic Toxicology during XXI All India Forensic Science Conference 2010.</p>
	<p>Sh. M.C. Joshi, Dy. Director & Scientist-D (Documents), the then Dy. GEQD, has been conferred “Home Minister’s Award” for the year 2007 for his outstanding contribution in the field of Forensic Documents during XXI All India Forensic Science Conference 2010.</p>
	<p>Dr. I. Haque, Dy. Director & Scientist-D (Biology), has been conferred the prestigious “Home Minister’s Award” for the year 2018 in Forensic Biological Sciences for his outstanding contribution in Research & Development the field of Forensic Biological Sciences during XXIV All India Forensic Science Conference 2018.</p>
	<p>Dr. Vimukti Chauhan, Asstt. Director & Scientist-C (Toxicology), the then Senior Scientific Officer (Toxicology), has been conferred “Home Minister’s Award” for the year 2018 for her outstanding contribution in the field of Forensic Toxicology during XXIV All India Forensic Science Conference 2018.</p>

For further information please write to:

Director
Central Forensic Science Laboratory
Directorate of Forensic Science Services
Ministry of Home Affairs
Government of India
Sector 36-A, Chandigarh, India—160036
PHONE :91-0172-2615068
FAX : 91-0172-2605923
E-mail : cfsi-chd@nic.in
Website : www.cfsi Chandigarh.gov.in