

DIRECTORATE OF FORENSIC SCIENCE - AN INTRODUCTION:

The Forensic Science Laboratory, Assam was established at Shillong (the then Capital of United Assam) in the year 1967. Dr. J. K. Borooah was appointed as the founder Director. The Laboratory was shifted to Guwahati in the year 1969 and subsequently shifted to its permanent setup at Kahilipara, Guwahati in 1978. Presently it is headed by Dr. R P Gohain as Director and is functioning under the administrative control of Home Department, Govt. of Assam as an independent Directorate.

With growing ingenuity of modern criminal, more and more complex crimes are referred for analytical purpose by the Law Enforcement Agencies. Considering the magnitude and variety of crimes, all Divisions of the laboratory have been equipped with most sophisticated state of art equipment. Advanced technology-centric DNA Fingerprinting and Computer Forensic Units have already been setup to solve such complex cases like Disputed Paternity and Cyber Crimes.

To cope the growing demand of solving various cases, 25 numbers of District Mobile Units has been set up under the 11th Finance Commission Award. These units have worked satisfactorily in District levels.

Considering upon the magnitude and variety of cases received for analysis, the Directorate of Forensic Science, Assam, generates the following future plan like setting up of separate Divisions like Brain Finger Printing and Speaker Identification to deal with cases relating to Cyber Crimes including getting the Laboratory accredited to NABL standards covering ISO 17025. The others under the Modernization of Police Force Scheme, 2007 – 08, setup of museum and works on drug characterization / impurity profiling which will be extended to other classes of drugs of abuse.

FUNCTION:

Forensic Science has now been considered as a vital and integral component of the criminal justice system. Forensic Science provides scientific aid to investigating agency for successful investigation of crime. Forensic Scientists analyze the physical exhibits left at the crime scene, recovered from the suspected criminal and the findings of the forensic scientists link crime with the criminal.

The service of this Laboratory is utilized by various investigating agencies for the Administration of criminal justice, In addition to those, other organizations like Army, B.S.F., NF Railway, Commercial Banks, Medical Colleges, Customs, Central Excise, Directorate of Revenue Intelligence, Narcotic Control Bureau, Educational Institutions, Universities, Research Institutions, Veterinary, Forest Department, Public and Private Sector Undertakings like Oil India Ltd., ONGC, Refinery etc. are also utilizing the service of this Laboratory. The Excise Department of North Eastern States has been utilizing the testing facilities available in this Laboratory for Criminal Justice System.

STATUS:

The present status of this organization is an independent Level II Directorate under the administrative control of the Home Department, Government of Assam. The Directorate comprises of 11 (eleven) independent Divisions, viz.

1. Ballistics
2. Biology
3. Chemistry
4. Drugs & Narcotics
5. Explosive
6. Instrumentation
7. Photography
8. Physics
9. Questioned Documents
10. Serology
11. Toxicology

The Deputy Director is the overall in charge of a Division under whom scientists of different levels are working.

STAFF PATTERN :

1. Deputy Director.
2. Senior Scientific Officer
3. Scientific Officer
4. Junior Scientific Officer
5. Senior Scientific Assistant
6. Scientific Assistant
7. Laboratory Technician
8. Technical Assistant
9. Laboratory Bearer

FACILITIES:

The Laboratory is presently equipped with a good number of sophisticated instruments including High Performance Liquid Chromatograph, Gas Chromatograph, Gas Chromatograph-Mass Spectrometer, Atomic Absorption Spectrophotometer, Large Comparison Microscope, VSC 5000, Docucenter 3000, HPTLC, XRF and computerized Photo Image System. All the divisions are also equipped with computer system for carrying out various analytical as well as other official works. The Photography Division is also equipped with Colour Photo Development unit with sophisticated camera, enlarger and other equipment.

WORK LOAD:

The workload of each division is satisfactory. The Directorate had received **2655** number of cases and reported **2661** cases with **29558** exhibits during the year 2008 (Reported figure includes arrear cases).

Activities, disposal and pendency of cases (Division wise):



Comparison Microscope

BALLISTICS DIVISION:

Ballistics Division of this laboratory is undertaking examination of various types of cases relating to different laws and statutory IPC, Acts like Arms Act, Explosive Substances Act, TADA(P) Act etc.

These involve:

Firearm:- To ascertain their caliber, make, model, working condition and status of recent firing.

Parts of firearm:- To ascertain their nature, type and whether they come under the Arms Act.

Cartridge & Cartridge case:- To ascertain their caliber, make, and whether live or not and also to establish a link of the fired cartridge case/misfired cartridge to the firearm & crime.

Bullets:- To ascertain their make, caliber, type and to establish a link to the firearm and crime.

Pallets/Wads:- To ascertain their make, size, nature of firearm through which they were discharged and range of firing.

The case statistics of this Division during the year under review are as follows

Cases/exhibits received	Cases/exhibits reported	Cases/exhibits pending
146/1099	129/1264	36/252

Pre pending: 19/417

BIOLOGY DIVISION:

Biology Division of this laboratory is undertaking examination of various types of cases relating to Wild Life Protection Act, Forest Act, NDPS Act, Food Adulteration Act, and Boilers Act etc. Material exhibits examined in this division involve:

HAIR:- To find out origin, individualization and comparative analysis/matching.

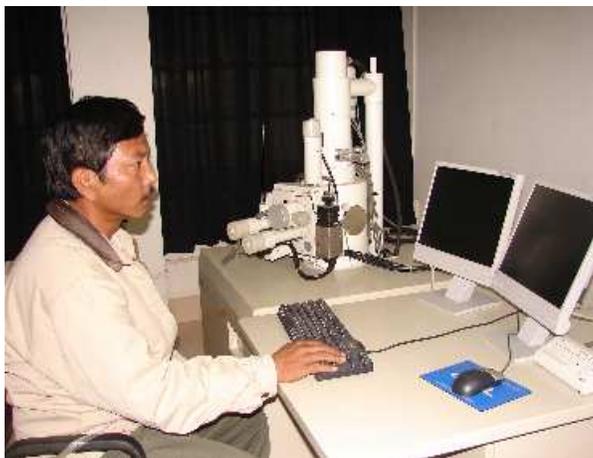
FIBRES:- To find the origin, comparison /matching.

DIATOMS:- To confirm drowning by death and the site of drowning.

INSECTS, FLIES, MAGGOTS etc:- To ascertain time since death and place of death.

PLANT MATERIALS-WOOD, LEAVES, SEEDS, FRUITS, FLOWERS, POLLEN

AND FINISHED PRODUCTS:- To determine the species origin
SKELETAL REMAINS, TISSUE, HORN, TUSK etc.:- To determine the origin, sex, age, stature etc.



Scanning Electron Microscope

SKULL WITH PHOTOGRAPH:- To ascertain whether the skull actually belongs to the person in the photograph or not by means of superimposition technique.

The case statistics of this division during the year under review are as follows:

Cases/exhibit received	Cases/exhibits reported	Cases/exhibit s pending
44 / 154	44 / 124	2 / 38

Pre pending: 2/8

CHEMISTRY DIVISION:

Chemistry Division deals with the examination of:

Explosives, its remnants, residues, components etc.:- To determine the nature, Composition, damage potential, quantitative estimation of explosive used.

Arson and Fire residues:- To know the nature and composition of fire accelerants.

Suspected Petrol, Diesel and other Motor Oils:- To determine whether it is adulterated or not and to find the nature and percentage of the adulterant.

Unknown substances in the form of solids, liquids and gases:- To know the qualitative and quantitative composition.

Suspected Cosmetics. Toiletry, Cement etc.:- To know whether they confirm to the specifications of brand or trade mark or spurious.



Atmospheric Distillation Apparatus

The case statistics of this Division during the year under review is as follows:

Cases/exhibits received	Cases/exhibits reported	Cases/exhibits pending
93 / 233	91 / 220	6 / 24

Pre pending: 4/11

DRUGS & NARCOTICS DIVISION:

This Division is undertaking examination of various types of cases relating to N.D.P.S. Act, Drugs and Cosmetics Act along with different Excise Acts.



GLC/MS/MS

During the year under review, the case statistics of this division is as follows:

Cases/exhibits received	Cases/exhibits reported	Cases/exhibits pending
510 / 2793	510 / 2793	Nil

Pre pending: Nil

EXPLOSIVE DIVISION:

Explosive Division of this laboratory is undertaking the examination of various types of cases relating



Raman Spectroscopy

to Explosives/ Explosive residues. During the year under review, the case statistics of this division is as follows:

Pre pending: 45/63

Cases/exhibits received	Cases/exhibits reported	Cases/exhibits pending
158 / 353	178 / 380	3 / 12

Pre pending: 23 / 39

INSTRUMENTATION DIVISION:

Instrumentation Division of this laboratory is undertaking maintenance of various instruments of different divisions. Routine maintenance apart, this division is also undertaking repair of instruments where necessary. Examination of electrical, electronic and engineering exhibits are also conducted here.

During the year under review, the case statistics of this division is as follows:

Cases/exhibits received	Cases/exhibits reported	Cases/exhibits pending
Nil	Nil	Nil

Pre pending: Nil.

PHOTOGRAPHY DIVISION:

Photography Division of this laboratory is assisting other

Divisions as and when necessary. This Division also helps scientists in crime scene investigation of various cases.



Enlarger Unit

During the year under review, the case statistics of this division is as follows:

Cases/exhibits received	Cases/exhibits reported	Cases/exhibits pending
356 / 5288	383 / 5655	Nil

Pre pending: 27 / 367

PHYSICS DIVISION:

Physics Division is undertaking examination of various types of cases involving IPC, Forest Act, Electricity Act,



Universal Testing Machine

Motor Vehicle Act, Railway Act, Copyright Act, Cinematography Act etc. It undertakes the examination of:-

Glass Fracture Studies:- To know the origin, direction and causation factors.

Glass pieces and fragments:- To find the nature, composition and whether they match with the control samples.