

NATIONAL FORENSIC SCIENCE INSTITUTE

MINISTRY OF SAFETY AND SECURITY

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COMPANY PROFILE

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A. INTRODUCTION

The National Forensic Science Institute of Namibia (NFSI) was established on 23 June 1993, with the aim of creating a national body tasked with the examination of evidence and crime scenes, as part of the Namibian judicial process. It has since successfully finalized and presented expert testimony in thousands of cases comprising millions of exhibits, establishing itself as an indispensable component of jurisprudence.

B. AIM

The NFSI is a highly specialized multi-disciplinary scientific research facility that applies all aspects of natural sciences to solving crime as well as finding scientific solutions to problems.

C. MISSION

- Always remain impartial and objective in our work
- Maintain the integrity of our work
- Deliver quality, scope and rate of return as expected by our clients
- Optimize the usage of our resources
- Continue to invest in infrastructure
- Optimizing research in order to continue to improve our service
- Promote an entrepreneurial culture that will ensure competitiveness.

D. SERVICES OF THE NATIONAL FORENSIC SCIENCE INSTITUTE

I. Physical Science

The physical science unit applies principles and techniques of physics to the identification and comparison of crime-scene evidence. It is staffed by scientists who have the expertise to use scientific tests, as well as modern analytical instrumentation for the examination of exhibits such as glass or electronic equipment. This unit aids in the investigation of arson and fire scenes.

II. Chemistry

The chemistry unit applies chemical methods in analysis and examination of evidence. It is staffed by scientists who have the expertise to use chemical tests in conjunction with modern analytical instrumentation for the examination of items as diverse as blood alcohol concentration, drugs, paint, explosives, accelerants and propellants.

III. Biology

The biology unit is staffed with scientists that apply their expert knowledge to the identification and DNA profiling of dried blood stains and other biological fluids, the comparison of hairs and fibres and the identification and comparison of biological materials such as wood and plants.

These methods are inter alia applied to blood-typing, species typing and identification of a diverse spectrum of biological samples.

IV. Ballistics

The examination of firearms, discharged bullets, cartridge cases, shotgun shells, and ammunition of all types is conducted by the ballistics unit. Garments and other objects are also examined in order to detect gunshot residues and to approximate the distance from a target at which a weapon was fired. The basic principles of firearm examination are also applied here to the comparisons of marks made by tools.



Another important aspect is wound ballistics, where the nature of gunshot wounds are examined in order to infer on points of entry and/or exit, projectile kinetics, energy components, etc.

V. Questioned Documents

This unit strives to ascertain authenticity and/or identify the handwriting and typewriting on questioned documents. Related responsibilities include analysis of paper and ink, as well as examination of indented writings (the term usually applied to the partially visible depressions appearing on a sheet of paper underneath the one which the visible writing appears), alterations, obliterations, erasures, and burned or charred documents.

The unit also specializes in the examination of all forms of secure documents (e.g. currency, stamps, cheques, ID's, passports, certificates, etc.).

VI. Toxicology

The toxicology unit examines body fluids and organs to determine the presence or absence of drugs and poisons and their involvement as possible cause of death.

VII. Evidence Collection

The incorporation of the crime scene evidence collection is an essential component of the total spectrum of forensic science services provided by the NFSI. The NFSI dispatches specially trained personnel to the crime scene to collect and preserve physical evidence that will later be processed at the NFSI. The personnel of this unit are highly trained and skilled in recognizing potential evidence, correct collection and packaging of the evidence and correct preservation of evidence and the integrity thereof.

VIII. Computer Forensics

The NFSI also engages in the examination of digital evidence, including inter alia forensic computer examination. This is a very sophisticated discipline that has to keep into account and keep abreast of the latest developments in the area of cyber technology.

It may be relatively easier to find concealed digital evidence but the acquisition thereof and presentation of same in a format that meets the stringent criteria stipulated by the Law Of Evidence, require skilful examination by highly trained forensic scientists.

IX. Forensic Engineering

Forensic engineers are concerned with failure analysis, accident reconstruction, and causes and origins of fires or explosions. Forensic engineers answer questions such as: "How did an accident or structural failure occur? Were the parties involved responsible? If so, how were they responsible? Accident scenes are examined, photographs are reviewed, and any mechanical objects involved are inspected. The unit is responsible for examination of arson and fire scenes, to determine inter alia the origin, seat, location, direction, and spread of the fire,

The NFSI employs skilled forensic specialists experienced in the reconstruction of events requiring application of above stated procedures.

E. THE FUNCTIONS OF THE FORENSIC SCIENTIST

I. Analysis of Physical Evidence

First and foremost the forensic scientist must be skilled in applying the principles and techniques of the physical and natural sciences to the analysis of the many types of evidence that may be recovered during crime investigation. However, the scientist must also be aware of the demands and constraints that are imposed by the judicial system. The procedures and techniques that are used in the NFSI



must not only rest on a firm scientific foundation but also satisfy the criteria of admissibility that have been established by the courts and by so doing withstand the rigours of cross-examination.

II. Provision of Expert Testimony

The product of their work may ultimately be a factor in determining a person's guilt or innocence necessitating the legal examination of forensic scientists with respect to their methods and conclusions at a trial or hearing. Trial courts have broad discretion in accepting an individual as an expert witness on any particular subject. Generally, if a witness can establish to the satisfaction of a trial judge that he or she possesses a particular skill or has knowledge in a trade or profession that will aid the court in determining the truth of the matter at issue that individual will be accepted as an expert witness. Depending on the subject area in question, the court will usually consider that knowledge acquired through experience, training, education, or a combination is sufficient grounds for qualification as an expert witness.

In court, the qualifying questions that are asked of the expert by counsel are often directed toward demonstrating the witness' qualifications, proficiency, competence and experience pertaining to the matter at hand.

Competency may be established by having him or her cite educational degrees, participation in special courses, membership in professional societies, and any professional articles or books published.

Proficiency focuses on vocational ability of a forensic expert pertaining to the commensurate skills required to perform a specific type of scientific examination.

The issue of experience equals the number of years of occupational exposure the witness has in areas related to the matter before the court.

The expert witness is called upon to evaluate evidence that the court lacks the expertise to do. This expert will then express an opinion as to the significance of the findings. The views expressed are accepted only as representing the expert's opinion and may later be accepted or ignored by the court.

III. Furnishing Training in the Proper Recognition, Collection and Preservation of Physical Evidence

The competence of the NFSI staff and the sophistication of its analytical equipment have little or no value if relevant evidence cannot be properly recognized, collected, and preserved at the site of a crime. For this reason, it is important that the forensic staff have responsibilities that will influence the conduct of the crime-scene investigation. The most direct and effective response to this problem is to dispatch personnel that have been specially trained in evidence collection to the crime scene. The NFSI has trained personnel on 24-hour call to aid criminal investigators in retrieving evidence. These people are trained to recognize and gather pertinent physical evidence at the crime scene. They have at their disposal all the proper tools and supplies that will make possible the proper collection and packaging of evidence for future scientific examination.

Where law enforcement agents are charged with the responsibility of collecting the evidence, the effectiveness in the execution of this function will be dependent on the extent of his or her training and working relationship with the NFSI. If maximum use is to be made of the skills of the NFSI, training of the crime-scene investigator must go beyond superficial classroom lectures to involve extensive personal contact with the forensic scientist. Each must become aware of the other's problems, techniques, and limitations.

The training of police officers in evidence collection and their familiarization with the capabilities of the NFSI should not be restricted to a select group of personnel on the force. Every officer engaged in fieldwork, whether it is traffic, patrol, investigation, or juvenile control, will often have to process evidence for scientific examination. Obviously, it would be a difficult and time-consuming operation to give everyone the in-depth training and attention that a qualified criminal investigator requires. However, a familiarity with the scientific services and capabilities can be facilitated through periodic



lectures and the dissemination of manuals prepared by the NFSI to outline the proper methods for collection and submission of physical evidence and dispatch to the NFSI.

IV. Contact Details

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