

FEU14 – SOP for the National Integrated Ballistics Information Network (NIBIN)

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1. Scope

- 1.1. This procedure is designed for the acquisition, storage and correlation of computer images from unidentified fired ammunition components and test fires which are entered into the NIBIN program.

2. Background

- 2.1. To establish the practices for documenting the examination of firearm evidence to conform to the requirements of the Department of Forensic Sciences (DFS) Forensic Science Laboratory (FSL) *Quality Assurance Manual*, the accreditation standards under ISO/IEC 17025:2005, and any supplemental standards.
- 2.2. All members trained in the use of the National Integrated Ballistics Identification Network System (NIBIN)/Integrated Ballistics Identification System (IBIS) shall be held responsible for adhering to the following policy and procedures for the processing of entries and correlations into NIBIN/IBIS.

3. Safety

- 3.1. For proper handling of firearm see the FEU01 - SOP for the Safe Handling of Firearms.
- 3.2. Members will use universal precautions with all evidentiary materials.

4. Materials Required

- 4.1. NIBIN/IBIS system

5. Standards and Controls

- 5.1. An automatic calibration will be performed of the NIBIN system each time a user logs into the system.

6. Calibration

- 6.1. Not applicable

7. Procedures

- 7.1. Image Entry
 - 7.1.1. Unidentified fired ammunition components (cartridge cases / bullets) and test fires from pistols, rifles, shotguns and revolvers that are submitted by MPDC members and other law enforcement agencies will be evaluated, prepared and entered into the NIBIN system.
 - 7.1.2. A NIBIN Image Worksheet will be completed with the case information data to include: FEU #, CCN #, Offense, Agency case #, Incident date, Location of the Offense, the Item numbers, Make of firearm when applicable, caliber, General Rifling Characteristics (GRC), Cartridge case brand Firing Pin Impression, Type of Specimen cartridge case and/or Bullet, the NIBIN user's initials and the date of input.
 - 7.1.3. Specimens delivered by Examiners shall be accompanied by a NIBIN Image Worksheet that designates items to be entered. These specimens shall be entered into the IBIS Brasstrax Chain of Custody Log upon receipt.
 - 7.1.4. The NIBIN Log Book shall be completed for all entries to include: Date, FEU#, Caliber, Item, Offense, Bullet or Cartridge case and initials of the NIBIN user

- 7.1.5. Cartridge cases and or bullets which are classified as having Insufficient Marks (IM) are not entered into NIBIN, however it will be documented in the NIBIN Log book and the NIBIN Image worksheet.
- 7.1.6. Evidence from the same scene is evaluated by the Firearm Examiner and the best candidates are prepared and entered into NIBIN, however if new **different caliber or same caliber different firearm** evidence is submitted it should be added to the case and entered into NIBIN system.

7.2. Correlation

- 7.2.1. NIBIN users are guided by the NIBIN/ BATF protocol when performing correlations.
- 7.2.2. NIBIN users performing correlations must print the image sheet from NIBIN when he/she encounters a High Confidence Case (HCC). The Firearms Control Page (located in the FiiS system) for each HCC case should be attached to the image sheet.
- 7.2.3. The information and results of the HCC verification will be placed on the HCC Hit list by the FEU member assigned to handle the HCC case.

7.3. High Confidence Case(s) (HCC)

- 7.3.1. NIBIN Technicians performing correlations and identifying potential HCC shall adhere to the following:
 - 7.3.1.1. Notifying the Examiner of Record when a potential HCC has been observed. (If the Examiner of Record is no longer employed by the DFS, the technician shall contact the Lab Manager for further guidance).
 - 7.3.1.2. Coordinating with the Examiner of Record the viewing of the HCC.
- 7.3.2. Firearms Examiners performing examinations on High Confidence Cases (HCC) shall adhere to the following:
 - 7.3.2.1. Obtaining evidence
 - 7.3.2.2. Perform examination

- 7.3.2.3. The verification of the HCC is to be made by at least two (2) Firearms Examiners
- 7.3.2.4. If the HCC verification is an identification it shall be documented on the original HCC image sheet as an HCC Identification and the initials of both examiners involved in the verification process, the date of the verification and the item numbers. The Examiner of Record must also attach a digital image of the identification with the initials of both examiners, case numbers, items numbers, conclusion and date of identification.
- 7.3.2.5. Notification of the Identification will be made to the Examiners involved NIBIN Coordinator and Laboratory Manager; after the verification is made.
- 7.3.2.6. Documentation of the HCC examination is to be logged in the NIBIN Log book in the appropriate column.
- 7.3.2.7. Completion of the NIBIN HCC image sheet with initials and date of the firearms examiners indicating: Positive for NIBIN or Negative for NIBIN.
- 7.3.2.8. NIBIN Hit report will be prepared by the FEU member.
- 7.3.2.9. NIBIN hit report must include signatures from the examiners, Laboratory Manager and the NIBIN coordinator.
- 7.3.2.10. FEU member will insert copies of the NIBIN Hit report in each respective physical and electronic case jacket.
- 7.3.2.11. All conclusions that are examined as HCC shall be recorded in an abbreviated report unless the case report is not complete at the time of examination, then it shall be listed in the Report of Examination.
- 7.3.2.12. All priority requests for NIBIN correlations should be evaluated within ten (10) business days.
- 7.3.2.13. When a case comparison is requested the evidence will be obtained by the requestor.
- 7.3.2.14. If the HCC verification is a non-identification it shall be documented on the original HCC image sheet as Negative for NIBIN/IBIS (HCC). This documentation shall include but not be limited to the examining members initials, date and conclusion.

8. Sampling

- 8.1. Not applicable

9. Calculations

- 9.1. Not applicable

10. Uncertainty of Measurement

- 10.1. When quantitative results are obtained, and the significance of the value may impact the report, the uncertainty of measurement must be determined. The method used to determine the estimation of uncertainty can be found in the *FSL Quality Assurance Manual – Estimation of Uncertainty of Measurement (Section 5.4.6)*.

11. Limitations

- 11.1. Due to uncontrolled variables, electronic images viewed on the NIBIN terminal cannot be used for determining identifications. Only through the microscopic examination of original evidence located through a NIBIN correlation can the opinion of identification be reached.
- 11.2. NIBIN (IBIS database) is a multi-user system which has a standard protocol for data entry (see IBIS User Manual). However, variables such as lighting, user experience, and the reproducibility of microscopic marks can affect the appearance of images captured, thus reducing the performance of the NIBIN correlation. **Electronic images viewed in NIBIN systems are visual facsimiles and do not have the quality and clarity of those images generally viewed when using a comparison microscope.**
- 11.3. When performing a microscopic (HCC) examination which includes a firearm the test fire ammunition must be like ammunition to the evidence in question. (i.e.) **same brand, caliber, cartridge case finish and primer.**

12. Documentation

- 12.1. NIBIN Entry / HCC Log Book**
12.2. NIBIN Image Worksheet (Current Version)
12.3. NIBIN HCC printout sheet (Current Version)
12.4. High Confidence Case Hit List (Current Version)
12.5. FEU NIBIN Hit Report (Current Version)
12.6. IBIS Brasstrax Chain of Custody Log

13. References

13.1. IBIS Brasstrax 3D V2.3 Training Guide 2011

13.2. IBIS Matchpoint + V2.3 Training Guide 2011

13.3. DOM10 – Evidence Handling Procedures (current revision)

13.4. Forensic Science Laboratory Quality Assurance Manual (Current Version)

13.5. FSL Laboratory Operations Manuals (Current Versions)