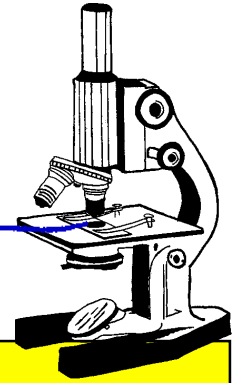


**A CURRENT  
EDUCATIONAL  
BULLETIN FOR  
SUBMITTING LAW  
ENFORCEMENT  
AGENCIES**

*A Closer Examination From The Benchtop...*

# UNDER the SCOPE



**MISSOURI STATE HIGHWAY PATROL • CRIME LABORATORY DIVISION**

PHONE: 573-526-6134  
FAX: 573-751-9922



THE DNA SECTION DOES NOT PERFORM "ABO" BLOOD TYPING OR DNA PATERNITY ANALYSIS. CALL FOR A REFERENCE LIST IF YOUR CASE REQUIRES THESE EXAMS.

WE CAN NOW E-MAIL THIS PUBLICATION TO YOUR AGENCY. TO BE PLACED ON THE MAILING LIST, SEND YOUR REQUEST VIA E-MAIL TO JASON WYCKOFF: wyckoj@mshp.state.mo.us

DUE TO INCREASED SECURITY, ANY PERSON SUBMITTING EVIDENCE AT THE GENERAL HQ LAB MUST SHOW PROPER IDENTIFICATION AND REGISTER WITH THE RECEPTIONIST ON THE TOP FLOOR OF THE ANNEX BUILDING. YOU MUST REMAIN ON THE TOP FLOOR UNTIL LAB PERSONNEL ESCORT YOU TO THE LAB. CALL AHEAD TO SCHEDULE AN APPOINTMENT.



SEPTEMBER, 2002  
VOLUME 2 • ISSUE 4

## NIBIN System Replaces Drugfire

The Firearm Section of the Missouri State Highway Patrol Crime Laboratory has recently implemented a new ballistic identification system. With this new technology in place, the criminalists in the section can offer increased forensic science services to submitting agencies.

Every firearm has certain class and individual characteristics which are imparted on the projectiles and cartridge cases fired in it. The barrel of the firearm marks the projectiles as they travel through it. The firearm's breech face, firing pin, extractor, etc. mark the cartridge case.

When projectiles or cartridge cases are recovered from a crime and submitted to the lab, Firearm Examiners can use the characteristics observed on the expended components in microscopic comparisons. These comparisons enable the examiner to determine whether or not the expended components "match" the expended components obtained during the test firing of the suspect firearm in an effort to confirm an identification.

Since 1995, the Firearm Section criminalists have utilized a computer database referred to as Drugfire to assist in the comparison of expended ammunition components. Drugfire contained images of expended ammunition components recovered at crime scenes as well as those acquired from the test firing of submitted firearms. The system allowed new entries to be searched against the existing database entries for possible matches, with the purpose of possibly linking ballistic evidence from one crime to another.

Recently, the Federal government mandated that the Integrated Ballistic Identification System (IBIS) replace the Drugfire system. While this new system performs essentially the same basic functions as Drugfire, it has expanded capabilities in record keeping, statistical analysis, and firearm identification.

The MSHP Crime Laboratory received the IBIS system in June, 2002. This system is currently connected with 35 other laboratories in a six state region. Eventually, the MSHP lab will be connected to a national network (National Integrated Ballistic Information Network, or NIBIN) with all other crime laboratories. Smaller labs not meeting qualifying criteria for an IBIS unit may send their expended components to the larger

"host" labs for entry. The MSHP Laboratory has agreed to host SEMO Regional Crime Laboratory in Cape Girardeau, MSSC Regional Crime Laboratory in Joplin, and Northeast Area Criminalistics Laboratory in Kirksville.

Firearms submitted to the MSHP Crime Laboratory will be test fired, if possible, so that test standards can be obtained for comparisons. These test standards may be entered into the NIBIN database if they meet the MSHP Firearm Section entry protocol. Expended components (cartridge cases, bullets, and bullet fragments) may also be entered into the NIBIN database and should be submitted regardless if a firearm has been recovered.

Here is a quick overview of the protocol we ask our submitting agencies to follow when submitting firearm related evidence to the lab.

1. Unload the firearm before packaging it, if possible.
2. Properly package, seal, and label the firearms, cartridges, bullets, bullet fragments, and/or cartridge cases. For rust prevention, do not package in plastic bags. Evidence tape should not be used on any evidence items, including the firearm—the tape should only be used to properly seal the evidence container.
3. The firearm will be test fired in the lab. The expended bullets and cartridge cases obtained from the test firing will be referred to as "test standards". If the firearm meets the entry criteria for NIBIN, the test standards will be entered.
4. Any expended bullets, bullet fragments, and cartridge cases submitted in a "no gun" case will also be entered into NIBIN if entry criteria is met.
5. The test standards will be returned with the firearm in a sealed box, which your agency should retain. If a future NIBIN hit occurs, the firearm and/or test standards must be resubmitted for comparisons.

The Missouri State NIBIN Administrator is Criminalist Kathleen Green, Firearm/Toolmark Section. She is responsible for the database system administration and security. For any questions, contact her at 573-526-6134, extension 252.