

RAPID DNA ANALYSIS IN THE POLICE BOOKING SUITE: “FBI INITIATIVE FOR REFERENCE SAMPLE POINT OF COLLECTION ANALYSIS”

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Beginning in 2009, the Federal Bureau of Investigation (FBI) in collaboration with the United States Department of Defense and the Department of Homeland Security provided incentives for the development of hands free, non-laboratory DNA typing equipment. Prototype machines that perform point-of-collection DNA analysis in less than two hours from buccal swabs are currently under development. The “swab in-DNA profile out” Rapid DNA (R-DNA) devices will produce Combined DNA Index System (CODIS) compatible profiles.

R-DNA technology could allow DNA profiles to be searched from the Booking Site similar to fingerprints. The use of R-DNA technology by non-Laboratory law enforcement personnel will require extensive evaluation, testing and validation. In January 2011, the Scientific Working Group DNA Analysis Methods (SWGDM) established a Rapid DNA Committee to monitor and address quality assurance and validation issues related to CODIS and the National DNA Database.

Expanding the use of R-DNA technology and CODIS submission to the police station will require significant training, oversight, coordination and infrastructure investment for local, state and federal law enforcement agencies. The Criminal Justice Information Services Division Advisory Policy Board (CJIS APB) established a Rapid DNA Task Force in 2010 to identify and study issues related to the integration of R-DNA technology into a police station environment. An overview of this Task Force and its interaction with the CODIS community will be discussed.

The National Institute of Standards and Technology and the FBI Laboratory are collaborating to test and evaluate the performance of R-DNA platforms. The status of the FBI R-DNA initiative and the NIST-FBI testing plan and strategy for CODIS validation will be presented.