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State of Louisiana
Department of Public Safety and Corrections
Public Safety Services

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TO: Louisiana Law Enforcement Agencies

FROM: Captain Kevin Marcel
Louisiana State Police Crime Laboratory Director

SUBJECT: Use of RAPID DNA Systems for non-CODIS Reference and Evidence Analysis

Rapid DNA is a term used to describe the fully automated (hands free) process of developing a DNA profile from a reference sample buccal (cheek) swab without human intervention. For the past few years, the Louisiana State Police Crime Laboratory (LSPCL) has been working with the FBI and other states to develop a Rapid DNA program with the goal of integrating Rapid DNA into the booking environment. Once implemented at an approved booking station, lawfully-owed DNA samples collected from qualifying arrestees at booking will have their DNA profiles generated by a CODIS-approved Rapid DNA instrument and searched in CODIS in as little as ninety minutes. Any positive CODIS search results will be communicated automatically to the investigating and booking agencies while the arrestee is still in police custody.

While we are continuing to make strides towards that goal, the LSPCL is aware that some law enforcement agencies may be considering procurement of Rapid DNA technology for usage in analyzing crime scene samples. The LSPCL recognizes that the scientifically responsible use of Rapid DNA technology can help investigate crimes, prosecute the guilty, and exonerate the innocent. Law enforcement partners considering procurement of Rapid DNA technology should be aware that its usage might affect the suitability of a crime scene sample for subsequent testing by an accredited forensic laboratory.

- If using a Rapid DNA instrument to process samples of low-level biological material (such as touch DNA), the samples may be consumed or significantly decreased, thereby reducing the amount of sample provided to the accredited crime laboratory for testing. Collecting two swabs instead of one may not solve this problem, since the small amount of available DNA is spread over more surface area, making it less likely results will be obtained.
- Additional sample handling to collect evidence for Rapid DNA instruments increases the risk of DNA contamination, which can affect the ability of an accredited crime laboratory to provide DNA results and testimony.
- Results from Rapid DNA instruments may differ from those of an accredited crime laboratory due to differences in testing, such as testing two different portions of a crime scene sample or the number of loci tested. Traditional crime laboratory DNA testing instruments are more sensitive than Rapid DNA instruments currently on the market, and it is possible that an accredited crime laboratory can develop DNA profiles from evidence that Rapid DNA instruments cannot.

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- The results obtained from crime scene samples are often mixtures of more than one contributor, which requires review and interpretation by a qualified forensic DNA analyst. LSPCL analysts cannot consult on or review the results of Rapid DNA testing.
- Evidence profiles generated by a Rapid DNA instrument do not qualify for entry into or searching of the CODIS database.

Because Rapid DNA technology is a relatively new approach to crime fighting, it has not been subjected to courtroom scrutiny. Any agency considering procurement of a Rapid DNA instrument should discuss with their local District Attorney what types of cases might be considered for prosecution, and the associated challenges with presenting evidence developed with new scientific technologies. LSPCL analysts cannot consult on or testify to results obtained from a Rapid DNA instrument, nor can they compare results generated in the laboratory with results generated from a Rapid DNA instrument.

DNA profiles generated in Rapid DNA instruments within Louisiana are not eligible for entry into CODIS. CODIS is an essential crime-fighting tool containing more than twenty million DNA profiles, and diversion of cases away from CODIS for local databases can reduce law enforcement opportunities to solve crime. The LSPCL cannot provide a copy of DNA data in CODIS to law enforcement for searching and comparison to DNA profiles generated on a Rapid DNA instrument. The LSPCL cannot search Rapid DNA profiles generated by law enforcement in CODIS.

If your agency has any questions regarding the usage of Rapid DNA technology for crime scene applications, please contact the LSPCL at (225) 925-7791 or crimelab@la.gov.

References:

- National District Attorney's Association (NDAA) Position Statement on the Use of Rapid DNA Technology - January 30, 2018
- FBI General Information page regarding Rapid DNA
<https://www.fbi.gov/services/laboratory/biometric-analysis/codis/rapid-dna>
- Non-CODIS Rapid DNA Considerations and Best Practices for Law Enforcement Use
<https://www.fbi.gov/file-repository/non-codis-rapid-dna-best-practices-092419.pdf/view>
- FBI Rapid DNA Executive Summary – FBI's Vision of Rapid DNA
<https://www.fbi.gov/file-repository/rapid-dna-executive-summary-9-25-17-final.pdf/view>
- Scientific Working Group on DNA Analysis Methods (SWGDM) Position Statement on Rapid DNA Analysis - October 23, 2017
- ASCLD Position Statement on Non-CODIS Application of Rapid DNA on Crime Scene and Disaster Victim Identification Samples - November 24, 2020
<https://www.asclد.org/asclد-policy-library/>

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