STANDARDS FOR THE OPERATION OF RAPID DNA SYSTEMS BY LAW ENFORCEMENT BOOKING AGENCIES
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STANDARDS FOR THE OPERATION OF RAPID DNA SYSTEMS BY LAW ENFORCEMENT BOOKING AGENCIES

1. INTRODUCTION

These Standards are applicable to law enforcement booking agencies using Rapid DNA Systems on buccal (inner cheek) swabs collected from certain arrested individuals who are legally required to provide such samples for the purposes of entering and searching the resulting DNA profiles in the Combined DNA Index System (CODIS). There are three levels of CODIS:

- Local DNA Index System (LDIS)
  - Used by individual public laboratories.

- State DNA Index System (SDIS)
  - Used at the State level to serve as a State’s DNA database containing DNA profiles from LDIS laboratories and the SDIS laboratory.

- National DNA Index System (NDIS)
  - Managed by the Federal Bureau of Investigation (FBI) as the nation’s DNA database containing all eligible DNA profiles uploaded by participating States.

State database laws place the responsibility on the applicable State CODIS Agency for the State database program and for ownership of the DNA samples collected in that State, as well as the resulting DNA profiles and DNA data. Accordingly, only the State CODIS Agency shall have ownership of the DNA samples, the DNA profiles and DNA data uploaded into any of the levels of CODIS by the booking agency.

State CODIS Agencies serve as the lead agency for the establishment of Rapid DNA programs in their states. In order to be approved by the Federal Bureau of Investigation for the “Authority to Operate” a Rapid DNA program in their state, the State CODIS Agency must first have a law that authorizes the collection and analysis of DNA samples from arrestees. The State CODIS Agency is responsible for developing statewide policies and procedures for the location, configuration and approval of Rapid DNA booking agencies in their state to operate Rapid DNA arrestee booking enrollment programs. The State CODIS Agency’s approval of a booking agency to operate a Rapid DNA program must include the review and approval of the booking agency’s procedures for operation of the Rapid DNA program. The State CODIS Agency must also have a Memorandum of Understanding or other agreement that defines the roles and responsibilities of the State CODIS Agency and the booking agency for the Rapid DNA program.
Rapid DNA Systems were designed to perform Rapid DNA analysis on buccal swabs collected during the arrestee booking process. The Rapid DNA System is a fully automated system capable of producing a CODIS acceptable DNA profile from an arrestee buccal swab without human interpretation in under two hours. When used by properly trained law enforcement personnel, the DNA profile generated by the Rapid DNA System may be uploaded via a dedicated criminal justice information network to SDIS and NDIS where the arrestee DNA profile will be immediately searched against DNA profiles from unsolved crimes of special concern (sexual assaults, homicides, kidnapping and terrorism cases) at both SDIS and NDIS. The same arrestee DNA profile will be searched against all crimes in the next scheduled SDIS and NDIS searches, usually occurring within 24 hours of the upload. Under these legal and technical requirements, upload of DNA profiles from a Rapid DNA System is a process managed by the State CODIS Agency.

The DNA sample and DNA profile resulting from the Rapid DNA analysis are personally identifiable information subject to Federal and State confidentiality requirements. As noted above, the State CODIS Agency has responsibility for, and ownership of, the DNA sample, the resulting DNA profile, and DNA data entered into CODIS by that booking agency. The booking agency conducting the arrestee’s booking station processing shall be responsible for providing the resulting DNA profile and DNA data, as applicable, to the State CODIS Agency. The booking agency shall not file, maintain, store or database CODIS eligible DNA profiles in a separate database or any other type of file.

Only NDIS approved Rapid DNA Booking Systems shall be used to generate DNA profiles for entry and searching in SDIS and NDIS. Booking agency personnel using a Rapid DNA System shall be trained and certified in the use of the Rapid DNA System for the resulting DNA profiles to be eligible for entry and searching in SDIS and NDIS. In addition to the Standards specified in this document, booking agencies shall comply with the requirements of the State CODIS Agency for participation in NDIS.

Safeguarding the physical and computer security of the Rapid DNA System is of paramount importance to ensure the integrity of the resulting DNA profiles. The CODIS Rapid Enrollment application software (CRE) will ensure the resulting DNA profile from the Rapid DNA System contains the appropriate arrestee metadata as well as a CODIS compatible DNA profile before the DNA data is uploaded to the State CODIS Agency. The FBI’s Criminal Justice Information Services (CJIS) Shared Enterprise Network (SEN) will automatically transmit the resulting DNA profile to NDIS in compliance with additional CJIS security protocols. This document consists of definitions and standards. Compliance with these Standards by a booking agency using a Rapid DNA System is required for the resulting DNA records to be uploaded to and searched in SDIS and NDIS. Only those resulting DNA profiles generated in compliance with these Standards shall be eligible for SDIS and NDIS.
EFFECTIVE DATE:

These Standards shall take effect __________.

2. SCOPE

These Standards describe the requirements for law enforcement booking agencies (hereinafter referred to as “booking agency”) using Rapid DNA Systems on arrestee buccal swabs to be searched at SDIS and NDIS. The Rapid DNA System will typically be used at the arrestee booking station of a law enforcement agency in jurisdictions where certain arrestees are required to provide DNA samples upon arrest. If a law enforcement agency uses a Rapid DNA System on offender samples collected from individuals that are legally required to provide such samples for the purposes of entering and searching the resulting DNA profiles in CODIS at locations other than a booking station, such as sex-offender registration or parolee processing locations, these Standards are also applicable to that use in those locations.

These Standards apply when the resulting DNA profile from the individual being arrested will be entered and searched at SDIS and/or NDIS. Booking agencies shall meet or exceed these Standards to ensure the quality and integrity of the data generated by the Rapid DNA System.

These Standards are not applicable to the use of a Rapid DNA System on a forensic casework sample (crime scene sample). Forensic casework samples processed on a Rapid DNA System are not eligible for entry or searching in CODIS.

3. RAPID DNA SYSTEMS

3.1 The booking agency shall use only NDIS approved Rapid DNA Booking Systems for arrestee DNA sample processing.

3.2 The booking agency shall have a designated location to use the Rapid DNA System in order to ensure the security and integrity of the Rapid DNA System, arrestee samples, DNA profiles and DNA data.

3.2.1 The Rapid DNA System shall be located in a secure area that is not physically accessible to the general public.

3.2.2 The Rapid DNA System shall be placed on a stationary surface and movement of the Rapid DNA System shall be minimized. Relocation of a Rapid DNA System shall be documented.

3.3 The booking agency shall maintain and store the Rapid DNA System in accordance with manufacturer specifications and State CODIS Agency requirements, as applicable.
3.3.1 The booking agency shall ensure the power supply is appropriate for continuous operation of the Rapid DNA System in accordance with manufacturer specifications and State CODIS Agency requirements, as applicable.

3.3.1.1 A battery powered uninterruptible power supply (UPS) capable of powering a run from start to finish shall be connected to the Rapid DNA System.

3.4 The booking agency shall provide for appropriate storage and disposal of the DNA samples and Rapid DNA System reagents in accordance with State CODIS Agency procedures and requirements, as applicable.

3.4.1 Rapid DNA cartridges and reagents shall not be used beyond their manufacturer specified expiration dates.

3.4.2 The booking agency shall have and follow a procedure to document the lot numbers, to include the expiration date, of the Rapid DNA cartridge and other reagents used for each Rapid DNA System run.

3.4.3 Rapid DNA cartridge(s), and any arrestee DNA sample remaining in Rapid DNA cartridges shall be disposed of in accordance with the procedures of the State CODIS Agency.

3.4.4 The booking agency shall have and follow a procedure to minimize contamination during arrestee sample collection and sample processing that includes the use of new gloves prior to, and the disposal of gloves after, each DNA sample collection.

3.5 The booking agency shall have and follow procedures to conduct performance checks of each Rapid DNA System. A Rapid DNA System shall satisfactorily pass performance checks prior to use on arrestee buccal swabs in accordance with the following criteria:

3.5.1 A performance check upon installation of a Rapid DNA System.

3.5.2 A performance check following the repair, service, and/or maintenance of a Rapid DNA System.

3.5.2.1 A performance check of a Rapid DNA System following relocation of the Rapid DNA System if recommended by the manufacturer or as established by the State CODIS Agency.

3.5.3 A performance check if a Rapid DNA System remains idle longer than the period recommended by the manufacturer or as established by the State CODIS Agency.

3.5.4 A performance check if a Rapid DNA System has experienced an extended power outage that exceeds recommendations by the manufacturer or as established by the State CODIS Agency.
3.5.5 A performance check before the use of new lot numbers of Rapid DNA cartridges and reagents. A negative control is also required during a performance check for new lot numbers of Rapid DNA cartridges and reagents. Negative control performance checks can be centralized and/or coordinated by the State CODIS Agency.

3.6 The booking agency shall retain documentation of performance checks and the repair, service or maintenance of each Rapid DNA System(s) as determined by the State CODIS Agency.

4. RAPID DNA OPERATORS

4.1 The booking agency shall have at least one Rapid DNA Lead Operator who is accountable for the use of all the Rapid DNA System(s) approved for use at the booking agency and serves as the designated point of contact with the State CODIS Agency.

4.1.1 The booking agency shall have at least one back-up Rapid DNA Lead Operator.

4.2 The booking agency shall have Rapid DNA Operators who shall be trained to operate the Rapid DNA System(s). Only trained and certified Rapid DNA Operators shall operate the Rapid DNA System(s).

4.3 Rapid DNA Lead Operators and Rapid DNA Operators shall successfully complete the training requirements of the State CODIS Agency prior to approval as a certified Rapid DNA Operator. Back-up Rapid DNA Lead Operators shall satisfy the training requirements for a Rapid DNA Lead Operator.

4.3.1 Rapid DNA Lead Operators and Rapid DNA Operators shall successfully complete a certification test before being certified to operate a Rapid DNA System in accordance with the requirements of the State CODIS Agency.

4.3.1.1 Successful completion of a certification test shall require that the Rapid DNA Operator demonstrate proficiency in the operation of the Rapid DNA System in accordance with these Standards and the requirements of the State CODIS Agency to include, at a minimum, the following:

4.3.1.1.1 Ability to operate the Rapid DNA System in accordance with the manufacturer’s requirements.

4.3.1.1.2 Ability to respond to the Rapid DNA System’s messages and commands.

4.3.1.1.3 Knowledge of actions to take when the Rapid DNA System produces an error message, or no result is obtained.
4.3.1.1 Knowledge of circumstances requiring performance checks and the ability to conduct a performance check of the Rapid DNA System in accordance with these Standards.

4.3.2 Refresher training shall be conducted and documented in accordance with the State CODIS Agency requirements to include, but not limited to, the following circumstances:

- 4.3.2.1 Rapid DNA Lead Operators and Rapid DNA Operators shall successfully complete refresher training upon major changes to the Rapid DNA System or Rapid DNA procedures; and

- 4.3.2.2 Rapid DNA Lead Operators and Rapid DNA Operators shall successfully complete refresher training if issues develop due to infrequent or improper use of a Rapid DNA System(s).

4.4 The Rapid DNA Lead Operator and Rapid DNA Operator shall have the following duties and responsibilities:

4.4.1 Rapid DNA Lead Operator Duties:

- 4.4.1.1 Oversee overall program operation and maintain certification to operate each Rapid DNA System(s). The Rapid DNA Lead Operator has the authority to suspend Rapid DNA operations within their booking agency.

  4.4.1.1.1 The Rapid DNA Lead Operator shall notify the State CODIS Agency within 5 calendar days if Rapid DNA operations are suspended at their booking agency.

- 4.4.1.2 Perform or oversee routine maintenance of Rapid DNA System(s) in accordance with the requirements of the Rapid DNA System manufacturer and State CODIS Agency.

- 4.4.1.3 Conduct and/or oversee performance checks of each Rapid DNA System in accordance with these Standards and State CODIS Agency requirements.

- 4.4.1.4 Ensure the Rapid DNA Program complies with these Standards and all relevant Federal, State and Local laws and policies.

- 4.4.1.5 Consult with the State CODIS Agency, Information Technology (IT) Department and/or State Identification Bureau (SIB)/CJIS Systems Agency (CSA) staff when necessary to troubleshoot operational issues.

- 4.4.1.6 Provide or oversee training to Rapid DNA Operators in accordance with the requirements of the State CODIS Agency.
4.4.1.7 Maintain training, certification test, and refresher training documentation and records for certified Rapid DNA Operators and NDIS approved Rapid DNA Booking System(s).

4.4.1.7.1 Determine, as necessary, if refresher training is needed for the Rapid DNA Operator(s) due to issues including, but not limited to, infrequent use of a Rapid DNA System(s), improper use of a Rapid DNA System(s), or major changes to Rapid DNA procedures.

4.4.1.8 Undergo refresher training as required by the State CODIS Agency.

4.4.1.9 Maintain documentation of the following in accordance with State CODIS Agency requirements:

- 4.4.1.9.1 Rapid DNA System performance checks.
- 4.4.1.9.2 Rapid DNA System maintenance and relocation logs.
- 4.4.1.9.3 Rapid DNA System users and run logs.
- 4.4.1.9.4 CRE maintenance.

4.4.2 Rapid DNA Operator Duties

4.4.2.1 Maintain, operate and performance check the Rapid DNA System(s) in accordance with these Standards and State CODIS Agency requirements.

4.4.2.2 Contact the Rapid DNA Lead Operator in the event of an error with the Rapid DNA System(s).

4.4.2.3 Undergo refresher training as determined by the Rapid DNA Lead Operator or State CODIS Agency.

5. SECURITY AND DATA PROTECTION

5.1 The booking agency shall have and follow procedures to safeguard the integrity of the Rapid DNA System, the confidentiality of the data, the arrestee DNA sample, the resulting DNA profiles and DNA data in accordance with Federal and State laws and the following:

5.1.1 Only a Rapid DNA Lead Operator and Rapid DNA Operator(s) shall be authorized to log in and operate a Rapid DNA System.

5.1.1.1 Separate unique logins shall be required for each Rapid DNA Lead Operator and Rapid DNA Operator accessing/utilizing a Rapid DNA System in...
accordance with the CJIS Security Policy and the procedures of the State CODIS Agency. The Rapid DNA Lead Operator or Rapid DNA Operator who is logged into the Rapid DNA System shall be the same individual operating the Rapid DNA System.

5.1.2 A Rapid DNA Lead Operator and Rapid DNA Operator shall use advanced authentication to log in to the CRE and a Rapid DNA System.

5.1.3 A Rapid DNA Lead Operator or Rapid DNA Operator shall transmit the DNA data as defined by the State CODIS Agency in accordance with the current CJIS Security Policy and the procedures of the State CODIS Agency.

5.2 The booking agency shall follow a data security procedure to ensure the integrity of the Rapid DNA analysis and resulting DNA profile and DNA data. This procedure shall ensure the following:

5.2.1 Secure data transmission from the electronic fingerprint capture device to the Rapid DNA System in accordance with the current CJIS Security Policy.

5.2.2 Secure data transmission when merging electronic fingerprint data with DNA data in accordance with the current CJIS Security Policy.

5.2.3 Secure data transmission to the CRE in accordance with the current CJIS Security Policy.

5.2.4 Secure data transmission from the CRE to the State CODIS Agency in accordance with the current CJIS Security Policy.

5.3 The booking agency shall not file, maintain, store, disseminate, compare, or database (or similar activity) the DNA sample, the DNA profile, or DNA data from the Rapid DNA System. Any arrestee DNA sample remaining in a Rapid DNA cartridge shall be disposed of in accordance with the procedures of the State CODIS Agency. DNA data shall be deleted in accordance with Federal and State laws and State CODIS Agency requirements.

6. SAMPLE CONTROL AND INTEGRITY DURING PROCESSING

6.1 The booking agency shall follow documented sample handling and processing procedures to ensure sample integrity and verification of the identity of the arrestee providing the buccal swab sample. These procedures shall comply with the following criteria:

6.1.1 Electronic fingerprint-based identification or other biometric identification of the arrestee at the time of DNA sample collection (record collection ID verification).
6.1.2 Electronic confirmation of the Qualifying Arrest Offense(s) authorizing the DNA collection.

6.1.3 Confirmation that the sample is identified with the correct CODIS Specimen Identification Number in a format prescribed by the State CODIS Agency.

6.1.4 Booking agencies shall submit additional arrestee buccal swabs to the State CODIS Agency as required by policies and procedures of the State CODIS Agency.

6.1.5 Continuity of daily operations, including shift changes, so that all qualifying arrestee DNA samples are collected and analyzed.

6.1.6 An alternate protocol is followed in the event that a DNA sample is not analyzed or the Rapid DNA System does not generate a successful result.

7. AUDITS

7.1 The booking agency shall be audited at least annually in accordance with these Standards. The annual audits shall occur every calendar year and shall be at least 6 months and no more than 18 months apart. Audits shall be conducted by an audit team designated by the State CODIS Agency.

7.1.1 Within 30 calendar days of its receipt, the booking agency shall submit the audit documents and, if applicable, corrective action(s), to the State CODIS Agency for review to ensure that findings, if any, were appropriately addressed.

7.2 Audit documentation shall be retained by the State CODIS Agency in accordance with applicable record retention laws and policies, and available for inspection by the FBI.
REFERENCES:


DEFINITIONS

The following terms are used throughout these Standards and are defined as follows:

**Advanced authentication** is additional security to the typical user identification and authentication of login ID and password and is intended to meet the standards of two-factor authentication.

**Arrestee** is an individual who was subject to arrest, either with or without a warrant, and required, by an applicable State or Federal law, to provide a DNA sample for law enforcement identification and databasing purposes.

**Arrestee metadata** is the biographical, identification and biometric information associated with the arrestee for criminal justice purposes. Required arrestee metadata fields include the State Identification Number (SID), Universal Control Number (UCN) (for Federal), Electronic Fingerprint Unique Event Identifier, Fingerprint Capture Date and Time, and Arrest Offense Description. Optional metadata fields include the Booking Agency Configurable Identifier, Arresting Agency Configurable Identifier, and Arrest Submission Date.

**Audit** is an inspection used to evaluate, confirm, and/or determine the extent to which specified requirements are fulfilled.

**Booking agency** for purposes of these Standards, means an agency or department with the authority to apprehend criminal offenders and/or perform booking activities but is not a forensic DNA laboratory. This typically is the booking station of a law enforcement agency but may also include locations where sex-offender registration or parole processing occur. A booking agency that uses a Rapid DNA System in accordance with these Standards is not considered a forensic DNA laboratory.

**Buccal** is the inside of a person’s cheek which is commonly swabbed for purposes of DNA sample collection.

**CJIS** is the Criminal Justice Information Services Division of the FBI.

**CODIS** is the COmbined DNA Index System administered by the FBI. CODIS links DNA evidence obtained from crime scenes, thereby identifying serial criminals. CODIS also compares crime scene evidence to DNA profiles obtained from offenders, thereby providing investigators with the identity of the putative perpetrator. In addition, CODIS contains profiles from missing persons, unidentified human remains and relatives of missing persons. There are three levels of CODIS: the Local DNA Index System (LDIS), used by individual laboratories; the State DNA Index System (SDIS), used at the State level to serve as a State’s DNA database containing DNA profiles from LDIS labs; and the National DNA Index System (NDIS), managed by the FBI as the nation’s DNA database containing all DNA profiles uploaded by participating States. The Rapid DNA analysis
process presents an additional avenue for arrestee DNA profiles to be entered into and searched in SDIS and NDIS.

**Certification test(s)** is a written, oral and/or practical test or series of tests defined by the State CODIS Agency. The certification test is designed to establish that an individual has demonstrated achievement of the technical skills and knowledge necessary to operate a Rapid DNA System.

**CJIS Systems Agency (CSA)** is a duly authorized state, federal, international, tribal, or territorial criminal justice agency on the Criminal Justice Information Services Division (CJIS) network providing statewide (or equivalent) service to its criminal justice users with respect to the criminal justice information from various systems managed by the FBI CJIS Division.

**Contamination** is the unintentional introduction of extraneous DNA into a DNA sample or Rapid DNA System.

**CODIS Rapid Enrollment application** or **CRE** is the government furnished application software provided to the booking agency that ensures the resulting DNA profile produced by the Rapid DNA System contains the appropriate arrestee metadata as well as a CODIS compatible DNA profile before the DNA information is transmitted to the State CODIS Agency.

**Corrective action** evaluates a noncompliance with the goal to identify, correct, and/or prevent reoccurrence of the noncompliance, when possible.

**DNA sample** is a buccal sample obtained from an individual who is legally required to provide a DNA sample for law enforcement databasing purposes and whose identity is electronically verified via an electronic fingerprint capture device at the time of collection of the sample.

**DNA data** is the raw computer file produced by the Rapid DNA System.

**DNA profile** is the information generated by the Rapid DNA System on the reference buccal sample taken from an individual that is uploaded into CODIS.

**FBI** is the Federal Bureau of Investigation, the Federal agency authorized by the Rapid DNA Act of 2017 to issue standards and procedures for the use of Rapid DNA Systems for generating DNA records for entry and searching in CODIS and the National DNA Index System (NDIS).

**NDIS** is the National DNA Index System. NDIS is one component of CODIS – the national and highest-level index containing the DNA records contributed from participating Federal, State and Local laboratories.
**NDIS approved Rapid DNA Booking System** is a Rapid DNA System that has been approved by the FBI for use in law enforcement booking agencies. A list of NDIS approved Rapid DNA Booking Systems can be found at [https://www.fbi.gov/services/laboratory/biometric-analysis/codis/rapid-dna](https://www.fbi.gov/services/laboratory/biometric-analysis/codis/rapid-dna).

**Negative control** is used to detect DNA contamination in Rapid DNA reagents and consumables. A negative control is only required during a performance check for new lot numbers of Rapid DNA cartridges and reagents.

**Offender** is an individual who is required by statute to submit a sample for DNA analysis and databasing. The term “offender” includes individuals who are convicted of or arrested for a crime or otherwise required by State or Federal law to provide a DNA sample for analysis and databasing.

**Performance check** is a quality assurance measure to demonstrate the Rapid DNA System is functioning properly. A performance check is completed by the run and confirmation of a manufacturer-provided positive control (known standard) through the Rapid DNA System. In addition, a negative control is required during a performance check for new lot numbers of Rapid DNA cartridges and reagents.

**Positive control** is used to determine if the Rapid DNA System is performing all the steps in the process properly. This control consists of a known DNA sample provided by the manufacturer.

**Procedure** is an established practice to be followed in performing a specified task or under specific circumstances.

**Qualifying Arrest Offense** is the offense for which the DNA sample is being collected at the time of arrest in accordance with applicable Federal or State law.

**Rapid DNA analysis** is the fully automated process of developing a CODIS acceptable DNA profile from a buccal swab without human interpretation.

**Rapid DNA cartridge** is a preassembled set of reagents designed for use in a Rapid DNA System.

**Rapid DNA Lead Operator** is a Rapid DNA Operator designated by the booking agency who oversees the operation of a Rapid DNA System(s) for their agency and is the main point of contact to the State CODIS Agency.

**Rapid DNA Operator** is an operator designated by the booking agency who is certified and authorized to operate a Rapid DNA System in that agency.

**Rapid DNA System** is a fully automated system capable of producing a CODIS acceptable DNA profile from an arrestee buccal swab without human interpretation in under two hours.
Reagents are the chemicals used in the Rapid DNA System.

Run is the term used to describe the complete process of developing a DNA profile using a Rapid DNA System. The process begins with the insertion of the cartridge containing an arrestee buccal swab into the Rapid DNA System and pressing start. The process ends with the generation of a result by the Rapid DNA System.

SDIS is the State DNA Index System which serves as a State’s DNA database operated by the State CODIS Agency.

State CODIS Agency is the government department or entity where the State CODIS System resides and is the entity responsible for approval of law enforcement booking agencies in the State to perform Rapid DNA analysis to generate DNA profiles for entry/search in CODIS and NDIS.

State Identification Bureau (SIB) is the state agency with responsibility for the state’s fingerprint identification services.