Use of RAPID DNA Systems

Introduction

Purpose

The objective of this Physical Evidence Bulletin (PEB) is to provide guidance to law enforcement agencies using Rapid DNA technology. The Bureau of Forensic Services (BFS) recognizes that Rapid DNA instruments are being used by law enforcement agencies for local databasing purposes and for the analysis of crime scene samples. Law enforcement partners should be aware of the considerations and limitations of Rapid DNA technology.

Considerations in the Use of Rapid DNA Technology

Policy Considerations

- No forensic evidence processed by automated Rapid DNA Technology may be searched in or uploaded to CODIS at this time.
- BFS will not accept reference or evidence DNA profiles generated by Rapid DNA instruments without a contractual partnership agreement between BFS and a law enforcement agency, as outlined by ***Crime Scene Rapid DNA Requirements for CODIS*** (December 4, 2023 Crime Scene Rapid DNA Requirements for CODIS — LE) and the ***FBI Quality Assurance Standards for Forensic DNA Testing Laboratories*** (effective July 1, 2025 and available at https://www.swgdam.org/.
- Regardless of the results obtained from Rapid DNA analysis, BFS will only accept items of evidence which meet the current Acceptance Criteria in ***Physical Evidence Bulletin 4 - Collection of Biological Materials and Reference Samples for DNA Analysis*** (https://oag.ca.gov/bfs/peb.
- BFS 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.
- BFS Criminalists cannot testify to any DNA analysis performed by non-BFS staff, including Rapid DNA analysis by law enforcement agencies.
- BFS does not have any contractual partnership agreements at this time.

Sample Considerations and Technological Limitations

- Rapid DNA Systems do NOT have mixture interpretation software.
- Rapid DNA Systems are far less sensitive than conventional testing in a forensic laboratory.
- If Rapid DNA analysis is conducted on an evidence sample and no results are obtained, do NOT discard the remaining evidence. Because Rapid DNA instruments are not as sensitive as the technology used in an accredited laboratory, your local BFS laboratory may be able to obtain results from the item.
- Collect multiple swabs from samples amenable to Rapid DNA testing. This will allow conventional laboratory testing on the swabs that were not processed in a Rapid DNA instrument.
- Splitting limited evidence for both Rapid DNA and conventional testing could result in insufficient DNA yields for both systems.
- Samples processed in a Rapid DNA instrument will not be accepted for re-processing.
- Additional sample handling, such as sampling a stain or evidence item for Rapid DNA analysis, increases the risk of DNA contamination.
- Elimination samples should be collected from technicians and law enforcement employees that handle evidence, including samples run on Rapid DNA instruments. These samples need to be made available upon request from the BFS laboratory.

Additional Considerations regarding Sexual Assault Evidence

Given the complex sample handling and propensity for DNA mixtures with sexual assault evidence, BFS does NOT recommend processing sexual assault evidence on Rapid DNA instruments.

Furthermore, processing evidence from sexual assault cases on Rapid DNA instruments is not sufficient to comply with state law. Sexual assault evidence will still be required to be sent to a CODIS-participating DNA laboratory.
Per Penal Code section 680, evidence from a sex offense specified in Penal Code section 261, 261.5, 286, 287, or 289, or former sections 262 or 288a must be delivered to a CODIS-participating DNA laboratory within 20 days after it is booked into evidence. Processing sexual assault evidence on a Rapid DNA instrument, without also meeting the conditions set forth in section 680, subdivision (c)(5), does not meet the definition of a Rapid turnaround DNA program as that concept is used in subdivision (c)(1)(B).

Sample types amenable to Rapid DNA testing

Sample types amenable to successful profile generation using Rapid DNA Systems include those expected to:

- Be single-source, and
- Have high quantity of DNA, and
- Be high quality DNA

Rapid DNA is ideal for forensic samples from a single donor, such as blood, neat semen, drinking containers, chewing gum, and cigarette butts.

For these samples, the FBI recommends an "A-Swab/ B-Swab" strategy where the A swab is for conventional laboratory testing by an accredited forensic DNA laboratory and the B-Swab is for Rapid DNA analysis. Consider side-by-side collection where biological material is collected "together" during the swabbing motion (bouquet method) versus collecting the A-Swab first followed by the B-Swab (sequential).

Sample types NOT amenable to Rapid DNA testing

Sample types NOT amenable to successful profile generation using Rapid DNA Systems include those expected to:

- Be DNA mixtures (*e.g.*, sexual assault evidence)
- Have low quantity of DNA (*e.g.,* touch/trace DNA swabs, hair)
- And/or be low quality DNA (*e.g.,* weathered stains; burned, decomposed, or aged bone and tissue)

Note: Even fresh bone requires pre-processing before analysis on Rapid DNA Systems.

How to get started

- Law Enforcement agencies should consult their local district attorneys before establishing a Rapid DNA Program and may reach out to the Bureau of Forensic Services for guidance.
- Law enforcement agencies are advised to follow federal guidance:
  - ***Guide to All Things Rapid DNA*** (March 1, 2025) https://le.fbi.gov/file-repository/rapid-dna-guide/view
  - ***Non-CODIS Rapid DNA Considerations and Best Practices for Law Enforcement Use*** (September 16, 2019) https://le.fbi.gov/file-repository/non-codis-rapid-dna-best-practices-092419.pdf/view
  - ***Rapid DNA Testing for Non-CODIS Uses: Considerations for Court*** (July 31, 2020) https://le.fbi.gov/file-repository/rapid-dna-testing-for-non-codis-uses-considerations-for-court-073120.pdf/view

- Additional information may be found:
  - FBI General Information page regarding Rapid DNA https://www.fbi.gov/services/laboratory/biometric-analysis/codis/rapid-dna
  - SWGDAM Position Statement on Rapid DNA Analysis (October 23, 2017) https://www.swgdam.org/_files/ugd/4344b0_f84df0465a2243218757fac1a1ccffea.pdf
  - NDAA Position Statement on the Use of Rapid Technology (January 30, 2018) https://dps.alaska.gov/getmedia/fb933229-8e52-4cf8-8fe0-cb72d5e039e3/NDAA-Statement-on-Use-of-Rapid-DNA-Technology-2018.pdf;.aspx
  - ASCLD Position Statement on Non-CODIS Application of Rapid DNA on Crime Scene and Disaster Victim Identification Samples (November 24, 2020) https://www.ascld.org/ascld-policy-library/

Contact Information

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To obtain further information regarding the collection, packaging, and submittal of evidence to BFS laboratories, please contact a BFS laboratory. For a list of regional laboratories please go to:

https://oag.ca.gov/bfs/services

To locate the most current Physical Evidence Bulletins please go to:

https://oag.ca.gov/bfs/peb