

Best Practice Recommendations for the Management and Use of Quality Assurance DNA Elimination Databases in Forensic DNA Analysis



WHAT IS AN AAFS STANDARD FACTSHEET?

The AAFS produces clear, concise, and easy-to-understand factsheets to summarize the contents of technical and professional forensic science standards on the OSAC Registry. They are not intended to provide an interpretation for any portion of a published standard.

WHAT IS THE PURPOSE OF THIS STANDARD?

Creating a database of elimination profiles—those DNA profiles from individuals whose access, role, or activities might result in DNA contamination of a case sample—is presented as one component of a broader strategy to detect and monitor contamination.

This standard provides best practice recommendations for collecting, storing, searching, and retaining DNA elimination samples and/or profiles in a quality assurance database.

It is recommended that the forensic science service provider (FSSP) maintain and use the elimination database following laws in its jurisdiction.

This standard is to be used in conjunction with [ANSI/ASB 018, 1st Ed., 2020](#); [020, 1st Ed., 2018](#); [040, 1st Ed., 2019](#); 139, 1st Ed., 2022; 175, 1st Ed., 2024; and ISO/IEC 17025.

WHY IS THIS STANDARD IMPORTANT? WHAT ARE ITS BENEFITS?

Maintaining the integrity of human DNA results by detecting contamination is essential. While an overall quality assurance program provides a comprehensive approach to detecting contamination, a well-maintained elimination database is an additional method to directly evaluate case samples for possible contamination.

An elimination database is an essential tool for upholding the accuracy and reliability of forensic evidence by reducing the occurrence of misinformation to investigators or erroneous results being entered into the national DNA database, Combined DNA Index System (CODIS).



HOW IS THIS STANDARD USED, AND WHAT ARE THE KEY ELEMENTS?

This best practice recommendation guides FSSPs in the construction and use of databases of DNA profiles to detect contamination that may have been introduced into evidence samples by individuals involved in the process.

This standard recommends that FSSPs develop elimination database policies relating to:

- Database management
- Access control and confidentiality
- Sample retention and deletion
- Database security and integrity
- Search parameters and matching criteria
- Documentation and reporting of contamination associations
- Handling ambiguous results

In addition, the standard provides recommendations on which types of profiles to include in the database, the information to provide sample-contributing individuals, traceability, and typing of DNA samples.